RSPCA
for all creatures great & small

29 September 2011

Committee Secretary
Senate Standing Committee on Rural Affairs and Transport
PO Box 6100
Parliament House
CANBERRA ACT 2600

Dear Committee

Re: Senate inquiry: Animal welfare standards in Australia's live export markets
Senate inquiry: Related Private Senators' Bills

This supplementary submission by RSPCA Australia is to correct a number of assertions made in the course of this Inquiry. In summary:

- There has been significant industry evidence of cruelty at point of slaughter in many importing countries for many years.
- The video footage collected by Animals Australia in March 2011 is a true and accurate record of the likely usual practices in those Indonesian slaughterhouses visited.
- The black Droughtmaster steer, filmed at the Jalan Stasiun slaughterhouse near Medan in Sumatra, who is seen shaking in the Four Corners program is not suffering from transit tetany but is likely exhibiting a fear response to his environment.
- In Australia all cattle are stunned, most pre-cut (sticking), with a small number stunned post-cut to meet Kosher requirements.
- In Australia, less than one percent of sheep, lambs and goats are slaughtered without stunning.

The ABC Four Corners program *A Bloody* Business documented routine and terrible cruelty inflicted on Australian cattle in Indonesia. The Australian community was understandably shocked.

The Australian Government and community have been shown the cruel treatment of Australian animals in importing countries via various television current affairs programs every year for the past eight years. MLA reports about Indonesia in 2000, 2004, 2005, 2007, 2008, 2009 and 2010 have consistently highlighted significant welfare problems at the point of slaughter, from abattoir workers deliberately hurting animals to incapacitate them, to ineffective throat cutting and restraint. Since 2004, these reports have also reported on the poor welfare outcomes associated with the use of the Mark 1 restraint box. Indeed the 2005 report warned of the PR nightmare that would ensue if the Australian public was made aware of animal slaughter practices in Indonesia. The MLA's report dated May 2010, but not released until January 2011, detailed problems with head slapping, eye gouging, tail twisting and multiple throat cuts. In essence, it describes much of the cruel treatment that was documented by Animals Australia then by Four Corners through theirown independent investigation.

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Given this proof of undisputed welfare problems, it was with shocked disbelief that we listened (10/8/2011) to Senator Back's unsubstantiated allegations about the authenticity of the footage and later (14/9/2011), his assertion, based on viewing less than 40 seconds of video, that the black steer standing alone and shaking at the Jalan Stasiun slaughterhouse had an underlying condition known as transit tetany. RSPCA Australia and Animals Australia met privately with Senator Back on 2 June for 90 minutes and talked him through the detail of the problems our investigation had identified in Indonesia. At that time he did not question the validity of our evidence nor has he contacted us since then to clarify any issues or concerns he may have had about the situation in Indonesia or elsewhere, the veracity of the footage, or our interpretation of the events depicted.

Professor Caple in his evidence on 14 September also made the ridiculous unsubstantiated allegation to the Committee that the vocalisation of cattle in the footage could have been added via video editing prior to the footage being analysed by RSPCA Australia.

RSPCA Australia completely refutes all these allegations.

The ABC in their evidence and Animals Australia in their evidence and supplementary submissionhave confirmed the authenticity of the footage. No evidence has been presented to substantiate any claims that the footage obtained by Animals Australia was not a true and accurate record of the usual practices in those Indonesian slaughterhouses randomly chosen and visited, or that the copies of the full footage viewed by RSPCA Australia, the ABC, and the Office of the Commonwealth Chief Veterinary Officer differ in any way whatsoever from that true and accurate record.

In order to examine the assertion by Senator Back that the black steer was suffering from an underlying clinical condition such as transit tetany, RSPCA Australia provides three professional opinions to the Committee: Dr Hugh Wirth, Veterinarian, President of RSPCA Victoria and immediate past President of RSPCA Australia, Dr Lloyd Reeve-Johnson, Veterinarian who has served on live export voyages and Dr Carol Petherick, Senior Research Fellow, Animal Behaviour and Welfare, University of Queensland. The professional qualifications and experience of each are also outlined in the attached.

Live exporters, MLA, LiveCorp, producer representative bodies, successive Governments and the Australian Parliament have all failed cattle, sheep and goat producers, their service providers and rural communities because of their lack of oversight of the live export industry.

This failure will continue despite controlled supply chains and traceability of animals if there is not a requirement in the export orders that exporters can only supply to chains that include stunning, rendering the animal unconscious to the pain and suffering of slaughter. It is clear from Indonesia already, that not all approved supply chains do include stunning, showing that the live export industry will not voluntarily protect the welfare of animals at point of slaughter.

Humane slaughter involves the animal being rendered insensible to pain prior to the throat cut. For this reason, the RSPCA holds the position that all animals should be stunned before slaughter. In Australia, ALL cattle are stunned, almost all with pre-cut stunning, and a very small number killed under Kosher slaughter requirements with post cut/simultaneous stunning. Right now, under special State and Commonwealth Government approval, approximately 250,000 sheep and goats are killed without stunning in Australia; this is less than one percent of total sheep, lamb and goat slaughters in Australia this year, although we hope that if exemptions (called Approved Arrangements) are amended in the near future to concur with community concern about non-stun slaughter as we expect, this will decrease further or be eliminated totally.

RSPCA Australia also puts on record our disappointment in the unprofessional and disrespectful treatment of RSPCA Australia and Animals Australia representatives as witnesses before the Committee. The behaviour and statements of some is unbecoming of Senators who should be focused on finding solutions to a significant animal welfare problem, not making unsubstantiated and offensive allegations for the purpose of attracting media attention and attempting to damage the reputations of RSPCA Australia and Animals Australia.

For the sake of the animals, the RSPCA hopes that the Committee makes strong recommendations to ensure that all exported livestock are stunned whilst upright prior to slaughter, and the standards of transport, handling and feedlotting in importing countries meets the expectations of the Australian community and protects the welfare of Australian animals.

Yours sincerely

Heather Neil
CEO
RSPCA Australia

··· **Dr Hugh J Wirth** ···
AM, KSJ, BVSc, Hon DVSc (Melb), MRCVS, FAVA.
Veterinarian

REPORT ON THE EXAMINATION OF VIDEO FOOTAGE

On Tuesday morning the 20 September, 2011, at the request of Ms Heather Neil, Chief Executive Officer of RSPCA Australia, I examined the contents of two DVDs containing scenes of the slaughter of four Droughtmaster beef cattle steers in an unnamed Indonesian abattoir. I was specifically requested to examine the behaviour of a black steer, which had been named "Tommy" ear tag ILE 8006, from the commencement of each DVD until the slaughter of the animal.

The first DVD I examined was clearly identified as "Tommy March 2011" and was a video clip of 18 minutes in length. The second DVD was identified as "Tommy 2 March 2011" and was 10 minutes in length. The footage of the two DVDs were shot from different camera angles, but featured the same four cattle. Ms Maria Mercurio, Chief Executive Officer of RSPCA (Victoria) was present in the room and was watching the video screen with me for the whole time I was examining the contents of the two DVDs.

The footage shown in "Tommy March 2011" gave a clear view of the four cattle initially in the pens showing their right sides and what subsequently occurred to each during the slaughter process.

The footage shown in "Tommy 2 March 2011" was not as clear as the camera angle was set "head on" but the footage showed each stage of the slaughter process of the four steers in DVD "Tommy March 2011"

There were a small number of breaks in the footage on each DVD, but it was clear from comparing the two segments that these were brief and did not affect the continuity or sequence of events shown.

The footage of each DVD opened on a row of four pens each containing a steer. The pen sides were constructed of metal pipe rails as were the entry and exit gates. There were six slaughtermen identified working on the killing floor.

The four cattle shown were each in good condition and were mostly standing quietly before the slaughtermen commenced the slaughter process. Each steer was handled and slaughtered individually. The last steer handled and slaughtered was the black steer called "Tommy" whose behaviour I was particularly asked to observe and comment on.

The slaughter process consisted of capturing, in turn, the right foreleg and right hindleg just above the pastern using a long rope each with a slip-knot noose. The side exit gate of each pen was then opened and the roped steer was pulled over into lateral recumbency and the animal then slid down the sloping concrete floor into a large trough. The head was then secured to a post after a rope with a slip- knot noose was placed and pulled tight around the neck just behind the head and then looped over the nose and lower jaw. The structures of the throat of the animal were then severed with a knife and the animal allowed to bleed to death.

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Specific comments:

1. Some of the steers – including "Tommy" – while waiting for the slaughter process to begin had their hind quarters hosed by a slaughterman. This upset the cattle that kicked out at the water jet and generally became agitated with some vocalisation. There seemed no point as to why this was done.

2. Prior to "Tommy" being hosed he occasionally kicked out at the pen rails which I regarded as quite normal behaviour for a single confined steer.

3. The capture of the right foreleg and right hindleg certainly upset the cattle greatly and they each struggled to get free. There was some vocalisation. The sliding into the trough further upset the cattle. One steer was moving its unrestrained head quite violently and the slaughterman kicked it in the head presumably because he felt endangered by the animal.

4. The cutting of the throat of each steer was poorly done with the result that each did not bleed out quickly and took a long time to die. The slaughterman with the hose was at this time busily hosing down the blood from the concrete as well as off the animal. This only served to unnecessarily stir up the dying steers.

5. The slaughter process as seen and described by me cannot be justified. The application of well-known veterinary principles on cattle handling and humane slaughter identifies the cruelty that these four animals were subjected to. Pre-slaughter stunning of each animal would have immediately overcome these problems – no animal cruelty and no occupational health and safety issues for the slaughtermen. During my examination of the contents of the DVD "Tommy March 2011" I noticed the black steer having episodes of skin twitching which involved the ear flaps, the dewlap, and over the right side of the thorax (the left side of the thorax was not shown). These episodes all occurred while the steer was standing in the pen awaiting slaughter. Importantly these episodes were of very short duration, did not worsen in expression and required absolute concentration on the part of the viewer to pick up. The timings on the 18 minute footage were 07-13 to 07-31(18 seconds); 09-15 to 09-40(25 seconds); and 10-20 to 10.35(15 seconds).

6. In attempting to explain the "twitching" episodes I first considered transit tetany. This usually occurs to animals after prolonged transport late in pregnancy, although the condition has been reported in steers. In the early stages of the disease the animal is restless and excited. There follows a staggering gait and recumbency. Although the steer was about to be slaughtered I ruled out transit tetany as a cause because the footage did not show a steer that was restless, or excited, or worsening to the point of staggering. The episodes were clearly neurological, but not persistent. I have therefore concluded on the evidence that the twitching signs represent an idiopathic short-term neurological condition.

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My overall clinical observations of the steer "Tommy" were that he was in good condition and not overly stirred up whilst in the pen awaiting slaughter. There was some vocalisation from the three cattle that were slaughtered before the black steer. In addition there were abattoir noises. In my view the steer was aware of what was happening around him. And behaved in a manner consistent with a fight or flight response.

It is entirely reasonable to suggest that the steer may well have been frightened or fearful.

Hugh J Wirth AM, KSJ
Veterinarian

22 September 2011

CURRICULUM VITAE

HUGH JOHN WIRTH, A.M., K.S.J., B.V.Sc., Hon. D.V.Sc (Melb), M.R.C.V.S., F.A.V.A, M.A.I.C.D

Personal

Born 9 September 1939 - Melbourne

Education

- The University of Queensland – Brisbane – Graduated 16 December 1963 (B.V.Sc.)
- Xavier College – Melbourne – 1949 -1957

Employment

- Principal, Balwyn Veterinary Surgery, January 1967 - August 2006 (retired)
- Associate Veterinary Practitioner, Balwyn Veterinary Surgery, 1965-1966
- Associate Veterinary Practitioner, Drouin Veterinary Surgery, 1964-1965

Veterinary Professional Appointments

- Member, Royal College of Veterinary Surgeons (UK) since 2004
- Honorary Secretary, Australian Veterinary Association, 1978-1981
- Convener, Standing Committee on Animal Welfare, Australian Veterinary Association, 1972-1978
- President, Victorian Division, Australian Veterinary Association, 1974
- Member, Victorian Veterinary Practitioners Registration Board, 1972-1981
- President, Melbourne Metropolitan Veterinary Practitioners Association, 1969
- Academic Associate, (now Senior Fellow), in the Faculty of Veterinary Science, The University of Melbourne 1967- 2006
- Member, Veterinary Panel, The Royal Agricultural Society of Victoria since 1965; Chairman since 1995
- Member, Melbourne Metropolitan Veterinary Practitioners Association 1965 -2007
- Member, Australian Veterinary Association since 1964. Life Member since 2006

RSPCA and Related Appointments (Honorary)

- Senior Vice-President (Immediate Past President) WSPA 2006 – 2008
- President, World Society for the Protection of Animals (WSPA) 2004 - 2006
- Junior Vice-President (President-elect), WSPA 2002-2004
- Secretary, WSPA 2000-2004
- Board Trustee WSPA since 1993
- President, RSPCA Australia 1980-1983 and 1988-2006
- Immediate Past President RSPCA Australia since 2006
- National Board Director, RSPCA Australia since 1980
- President, RSPCA (Victoria) since 1972
- Director, RSPCA (Victoria) Board since 1969

Animal Welfare Appointments

- Member, Australian Pork CRC Board since 2011
- Member, Advisory Panel, Marjan Centre for the study of Conflict and Conservation, King's College, London since 2010
- Member, Australian Animal Welfare Strategy Advisory Committee to the Australian Minister for Agriculture, Fisheries and Forestry since 2005
- Member, Live Export Standards Advisory Committee to the Australian Minister for Agriculture, Fisheries and Forestry 2004 – 2009
- Member, Advisory Committee to the Professor of Animal Welfare, The University of Queensland, 2003-2009
- Member, Independent Reference Group on Live Animal Exports to the Australian Minister for Agriculture, Fisheries and Forestry 1999 -2003
- Member, National Consultative Committee on Animal Welfare to the Australian Minister for Agriculture, Fisheries and Forestry 1989 – 2011
- Member, National Advisory Committee on Kangaroos to the Australian Minister for the Environment 1985-1995
- Member, Victorian Intensive Dairy Review Committee, 1983
- Member, Victorian Animal Welfare Advisory Committee to the Minister for Primary Industries since 1980
- Member, Livestock Advisory Committee to the Australian Maritime Safety Authority, 1970 - 2005.

Other Appointments

- Member, Australian Institute of Company Directors since 2010
- Knight of Honour, Order of St John of Jerusalem, Knights Hospitaller – Australasia 1999. Knight of Grace 2004
- Australia Day Ambassador, since 1997. Life Ambassador since 2005.
- Broadcaster on Animal Welfare Issues 1278 Radio Melbourne 1972-1978 and 774 ABC Melbourne Australian Broadcasting Corporation, since 1981

- Vice-President (College) The University of Queensland Students Union, 1963
- President, St Leo's University College Students Club, 1963

Awards

- McDermott Award for a significant contribution to the welfare of animals through the WSPA, 2010
- Xaverian Award for community service and sustained commitment to the ideals of St. Ignatius of Loyola, Xavier College, 2009
- Assisi Award for Outstanding Service to Animals, the New Zealand Companion Animal Council 2007
- Vocational Excellence Award, the Rotary Club of North Balwyn, 2007
- Certificate of Appreciation for service to the Australian Veterinary profession as an animal welfare advocate 2007
- Awarded Centenary of Federation Medal for work with RSPCA Australia, 2003
- Admitted to the degree of Doctor of Veterinary Science (DVSc) *honoris causa* The University of Melbourne, 2001
- Honorary Life Membership, The Royal Agricultural Society of Victoria, 1999
- Massachusetts SPCA (USA) George T Angell Humanitarian Award, 1998
- President's Medal, The Royal Agricultural Society of Victoria, 1998
- Victoria Day Award for Community and Public Service, 1997
- RSPCA Australia Outstanding Service Award, 1994
- Honorary Life Membership. RSPCA (Victoria), 1992
- Advance Australia Award, 1988
- Appointed Member, The Order of Australia, 1985
- Elected Fellow, Australian Veterinary Association, 1979

Publications

- Living with Cats, 1997; Second Edition (revised) 2010
- Living with Dogs, 1995; Second Edition (revised) 2010
- A Vet's Guide to Your Pets Illnesses and Injuries, 1978
- Numerous papers and articles on animal welfare issues

Clubs

- Royal Automobile Club of Victoria

Recreation

- Gardening
- Light aircraft flying

1 May 2011

Overview:

This report is intended as an impartial and professional opinion based upon data provided in two video sequences depicting the processing of a Droughtmaster steer (Yellow ear tag: ILE 8006 GGLC) in a slaughterhouse.

The slaughterhouse operators appeared to be well practised in their technique, yet it appears their training did not cover at least two fundamental internationally accepted criteria for slaughterhouse operation [ii, iii], specifically:

- Animals must not be moved to the slaughter point unless they can be processed immediately.
- The method of killing must be employed in a manner that minimises the risk of causing pain, fear or distress to the animals.

It would be naïve to attempt to reject the concept of extreme distress in any animal exposed to the multiple adverse stimuli evidenced in this video footage.

It is my professional opinion that the distress to the study animal could have been greatly reduced by elementary oversight and appropriate training to:

1. minimise the time taken
2. minimise the exposure of the animal to the killing and dismembering of other animals

The practices observed in this video caused major, unnecessary and avoidable distress to the study animal during the process of slaughter which could have been greatly reduced within religious and cultural requirements, despite substandard animal restraint facilities.

Background:

On 14 September, 2011 I was approached by RSPCA Australia and requested to provide an independent clinical opinion of the behaviour of a Droughtmaster steer (Yellow ear tag: ILE 8006 GGLC) based upon two video clips taken in a slaughter facility. This animal is referred to as the 'study animal' in this report. The video footage provided showed two different angles of the same event. The footage shows a line of four pens each containing a Droughtmaster steer. The study animal was the second in line (nose to tail), but the last to be killed.

There were a few breaks in sequence, however examining the preceding and following footage these breaks do not affect the continuity or ability to interpret the scenario depicted. The sequence of events in both camera angles was the same.

Camera 1 (17 minutes 34 second video clip)
This footage shows four steers assembled in a row of pens, nose to tail in full sight of each other. The study animal is the second in the line (nose to tail) or Animal 2 in the line. The sequence begins with the animals already in the pens with ropes around the near side hocks of the three other animals. The first animal, designated Animal 1 is caste by tripping onto a sloping concrete slab followed by Animals 4 and 3 respectively. Ropes are placed around each animal's neck and then formed into a halter used to hyper-extend the neck. The ropes are secured to posts in this position to allow the major vessels of the neck to be severed. During this process, the study animal, Animal 2 (ILE 8006 GGLC), remains upright actively observing the process of casting and killing of the other animals. There is some difficulty in tripping and rolling Animal 3 immediately behind the study animal. Sound is adequate to clearly hear the slaughterman sharpening his knife at 3.30mins. At 3.45mins the 4th animal's throat is cut severing the major arteries in the immediate visual field of the study animal. The process of neck hyper-extension is repeated on Animal 3 immediately behind the study animal and the throat is cut at 4 minutes and 50 seconds. The agonal sounds of slaughter are audible at 5 minutes and would have been audible to the study animal. At this point the animal is observed trying to reverse out of the pen. All animals are still exhibiting reflex movement past the 6 minute period. There are large amounts of blood on the floor that are being hosed by the slaughtermen. The slaughtermen are calm and there is a clear impression that they are performing a routine process that is well practiced as few instructions are given between them and same procedure and sequence is repeated on each animal. At 7.44mins and 8.00mins the study animal is observed kicking at the side of the pen and at 8.18mins trying to back out of the pen. No attention is being paid to the study animal and there are no other obvious stimuli (apart from the visual, olfactory and aural stimuli of processing other animals) likely to provoke the kicking, signs of distress as described later in this report, or the continued effort of the study animal to back away from the process of skinning and evisceration. From 09.39mins skinning and evisceration shown to be occurring no more than 4 metres in front of the study animal with a clear line of sight. At 10.27mins body parts and fascia are being thrown across the room in front of the study animal and at 10.46mins an axe is being used to open the sternum of Animal 1. This is in direct line of

sight and can be clearly heard. By 10.57 min a noose has been attached to the front lower leg of the study animal. The slaughterman then tries several times to snare the hind leg. The animal moves forward and backwards within the pen still snared by the front leg. At approx 12.00mins the noose is attached to the hind leg. The animal continues to struggle and at 12.28 mins slips the ground before righting itself while hobbled on two legs.

At 13.00mins the side panel is opened and the animal is tripped, falling heavily onto its side and sliding down the concrete slope. It repeatedly thrashes its head against the concrete surface, in my opinion with force sufficient to do damage and cause significant pain. This is particularly clear in video clip 2. The ear tag number is clearly visible at 13.45mins. Knife sharpening is heard and a noose applied to the animal's neck which is hyper-extended. The tag is clearly visible again at 14.50mins. The neck is cut at 15.00mins and agonal sounds from the trachea are heard at 15.26mins. A corneal reflex is clearly visible at 16.25mins and again at 16.33mins, one and a half minutes after severing of the great vessels of the neck and trachea. Regular respiratory sounds cease at 16.52mins which using OIE criteria of loss of brainstem reflexes would be defined at the point of death as the cessation of brainstem activity[i]. After this point reflex muscular movement continues.

Camera 2 (10 minutes 38second video clip)

This clip begins with two animals already laterally caste (Animals 1 and 4) and shows the attempts to caste Animal 3 (immediately behind the study animal). The audio is adequate to hear the slaughterman hissing at the third animal, Animal 1 vocalises while caste and laterally recumbent at 36seconds and 40 seconds, and the gurgling of blood in the windpipe of Animal 1 immediately in front of the study animal is heard from 1.22min when its throat is cut. At 1.38mins the study animal adopts a 'head down' defensive posture and is clearly watching the slaughter process of the animal in front. For the duration of the video it is clearly watching the killing and processing of the animal in front and by turning its head the animal behind.

At 1.54min with a slaughterman pulling on the tail of Animal 3 it is caste with a struggle immediately behind the study animal. There are large amounts of blood and water in full view of the study animal as well as both agonal sounds and distress noises from the three caste animals (e.g. 2.35-2.55 mins). At 3.52-3.53mins there is a short break in continuity which may represent a gap of several seconds as a bar is placed behind the study animal to further restrict its movement within the pen. The slaughtermen can be heard whistling and are calm. The impression is one of a regularly practiced routine. At 5.08min the animal immediately in front of the study animal is no longer moving and is placed on its back in preparation for skinning and evisceration. At 5.13-5.14min and 5.22-5.23min there are short jumps in the footage and minutes may have passed before the camera reverts to Animal 1 directly in front of the study animal where skinning is well progressed and lower leg removal is being completed.

It is very difficult to ascertain a precise respiration rate based upon the video alone, however between 5.30- 6.00mins judging from thoracic movements the study animal appears to be breathing at an accelerated rate in excess of double the resting rate. When the slaughterman snares the front and rear legs it struggles repeatedly. *Circa.* 6.50mins abdominal breathing movements can be seen and the respiratory rate appears to be well above 60 breaths per minute and can be described as dyspnoeic. For short periods abdominal movements related to breathing can be counted between the bar and the ventral abdomen. Abdominal breathing increases as a result of the struggle to snare the animal's legs and the animals attempt to resist this. The animal is caste at 8.50mins. The animal struggles while laterally caste and slams its head forcefully and repeatedly on the concrete floor six times (e.g. 9.04min, 9.06min, 9.37min, 9.38min, 9.48min, 9.50min). Its nose appears to be within 2 metres of the part-skinned carcase of the animal in front of it. At 10.12mins its neck is hyper-extended now giving view of the ongoing evisceration of the animal immediately behind (approximately 3 metres from its nose). The repeated axe blows of the slaughtermen as they appear to be splitting the sternum of Animal 4 can be clearly heard. The clip ends at 10.36min as viscera from Animal 3 are dragged closely past the study animal's nose and the slaughterman can be heard sharpening his knife in preparation for the neck incision.

Conclusion:

Four common sense principles[ii,iii] of have been widely applied in slaughterhouse design:

1. Animals must be moved and handled calmly and quietly. Handlers should not rush animals or become aggressive towards them.
2. The routes ahead should be clear of obstruction and provide a consistent visual environment, designed in a way that encourages forward movement using appropriate lighting and layout.
3. Animals must not be moved to the slaughter point unless they can be processed immediately.
4. The method of killing must be employed in a manner that minimises the risk of causing pain, fear or distress to the animals.

The footage in these clips does not allude to the way animals were handled or moved into the pens, however, it is clear that the study animal was not processed immediately. To avoid doubt, the study animal was subjected to watching, hearing and smelling the killing process of three other animals in close proximity over a period of at least 15 minutes. The animal in front of the study animal was certainly within 5 metres of the nose of the study animal for the majority of the footage.

The method of killing in no way minimises the risk of pain, fear or distress. To avoid doubt, the process of leg snaring and tripping has the potential of causing significant stress and pain, the study animal slammed its head into a solid concrete floor on at least six occasions as it attempts to right itself with inadequate head restraint and was lying

in close proximity to blood and viscera of other animals as well as the constant background noise of distress or agonal breathing as these animals were killed.

The study animal exhibited many subjective signs of stress consistent with prolonged exposure to the inappropriate, strong and repeated stimuli of other animals being killed and dismembered in close proximity. The stress response is a sympathomimetic reaction involving elevated release of adrenocorticoid hormones including adrenaline, noradrenaline and cortisol as well as increased output by the sympathetic nervous system all intended to heighten the responsiveness of the body, increase alertness and prepare for the euphemistic 'flight' or 'flight' response. In this case subjective evidence of the stress response is repetitive erratic movement forwards and backwards, 'searching' behaviour for an exit, exopthalmus, increased respiratory rate, tail and ear 'flicking', defensive posturing with head lowered. This is consistent and not surprising in environmental conditions where the sounds of animals being killed and agonal sounds of dying animals are clearly audible through much of the footage and where the smell of fresh blood and viscera would be evident and visual cues of animals in distress, having their throats cut, being skinned, eviscerated were clearly within the vision of the animal in question for a period of at least 13 minutes while in the pen and a further 2 minutes while caste in addition to the estimated 1.33 minutes from the time when the throat is cut to the loss of corneal reflex. Vocalisation before the throat was cut was evident from more than one animal but was not conclusively attributed to the study animal.

Whilst it would be theoretically possibly, to posit differential diagnoses such as metabolic imbalances for some of the behaviours, restlessness or muscular twitching these would all be highly unlikely as the primary cause of the behaviour illustrated. Significant metabolic imbalances occur with prolonged stress causing changes in blood electrolyte and glucose levels which may result in secondary muscular spasm, exopthalmus, hyperventilation and impairment of meat quality.

Useful objective clinical measures of stress include respiratory rate, heart rate, repetitive movement patterns. Less useful but relevant pathophysiological measures include blood pressure and cardiac output, blood $_pCO_2$, pH, HCO_3^-, Na^+, Mg^{++}, glucose, cortisol, catecholamines, other hormones and changes in meat quality. The practicality of sampling and inconsistencies in interpreting results from individual animals rather than population based samples limits usefulness.

It would be naïve to attempt to reject the concept of extreme distress in any animal exposed to the levels of adverse stimuli evidenced in this video footage or to attempt to over-interpret literature which reveals difficulty interpreting individual animal responses. Stress and emotional responses involve the limbic system of the brain which is closely connected to olfactory inputs, auditory inputs and the parts of the brain which

process memory and recall of previous experience. The human emotional response is the best understood and illustrates that there can be a vast range of emotional and stress reactions between individuals. Despite this society has a concept of stress levels that would be considered unacceptable to impose on any human irrespective of individual coping strategies. Acute Traumatic Stress Reaction and Post-Traumatic Stress Reaction are internationally coded clinical diagnoses in humans[iv] and are the psychological consequence of exposure to stressful events. Despite a lack of organic causative agent these disorders result in persisting severe debilitation. There is no evidence that other mammals with cerebral function are different in terms of the adverse impact of extremely stressful situations. Olfactory cues are particularly potent stimulators of emotional responses and animals generally have a better developed sense of smell than humans.

Regular respiratory sounds suggest that it took 1.52mins between the time that the throat was cut and brainstem death using OIE criteria. The criteria for brain death are similar to those used to define human brain death as the point at which all perception is deemed to be lost.

This video footage in my opinion shows slaughtermen performing a well practiced routine. They appear calm, consistent and trained in their technique. The technique being implemented is totally unacceptable in many facets and causative of major distress in the study animal:

- **Design of pens** – these are of primitive design and incur significant stress on animals through their mode of operation. Trapping and tripping animals prior to slaughter results in significant stress to the animals as well as physical pain
- **Delay in processing animals**
- **Animals having direct sight, smell and sound of the slaughter process**
- **Inappropriate methods of restraint** causes unnecessary stress to animals (i.e. roping, casting, lateral recumbency and neck hyper-extension)
- **Inappropriate proximity** to blood, viscera and part processed dead and dying animals exposing animals to strong adverse olfactory, aural and visual stimuli

All of the above are well recognised stressors and contrary to the most basic precepts of humane slaughter or basic animal husbandry principles, specifically 'Freedom from Fear and Distress through ensuring conditions and treatment which avoid mental suffering"[v].

Despite cultural factors, religion-based technique, and, within the limitations of primitive and unacceptable equipment it is my professional opinion that the distress to

the study animal could still have been greatly reduced by elementary oversight and appropriate training of the process to minimise the time taken and exposure of this animal to killing and dismembering of other animals. Whilst the operators were skilled at the techniques they had been taught, it appears that their training did not cover at least the two fundamental precepts cited, that:

- Animals must not be moved to the slaughter point unless they can be processed immediately.
- The method of killing must be employed in a manner that minimises the risk of causing pain, fear or distress to the animals.

The practices observed in this video are unacceptable and represent denial or ignorance of any contemporary welfare standard. The practices recorded caused major, unnecessary and avoidable distress to the study animal during the process of slaughter which could have been avoided within religious and cultural requirements, despite substandard and inappropriate animal restraint facilities.

This report is intended as an impartial and professional opinion based upon the data provided in two video sequences.

Lloyd Reeve-Johnson 18 September 2011.

BVM&S, DVMS, PhD, DipECPVT, PGCert(Business Admin), CBiol, FSB, FRCVS

Qualifications:

1993 Bachelor of Veterinary Medicine and Surgery, Edinburgh

1998 PhD Veterinary Epidemiology and Economics, Reading, UK

1999 Doctor of Veterinary Sciences - respiratory pathology in production animals, Edinburgh

2002 Fellowship of Royal College of Veterinary Surgeons, London

2002 Accredited as European Union Recognised Specialist in Veterinary (Clinical) Pharmacology, European Veterinary Specialities Board

2007 AQIS Accredited Veterinarian- live animal export

1993-1995 – UK - Predominantly large animal veterinary practice servicing Genus multiple ovulation and embryo transfer (MOET) elite herds, Belgian Blue studs, suckler and breeding herds and dairy herds including Ministry of Agriculture Food and Fisheries certified veterinary inspector (Cattle and Sheep)

1995-1998 –Project Manager, Elanco Animal Science Research - production animals – UK, France, Italy, Spain, Belgium, North Africa and Middle East (including veal calves, dairy and beef breeding herds)

1998-2000 – Global Project Leader, USA – dairy and beef (including reseach and advisory services to feedlots with over 100,000 head on site in Colorado and dairies with 3000+ head of cattle (California, New York) on three times daily milking regimes.

2000-2001 – European Director, Elanco Animal Science Research.

2001-2004 – Clinical lead and Executive Director, VET ltd – included 28 veterinary clinics, 1 diagnostic and pathology laboratory, tertiary referral centre of excellence staffed by US and EU recognised specialist veterinarians and a clinical studies unit conducting clinical studies for many major international animal health companies (including Pfizer, Bayer, Intervet, Vetoquinol, Phytopharm, Arnolds)

2004-2006 – Professor of Veterinary Pharmacology and Head of School of Veterinary Science, University of Queensland

2006-present - Principal - Goyd Project Solutions - Independent consultant, practitioner and researcher – epidemiology, economic and clinical evaluations.

2007- Present - partner Pacific Animal Consulting and Agribusiness

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[i] Rev. sci. tech. Off. int. Epiz., 2005, 24 (2), 693-710

[ii] Official Journal of the European Union L 303/1

[iii] Rev. sci. tech. Off. int. Epiz., 2005, 24 (2), 693-710

[iv] DSM-IV and ICD 10 Diagnostic Criteria

[v] Farm Animal Welfare Council

Queensland Alliance for Agriculture & Food Innovation (QAAFI)

Dr Carol Petherick
Senior Research Fellow
(Animal Behaviour &Welfare)

CRICOS PROVIDER NUMBER 00025B

23 September 2011

Video footage of steer slaughter

The video footage provided showed two different camera angles of the same event, one of 18 minutes in length and the other of 10 minutes. The footage shows a line of four pens each containing a Droughtmaster steer. Ihave reviewed the footage a number of times.

As requested, I'm giving my assessment of the behaviour of the 3rd steer from the left. I raise questions to which you may not have the answers, but they are questions that may need to be considered if a definitive 'diagnosis' on this animal is being sought.

The first obvious point is that steer 3 is the only one of the four not already leg-restrained at the start of the filming. Why not? If he was the first or last animal in the sequence it would be more understandable, but he isn't. The second obvious point is that steer 3 is very alert and reactive to what is going on around him; he is aroused, looking around, reacts to people moving around, appears to pay attention to the slaughter and butchering of the other steers and, I believe, I heard him bellow a few times. The third and less obvious point is that steer 3 appears to have less "condition" on him i.e. he appears to be a lighter body weight and have less fat cover than the other three.

These three points strongly suggest to me that steer 3 was probably difficult to handle, fearful and had a 'temperament' issue i.e. he is innately agitated and aroused. This conclusion is further supported by the way he reacts to being sprayed with water, being roped and restrained by the legs, to being cast, and to being head-roped. His behaviour is quite extreme compared to the other three; he kicks, pulls, jumps, bucks, struggles, and thrashes around on the concrete when he has been cast.

My own research on cattle temperament clearly demonstrates that those cattle that are highly reactive to their environment and changes in it (which includes their interactions with humans) have reduced liveweight gains and poorer feed conversion efficiencies than calmer, more docile ('good temperament') cattle. Indeed, we have recommended that such "poor temperament" cattle should not be feedlot finished, as it is likely to be uneconomic.

The other very important thing to note is that these poor temperament cattle do not cope well in stressful situations; my own research shows that these cattle have high plasma cortisol (stress hormone) concentrations in stressful situations, high levels of other blood and plasma parameters which are indicative of a corticosteroid-mediated stress response and parameters indicative of the classic "fight or flight" (adrenergic-mediated) stress response. Additionally, there is also a good deal of evidence that their meat quality is reduced in comparison to good temperament cattle.

Based on the limited footage of this steer and not knowing what happened to him and how he was handled prior to filming, my assessment is that this steer is extremely stressed (and therefore, his welfare is poor) and the trembling/muscle tremors shown by this steer are a consequence of this

extreme stress. I have seen such trembling in cattle that have recently undergone painful procedures (e.g. spaying), although it doesn't appear to be a common response. It is also noteworthy that this steer spends relatively long periods of time standing with his head very low. This is another posture that we have identified, through our studies, to be associated with pain. My opinion is that this steer is in considerable distress and his welfare is severely compromised.

It is, of course, virtually impossible to say exactly why the animal is in such distress, as there would be many contributing factors. I have little doubt, however, that fear was a large contributor to the trembling, probably mediated by his inherent fearfulness, the hyper-reactivity and the ensuing physical exertion.

I understand that it has been suggested that this particular steer had some kind of metabolic disorder (transit/transport tetany) and that this was the reason for the trembling. This diagnosis seems rather unlikely given that transit tetany typically occurs as a consequence of prolonged transportation (hence the name of the disorder) and in cows in late pregnancy, although it has been seen in steers transported to slaughter. It is noteworthy that transit tetany is also a stress response and is, thus, indicative of poor animal welfare.

Had these steers been transported a long distance prior to slaughter? Were the conditions of transport poor e.g. crowded, hot with poor ventilation, and minimal access to food and water? These conditions are also pre-disposing factors for this condition. Other pre-disposing factors in cattle transported to slaughter are heavy feeding prior to transportation, deprivation of food and water for more than 24 hours during transportation, and unrestricted access to water and exercise immediately after arrival. Is it possible to find out whether any of these factors applied to these cattle? If they did, then it is indicative of very poor transportation management and handling, which would have jeopardised the welfare of the cattle.

The clinical signs of transit tetany also appear inconsistent with the behaviours of steer 3, as far as can be ascertained from the footage. Prior to hosing and restraint, steer 3 was aroused and reactive, but he did not seem particularly restless, and there was no indication of a staggering gait, frothing at the mouth and trismus (the sound quality wasn't good enough to determine if he was grinding his teeth), all of which are reported to be clinical signs of transit tetany.

I hope this assessment is of assistance to you and if you need further information or clarification, please get in touch.

Kind regards

Carol Petherick (IIAT, BSc (Hons.), MSc, PhD)
Senior Research Fellow (Animal Behaviour & Welfare)

Carol Petherick is internationally recognised as a pre-eminent authority on the behaviour and welfare of rangeland, beef cattle. She is an ethologist (animal behaviourist) by training, having obtained her BSc in Psychology and Zoology from The University of Reading, England. Her tutor and mentor was Prof Don Broom who later held the world's first chair in animal welfare (at The University of Cambridge). She has

been conducting and leading research in the behaviour and welfare of livestock for more than 30 years. She obtained her MSc through research from The University of Aberdeen, Scotland and her PhD from The University of Queensland, Brisbane. Her post-doctoral research was conducted at The Roslin Institute, Edinburgh, Scotland under the guidance of Dr Ian Duncan who later held the world's second chair in animal welfare (at The University of Guelph, Canada). During her time in Scotland, Carol collaborated with a number of leading, internationally-renowned researchers to obtain funding for extensive animal welfare research programs.

Carol emigrated from Scotland to Australia in 1993 to join the state government's Dept Primary Industries to initiate, develop and lead a research program, in northern Australia, on the behaviour and welfare of beef cattle. She has received funding, over about 15 years, from the Cooperative Research Centre for the beef industry and has conducted research on the temperament of beef cattle and the implications this has for coping with stress and cattle productivity and, more recently, on the impact of dehorning on cattle welfare. She has received several grants from Meat and Livestock Australia and, in recent years, has focussed on painful husbandry practices with a view to improving animal welfare. She continues her collaborations with other internationally-renowned, animal welfare scientists.

In 2009, Carol was a member of the team awarded the Australian Museum's Eureka Prize for science that contributes to the protection of animals for research on alternatives to/more humane methods for dehorning cattle. Carol's expertise on the behaviour and welfare of rangeland beef cattle is further recognised by repeated invitations to give presentations at both international. scientific conferences and beef cattle industry, field days and workshops.

Carol has published widely in both the scientific and livestock industry literature; she has a total of about 190 publications, including 47 in peer-reviewed journals, 55 conference abstracts, 74 industry-related reports and articles, and the remainder in edited books and conference proceedings. She is also Co-Editor-in-Chief of the leading, international journal for applied ethology, Applied Animal Behaviour Science.