



TRAINING STANDARDS COUNCIL

INSPECTION REPORT

APRIL 1999

BNFL Springfields

SUMMARY

BNFL Springfields provides good training in engineering. The workshop facilities are excellent. Staff are capable and very experienced. The initial off-the-job training provides trainees with a thorough foundation. It is followed by additional workshop training which enables trainees to develop a high degree of competence in specialist areas of engineering. The company offers good training in the workplace. Some trainees make slow progress towards their workplace qualification. All trainees have access to the company's comprehensive support services. Strenuous efforts are made to encourage trainees from under-represented groups, but with little success. The training is very well managed and effective quality assurance arrangements are established.

GRADES

OCCUPATIONAL AREAS	GRADE
Engineering	2

GENERIC AREAS	GRADE
Equal opportunities	2
Trainee support	1
Management of training	2
Quality assurance	2

KEY STRENGTHS

- ♦ excellent workshop resources
- ♦ experienced and capable trainers and assessors
- ♦ high level of competence achieved by trainees
- ♦ comprehensive and effective progress reviews
- ♦ high retention and achievement rates
- ♦ good support services
- ♦ clear and relevant quality assurance procedures
- ♦ effective analysis and use of feedback and data

KEY WEAKNESSES

- ♦ late start of assessment in the workplace
- ♦ low numbers of female trainees and trainees from minority ethnic groups
- ♦ few assessors in the workplace
- ♦ inadequate training guidance for workplace supervisors

INTRODUCTION

1. The training provider is the training department of British Nuclear Fuels Limited, Springfields (BNFL). It is located to the west of Preston, Lancashire on a site that produces nuclear fuel. The company provides engineering training for its own employees and those of other companies. The existing training facility was set up in 1982 to train 60 engineering apprentices each year for the BNFL site. The annual requirement of the site has dropped to only 10 apprentices. The company decided to make use of the excess capacity by offering an apprentice training service to other companies in the area. The first external trainees started in 1997. The number of client companies has grown to 13. They lie within a 35-mile radius of BNFL Springfields. They cover a range of sectors including a power station and food-processing companies. The training is delivered and managed by a staff of 16.

2. There are 80 engineering trainees on the modern apprenticeship programme funded by Lancashire Area West Training and Enterprise Council (LAWTEC). Of these, 37 are BNFL employees. The client companies employ the remaining trainees. They all receive off-the-job training in BNFL's workshops, including assessment to national vocational qualification (NVQ) level 2. After the period of workshop training is completed, trainees are based in their employers' workplaces. BNFL's staff monitor and review their progress towards completion of the modern apprenticeship and carry out assessments. All trainees attend college one day each week throughout the period of their training to gain background theory and additional qualifications. The training normally takes three and a half years.

3. BNFL has a high profile as an employer in the local area, which enables it to attract a large number of well-qualified applicants for the training programme. Eleven of the client companies rely on BNFL to recruit trainees for them. The unemployment rate in the area is 4.2 per cent, compared with a national average of 5.2 per cent. The area has a relatively high proportion of large companies, and the local economy is strong in engineering, defence and manufacturing.

4. In 1998, the percentage of school leavers achieving five or more general certificates of secondary education (GCSEs) at grade C and above was 47 per cent, compared with the national average of 46.3 per cent. Preston itself contains a high proportion of people from minority ethnic groups, and together they account for 10 per cent of the local population, but within the entire area served by BNFL, only 2.1 per cent of the population are from minority ethnic groups.

INSPECTION FINDINGS

5. BNFL Springfields produced its first self-assessment report in June 1998. All staff were involved in the self-assessment process through staff meetings. Senior members of the training department wrote the report, with the assistance of a focus group drawn from all levels of staff. The self-assessment report accurately reflects most of the strengths identified by the inspection team. Inspectors identified a small number of additional weaknesses.

6. A team of two inspectors spent a total of eight days at BNFL during April 1999. Thirty-four trainees were interviewed. Eight employers were visited and 10 workplace supervisors were interviewed. Sixteen interviews were conducted with the staff and managers of BNFL. Three training sessions were observed. Assessment in the workplace was observed. A range of documents was inspected, including trainees' records, portfolios, awarding body reports and written policies. In addition to engineering, BNFL offers training in business administration, but as there were only four trainees, this occupational area was not inspected.

Grades awarded to instruction sessions

	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	TOTAL
Engineering	1	2	0	0	0	3

OCCUPATIONAL AREAS

Engineering

Grade 2

7. All trainees are on the engineering modern apprenticeship programme. They spend the first 26 weeks engaged in off-the-job training in BNFL's workshops. They complete an engineering foundation level 2 NVQ in mechanical or electrical engineering or in fabrication. The trainees employed by BNFL remain in the workshop for a further year to improve their skills. They are not permitted into the workplace until they are 18 years of age, for reasons of radiological safety. Other companies can choose to extend the period of their trainees' workshop training either by having them remain on a continuous basis or by having them take specific modules. Once the trainees have completed their workshop training, they are based in the workplace of their employer. They receive training under the supervision of identified members of the employer's staff and collect evidence of their competence against the engineering NVQ level 3 standards. BNFL's staff visit them in the workplace to conduct assessments. Trainees' portfolio evidence is also used to demonstrate their competence in key skills. Throughout their training, trainees attend a local further education college for one day each week, where they follow courses leading to additional, nationally recognised qualifications. The proportion of trainees successfully completing their apprenticeship has exceeded 95 per cent in each of the last five years. The reason for trainees failing to complete their full training plan is always failure to achieve one of the qualifications in theoretical knowledge.

Inspectors identified a number of strengths in the self-assessment report that were no more than normal practice, but agreed with the self-assessment grade.

STRENGTHS

- ◆ high achievement rate
- ◆ excellent workshop resources
- ◆ experienced and capable trainers and assessors
- ◆ flexible programme of off-the-job training to meet trainees' needs
- ◆ good workplace training opportunities
- ◆ high level of competence achieved by trainees

WEAKNESSES

- ◆ late start of assessment in the workplace
- ◆ few assessors in the workplace

GOOD PRACTICE

In addition to the normal foundation skills, BNFL offers all trainees courses in specialist engineering skills such as pneumatics, hydraulics, process control, instrumentation, programmable logic controllers and refrigeration.

8. The workshops at BNFL Springfields are exceptionally well equipped. Engineering machine tools are plentiful. The accommodation is ideal. The electrical installation facilities are designed to be realistic, with purpose-designed walls, floors and roof spaces. The instrumentation and control rigs precisely replicate those in a plant, except that water is used in place of chemicals. There are small teaching rooms, adjacent to the workshop, for the delivery of background knowledge in conjunction with practical demonstrations. Larger, fully equipped lecture rooms are available away from the workshops for full-group training. The training centre also has an open-learning facility containing computer-based self-tutoring packages, covering a wide variety of subjects. Trainees initially work towards their engineering NVQ level 2 using the basic equipment. They then receive further off-the-job training and background knowledge, either continuously or by returning for specialist courses, which takes them well beyond the standard required for the NVQ level 2. Each individual training plan is carefully designed to include modules which meet the specific needs of the trainee in their particular job. Staff deliver training to a very high standard. Well-designed course notes are provided for trainees. They contain questions for the trainees to check their understanding. Trainees participate enthusiastically in the sessions and display a good understanding of the subjects.

9. Employers produce detailed training plans, in consultation with trainees and training staff, in 75 per cent of cases. The remaining employers are smaller. They rely on BNFL to structure the training as it progresses, following a detailed discussion of the overall NVQ with the employer prior to the start of the training. The opportunities for on-the-job training vary according to the size of employer, from satisfactory to exceptionally good. Assessment is well established for the trainees employed by BNFL and working on their plant. It is based on an appropriate combination of observation, realistic simulation and evidence collection. BNFL's staff conduct the assessments. There are only a small number of workplace assessors in BNFL and at one other employer. Arrangements are in place to assess trainees working at the premises of the other employers, but no workplace assessment has yet been carried out. Good evidence of competence has been

collected but trainees with these employers do not routinely match the evidence to the performance criteria of the NVQ standard. The trainees are still in the early stages of their level 3 training and have not yet completed any assessments.

10. The development and assessment of key skills is effective. Trainees are all aware of key skills. There is good use of naturally occurring evidence from the workplace. The use of evidence from artificially created exercises is avoided. Trainees usually have a high standard of key skills on entry to training programmes. The engineering training provides trainees with many opportunities to develop their key skills further. Trainees attend an outdoor activities course where key skills are explicitly developed and evidence of achievement is recorded. Although the level of key skills at which trainees are assessed meets the requirements of the modern apprenticeship framework, the level is low and does not stretch the trainees.

GENERIC AREAS

Equal opportunities

Grade 2

11. BNFL Springfields has a comprehensive equal opportunities policy. The ethnic background and gender of applicants are monitored throughout all stages of recruitment. The resulting statistics are analysed and used to improve promotional activities, with the aim of increasing the number of trainees from under-represented groups. Trainees are given a copy of BNFL's equal opportunities booklet at induction and it is explained to them. Grievance and harassment procedures are in place. Staff are trained in equal opportunities awareness. A check is made that employers have their own equal opportunities policy prior to placement of a trainee. They are made aware of their responsibility to trainees. Of the 70 trainees recruited over the last three years, only one is from a minority ethnic community and only three are women. This under-representation is recognised by BNFL but was not listed as a weakness in the self-assessment report. The inspectors found many strengths in the commitment, effort and initiative shown by BNFL's staff, and they agreed with the self-assessment grade.

STRENGTHS

- ◆ strenuous efforts to recruit trainees from under-represented groups
- ◆ excellent documents to explain equal opportunities issues
- ◆ high level of awareness by staff of equal opportunities issues
- ◆ continuous efforts to improve equal opportunities performance

WEAKNESSES

- ◆ low number of women and trainees from minority ethnic groups
- ◆ employers not informed in writing of their responsibility to trainees

GOOD PRACTICE

Female trainees visit schools in the area as part of the Industry 2000 project to talk to students about careers for women

12. BNFL has made strenuous efforts over an extended period to increase the number of female trainees and improve recruitment from minority ethnic groups.

Although the company receives many more applications than it needs, staff visit schools and attend careers conventions partly to encourage applications from the under-represented groups. Advertisements are placed in publications aimed at the local minority ethnic communities. BNFL was instrumental in establishing a joint project with other employers in the region to encourage women into the engineering profession. The statistics collected are effectively analysed. Despite these efforts, insufficient numbers apply. Selection is made solely on merit. BNFL has been active in trying to identify the reasons for the low numbers of applications from these under-represented groups. Government publications have been researched and external advice has been sought to identify unintended barriers to these groups of applicants. Changes have been made to the selection criteria, for example, raising the maximum age to 18 because it is possible that a lower entry age discourages applicants from certain minority ethnic communities. Despite its lack of success, BNFL still seeks new ways of tackling the problem and has a plan of further actions.

13. Trainees are aware of their rights and responsibilities. They know what constitutes unreasonable treatment and how to make a complaint. There is a high level of awareness of equal opportunities issues among all staff. They receive training, including updates to cover the requirements of the legislation protecting the rights of those with disabilities. The company's booklet on equal opportunities is excellent. It explains the rights and responsibilities of trainees in clear language. A second booklet on harassment is very helpful. Employers are reminded of their responsibility under equal opportunities legislation when their policy is checked. They are not, however, given a written statement of their responsibility, which contravenes a requirement of BNFL's contract with LAWTEC.

Trainee support

Grade 1

14. BNFL Springfields receives 20 applications for every apprenticeship it offers. There is a rigorous selection process, which includes psychometric testing and interviews. Trainees receive an induction into their training programme over the period of a week. They are supported throughout the workshop stage of the training by BNFL's staff and they receive visits from their employers. They are also able to access the support facilities of BNFL's site, including the welfare services. They have full access to the support facilities of the college as well. When they transfer to the workplace, they are assigned a supervisor by the employer. A member of BNFL's staff visits each trainee in the workplace at least every eight weeks to review his or her progress. A written record is made. Ninety-nine per cent of the apprentices are retained by their employers after they complete their training. Trainees have the opportunity to discuss their future careers when they approach the end of their training. Those who are not retained are given careers advice and support by BNFL to find alternative employment. Inspectors agreed with the strengths in the self-assessment report. One of the weaknesses identified in the report has been addressed in the 10 months since the self-assessment was carried out. Inspectors awarded a higher grade than that given by the company.

STRENGTHS

- ◆ effective selection procedure
- ◆ comprehensive and effective progress reviews
- ◆ free transport provided for trainees
- ◆ valuable support and guidance given at completion and beyond
- ◆ high retention rates
- ◆ access to the company's support services

GOOD PRACTICE

When trainees attend college, they arrive at the BNFL site as normal and are then transported to and from the college. This ensures that they maintain the same level of attendance and time keeping on their days at college as they do when they are in the workplace. It also avoids difficult journeys for some trainees and allows the company to contract with a small number of colleges rather than a larger number close to the trainees' homes.

WEAKNESSES

- ◆ insufficient account taken of existing engineering and key skills

15. The selection procedure applies to all trainees, irrespective of their potential employer. It is thorough and is effective in selecting those trainees most able to benefit from the training offered by BNFL. Special arrangements are made to enable trainees with dyslexia to be given fair treatment by adapting the selection test. A qualified basic skills trainer is available on BNFL's site to help any trainees with dyslexia. The initial assessment is used for selection purposes, to decide on the career pathway within engineering and to identify any additional support needs. It is not used to identify existing engineering competence or to assess trainees' existing ability in key skills. The initial modules of off-the-job training follow a fixed programme, meaning that some trainees repeat work which they already feel capable of performing.

16. When they start their modern apprenticeship, trainees are given a week-long induction. It is well planned and provides trainees with the information they need to embark on their programme. Trainees find it helpful and are able to retain the information. There are systematic checks to measure their understanding. Trainees receive a further induction when they enter the workplace. Free transport is available from the main population centres to BNFL's site. Attendance and time keeping discipline are instilled from the beginning in a firm but respectful manner. Trainees are treated like adults and respond by behaving very well.

17. Trainees' reviews are used to make detailed records of their progress both towards their qualification and in acquiring general work skills. The reviews are specific in identifying future actions for the trainee. The records chart their progression from review to review. Workplace supervisors are involved in the reviews. The retention rate of trainees is greater than 90 per cent. For trainees employed by BNFL, the proportion of those offered permanent jobs at completion is 75 per cent. Those who are not offered a permanent job are normally offered a temporary contract of up to two years while they find alternative employment. They are given training in securing employment and all have so far found employment. Trainees are able to access additional training from external sources during this period to enable them to prepare for work in a different sector. For example, one trainee was trained in offshore survival and safety training to enable him to take up a career in the offshore oil industry. Trainees employed by other companies do not have access to the same financial support, but BNFL supports all trainees beyond the completion of their training. For example, if a company makes a trainee

GOOD PRACTICE

BNFL makes its extensive company support facilities available to all trainees irrespective of their employer. These include access to the welfare support unit. Trainees are introduced to this confidential service during induction. Some trainees gain valuable advice and support to help them with problems such as debt, housing and personal relationships, which may otherwise restrict their

Instead of the usual practice of issuing trainees with covers to fit over their own glasses, all bespectacled trainees are supplied with prescription safety glasses free of charge.

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redundant within two years of completion, BNFL will endeavour to find them alternative employment with another company.

Management of training

Grade 2

18. The training department of BNFL Springfields is managed as an integral part of the company and the training manager reports to the site chief engineer. The department consists of 16 staff, all of whom have detailed job descriptions. Management structures are clear. Staff understand their roles and responsibilities. Two of the staff have specific responsibility for liaison with the external employers. The other staff manage and deliver training in the BNFL workshops. There is an active appraisal system and a continuous staff training and development programme. Internal communication takes place by means of weekly staff meetings, e-mail, a weekly news bulletin, a monthly site magazine and departmental team meetings. Trainees' progress is monitored both centrally, using a computer database which staff are able to access, and using wall charts. The needs of the department are set out in a departmental business plan. Targets are set at the beginning of the year, both for individual staff and for the company as a whole. The company holds the Investors in People Standard. Inspectors agreed with most of the strengths in the self-assessment report and identified additional weaknesses. They agreed with the grade in the self-assessment report.

STRENGTHS

- ◆ very effective management systems
- ◆ staff training and development meet the needs of the business
- ◆ good internal and external communication
- ◆ rigorous monitoring of measurable targets

WEAKNESSES

- ◆ no formal agreement with four employers
- ◆ low level of knowledge of NVQs by workplace supervisors

19. The managers and staff of the department manage the whole training process very effectively. They have developed systems and communication methods to ensure the smooth operation of the department. They monitor activities continuously and are fully in control. There is active support and involvement from the senior management of BNFL. The company looks after the staff well and is prepared to make substantial investments to equip them for the training they deliver. The business plan is a valuable working document. It contains targets for the current year. The content of the business plan is communicated to staff and is used as the basis of their own personal development. Regular appraisal interviews are carried out with staff. They are used to establish staff development requirements. Each member of staff has his/her own personal development plan. There is effective informal communication among members of the management and staff who all work well as a team. The communication between trainees and staff is good, assisted by

the open culture of the organisation.

GOOD PRACTICE

'Role proficiency' graphs are produced for all staff. They measure current competence against the requirements of the job. The graphs are used to identify any future development needs.

20. Off-the-job training is well managed. The training programmes are planned to meet the needs of trainees and to make maximum use of the resources available. Management of the on-the-job training is also effectively planned and organised. There is a good understanding of the needs of all the employers and the skills trainees need to be effective in the workplace. The familiarity with the engineering context is not restricted to the workplaces within BNFL. The co-ordination of on- and off-the-job training is well managed, but is limited by a lack of knowledge of NVQs by workplace supervisors. Data about achievement against targets are collected, analysed and issued to all managers and training staff on a regular basis. In addition to keeping track of training records, the monitoring system is also used to plan future training needs. The information and the reports are used to measure the quality of training and its cost effectiveness. The system also provides a record for staff's career path development.

21. The agreement drawn up between BNFL and employers is complex and this is a cause for concern for some employers. Four of them have not yet signed the agreement. There is no agreement in force between these employers and BNFL, other than a simple purchase order. This does not meet LAWTEC's requirements.

Quality assurance

Grade 2

22. The training provided by BNFL is defined by a set of documented procedures produced to the ISO 9000 quality standard, which meet the requirements of the TEC and the awarding body. Internal audit arrangements are in place. Feedback from trainees is collected at certain points in their programme. Employers' views are obtained and used to improve the training. All trainees are interviewed on completion of their training programme. Performance data are analysed and used to identify long-term trends in the training. Action plans are used to develop and improve training. Inspectors agreed with the self-assessment grade, although the strengths and weaknesses they identified differ from those in the self-assessment report.

STRENGTHS

- ◆ clear and relevant quality assurance procedures
- ◆ rigorous monitoring of quality assurance procedures and action plans
- ◆ effective analysis and use of feedback and data
- ◆ accurate self-assessment

WEAKNESSES

- ◆ inadequate training guidance for workplace supervisors

GOOD PRACTICE

Local improvement teams are set up to identify weaknesses in the training

23. BNFL's managers and staff have a good understanding of the importance of quality assurance, and numerous quality assurance systems are used throughout the

company. They have considered carefully how quality assurance can be effectively applied to the training process. The quality assurance procedures are clear. They address the key stages of the training process and are used by managers and staff to ensure a consistent standard of training. The procedures are reviewed annually by a group of staff and managers. When a potential improvement to the training is identified it results in an amendment or addition to the relevant procedure. Qualified staff internally audit the procedures. The internal audits identify lapses in training delivery as well as in the administration. The self-assessment report produced by BNFL is detailed and informative. It contains many strengths which inspectors regarded as no more than normal practice, and few weaknesses. BNFL has a good understanding of how its training compares with national norms and is able to grade itself with a high degree of accuracy.

24. Internal verifiers are clear about their responsibilities. Assessment results are regularly sampled and reviewed. The quality of on-the-job training is not compared across all of the external placement areas. The internal verification procedures follow the awarding body's guidelines and are rigorously monitored. Requests for changes suggested by external bodies are promptly actioned. Questionnaires from the company are used to seek regular feedback on the views of staff, employers, parents and trainees. They yield valuable information which is used to promote continuous improvement. There is formal analysis and evaluation of the feedback findings as well as of other performance data. Staff are made aware of the results.

25. The quality assurance arrangements do not extend as comprehensively to on-the-job training offered by employers other than BNFL. There is little guidance for workplace supervisors on their role in the training programme. The quality of the on-the-job training depends on the interest and ability of the supervisors. BNFL relies on the monitoring and input of its own staff to compensate for this.