8. Development of guidance on occupational risks from BSE and other TSEs

Introduction

8.1 When an animal is suffering from disease or is a carrier, there are obvious safety risks for those who work in contact with it. At its simplest, they may risk injury from uncharacteristic aggressive behaviour. But they may also be at risk of themselves contracting the disease if it is zoonotic – transferable from animals to humans – such as tuberculosis, rabies and anthrax. Infection may be through cuts, inhalation or by mouth. Even when the animal is dead, its tissues may still be infective, as we have seen over recent years with E. coli and salmonella. When humans contract the disease, they may pose a further set of risks to others who are involved with their medical care.

8.2 In this chapter we look at the way the Government and other responsible bodies handled the development of guidance on occupational risks from BSE and other transmissible spongiform encephalopathies (TSEs). After briefly surveying the guidance issued on TSEs before the emergence of BSE, the rest of the chapter focuses on the response on occupational risks from 1988 to March 1996.

8.3 The occupations at risk of exposure to the BSE agent spanned stockmen and farmers, veterinary surgeons, slaughterhouse workers, knackermen, renderers, workers at local authority landfill sites and at incinerators, and laboratory workers such as pathologists. People working in zoos and wildlife parks were at risk from the emergence of TSEs, during 1986 to 1996, in exotic ungulates and members of the cat family. Similarly medical and health care professionals, mortuary workers and undertakers were at risk from the emergence of variant Creutzfeldt-Jakob disease (vCJD).

8.4 The lead responsibility for occupational health guidance and regulations lay with the Health and Safety Executive of the Health and Safety Commission (HSC/HSE). However, many aspects were the province of individual government Departments or required other specialist input. In these cases, HSE worked closely with the relevant Department. The HSC/HSE itself is a complex organisation drawing on a range of advisory Committees and groups. It issues advice and guidance in a variety of ways, ranging from advertisements and information to codes of practice. Annex 1 provides a brief overview of its structure and responsibilities; further details are given in vol. 14: Responsibilities for Human and Animal Health.

8.5 The Southwood Working Party identified occupational risk as an important matter for the HSE to consider. In their Report published in February 1989 they drew attention to occupational groups at risk and recommended that the potential
problems from BSE should be brought to the attention of HSE, which could consider whether further guidance should be given to such groups.

8.6 HSE carried forward work on this in three Working Groups whose membership included officials from DH and MAFF as well as others. Annex 2 provides details of the membership, and where available the terms of reference of the various Committees and Working Groups that considered BSE. Annex 3 provides an alphabetical list of the occupations potentially at risk and the guidance produced from 1981 to 1996. Annex 4 provides a chronological summary of occupational guidance issued up to June 1996 on BSE and other TSEs.

Officials from HSE, DH and MAFF featured in this chapter

8.7 Certain officials from HSE, DH and MAFF played key roles in the production of occupational guidance in relation to BSE and TSEs. In the following paragraphs we describe these officials briefly, including their membership of the relevant committees and working groups. Their membership of these various committees and groups is set out in the table in Annex 2 (Appendix).

Health and Safety Executive (HSE)

Mr Peter Lister

8.8 Head of Section, Health Policy Division B1 (HSE) responsible for policy issues in relation to all aspects of occupationally acquired infection either proven or suspected.3355 Member of the HSE BSE Working Group and the Cross-Divisional Task Force on Zoonoses (CDTFZ); also the joint HSE Secretary to both the Advisory Committee on Dangerous Pathogens (ACDP) and the ACDP Working Group.

Dr David Gompertz

8.9 Deputy Director Medical Services (HSE) from 1985 to 1993. Involved in various cross-divisional multidisciplinary activities related to his background in pathology and laboratory science, including development of HSE’s interest in the occupational zoonoses and occupational risks from BSE.3356 He was Chairman of the HSE BSE Working Group and the CDTFZ.

Mr Alastair McLean

8.10 Area Director Scotland West Area from March 1987 to June 1993. Responsible for the administration of the Health and Safety at Work Etc Act 1974 and associated legislation in Scotland West Area (administrative areas of Strathclyde, Dumfries and Galloway and the Outer Islands). Overall responsibility for the Food and Packaging National Industry Group. Member of CDTFZ.3357

3355 S495 Lister para. 5.3. Mr Lister had held the posts of Principal Scientific Officer at the DH until March 1989, when he joined HSE where he was Senior Principal Scientific Officer until his retirement in August 1996. The Health Policy Division later became the Health Directorate
3356 S557 Gompertz para. 4
3357 S550 McLean para. 1
Mr Stuart North

8.11 Deputy Superintending Inspector of Factories between July 1989 and April 1996, in charge of the HSE Food National Industry Group (NIG). Had day-to-day responsibility for national oversight of health and safety in the food industry and reported directly to Mr McLean.3358 Member of the HSE BSE Working Group and the CDTFZ.

Dr Vanessa Mayatt

8.12 Principal Specialist Inspector between 1987 and November 1990 with overall responsibility for the Microbiology Unit. Responsible for providing advice to other HSE Inspectors and to organisations where HSE enforced health and safety law on precautions to avoid microbiological risk.3359 Member of HSE BSE Working Group, CDTFZ and the ACDP.

Department of Health (DH)

Dr Hilary Pickles

8.13 Principal Medical Officer. Dr Pickles held the Departmental lead on BSE between 1988 and 1990 and the professional lead between 1988 and 1991.3360 In May 1988 she became joint secretary to the newly formed Southwood Working Party and subsequently SEAC. She was also a member of the HSE BSE Working Group and of the ACDP Working Group and DH observer on the ACDP.

Ms Ailsa McGinty

8.14 Senior Scientific Officer, Health Care Division (DH), from May 1989 to February 1992. From February 1992 to September 1995, Principal Scientific Officer of the Health Aspect of Environment and Food Division. She provided professional advice to DH colleagues on the provision of microbiology pathology services, laboratory safety issues, disinfection and policy on general pathology service.3361 She was a member of the HSE BSE Working Group and the CDTFZ. In February 1992 she also became the DH Secretariat to both the ACDP and the ACDP Working Group.

Ministry of Agriculture, Fisheries and Food (MAFF)

Mr Alan Lawrence

8.15 Mr Lawrence was Grade 6 in MAFF Animal Health Division (BSE and related issues), January 1989 – October 1992.3362 His role comprised activities in the Notifiable Diseases Branch and centred on administrative aspects of dealing with

3358 SS31 North para. 4
3359 SS05 Mayatt para. 5
3360 SS15 Pickles para. 2
3361 SS29 McGinty paras 2–3
3362 Mr Lawrence was seconded to work for the European Commission on aspects of the Animal ‘Waste’ Directive (90/667) September 1991–September 1992 and thereafter took position as Grade 6 in Meat Hygiene Division-led Project Team to establish the Meat Hygiene Service from October 1992–February 1995
outbreaks of notifiable diseases. He was also joint secretary of the Southwood Working Party.

Mr John Maslin

8.16 Head of the Administrative Branch, Animal Health (Disease Control) Division (MAFF) from February 1989. Dealt with non-notifiable and notifiable diseases including BSE. From April 1990, head of a separate BSE branch providing administrative support on the development and implementation of policy on BSE. He reported to Mr Lawrence. Member of HSE BSE Working Group.

Mr Dennis Sweasey

8.17 Mr Sweasey was a Safety Officer for the Central Veterinary Laboratory (CVL). He was a MAFF observer on ACDP and a member of the Committee’s Working Group.

Dr Danny Matthews

8.18 From 1988 onwards Dr Matthews was a Senior Veterinary Officer (SVO) with the State Veterinary Service (SVS). He was a member of the HSE BSE Working Group and the CDTFZ.

Mr Andrew Fleetwood

8.19 Veterinary Investigation Officer in the SVS from 1987 to late in 1991, when he became Temporary Senior Veterinary Investigation Officer and then Senior Veterinary Officer, Animal Health (Zoonoses) Division. He held this post until 1996. He was a member of the CDTFZ.

Early 1980s

Guidance on TSEs before the emergence of BSE

8.20 The potential risks of cross-infection for health workers caring for, or working with tissues from, patients with TSEs or other dementias were recognised in the late 1970s. In 1979 the CMOs (Chief Medical Officers) in England, Scotland and Wales set up the Advisory Group on the Management of Patients with Spongiform Encephalopathy (Creutzfeldt-Jakob Disease (CJD)). It had the following terms of reference:

To consider in the light of available evidence what measures need to be taken by persons caring for and carrying out clinical and laboratory procedures, including post-mortem examinations on patients with transmissible spongiform encephalopathy or other dementias, in order to avoid any

3363 S76 Lawrence paras 1, 8
3364 S77 Maslin pp. 1–5
3365 S127 Fleetwood paras 4–7
potential hazard from cross-infection by these agents from patients or their tissues.\textsuperscript{3366}

8.21 In November 1981 the Advisory Group produced guidance on precautions to be observed when caring for patients suffering from CJD or handling their tissues.\textsuperscript{3367} The Group decided to confine its recommendations to CJD, which at that time:

[was] the only known transmissible form of spongiform encephalopathy likely to be encountered in Europe.\textsuperscript{3368}

8.22 The report noted the occurrence of iatrogenic patient-to-patient transmission of CJD in three cases following neurosurgery and in one following transplantation of a corneal graft donated by an affected patient. It also noted a further three patients ‘who had all had neurosurgical procedures in one hospital in the same year, subsequently contracted CJD. It is possible that these cases arose as a result of cross infection.’\textsuperscript{3369}

8.23 The report recommended a number of precautions to be taken when attending patients with known or presumed CJD. The objective was to reduce the risk of contamination from various procedures involving tissues, blood and other body fluids. The recommended precautions were directed at the following: transplant and tissue donations, ward procedures, theatre procedures, transmission of specimens, precautions in the laboratory, post-mortem examination and accidental contamination. An appendix to the guidance set out the recommended sterilisation procedures for surgical instruments.\textsuperscript{3370} The guidance in relation to these sterilisation procedures was updated in 1984.\textsuperscript{3371}

The categorisation of pathogens

8.24 In 1984 ACDP, an advisory Committee to HSC, produced the first edition of ‘Categorisation of Pathogens’. This categorised infectious agents into four numbered Hazard Groups (1–4) and set out four levels of containment for microbiology laboratory activities and work with infected animals. The publication was updated in 1990.\textsuperscript{3372}

8.25 Hazard Group 1 organisms are those most unlikely to cause human disease, whereas Group 4 organisms are those that cause severe human disease, presenting a serious hazard to laboratory workers as well as a high risk of spread to the community, and for which there is no effective treatment. The following table shows ACDP’s definition of the Hazard Groups and examples of recommended containment measures for each Group:
<table>
<thead>
<tr>
<th>Hazard Group</th>
<th>Definition</th>
<th>Examples of recommended containment</th>
</tr>
</thead>
</table>
| 1            | Laboratory personnel must receive instruction in the procedures conducted in the laboratory | An organism that is most unlikely to cause human disease  
**The laboratory** should be easy to clean, maintain an inward air-flow and contain adequate hand washing facilities.  
**Workers in the laboratory** should: close doors when working, wear appropriate gowns, etc, not eat, chew, drink, smoke or apply cosmetics, not practise mouth pipetting, disinfect hands after handling viable materials, minimise the production of aerosols, clean bench tops, store laboratory glassware and other materials in a safe manner, render waste material as non-viable before disposal.  
**Waste material**: should be transported in robust containers without spillage. |
| 2            | Laboratory personnel must receive instruction and training in handling pathogens, and an appropriate standard of supervision of the work must be maintained | An organism that may cause human disease and which might be a hazard to laboratory workers but is unlikely to spread to the community. Laboratory exposure rarely produces infection and effective prophylaxis or effective treatment is usually available.  
**The laboratory** should: be easy to clean, maintain an inward air-flow, contain adequate hand-washing facilities near the exit, have limited access (to laboratory personnel and other specified persons), provide adequate space for each person (24m$^3$) and have effective disinfectants available for routine disinfection.  
**Workers in the laboratory** should: close doors when working, wear side or back fastening gowns, not eat, chew, drink, smoke or apply cosmetics, not practise mouth pipetting, disinfect hands after handling viable materials, generally work on the open bench and minimise the production of aerosols, use a microbiological safety cabinet when shaking vigorously, mixing or using ultrasonic disruption etc, disinfect bench tops, store laboratory glassware and other materials in a safe manner, render waste material safe before incineration.  
**Waste material**: should be transported in robust containers without spillage. |
| 3            | Laboratory personnel must have had training in handling pathogenic and potentially lethal organisms and in the use of safety equipment and controls. A high standard of supervision of the work must be maintained | An organism that may cause severe human disease and presents a serious hazard to laboratory workers. It may present a high risk of spread to the community but there is usually effective prophylaxis or treatment available.  
**The laboratory** should be easy to clean, be sealable to permit fumigation, sited away from general circulation and provide adequate space for each person (24m$^3$), have access limited to authorised personnel, have its door locked when unoccupied and have a door with a glass panel so that occupants can be seen, have a biohazard sign posted at entry, have a continuous airflow into the laboratory and contain its own equipment so that all Hazard 3 materials are held within the laboratory and nowhere else.  
**Workers in the laboratory** should: close doors when working, wear side- or back-fastening gowns, not eat, chew, drink, smoke or apply cosmetics, not practise mouth pipetting, wear gloves for all work with infective materials, wash hands before leaving the laboratory and make all waste materials safe before disposal or incineration.  
**Waste material**: should be transported in robust containers without spillage. |
### Development of guidance on occupational risks after the emergence of BSE

#### 8.26
During 1988 three sets of occupational guidance on BSE were produced: one set was aimed at handlers of BSE-affected cattle and the other two were issued by the CVL for internal use.

#### Concern for handlers and HSE guidance

**8.27** During early 1988, HSE Agricultural Inspectorate was alerted to the risks to hauliers of attacks from BSE-affected cattle. In March 1988, Mr A M Jones (HM Principal Agricultural Inspector) minuted Mr J R Russell (Area Director, HSE) reporting that MAFF had recently contacted him regarding ‘a potential serious health risk to persons required to handle cattle suffering from [BSE]’.  He stated:

> It was claimed, at my meeting, one haulier had already been badly mauled by such an animal – full details of this incident or its whereabouts are not known. Hauliers have expressed an opinion that because of the unpredictable behavioural pattern of BSE cattle they are being exposed to additional risk to their own health and safety.

**8.28** Mr Jones recommended that further discussions should be held between ‘ourselves’ and MAFF Veterinary Service to ‘promulgate a suitable Code of Practice for their handling’.

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### Table 8.1: Definition of Hazard Groups (cont’d.)

<table>
<thead>
<tr>
<th>Hazard Group</th>
<th>Definition</th>
<th>Examples of recommended containment</th>
</tr>
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<tr>
<td>4</td>
<td>A specific code of practice must be prepared for the work in the laboratory and a safety officer must be appointed and be accountable to the person identified as responsible for the work. Personnel must be over the age of 18 and must have had specific training in the work in the laboratory, and the use of safety equipment and must receive specific training, instruction and information on the handling of the pathogen(s) concerned. The work must be supervised.</td>
<td><strong>The laboratory</strong> should: be easy to clean, be sealable to permit fumigation, sited in an isolated part of the building and access be limited to authorised personnel, provide adequate space for each person (24m²), have entry through an airlock with the outer door labelled with a ‘work in progress’ sign, include an observation window, etc, so that occupants can be seen, provide a telephone or other means of outside communication, have effective disinfectants available for immediate use, have an efficient insect and rodent control programme and provide high-performance respiratory protective equipment for use in an emergency. <strong>Workers in the laboratory</strong> should: be accompanied by at least one other competent person to assist in case of an emergency, wear a complete change of clothing in the laboratory unit and shower before leaving, not eat, chew, drink, smoke or apply cosmetics, not practise mouth pipetting, conduct all laboratory procedures with infective materials in a Class III microbiological safety cabinet, store all infective material in the laboratory unit and nowhere else, make all material safe before removal (which must be conducted by a safety officer) from the laboratory. <strong>Waste material</strong>: should be transported in robust containers without spillage.</td>
</tr>
</tbody>
</table>
8.29 On 20 May 1988, having consulted MAFF on an earlier draft, HSE issued a
circular entitled ‘Bovine Spongiform Encephalopathy (BSE)’ to Area Directors and
Inspectors. The circular set out to alert Inspectors on the likely risks to handlers
arising from changes in the behaviour of affected animals.\textsuperscript{3374} On health and safety
it stressed:

There is no evidence that cattle have become diseased by contact with
animals of other species nor that any other species have been diseased by
contact with live cattle or products from cattle.

There is some risk of physical injury when handling affected animals
\textit{e.g.} loading/unloading during transport to an abattoir and in this respect
hauliers may be at particular risk.\textsuperscript{3375}

\textbf{Dr Pickles alerts HSE to the Southwood Working Party’s concerns}

8.30 In vol. 4: \textit{The Southwood Working Party, 1988–89} we discuss the first meeting
of that Working Party, on 20 June 1988. One of the matters covered was the
occupational health risks associated with BSE.\textsuperscript{3376} It was agreed that Dr Pickles
should make enquiries into the health and safety aspects of BSE.\textsuperscript{3377} Accordingly,
on 24 June 1988 she wrote to Dr Gompertz enclosing some background material
prepared for the Working Party.\textsuperscript{3378} This included a list of questions, tabled by
Sir Richard Southwood, and the answers that had been supplied. One of these
asked:

15. What are the theoretical routes to man of parts/products of cattle,
especially dairy cattle, before and after slaughter? \textsuperscript{3379}

8.31 The answer (which had been provided by Dr Pickles herself) listed some of
the potential occupational routes of transmission:

- surface contact with outer-hide: cowhands, vets, slaughtermen,
tanners, leather workers
- surface contact with udders/milk: cowhands/dairymen
- surface contact with blood, flesh, brain: slaughtermen, butchers, cooks
- aerosol inhalation of blood: slaughtermen?
- inoculation of blood: vets during needlestick injuries
- surface contact with saliva, semen, placenta, blood and amniotic fluid
during calving: cowhands, vets
– surface contact with misc. products: workers in various industries e.g. rendering, some pharmaceuticals

– laboratory workers exposed to fetal calf serum.\textsuperscript{3380}

**8.32** Dr Pickles suggested to Dr Gompertz:

The HSE interest could be two-fold, firstly in assessing whether occupational exposure to BSE has led to human disease, and this might be the only way we could ever know if the agent is pathogenic to humans, and secondly in reducing occupational risks.

. . .

There is also the issue about what protection if any is needed for those who have to continue to handle infected brain. The virologists examining brains take precautions (although I do not know if this is up to CJD standards). What precautions should be recommended for them, or others handling material from known affected cattle?\textsuperscript{3381}

**8.33** As a result, a meeting was called some weeks later (9 September 1988). We discuss this below.

**CVL lead on guidance for veterinary laboratory workers**

**8.34** In the meantime, following enquiries about the potential risks involved in handling material from suspect BSE cases, MAFF had been giving consideration to the safety of its own staff. In July 1988, Mr Sweasey circulated guidelines for handling BSE material in the laboratory among the Superintending Veterinary Investigation Officers (SVIOs, MAFF). The guidelines, entitled ‘Safe working procedures’, were for use by MAFF staff at Veterinary Investigation Centres (VICs). They advised on necessary safety procedures when handling instruments, brain removal, storage, incineration, disinfection, protective clothing, fixation and accidental contamination when handling BSE material.\textsuperscript{3382}

**8.35** Also in July 1988, Dr Cawthorne (Head of the Veterinary Investigation Section, SVS, MAFF) sent an internal minute to all the SVIOs attaching guidance entitled ‘Health and Safety at Work’.\textsuperscript{3383} This gave advice in respect of both the ‘physical’ and ‘infectious’ risks whether in the field or in the laboratory. On physical risks it advised:

No action should be taken that will present a risk of injury. As behavioural changes will vary from case to case, as will handling facilities on farms, each case should be assessed on its merits. In determining action to be taken Ministry Staff should remember they have a responsibility towards farm staff as well as themselves, just as the farmer and his employees have responsibilities to avoid placing themselves or MAFF employees at risk.

\dots

\textsuperscript{3380} YB88/6.20/7.1–7.25
\textsuperscript{3381} YB88/6.24/1.1–1.2
\textsuperscript{3382} YB88/7.26/1.1–1.4
\textsuperscript{3383} YB88/7.26/12.1–12.4

781
Safety considerations do not end once the animal is dead as procedures for removal, transportation, incineration can all present physical risks if not conducted with care and forethought.

**8.36** On infectious risks, the guidance stated that, while MAFF’s view was that BSE did not present a risk to humans, their actions to date in disposing of the carcasses of suspect cattle were intended to reassure the public and ensure that confidence in beef/dairy products was maintained.\(^{3384}\) It advised that thick rubber gloves be worn at all times when injecting suspects, waterproof clothing be worn if blood spillage was anticipated and no food or drink be consumed after handling. It also advised that all equipment used for stunning, injection or decapitation of suspects be stored and transported in robust containers prior to disposal or sterilisation; that bovine heads transported to VICs be double-wrapped in plastic bags; and that protective clothing be worn when handling nervous tissue, spleen, placenta and uterine fluid. On caesarean section it stated:

Many farmers appear keen to retain cows that are close to calving in the hope that they can at least salvage a calf from the cow. Deterioration is often rapid immediately prior to calving and requests may be received to allow the calf to [be] delivered by caesarean section at or before slaughter.

Despite the absence of a known risk to humans, given that the placenta of sheep infected with scrapie is known to be infectious, caesarean sections are contraindicated.\(^{3385}\)

**8.37** This advice was followed up in November that year by CVL guidelines entitled ‘BSE and Scrapie – Guidelines on Some Safety Aspects – CVL’.\(^{3386}\) These were also for internal use. The guidelines advised that the BSE agent, which had not been listed by the ACDP in their Categorisation of Pathogens (1984), should be treated on a par with the Kuru and CJD agents, ie, Hazard Group 2 pathogens.

**HSE’s initial consideration of the Southwood Working Party’s concerns**

**8.38** Following Dr Pickles’s letter of 24 June 1988, Dr Gompertz and other officials from HSE met with her (9 September 1988). On 12 September 1988, in a minute to others in HSE, Dr Gompertz set out the views they had reached, describing these as ‘tentative opinions of an *ad hoc* meeting’. He said that it had been agreed that there was no need to inform slaughterhouse men, butchers, or those in the animal feed industry about BSE as a hypothetical hazard to man. Hygiene precautions aimed at preventing other zoonoses were sufficient for the time being. He added that just as HIV infections had encouraged those at risk occupationally to improve their normal standards of work hygiene, BSE could be used as a stimulus to do the same with those handling animal carcasses, tissues and products. He emphasised that this should be done under the general umbrella of zoonoses and BSE should not be mentioned at this time.\(^{3387}\)

**8.39** Dr Gompertz also asked for views on whether an HSE/Local authority campaign, based on the prevention of zoonoses generally, should be initiated on.

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\(^{3384}\) YB88/7.26/12.1

\(^{3385}\) YB88/7.26/12.4

\(^{3386}\) YB88/11.25/6.1–6.4

\(^{3387}\) YB88/9.12/5.1
these lines to improve hygiene standards in slaughterhouses, the meat rendering industry, animal feedstuff manufacturers and veterinary pathology laboratories and among producers of biological pharmaceuticals.3388

8.40 The suggestion did not meet with universal approval. Others at HSE responded that there were clear differences between the initiative based on BSE and the AIDS campaign. For instance, Dr Cottam (Microbiology Unit, HSE) said that AIDS presented a real risk to man of an incurable disease by a known route of exposure. In his opinion, BSE was not likely to be of significant risk to man. Also, there was generally insufficient information on the incidence of occupationally acquired zoonoses to initiate a campaign that would have the same impact as the one on AIDS.3389 He advised:

Different standards and approaches to safe working are required for such diverse activities as slaughterhouses/meat renderers and the producers of biological pharmaceuticals. Also different ‘hygiene precautions’ are required for different zoonoses.

8.41 In September 1988, HSE’s Medical Division issued an internal memo informing others in the HSE about the latest developments. This stated:

There has recently been publicity about a new disease, BSE, which has been found in cattle in the UK. It is currently thought that this disease which only affects cattle, represents a cross species infection by the scrapie agent of sheep. There has also been speculation that a similar species transfer could occur leading to infection in humans.

Investigations carried out so far suggest that infection in cattle could have resulted from the practice of feeding concentrated animal protein obtained from offal (including brains) which contained the scrapie agent. On present evidence there is no indication that infection would be transmitted to humans in the same way.

Medical Division have opened discussion with representatives of the DoH and MAFF in respect of any possible occupational implications. It was agreed that there is no immediate need to inform slaughterhouse men, butchers, or those in the animal feed industry, about BSE as a hypothetical hazard to man . . . It was felt that just as HIV infection has encouraged all at risk occupationally to improve their normal standards of work hygiene, HSE could use BSE as a stimulus to do the same with those handling animal carcases, tissues and products. However, this should be done under the general umbrella of zoonoses and BSE, should not, at this time, be singled out . . . 3390

8.42 The memo noted that CVL had produced guidelines for those in the MAFF veterinary service conducting post-mortem examinations on infected cattle, and that ‘any others carrying out similar work should be encouraged to seek advice from CVL’.3391

3388 Ibid.
3389 YB88/9.30/9.1
3390 YB88/9.00/5.2
3391 Ibid.
Some weeks later (on 7 November 1988) Ms Maureen Holkham of HSE’s Education NIG wrote to Mr Garstang of HSE’s Medical Division about the reactions of the Health Services, Education and Food NIGs to Dr Gompertz’s minute of 12 September 1988:

Within some higher education establishments, experimental and teaching work using a variety of animal species is extensive and the (unknowing) use of animals infected with zoonotic agents (including BSE) presents a foreseeable risk to health. However, the level of control exercised over incoming animal stock and the general environment probably helps to limit routes of infection. The NIG is aware of only one incident to zoonotic infection in this sector, namely an outbreak of Q-fever at Bristol University in 1981 (15 people infected in animal house and veterinary school laboratories following post-mortem examination of sheep).

Because of the low incidence of infection, the Education NIG could not advocate that a high priority be given to a hygiene standards campaign. Obviously, other NIGs may have different experience, and if an HSE campaign is sanctioned, we would like to keep an overview.3392

Mr Garstang passed this on to Dr Gompertz on 24 November 1988, advising that although the Health Services, Education and Food NIGs acknowledged a foreseeable risk to health from BSE within their sectors, there was minimal evidence of zoonotic infection within the Factory Inspectorates area of work. There was little evidence to support the need for a campaign to improve hygiene standards.3393

Although it does not appear to have been referred to the Education NIG, a school safety issue concerning the dissection of bovine eyeballs had arisen separately. This is reviewed in the Chapter 9: Bovine Eyeball Dissection.

Further involvement of Dr Pickles and the Southwood Working Party

On 15 November 1988, Dr Pickles wrote to Dr Gompertz updating him on the Southwood Working Party’s progress.3394 She said that the Report was likely to state that HSE had been alerted to the possibility of occupational exposure and had been asked to take any steps thought appropriate. The Southwood Working Party also wished to draw particular attention to those who handled placenta, which was considered a particularly potent source of infection.

In the meantime, HSE promoted general improvement in work hygiene standards in response to occupational queries about BSE.3395

Sir Richard Southwood raises health and safety aspects of calving and lambing

On 24 November 1988, at a meeting with Ministers and the CMO, Sir Richard Southwood raised his concern about health and safety aspects of handling
Mrs Shirley Stagg (Principal Private Secretary to the Minister) sent Mr Cruickshank (Under Secretary, MAFF) a minute of the meeting which noted:

Sir Richard was concerned about health and safety aspects of handling animals when slaughter took place on the farm or when handling calving (the placenta of animals was considerably infected). If people were handling animals and had lesions in their skin then they could become infected with material from the animal. Current HSE regulations were not adequate to deal with this. Mr Meldrum was concerned that to introduce new precautions would escalate the issue unnecessarily when we were saying there was no hazard to man from BSE or indeed from scrapie. Sir Donald [Acheson] pointed out that there was doubtless a code of practice for people handling infected animals at CVL. Mr Thompson thought that it should be possible to produce a sensible code of practice governing the slaughter of animals on farm. He was however concerned about precautions for calving and lambing. Sir Richard thought that the point could readily be dealt with by warning people about handling animals if they had lesions in their skin. This could be a very general warning and need not be alarmist. It could possibly be incorporated in HSE rules.

8.49 At the Southwood Working Party’s next meeting, on 16 December 1988, the members agreed that HSE’s current line was appropriate. This was not to provide specific advice about BSE but to advise those generally coming into contact with livestock on the risks from ‘zoonoses’.

1989

The Southwood Report

Occupations identified for HSE’s consideration

8.50 On 9 February 1989, Dr Pickles sent an advance copy of the forthcoming Southwood Report to HSE. The Report was published on 27 February 1989 and in addressing the possible transmission routes of BSE it concluded:

The greatest risk, in theory, would be from parenteral injection of material derived from bovine brain or lymphoid tissue. Medicinal products for injection or surgical implantation which are prepared from bovine tissues, or which utilise bovine serum albumin or similar agents in their manufacture, might also be capable of transmitting infectious agents . . .

8.51 The Report went on to raise concerns for certain occupations:

Direct inoculation of bovine tissue could also occur accidentally in certain occupations, such as slaughtermen, veterinarians and laboratory workers.
Guidance on safe working practices in general are drawn up by the Health and Safety Executive who have been alerted to the potential concern about BSE and in particular to the possible infectivity of placentae. No specific additional guidance on BSE is thought appropriate at this time. However, adherence to recommended procedures in handling animals and animal products is clearly very important.\textsuperscript{3401}

8.52 The Report recommended:

\ldots the potential problems caused by BSE are brought to the attention of the Health and Safety Executive who can consider whether further guidance should be given to such groups.\textsuperscript{3402}

8.53 The Southwood Working Party’s proposals on potential research areas included the surveillance of humans at risk and formal monitoring of CJD cases, particularly in occupational groups exposed to bovine tissues. For a full discussion of the Southwood Working Party and the \textit{Southwood Report} see vol. 4: \textit{The Southwood Working Party, 1988–89}.

8.54 The Government’s press release which accompanied the publication of the Southwood Report stated:

The Health and Safety Executive will be considering what further action is necessary to ensure that the existing guidance to occupational groups involved with cattle is followed: this guidance outlines hygiene procedures which are considered to be appropriate for BSE.\textsuperscript{3403}

\textbf{HSE’s, MAFF’s and DH’s initial response to the \textit{Southwood Report}}

8.55 On 1 March 1989, HSE sent a circular headed ‘Bovine Spongiform Encephalopathy’ to its Area Directors and Inspectors of Factories and Agriculture. This advised Inspectors about guidance to handlers of animals, carcasses, tissues and products following previous guidance of May 1988 (see paragraph 8.29). It drew attention to the Southwood Report and advised that normal hygiene precautions prescribed for the prevention of zoonoses were adequate for the present time. It said:

Medical Division have had discussions with representatives of the DoH and MAFF in respect of any possible occupational implications. It is agreed that there is no immediate need for any new precautions for those handling cattle, their products, or those in the animal feed industry, in respect of BSE as a hypothetical hazard to man. The adoption of those hygiene precautions prescribed for the prevention of zoonoses in the various occupations is all that is needed at the present time. It is thought that just as AIDS (HIV) infection has encouraged all at risk occupationally to improve their normal standards of work hygiene, we should use BSE as our stimulus to do the same with those handling animals, their carcases, tissues and products.

\textsuperscript{3401} IBD1 tab 2 para. 5.3.4
\textsuperscript{3402} IBD1 tab 2 para. 8.3
\textsuperscript{3403} YB89/3.09/6.1. The final press release by MAFF on 26 May 1989 (YB89/5.26/3.3) referred to the HSE’s role in the following, slightly different, terms: ‘A review by the Health and Safety Executive to determine what guidance may be appropriate in relation to all diseases of animals, including BSE, that may present a hazard during occupational exposure’
However, this should be done under the general umbrella of prevention of zoonoses and BSE should not, at this time, be singled out.3404

**8.56** On 1 March 1989, Dr Gompertz minuted others at HSE about the latest initiatives following the *Southwood Report* on BSE. As suggested by Dr R Nourish (Head of Occupational Hygiene Biosafety and Environment Unit, Technology Division 4, HSE),3405 a cross-divisional task group was being set up to decide HSE’s policy, operational advice and research requirements concerning various zoonoses. Also, the role of ACDP was being discussed with Dr Tyrrell (Chairman of the ACDP and also Chairman of the recently formed Consultative Research Committee on BSE: the ‘Tyrrell Committee’).3406 Appropriate representatives from the relevant NIGs would also be invited to attend meetings.3407

**HSE, MAFF and DH consider the need for further guidance**

**8.57** On 9 March 1989, Mr Lawrence wrote to Dr Gompertz about follow-up to the *Southwood Report*. He suggested that they should meet to discuss the development of written guidance for the occupational groups outside MAFF most likely to come into contact with affected cattle: farmers and farm workers, knackermen and personnel working at the disposal sites.3408 Dr Gompertz wrote back on 14 March 1989, stating that HSE were discussing the matter internally to review their response to BSE and that he would contact MAFF following that.3409

**HSE meeting on BSE: slaughterhouses identified as a potential problem**

**8.58** On 29 March 1989, Dr Gompertz chaired a meeting to establish an HSE policy line on BSE in response to events arising from the *Southwood Report*, and to consider the adequacy of HSE’s existing general guidance in relation to BSE risks.3410 The group also discussed whether there was a need to provide specific guidance for butchers, slaughterhouses and veterinarians.3411

**8.59** They agreed that if there was any danger of transmission of BSE this was most likely to occur within the slaughterhouse. It was noted that slaughterhouses were mainly a local authority responsibility and that HSE had not traditionally carried out much work in that area. However, although there could be some overlapping of responsibility, the 1974 Act needed to be enforced there. There was also a need to improve hygiene standards and provide guidance on general precautions.3412 It was agreed that the Medical Division would take the policy lead and that, as suggested by Dr Nourish earlier in March (see above), a cross-divisional task force on

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3404 YB89/3.01/5.1
3405 Head of Occupational Hygiene Biosafety and Environment Unit, Technology Division 4, April 1990–April 1991, HSE.
3406 Dr Nourish held several posts within HSE between November 1984 and March 1996; see S555 Nourish para. 1
3407 The Tyrell Committee was a new Committee to advise on, coordinate and oversee research work on TSEs, and had set out the terms of reference and the areas of research to be considered. The establishment of such a Committee had been recommended in the Southwood Report and its establishment was publicly announced by way of a press release on 17 February 1989. For a detailed description of this see vol. 11: *Scientists after Southwood*
3408 YB89/3.01/7.1; see also YB89/03.01/6.1
3409 YB89/3.09/6.1–6.2
3410 YB89/3.14/8.1
3411 YB89/5.09/6.2
3412 Ibid.
zoonoses (CDTFZ) would be established and meet on 9 June 1989. A meeting between HSE, MAFF and DH was also agreed for that date.

8.60 The meeting concluded, among other things:

Initially there was some concern expressed that it might appear that HSE did not seem to be taking positive action in this area. Dr Nourish urged the meeting to be more confident and pointed out that HSE had carefully considered the Southwood report, and had taken heed of its recommendations. HSE had used its expertise in hazard/risk assessment and its suggested approach of minimising risks by upgrading general hygiene precautions was consistent with current information on hazards and risks of the agent. Slaughterhouses in particular had been identified as a potential problem area and guidance to improve general hygiene was being proposed; while for laboratory work, a link to ACDP containment level 2 was being suggested and that taken together this was a reasonable line to take on all the available evidence. 3413

HSE advised by Dr Tyrrell

8.61 On 12 April 1989, Dr Gompertz, Mr Lister and Dr Nourish met with Dr Tyrrell. 3414 Dr Tyrrell told them that he hoped to have agreed a document on research proposals by May. He advised that, at that time, it was best to continue by analogy with scrapie, which was not highly infectious and in respect of which there was no evidence of transmission to man. In the present state of knowledge, hygiene was important. 3415 Dr Mayatt told us:

The matters discussed at that meeting confirmed in our minds that we were on the right track as regards the HSE’s response to BSE, primarily that good hygiene practices were the most effective response and that the occupational risk was still conjectural. 3416

MAFF ask for interim advice

8.62 On 12 April 1989, Mr Lawrence wrote again to Dr Gompertz expressing concern about the delay before the meeting to be held on 9 June 1989. In the meantime MAFF had been receiving a number of enquiries, particularly from local authorities, about burial of carcasses on waste tips. 3417 He stated:

It will be difficult to remain non-committal for another 8 weeks, and such delay could well provoke criticism and adverse publicity.

In the circumstances I think we must be in a position to provide some guidance now, certainly if asked to do so . . .

8.63 Accordingly, Mr Lawrence proposed to offer four advice points and attached a draft of these. He described them as ‘an adaptation of new instructions which are
going out to our own staff’. The advice was similar to that issued by CVL in July 1988 (see paragraph 8.35). He added:

    . . . we are in regular contact with a number of these occupational groups and as such we are perhaps in the best position to offer advice.3418

8.64 Mr Lister replied on behalf of Dr Gompertz on 24 April 1989.3419 He stated that, in the circumstances and subject to a few amendments, the advice was suitable.

8.65 On 26 May 1989, in response to a Parliamentary Question about Government action on BSE, MAFF issued a press release listing 14 measures that had been taken by the Government thus far.3420 One of the measures listed was:

    A review by the Health and Safety Executive to determine what guidance may be appropriate in relation to all diseases of animals, including BSE, that may present a hazard during occupational exposure.3421

The HSE BSE Working Group and the CDTFZ meetings

8.66 The HSE BSE Working Group (BSEWG) and the Cross-Divisional Task Force on Zoonoses (CDTFZ) met separately until the groups merged in May 1990. The following section charts their deliberations.

First meeting of HSE BSE Working Group: division of responsibilities between MAFF, DH and HSE

8.67 As agreed at the HSE meeting on 29 March 1989, the HSE BSE Working Group met for the first time on 9 June 1989.3422 Mr Maslin and Dr Matthews attended from MAFF. Dr Pickles and Ms McGinty attended from DH. Dr Mayatt’s handwritten note of the meeting recorded: ‘BSE and MAFF: Media driven problem largely: MAFF has to be seen to be taking action’.3423 The formal note of the meeting recorded that MAFF and DH reported that bovine offal (eg, spinal cord, spleen) would be banned for human consumption in the near future and this might well increase concerns about worker safety in the slaughterhouse and butchery trades. The meeting agreed on occupational groups thought to be at risk. These included stockmen, market handlers, vets, slaughterers, fell mongers3424, knackers, renderers, farmers, laboratory workers, those working at incinerator plants, inseminators, and local authority Inspectors. MAFF considered that farmers, vets, slaughtermen, knackers and (peripherally) butchers needed to be given advice urgently.3425 Dr Mayatt told us:

    As to the list of occupational groups likely to be at risk recorded at paragraph of the minutes, I believe these were arrived at by a brainstorming exercise. I
do not recall an attempt to prioritise these groups. Although I have recorded in my own handwritten notes of this meeting MAFF’s comments that there was a need for urgent advice for veterinary practitioners, I was really only recording the comment. It did not mean that the HSE endorsed the view or would act on it.3426

8.68 There was also discussion of the type of guidance necessary but no agreement was reached. It was thought that a leaflet suitable for the farming community, inspectors and the general public would not necessarily be suitable and useful in slaughterhouses.3427

8.69 It was decided that HSE would lead on advice to slaughterers and consult with the representatives from the meat industry and trade unions. MAFF would take the lead on advice to those dealing with live animals including stockmen, vets and handlers in general. They were to consult initially with the British Veterinary Association (BVA) and later with the relevant trade unions. DH had already asked pharmaceutical manufacturers to provide lists of products based on bovine tissue.3428 Specific advice to butchers was not thought necessary at this stage, although it was felt that this area should be given some consideration.3429

8.70 Mr Lister said that the forthcoming 1990 ACDP report ‘Categorisation of Pathogens’ was to include an appendix on slow viruses in general and a reference to BSE. However, as there was no evidence that BSE was pathogenic to humans, it had not been given a Hazard Grouping.3430

First meeting of the CDTFZ: BSE not on the list

8.71 The CDTFZ also met for the first time on 9 June 1989. The meeting was chaired by Dr Gompertz and attended by several other officials from HSE as well as both Food and Health NIGs.3431 In his introduction Dr Gompertz reminded the meeting that the need to constitute the group had arisen following the recent concern about BSE and subsequent MAFF approaches to HSE for advice on worker protection. Several Parliamentary Questions had been answered by referring to this task force.3432 It aimed to prepare guidance for three groups: HSE staff (including Inspectors), external professionals such as GPs, and vets and other workers who might be exposed to zoonoses.3433

8.72 The meeting began by agreeing a list of zoonoses that should be dealt with as a priority. The members went through a list of zoonoses from an existing publication and selected 16 for initial consideration. The list did not include BSE.3434

8.73 Having attended both the HSE BSE Working Group and CDTFZ meetings on 9 June 1990, Mr McLean minuted Mr North on 13 June 1989. He expressed concern at HSE’s role in giving guidance to abattoir workers which MAFF and DH had considered necessary. On the HSE BSE Working Group meeting he stated:
It was obvious from the input from MAFF and the Department of Health that these other Departments are much more concerned about the problem of BSE than was HSE since we had taken several months to arrange this particular meeting.

It appears that the problem so far as MAFF is concerned is the need to be seen to be doing something since the problem is driven by both media and questions to the Minister in the House. MAFF have given advice to their own veterinary officers and have also given advice generally to veterinarians who may be involved in cattle infected by BSE. Whether advice to veterinarians not employed by MAFF is for MAFF or for HSE to give was rather glossed over . . .

As a result of the pressure from MAFF it was agreed at the meeting that a fairly general press notice could be issued giving interim advice on health and safety in handling BSE carcasses. This, however, was regarded very much as a first step and there was a need perceived by both MAFF and the Department of Health to give somewhat more detailed advice on the health and safety precautions which should be adopted in abattoirs.

We managed to resist the commitment to produce definitive and detailed advice on this since it is a problem to which we have directed no attention in recent years and we have no idea at this stage about any additional precautions which we might wish abattoir owners to take to protect from what is at this stage only a hypothetical risk . . .

8.74 He stated that ‘stop gap’ guidance had been arranged but that the issue would be discussed further at a forthcoming meeting on 26 July, which he hoped Mr North would attend. He considered that because of the lack of evidence as to whether the BSE agent created a hazard to health, any decision would be difficult to enforce in the industry. He stated:

I see your role at that meeting to be about as obstructionist as possible and to make sure that people realise the great difficulties in actually pressing the abattoir owners to do anything unless we can actually prove some risk.

8.75 Mr McLean told us:

In asking Mr North to be ‘about as obstructionist as possible’ at subsequent meetings I was aware of the pressure by other government Departments and other parts of HSE who appeared to feel that the NIG would be in a position to develop a clear strategy to counter any risk to abattoir workers who might be affected by BSE and to enforce whatever precautions were felt to be appropriate. Because of our lack of knowledge about the risk and about ways of avoiding the risk, I felt that we had to resist these pressures and only agree to do what we could actually deliver in practice.
Slaughterhouse visit indicates problems with guidance for workers

8.76 On 13 July 1989, Mr Lister sent Dr Gompertz a report of his visit to the biggest slaughterhouse in the country. He had been convinced that gross exposure to blood was virtually unavoidable in the slaughtering business. Nearly all the staff using knives and saws routinely wore metal aprons, chain mail gloves and forearm guards on the holding hand/forearm, but the knife hand was most commonly bare. He stated:

I think we should speak before we issue any further guidance on occupational exposure to infection in the meat trade. The scale and pace of work in this slaughterhouse would make it very difficult to insist on any additional precautions that were not patently effective in reducing exposure. This unit is well run and well kept but contamination of personnel is unavoidable despite the use of protective clothing. Skin exposure was very marked in some parts of the operation. In the cutting and boning rooms at least, if not right through the process, workers are paid by the weight of meat shifted and this would discourage any impediment. Nevertheless the vet and the safety officer confirmed that the staff are concerned about BSE and it is clear that in smaller units especially those with no vet screening the incoming stock an infected animal could easily get into the system.

There is more but this can wait until we next meet. Meanwhile I plan to arrange a visit to a smaller less well-equipped company.

8.77 On 25 July 1989, following the suggestion at the HSE BSE Working Group meeting on 9 June, a consultation meeting with MAFF, DH and Mr F J Anthony from the BVA was held to discuss guidance, in the form of a press release, for worker protection against BSE. Mr Anthony said that the press release would need to include specific guidance on handling/disposing of placentae. MAFF stressed the importance of early issue of the press release (prepared and agreed by HSE/MAFF), a draft of which had already been agreed. The main action arising from the meeting was agreement that BVA would produce its own guidance for the veterinary profession, to be discussed further with HSE and MAFF on 21 September 1989. After this, simplified guidance could be developed for farmers and farm workers.

HSE issues a news release for groups ‘occupationally exposed’ to BSE cattle

8.78 HSE issued the news release, entitled ‘Guidance for those Handling, Carting and Disposing of Known or Suspected BSE Carcases’, on 8 August 1989. This stated:

HSE’s advice is being issued following the report of the independent scientific working party chaired by Sir Richard Southwood which was published in February and examined all aspects of BSE. The Report
recommended that HSE should consider possible exposure of various occupational groups to the BSE agent.

HSE considers the risk to human health is remote but says that it is very important that all those who come into contact with known or suspected BSE carcases, (for example when handling, carting or disposing of them) observe the following reasonable procedures:

a. protective clothing should be worn, including gloves. After use, clothing should be rinsed free of any debris and washed with water and detergent;

b. eye protection should be worn if there was a risk of splashing into the eyes;

c. cuts and abrasions should be covered with waterproof dressings. Care should be taken to avoid puncture wounds and cuts when handling known or suspected BSE carcases. Injuries should be washed thoroughly in running water;

d. hands should be washed before eating, drinking or smoking;

e. contaminated areas (including transport) should be washed down with detergent and water;

f. all accidents should be recorded . . .

8.79 The press release also stated that guidance for abattoir workers and other occupational groups would be issued shortly. 3442

8.80 Later, in December 1989, HSE issued an ‘Agricultural Information Sheet’ entitled ‘Zoonoses in agriculture: Preventing the spread of disease to livestock handlers’. 3443 It was aimed at people working with livestock in agriculture and associated industries, as there were ‘risks to health from a number of diseases carried by cattle, sheep, pigs, poultry, deer and rodents’. It gave some advice about minimising the risk of infection by animal diseases generally and mentioned briefly that BSE was the most recently identified disease of cattle but that there was no evidence that it could be transmitted to humans.

Second meeting of HSE BSE Working Group: draft guidance for slaughterhouse workers discussed

8.81 The HSE BSE Working Group met again on 11 September 1989. 3444 The group discussed guidance for abattoir/slaughterhouse workers, a draft of which had been prepared by MAFF as agreed on 9 June. Dr Pickles thought that the draft appeared too ‘complacent’, as it was not apparent from it that expert opinion was that penetrating injuries were a possible cause of concern. 3445 It was agreed that Mr Lister would redraft it. 3446 However, the point had still not been clarified by the end of the year when, in December 1989, Dr Pickles in a letter to Ms Julia Soave (HSE) stated that she still felt ‘very uneasy about the draft note on abattoirs’. She pointed out a slight contradiction within the guidance:

The impression is given that if the abattoir worker follows the current rules and regulations (which are claimed here to be designed to protect the worker
from zoonoses rather than the meat from infected workers), then there should be no problems. It is thus implied that if the worker does eat or smoke, for example, there would be a risk. But nothing is further from the truth. We do not believe there is any real risk from oral or topical exposure, even if BSE animals are being slaughtered, and every abattoir worker will know that that happens sometimes.

At the same time, it may be that not enough attention is given to these areas where there may be real risk ie parenteral exposure to certain tissues. 3447

8.82 Mr D R Fry (Head of Branch C, Meat Hygiene Division, MAFF) had taken a narrower view when consulted about the draft guidance. In a minute to Mr Maslin, Mr Fry said that certain sections of the draft guidance implied that the rules had been developed for BSE when in fact almost all of it was required by existing legislation. He stated:

I would have thought that the message we should be trying to convey is that if slaughterhouse operators and workers observe the existing hygiene rules they need do very little extra to protect themselves. 3448

Second meeting of CDTFZ

8.83 On 16 November 1989, the CDTFZ met again. 3449 Ms Howe, a representative from DIAS (HSE’s publications section), was present. The meeting was mainly devoted to the 16 zoonoses detailed at their June meeting.

8.84 During discussions relating to a Leptospirosis 3450 card, the minutes record:

Although not within the remit of this group it was agreed that as Ms Howe was present this meeting would provide a useful opportunity to discuss guidance on BSE. It was explained to Ms Howe that what was envisaged was a ‘card’ for those handling BSE infected/possibly infected cattle, a guidance leaflet for abattoir managers and later a more general leaflet for abattoir managers and later a more general leaflet relating to working practices aimed at abattoir workers.

Mr Lister pointed out that much would depend on the upcoming meeting with abattoir managers.

Members having discussed briefly the possible distribution of the ‘card’ e.g. agriculture Inspectors, Vets, hauliers dealing with infected carcases, Ms Howe agreed that she now had some idea of the numbers required. 3451
Third Meeting of HSE BSE Working Group: consultation with representatives from the meat industry and trade unions and advice to slaughterers

8.85 HSE had agreed to take the lead on advice to slaughterers at the meeting on 9 June 1989. They met with representatives from MAFF, DH, the meat industry and trade unions on 13 December 1989. The minutes of the meeting record that Dr Gompertz pointed out that under the Control of Substances Hazardous to Health Regulations (COSHH) a risk assessment was required, but that in the case of BSE it was not known what the risks were. The COSHH Regulations controlled exposure to hazardous substances (e.g., chemicals and human pathogens).

8.86 Mr M Symons (Federation of Fresh Meat Wholesalers) queried the need to issue a document on BSE and asked why BSE was being used as a vehicle to improve hygiene standards, stressing that this could damage the industry. He suggested that HSE could focus on the parts of the job that were BSE-related, for example, removing the brain from the skull. He stated that he was unable to comment on the guidance without further consultation. However, Mr Russell (USDAW) indicated that they were in favour of the guidance and that further consultation on this could be channelled through the HSE Joint Working Party on the Meat Trade.

8.87 It was agreed that Dr Gompertz would redraft and circulate the guidance for comment.

8.88 Mr North’s note of the meeting recorded that DH had pointed out:

On the one hand there is some evidence from scrapie in sheep that a similar type virus has not been transmitted but on the other hand humans are capable of infection with this type of virus – CJ Disease. The experimental evidence to date is that it is only by injecting high titres into the brains of mice that transmission has occurred therefore lower concentrations of virus through occupationally likely routes of infection should give a much lower risk of infection even if the virus was transmissible. Against this background, it is rather difficult to explain why the Government has recently banned the supply of offal into the human food chain: it is really a political/presentational step.

8.89 Mr North’s note continued:

3452 YB89/12.13/13.1–13.7. Attendees were Dr Gompertz (Chair), Mr Beeson Snr, Mr Beeson Jnr, Mr M Symons (Federation of Fresh Meat Wholesalers), Mr M Gordon and Mr D Russell (USDAW), Mr North (HSE), Dr Pickles (DH), Ms McGinly (DH), Dr Matthews (MAFF) and Ms Soave (HSE)
3453 YB89/12.13/13.3
3454 L19 tab 10
3455 DO01 tab 11 p. 2. ‘Inquiry into BSE: Information from the Health and Safety Executive’. In 1994 specific requirements for biological agents (human pathogens) were added to COSHH. This implemented directive 90/679/EEC on the control of risks from exposure to biological agents (bacteria, viruses, fungi and parasites) at work (L18 tab 24). This included a general requirement for risk assessment and control measures for all work activities that may involve exposure to biological agents. Specific control measures and other requirements were added for intentional work with biological agents in laboratories or animal rooms
3456 YB89/12.13/13.4. The Meat Trades Joint Working Party was an industry and HSE group chaired by the HSE. It had operated for a number of years and in the food sector the working party was a major avenue for promulgating guidance. It had its own guidance notes published by the British Meat Manufacturers’ Association (BMMA). The guidance notes published by the Meat Trades Joint Working Party would be distributed among the constituent members of the associations on the working party but the HSE would also raise awareness of them through journals, conferences and other available avenues; see SS31 North para. 5
3457 YB89/12.13/13.7
3458 YB89/12.13/14.1
In the discussion, it was agreed that guidance was necessary because of ministerial pressure, concern which was present in the trade (although the diagnosis was that reassurance was the most appropriate information) and that HSE needed to provide an informed hazard assessment of the risk.


It was highlighted that whilst the existing product safety regulations – ie. good hygiene – would also guard employees against the risk of infection, in the particular case of BSE, guidance founded only on good hygiene would miss the point. BSE precautions are specifically in relation to penetration and contamination with named higher risk products.

It was therefore agreed that HSE would provide a first draft of guidance for subsequent discussion highlighting these aspects. At this stage, the guidance would probably have to end at avoiding penetrating injuries – how that might be achieved would have to be left for more detailed secondary stage more specific guidance.\textsuperscript{3459}

1990

**Guidance for veterinary surgeons, slaughterhouse workers and farmers**

**MAFF takes the lead on guidance for veterinary surgeons**

**8.90** As agreed on 25 July 1989, MAFF, in consultation with the BVA, produced a circular entitled ‘Guidance for Veterinary Surgeons handling known or suspect cases of BSE’ in January 1990.\textsuperscript{3460} This covered the precautions to be taken during the initial examination of suspect cases, when taking and handling blood samples, during and after the calving of a BSE suspect and during post-mortem examination of a BSE suspect. The precautions included:

i. isolating the animal away from noise;

ii. ensuring free access to exits for those dealing with the animal;

iii. handling such animals firmly but quietly;

iv. arrange for the animal to be restrained safely, preferably in a crush (animal handling crate);

v. wearing plastic or latex gloves for oral cavity examinations;

vi. disposal of gloves by incineration;

vii. recommendation to use vacutainers rather than syringes when taking blood samples;

viii. proper disposal of needles;
 ix. protective clothing to be worn during calving;
 x. minimal handling and safe disposal of placentae;
 xi. protective clothing during post-mortem examination;3461
 xii. proper disinfection routines.

8.91 On 26 February 1990, HSE issued a circular to its Area Directors and Inspectors drawing their attention to the January guidance for veterinary surgeons and stating:

Whilst the guidance (prepared in consultation with the British Veterinary Association and HSE) is aimed primarily at veterinary surgeons, it does contain information and guidance which may be relevant to others engaged in agriculture and similar occupations.

... Inspectors may use the guidance as appropriate when giving advice on BSE.3462

HSE guidance for slaughterhouse workers and the issuing of ‘BSE cards’

8.92 On 14 February 1990, Dr Matthews wrote to Dr Gompertz about the pending guidance notes for abattoir workers, stating that MAFF were ‘receiving some criticism, especially from veterinary quarters, for not issuing earlier guidance’.3463 He pointed out that this might have been prompted by MAFF’s circulation of the guidance notes to veterinary surgeons.

8.93 In February 1990, HSE published the pocket carry card entitled ‘BSE and carcase disposal’.3464 This was aimed at those handling the carcasses of BSE-infected cattle and gave HSE contact telephone numbers, addresses and bullet point advice stating:

In the UK cows suffering from BSE are now slaughtered and their carcases taken for disposal.

While it is very unlikely that BSE will affect human health, it is important to take reasonable hygiene precautions in handling carcases of these animals.

The precautions suggested here will also protect you from other diseases of cattle known to affect man.

So when handling BSE carcases:

- cover cuts and abrasions with waterproof dressings before work starts;
- wear protective clothing including gloves;

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3461 Post-mortem examination of suspects was not normally permitted unless agreed in advance with the Divisional Veterinary Officer (see YB90/1.00/1.1–1.2 para. 4)
3462 YB90/02.26/7.1
3463 YB90/2.14/9.1
3464 YB90/2.00/1.1
• avoid cuts and puncture wounds during work;
• use eye protection if there is risk of splashing;
• wash your hands before eating drinking and smoking;
• wash down contaminated areas with detergent and water;
• rinse protective clothing free of debris after use and wash with detergent and water;
• report all accidents to your employer.  

8.94 On 23 March 1990, Mr Lawrence minuted Mr Maslin expressing concern about ‘HSE’s inaction’ in giving guidance to occupational groups that might come into contact with BSE. He said that despite pressure from MAFF, HSE’s process had been slow in an area where they and DH should have been taking the initiative for a number of the groups concerned. He commented:

Our problem is that whilst it is for HSE to take the lead in this it is our Ministers who take the flak on any aspect of BSE.  

8.95 He recapitulated the advice issued so far:


– To those handling, carting and disposing of suspected BSE carcases issued in August 1989 – but not in the final form we would have liked.

– General advice on zoonoses in agriculture – issued by HSE in December 1989 – BSE gets a mention but on the basis that there is no evidence of a risk for humans.

– Advice to veterinary surgeons – issued by MAFF in January 1990.

Farmers are advised about BSE, including safety aspects, when disease is suspected but a general note will shortly be going to all cattle farmers.

The one major outstanding area is abattoir workers (I think it was this aspect that led to criticism on Face the Facts). I believe that HSE are close to finalising this.  

8.96 In the event, the guidance prepared jointly by the Meat Trades Joint Working Party and HSE (in consultation with DH and MAFF) was issued to the industry later that month. This was entitled ‘Guidance Note 5: BSE’ and advised ‘on the occupational hazards from BSE of handling meat and meat produce in the abattoir and meat preparation industry’. The introduction to the guidance drew attention to the Bovine Offal (Prohibition) Regulations 1989, which had come into force in November 1989. The guidance was also issued as an NIG minute to HSE Inspectors covering the industry.  

3465 YB90/2.00/1.1
3466 YB90/3.23/1.1
3467 Ibid
3468 YB90/3.23/1.2
3469 Ibid
3470 Ibid
3471 L2 tab 3B. For further information see Chapter 3, ‘Introduction of the ban on specified bovine offal’
3471 DO01 tab 11 p. 18 (NIG Minute 21/1990/05)
8.97 The guidance advised on hygiene measures, including wearing protective gear and avoidance of injuries with instruments that might have come into contact with SBO and placentae. Employers were also advised about their responsibilities to provide adequate washing facilities and first aid supplies and to ensure a high standard of general housekeeping was maintained.\textsuperscript{3472}

**CDTFZ and discussions on BSE**

8.98 During the early part of 1990 the CDTFZ met twice to consider those zoonoses agreed to be within the group’s remit. BSE was discussed briefly during these meetings. At the third meeting, on 30 January 1990, the layout and content of the BSE cards was discussed.\textsuperscript{3473} At the fourth meeting, on 26 March 1990, Mr North reported on the issue of Guidance Note 5 (see paragraph 8.97) which was being printed by the British Meat Manufacturers’ Association (BMMA) and ‘should reach 90% of abattoirs, very quickly’. The Chairman pointed out that it should be clear that the guidance had been produced by the meat trade in consultation with HSE, MAFF and DH. Mr North also said that a more detailed look at work practices in slaughterhouses was required and this would be taken forward with the HSE/Mead Meat Trades Joint Working Party.\textsuperscript{3474}

**HSE BSE Working Group merges with CDTFZ: guidance for renderers considered**

8.99 At the fifth CDTFZ meeting, held on 31 May 1990, Dr Gompertz raised the question of the future of the HSE BSE Working Group.\textsuperscript{3475} Because the membership of both groups was largely the same and as the HSE BSE Working Group had not met for six months, it seemed sensible to combine the two. There was general agreement although it was pointed out that this was not to imply that the members felt that BSE was a zoonosis. It was agreed that the merged group would be titled Cross-Divisional Task Force on Zoonoses and BSE (CDTFZ & BSE).

8.100 Mr North felt that more detailed guidance was needed for abattoir workers covering the precautions to be taken against dangers of infection from and treatment of the more serious injuries, eg, deep cuts. The meeting also agreed that there was a need to investigate the risk factors related to the inhalation of aerosols in these workplaces. The minutes record:

> It was pointed out that there was also likely to be an increase in the use of band-saws, etc, and generally, unless there was to be a radical change in the way slaughterhouses are run, which seemed unlikely, risks could not be completely eradicated and workers would have to accept this and take sensible precautions.\textsuperscript{3476}

8.101 Mr North pointed out that there was also clearly a need for guidance aimed at workers in the rendering side of the trade. He agreed that this would be produced as guidance from the Food NIG.\textsuperscript{3477} This guidance took two years to produce.
Farming industry on the agenda: MAFF takes the lead

8.102 On 2 January 1990, Mr D Wilks (Senior Agricultural Inspector, HSE) had written to Dr Gompertz questioning the need for written guidance to the farming industry on BSE. There was already guidance for laboratory workers and slaughterers and there was soon to be guidance for veterinary surgeons on handling known or suspect BSE cases. While he recognised the sensitive nature of the issue, he was concerned that HSE were claiming a lack of evidence that BSE was zoonotic yet they were issuing more guidance on BSE than any other zoonoses. In his opinion there was no need to issue further guidance to farmers/farm workers on this subject. He pointed out:

We would not be able to say anything new and would just reiterate the need for some protective clothing, washing facilities and good personal hygiene. 3478

8.103 Dr Gompertz agreed:

I am quite happy to accept your view that there is no immediate need to issue guidance on BSE to farmers and farm workers. 3479

8.104 However, in February 1990, Dr Matthews wrote to Mr Gompertz enclosing draft advisory notes to farmers. 3480 He stated that, despite Mr Wilks’s opinion that no further guidance to farmers was needed, MAFF had already been in the process of producing the notes. In June 1990, MAFF issued ‘Bovine Spongiform Encephalopathy (BSE) Advisory Notes for Farmers’ which included a section entitled ‘Health and Safety’ providing brief guidelines for the management of BSE suspects. 3481 The guidance, which had been agreed with HSE, stated that there was no evidence that BSE was infectious to humans but advised that BSE suspects be isolated and handled firmly but quietly. Whenever animals had to be treated on the farm, whether BSE suspects or not, strict hygiene procedures were to be followed so as to prevent the risk of spreading disease from animal to animal, and from animal to handler. It also advised consultation with a veterinary surgeon about breeding from offspring of cows infected with BSE. The note advised that further health and safety guidance could be obtained from HSE.

Discovery of cats with TSEs and implications for occupational health

8.105 On 10 May 1990, Dr Gompertz received a copy of a minute sent by Dr Pickles to Dr Metters (Deputy CMO) in which she reported the discovery of a spongiform encephalopathy (SE) in a cat. 3482 Dr Pickles identified two possible explanations: either that cats had been susceptible for years and previous cases had gone unrecognised or that a new agent, presumably BSE, was virulent in a way that previous agents such as scrapie had not been. She pointed out that the second possibility was most ‘unlikely’ but more worrying as it ‘challenged the assumption we have made for humans by analogy with scrapie’. 3483 She added:

3478 YB90/01.02/5.1–5.2
3479 YB90/1.05/12.1
3480 YB90/2.14/9.1
3481 YB90/6.00/1.3–1.4
3482 YB90/5.10/4.1–4.2
3483 YB90/5.10/4.1–4.2 at 4.2
The potential hazard for humans from cats can be assessed on the assumption feline spongiform encephalopathy behaves like others in the family, in particular in the way infective agent is distributed. Parenteral exposure to ‘risk’ (ie lymphoid/nervous) tissue are the main concern.

8.106 She stated that accidental exposure in an occupational setting was being referred to HSE and that veterinarians were being informed by BVA. She also pointed out that neurophysiologists and others who experimented on cats might also need advice.\textsuperscript{3484}

8.107 The discovery of SE in a cat sparked off intense media speculation about the transmissibility of BSE and a full description of events is given earlier (see Chapter 4). As described there, during this period the Agriculture Committee produced a report on BSE having received evidence from many quarters.\textsuperscript{3485} DH submitted a memorandum to the Committee outlining its involvement. The memorandum had been agreed with MAFF and HSE. Under the heading ‘Potential Occupational Risks’ it stated:

The Southwood group accepted that accidental inoculation with infected bovine material is a possibility in certain occupations. Laboratory staff working on the brains of BSE animals have adopted strict precautions to avoid such injuries. Advice has also been issued by the HSE to those handling the carcases of infected animals and in collaboration with the Meat Trade Federation also to workers in abattoirs. Additional advice is being considered for farm workers. The Ministry of Agriculture, Fisheries and Food has provided advice to veterinarians after consulting the HSE. The HSE is maintaining a Working Group on BSE and will tailor or modify guidance as and when new information arises of relevance to health and safety.\textsuperscript{3486}

Development of guidance for those working in zoos and zoological gardens with ungulates

8.108 SEs were also being recognised in an increasing range of zoo animals during this period. This led to the production of guidance for those who came into contact with them. On 24 August 1990, MAFF distributed guidance entitled ‘Spongiform Encephalopathies in Zoo Animals’. The section on health and safety had been prepared in consultation with HSE.\textsuperscript{3487} By way of introduction the guidance stated:

Since June 1986, five cases of a spongiform encephalopathy have been found in zoo ungulates. Recent press reports on these cases have highlighted the need for zoos to be vigilant for further cases. These notes give brief general guidance on this type of disease and the procedures that should be followed. Because of the limited knowledge of spongiform encephalopathies in captive zoo species they are largely based on experience of BSE and scrapie.\textsuperscript{3488}

8.109 The guidance advised on:

\textsuperscript{3484} Ibid.\textsuperscript{3485} IBD1 tab 7: ‘Agriculture Committee: Fifth Report: Bovine Spongiform Encephalopathy (BSE)’, 10 July 1990 \textsuperscript{3486} IBD1 tab 7 p. 159 \textsuperscript{3487} DO01 tab 11: ‘Inquiry into BSE: Information from the Health and Safety Executive’ p. 18 \textsuperscript{3488} YB90/8.24/1.1–1.7
i. recognising SE symptoms in animals (including cattle);
ii. procedure for reporting suspected cases to veterinary surgeons and the local Divisional Veterinary Officer of MAFF;
iii. health and safety (including handling affected animals; procedure for treating animals whether suspected of having an SE or not; hygiene practices during handling and calving); and
iv. breeding.

8.110 The guidance further advised that all staff involved with animals should be instructed and trained in identifying symptoms that could be related to BSE. 3489

Meetings of the combined CDTFZ & BSE

8.111 Following the agreement to merge the HSE BSE Working Group and CDTFZ in May 1990, the new combined group did not meet until 6 September 1990. On this occasion BSE was discussed briefly. Dr Ide (Food NIG) and Mr Lister reported that employers in the meat trade saw little need for further guidance and so were not willing to cooperate. The group decided that the most appropriate approach was to seek to have an observer on the Spongiform Encephalopathy Advisory Committee (SEAC). Mr Lister was to approach contacts in MAFF and report back on progress. 3490

8.112 Dr Ide also reported that the first steps had been taken towards investigating the need to produce guidance on BSE for workers in the rendering trade. He said that the trade association had been contacted but it appeared that as workers had no contact with possibly infected animal tissue there might not be any need to carry this forward. It was agreed to leave this aside for the time being. The rest of the meeting was concerned with the list of zoonoses (as agreed in the previous CDTFZ meeting). A further meeting was scheduled for November. 3491

1991

8.113 The meeting in November was cancelled because of snowstorms, and on 15 February 1991 Dr Gompertz minuted members of the Committee to say that he had now received contributions on all the 17 agreed zoonoses. He attached a draft of ‘The Occupational Zoonoses’ guidance, and sought comments on it prior to finalising it for publication. 3492

8.114 The second meeting of the CDTFZ & BSE was held on 15 March 1991. 3493 On BSE, Mr Lister, Mr North and Mr Greaves reported that SEAC ‘would be dealing with little of interest to this Group and that it would therefore not be appropriate to have an observer on the Committee’. However, Mr Lister would receive papers and keep an eye on developments. (Five years later, in 1996, HSE was granted observer status on SEAC; see paragraph 8.148).
8.115 Mr North said that a small NIG Working Group might be looking at practices in slaughterhouses. The group also discussed briefly the need for guidance for the rendering industry. It was agreed that Mr North and Dr Matthews would consider this further using information available from MAFF. Mr North might accompany MAFF Inspectors on a visit to a rendering plant. Mr Lister reported that the ACDP had created a Working Group on TSEs which might be looking at BSE. (The ACDP Group’s deliberations are discussed later in this chapter.)

Mr North requests information on slaughterhouses

8.116 On 3 July 1991, Mr North wrote to Dr Wood (University of Bristol, Animal Science Section) to ask for a discussion and visit to their in-house model slaughterhouse. Mr North explained his interest in deep penetrating wounds and cross-contamination and in pinpointing any particular high-risk activities.

8.117 Mr North enclosed ‘Guidance Note 5’ issued the previous year and explained:

Whilst this guidance provides general assurance and sets out the general precautions it was felt to be prudent to at least identify which particular slaughterhouse activities might be associated with any hazard to employees in the event that evidence comes to light that BSE is transmissible to man. In that, hopefully unlikely, eventuality we would like to be in a position to know which activities carried a risk and to have considered possibilities of different work methods to alleviate that risk. Of course employees are already trying to avoid the more acute penetrating injury in the first place but such accidents do regrettably occur and if the risk to their health was much greater than the immediate physical injury then it may indicate that a higher standard of safeguards may be appropriate. These are the areas I would wish to explore.

8.118 On 4 July 1991, Dr Wood responded confirming that he would be pleased to assist in defining which slaughterhouse practices were potentially hazardous.

8.119 At the next meeting of the CDTFZ & BSE, held on 7 October 1991, Mr North reported on his continuing investigations regarding deep cut hazards for slaughterhouse workers. Splitting the head of the animal to remove the brain and splitting the spinal column appeared to pose the greatest risk and Mr North was asked to convey to slaughterers the need to continue taking all precautions. He reported that he was working on guidance for the knackering and rendering industries. The meeting agreed that guidance on handling infected carcasses in hunt kennels and maggot farms was also required.

8.120 At the conclusion of the meeting the Chairman suggested the Committee should remain in existence ‘as a forum for discussions of developments’ and meet again in March 1992.

8.121 On 28 November 1991, Food NIG issued a minute to HM Inspectors of Factories and Employment Medical Advisers (EMAs) entitled ‘Application of..."
COSHH\textsuperscript{3497} to microbiological hazards in the meat industry and updates in
knackers, renderers and BSE’.\textsuperscript{3498} This stated:

The purpose of this minute is to give Inspectors and EMAs early information
of guidance which the NIG has cleared through the HSE/Meat Trades Joint
Working Party and the HSE Cross Divisional Taskforce on Zoonoses and
BSE; and of precautions advocated in relation to knackers, renderers and
slaughterhouses in relation to Zoonoses BSE.

\textbf{8.122} The guidance stressed that Inspectors should press for surveillance by
employers to assist them to determine if there was a hazard or if there was adequate
control. Until there was adequate information about prevalence, most of the control
measures required were likely to be general and personal hygiene ones. It also stated
that because the NIG had received enquiries, the present advice was an advance
notice of a forthcoming HSE/Meat Trades Joint Working Party Guidance Note and
Operational Circular (OC) drawing attention to the whole series of such guidance
notes.\textsuperscript{3499}

\textbf{8.123} On knackers and renderers it stated:

The NIG has completed a survey of microbiological hazards in the
knackering and rendering industries. This survey tended to show that
microbiological hazards should be adequately controlled by good process
and personal hygiene. Because prohibited offal is handled by knackers and
renderers, the processes were also examined in relation to possible
occupational hazards from BSE. As a result the NIG will be pressing the
industry not to scoop brains out of split bovine heads by hand – because of
the risk of a deep cut from bone fragments contaminated with a high
concentration of the BSE agent from the brain.

\ldots

The NIG has recently carried out a further analysis of slaughterhouse
activities to identify which processes might pose a particular risk of such
deep inoculation and of possible control measures. The processes appear to
be the use of the depithing rod, removal of the brain after splitting the head
and (possibly) splitting the spinal column. MAFF have advised that the vast
majority of bovine carcases going through an abattoir come from animals
that will not have been exposed to BSE through feed (mostly because they
have been reared post 1988) but that cull cows (ie adult cattle) will have been
exposed at a time when the challenge dose in feed was at its maximum (early
1988). A few of these cull cows may be handled at any abattoir but a few
slaughterhouses may specialise in them (eg for certain specialised products
such as beefburgers). For these, the 3 or 4 years which has intervened since
1988 would mean that the BSE agent was in a particularly concentrated state
in their brain tissue. So far the agent has not been identified in any part of the
prohibited offal other than the brain tissue but as further time develops it is
expected the agent would spread. Therefore, there is a particular need when
handling such older cattle to take additional prudent precautions to avoid
contamination with (for the present) brain tissue.

\textsuperscript{3497} Control of Substances Hazardous to Health Regulations 1988; see L19 tab 10
\textsuperscript{3498} YB91/11.28/5.1
\textsuperscript{3499} YB91/11.28/5.1
Such prudent precautions might include not using the pithing rod or disinfecting it on withdrawal from the brain. Animal welfare considerations should also be considered however as pithing is designed to ensure that no pain is felt if the stunning effect wears off too quickly.

Similarly, splitting of bovine heads should be discouraged in slaughterhouse premises (around 80% of slaughterhouses do not split heads now). If heads are to be split and brains removed then special tools should be used for brain removal rather than risk jagging the hand on sharp bone fragments with the risk of BSE agent contamination . . .

It is more difficult to identify precautions which could be taken against deep cuts and contamination whilst splitting the spinal column. However, at present this is not such a priority as no BSE agent has yet been found there.

1992

8.124 The CDTFZ & BSE group met, as planned, on 11 March 1992. On this occasion Mr Fleetwood and Dr Matthews from MAFF also attended. Mr North reported on progress in providing advice to slaughterhouse workers regarding safe working practices for dealing with BSE-infected cattle. Dr Matthews reported that there was no legislation intended to prohibit the splitting of cattle heads to remove the brains. The meeting agreed that the most important point to get across was that brain should not be removed from split heads by hand.

HSE issues guidance for the knackering (including hunt kennels and maggot farms) and rendering industries

8.125 On 9 June 1992, HSE Field Operations Division distributed an Operational Circular ‘OC’ entitled ‘Zoonoses on Bovine Spongiform Encephalopathy: Guidance for the Knackering (including at Hunt Kennels and Maggot Farms) and Rendering Industries’ to Factory and Agriculture Inspectors and Specialist Inspectors (Occupational Hygiene). This stated:

This OC describes the above processes and advises Inspectors on the microbiological hazards which may be present, gives and assessment of their risk and indicates the guidance which could be given to occupiers. It has been agreed with the industry.

8.126 The note recommended that when handling carcasses and waste, workers at knackers, hunt kennels and maggot farms should:

i. Wear gloves and cover cuts and abrasions with waterproof plasters;

ii. Wear gloves or gauntlets on the non-knife hand and protective aprons when using sharp knives for boning and cutting;
iii. Not remove brains by hand;
iv. Maintain a high standard of general housekeeping in the premises and
minimise contamination of surfaces by frequent washing;
v. Wash hands and arms frequently, particularly before drinking, eating
and smoking;
vi. When using a captive bolt stunner, clean the bolt thoroughly before
further use and avoid returning the bolt to the barrel of the stunner using
the hand or other parts of the body; and
vii. Implement the Control of Substances Hazardous to Health (COSHH)
and guidelines from the British Meat Manufacturers Association.3503

8.127 Similar precautions were recommended for workers in the rendering
industry.

8.128 The CDTFZ & BSE group met again on 1 October 1992. Mr Lister reported
that the advice on SEs being produced by the ACDP would contain some advice for
‘handlers’ of all kinds but would mainly be concerned with those who were likely
to encounter the agent in the laboratory. The Committee agreed ‘that there was
nothing further the group could or should have done so far in relation to advice for
those liable to encounter the BSE agent in their work’. 3504

1993

The CDTFZ & BSE meetings put on hold

8.129 After the meeting on 1 October 1992 it seems that the group did not meet
again for some time. On 25 August 1993, Dr Ide (Senior Employment Medical
Adviser) wrote to Dr J M Wattie (Senior Employment Medical Adviser):

Mr Gompertz tells me that you are now Madam Chairman of this
Committee.

You will remember that it was convened in 1989 following the publication
of the Southwood Report on Bovine Spongiform Encephalopathy (BSE).
The Working Group’s purpose was to provide HSE with consistent advice
about this problem. This function was discharged, but the group acquired a
momentum of its own and decided to take an interest in zoonoses generally.
This resulted in the publication of ‘The Occupational Zoonoses’ last year.

The last meeting took place on 1 October 1992 and a further meeting was
tentatively scheduled for 17 March 1993, but did not take place since there
was nothing which merited discussion, and the group became dormant.3505

I enclose a cutting from the “Glasgow Herald” of Friday, 13 August. I don’t
know if the MRC Unit for CJD has merely resulted in improved collection

3503 YB92/6.09/7.1–7.4
3504 YB92/10.01/4.1–4.5
3505 YB93/08.25/2.1
of statistics and I have no idea what the year-on-year fluctuation of cases of CJD has been in the past, although I anticipate being able to get some up-to-date information on this at a meeting of Consultants in Public Health Medicine that I will be attending in Edinburgh on 2 September.

Our advice to HSE and others was based partly on the view expressed in the Southwood Report that BSE had a mean incubation period of 4 years, and that following the imposition of the animal products feed ban in July 1992 that the numbers of cases of BSE would begin to fall from the corresponding time in 1992. The figures for BSE are roughly confirmed by my colleagues at the Communicable Diseases Surveillance Centre in Ruchill Hospital, Glasgow, so the decline does not seem to be happening.

Do you think it would be wise to call a meeting of the Working Group in the not too distant future to review the situation and prepare a ‘Plan B’ if necessary?

8.130 The Inquiry has not seen any response to this minute. However, it seems that the Group did not meet for some time.

1994

The CDTFZ & BSE meetings cease

8.131 In December 1994 (following publication of ACDP’s guidance ‘Precautions for work with human and animal Transmissible Spongiform Encephalopathies’ in July 1994 – see below), Mr North minuted Mr Lister about the ‘Possible need to update guidance on prudent precautions against BSE’. He attached an Environmental Health Briefing dated 3 October 1994, noting that this seemed to imply that BSE was a TSE in Hazard Group 1 and that ‘measures to limit exposure should be taken when working with lymphoid or neural tissue’. He said:

That advice seems to be expanded in the following paragraph to indicate the need to wear eye protection and swab down surfaces with sodium hypochlorite etc. Apparently Birmingham EHOs have asked whether this advice should be given to slaughterhouses where people work with such lymphoid tissue after removal from the carcass. The advice goes further than that which we had issued to the industry through the attached British Meat Manufacturers Association Guidance Note No 5 (also issued as an NIG minute) and which we cleared through the BSE Zoonosis Working Group. The reference to the ‘suitable protective equipment’ in that it is not meant to imply the need for anything special over and above what would normally be worn in a slaughterhouse – and this would not extend to eye protection, the use of knives could not be avoided, and disinfectant would not be used.

I wonder if you could give a view as to the classification of such prohibited material rising in slaughterhouses (is that Hazard Group 1?) and should the
guidance we have given to industry now be updated to refer to this more stringent standard of basic protective measures . . . 3506

8.132 We did not see any response to this minute.

1995

CDTFZ & BSE meetings reinstated

8.133 On 3 October 1995, Mr North sent another memo to Mr Lister headed ‘Possible need to update guidance on prudent precautions against BSE’. He asked for advice on two specific issues which he said might indicate a need to revise the current sector specific guidance published on prudent precautions against BSE.

The first question relates to the need to wear eye protection and swab some surfaces as envisaged in the Precautions for Work with Human and Animal Transmissible Spongiform Encephalopathies Publication. My earlier minute of 7 December 1994 (copy enclosed) gives a full explanation of this question – but I cannot trace having received a reply from you.

The second question relates to whether or not there is still a potential risk for BSE in cattle passing through abattoirs. In the period when we had regular Zoonoses and BSE Working Group Meetings, we had regular updates from DH and MAFF on the increasingly lower incidence of BSE infection in cattle. If this progress has subsequently been continued, then I presume virtually no cattle passing through slaughterhouses will now have BSE, owing to changed feed regimes. In that case, there may be no risk and hence, we could advise industry and Inspectors that the ‘prudent precautions’ which we envisaged, could now be relaxed.

On the other hand, I note that MAFF have just revised the Specified Bovine Offal Order 1995 which controls what happens to specified bovine offal. I presume they only made these regulations because they feel that there may be an incipient risk still from BSE and this was a legislative tidying exercise. If there is still a risk, then I ought to advise Inspectors of this new legislation. 3507

8.134 On 23 November 1995, Mr Lister minuted members of the group stating:

Some recent events and emerging information have prompted the need to review the position with regard to possible occupations exposure to BSE. It is in any case timely to do so.

I write to suggest that we re-convene the Inter-Departmental group on BSE (later merged with the Zoonoses WG) which last met several years ago.
There is some urgency to this partly because there may be the need to revise or supplement the ACDP guidance on TSE and other guidance issued by HSE and others.

I would be grateful if you could attend a meeting . . . at the earliest opportunity. 3508

8.135 The group met on 6 December 1995. The minutes record that the purpose of the meeting was ‘to review the position with regard to possible occupational exposure to BSE in the light of recent events and emerging information’. Mr Lister explained that HSE were concerned with:

- whether the guidance given to those in the meat trade needed to be updated;
- whether the ACDP TSE guidance should be updated in the light of attention given to certain points in this document during the interview with Dr Crumpton by World in Action;
- the use of bovine eyes for research purposes;
- the need for HSE to be fully in touch with all new developments. 3509

8.136 Mr North reported that EHOs had been pressing slaughterhouses to follow the guidance given in the ACDP TSE publication. He said that the guidance was not meant to apply to such situations and this should be made clear. Dr Matthews commented that because the recent SBO Regulations prohibited the splitting of heads this would decrease the risk of exposure and that overall the risk of exposure to BSE-infected animals in slaughterhouses was declining. 3510

8.137 Mr Fleetwood stated his greatest concern was the rendering industry because the great majority of SBO was being rendered now and there were four or five plants which dealt with nothing but this material; the industry was concerned about the risk involved. Mr Lister suggested that the Inspectors who dealt with those premises could undertake a preliminary inspection and then talk through the situation with employers and help them produce their own guidance in collaboration with HSE. Dr Matthews updated the group on the latest available figures on BSE and the fact that there appeared to be a problem with cross-contamination of feed. Dr Wight reported on CJD surveillance. She reported that there was no evidence of any change in the pattern of CJD in the UK since the CJD surveillance project had been set up in 1990, but that the latest figures available (1994) did not take account of the fourth farmer and two teenagers who were confirmed as having CJD. The implications of this were being discussed by SEAC. Mr Bowden asked whether it would be appropriate for HSE to attend SEAC meetings as observers and Dr Wight undertook to investigate this further. 3511

8.138 Ms Lawrence (DH) asked whether it was appropriate for the ACDP to review the TSE guidance. Dr Wight said that there might not be sufficient new data to

3508 YB95/11.23/11.1—11.3
3509 YB95/12.06/15.1—15.4. The meeting was attended by Mr Bowden (HSE), Ms Deans (HSE), Mr Fleetwood (MAFF), Ms Lawrence (DH), Mr Lister (HSE), Dr Matthews (MAFF), Mr North (HSE), Mr Render (MAFF) and Dr Wight (DH)
3510 YB95/12.06/15.1
3511 YB95/12.6/15.2
warrant a review at that stage and it might be wise to wait until results of ongoing pathogenesis experiments were available in 1997.

8.139 Mr Render (MAFF) expressed his concern about the use of bovine eyes for research purposes and asked whether such researchers were aware of the ACDP TSE guidance. Mr Fleetwood said that ‘because of the change to the SBO Order, researchers now had to buy the whole head rather than just the eyes and were reluctant to do so because of the cost. However, this may have drawn their attention to the risk of BSE/TSEs.’

8.140 It was agreed that there was no case for changing or adding a supplement to the TSE guidance until further results on the pathogenesis of BSE were available, and that there need be no change in the guidance given to the meat industry, but that the message needed to be reinforced somehow. The guidance issued to farmers, vets and zoo managers needed no change. The issue of bovine eyes warranted further attention and the appropriate bodies would be approached.

8.141 After this meeting, HSE’s Food NIG issued a minute to Inspectors, Employment Advisers and Field Consulting Groups entitled ‘Review of Precautions advised against occupational risks from BSE and of guidance for abattoir workers, carcase handlers and renderers’. It said:

This minute advises Inspectors that the existing guidance on ‘prudent precautions’ remains relevant and necessary for carcase handlers and abattoir workers and that some additional precautions will hopefully be agreed for the specialised rendering plants handling specified bovine offal.

8.142 The minute stated that the guidance contained in British Meat Manufacturers’ Association Guidance Note 5 (written by the NIG and agreed with MAFF and DH) remained ‘appropriate, current and necessary’ and:

In view of the current concerns it is necessary to re-emphasise to the trade that the risks have been reviewed and that, if there are any risks, they would be controlled through the precautions advised in that Guidance Note: that is through the measures they should be taking anyway for other reasons to achieve good hygiene and protection against deep cuts.

8.143 On head-splitting, the minute said that bovine heads now had to be taken off whole from the carcass and treated separately, and that previous guidance on this (BMMA Guidance Note 5) remained current although the risk was decreasing. Previous advice about knackering remained valid. On rendering, the previous advice remained appropriate, in general terms. However, it continued:

MAFF report that the rendering process has now significantly changed as all specified bovine offal has to be treated in dedicated plants. This has led to the concentration of the process into relatively few plants in the country with increased concentration of risk at those plants. Additionally, research indicates that the BSE agent is not killed by the heat process of drying into bone meal. For these reasons, MAFF have asked HSE to give further advice.
to the rendering industry to control the risk of contamination, including from aerosols.\textsuperscript{3515}

8.144 With regard to the 1994 ACDP guidance, the minute stated that this did not apply to non-laboratory applications such as slaughterhouses.\textsuperscript{3516}

1996

Update on guidance

8.145 On 2 January 1996, Mr M Sebastian (Livestock NIG, HSE) wrote to Mr Lister referring to the recent meeting of the CDTFZ & BSE, pointing out that his NIG had not been invited to attend and that the Livestock NIG had a crucial interest in the issue.\textsuperscript{3517}

8.146 Also, in January 1996, HSE/Meat Trades Joint Working Party issued a revised edition of Guidance Note 5 to all abattoirs slaughtering cattle.\textsuperscript{3518}

8.147 On 15 January 1996, Mr Lister wrote to Dr Ailsa Wight, the DH representative on the CDTFZ & BSE and also the DH observer on SEAC. He said that HSE had been granted observer status on SEAC and that he would, for the time being, fill that role.\textsuperscript{3519} He stated that at the last SEAC meeting (5 January 1996) the recent case of suspected CJD in an abattoir worker was to be discussed but was not raised. He asked for a list of dates for forthcoming meetings and prior notice of any information or issue connected to occupational risks from BSE exposure.

Guidance for neuropathologists and mortuary workers: 1991–95

8.148 This section describes the various sets of guidance that were developed during 1991 through to 1995, to address the occupational hazards from BSE and other TSEs to laboratory workers and mortuary workers. Some of this guidance, as described below, was developed independently from the HSE.

8.149 In 1991, Dr Jeanne Bell, a neuropathologist from Edinburgh and member of the CJD Surveillance Unit, produced a protocol entitled ‘Department of Health CJD Surveillance – Neuropathology: Guidance for autopsy protocols in suspected CJD cases, in relation to differing local facilities’,\textsuperscript{3520} which was incorporated in a Medical Research Council (MRC) clinical booklet.\textsuperscript{3521}

8.150 Also, in 1991, guidance entitled ‘Safety In Health Service Laboratories: Safe Working and the prevention of infection in the mortuary and post-mortem room’ was produced by a Technical Sub-Committee Working Group of the Health...
Services Advisory Committee (an advisory Committee for the HSC). Mr Lister was a member of this Working Group. The guidance did not mention BSE or CJD but focused on good hygiene practice and the safe handling of instruments likely to cause puncture wounds or cuts. In 1993, Dr Bell and Dr Ironside prepared detailed guidance entitled ‘How to tackle a possible Creutzfeldt-Jakob disease necropsy’.

**8.151** In July 1994, a report entitled ‘Precautions for work with human and animal Transmissible Spongiform Encephalopathies’ was issued by the ACDP. This report contained a section that gave more detailed guidance for neuropathologists and mortuary workers. The development of this guidance is described in the next section.

**8.152** On 28 April 1995, the Communicable Disease Report Review published an article entitled ‘The infection hazards of human cadavers’ by T D Healing of the London Communicable Disease Surveillance Project, P N Hoffman of the Laboratory of Hospital Infection, Public Health Laboratory Service, and S E J Young, Fellow of the Royal College of Physicians, London. This included a section on TSEs. The guidance contained in the article was addressed to doctors (especially pathologists), technical staff in pathology, morticians, funeral directors, embalmers and members of the emergency service who were exposed to risks from the recently deceased.

### Guidance produced by ACDP

#### Structure and function of ACDP

**8.153** As described in Annex 2, HSC/HSE operates with the assistance of advisory Committees. One of these, the ACDP (Advisory Committee on Dangerous Pathogens) had a significant role in the preparation of guidance in relation to BSE.

**8.154** The ACDP was set up by HSC and DH in 1981. It had a tripartite membership, consisting of an independent chairman (Dr David Tyrrell from 1981 to 1990; Dr Michael Crumpton from 1991 to date), with representatives of employers, employees and specialist members selected from nominations by professional bodies. It had a dual (HSE/DH) secretariat. HSC’s Annual Report of 1986/87 described ACDP’s role as follows:

> The Advisory Committee on Dangerous Pathogens (ACDP) advises Health and Agriculture Ministers as well as the Commission [HSC]. ACDP advises on general standards of safe working in laboratories handling dangerous pathogens; new hazards involving pathogens; control measures;

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3522 Health and Safety Executive, HMSO, 1991. The guidance stated that it was ‘an authoritative document which will be used by health and safety Inspectors in describing reliable and fully acceptable methods of achieving health and safety in the workplace’. It remained open to employers to achieve equivalent levels of health and safety using other acceptable means: if so, reference was likely to be made to the document by Inspectors to demonstrate the level that had to be achieved. Although it had no legal force, its standing as agreed practical guidance meant that it could be referred to in a court or tribunal to demonstrate the standards that need to be met under the law. – Preface (v)

3523 Health and Safety Executive, HMSO, 1991, p. 18

3524 Journal of Clinical Pathology, 1993, 46, 193–7

3525 M69A tab 5

3526 YB96/4.28/5.1–5.8
categorisation of pathogens according to hazard; and research on pathogens.\textsuperscript{3527}

8.155 The ACDP’s terms of reference were widened in October 1991, and its membership made more compact. A briefing note prepared for the first meeting following these changes said:

Membership

The newly reconstituted ACDP now consists of 8 ‘expert members’ (whose names are selected from suggestions solicited from a range of professional associations), 4 representatives of employers and 4 of employees. (In the past there were 10 plus 6 plus 6 members respectively.) This arrangement upholds the standard tripartite structure of all HSC advisory Committees.

Terms of reference

The new terms of reference of the ACDP (see below) were very much supported by the Commission and the Health Minister. They represent a sharp change away from the largely laboratory safety angle of the old terms of reference which were prompted by the Birmingham smallpox outbreak in 1978. There was however enough latitude in the latter to allow some other issues to be put before the Committee but the change is designed to encourage as wide a selection of business as possible. HSE can now more comfortably address the needs of other occupational groups through the ACDP.

The new terms of reference are:

To advise the Health and Safety Commission, the Health and Safety Executive and the Health and Agriculture Ministers, as required, on all aspects of hazards and risks to workers and others from exposure to pathogens.\textsuperscript{3528}

8.156 As explained earlier (see paragraphs 8.24–8.26), one of ACDP’s functions was to review and categorise pathogens into four Hazard Groups and publish the findings.\textsuperscript{3529}

ACDP’s precautionary note on the BSE agent: 1990

8.157 The ACDP categorised CJD, GSS and kuru as Hazard Group 2: agents that might cause human disease and might be a hazard to laboratory workers but were unlikely to spread to the community.\textsuperscript{3530} The second edition of the ACDP’s guidance note ‘Categorisation of Pathogens according to Hazard and Categories of Containment’ (published in 1990) contained an appendix entitled ‘Slow Virus Infections of the Central Nervous System’.\textsuperscript{3531} The appendix dealt only briefly with BSE, and although the agent was not allocated to an ACDP hazard group, the

\textsuperscript{3527} M68 tab 1 p. 11
\textsuperscript{3528} YB91/10.30/4.3–4.4
\textsuperscript{3529} M69 tab 1 p. 15
\textsuperscript{3530} M69 tab 1 p. 15; YB91/5.30/5.1
\textsuperscript{3531} M11A tab 6
application of Containment Level 2 precautions was advised for laboratory work with the agent. It stated:

Following detailed examination of BSE by the Southwood Committee it is clear that at this stage there is insufficient evidence on which to consider the allocation of the agent responsible for this newly emerged encephalopathy to an ACDP hazard group. However, while uncertainty remains about the potential for its transmission to man, it is prudent to treat known or suspected BSE-affected tissues with caution when working with them in the laboratory or animal room. Containment level 2 precautions with additional measures to guard against puncture wounds and cuts and the contamination of broken skin and eyes are considered to be appropriate. There is no specific information at present on the susceptibility of the BSE agent to heat and chemical disinfectants.\(^{3532}\)

**Establishment of the ACDP Working Group on SEs**

**8.158** In September 1990, the ACDP Secretariat circulated a paper on slow viruses to the members. It referred to the ‘recent emergence’ of BSE, and stated that this had ‘re-stimulated interest in the wider field of slow virus infections in general’. It reminded members of the new appendix on slow virus infections added to the second edition of the ACDP guidance note mentioned above. It continued:

The Secretariat is not aware of any conclusive evidence to show that the agent of CJD has been responsible for occupational infections although there are anecdotal reports of cases in workers exposed to neurological tissue. There are documented instances of patients known to have been infected by means of contaminated surgical instruments, certain human tissue implants and transplants and the use, in the past, of human growth hormone prepared from cadaver pituitary glands.

As all members will know, there is as yet no other evidence to suggest that the agent responsible for BSE presents a risk to man either from food or occupation.

Although on present evidence the agent of CJD does not appear to represent a significant occupational hazard it is suggested that in the current climate of concern it may be appropriate for the ACDP to draw together all the relevant information on the subject. (Science, the potential risks, the means by which the agent(s) concerned may or may not be inactivated, the properties of slow viruses and some detail on appropriate control measures). A distinct publication carrying the ACDP’s authority could be useful in a number of working environments. These would include, for example, neurosurgery, neuropathology research, histopathology Departments, post-mortem rooms, anatomy department dissection rooms and embalmers’ premises. Those working on slow viruses in laboratories and animal rooms may need additional guidance in dealing with everyday practical problems such as decontamination of safety cabinets, disposal of filters, treatment of reusable glassware and instruments etc. New scientific evidence supports the current
advice from the Department of Health although DA(81)22 and DA(84) 16 may need some modification.

If the Advisory Committee considers that guidance of this type is appropriate at this time, it will be important not to raise alarm by implying that the risk of slow virus infection has increased. There is no evidence to support this.

At present, the problem is that the facts and guidance that are available are scattered and there may be a case for drawing it together for the information of those with concerns in this field.

Therefore, the Committee is asked to consider the following:

Is there a need for a compendium of up-to-date information and/or guidance on slow viruses?

If so, to whom should it be addressed?

Is the ACDP the most appropriate body to produce a document of this nature?

Members will recall being issued with a copy of the Southwood Report at an earlier meeting. This contains some useful background information on slow viruses. 3533

8.159 After further discussions on this matter at subsequent meetings, and consultation with DH, the minutes of the ACDP meeting on 4 December 1990 record:

Dr Harper [DH Secretariat] informed members that, following consultation with the Department of Health, the suggestion that a document carrying ACDP’s authority would be a most useful and effective means of providing the necessary guidance, was readily accepted.

The Chairman agreed that ACDP should accept the request for guidance in principle. He pointed out, however, that ACDP’s work in producing guidance on health surveillance and risk assessment had to take priority. It was agreed to set up a small Working Group, with co-option of outside members with specialist knowledge as necessary. 3534

8.160 Accordingly, in February 1991 the ACDP Working Group was established. It met eight times between March 1991 and May 1993. Its terms of reference were:

To report to the ACDP on the need for additional guidance on health and safety aspects of work with animals or humans, their tissues or in vitro systems infected or potentially infected with spongiform encephalopathy agents, and to draw up such guidance. 3535
8.161 The ACDP Working Group was chaired by Professor Biggs (although the first two meetings were chaired by Dr Pickles). It consisted of four ACDP members: Professor Biggs, Mr Clare, Mr P Taylor and Dr Wyatt. Other members were:

- Dr D Taylor and Dr J Bell (Neuropathogenesis Unit);
- Dr Jeffries and Mr A Taylor (HSE Advisory Committee on Genetic Modification);
- Ms Heywood, Specialist Inspector Biohazards (Dangerous Pathogens) from HSE.
- Dr Pickles, Ms McGinty, Mr Sweasey, Mr Lister.

8.162 The guidance drafted by the ACDP Working Group was agreed by the main Committee in June 1993, approved by the HSC and Health Ministers, and finally published in July 1994. It focused primarily on CJD and other known TSEs and only incidentally offered guidance on potential BSE risks.3536

8.163 The ACDP Working Group was wound up in 19933537 and any subsequent TSE issues were dealt with by the main ACDP Committee (until the announcement on 20 March 1996).

Guidance produced by ACDP Working Group

Dr Pickles produces a background working paper: the Reference Document

8.164 Before the ACDP Working Group had their first meeting Dr Pickles prepared a draft guidance note entitled ‘Spongiform Encephalopathy and Exposure at Work’.3538 She told us that she had given considerable attention to the need for updated guidance to certain occupational groups.

The pressing practical issues were first, for the neuropathologists who were conducting examinations as part of the CJD surveillance project and secondly, for the many laboratory scientists who, thanks to new funding, were moving into this area with a biological agent which did not seem to obey the rules, especially in relation to susceptibility to disinfection procedures.3539

8.165 The paper itself was divided into several sections, including a review of the current guidance,3540 a discussion of the pathogenicity of SE agents and their decontamination, and recommendations for possible areas for guidance and research. The paper noted that CJD, GSS and kuru were known TSE agents in man and had been classified as Hazard Group 2 by ACDP.3541 BSE was, however,
categorised as Hazard Group 1. The paper explained that animal TSEs could be formally categorised only as 1 (non-pathogenic) as there was no evidence that any animal SEs had ever been transmitted to humans or that scrapie was causally linked to CJD.

8.166 The draft paper was sent to Mr Lister and Mr Sweasey. In her covering letter Dr Pickles set out her view that the main areas of work appeared to be human neuropathology in CJD and laboratory investigation particularly on the genetic modification side. She added:

I suspect none of us would have difficulties with authoritative advice in these areas. Inevitably, however, there will be anomalies with practices outside these settings, say for surgeons and others exposed to tissues of patients or veterinarians or farmers exposed to tissues of animals potentially but not known to be infected. To my mind it would be better to fudge these issues than abort the whole idea of getting advice out on the more clear-cut priority areas.

8.167 On possible areas for guidance, the paper set out the following for consideration:

- Human SEs:
  - clinical management in CJD (and for informal carers)
  - general pathology/surgery/tissue handling in CJD
  - neuropathology in CJD/GSS
  - more general aspects of neuropathology or handling of tissue with a high risk of infection in subclinical cases.

- Animal SEs:
  - human agents or PrP genes in experimental animals
  - neuropathology or in vitro studies in animal SEs
  - handling of animals with clinical SE or their tissues (a) laboratory (b) veterinary/surgical procedures (c) farm or field
  - handling of ‘high risk’ tissues from potentially asymptomatic cases eg on farm.

The Reference Document and the Guidance Document

8.168 Dr Pickles’s draft paper was discussed at ACDP Working Group’s first meeting, on 28 March 1991. The Group decided:
that in view of recent developments a new guidance document on SE was needed for workers exposed or potentially exposed to all the SE agents. ACDP was thought to be the most appropriate body to bring this guidance together with expert input on specialist areas such as neuropathology, GM experimentation and disinfection procedures as required.\textsuperscript{3546}

\textbf{8.169} At the second meeting, on 13 May 1991, the paper was adopted as a working document for internal use.\textsuperscript{3547} After the meeting Dr Pickles wrote to Mr Lowson (MAFF) and noted, among other things, that the draft paper ‘was considered of an inappropriate weight to be accessible to an audience that covered farm workers as well as laboratory scientists’.\textsuperscript{3548} It was to be used as the basis for a briefer practical guidance for wider circulation in the work-place.

\textbf{8.170} From this point Dr Pickles’s draft paper was called the ‘Reference Document’. The briefer practical guidance was called the ‘Guidance Document’. Both were to undergo protracted revisions.

**Fast-track letter to neurosurgery staff**

\textbf{8.171} When ACDP Working Group began consideration of both the Reference Document and the Guidance Document it became apparent that the drafting process was to be a lengthy one and that neurosurgical staff, who were considered at particular risk, needed more urgent advice.

\textbf{8.172} It was decided that such advice would be fast-tracked through a ‘Dear Doctor’ letter. In October 1991 the ACDP Working Group Secretariat circulated a draft letter on precautions to avoid cross-contamination with TSE agents in neurosurgery.\textsuperscript{3549} The covering note from the Secretariat presented the draft letter as ‘possible fast-tracking of guidance for neurosurgery staff’ and commented that the ‘guidance on SEs that is currently being developed will deal with this but inevitably it will be some months before it is published’.\textsuperscript{3550} The fast-track letter (also referred to as the Professional Letter (PL)) was the first guidance produced by the ACDP Working Group. However, it took 14 months to agree.

\textbf{8.173} During that time the ACDP Working Group worked on the draft in consultation with DH. The letter ultimately went through five drafts\textsuperscript{3551} and a number of rounds of consultation within both DH and HSE and with the advisers to the CMO\textsuperscript{3552} and SEAC.\textsuperscript{3553} It was eventually issued to relevant medical professionals through the office of the CMO on 8 December 1992, entitled ‘Neuro and Opthalmic surgery procedures on patients with or suspected to have, or at risk of developing CJD or GSS’.\textsuperscript{3554} It covered the handling of surgical procedures

\textsuperscript{3546} YB91/3.28/5.3
\textsuperscript{3547} YB91/5.13/4.2
\textsuperscript{3548} YB91/5.15/2.1–2.4
\textsuperscript{3549} YB91/10.03/1.1–1.5
\textsuperscript{3550} YB91/10.00/1.1
\textsuperscript{3551} First draft considered by the ACDP Working Group on 14 January 1992: YB92/1.14/5.1–5.10. Second draft prepared and circulated by Mr McDowall (DH): YB92/2.27/6.1–6.6. Third draft considered and amendments necessary agreed at ACDP Working Group meeting on 15 June 1992: YB92/6.15/7.1–7.7. Fourth draft distributed by Ms McGinty (HSE) to all members of ACDP Working Group for comment on 7 August 1992: YB92/8.07/4.1. Fifth and final draft issued on 8 December 1992 after clearances received from ACDP Working Group, CMO Consultant Medical Advisers and Tyrrell Committee: YB92/12.09/7.1 to YB92/12.09/28.1
\textsuperscript{3552} YB92/4.29/2.1–2.11. Members of ACDP advised that Dr Wight (DH) had written to CMO’s Consultant Advisers for comments on the draft letter
\textsuperscript{3553} YB92/8.11/1.1
\textsuperscript{3554} YB92/12.08/4.1
involving patients with CJD-type diseases and dura mater recipients. It did not cover guidance for situations involving corneal implants.\textsuperscript{3555}

\textbf{8.174} Professor Biggs told us about the fast-tracking of guidance for neurosurgery work:

This was considered by the WG to be urgent and of importance such that it at times took priority over the Reference and Guidance Documents in the time of the Secretariat. It apparently had an unexpectedly difficult consultation period within the DoH partly due, I was informed, to the sensitivities of possible litigation by recipients of human growth hormone and partly from initial disagreements of some over the inclusion of recipients of duramater in the high risk category . . . \textsuperscript{3556}

\textbf{Decision to put the Reference Document aside and develop the Guidance Document}

\textbf{8.175} The Reference Document also went through extensive redrafting and consultation. However, in January 1992, after the fifth meeting of the ACDP Working Group, it was decided that the Guidance Document should take precedence over the Reference Document.\textsuperscript{3557} In the event the Reference Document was never issued. At its seventh meeting in May 1993 the Working Group considered that extensive re-drafting and up-dating would be required to compile the proposed Reference Document ‘which would only be of value if it was kept regularly up to date in any case’.\textsuperscript{3558} It was agreed that:

ACDP should aim to issue the guidance document only, although the benefits to workers and others, if a ‘reference’ document were to be produced in another quarter were fully appreciated by members.\textsuperscript{3559}

\textbf{The Guidance Document ‘Precautions for work with human and animal Transmissible Spongiform Encephalopathies’}

\textbf{ACDP Working Group deliberations}

\textbf{8.176} By the time the ACDP Working Group decided to stop work on the Reference Document, the Guidance Document had already undergone four drafts.\textsuperscript{3560} It then underwent three more drafts and rounds of consultation before publication.\textsuperscript{3561}

\begin{flushleft}
\textsuperscript{3555} YB92/4.29/2.3; YB92/6.24/7.4
\textsuperscript{3556} S106A Biggs para. 28
\textsuperscript{3557} YB92/1.14/5.4
\textsuperscript{3558} YB93/5.24/2.6
\textsuperscript{3559} YB93/5.24/2.6; see also S106A Biggs para. 14
\textsuperscript{3560} A review of the first draft took place on 6 August 1991 at the third meeting of the ACDP Working Group: YB91/8.22/3.1–3.2. The second draft was evaluated at its fourth meeting held on 24 October 1991: YB91/10.24/3.1–3.7. The third draft was discussed at its fifth meeting held on 14 January 1992: YB92/1.14/5.1–5.10. The fourth draft was discussed at its sixth meeting held on 15 June 1992: YB92/6.15/7.1–7.7
\textsuperscript{3561} The draft guidance was evaluated again at an ACDP Working Group meeting on 24 September 1992: YB92/8.22/9.1–9.13. A further draft was produced in January 1993: YB93/1.00/3.1–3.3, with the final draft produced in February 1993: YB93/2.00/2.1. The final document can be found at M69A tab 5
\end{flushleft}
8.177 On 28 March 1994, Dr Roger Skinner (Principal Medical Officer, DH) submitted the final draft of the guidance to Dr Metters (Deputy CMO) seeking endorsement from the Ministers.\footnote{YB94/3.28/4.1–4.4. The document was also copied widely and recipients included Dr Kendell (Scottish CMO), Dr D Hine (Welsh CMO) and Dr M J McKenna (Northern Ireland CMO), Dr A Wight, Ms McGinty, Dr Pickles (DH), Mr P Lister (HSE), Mr K Dale and Mr T Eddy (MAFF)} In his covering minute Dr Skinner said:

> The emergence of BSE in the late 1980s re-stimulated academic and scientific interest in human and animal TSEs. At the same time, awareness of potentially contaminated tissues and body fluids from animals or humans who had or were suspected of suffering from a TSE was heightened.

\ldots

8.178 On 15 April 1994 Mr Sackville (Parliamentary Under-Secretary of State, DH, 1992–95) approved the issuing of the guidance.\footnote{YB94/4.15/3.1; see also S321 Sackville para. 36} After some delay the Guidance Document was eventually published in September 1994.\footnote{DO01 tab 11 p. 16; Appendix 4 ‘Inquiry into BSE: Information from the Health and Safety Executive’}

**Content of 1994 ACDP guidance: ‘Precautions for work with human and animal Transmissible Spongiform Encephalopathies’**

8.179 The published guidance, divided into four parts, aimed to draw together the basic facts about TSEs in order to provide information for all concerned in laboratory work, in clinical care and animal handling. The guidance gave particular advice to laboratory workers, health care workers, pathologists, anatomy and pathology teachers, post-mortem workers, embalmers and veterinarians and was divided into the following general sections:\footnote{M69A tab 5}

1. Part I ‘Introduction’ included sections on the TSEs, diagnosis of TSE infections, the nature of TSE agents and transmission of TSEs;

2. Part II ‘Hazards and risks’ comprised sections on hazard categorisation of TSE agents and hazard containment;

3. Part III ‘Control of infection and containment’ included sections on Control of Substances Hazardous to Health (COSHH) Regulation requirements, basic precautions to avoid exposure, accident reporting and health surveillance, as well as sections on exposure to human TSE agents in the health care setting\footnote{This section dealt with the following topics: general; nursing in ward and community; surgical procedures; collection, labelling, transport and handling of clinical specimens; pathology; post-mortem examination of known, suspect or at risk TSE patients; anatomy and pathology teaching; and body handling and embalming} and exposure to animals with TSE\footnote{This section dealt with the following topics: naturally infected animals; laboratory animals with TSE; carcasses of animal with TSE; post-mortem examination of animals with TSE; animal neuropathology and abattoirs};

4. Part IV ‘Decontamination and waste disposal procedures for TSE agents’, highlighting ineffective and effective methods of decontamination.
Further developments

8.180 In 1995 ACDP published the fourth edition of Categorisation of biological agents according to hazard and categories of containment. Appendix 19, entitled ‘Transmissible Spongiform Encephalopathies’, listed BSE as a known TSE. It stated:

Following detailed consideration by the Southwood Committee and other groups since then, it is clear that there is insufficient evidence on which to consider the allocation of the agent responsible for BSE to an ACDP hazard group. However, whilst uncertainty remains about the potential for its transmission to humans, it is prudent to treat known or suspected BSE-affected tissue with caution. The new guidance addresses this issue and also provides recommendations applicable to work with other animal TSE.

8.181 On 18 April 1996, ACDP and HSE issued a press release entitled ‘Review of BSE guidance issued to occupational groups’. This stated:

Following a recommendation made by the Spongiform Encephalopathy Advisory Committee (SEAC), which was announced by the Secretary of State for Health in a statement to the House of Commons on March 20 1996, the Advisory Committee on Dangerous Pathogens (ACDP) has met to review all the guidance on bovine spongiform encephalopathy (BSE) issued to workers in various occupational groups.

The ACDP has re-examined, in light of current evidence, the principles of the control measures recommended in the various guidance publications for abattoir workers, farmers, laboratory workers, vets, zoo-keepers and others published since 1990.

The ACDP advises that, subject to some adaptation to specific occupational settings, the prudent precautions incorporated in the current guidance remain valid.

The Committee considers that there is no evidence of risk of transmission of BSE to humans from contact with live cattle in normal farming practices, or in dealing with their carcasses. Furthermore in considering likely routes of transmission, it is the Committee’s opinion that transmissible spongiform encephalopathies (TSEs), including BSE, are unlikely to be transmitted by the respiratory route. Nevertheless, the Committee strongly recommends that high standards of personal and occupational hygiene are maintained. Most importantly, there is a continuing need to protect persons in exposed occupations against splashing by specified bovine material (SBMs) especially those from the central nervous system.

8.182 In June 1996, the ACDP issued BSE – (Bovine spongiform encephalopathy) Background and general occupational guidance. The guidance stated:

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3569 Categorisation of biological agents according to hazard and categories of containment, HSE Books, HMSO, 1995, ISBN 0 7176 1038 1
3570 YB96/4.18/5.1–5.2

821
This new more general guidance, which has been agreed by the Health and Safety Commission and Health and Agriculture Ministers, is based on the most up-to-date knowledge and if it is followed then it is considered that workers will have a negligible risk of being exposed to BSE. Its main purpose is to provide information about BSE and to re-emphasise the need to use the precautionary protective measures that are judged to be generally appropriate.

People responsible for health and safety matters in the various workplaces where there is contact with material that may be contaminated with the BSE agent, especially those newly involved in disposal operations, will find this guidance helpful in developing local codes of practice for the safe conduct of the work. In addition, the separate sector-specific publications, which provide more detailed information, are being revised to reflect the principles incorporated in this document.\(^{3571}\)

8.183 The guidance listed those who might be exposed to BSE. This included farmers, veterinary surgeons, hauliers, slaughterhouse workers, renderers, incinerator operators, maintenance engineers (eg, in abattoirs, rendering plants, incinerators) and land-fill site workers where rendered material is disposed of. Other groups of workers included those involved in the storage of greaves or meat and bone meal. The guidance gave general background information about BSE and went on to reiterate the advice given in the press release of 18 April.

**EC Directive on the classification of biological agents**

8.184 During the early period of the work of the ACDP Working Group, the EC\(^{3572}\) was negotiating a directive on the classification of biological agents. Mr Lister told us:

Meetings on ‘biological agents’ convened by the European Commission...began in the late 1980s. These concerned the development of a Directive to do with protection against exposure to biological agents (ie bacteria, viruses, fungi and parasites) at work including those causing spongiform encephalopathies which were known at that time to be transmissible to humans. HSE was fully involved in these formative meetings.

When the proposed Directive on control measures (90/679/EEC)\(^{3573}\) was finally put forward for adoption, the HSE, as the body concerned with health and safety legislation in the UK, worked in very close collaboration with UKREP (United Kingdom Permanent Representative in Brussels) in negotiating the terms of the Directive at meetings of the Social Questions Working Group of the Council of Ministers of the EU. I attended about a dozen of those meetings in Brussels along with an administrative colleague from HSE. I do not recall any mention of BSE at that time.

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\(^{3571}\) BSE – (Bovine spongiform encephalopathy) Background and general occupational guidance, HSE Books, HMSO, 1996

\(^{3572}\) The European Union (EU) came into existence on 1 November 1993 as a result of the Maastricht Treaty. It incorporated but did not replace the European Community. Throughout the volumes of this Report the term EU is generally used for consistency’s sake (even if sometimes chronologically incorrect), except where specific reference is made to the functions conferred by the European Community Treaty or to its legal effect.

\(^{3573}\) See L18 tab 24
However, a later Directive, amending the first, concerned a classification of biological agents (ranked in risk/hazard groups 1 to 4[3574]). Preparatory work on this was the function of a group of ‘national experts’ convened again by the EC at which all Member States were represented. I represented the UK (via HSE) with support from my fellow joint secretary of the ACDP and on several occasions also a member of HSE’s THSD. The line to take at all these meetings was, where time allowed, prepared in consultation with ACDP and others and, where necessary, with Ministerial approval.[3575]

8.185 On 30 May 1991, Ms McGinty reported to Dr Pickles about a recent EC meeting to discuss the draft directive. She said:

As anticipated there was considerable pressure from the other member states at the last meeting of experts in Luxembourg to classify the agents of CJD, GSS and Kuru in Group 3 rather than Group 2 (our current classification). There seemed to general agreement that the agents of BSE and scrapie should be excluded from the list on the basis that they are animal infections with no evidence of human pathogenesis, and there should be no difficulties in defending this position.

However, in order to resist pressure to upgrade the human SE agents we will need some convincing arguments as to why lower classification is appropriate.

. . .

If you consider that we should resist the classification of human SE agents to Group 3, and that the political and practical consequences of not doing so are too great, I can put a reserve on this classification. We will hopefully get a further chance to discuss matters when the draft Directive is considered by the [EC] Social Questions Working Group, though it is unlikely that this group will be willing to overthrow the decision of the national experts without very good reason.[3576]

8.186 The ACDP Working Group was kept informed about developments on the draft directive. In August 1991 Mr Lister reported to the Group that the EC Working Group on the directive had prepared a final draft on the classification, which included human SEs as Group 2 and did not list animal SEs. He advised that the draft proposal would be put to the Commission’s Advisory Committee for Safety, Hygiene and Health in September. He expected that the directive might be adopted ‘later in 1992’. [3577]

8.187 Professor Biggs told us that, at the sixth meeting of the ACDP Working Group on 15 June 1992, the members were informed that the draft directive was likely to classify the human TSEs in Hazard Group 3. He continued:

The UK did not agree with this and was negotiating for a derogation on containment for these agents to be handled as group 2+. Because it was likely that these negotiations would be prolonged, I agreed with the Secretariat in

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3574 See L18 tab 24
3575 S495 Lister para. 9.1
3576 YB91/5:30/5.1–5.2
3577 YB91/8.6/3.1
January 1993 that we should proceed to finalise the Guidance on the basis of the current ACDP categorisation of these agents as group 2.\textsuperscript{3578}

**8.188** The Directive was adopted in 1993 ( Directive 93/88/EEC) and classified the agents responsible for human TSEs in Hazard Group 3. The Directive also recommended the use of a Containment Level 2 for laboratory work with the BSE agent.\textsuperscript{3579}

**8.189** Mr Lister told us:

In the absence of any evidence in 1995 and very early in 1996 of a compelling link between BSE and human disease (and there is still none in relation to occupational exposure), it was appropriate for the UK to resist the moves made by several of the Member States (notably Germany, Austria and initially France) to have BSE classified formally as a biological agent under the terms of the Directive. Such premature classification, and its consequent implementation in domestic legislation as would have been required, may have had a profound effect in terms of limitation of important research activities in the UK and in many other respects could have been damaging to the UK’s interests. (Later on, in 1996 or 1997, when the link between BSE and nvCJD was more firmly established, the UK itself, \textit{via} HSE’s representation at further EC meetings, proposed the appropriate classification of the BSE agent. Notably though, a suitable derogation from the full stringency of containment measures was successfully negotiated as this had already been applied to CJD and other human spongiform encephalopathies. There is no proven record of CJD having been transmitted through occupational exposure and for some years containment measures have been modified accordingly).\textsuperscript{3580}

**Discussion**

**8.190** Occupational risk was an urgent matter for consideration when BSE emerged. It involved what Dr Cawthorne termed ‘physical’ and ‘infective’ risks. By May 1988, HSE had sent a circular to their Inspectors on how to advise farmers and handlers about aggressive behaviour in infected animals. MAFF issued advice in July 1988 to their staff within the CVL and the VICs about safety precautions when handling animals and tissues. They followed this up with more detailed instructions in November.

**8.191** However, these were far from being the only groups of workers exposed to risk. This chapter has reviewed what was done to advise the wide range of other workers who also might have been in contact with the BSE agent.

**8.192** Two features of this story struck us particularly. The first was how long it took to issue simple warnings and advice even to those workers identified as at high risk. The second – which bore on the first – was the unsystematic way in which they were identified and decisions taken about who should contact them.
8.193 Why was this so? We thought there were several factors in play. Each of these is considered below. We go on to comment on the outcome so far as handling BSE was concerned and the lessons to be learnt.

The factors in play

(1) The system for preparing occupational guidance

8.194 Overall statutory responsibility for advising about risk to workers and ensuring adequate action rested with the HSE and the HSC. Intricate consultation arrangements applied under the legislation, involving not only HSE staff but also employers’ and employees’ representatives. A favoured method of operation was through codes of practice and guidance, which allowed flexibility of application. The emphasis was on the responsibility of employers to follow this through. HSE Inspectors advised, monitored known risks and how they were being dealt with, and where necessary prosecuted.

8.195 The HSE drew heavily on the advice of their expert advisory committees and groups. They also consulted and worked closely with ‘sponsor’ departments knowledgeable about the industries concerned and who had their own lines of communication with those working there.

8.196 These arrangements helped ensure advice was solidly based and workable. However, they meant that dealing with a complex issue could take considerable time. Thus, as this narrative shows, it took two years to agree advice to renderers.

(2) Ambivalence about who was in the lead in issuing guidance

8.197 The lead role in issuing guidance to specific groups of workers who might be affected by contact with the BSE agent was not clear-cut. Occupational risk and product risk were closely intertwined. Departments as employers were under a duty themselves to ensure the safety of their workers. Many regular channels of communication for specific categories of urgent information were in place between Departments and ‘their’ industries. MAFF was keen to use its own frequent contacts with individual trade organisations and professional bodies about all aspects of BSE to issue occupational advice. As they pointed out, it was MAFF ministers who were under fire on BSE and were expected to provide prompt advice.

(3) Limited HSE knowledge on slaughterhouses

8.198 The industries associated with animal slaughter were not traditional HSE territory. HSE saw them as a sphere where local authorities were in the lead. However, as discussed earlier in this volume and that on animal health, the responsibilities of local authorities were directed towards ensuring that meat products, rather than the workers themselves, avoided contamination. Although many of the handling and hygiene arrangements were relevant to both product and worker safety, the latter involved additional aspects, such as the risks from cuts or from inhalation. When MAFF pressed for immediate issue of advice to abattoir workers and knackeries, HSE were cautious about endorsing this until they were better informed on the practical considerations. A difference of view then developed
between them and MAFF about what the advice ought to be. Similar considerations, though to a lesser degree, applied to other fields of work, notably veterinarians and butchers.

(4) Risk assessment and the Southwood Report

8.199 HSE were pioneers in the use of risk assessment in public policy making. Volume 15: Government and Public Administration illustrates the role they have played in developing this over the years in the public sector. Dr Gompertz described their approach to the real or potential risk as depending on an assessment of that risk and having to be ‘reasonably practicable’. In 1996 they described this to the Select Committee on Agriculture as ‘identifying all the hazards associated with the risk issue then expressing the likelihood that harm will be experienced by a specified population and what the consequences will be’.

8.200 These were still early days in developing their techniques and BSE, when it emerged, was a particularly intractable hazard to assess. They were faced with an animal disease of which the main apparent analogue – scrapie – did not infect humans working closely with sheep. The status of the BSE agent was likely to take years to establish. Meanwhile HSE lacked an information basis to apply the sort of structured risk assessment they were promoting as a basis for proportionate responses.

8.201 Their main source of information was the Southwood Report. While this was in preparation Dr Pickles had discussed with Dr Gompertz and his colleagues the occupational safety implications. The general view at that time was that BSE was only a hypothetical risk. In the discussions that ensued the view prevailed that it did not justify separate occupational guidance and (since it was not thought likely to be transmissible to humans) certainly not stricter precautions than those for recognised dangerous zoonoses.

8.202 When the Southwood Report appeared it was read by HSE, as by others, as indicating ‘only a hypothetical risk’. Dr Gompertz told us:

I read the Southwood Report as soon as it was sent to me. My understanding from the report was that the risk to humans from transmission was thought to be remote from any route of transmission including accidental inoculation. It was not known even if there was any human hazard.

8.203 Dr Mayatt told us what she considered the key message to take from the Report, as regards occupational hazard:

Apart from ethical considerations (feeding of animal protein to ruminants), the changes of the rendering processes and the impact that has had on this area, the salient issue as regards occupational hazard was that the risk analysis was very much up in the air (ie whether or not BSE represented a risk in the occupational setting).
8.204 The Report did not specifically recommend action by HSE. The Working Party had understood from the exchanges between Dr Pickles and Dr Gompertz that they were already looking at the issues. Instead it simply recommended that HSE had the potential problems of BSE brought to their attention so that they could consider whether further guidance should be given. The press release was even lower key. It said HSE would be considering whether further action was necessary to ensure existing guidance was being followed.

8.205 It is plain from the way they approached the next steps that HSE did not feel they were being asked to carry out this work in a specially urgent or comprehensive way. MAFF soon began to press for discussion and issue of advice, in particular for farmers, slaughtermen and those working at disposal sites. However, HSE interpreted this as a presentational rather than a safety problem. A terse manuscript comment by Dr Mayatt on the discussion that was eventually held with MAFF and DH on 9 June 1989 sums this up:

BSE and MAFF: media driven problems largely; MAFF has to be seen to be taking action. 3585

8.206 Dr Matthews, for his part, referred after the meeting to ‘the hitherto casual attitude of HSE’. 3586

(5) Parallel review exercises

8.207 The 9 June meeting was the first of three meetings of the HSE task force specially constituted to follow up the Southwood Report, the HSE BSE Working Group. However, HSE also conducted two parallel exercises that bore on the preparation of occupational safety guidance about BSE.

8.208 The first was the preparation of guidance by the CDTFZ about the indications and appropriate safety measures for a selection of known zoonoses. Dr Gompertz told us that when he was first approached by Dr Pickles:

The approach from Dr Pickles came at a time when HSE had started to review the infectious diseases that might be transmitted from animals to humans in occupational settings, the occupational zoonoses. A cross divisional task force had already been established to do this. 3587

8.209 BSE was excluded from this exercise as ‘not proven’, and the booklet that eventually appeared in 1993 did not refer to BSE. 3588 It none the less figured on the task force’s agendas, and action was discussed by the members. There was both a somewhat uncomfortable relationship and overlapping membership between its work and the deliberations of the HSE BSE Working Group, and in May 1990 it was decided to amalgamate the two. The nicety that BSE was still not considered by HSE to be a zoonosis was dealt with by an expanded title: the CDTFZ and BSE. This Group went into abeyance between October 1992 and December 1995.

8.210 The second exercise was a Working Group of the ACDP set up in February 1991 to prepare detailed guidance on the handling of TSEs. It was wound

3585 YB89/6.9/20.1–20.2
3586 YB89/6.12/7.1–7.2
3587 S557A Gompertz para. 18
3588 DO01 tab 11 p. 14: HSE publication The Occupational Zoonoses, HMSO, 1993
up on 24 May 1993. This guidance was inspired by the fresh interest in TSE research brought about by the emergence of BSE. We noted the new broader terms of reference for the ACDP which made its remit wider.

8.211 The exercise undertaken by the ACDP Working Group endured many vicissitudes and the guidance was not issued until September 1994. It gave comprehensive advice on precautions for work with all known TSEs, human and animal, including BSE. We discuss below the reasons for this 3 ½-year gestation period.

**Was the response adequate?**

8.212 With the exception of the ACDP guidance, HSE had completed by June 1992 the exercise of advising the main groups at risk, recommended by Southwood three years earlier. In June 1996 – outside the period covered by the remit of this Inquiry – the ACDP at the request of SEAC reviewed the principles of all the guidance so far issued to various occupational groups. They concluded that ‘subject to some adaptation to specific occupational settings, the prudent precautions incorporated in the current guidance remain valid’.

8.213 This assessment did not, however, address the timeliness within which that advice had been issued. Unlike the safety of eating beef, concerns about worker safety had not attracted much public interest. The tempo of the action taken was decided by Departments either on their own initiative or in response to concerns that had been raised with them.

8.214 The HSE performed a useful unifying role on the content of the guidance that went out about BSE, since in most cases it was either issued under their aegis, or endorsed by them. Their overview role on assessment of occupational risk and maintaining a balanced approach meant it was rational for them to take a cautious line on any measures that were more rigorous than those being adopted for confirmed zoonoses. Their favoured approach to BSE was to reinforce general guidance and stress sensible working practices and precautions. As proponents of the application of risk assessment principles and a proportionate approach to hazards, this was a reasonable basis on which to seek to proceed.

8.215 However, unlike the approach adopted by DH in respect of medicines (discussed in vol. 7: *Medicines and Cosmetics*) of ranking the categories of risk as a guide to action, the HSE approach to worker safety did not appear to use any systematic ranking associated with the tissues and processes involved. Dr Mayatt described the list of occupational groups being arrived at by ‘a brainstorming exercise. I do not recall an attempt to prioritise these groups.’ Dr Pickles rightly drew attention to this when the guidance for abattoirs was under discussion. Such an approach would, we believe, have been helpful in focusing action where it was most urgently needed.

8.216 Although the plan was that only general guidance would be issued, in practice the action had to be much more specific. Generalised guidance would have no practical impact. It was rightly agreed that advice would need to be tailored industry by industry, given the wide differences in processes involved and target
audiences. There were different possible approaches to this. One was to issue a clear warning to alert those concerned, and to look to management then to develop and apply local codes of practice. Another was to issue direct advice about what should be done. Both these approaches were used to differing degrees though not, it would appear, on the basis of any predetermined strategy.

8.217 Hand-in-hand with this went the need to consider the timing of the preparation and publication of each piece of guidance. There needed to be clear perceptions about the most important hazards and how they should be dealt with. It appeared to us that this did not happen. Indeed, some of the highest-risk activities were dealt with only late in the process.

8.218 We considered in the light of the five background factors we discussed above whether the way the issue of guidance on occupational risk from BSE was handled was reasonable. All of them influenced what transpired.

8.219 However, we thought the determining factor was the HSE perception that DH, MAFF and the Southwood Working Party all believed the risk to humans to be remote, even from inoculation and before any precautionary measures were taken. Their sluggish initial response about meeting with MAFF and DH to discuss the remit laid on them while regrettable, was therefore not unreasonable. Their caution about agreeing to the issue of advice where they were not in a position to judge if it would be sustainable in practice was also not unreasonable and we do not criticise them for their approach.

8.220 Nevertheless, we are concerned that the outcome of the pace and attitude adopted was considerable delay in the issue of guidance to high-risk occupational groups. Some of the groups who waited longest to receive guidance were also in close contact with the highest-risk material.

8.221 Slaughterhouses were an area clearly needing urgent consideration and MAFF were right to press for this. We recognise the legitimate HSE concerns that advice MAFF proposed should be well-founded, their wish to establish their own base of knowledge and to ensure both sides of the industry were content with what was proposed. This was their established approach to preparing advice, using their advisory national groups. Accordingly we do not criticise the part they played in delaying the issue of guidance, though we think the consequent delay of several months was undesirable.

8.222 It is perhaps surprising that MAFF did not identify renderers handling cattle offal rather sooner, given that guidance to workers disposing of carcasses on tips had been an early concern. Moreover, the preparation of the guidance notes by HSE was long-drawn-out. However, there was continuous and intense dialogue with the rendering industry from the early days of the outbreak. The possible risks infected material posed for their workers cannot have escaped their members. The knackers’ trade, and the use made by maggot farms and hunt kennels of unfit meat, were only belatedly recognised by Government as needing to be brought within their controls on BSE. We do not criticise the consequent delays in issuing occupational guidance to them.

8.223 In the case of the ACDP Working Group on BSE, the categories of worker involved were at particular risk of contact with highly infective tissue. We noted
that when Dr Pickles was initially involved with the launch of the Working Group she commendably not only provided draft outlines of the scope of the document that might be prepared, but suggested a handling plan and timetable to enable it to appear at the earliest possible date. That timetable soon fell by the wayside and the process sank into a drafting morass.

8.224 Witnesses suggested a variety of reasons for this. They included uncertainty about appropriate decontamination procedures and about blood products, constantly emerging new information coupled with poor knowledge about thinking within SEAC, pressure of other work on the Secretariat and sidetracking into protracted drafting time on a professional letter of warning on neuro- and ophthalmic surgery procedures. Further delays were then incurred up to September 1994 though the document had been agreed in 1993, while DH finalised advice on at-risk patient groups ‘inadvertently treated with CJD infected medicines or tissue grafts’. A background factor influencing the handling of the exercise was continuing debate, including controversy at a European level both over whether human TSEs were a Category 2 risk or, as some advocated, came in Category 3 requiring more rigorous safeguards. There was also debate over whether BSE should be categorised at all, as Germany, Austria and France had suggested, it being open to question whether it was a human pathogen.\footnote{See summary table of risk categories in para. 8.25}

8.225 While all these help to explain why delay occurred, collectively they produced what seems to us a quite unacceptable delay. We have not in this instance embarked on the detailed exercise of attempting to identify whether individuals were responsible for this unfortunate outcome. It would have been disproportionate to do so. However, we must express our dismay that the sense of timeliness became lost. The system of refining drafts between DH and the ACDP Working Group, which met only infrequently, proved hopeless. Search for perfection in an area so uncertain as this was likely to be impossible to achieve. The best was again allowed to become the enemy of the good.

8.226 It seemed to us that one of the weaknesses in the way matters were approached was the absence of an overall framework within which the pathways of occupational risk could be systematically scrutinised and revisited. Had there been an audit of what happened to all bovine tissues of the kind we identify in vol. 7: Medicines and Cosmetics we believe this would have provided such a framework. This would, as one of its outcomes, have indicated the main occupational areas where handling advice needed to be provided. It would also have promoted the desirable process of establishing priorities, timing and responsibility for tackling them. A systematic and timetabled approach might then have been built into the exercise of issuing occupational guidance as a whole.

8.227 We also consider that, even if definitive judgements could not be made about risk, a degree of risk assessment could usefully have been applied by ranking the known points of exposure. This was, as we have noted, the approach used on medicines. Advice could then have been given about identifying hazard analysis critical control points (HACCP) in respect of working practices. The HACCP technique was later applied effectively in abattoirs to food hygiene risks.
8.228 A framework of the sort we are envisaging would also have been a ready means of identifying, as fresh information emerged, where occupational risk needed review.

Lessons for the future

8.229 We drew six general lessons from the way that BSE was handled in relation to occupational health.

8.230 (1) The best should not be allowed to become the enemy of the good. We saw great effort put into immaculate presentation and resolving all disagreements in documents. Admirable though these high standards are, the downside is that they can cause unacceptable delays. One witness put it graphically:

In a way, the Working Group was on a treadmill in the sense that any delay arising from the time needed to address a subject, or any other reason, was time during which new information became available requiring re-addressing subjects already dealt with.  

8.231 (2) Established procedures while necessary should not be allowed to delay urgently needed action. It is good practice when producing guidance to involve as many of the parties concerned as possible. However, where speed is of the essence that may be counter-productive. Instead, it may be better if possible to issue initial guidance in prompt and simple form, to be later adjusted and amplified as necessary. Where normal consultation processes are short-circuited on grounds of urgency, this should of course be later explained and justified to those normally consulted. It will be necessary to reach a judgement in each case as to whether the situation is urgent.

8.232 (3) Establishing before a crisis arises where lead responsibility for advice lies is highly desirable. While HSE has overall responsibility for occupational safety guidance and the consistency and principles of the approach to this, we see no reason why Departments should not under standing arrangements take the lead on some matters. This should be explicitly agreed rather than leaving uncertainty and a degree of manoeuvring over who is calling the shots, and whose information system is to relay the agreed advice. In the case of a disease such as BSE we would see positive merit in advice clearly coming from a single authoritative source.

8.233 (4) Mixed messages are weak messages. Underplaying the reasons why action is needed can damage the outcome that the action is meant to secure. The importance of risk communication within and between Departments, as well as with the public at large, was inadequately recognised throughout the handling of BSE generally. This applied to advice on occupational safety issues as to other matters.

8.234 (5) Even where risk cannot be accurately assessed, it should be standard practice to categorise the matters that present the highest likely risk, and these should be dealt with first. This applies to occupational risks as much as to any other sorts.
8.235 (6) A properly constructed overview of what is being addressed overall should be drawn up and monitored. Where a threat that applies to a wide range of industries or activities is involved, a framework identifying the pathways for infection is essential and can provide a useful basis for establishing responsibility for action and setting timetables for its completion.

Annex 1 to Chapter 8: Organisation of HSE

1 The Health and Safety at Work Etc Act 1974 (‘the 1974 Act’) is the principal legislation in England and Wales designed to secure the health, safety and welfare of persons at work; it imposes duties on employers and employees. Ministers from other government Departments, such as DH, also produce regulations on workplace safety, particularly for industries within their Department’s remit. Government Departments, as employers, also produce health and safety guidance for their staff.

2 Part I of the 1974 Act is the substantive section and covers the general duties of employers and employees, the regulation and approval of codes of practice, and enforcement of the provisions and penalties. Part I also created the Health and Safety Commission (HSC) and the Health and Safety Executive (HSE) whose duties are governed by the Act and any regulations made under it. The responsibilities of the HSC and HSE are described briefly below and in more detail in vol. 14: Responsibilities for Human and Animal Health.

Application of the 1974 Act in Scotland and Northern Ireland

3 The Act applies throughout Great Britain (ie England, Scotland and Wales). However, apart from some minor provisions, the Act does not apply to Northern Ireland.

4 The health and safety legislation in Northern Ireland is broadly similar to that of Great Britain. It is enforced mainly by the Department of Economic Development and the Department of Agriculture through a health and safety Inspectorate, although the district councils have an enforcement role similar to that of local authorities in Great Britain. There is a Health and Safety Agency, roughly corresponding to the HSC but without its policy-making powers, and an Employment Medical Advisory Service.

HSC and HSE

5 At the time when BSE emerged HSC was (and continues to be) responsible for developing policy on health and safety at work, including proposals for new or revised regulations and codes of practice.

6 The HSE is the operational arm of the HSC and is the primary instrument for carrying out the HSC policy. It has day-to-day responsibility for enforcing health
and safety law, except where other bodies, such as local authorities, are responsible.\textsuperscript{3597} In 1986 its field service and inspections were carried out by staff in ten Inspectorates, including the Factory Inspectorate and the Agricultural Inspectorate. Health and safety legislation was also enforced by local authorities (who principally inspected shops, warehouses, service industries and slaughterhouses).\textsuperscript{3598} HSE had various liaison arrangements with representatives from industry to deal with sector-specific health and safety problems; for example the Food Industry, Health Services and Education National Industry Groups (NIGs).

7 HSC and HSE also use a number of standing advisory Committees, including several which deal with specific industry sectors. With regard to BSE and the consideration given to occupational risks, the Advisory Committee on Dangerous Pathogens (ACDP) was most relevant. This was set up by HSC and DH in 1981 with an independent chairman and a dual HSE/DH secretariat. Its terms of reference, originally mainly directed at laboratory workers, were widened in 1991. Its purpose now is to provide advice on all aspects of risks to workers from exposure to dangerous pathogens (ie, infectious agents).\textsuperscript{3599} It also advises on general standards of safe working practice in laboratories handling dangerous pathogens and categorises these according to hazard in light of research.\textsuperscript{3600} This categorisation determines the precautions to be taken over each pathogen.

8 After initial consideration about the merits of issuing guidance on occupational risks from BSE, in February 1991 the ACDP established the ACDP Working Group to take this forward. In addition to the work on BSE by the ACDP and its Working Group, occupational risks from BSE were considered in light of the Southwood Report recommendations by a specially constituted group (HSE BSE Working Group). Members included representatives from MAFF and DH. The emergence of BSE, among other factors, had added to a concern about zoonoses in general and a Cross Divisional Task Force on Zoonoses (CDTFZ) was also created within HSE to prepare guidance on these. Later, the HSE BSE Working Group and the CDTFZ merged to become the Cross-Divisional Task Force on Zoonoses and BSE (CDTFZ & BSE).

\textsuperscript{3597} Section 18 Health and Safety at Work Act 1974
\textsuperscript{3598} M68 tab 1 p. 5. These agencies included the Railways Inspectorate (for the safety of railway workers) and the Petroleum Engineering Department of the Department of Energy (North Sea safety)
\textsuperscript{3599} The ACDP was a result of developments over a number of years. In 1973, a Working Party on the Laboratory Use of Dangerous Pathogens was set up by the Secretary of State for Social Services in conjunction with the Secretaries of State for Scotland, Wales, Northern Ireland and Science and MAFF. In 1975 the Working Party produced a report, known as the Godber Report (M11D tab 12). Following the Godber recommendations, a working party of expert representatives was established under the code of practice for the Prevention of Infection in Clinical Laboratories and Post-mortem Rooms. The Code (see M11D tab 13) was published in 1978 and recommended that an advisory group be established to review the categorisation of pathogens and advise laboratories as to suitable safety precautions. As a result the DH set up the Dangerous Pathogens Advisory Group which later became the ACDP
\textsuperscript{3600} The choice of laboratory control measures is regulated under the Control of Substances Hazardous to Health Regulations 1984 (COSHH) and largely dictated by the categorisation of biological agents into one of four Hazard Groups. Since 1984 this categorisation has been set out in guidance from the ACDP. Following the adoption of an EC classification of biological agents (Directive 93/86/EEC) the categorisation has been achieved via an HSC ‘Approved List’ made under section 15 of the Health and Safety at Work Act 1974
Annex 1: Figure 1 – Organisation of HSE
Annex 2 to Chapter 8: Membership and, where available, terms of reference of relevant HSE Committees and Working Groups

HSE BSE Working Group (June 1989–May 1990)

Terms of Reference

The HSE BSE Working Group did not have official terms of reference.

Chair: Dr D Gompertz, Deputy Director Medical Services (HSE)

From HSE
Mr W A Bennie: Senior Principal Inspector of Factories, Food NIG
Mr S North: Senior Principal Inspector, Food NIG
Dr C W Ide: HSE’s Employment Medical Advisory Service (EMAS), Food NIG
Dr D M Smith: Senior Employment Medical Adviser
Dr V L Mayatt: Principal Specialist Inspector, Microbiology Unit
Dr R Nourish: Head of Occupational Hygiene, Biosafety and Environment Unit, HSE
Mr P Lister: Head of Section, Health Policy Division, HSE
Mr A J Taylor: HSE Advisory Committee on Genetic Modification
Mr D J Wilks: Senior Agricultural Inspector

From MAFF
Dr D Matthews: Senior Veterinary Officer (SVS)
Mr A J Maslin: Head of Administrative Branch, Animal Health Division

From DH
Dr H Pickles: Principal Medical Officer, Health Care Division, DH
Ms A McGinty: Senior Scientific Officer, Health Care Division, DH

Cross-Divisional Task Force on Zoonoses (June 1989–May 1990)

Later, the group merged with the HSE BSE Working Group and was called CDTFZ & BSE (May 1990–present)

Chair: Dr D Gompertz

From HSE
Dr B Crook: Microbiologist
Dr C W Ide: Occupational Physician, Food NIG
Dr D Smith: Senior Employment Medical Adviser (with responsibility for
From DH
Ms A McGinty: Senior Scientific Officer, Health Care Division, DH
Dr A Dawson
Dr D Harper

From MAFF
Dr D Matthews: Senior Veterinary Officer (SVS)
Mr A Fleetwood: Veterinary Investigation Officer (SVS)
Also, Mr M Greaves: Environmental Health Officer, Wakefield

Advisory Committee on Dangerous Pathogens (ACDP) (1981–present)

Terms of Reference

‘To advise the Health and Safety Commission, the Health and Safety Executive and the Health and Agriculture Ministers, as required, on all aspects of hazards and risks to workers and others from exposure to pathogens.’

Members in 1989

Chairman: Dr D A J Tyrrell

Specialist members
Mr A J Barrow
Professor P M Biggs
Dr R Edmond
Dr R Fallon
Dr A Kelly
Professor C Pringle
Dr T Roberts
Dr E Shaw
Dr S Young
Dr T Wyatt

**Employer representatives**
Mr A Clare
Miss A Harris
Dr W Kearns
Dr J Smith
Professor S Tabaqchali

**Employee representatives**
Ms J Church
Dr R Davies
Mr K Hargreaves
Dr R Owen
Mr P Taylor
Miss E Wrenn

**Departmental Observers**
Ms K Heywood: Specialist Inspector Biohazards (Dangerous Pathogens), HSE
Dr H Pickles: Principal Medical Officer, Health Care Division, DH
Dr W Thornton: DHSS, NI
Dr J Hutton: DH
Mr J Bell: MAFF
Mr D Sweasey: Safety Officer, CVL, MAFF
Col E Parry: MOD
Dr A McIntyre: SHHD

**Secretariat**
Mr P Lister: Head of Section, Health Policy Division, HSE
Mr R Gates: HSE
Ms A McGinty: Senior Scientific Officer, Health Care Division, DH
(unti May 1991)
Dr Marilyn Nugent: DH (from May 1991)
Mr McDowall: DH

**Advisory Committee on Dangerous Pathogens Working Group on SEs (ACDP Working Group)**
(February 1991–March 1993)

**Terms of Reference**

‘To report to the ACDP on the need for additional guidance on health and safety aspects of work with animals or humans, their tissues or *in vitro* systems infected or potentially infected with spongiform encephalopathy agents, and to draw up such guidance.’
Members

Chairman: Professor P M Biggs (ACDP)

Dr Jeanne E Bell: Neuropathogenesis Unit
Mr A R Clare: ACDP
Professor D J Jeffries: HSE Advisory Committee on Genetic Modification
Dr D Taylor: Neuropathogenesis Unit
Mr P Taylor: ACDP
Dr T Wyatt: ACDP
Dr H Pickles: Principal Medical Officer, Health Care Division, DH

Observers

Ms K Heywood: Specialist Inspector Biohazards (Dangerous Pathogens), HSE
Mr A Taylor: HSE Advisory Committee on Genetic Modification
Mr D Sweasey: Safety Officer, CVL, MAFF
Mr W McDowall: DH
Mr R Gates: HSE

Secretariat

Mr P Lister: Head of Section, Health Policy Division, HSE
Ms A McGinty: Senior Scientific Officer, Health Care Division, DH
(until May 1991)
Dr Marilyn Nugent: DH (from May 1991)
### Appendix to Annex 2: Key players and membership of committees and working groups

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<td>Head of Section Health</td>
<td>Principal Medical Officer</td>
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<td>Mr A McLean</td>
<td>Mr S North</td>
<td>Ms A McGinity</td>
<td>Mr J Maslin</td>
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<td>Food NIG</td>
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<td>Dr D Sweeney</td>
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<td>Senior Veterinary Officer</td>
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<td></td>
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<td>Mr A Fleetwood</td>
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| HSE BSE WG         | CDTFZ                      | ACDP                        | ACDP WG                     |
|                    |                            |                             |                             |

- HSE: Health and Safety Executive
- DH: Department of Health
- MAFF: Ministry of Agriculture, Fisheries and Food

*Note: The table indicates the participation of key players in different committees and working groups.*
Annex 3 to Chapter 8: Alphabetical list of occupations at risk and guidance produced

<table>
<thead>
<tr>
<th>Occupations at potential risk from BSE/TSEs</th>
<th>Year and title of guidance produced</th>
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<tbody>
<tr>
<td>Abattoir/ slaughterhouse workers</td>
<td>Guidance Note 05: BSE (March 1990)</td>
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<td>Review of Precautions advised against occupational risks from BSE and of guidance for abattoir workers, carcass handlers and renderers (1995)</td>
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<td>Agriculture Workers</td>
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<td>Precautions for work with human and animal Transmissible Spongiform Encephalopathies (July 1994)</td>
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<tr>
<td>Anatomy and pathology teachers</td>
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<td>Precautions for work with human and animal Transmissible Spongiform Encephalopathies (July 1994)</td>
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<td>Coroners</td>
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<td></td>
<td>Update on 1981 paper</td>
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<td></td>
<td>The infection hazards of human cadavers (April 1995)</td>
</tr>
<tr>
<td>Occupations at potential risk from BSE/TSEs</td>
<td>Year and title of guidance produced</td>
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<tr>
<td>-------------------------------------------</td>
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<tr>
<td>Ear, nose and throat surgeons and workers</td>
<td>Neuro- and ophthalmic surgery procedures on patients with or suspected to have, or at risk of developing CJD or GSS (Dec. 1992)</td>
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<tr>
<td>Educational establishments</td>
<td>Bovine eyeball dissection (Dec. 1992)</td>
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<tr>
<td>Emergency service workers</td>
<td>The infection hazards of human cadavers (April 1995)</td>
</tr>
<tr>
<td>Farmers</td>
<td>BSE Advisory Notes (June 1990)</td>
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<td>Field workers</td>
<td>Health and Safety at Work (July 1988)</td>
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<tr>
<td>Handlers, carters and disposers of suspected BSE cases</td>
<td>Bovine Sporganform Encephalopathy (May 1988)</td>
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<td>Handlers of animals, carcasses, tissues and products</td>
<td>Bovine Sporganform Encephalopathy (Mar. 1989)</td>
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<td>BSE pocket carry card (Feb. 1995)</td>
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<td>Occupations at potential risk from BSE/TSEs</td>
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<td>General</td>
<td>Precautions for work with human and animal Transmissible Spongiform Encephalopathies (July 1994)</td>
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<td></td>
<td>Categorisation of biological agents according to hazard and categories containment (4th edn 1995)</td>
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<td>Review of BSE guidance issued to occupational groups (April 1996)</td>
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<td>Knackers</td>
<td>Application of COSHH to microbiological hazards in the meat industry and updates in knackers, renderers and BSE (Nov. 1991)</td>
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<td>Zoonoses in Bovine Spongiform Encephalopathy: guidance for the knackering (including hunt kennels and maggot farms) and rendering industries (June 1992)</td>
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<tr>
<td>Laboratory workers</td>
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<td>Health and Safety at Work (July 1988)</td>
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<td>Safety In Health Service laboratories; safe working and the prevention of infection in the mortuary and post-mortem room (1991)</td>
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<td>Precautions for work with human and animal Transmissible Spongiform Encephalopathies (July 1994)</td>
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<td>Livestock workers in agriculture and associated industries</td>
<td>Zoonoses in agriculture: preventing the spread of disease to livestock (Dec. 1989)</td>
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<td>Neuropathologists</td>
<td>Protocol for neuropathological high-risk autopsy</td>
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<td>Precautions for work with human and animal Transmissible Spongiform Encephalopathies (July 1994)</td>
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<td>Occupations at potential risk from BSE/TSEs</td>
<td>Year and title of guidance produced</td>
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<td>Orthopaedic workers</td>
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<td>Pathologists</td>
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<td>Renderers</td>
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<td>Surgeons</td>
<td>Advisory Group on the Management of Patients with Spongiform Encephalopathy Update on 1981 paper</td>
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<td>Veterinary surgeons</td>
<td>Guidance for veterinary surgeons handling known or suspect cases of BSE (Jan. 90) Precautions for work with human and animal Transmissible Spongiform Encephalopathies (July 1994) Bovine Spongiform Encephalopathy (Feb. 1990)</td>
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<tr>
<td>Occupations at potential risk from BSE/TSEs</td>
<td>Year and title of guidance produced</td>
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<td>Spongeform encephalopathies in zoo animals: guidance notes (Aug. 1990)</td>
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### Annex 4 to Chapter 8: Health and safety guidance production and sources

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<tr>
<th>Year</th>
<th>Title</th>
<th>Occupation</th>
<th>Department</th>
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<tr>
<td>1981</td>
<td>Advisory Group on the Management of Patients with Spongiform Encephalopathy (CJD)</td>
<td>Laboratory workers</td>
<td>DH (Published)</td>
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<td>1984</td>
<td>(update on 1981 paper)</td>
<td>Laboratory workers</td>
<td>DH (Published)</td>
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<tr>
<td>May 1988</td>
<td>Bovine Spongiform Encephalopathy</td>
<td>Handlers</td>
<td>HSE (Internal Circular)</td>
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<td>July 1988</td>
<td>Handling of BSE Material</td>
<td>Veterinary laboratory workers (CVL)</td>
<td>MAFF (Internal Guidelines)</td>
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<td>November 1988</td>
<td>BSE and Scrapie</td>
<td>Veterinary laboratory workers (CVL)</td>
<td>MAFF (Internal Guidelines)</td>
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<tr>
<td>February 1989</td>
<td>Southwood Report published</td>
<td>Handlers of animals, carcasses, tissues and products</td>
<td>HSE (Internal Circular to Area Directors and HM Inspectors Agriculture/Factories)</td>
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<td>March 1989</td>
<td>Bovine Spongiform Encephalopathy</td>
<td>Handlers</td>
<td>HSE (Published Guidelines)</td>
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<td>August 1989</td>
<td>Guidance for those Handling, Carting and Disposing of Suspected BSE cases</td>
<td>All groups occupationally exposed to BSE cattle</td>
<td>HSE (Published)</td>
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<td>December 1989</td>
<td>Zoonoses in Agriculture: Preventing the spread of disease to livestock</td>
<td>Those working with livestock in agriculture and associated industries</td>
<td>HSE (Published)</td>
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<td>February 1990</td>
<td>Guidance for Veterinary Surgeons Handling Known or Suspect Cases of BSE</td>
<td>Veterinary Surgeons</td>
<td>MAFF (Circular to Area Directors and HM Inspectors Agriculture/Factories)</td>
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<td>February 1990</td>
<td>BSE Pocket Carry Card</td>
<td>Handlers and those disposing of carcasses</td>
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<td>Guidance Note 05</td>
<td>Abattoir/meat workers</td>
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<td>June 1990</td>
<td>BSE Advisory Notes</td>
<td>Farmers</td>
<td>MAFF (Published)</td>
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<td>August 1990</td>
<td>Spongiform Encephalopathies in Zoo Animals: Guidance Notes</td>
<td>Veterinary surgeons in zoos/zoological gardens</td>
<td>MAFF</td>
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<td>June 1992</td>
<td>Zoonoses in Bovine Spongiform Encephalopathy: Guidance for the Knackering (including Hunt Kennels and Maggot Farms) and Rendering Industries</td>
<td>Knackering and rendering industries</td>
<td>HSE (Internal Circular)</td>
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<td>December 1992</td>
<td>Bovine Eyeball Dissection</td>
<td>Educational establishments</td>
<td>DFEE</td>
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<td>1993</td>
<td>How to Tackle a Possible Creutzfeldt-Jakob Disease Necropsy</td>
<td>Neuropathologists</td>
<td>Dr Bell and Dr Ironside</td>
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<td>1994</td>
<td>Precautions for work with Human and Animal Transmissible Spongiform Encephalopathy</td>
<td>Laboratory workers, health care workers, pathologists, anatomy and pathology teachers, post-mortem workers, embalmers and veterinarians</td>
<td>ACDP (Published)</td>
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<td>1995</td>
<td>Categorisation of Biological Agents According to Hazard and Categories of Containment</td>
<td>Laboratory workers</td>
<td>ACDP (Published)</td>
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<td>20 March 1996</td>
<td>Government Announcement on BSE/CJD</td>
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### Development of Guidance on Occupational Risks from BSE and Other TSEs

<table>
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<th>Department</th>
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<td>April 1996</td>
<td>Review of BSE Guidance Issued to Occupational Groups</td>
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<tr>
<td>June 1996</td>
<td>BSE background and general occupational guidance</td>
<td>All relevant occupations</td>
<td>ACDP (Published – HSE Books, 1996)</td>
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