5. The animal health story

296 By the time that the *Southwood Report* was published, the two major measures that the Working Party had recommended were in place. The ruminant feed ban had been extended – not indefinitely as the Working Party had recommended, but for a further year. An indefinite extension was to come later. If feed were the only means of infecting with BSE, the ban should in due course eradicate the disease. So far as the risk to humans was concerned, the Working Party considered that slaughter and destruction of animals showing clinical signs sufficed to protect against the remote risk of transmission as a result of eating infective tissue. So far as occupational risks and risks in relation to medicinal products were concerned, the Working Party had alerted those responsible for addressing these.

297 Substantial further measures were, however, to be taken to address food risks, for both humans and animals. These were, first, the ban on using Specified Bovine Offal (SBO) for human food (‘the human SBO ban’), followed by a ban on incorporating SBO in animal feed (‘the animal SBO ban’). Our task of reviewing the action taken in response to BSE up to 20 March 1996 requires us to examine the circumstances in which these measures were introduced. It also requires us to review the various measures that were taken in response to BSE and how they were enforced and monitored. That is a complex, but important, part of the BSE story. It is important because there were significant shortcomings in both the human health and the animal health measures, and in their enforcement and monitoring. Had we attempted to cover all of this in simple chronological order in our Report, the result would have been to confuse. Accordingly we decided at this stage to divide our coverage into two. In Volume 5 we have traced the story of measures taken to protect animal health. In Volume 6 we have followed the story that relates to the protection of human health.

298 We propose to follow the same course in this volume. In this chapter we shall cover that part of the story which is told in detail in Volume 5. We shall moreover subdivide the topics in the same way as we have in that volume. This means that we shall give separate treatment to the ruminant feed ban and the animal SBO ban. The former was the measure designed to protect cattle and other ruminants. The latter was designed to protect non-ruminant animals, but provided fortuitously an additional line of defence for cattle, which proved of great importance.

299 It may be thought that we have got our priorities wrong in considering animal health before human health. The reality is that, although introduced in the interests of animal health, the action taken to eradicate BSE was of critical importance in protecting humans should BSE prove, as indeed it did, to be a zoonosis. It is for this reason that we considered it logical to look first of all at that part of the BSE story which was motivated by the immediate demands of animal health.
Ruminant feed ban

300 Mr Kevin Taylor\textsuperscript{33} became responsible for providing veterinary advice on all aspects of the control of BSE from the time that it became a notifiable disease in 1988. He told us that there was no practical way in which the ruminant feed ban could be enforced, as there was no test which could identify rendered ruminant protein in animal feed. Effectiveness depended on voluntary compliance with the ban. Because of the long incubation period, years would elapse before it would become apparent whether there had been strict compliance with the ruminant feed ban. We consider that it was reasonable to expect that neither feedmills nor farmers would deliberately incorporate MBM in cattle feed. Other sources of protein were available that were only marginally more expensive.

301 No guidance was given to the County Councils and Unitary Authorities, whose duty it was to enforce the ban. We had evidence which suggested that some local authorities made attempts to check on compliance with the ruminant feed ban by sampling, but found this impossible. It is possible that others may have checked the records of feedmills to ensure that MBM was not a component of cattle feed, although strictly they had no statutory right to demand to see these.\textsuperscript{34} In general we do not believe that any steps were taken by local authorities to enforce the ban during any part of the period with which we are concerned.

302 Mr MacGregor proposed that the introduction of the ruminant feed ban should be handled in a low-key way on the assumption that MAFF had a system for notifying all those who were affected, and in particular farmers. In the event MAFF officials made no attempt to contact renderers, the feed trade or farmers directly, but relied upon meetings with trade associations, or farmers’ unions, together with a press release, in order to publicise the introduction of the ban.\textsuperscript{35}

303 Representatives of the feed industry told us that when the feed ban was introduced, a number of factors combined to detract from any impression of urgency about its implementation:

- the grant of a period of grace in which to use up current stocks of feed;
- the absence of any feed recall;
- the fact that neither import nor export of MBM was to be prohibited;
- uncertainty as to whether MBM was indeed the vector of BSE and, if it was, as to which rendering systems were unable to inactivate it; and finally,
- the belief that a very large amount of infective feed would have to be consumed to transmit the disease.

304 Farmers who gave evidence told us that they did not appreciate the gravity of the situation at the time. It was only the occasional farmer who had experience of BSE and that experience was normally of no more than a single case. They continued to use up any stocks of cattle feed remaining at the time that the ban came into force.\textsuperscript{36}

\textsuperscript{33} Veterinary Head of Notifiable Diseases Section, 1986–91; Assistant Chief Veterinary Officer, Animal Health and Welfare Veterinary Section, 1991–97

\textsuperscript{34} Vol. 5: Animal Health, 1989–1996, Chapter 2, paras 2.10 and 2.43


\textsuperscript{36} Vol. 3: Early Years, 1986–88, paras 4.86–4.113
305 A relatively relaxed attitude to enforcement of the ban was illustrated by the decision of Mr Meldrum in February 1989 that the development of an ELISA test, to detect the presence of ruminant protein in animal feed, should be carried out ‘in house’ by a senior scientific officer at Worcester VIC, Mr Mike Ansfield. This course had a number of attractions, not least that MAFF would retain the intellectual property in the test, which might prove commercially valuable. It was estimated, however, that it would take between 12 and 18 months to develop the test. The more costly alternative of seeking external collaboration in producing a test would have been likely to produce swifter results.\footnote{Vol. 5: Animal Health, 1989–1996, Chapter 2 paras 2.52–2.54} As we have commented above, this attitude was a consequence of a failure to appreciate the need to guard against cross-contamination of cattle feed.

306 Although no anxieties were expressed about the adequacy of the action taken by MAFF to eradicate BSE, there were concerns about the risk that BSE might pose, in the interim, to humans and to non-ruminant animals. The scale of infection of cattle during the period before the ruminant feed ban was introduced proved to have been greatly underestimated. By the end of 1988 cases were being reported and confirmed at a rate of over 100 cases a week. The Southwood Working Party had envisaged cases remaining on a plateau at about that rate, but by the end of April 1989 the rate had increased to about 150 cases reported each week. In June 1989 the Government announced its intention to ban SBO (brain, spinal cord, tonsils, thymus, spleen and intestines) from all human food (‘the human SBO ban’). This led a large part of the feed industry to impose a voluntary ban on including those categories of offal in animal feed, a ban that MAFF made statutory in September 1990 (‘the animal SBO ban’) after a number of cases of Feline Spongiform Encephalopathy (FSE) had been identified and BSE had been experimentally transmitted, by inoculation, to a pig. Those events are dealt with later in this chapter.

307 The first case of FSE in May 1990 led to considerable public concern about its implications for human health and to an Inquiry into BSE by the Agriculture Committee of the House of Commons. The primary concern of the Committee was the implications of BSE for human health. So far as animal health was concerned, the Committee observed that the ruminant feed ban, if strictly applied, should arrest BSE. They recommended, however:

That the Government establish an expert committee to examine the whole range of animal feeds and advise on how the industries that produce these should be regulated.

308 This recommendation was accepted by the Government, which set up the Lamming Committee (the Expert Group on Animal Feedingstuffs) in 1991.

309 By the end of 1990 MAFF officials and Mr Gummer, now the Minister of Agriculture, Fisheries and Food, had no reason to doubt the efficacy of the ruminant feed ban. The rate of reported cases had soared until in some weeks these exceeded 400, but they were all cases of cattle born before the ruminant feed ban came into force. Mr Ansfield appeared to have made substantial progress in the development of an ELISA test. His test could detect both ovine and bovine protein in meat and bone meal (MBM). It remained to test it on compound feed.
The development of the ELISA test resulted in some concern on the part of UKASTA. It feared that the test would identify small quantities of ruminant protein in cattle feed resulting from cross-contamination with pig and poultry rations in the feedmills, or from traces in tallow incorporated in cattle feed. Its concern was not that this would be sufficient to infect cattle, but that it might result in prosecution of its members for breach of the Regulations. This concern was conveyed by Dr Danny Matthews to Mr Meldrum. He told us that at this point he did not recall any concerns at MAFF that cross-contamination of feed might be taking place on a scale sufficient to undermine the effectiveness of the ruminant feed ban.

The first BAB

On 22 March 1991 the first BAB was reported to Mr Gummer. This was made public by a news release five days later. It caused considerable excitement within MAFF as urgent consideration was given to whether it was a case of maternal transmission or whether it might have been infected by feed. It was, however, only the first of what was to become first a trickle, then a stream and finally a flood. By the end of the year 300 BABs had been reported, of which only 11 had been confirmed. Investigations by Dr Matthews and his colleagues suggested that at least the majority of these cases were caused by feed containing MBM that was still in the feed chain when the ban came into force on 18 July 1988.

The Lamming Committee met for the first time on 15 February 1991. At their second meeting on 13 March they heard evidence from Mr Meldrum. He told them that he was not totally content with the current controls, as at present there was no test for ruminant protein in feed. However, an ELISA method was currently being evaluated for use in the field.

He said that he was fairly confident that on-farm mixers would observe the controls, despite the absence of a test.

Unfortunately, hopes that the ELISA test was almost ready for use were dashed when it was found that most compound feeds produced a positive result even when they included no MBM.

As the number of BABs increased, so did MAFF officials’ conviction that feed containing ruminant protein had been fed to cattle for a significant period after the ban came into force. In September 1992 Dr Matthews minuted Mr Meldrum commenting that it was clear that the major compounders had needed at least three months to clear stocks, in some cases longer. He added that smaller compounders, who were disproportionately represented among suppliers to owners of BAB cases, 38 The Senior Veterinary Officer at Tolworth responsible for BSE 39 BSE victim Born After the ruminant feed Ban came into force 40 Professor G E Lamming, Professor of Animal Physiology, Nottingham University; Professor P C Thomas, Principal and Chief Executive, Scottish Agricultural College; Mr C Maclean, Technical Director, Meat and Livestock Commission; and Dr E M Cooke, Deputy Director, Public Health Laboratory Service
having not been party to discussions prior to the introduction of the ban, might be expected to have taken longer to clear their stocks.

**UKASTA’s information about breaches of the ban**

By this time 220 BABs had been confirmed. Mr Meldrum wrote to Mr James Reed, the Director-General of UKASTA, suggesting that there had been a time lag of between three and six months before the ban became fully effective. In response to Mr Meldrum’s request for information, UKASTA asked all companies represented on its Executive Committee to answer a questionnaire. At a meeting on 10 November, they gave Mr Meldrum the results of this survey, on condition that the information would be treated with the utmost confidence. The survey showed that most compounders had continued to manufacture cattle feed containing ruminant protein into July 1988 and did not clear stocks from their premises until August or September, or even, in a few instances, October. When giving evidence to us, UKASTA representatives suggested that the stocks of cattle feed may have been cleared by incorporation in feed for non-ruminants, so that the survey may not have disclosed deliberate breach of the ban by UKASTA members. We reject this suggestion, as did Mr Meldrum. The contemporary evidence of the meeting on 10 November is unequivocal. That evidence is reinforced by the fact that over 11,000 cattle born in the last five months of 1988 contracted BSE, as did a further 12,600-odd that were born in 1989.

These figures will, of course, reflect the use by farmers after 18 July 1988 of feed purchased before that date, but we are satisfied that they also reflect deliberate breaches of the ban by some compounders and others in the supply chain. As a whole the animal feed industry does not emerge from the BSE story with credit.

MAFF officials seized eagerly on evidence of breaches of the ruminant feed ban, for the alternative explanation that maternal transmission was occurring was less palatable. In November Ministers were told that there was clear evidence that ruminant feed containing MBM would have been available for six months after the ban came into force. At the year end a MAFF progress report expressed continued confidence that the ban would bring the epidemic to an end.

The first half of 1993 saw MAFF officials frustrated in their desire to start testing feed for the presence of animal protein by continuing difficulties in developing the ELISA test – accentuated by suspension of work on the project while the Worcester VIC was relocated to Luddington. MAFF’s difficulties were compounded by the fact that they had no legal power to carry out random sampling. Samples could only be taken when there were reasonable grounds for suspecting that the Regulations were being broken. The lengthy incubation period made it difficult to demonstrate such grounds.

In September a briefing paper prepared for Mrs Gillian Shephard, who had succeeded Mr Gummer in July as the MAFF Minister, and Mr Nicholas Soames, the Parliamentary Secretary at MAFF, stated that there had been 4,010 confirmed BABs, the great majority of which had had access to ruminant protein in their feed. The paper went on to make the point that the animal SBO ban introduced in 1990 had had the effect of reinforcing the ruminant feed ban.
Problems in relation to sampling continued in the first half of 1994. The ELISA test was ready for field testing, but sampling capacity at Luddington was limited and there was no hope of embarking on large-scale monitoring at feedmills. Furthermore, the lawyers were having difficulty finding a path through the maze of different Regulations relating to animal feed that would enable mandatory sampling to be introduced.

Towards the end of 1993 Mr Wilesmith had begun to feel concerned that cross-contamination might be taking place at feedmills manufacturing multi-species rations. This concern was taken up by Mr Bradley early in the following year. In a minute to Mr Kevin Taylor, he commented that they had both believed that the animal SBO ban would have stopped any infected ruminant protein getting through into the animal feed chain, but if the SBO ban was being abused there was a weakness in this argument. It was at this time that concern was growing about reports of non-compliance with the animal SBO ban.  

By the middle of 1994 MAFF officials had worked out a sampling procedure which they recommended in a submission to Mr Soames. Sampling of cattle feed should initially be carried out on farms on a voluntary basis. Any positive results would lead to mandatory sampling at the feedmill which had supplied the feed. MAFF would carry out the testing themselves rather than entrusting the ELISA test to the local authorities, which had statutory responsibility for enforcing the ban. There were a number of reasons why MAFF officials wished to keep the testing ‘in house’ – one being apprehension that some local authorities might prove over-assiduous in enforcing the ban. It seems to us that the test was not sufficiently robust at this stage to be used in statutory enforcement of the ban. The decision of MAFF officials that MAFF should use the test on a voluntary basis under a uniform scheme to operate across the country was reasonable.

Cross-contamination in feedmills

In June 1994 the possibility that cross-contamination in feedmills was a cause of some of the BABs was discussed with UKASTA’s Scientific Committee. They commented that equipment used in feedmills was being updated ‘as and when required’. This was the start of a series of meetings between MAFF officials and UKASTA in which each had a similar hidden agenda. MAFF was concerned not to do anything that would lead UKASTA members to cease using animal protein as an ingredient of feed for non-ruminant animals. UKASTA, for its part, was anxious that its members should be able to continue to do this without incurring risk of prosecution should it result, on occasion, in cross-contamination of ruminant feed. UKASTA was to threaten repeatedly that it might have to advise its members to cease using animal protein, while MAFF officials sought to allay UKASTA’s anxieties by reassuring its members that sampling was not being used as a precursor to prosecution. In reality, the limitations of the ELISA test, coupled with the requirement under the Order to prove knowing incorporation of ruminant protein, meant that MAFF officials were in no position to contemplate enforcing the ruminant feed ban by criminal proceedings.

See paras 441ff
In July 1994 Mr William Waldegrave succeeded Mrs Shephard as Minister of Agriculture, Fisheries and Food. The following month he was informed of the first four BABs to be reported that had been born in 1991.

By September 1994 a number of factors had combined to indicate that cross-contamination in feedmills was a serious problem:

- Inactivation studies had shown that the three systems which provided most of the UK rendering capacity were not capable of inactivating the BSE agent.
- Epidemiological investigations had revealed a correlation between the incidence of BABs and the ratio of cattle to pigs in the different counties. The incidence of BABs was highest in those counties where mills were producing both pig and cattle feed in large quantities. Mr Wilesmith concluded that cross-contamination was likely to be occurring at the mills rather than on the farms, although he recognised that cross-contamination on the farm was possible.
- There was clear evidence of failures to comply with the requirements of the animal SBO ban.
- Four BABs born in 1991 had been confirmed.
- Voluntary on-farm ELISA testing had produced the first positive result.
- Interim results of MAFF’s attack rate experiment had shown that 1 gram of infective material was sufficient to transmit BSE when administered orally.

This last factor produced a radical change of attitude on the part of both MAFF and UKASTA to the dangers of cross-contamination of feed. In reporting to Mr Waldegrave on 21 November 1994, Mr Richard Packer, the Permanent Secretary at MAFF, stated:

"The trade’s protestations that cross-contamination never occurred have been reversed; they are now more or less telling us that where the same mill is used for ruminant and non-ruminant feed, some cross-contamination is inevitable, although this is usually at low levels."

Mr Packer had plainly been misinformed. UKASTA had expressed concern about cross-contamination at the outset, but had been led to believe that this would not matter because a large quantity of infective material had to be eaten in order to result in infection.

At this point UKASTA appeared to come closest to advising its members to cease using MBM in feed. It attempted to elicit from MAFF an assurance that the rendering processes would produce MBM that was ‘safe’. Mr Packer was not prepared to provide this. However, he did produce for UKASTA a statement summarising the steps MAFF had taken to prevent transmission of BSE to cattle. This emphasised that the controls over the implementation of the animal SBO ban were being strengthened and that more effective rendering processes were being adopted. The statement ended:

"The Ministry considers there to be no reason in principle why [ruminant protein] should not continue to be used in non-ruminant feed, even in..."
premises preparing feed for ruminant and non-ruminant species, provided that steps are taken to prevent accidental inclusion in ruminant rations.

UKASTA accepted this statement as satisfactory reassurance and the use by its members of MBM in non-ruminant feed continued.

331 We had evidence from some of the major feed compounders that once they had been made aware that cross-contamination was a cause for concern, they took steps to identify the critical control points and to modify their production lines so as to reduce the risk of contamination occurring. UKASTA and MAFF reached agreement under which compounders were permitted, under a quota system, to submit samples to Luddington for ELISA testing in order to check that their production was free of contamination. This sampling was carried out in parallel with sampling by MAFF of feed on farms on a voluntary basis. Mr Meldrum told us of at least one occasion on which this led to the identification of a mill where cross-contamination was occurring, and to the mill in question taking steps to remedy the problem. Problems were, however, still being experienced with the ELISA test and it was apparent to both MAFF and UKASTA that it was capable of giving false positives and false negatives.

332 As at 23 January 1995, the number of confirmed BABS had risen to 15,771, of which 812 had been born in 1990 and 9 in 1991. In the following month it was confirmed that the attack rate study had demonstrated that 1 gram of material was sufficient to produce oral transmission. When this was reported to Mr Waldegrave, he asked whether further steps needed to be taken to ensure that compounders’ feedlines were clean. Mr Meldrum replied that the short answer was ‘No’. The important thing was to prevent infected material entering the feedlines. As to this, the only action that he could recommend was to continue to intensify controls on the disposal of SBO. Mr Waldegrave accepted this advice.

333 In May 1995 MAFF officials were giving consideration to arranging advisory visits to feedmills in order to give guidance on how to avoid cross-contamination and, at the same time, to replacing voluntary sampling on farms with unannounced sampling visits to mills. Our impression is that UKASTA was less than enthusiastic about these proposals. Its first duty was to protect its members’ interests and it showed a continued awareness of the need to protect its members from the risk of prosecution. However, consideration of voluntary visits and sampling was overtaken by a Decision of the European Commission adopted on 18 July 1995. This required routine monitoring of feedmills, and in particular of mills which produced both ruminant and non-ruminant feed, to include official ELISA tests for the presence of animal protein.

334 Discussions with UKASTA about implementing this Decision did not receive an enthusiastic response. UKASTA did, however, cooperate in the drafting of a letter from MAFF to all manufacturers and mixers of feedstuffs, drawing attention to the need to avoid cross-contamination and giving guidance on how to do so. We found this a bland document. In particular it made no mention of the fact that experiments had demonstrated that as little as 1 gram of infective material could result in oral transmission of BSE. A revised Advisory Note directed specifically to farmers was drafted by MAFF in November 1995. This was an admirable document giving detailed advice on all the different ways in which feed might become

42 Commission Decision 95/287/EC
contaminated on the farm or in the course of farm mixing. Unfortunately, this draft got bogged down in the course of the consultative process, involving input from the Spongiform Encephalopathy Advisory Committee (SEAC) and the Parliamentary Secretary, and had not been sent out when it was overtaken by events in March 1996. This was one of a number of examples in the BSE story of the best being the enemy of the good.

By 24 August 1995 the number of confirmed BABs had risen to 21,475, of which three had been born in 1992. Although it was not initially appreciated, the effect of the Commission Decision requiring mandatory sampling of feed was to give MAFF officials the right to enter mills and carry out the sampling. An Animal Health Circular was drafted instructing State Veterinary Service staff on measures to implement the mandatory sampling regime, which was initiated early in 1996. Although the ELISA test was still not perfected – we understand that it remains imperfect to this day – the first round of tests produced four positive results from 25 mills tested.

On 6 July 1995 Mr Douglas Hogg succeeded Mr Waldegrave as Minister of Agriculture, Fisheries and Food. One of his first acts was to introduce the Specified Bovine Offal Order 1995 which, as we explain later in this chapter, dramatically improved the regime for enforcing the animal SBO ban. Later in the year, Mr Hogg discussed with Mr Meldrum whether further measures should be taken in the feedmills to address the risk of cross-contamination. Mr Meldrum explained that mandatory sampling was to be introduced and advised that it would not be practical to require feedmills to set up separate production lines for ruminant and non-ruminant feed. Mr Hogg accepted this advice.

SEAC reviewed from time to time the implications of the BABs and the action that MAFF officials were taking to address the cause of infection. The Committee urged the importance of the development of the ELISA test, but in general endorsed the action that MAFF was taking. On the identification of the probable link between BSE and the new variant cases of CJD, SEAC’s attitude changed. Members considered that it was of paramount importance to bring the BSE epidemic to a close as swiftly as possible, thereby protecting both animal and human health. To achieve this SEAC proposed a ban on the use of all meat and bone meal of mammalian origin in farm animal feed. This would remove all possibility of the contamination of ruminant feed. The Government accepted this advice and gave effect to it on 29 March 1996.

As at end-June 2000 the number of confirmed BABs stood at 41,538. Of those 179 were born in 1995 and 2 in 1996. For each confirmed case, several will have been slaughtered before developing clinical symptoms. Almost all of these cases will have resulted from eating MBM derived from apparently healthy animals, because animals showing signs of BSE were being slaughtered and destroyed.

What went wrong?

When looking back with the benefit of hindsight, we have identified a number of things that went wrong in the history of the ruminant feed ban.

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43 See Volume 11
44 The Bovine Spongiform Encephalopathy (Amendment) Order 1996
At the time that the ban was introduced, it was thought that all that the Regulations needed to do was to prevent the deliberate inclusion of ruminant protein in cattle feed. The Regulations were not designed to make unlawful the accidental contamination of cattle feed with small quantities of feed containing ruminant protein. Nor did they confer adequate powers of entry, inspection of records and sampling.

For the same reason, the development of a test to detect the presence of small amounts of ruminant protein in cattle feed was not treated as a matter of high priority. Five years were to elapse before the ELISA test was developed to a point at which some practical use could be made of it.

These shortcomings were symptomatic of a lack of rigorous thought about the implementation of the ruminant feed ban and the risk of cross-contamination at the time that it was introduced, which we have discussed in Chapter 3 above.

The risk of cross-contamination was then masked by the introduction of the animal SBO ban. We believe that it was because of the second line of protection apparently afforded by this ban that the Lamming Committee had no concerns about the possibility of contamination of ruminant feed. The Committee expressed concerns about the lack of control of on-farm mixing, but not in the context of BSE.

No sense of urgency attended the introduction of the ruminant feed ban. This was because of a fundamental misunderstanding of the scale of infection that was taking place. It was believed that infection had probably been occurring at a uniform rate of perhaps no more than 60 cases a month. In fact, the latent snowballing effect of recycling had boosted the rate of infection to 10,000 cases a month or more.45 No one is to be criticised for failure to appreciate the scale of the problem. We do, however, censure (although we do not have the means to identify) those in the feed industry who deliberately breached the ruminant feed ban by continuing to supply ruminant feed that contained animal protein after 18 July 1988, when the ban came into force.

For some years MAFF officials proceeded on the basis that all necessary steps had been taken to eradicate BSE. As Mr Thomas Eddy46 was to remark to Mr Waldegrave in February 1995, the long incubation period meant that five years had to elapse before it could become apparent whether precautionary arrangements and compliance by the industry were adequate. As the numbers of BABs increased, and their dates of birth grew later and later, MAFF officials progressively extended the period of carry-over of cattle feed containing ruminant protein that they assumed must have occurred. To an extent they were correct and we do not feel that they can be criticised for not appreciating until 1994 that a significant cause of infection of BABs was cross-contamination of cattle feed.

At that stage there were a number of alternative options to address the problem. The most radical was to prohibit the use of MBM in all animal feed. As Mr Meldrum remarked to Mr Hogg, the economic consequences of this would be ‘devastating’ and a serious waste disposal problem would be created. In the absence of evidence that BSE was transmissible to humans, we do not consider that this extreme measure was called for. To have adopted it, simply to prevent cross-

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45 We base this figure on the rate of confirmation of cases five years later, assuming that for every cow that developed clinical signs there would have been several infected cattle slaughtered before signs developed
46 Head of Animal Health (Disease Control) Division, MAFF
contamination of feed in feedmills and on farms, would have been an admission of defeat. Other, less drastic, viable options were open.

347 At one time we were attracted by the view that feedmills should have been required to process feed for ruminants and feed for non-ruminants in separate production lines. We were, however, persuaded that to have insisted on the heavy expenditure necessary to achieve this would also have been disproportionate. MAFF’s approach was to concentrate on procuring proper implementation of the SBO ban. This included requiring renderers to process SBO in dedicated plant. We consider that it was reasonable for MAFF officials and Ministers to conclude that it was not necessary to require feedmills to undertake, in parallel with renderers, the expense of installing duplicate lines. Instead MAFF sought to encourage feedmills to take voluntary steps to reduce the potential for cross-contamination.

348 With hindsight, we can deduce that the measures that MAFF had already taken had had a dramatic cumulative effect in reducing infection year on year. Looking back five years from end-June 2000, we see only 232 BABs which were born in 1995, and only 2 born in 1996. But for the events of March 1996 MBM would have remained part of the diet of pigs and poultry and MAFF would have been able to claim that, by a combination of the ruminant feed ban and the animal SBO ban, they had virtually eradicated infection of cattle with BSE.

349 It is this consideration which has led us, at the end of the day, to conclude that no criticism need be made of the somewhat muted attempts by both MAFF officials and UKASTA to get feedmills and farmers to take steps to tackle cross-contamination. When it was appreciated that this was occurring, and that a quantity as small as 1 gram of infective material would suffice to transmit the disease orally, one might have expected UKASTA urgently to draw these facts to the attention of its members and MAFF to do the same in relation to cattle farmers and to feedmills that were not members of UKASTA.

350 We suspect that the more measured approach that was adopted was explained by a shared reluctance on the part of MAFF and UKASTA to adopt a course that might lead to feed compounders ceasing to use animal protein as a feed ingredient. For the reasons that we have given, we do not feel that this was an unreasonable attitude to adopt.

Introduction of the animal SBO ban

351 In Chapter 4 we examined the consideration given by the Southwood Working Party to the risk that attached to eating beef or offal from animals infected with BSE but not yet showing clinical signs (subclinical animals). We saw that the Working Party did not consider that the risk posed to humans (other than babies) justified any precautions. The same was true in relation to the risk involved in feeding such matter to animals, although the Working Party expressed some general reservations about the practice of disposing of animal waste in this way.

352 As we have pointed out, the virulence of the infectivity of subclinical animals is indicated by the fact that, despite the ruminant feed ban and the animal SBO ban, over 41,000 cattle born after 18 July 1988 developed clinical signs of BSE. Most of
these would have been infected by MBM derived from apparently healthy cattle, since clinically affected animals were removed from the human and animal food chains.

353 In June 1989 the Government announced that it had decided to go beyond the precautions recommended by the Southwood Working Party and to ban Specified Bovine Offal (SBO) from human food. MAFF officials had reservations about imposing the human SBO ban. These included apprehension that it might lead to public pressure for further precautionary measures. These concerns were soon to prove well founded.

354 Even before the human SBO ban was introduced, the pet food industry had been considering whether to stop incorporating in pet food those bovine tissues most likely to be infectious if they came from an animal incubating BSE. The major pet food manufacturers have a guiding principle, which is that nothing should be incorporated in pet food which is not fit for human consumption. No sooner had the Government announced that it intended to introduce a ban on including certain types of bovine offal in human food than the Pet Food Manufacturers’ Association advised its members to exclude this offal from their products.

The voluntary animal SBO ban

355 At this time farmers began to express concern about purchasing pig and poultry feed that contained animal protein – particularly protein derived from those parts of cattle which had been banned from human consumption. Some supermarkets were also showing a reluctance to purchase meat from animals that had been reared on such feed. In order to restore customer confidence UKASTA decided in July 1989 to advise its members to insist that any MBM which they purchased for incorporation in animal feed should be SBO-free. This led the UK Renderers’ Association (UKRA) to threaten that its members would be forced to refuse to accept SBO for rendering if there ceased to be any custom for the end product. Mr Meldrum persuaded UKASTA to defer introducing its voluntary ban until the human SBO ban came into force.

356 It was at this time that Mr Gummer succeeded Mr MacGregor as Minister of Agriculture. In September he received a submission from his officials about UKASTA’s proposed voluntary ban. They had considered, in the light of the Southwood Report, whether any restrictions should be placed on feeding animal protein to non-ruminants and decided that there was no scientific justification for this. In their submission to Mr Gummer, they warned of ‘serious implications’ if UKASTA went ahead with its proposed ban. Renderers would be likely to refuse to accept 1,500 tonnes of SBO per week. Slaughterhouses left with SBO on their hands might be forced to close. Public pressure might grow for a complete ban on animal protein in animal feed.

357 At a meeting with UKASTA on 2 October 1989, Mr Gummer sought to dissuade the Association from its proposed ban, arguing that there was no scientific justification for this. He said that the human SBO ban was only being introduced for ‘administrative convenience’. UKASTA remained unmoved by this and by
continued pressure from MAFF officials to drop its ban. Later in the month Mr Lawrence wrote:

> Despite all our efforts UKASTA seem hell bent on pursuing their potentially damaging course . . . I am concerned and aggrieved that UKASTA seem blind to the consequences of their actions.

358 On 9 November, four days before the human SBO ban came into force, UKASTA issued a circular to its members recommending that their contracts for the purchase of MBM should stipulate that this must be SBO-free.

359 Not all feed compounders refused to accept MBM derived from SBO. A limited market developed for this, at a lower price than SBO-free meal. Renderers sought to satisfy the demands of those customers seeking meal that was free of SBO by insisting that slaughterhouses separate the SBO from other offal. Renderers collected the SBO in separate containers for processing as waste, but charged for doing so. Renderers had, however, no means of ensuring that slaughterhouses complied strictly with this requirement. MAFF officials continued to protest that there was no justification for the ban.

360 In introducing a voluntary SBO ban, UKASTA and UKRA were doing no more than responding to customer demand. They were not concerned with the question whether or not their customers’ perceptions were scientifically sound; or with the adverse financial consequences that the ban had for slaughterhouses. These were matters of legitimate concern to MAFF. There were good grounds for believing that pigs and poultry had shown themselves impervious to TSEs—a point on which Mr Meldrum sought and obtained confirmation from Professor Southwood. We have no criticism to make of MAFF officials’ and Ministers’ vigorous opposition to the voluntary SBO ban at this stage of the story.

361 In the months that followed, MAFF came under increasing pressure to introduce a statutory ban on the incorporation of SBO in animal feed, and some pressure to introduce a total ban on feeding animal protein to animals. Ministers sought reassurance that there was no merit in these proposals. Their officials assured them that they had no scientific justification. This reassurance Mr Gummer conveyed to the Prime Minister, Mrs Margaret Thatcher, at the end of January 1990, when she in her turn queried whether it was desirable to continue feeding animal protein to pigs and poultry. Over the months that followed, MAFF officials continued to insist that there was no scientific justification for an animal SBO ban. Then came the cat.

**The cat**

362 On 9 May 1990 Mr Gummer was informed that a Siamese cat had died of a spongiform encephalopathy. This was the first known case of Feline Spongiform Encephalopathy (FSE). The public reaction was predictable. Had the cat caught BSE? If BSE could be transmitted to a cat, why not to humans? The media had a field day. We deal with the human health implications of the cat later. Here we are concerned with the implications it had in relation to animal feed.
363 It was not clear at the time whether there was any connection between BSE and the cat. It was possible that cases of FSE had occurred in the past, but had never been diagnosed. Mr Gummer understood from Mr Meldrum that there was no likely connection between the cat and BSE. Mr Meldrum should not have given this reassurance, for it put the matter too high.

364 The cat led to renewed public concern about the practice of feeding SBO to pigs and poultry. In a meeting with Mr Gummer, Sir Simon Gourlay, the President of the National Farmers’ Union (NFU), suggested that MAFF should introduce a statutory SBO ban for pig and poultry feed, thereby regaining the initiative and restoring public confidence. Mr Gummer’s response was that there was no scientific justification for such action, which would be unlikely to allay public concern but would merely move the debate to another vulnerable area. The NFU was not convinced. In June 1990 it issued advice to farmers recommending that they should not use animal feed that included SBO.

365 That there was no scientific justification for an SBO ban remained MAFF’s public position. The cat had changed nothing. SEAC had, however, been asked to give urgent consideration to the implications of the cat. SEAC then indicated that it wanted to give consideration to pig and poultry feed. This led Mr Gummer, who previously had seen no need to refer this matter to SEAC, to ask the Committee to consider the whole question of feeding animal protein to animals. Neither he nor his officials thought it appropriate to inform the feed industry or others that he had done so. Mr Andrews, the Permanent Secretary, remarked that ‘the issue would have to be very carefully handled’.

366 The issue was carefully handled. Over a period of several months a paper was prepared for SEAC on the inclusion of SBO in feed for non-ruminants. This set out MAFF’s reasons for concluding that there was no justification for preventing this practice and invited SEAC to endorse that conclusion. In August 1990 the paper was submitted to Mr Gummer for his approval, which it received. But before the paper could be considered by SEAC, it was overtaken by events (see paragraph 368 below).

367 The furore that greeted the announcement of the first case of FSE led MAFF to adopt an unnecessarily defensive approach to pressure for an animal SBO ban. Public pronouncements suggesting that the cat was no cause for concern did not carry conviction. MAFF witnesses emphasised to us that if any doubt had been expressed, this would have been treated as being of major significance, indicating a possible change of policy. We do not criticise MAFF officials for the cautious stance that they took, but we feel that it was ill-judged in that it harmed their credibility. They would have done better to state openly that, while MAFF did not consider that the cat called for any change of policy, SEAC had nonetheless been asked to advise whether it had any implications in relation to the composition of animal feed.

The pig

368 In August 1990 the whole picture was changed by the experimental transmission of BSE to a pig by injection of infectious material into the brain. This experiment had started 15 months earlier. In July 1990, in a note to Mr Gummer,
Mr David Maclean, the Minister for Food Safety, suggested that some contingency planning should be put in hand against the possibility that this experiment might produce a positive result. He expressed the view that in that event:

We would have no option but to ban specified offals from pig and poultry feeds also. No-one should imagine that we could do anything else. It would be pie in the sky to believe that we could hold the line on this or somehow distinguish poultry feed from pig feed.

MAFF officials did not agree. In a note to Mr Andrews, which he told us he had cleared with his veterinary colleagues, Mr Robert Lowson said that there was not much that they could do to prepare for the possibility that offal would have to be banned from pig and poultry feed, but that this would only become necessary if it was shown that transmission could be effected by the feed route. Transmission by inoculation would not justify a ban. Mr Andrews endorsed this view. It proved to be wrong.

When, on 20 August, news was received that BSE had been transmitted experimentally to a pig, Mr Meldrum and Mr Gummer agreed that this should be kept confidential until SEAC’s advice had been obtained. An emergency meeting of SEAC was held on 7 September. A paper was prepared for this meeting by Mr Meldrum which put forward three options:

- Do nothing
- Ban MBM derived from SBO from animal feed
- Ban all MBM from animal feed.

The paper stated that the second option:

... would, in practice, simply add the weight of legislation to an arrangement which is already operating de facto on a voluntary basis. This is the option that holds most attraction for the Ministry’s veterinary advisers.

By the time of SEAC’s meeting, FSE had been reported in nine cats. SEAC concluded that the result of the pig experiment indicated that it would be prudent to exclude SBO from pig diet, and that the cases of FSE suggested that a cautious view should be taken of those species which might be susceptible to BSE. Accordingly SBO should be excluded from the feed of all species. Mr Meldrum’s second option had found favour.

The statutory animal SBO ban

When Mr Gummer was informed of this advice, he accepted it. This accorded with an approach to BSE that he had decided to adopt as a matter of principle: decisions on what action should be taken in the face of any development should always be referred to SEAC, and SEAC’s advice should be followed.

On this occasion Mr Gummer was determined that news of the result of the pig experiment should not leak out until MAFF was in a position to announce its response to it. The task of drafting appropriate Regulations was tackled by the
MAFF lawyers based on instructions from officials in what had become the Animal Health and Veterinary Group, but without any wider consultation. Although implementation of an animal SBO ban would involve, as a matter of critical importance, practices in the slaughterhouse, Mr Keith Baker, the Assistant Chief Veterinary Officer responsible for meat hygiene, was not consulted. Instructions were given that the Territorial Departments in Wales, Scotland and Northern Ireland were to be informed ‘at the latest possible moment and in such a way that as few as possible people were in the picture’.

374 SEAC confirmed its advice on 20 September. The draft Order implementing it was submitted for signature on 21 September. MAFF announced the making of the Order in a news release on 24 September and the Order came into force on the following day. Mr John Maslin of the Animal Health Division was to describe the Order as made ‘in haste and secrecy’. That was a fair description.

375 The new Order amended the Order that had introduced the ruminant feed ban. It prohibited the sale, supply and use of SBO, feedstuffs containing SBO, or animal protein derived from SBO for feeding to animals and poultry. It also prohibited the export to EU Member States of feedstuffs containing SBO or animal protein derived from SBO.

The operation of the statutory animal SBO ban

376 We noted earlier in this volume that the ruminant feed ban was not fully effective. One reason was that ruminant feed was contaminated by feed for pigs and poultry which contained bovine MBM from cattle incubating BSE. After September 1990, when the animal SBO ban came into force, this cross-contamination should not have mattered. Pig and poultry feed should not have contained any MBM derived from SBO. If a little of this got mixed with feed for cattle it should have caused no harm. This was not the reason for bringing in the animal SBO ban, but it should have been one of its effects.

377 The large number of BABs born after September 1990 shows that something went very wrong. Over 12,000 of these animals developed signs of BSE. A much greater number must have been infected with BSE, but were slaughtered and eaten before any signs developed. How were all those cattle infected? For the vast majority it was because their feed had been contaminated by pig and poultry feed infected with BSE. How was it that, despite the animal SBO ban, BSE was getting into pig and poultry feed? There is more than one answer. In Chapter 4 of vol 5: Animal Health, 1989–96 we identify two reasons which probably played a minor part:

- The Order excluded from animal feed the SBO that was banned from human consumption, but did not identify all the potentially infective tissues and products which might go into animal feed.
- SBO was not always cleanly removed from the parts of the carcass that went to be rendered for animal feed.
Each of these sources of potential infectivity is, we believe, of insignificance compared with the primary source of the infectivity that resulted in BABs. This was that SBO was mixed, both deliberately and by accident, with carcass remains that were rendered for animal feed.

There were always going to be problems with enforcing the animal SBO ban. The financial temptation to pass off SBO as offal fit for incorporation in animal feed was considerable. There were ample opportunities, in the slaughterhouse, in the collection centres and at the renderers to give way to this temptation. Admixture of SBO with other offal was hard to detect. Those practical problems were compounded by the form of the Regulations that were put in place. They were, quite simply, unenforceable. To explain why this was, we shall have to lead the reader through a complex regulatory maze.

Before the ban

In order to understand the working of the animal SBO ban, it is necessary to appreciate the scheme that operated for dealing with meat unfit for human consumption, including SBO, before the ban was introduced. This is a topic of complexity, dealt with in detail in Chapter 4 of Volume 5. Here we shall give a greatly simplified account.

Animals killed for human consumption had to be slaughtered in a licensed slaughterhouse. The parts of the animal which were not wanted or were not fit for human consumption would normally be removed to a renderer to produce tallow and MBM—the latter being used as an ingredient of animal feed.

Fallen stock or animals put down on the farm would normally be collected by a knacker’s yard or hunt kennel. Although they could not be used for human food, a variety of other uses were made of these carcasses. Remnants, including heads and spinal columns, would commonly go to be rendered to produce tallow and MBM used for animal feed. This waste from knackers and hunt kennels provided about 10 per cent of all rendered material.

The Meat (Sterilisation and Staining) Regulations 1982 (MSSR) were complex provisions designed to ensure that unfit meat was not used for human food. In a slaughterhouse, Meat Inspectors had to identify unfit meat and ensure that it was separated from the meat that was to go for human consumption. They applied a health stamp on the meat that was going for human consumption. The unfit meat, if not sterilised on the premises, normally had to be stained black. It could only leave the slaughterhouse after the issue of a permit authorising its removal to an approved destination, which would normally be a renderer. A copy of the permit would have to accompany the unfit meat to its destination, before being returned to the local authority which had issued it, so that a check could be made that the unfit meat had not gone astray.

At the knacker’s yard and hunt kennel, the MSSR provided that all meat had to be treated as unfit for human consumption. Any remnants sent off to be rendered had to be stained black and accompanied by a movement permit.
Limited exceptions were made to requirements to stain and to obtain movement permits in respect of some categories of unfit meat when they were placed in a container of green offal. Green offal consisted of the intestine and stomach of the cow, together with their contents. Green offal was unfit for human consumption and was readily identifiable, and so was not required to be stained. It acted as a passport for the unfit material that it cloaked.

The human SBO Regulations

The human SBO Regulations followed the scheme of the MSSR. Their broad effect was to add a parallel regime so that SBO had to be handled in a similar way to unfit meat under the MSSR. The Regulations applied only to slaughterhouses, as in knacker’s yards and hunt kennels the whole of the carcass was already treated as unfit for humans and subject to the MSSR. SBO had to be stained in the same way as other unfit meat, stored separately from meat fit for human consumption and removed under cover of a movement permit. But there was no requirement that SBO should be kept separate from other unfit meat. On the contrary, the Regulations permitted SBO to go down the same chute as other unfit meat into the same container to be stained by a common stain and removed to the renderers as a single consignment.

There were one or two complications. Bovine intestine was an SBO. Under the 1982 MSSR, intestine and its contents, being a constituent of green offal, did not have to be stained even if found unfit for human consumption. Like other green offal, it could act as a passport for unfit meat in the same container, but that was not the case under the human SBO Regulations, under which bovine intestines were subject to the requirements of staining and movement permits. Nor did the Regulations explain how the system of movement permits should operate in respect of a mixed consignment of SBO and other unfit meat.

Enforcement

Regulations made under the Food Act 1984 and its successor the Food Safety Act 1990 fell to be enforced by the District Councils, of which there were 275, and by the unitary authorities in the Metropolitan and London Boroughs. Thus the 1982 MSSR and the human SBO Regulations fell to be enforced by this tier of local authorities, which were also responsible for enforcing the Meat Inspection and Meat Hygiene Regulations in slaughterhouses. Their Environmental Health Departments employed Authorised Meat Inspectors (AMIs) and Environmental Health Officers (EHOs), who were trained in meat inspection, to enforce all these Regulations. Some slaughterhouses were approved to produce meat for export. In these, Official Veterinary Surgeons (OVSS) engaged by the local authorities were responsible for overseeing the implementation of all hygiene and meat inspection Regulations. This became the rule in all slaughterhouses – domestic and export – following the introduction of the European Single Market on 1 January 1993.

Hygiene standards varied enormously in British slaughterhouses from the lamentable to the good, with the majority tending towards the former rather than the
latter. This meant that the United Kingdom was unable to satisfy European standards and led, in 1995, to the transfer of meat hygiene enforcement functions in slaughterhouses from local authorities to central government, and to the establishment of a national Meat Hygiene Service, responsible to MAFF, to carry out those functions. Until that occurred there was a wide disparity, not merely in hygiene standards, but in the manner in which, and rigour with which, individual local authorities organised the fulfilment of their slaughterhouse enforcement obligations. In many slaughterhouses, staffing levels were such that Meat Inspectors had little time for anything except the vital function of ensuring that unfit meat did not go for human consumption. This was one reason why hygiene standards were so poor.

390 The MSSR 1982 were designed to ensure that unfit meat was not diverted into the human food chain. By 1989 in most slaughterhouses a routine had become well established under which the unfit material would be regularly collected by a local renderer to be turned into tallow and MBM for animal feed. Some was supposed to be stained and removed under a movement permit. Some travelled cloaked in green offal. Where such a routine was established, local authorities were permitted to authorise slaughterhouses to make out their own movement permits, and did so. In such circumstances, the Meat Inspectors and EHOs in many slaughterhouses devoted little time or effort to enforcing what seemed no more than formalities of movement permits and requirements as to staining and carrying unfit material in sealed and marked containers.

391 Once the container of offal left the slaughterhouse for the renderer, all supervision ceased. Often the container did not go direct to the renderer. Lorries would collect containers from a number of slaughterhouses, and sometimes they would be taken to collection centres, where offal from different slaughterhouses would be combined into larger consignments for onward carriage to the renderer. The MSSR 1982 envisaged that checks would be made on containers of unfit meat when in transit. So far as we are aware no such checks were ever made. The only checks carried out by District Councils were the reconciliation of movement permits once these were ultimately returned from the renderers, and the evidence was that this formality was, in practice, not an effective check.

392 If Meat Inspectors and EHOs had little time for enforcement of what may have seemed over-bureaucratic Regulations, the Government’s deregulation initiative tended to convey, whether rightly or wrongly, the message that it was not desirable to be over-fastidious in insisting on compliance with the letter of the Regulations when there was no concern of substance that their object was not being achieved.

393 The evidence that has led us to these conclusions is set out in detail in Volumes 5 and 6. Some of it came to light when Mr Lawrence of MAFF was leading a team to investigate how enforcement of the Regulations worked in practice as part of the task of introducing the Meat Hygiene Service. Some of it came to light in 1994 and 1995, when very significant shortfalls were discovered in the quantities of SBO that were going for rendering. Some represents the testimony of individual witnesses given to the Inquiry.

394 One piece of evidence, which we found particularly significant, merits specific mention here. When the human SBO ban was introduced, it focused the attention of the Environmental Health Departments of the local authorities on the practical
problems of the scheme established under the MSSR 1982. On 1 February 1990 Mr Mike Corbally of the Institution of Environmental Health Officers wrote to the Animal Health Division of MAFF with no less than 11 pages of enquiries and comments about the human SBO ban that the Institution had received. In particular, the requirements of the Regulations as to the containers in which unfit material was stored and transported and the formalities in relation to movement permits were proving difficult or impossible to comply with in practice. In 1994 MAFF was again to receive information that the system of movement permits was not working and ‘had to rely on trust’.

The voluntary animal SBO ban

395 The MSSR and human SBO Regulations provided two parallel systems for handling all unfit meat. Renderers and the animal feed industry lost little time in introducing a practice of greater complexity. Under the voluntary animal SBO ban, described earlier in this chapter, feed merchants required renderers to supply MBM free of SBO, for incorporation into animal feed. The renderers, in their turn, required the slaughterhouses to segregate SBO from other offal. Other offal the renderers would pay for, as the raw material of MBM which they could sell on. SBO was unwanted waste. The renderers made a substantial charge for disposing of this.

396 The voluntary animal SBO ban was not complied with by all. Renderers found a market, albeit diminishing, of feed compounders who were happy to purchase, at a reduced price, MBM derived from SBO. Nor was there confidence that those who were purporting to comply with the voluntary ban were being scrupulous in doing so. It was difficult, if not impossible, to tell whether a container of decomposing offal contained an element of SBO. The financial temptation for slaughterhouses to pass off SBO as non-SBO material was considerable. Forced to trust the slaughterhouses, but with reservations about doing so, the renderers contracted with the feed merchants, not that they would supply MBM that was SBO-free, but that they would do their best to do so. Renderers, also, were under a temptation not to look too closely at the material that they were rendering to sell at a profit lest they should have to treat it as SBO to be disposed of at cost to themselves.

397 This, then, was the regime prevailing when the animal SBO ban was introduced.

The statutory animal SBO ban

398 The provisions in the Order bringing in the animal SBO ban were very short and simple. They made it an offence knowingly to sell or supply for feeding to animals or poultry, or to feed to any animals or poultry, any SBO. The same applied to any animal feedstuff known to contain SBO or where there was reason to suspect this. There was a fundamental problem with these provisions. Neither the feed compounding nor the farmer had any means of knowing whether animal protein incorporated in the feed had been derived from SBO. They were reliant on renderers to ensure that the MBM that they supplied was not derived from SBO. But the Order did not expressly make it an offence for renderers to manufacture MBM from SBO. It was arguable whether, on a proper construction of the Order, supplying such MBM to feed compounders was an offence. The renderer in his turn relied on the
slaughterhouse, the knacker’s yard and the hunt kennel to ensure that material supplied was separated into SBO and other offal. Yet the Order did not require this.

399 If those whose duty it was to comply with the animal SBO ban had no means of knowing whether ruminant protein incorporated into animal feed was derived from SBO, those responsible for enforcing the ban were in an even worse position. They had no means of proving that animal feed contained protein derived from SBO, let alone that those supplying the feed, or feeding it to animals, knew that it contained SBO. The Order was unenforceable.

400 In England and Wales, enforcement of Orders made under the Animal Health Act 1981 was the statutory responsibility of the County Councils and the Unitary Authorities in the Metropolitan and London Boroughs. Thus outside the Metropolitan and London Boroughs it was not the District Councils (responsible for the human SBO ban) but the County Councils that were responsible for the enforcement of the animal SBO ban. The County Councils sought to discharge that responsibility through the Trading Standards Officers employed by their Trading Standards Departments.

401 We had little evidence to suggest that Trading Standards Officers made any attempt to enforce the animal SBO ban, which is hardly surprising having regard to the practical problems of enforcement that we have described above. We did receive evidence of consideration being given by the Trading Standards Officers of one county, in conjunction with the State Veterinary Service and the local District Council, to taking action to address the practices of a particular renderer who allowed SBO to become mixed with offal that was going to be rendered to produce MBM for sale to feed compounders. It was concluded that there was no action that could be taken because:

i. There was no provision in the animal SBO Regulations which made it an offence for a renderer to mix SBO material with non-SBO material.

ii. It was impossible to demonstrate that MBM which was being sold for incorporation into animal feed was derived in part from SBO materials.

402 Much later, in 1995, after defects in the Regulations had been identified, new provisions were introduced which were enforceable.\textsuperscript{54} They included the following requirements:

- On removal from the carcass, whether in the slaughterhouse, the knacker’s yard or elsewhere, SBO had to be kept separate from all other material.
- SBO had to be dyed with a distinctive blue stain.
- SBO had to be removed to approved premises for disposal.
- SBO had to be kept separate from all other material at all stages of its progress from the slaughterhouse to final disposal.
- Records had to be kept of receipt and onward despatch of SBO at each stage of its journey from the slaughterhouse to final disposal.

\textsuperscript{54} The Specified Bovine Offal Order 1995
403 Why were the shortcomings in the animal SBO Regulations not identified at the time that those Regulations were introduced? Why did the Regulations not include requirements such as those introduced in 1995? Broadly, witnesses from MAFF gave two answers to these questions:

i. The Regulations were merely giving statutory force to the animal SBO ban that was already in place on a voluntary basis. This ban was being taken seriously and appeared to be operating satisfactorily.

ii. A detailed statutory code for the handling of SBO already existed under the human SBO ban. Enforcement of this ban would have the additional benefit of ensuring that the animal SBO ban was complied with.

404 These views were implicit in this observation made by Mr Maslin in his submission inviting Mr Gummer to approve the draft Order:

Enforcement is the responsibility of the Local Authorities. They are already monitoring and enforcing the Bovine Offal (Prohibition) Regulations 1989. In practice, the specified offal is being separated from other material at the abattoir. It is collected and processed separately by renderers. As with the existing ruminant feed prohibition, the ban on its sale, supply and feeding will, to a large extent, be self-policing. In these circumstances there would be little or no resource implications for Local Authorities. 55

Reliance on the voluntary animal SBO ban

405 We have already drawn attention to the fact that the voluntary animal SBO ban was not universally applied. We have also drawn attention to the financial consequences of that ban, the motive that these gave for evasion and the doubts as to compliance – particularly in relation to the slaughterhouses. On the evidence that we received, there were no reasonable grounds for concluding that there was or would be satisfactory compliance with the animal SBO ban on a ‘self-policing’ basis. The voluntary animal SBO ban was not a satisfactory alternative to a statutory scheme that was capable of enforcement. We identify below the MAFF officials who should have appreciated this.

Reliance on the human SBO ban

406 Reliance on enforcement of the human SBO ban as a means of enforcing the animal SBO ban was misplaced for a number of reasons:

- For the reasons given above, Meat Inspectors, EHOs and OVSs were unlikely to devote much energy to enforcement of the technical requirements of staining and movement permits under the MSSR and the human SBO Regulations.

- Strict compliance with those Regulations was not practical and was not being insisted upon, as Mr Corbally’s letter had demonstrated.

- It was of critical importance from the viewpoint of the animal SBO ban that SBO should be kept separate in the slaughterhouse and not mixed, whether
by accident or design, with carcass remains that were going to be supplied to renderers as fit for incorporation in animal feed. There was, however, no statutory requirement in the human SBO Regulations that such separation should take place. There was thus no relevant Regulation for the District Council officials to enforce.

- Witnesses suggested that the AMIs and the EHOs employed by the District Councils would have been ready to help out their colleagues on the County Councils by ensuring that SBO was in fact handled separately from other unfit material. Although we have no doubt that many District Councils and County Councils cooperate closely, we were not persuaded that District Council officials, whose responsibilities were to protect human health, would be enthusiastic about enforcing practices that had relevance only to animal health, the more so when those practices were not required by any Regulations. In 1994 a MAFF official was to report of the District Councils:

> It is clear that some Local Authorities see the legislation merely as an exercise in removal of SBO from carcasses and preventing its use for human foodstuffs.

We did not find that attitude surprising. It reflected precisely the area of legitimate concern for District Council officials.

- If the two tiers of councils were to cooperate in trying to make the animal SBO ban work, it was desirable that they should have been given some guidance by MAFF officials as to what was expected of them. No such guidance was given. They were simply sent a copy of the 1990 Order and asked to arrange a meeting if they wished to discuss its enforcement. No such request was received.

**Knacker’s yards and hunt kennels**

407 So far we have been concentrating on slaughterhouses, for they were the major suppliers of raw material to the renderers. Turning to knacker’s yards and hunt kennels, we find a particularly unsatisfactory state of affairs.

408 The definition of SBO in the animal SBO Order followed that of the human SBO Regulations. This defined SBO by reference to offal from animals ‘slaughtered’ in the UK. The ban thus did not apply to any offal from fallen stock—the major source of knacker meat. It is not clear to what extent knacker’s yards and hunt kennels took advantage of this lacuna and continued to use SBO as a source of animal feed, for MAFF made it plain that the Order was intended to apply to these premises. This error in the Order was remedied by amendment in 1991.56

409 Although the 1991 amendment of the animal SBO Order made it illegal to feed to animals SBO from fallen stock, or protein derived from this, there were no Regulations which required a renderer to separate SBO from other material. The handling of knacker meat was governed by the MSSR 1982, which treated all of it as unfit for human consumption. There was no statutory basis for insisting that knacker’s yards or hunt kennels separate SBO from other material being sent to renderers. We are not aware of either County Councils or District Councils making
any attempts to enforce the separation of SBO from other matter at knacker’s yards or hunt kennels. Those renderers that were prepared to receive material from knackers for production of MBM – and they were a minority – insisted that it should be SBO-free. We are sceptical as to how rigorously the knacker’s yards complied with that requirement.

**SBO in transit**

410 No Regulations required SBO to be kept separate from other offal when in transit to the renderers. There was scope for admixture, deliberate or accidental, when containers of SBO and non-SBO material were carried together on the back of the same vehicle and, more particularly, when stored together in collection centres. Neither District Councils nor County Councils considered it any part of their duties to check what was happening to SBO in transit.

**Responsibility**

411 We turn to the question of who should bear responsibility for the shortcomings in the animal SBO Order. Part of the problem was that the Regulations were introduced ‘in haste and secrecy’ and without consultation. Had there been consultation with those who would have to enforce the Order or those who were knowledgeable about problems in slaughterhouses – and we have particularly in mind Mr Keith Baker, the Assistant Chief Veterinary Office (ACVO), Meat Hygiene – mistakes might have been avoided.

412 Are Mr Meldrum and Mr Gummer to be criticised for their decision to keep the transmission to a pig and the measures being planned in response to it ‘under wraps’? We do not think so. They were reacting to the furore that had been generated when the news of FSE in a cat was announced before MAFF had been advised by SEAC on its implications and whether any action was called for. With hindsight, however, we believe that it would have been better if MAFF had published SEAC’s advice of 7 September and stated that the voluntary ban that was in place would be replaced with a mandatory ban after consultation. The fact that the voluntary ban was already in place, albeit that it was not universally observed, meant that MAFF could have justified taking a reasonable length of time to prepare the Regulations for a compulsory ban.

413 The fact that the ban was introduced in haste need not have prevented those who were responsible for its terms from giving rigorous thought to the question of how it was to work. We have not found it easy to identify the parts played by individual team members responsible for the Order, for instructions were given by telephone and memories are hazy as to precisely what took place. Those involved included Mr Maslin, Mr Lawrence, Mr Lowson and Mrs Elizabeth Attridge on the administrative side, Dr Danny Matthews, Mr Kevin Taylor and Mr Meldrum on the veterinary side, and Miss Gillian Richmond and Mr Ayyildiz Yavash from MAFF’s Legal Department.

414 We do not consider that the lawyers are to be criticised for the contents of the Order. It was primarily for those instructing them to consider how the Order would
work in practice. Furthermore, we note that Miss Richmond ‘flagged up’ a warning that officials might be criticised for including provisions which were unenforceable.\(^{57}\)

415 We have concluded that, as head of the Animal Health Division, although he delegated the detailed discussions about the Regulations, Mr Lowson had ultimate responsibility on the administrative side of the team for ensuring that the terms of the Order were satisfactory. Mr Meldrum had lead responsibility for providing veterinary advice on the practicalities of the Order.

416 We do not consider that either Mr Lowson or Mr Meldrum gave rigorous consideration to the requirements of the animal SBO ban. They should have appreciated that the working of the voluntary animal SBO ban did not demonstrate that there would be satisfactory compliance with the statutory animal SBO ban on a ‘self-policing’ basis. And they should have appreciated that in the form in which the Order was drafted, it was obviously unenforceable. We do not say that they should have identified all the answers to the considerable problems posed by the ban. They should, however, have identified that the problems existed.

417 We would exclude from this criticism the lacuna in relation to fallen stock. This drafting error was not an obvious one, though it was quickly picked up. It was the kind of drafting point which can slip through the net when Regulations are drafted under pressure, and not one that we would necessarily have expected either Mr Lowson or Mr Meldrum to identify.

418 We have drawn attention to the fact that the Regulations did not require SBO to be kept separate or treated differently from other unfit material in slaughterhouses or elsewhere, although such separation was required under the contractual arrangements between slaughterhouses and renderers. We are satisfied that this separation requirement was not properly implemented and that, both by accident and by design, substantial quantities of SBO were supplied by slaughterhouses to renderers as material that was fit to be rendered for animal feed. Although the State Veterinary Service undertook the task of monitoring performance of the Regulations, four or five years were to pass before MAFF discovered that the ban was not being properly implemented. We turn to examine this part of the story.

**Monitoring**

419 Ministers looked to the State Veterinary Service (SVS) to monitor and alert them to any problems arising over the enforcement by local authorities of Regulations introduced by MAFF. The Food Act 1984 gave MAFF’s veterinary inspectors the right to enter premises for this purpose. In 1989 Veterinary Officers (VOs) of the Veterinary Field Service (VFS) would make an annual visit to domestic slaughterhouses and a monthly visit to export-approved slaughterhouses to check that the various Regulations introduced by MAFF were being observed. These included the Meat Hygiene Regulations, the Meat Inspection Regulations, the MSSR and, after their introduction, the human SBO Regulations. Visits were also made by VOs to knacker’s yards on an annual basis to check on observation of Regulations which applied there.
420 Reports of visits had to be submitted to MAFF on a prescribed Meat Hygiene Inspection (MH1) form, which had space for entries in respect of each of the applicable Regulations. When the 1990 Food Safety Act replaced the Food Act 1984, the right of entry of MAFF inspectors was not preserved. This did not inhibit them from making their regular visits. They would normally, however, arrange to visit in the company of the district council EHO responsible for supervising the enforcement of the Regulations in the slaughterhouse in question.

421 The Animal Health Act 1981 gave MAFF’s veterinary inspectors the right to enter premises on suspicion that the Regulations under that Act were not being complied with. They also made regular visits to renderers to check for the presence of salmonella in accordance with the Protein Processing Order of 1981.

422 If VOs found that Regulations were not being complied with, it was their duty to inform the relevant local authority of this, giving guidance where necessary. The breach would be recorded on the MH1 form and would thus be drawn to the attention of MAFF officials at headquarters.

423 When the human SBO ban was introduced in November 1989, no specific instructions were given to the VFS as to monitoring compliance with its requirements. The human SBO Regulations were simply added to the list of those that had to be checked on the MH1 form. Nor, initially, were any special steps taken to monitor compliance with the animal SBO ban upon its introduction in September 1990. In October 1990, however, Mr Andrews, the MAFF Permanent Secretary, suggested that the Ministry should carry out checks at slaughterhouses and renderers so that Ministers could be assured that no SBO was getting into animal feed. Mr Meldrum was quick to take up the suggestion. He asked Mr Keith Baker to make arrangements for VOs of the Field Service to make special visits to slaughterhouses and to renderers to check on the handling of SBO. Mr Baker was the ACVO at the head of the Meat Hygiene Veterinary Section. It was strange, on the face of it, that he should be charged with the checking of an animal health measure. We would have expected this duty to fall to Mr Kevin Taylor, who was at the time head of the Notifiable Diseases Section and subsequently became ACVO responsible for animal health and welfare. The explanation was that the only Regulations that made express provision for the handling of SBO were the human SBO Regulations, and monitoring of these fell logically within the province of the VOs with special training in meat hygiene.

424 The system that was set up required the Divisional Veterinary Officers to submit monthly returns of visits made by the VOs in their divisions. These were collated on a regional basis and sent to an officer of the Meat Hygiene Veterinary Section at Tolworth – initially Mr Stephen Hutchins, followed in 1991 by Mr Alick Simmons, who was himself succeeded in 1995 by Mr Andrew Fleetwood (an officer in the Notifiable Diseases Section). That official prepared a summary giving the national picture. Although Mr Baker set up this system, he told us that responsibility for it subsequently shifted to Mr Iain Crawford, as head of the VFS; thereafter he continued to receive the summaries of the returns, but only as ‘a matter of politeness’ because they were prepared by one of his staff. Mr Crawford told us that he had responsibility for advising on the practical problems of implementing policy in the field, but no responsibility for making policy decisions or advising Ministers on policy.
Mrs Attridge, head of the Animal Health and Veterinary Group, explained to us that while administrators in her group had responsibility for monitoring and keeping the Regulations in relation to the animal SBO ban under review, her ‘eyes and ears’ on the ground were the field vets.

We found this a confusing picture. No one person appears to have been responsible for keeping the adequacy of the monitoring of the animal SBO ban under review. As the story progressed the initiatives for tightening the system tended to come from Mr Meldrum.

Renderers

Initial returns on visits to renderers in January 1991 led Mr Meldrum to direct that there should be a further round of visits the following month and that thereafter renderers should be visited every two months. These early returns indicated that SBO was being kept separate from other material and that renderers were making sure that it did not get mixed with the material being processed for animal feed. Unofficial reports were nonetheless received by MAFF of wrongdoing in some rendering plants. As Mr Lawrence remarked, ‘short of catching them in the act it is a pretty hopeless task’.

The reports disclosed one area of particular concern. Renderers used common plant for processing offal which produced MBM for incorporation in animal feed, and for processing SBO, whose product had to be kept out of animal feed and disposed of as waste. Methods of cleaning or purging the production plant between one batch and the next varied widely, with some plants doing nothing at all. Once again Mr Meldrum intervened. In September 1991 he asked Mr Simmons to draw up procedures which would ensure that no cross-contamination occurred at rendering plants. In consultation with UKRA, Mr Simmons prepared a ‘Code of Practice for the Handling of SBO at Rendering Plants’, which was distributed in August 1992. This provided for precautions to prevent ‘comminglement’ of SBO with other material. MAFF officials had expressed concern at the use of the description ‘cross-contamination’. The precautions included cleansing or purging of plants between batches.

Had it been appreciated when the animal SBO ban was introduced that a very small quantity of infective material might suffice to transmit BSE orally, we have no doubt that more urgent steps would have been taken to address the risk of cross-contamination in the course of rendering. As it was, the Code of Practice was a significant, if tardy, step in the right direction. But as we shall see, events in 1994 were to demonstrate that it was not enough.

Meanwhile, early in 1991, concerns had been raised about the disposal of protein produced from the rendering of SBO. SEAC had been consulted and advised that it was not satisfactory that it should be spread on fields as fertiliser. This led to the introduction of a statutory requirement that disposal of protein derived from SBO would have to be effected under licence, to be granted by MAFF. The licensing scheme required data to be kept of weights of SBO received by renderers and of the protein derived from it, which enabled a rudimentary check to be made that SBO had not gone astray at the renderers.

The NPU BSE-to-sheep experiment was to show that ½ gram was enough
The Bovine Spongiform Encephalopathy Order 1991, article 9
The VFS continued to make regular visits to renderers to monitor the practice of keeping SBO separate from other material. These gave no indication that the position was other than satisfactory.

Slaughterhouses

Mr Baker’s instructions to Divisional Veterinary Officers about monitoring in November 1990 had focused on information to be provided about the handling of SBO at renderers. They included, however, a request that visits should be made to slaughterhouses in order to discover ‘how slaughterhouses are handling specified offal’. The response to this request varied so much in format and detail that a further round of reports was called for. For these a pro forma was used which called for information about brain removal, staining and movement permits. No mention was made of ensuring separation between SBO and other material. Not until August 1992 were field staff expressly instructed that the ‘essential feature in effective control’ was ensuring that SBO was kept separate from other material in the slaughterhouse and during transportation to rendering plants.

Both before and after these instructions, the returns received in respect of visits to slaughterhouses gave a satisfactory picture of practices observed. There were occasional reports of failures to observe the requirements of the human SBO Regulations in relation to staining or movement permits, but not to an extent that was significant.

This picture contrasted with a series of unofficial reports to MAFF of evasion of the animal SBO ban. In November 1990 Mr Lawrence was invited by Mr Peter Carrigan, who had a substantial business operating the gut rooms of slaughterhouses under contract, to visit a gut room to see the operations involved and to consider whether existing controls were sufficient. Mr Carrigan was in no doubt that they were not, and that there was widespread evasion of the animal SBO ban. This visit led Mr Lawrence to question the adequacy of the monitoring that MAFF was providing and to suggest that weight checks should be carried out at slaughterhouses and renderers to verify that the weight of SBO reflected the number of animals slaughtered. This suggestion was considered to be impractical by the members of MAFF’s Meat Hygiene Veterinary Section.

Mr Lawrence also suggested that a distinctive marker might be added to SBO, thus facilitating its identification in and after it had left the slaughterhouse. We had evidence that enquiries were made as to whether a cheap marker or stain could be developed for this purpose. They did not lead to a successful outcome, but we were not able to establish why this was.

Reports continued to come in from ‘trade sources’, some considered reliable, that the Regulations were being disregarded and that SBO was being consigned by slaughterhouses to renderers unstained. One source of such information was Prosper De Mulder, the major UK renderer. This was typical of the cooperation provided by this company to MAFF throughout the BSE story. The company operated to high standards and showed a consistent concern that the Regulations should be effectively implemented.
This concern was shared by Mr Meldrum. His reaction to reports of disregard of the Regulations was to seek to improve the rigour of the monitoring by the VFS. In August 1991 a Circular was issued to the field staff, informing them of reports of non-compliance with the Regulations and instructing them to carry out the occasional unannounced visit to slaughterhouses. Notwithstanding this, the reports from the VFS continued to portray a satisfactory picture so far as slaughterhouse practices were concerned.

**Knacker’s yards and hunt kennels**

Officers of the VFS were instructed to make monthly visits to knacker’s yards and hunt kennels; the frequency reflected the fact that these premises were subject to significantly less local authority supervision than slaughterhouses. The instructions given were that on these visits staff should review ‘the procedures for the disposal of waste material generally and the specified offals in particular’. We are not, however, aware of any returns which dealt with the manner in which SBO was handled at knacker’s yards and hunt kennels. The only relevant Regulations were the MSSR 1982. These required all knacker meat to be treated as unfit for human consumption. They provided for staining and for movement permits in relation to this, but made no specific provisions in relation to SBO. We believe that this is why the returns from the VFS made reference, on occasion, to non-compliance with the MSSR but no reference to the handling of SBO.

**‘Cradle to grave’ reviews**

A significant improvement in the monitoring of the handling of SBO was introduced on the initiative of Mr Simmons in April 1993. He recognised that individual reports on slaughterhouses and on renderers did not give headquarters a complete picture of SBO disposal. He issued a new pro forma, Form MH6. This extended the scope of the return to cover all aspects of SBO handling from the slaughterhouse, to the collection centre, to the renderer and to the final disposal of the protein derived from the rendering of the SBO. Confirmation was sought that SBO was separated from other material at all stages of its journey.

In 1993 three sets of the new ‘cradle to grave’ returns were summarised by Mr Simmons. They indicated that practices were almost universally satisfactory. Occasional infringements ‘of a minor nature’, such as failing to stain all SBO or failing to identify SBO lines, were drawn to the attention of the local authorities, which took remedial measures.

**The truth emerges**

Despite the rosy picture painted by the returns from the VFS, unofficial reports of disregard by slaughterhouses of the Regulations were becoming more frequent. These reports led Mr Crawford to issue instructions on 1 February 1994 that all renderers processing SBO should be visited during the month of February unannounced. Full and detailed reports were to be provided of what was found. In summarising these reports on 25 March, Mr Simmons observed that both at collection centres and at renderers the constituents of stored material awaiting processing had to be taken on trust. His conclusions were that a small but significant
amount of the total SBO processed, as a result of being inadequately identified and separated from other material at the slaughterhouse, in transit or at the rendering plant, was finding its way into processed protein that was being incorporated in animal feed. It was to become apparent that the only error in Mr Simmons’s conclusions was that the amount in question was not small.

Mr Simmons included in his report a number of recommendations for tightening controls on the handling of SBO. Mr Meldrum called two meetings of officials in the course of April to consider these. Some of the deficiencies in the animal SBO Regulations which we have described above were recognised – it seems for the first time – namely:

- The animal SBO ban did not require the separation of SBO from other material at all stages.
- The 1989 human SBO Regulations did not apply to knacker’s yards.

Various measures were considered, including the requirement that SBO should be stained with a special dye.

On 3 May Mr Eddy, who had taken over as head of the Animal Health (Disease Control) Division in June 1993, chaired a meeting to consider the way ahead. He later wrote that at this meeting:

We spent a great deal of time clarifying in our own minds how the current arrangements work.

This was an exercise that should have been done in 1990 when the animal SBO ban was initially introduced. It was only from 1994 onwards that suitable legislative changes were prepared, including the requirement for a special dye for SBO, a requirement for SBO to be kept separate from non-SBO material, an approved system of movement permits, and a requirement that renderers handling SBO should be licensed.

The penny drops

It was at about this time that MAFF officials began to appreciate the true significance of breaches of the animal SBO ban. The numbers of BABs were soaring. In September 1993 the total had exceeded 4,000; by September 1994 it was to reach nearly 13,000. It was apparent that some had been born after the animal SBO ban had come into force. MAFF officials, including Mr Wilesmith, Mr Bradley and Mr Meldrum, were reaching the conclusion that the likely cause was double contamination:

i. contamination of MBM used for pig and poultry feed with SBO; and
ii. contamination of cattle feed with pig and poultry feed.

This led Mr Meldrum to initiate a review of arrangements for the disposal of SBO. Subsequent developments were attributable in large measure to the commendable lead of Mr Meldrum.
In July 1994, because of pressure of work in Mr Eddy’s division, Dr Richard Cawthorne, the head of the Animal Health (Zoonoses) Division, was asked to ‘assume overall responsibility for progressing changes to the SBO controls and produce an action plan’. He was assisted by Mr Fleetwood, a Senior Veterinary Officer (SVO) in his division. Mr Fleetwood carried out an informal telephone survey of the quantities of SBO received by the major UK rendering plants. He compared this with the amount that ought to have been generated from the cattle being slaughtered. The weekly total was 400 tonnes short of the 1,200 tonnes which was his average estimate for the time of year. He concluded that the ‘SBO controls were not working’.

Two further factors added to the gravity of the situation:

- In March 1994 preliminary results of a European study on the effect of the rendering process on inactivating BSE had demonstrated that the three systems that collectively provided most of the UK rendering capacity did not provide effective inactivation.
- In the summer of 1994 initial results of the CVL’s attack rate experiment indicated that as little as 1 gram of infective material was capable of transmitting BSE orally to a cow.60

The potential consequences of cross-contamination at the renderers and in the feedmill were all too plain.

On 10 August the new Minister of Agriculture, Mr William Waldegrave, received a submission proposing radical changes to the animal SBO ban (along with changes to the human SBO ban). In agreeing that they should go to consultation, the Minister expressed concern that ‘the controls should be made as simple as possible’.

A lengthy consultation period then ensued, which resulted in the introduction of new provisions after the Meat Hygiene Service had replaced the local authorities in the slaughterhouses.

The Meat Hygiene Service takes over and a new SBO stain is introduced

On 1 April 1995 the Meat Hygiene Service (MHS) was launched as an Executive Agency of MAFF. It took over from local authorities responsibility for meat inspection and enforcement of the legislation relating to meat hygiene and SBO controls in slaughterhouses and head-boning plants. At the same time, Regulations were introduced which required SBO to be stained with a new distinctive food colour, Patent Blue V, instead of the previous black stain, which was used for other unfit meat.61 This new stain had been identified as suitable the previous autumn, following instructions given by Mr Meldrum.

More shortcomings revealed

Most of those who had worked in slaughterhouses for local authorities as Meat Inspectors, EHOs or OVSSs transferred their employment to the MHS. With the

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60 The fact that the NPU had already transmitted BSE to a sheep with an oral dose of only ½ gram of infective material appears to have been overlooked.
61 The Bovine Offal (Prohibition) (Amendment) Regulations 1995
MHS in place it was possible for both the MHS and the VFS to carry out rigorous monitoring of the standards of enforcement of the Regulations applied by the staff that the MHS had inherited. It quickly became apparent that there were widespread failures to dye SBO with the new dye, or indeed with the old one. Mr Peter Hewson, a senior official in the Meat Hygiene Veterinary Section, commented in a minute:

> It is clear to us that the local authorities were not implementing the staining requirements of the SBO regulations with the diligence we would have expected.

453 In the first three weeks of June, under the leadership of Mr Fleetwood, the VFS carried out a period of national surveillance, in the course of which every slaughterhouse known to handle bovine material received an unannounced visit on which a thorough inspection was carried out. Mr Fleetwood summarised the result:

> The overall impression of this snapshot view of the industry is that there is widespread and flagrant infringement of the regulations requiring staining of SBO. Insofar as this may reflect the general attitude of the industry to controls on SBO, it is of concern. Although the problems with separation are less extensive, there are grounds for suspecting that the highest risk tissues (brain and spinal cord) have been mixed with other by-products and processed for animal consumption . . . a careless attitude to separation and disposal seems to be prevalent and it is probably leading to accidents during disposal. 62

454 It is right that we should emphasise here a point made by a number of MAFF witnesses. Responsibility for implementing the human SBO Regulations lay with the operators of the slaughterhouses. Responsibility for enforcing the Regulations rested fairly and squarely on the local authorities, not on MAFF. The legislation did not even provide for MAFF to exercise a monitoring role.

455 We have drawn attention to the fact that the human SBO Regulations did not require SBO to be kept separate from other unfit material. They did, however, require SBO to be stained, whether or not mixed with other unfit material. This requirement was frequently disregarded. Slaughterhouse operators were not fulfilling their statutory obligations and local authorities were not enforcing them.

456 We have suggested that one reason for this was that the Regulations were designed for the protection of human health, and there were no concerns that failure to stain might result in SBO getting into the human food chain. This may explain, but cannot excuse, breaches of statutory duty. There were many other reasons for these:

- Budgeting constraints meant that some local authorities did not employ sufficient staff to carry out slaughterhouse inspection duties satisfactorily. Nor was it easy to recruit staff. This was particularly difficult in the case of the OVSs – who should have been the most important members of the team. Veterinarians tended not to relish slaughterhouse duties and we had evidence that, when it was possible to recruit these, often from overseas, their quality was sometimes poor.

62 YB95/7.04/3.3, para. 5
There was often resentment on the part of slaughterhouse operators, Meat Inspectors or both at the imposition at the top of the inspection hierarchy of the OVS, whose need and function was considered to be open to question.

There was a lack of effective line management. Meat Inspectors were often left to their own devices, without supervision, and tended to become ‘almost part of the plant staff’, getting involved in trimming and perhaps even dressing, rather than keeping themselves removed and recognising their roles as enforcement officers.

Local authorities were often reluctant to be over-exacting in respect of slaughterhouses that provided local employment and a local service to farmers, but were operating on the margin of solvency.

Under the Government’s deregulation initiative, there was a culture of ‘light touch’ regulation. At the same time there was a media campaign which pilloried local authority enforcement officials as ‘bureaucrats from hell’ or ‘little Hitlers’.

More than half the plants visited in June 1995 were not meeting the statutory requirements on staining, and 60 out of 435 plants were not separating SBO correctly from other material. Sixteen were not separating it at all. This was the lamentable state of affairs that confronted Mr Douglas Hogg when he replaced Mr Waldegrave as Minister of Agriculture on 5 July 1995.

The new Order

One of Mr Hogg’s first actions was to approve the terms of the proposed new Order, after having carefully discussed their implications with the Parliamentary Secretary, Mrs Angela Browning, and with his officials.

The Order was admirably comprehensive and yet satisfied Mr Waldegrave’s request that it should be simple. In a single piece of legislation, enacted under the Animal Health Act 1981, it contained provisions aimed at protecting both human and animal health. Those aimed primarily at protecting animal health included the following:

- a ban on feeding SBO to animals;
- a ban on using SBO in the preparation of animal feed;
- a ban on selling SBO for feeding to animals or for use in the preparation of animal feed;
- a requirement that brain and eyes should not be removed from the head and that the head should be disposed of as SBO;
- a requirement that SBO should not come into contact with any other animal material in the slaughterhouse;
- a requirement that SBO be marked with Patent Blue V;
- a requirement that SBO be removed to an approved collection centre, rendering plant or incinerator;

The Specified Bovine Offal Order 1995
THE ANIMAL HEALTH STORY

- a requirement that SBO be kept separate from all other animal material in transit, at the collection centre and at the renderer;
- a requirement for weight-recording and record-keeping by all those generating or disposing of SBO;
- a requirement for dedicated SBO facilities at rendering plants.

The last requirement had proved controversial during consultation. It was Mr Meldrum who insisted on its inclusion. Renderers were granted a period of six months to introduce new dedicated lines. The new Order came into force on 15 August 1995.

460 Meanwhile the VFS had carried out two further rounds of intensive unannounced visits, and the MHS management introduced training and awareness-raising for the staff that they had inherited to rectify the shortcomings that had been disclosed.

461 On 29 September Mr Fleetwood was able to report that the amount of SBO being processed had increased by over 100 per cent. A minor part of this increase was attributable to the fact that whole heads were now treated as SBO. The balance is indicative of the extent of the previous evasion of the Regulations. It suggests that the 33 1/3 per cent shortfall identified by Mr Fleetwood’s telephone survey was probably not far short of the mark.

462 Although there had been a significant improvement by September, the VFS was still finding widespread failure to comply with the Regulations. Up to this point MAFF officials and Ministers had been comforted by the belief that the shortcomings discovered did not endanger human health. However, towards the end of October 1995 Mr Meldrum had the unenviable task of informing the Chief Medical Officer, Dr Kenneth Calman, of four instances where spinal cord had been found in carcasses that had been health stamped by Meat Inspectors. Mr Packer suggested that Mr Hogg should call in the slaughterhouse owners and ‘read the riot act’.

463 Mr Hogg did just that. On 8 November he issued ‘formal instructions’ to Mr Johnston McNeill, Chief Executive of the MHS, calling upon him to ‘make every effort to secure 100% compliance’ with the Regulations. This was an extreme step for a Minister to take in relation to an Executive Agency.

464 On the following day, Mr Hogg called in slaughterhouse operators and read the riot act. He told them that he would only be satisfied with 100 per cent compliance with the rules. This ambitious goal was not achieved, but the concerted efforts of the slaughterhouse operators, the MHS and the VFS produced impressive results. Whereas in October the VFS visits had disclosed that 31 per cent of slaughterhouses had failed to comply with the Regulations in one respect or another, by November this proportion had dropped to 13 per cent. By the beginning of January, Mr Fleetwood was able to report that:

Very few problems are now being recorded other than a few lingering defects in staining and record keeping.

Of 344 visits made, only 5 per cent were recorded as unsatisfactory.
Knacker’s yards and hunt kennels were included in the enforcement campaign. Mrs Browning met with their representatives to emphasise the need for improvement. Once again a remarkable improvement was produced. In one month alone, the proportion of visits to these premises which proved unsatisfactory dropped from 65 to 29 per cent.

By the end of 1995 MAFF had published a list of head-boning plants, incinerators and collection centres which had been inspected and which were approved under the 1995 Order to receive SBO. Renderers proceeded to upgrade their plant in order to provide dedicated lines for processing SBO as required by the Order. In some cases, short extensions of the six-month deadline had to be granted. On 13 March 1996 MAFF published a list of renderers approved to handle SBO together with a further list of head-boning plants, incinerators and collection centres.

Thus, by the end of the period with which we are concerned, there was at last in place a sound set of Regulations, imposing an effective animal SBO ban which was being properly implemented and monitored. At this point the abrupt change in perception of the risk that BSE posed to humans led to the imposition of a blanket ban on feeding animal protein to animals. The animal SBO ban became history.

Did the provisions of the animal SBO ban matter?

To what extent were the shortcomings that we have described attributable to the defects in the provisions of the animal SBO ban that we identified at the outset of this section?

Mrs Attridge, who was head of the Animal Health and Veterinary Group which had responsibility for the animal SBO ban, and Mr Meldrum each submitted to us that improvements in the Regulations would have had no significant effect on enforcement in slaughterhouses so long as the District Councils remained responsible for this. They suggested that it was the introduction of the MHS that enabled the tightening of standards in slaughterhouses in and after 1995. This was achieved by consolidating all the Regulations into a single instrument under the Animal Health Act 1981. The MHS enforced the consolidated Regulations in the slaughterhouses and the County Councils enforced them elsewhere. Before the MHS took over, there was no practical way of ensuring that separation of SBO from other material was enforced in the slaughterhouse. Mrs Attridge added that if there had been problems in getting slaughterhouses to apply a single black stain – which there certainly had – a requirement that SBO should be marked with a separate blue stain would have been likely to have compounded those problems.

There is force in these points. The regime under which some 300 different councils throughout Great Britain shared responsibility for enforcing Regulations in slaughterhouses had proved to have a severe structural weakness. No changes in Regulations would have overcome that weakness. Furthermore, the District Councils were not concerned with animal health Regulations. The County Councils, which had to enforce these, had no presence in slaughterhouses. Plainly the human SBO ban and the animal SBO ban could not sensibly be consolidated into a single Order so long as this situation prevailed. Nonetheless, we believe that if the animal
SBO ban had been imposed by a detailed code such as that introduced in 1995, the benefits would have been considerable. A statutory obligation to stain SBO with a distinctive stain and keep it separate at all times from all other material would have made it quite clear to slaughterhouse operators what their duty was. Meat Inspectors, EHOs and OVSs employed by the District Councils would in practice have had to have regard to that obligation in the course of enforcing the human SBO ban – indeed the terms of the human SBO Regulations could have been amended to bring them into line. The VFS would have been in no doubt as to the obligations that it was monitoring – and the distinctive stain would have helped it in its task.

471 So far as knacker’s yards, hunt kennels, collection centres, transit to renderers, and rendering plants were concerned, there is no doubt that it would have been possible to impose clear and simple statutory obligations to keep SBO separate from other material. The County Councils would have been responsible for enforcing these. We are in no doubt that this would have resulted in significantly more effective enforcement and monitoring of the animal SBO ban.

Why did it take so long?

472 In July 1995 Mr Packer commented in a minute to Ministers:

The unsatisfactory treatment of specified bovine offal in slaughterhouses reflects an unfortunate state of affairs which has presumably existed for many years. We must expect questions on why we allowed the situation to persist for so long.

473 We asked many witnesses why it was that the VFS did not identify the shortcomings in slaughterhouses earlier than 1994. Most had no answer to make, other than that the shortcomings that were revealed in 1995 were a recent development. This suggestion we reject. We are satisfied that they had persisted throughout.

474 Mr Fleetwood suggested that the problem was that, whether or not visits were made by formal appointment, slaughterhouses would have had advance warning of them. ‘Unannounced’ visits might have fallen into a pattern so that they were anticipated. Slaughterhouses would have taken steps to ensure that the right bins were in place and liberal quantities of stain being applied when MAFF veterinarians arrived.

475 These suggestions were speculative, but we think that there may be something in them. The VFS had no right of access to slaughterhouses. It would not have been easy simply to turn up to carry out an inspection without liaising with the local authority responsible for enforcement. The truly unannounced and unexpected visit may well have been a rarity.

476 Mr Fleetwood also suggested that animal health officers making the visits may have been fairly recent recruits to the VFS and ‘easily browbeaten’ by slaughterhouse managers. There may also be some truth in this suggestion. We believe, however, that before 1995 inspections by members of the VFS were much
less rigorous than after the MHS had taken over. There were a number of reasons for this.

- Before 1994 the practical importance of the animal SBO ban was not appreciated. It appeared to be a precautionary measure to protect pigs and poultry that was probably unnecessary.
- The growing number of BABs and the result of the attack rate experiment led, in 1994, to the realisation that the animal SBO ban was a crucial element in the eradication of BSE.
- Before 1995 VFS visits were made ‘on sufferance’. After 1995 they were made with the support of the MHS.
- Before 1995 the VFS visits were not targeted, for there were no Regulations requiring SBO to be kept separate from other unfit material. After 1995 there were specific statutory requirements to be monitored.

477 We consider that these are all factors which tend to explain why the shortcomings discovered in 1995 were not identified earlier by the VFS. MAFF officials were, however, receiving regular reports from unofficial sources that, contrary to the reports that were being made by the VFS, the animal SBO ban was being evaded. Are they to be criticised for not reacting more rigorously to these reports? Their reaction was steadily to step up the stringency of monitoring by the VFS until, finally, its reports confirmed the unofficial ones. Once again we have concluded that the failure to respond more positively was attributable to the failure to focus at the outset on the possibility that a very small quantity of infectious material might suffice to transmit BSE to cattle. As the years passed without cases of transmission of BSE to pigs and poultry, it must increasingly have seemed that the concerns which had given rise to the animal SBO ban were unfounded.

478 When in 1994 it was appreciated that shortcomings in the enforcement of the animal SBO ban were probably leading to the infection of cattle, Mr Bradley of the CVL concluded: ‘We have to quickly and effectively re-assess and, if necessary, improve the policing of the controls both via MAFF and the Local authorities.’ We believe that Mr Meldrum and his colleagues reached the same conclusion. Are they to be criticised for not reaching it sooner? Once again we have concluded that the failure to respond more positively was attributable to the original failure to explore the minimum amount that might infect and thus to focus at the outset on the danger of cross-contamination at the time of introduction of the ruminant feed ban. Given that failure, we do not consider that the manner in which MAFF officials performed their role of policing the animal SBO ban fell outside the range of acceptable responses to the facts as they appeared at the time.

Two fundamental issues

479 The story that we have set out raises two fundamental issues:

- should the feeding of all animal protein to animals have been banned from the outset? If not,
should the requirement that SBO be processed in dedicated rendering facilities have been imposed from the outset?

480 The practice of feeding animal protein to animals was considered, in the context of BSE, by the Southwood Working Party, by SEAC and by the Lamming Committee. None considered that the practice should be stopped, or even that the practice of feeding ruminant protein to pigs and poultry should be stopped. The total ban on feeding animal protein to animals that was imposed pursuant to SEAC’s recommendation in March 1996 was a reaction, and a reasonable reaction, to the horror of discovering that BSE was probably transmissible to humans. Its consequence was to turn renderers into a waste disposal industry rather than producers of a valuable animal by-product. We do not consider that it is cause for criticism that MAFF officials, MAFF Ministers and MAFF’s expert advisers did not consider that this step was justified prior to 1996.

481 Had the possibility that a very small amount of infective material in feed would suffice to transmit BSE been appreciated, we feel that this should have led to the conclusion that it was unsatisfactory to use the same plant to render sequentially SBO and offal for incorporation in animal feed. We have already criticised the failure to give consideration to the possibility that a small quantity would infect at the time of the introduction of the ruminant feed ban.

482 Given that failure, we would not criticise MAFF officials for not insisting that SBO should be rendered in dedicated facilities. The considerable cost that this would have imposed on renderers could reasonably have been considered disproportionate if its only purpose was to enhance the protection of pigs and poultry against what was no more than a possible risk. Once perceptions had changed in 1994, Mr Meldrum is to be commended for having insisted that renderers should be required to provide dedicated facilities if they were to be permitted to process SBO.

Conclusions

483 We have reached the end of a black chapter in the BSE story. There are lessons to be learned from it, which we consider later. At this point we have a few concluding remarks.

484 Mr Meldrum was correct to stress the structural problems prior to 1995 of enforcing Regulations in slaughterhouses. The MHS was not introduced as a response to the problems of BSE. Its introduction was, nonetheless, of the greatest significance in addressing the dangers that BSE posed to the human and animal food chains.

485 The SVS, of which the VFS was one arm, had no statutory role in relation to the enforcement of the SBO Regulations. The monitoring role that it had undertaken was essential. Statutory recognition of that role, and statutory power of entry in support, would have been desirable.

486 In the event, largely as a result of the direction of Mr Meldrum, the SVS found itself increasingly filling the gaps in the statutory machinery for enforcing the
animal SBO ban. One example was the monitoring that the VFS undertook of collection centres. Another was the negotiation with UKRA of the Code of Practice that was introduced in order to reduce cross-contamination at the renderers.

Finally, we should recognise the credit due to the continued efforts of the MHS, the SVS and slaughterhouse operators themselves, spurred on by the vigorous intervention of Mr Hogg, in turning round in 1995 what, up to then, had been a most unsatisfactory state of affairs. They were assisted in doing so by the belated introduction of an excellent regulatory scheme.

Cattle-tracking

There are two other topics which properly fall within the context of animal health. The first of these is cattle-tracking. Had MAFF had in place a computerised system under which the movements of cattle could be traced back to their place of birth, and their dams identified, this would have been of great benefit in satisfying European requirements that beef exported should have a BSE-free provenance. This we can see with hindsight. When BSE emerged, however, the immediate question was whether such a system needed to be put in place either to meet the demands of controlling BSE, or to meet the demands of disease control that might arise from the emergence of other new diseases.

That question was considered in 1990 by the Agriculture Committee of the House of Commons and answered in the affirmative. It was subsequently explored by MAFF officials in the context of a wider consideration of future information technology requirements. Officials concluded that neither the demands of BSE, nor those of disease control in relation to any foreseeable new disease, could justify the expense of introducing a computerised animal-tracking system. In vol. 5: Animal Health, 1989–96 we have reviewed that conclusion and decided that it is not one we would criticise. We make no comment, for it is not within our terms of reference, on MAFF officials’ response to the wider demands and possibilities of information technology.

Breeding

The other topic which falls within the context of animal health is that of breeding. In 1990, when it was unclear whether, or to what extent, BSE was a disease which would be maternally transmitted, a practical problem arose of concern to farmers: should they use the offspring of BSE cattle for breeding?

The British Veterinary Association and the MAFF veterinarians, headed by Mr Meldrum, were of one mind. Farmers should be advised that it was not desirable to breed from the progeny of BSE victims. Dr Pickles, who led in relation to BSE on behalf of DH, learned of this proposed advice. She considered that it was open to a number of objections, more political than veterinary, which MAFF officials had overlooked. SEAC had just been set up, and Dr Pickles succeeded in persuading Ministers that the new committee should be requested to consider the proposed advice.
SEAC did so at its first meeting, and expressed agreement, then and there, with Dr Pickles’s reservations. We for our part had reservations about the use that was made of SEAC on this occasion and its outcome, though they did not lead us to criticise anyone involved. A full discussion of this matter is to be found in vol. 11: Scientists after Southwood.

The result was that MAFF did not advise farmers against breeding from the offspring of cattle which had been affected with BSE. An Advisory Note to farmers, which was issued in 1990, simply recommended that, if in doubt, farmers should consult their vet. Such a recommendation was not very helpful to farmers who received it. Given SEAC’s advice that farmers should not be advised not to use the offspring of BSE cattle for breeding, we do not criticise the approach adopted in MAFF’s Advisory Note.