

APPENDIX H SUMMARY OF VETERINARY INFORMATION

TO: KENTUCKY HORSE RACING COMMISSION (KHRC)
FROM: MARY SCOLLAY, D.V.M.
DATE: MARCH 10, 2011
RE: 2010 BREEDERS' CUP LADIES' CLASSIC

I. PHYSICAL ASSESSMENT

For the last 2 years, KHRC veterinarians have performed in-barn and on-track-under-tack inspections and assessments of Kentucky Derby and Oaks horses in the week preceding those races. This protocol has facilitated the timely identification and responsible resolution of issues related to racing soundness. Given its success, this practice was expanded to include Breeders' Cup 2010.

The Breeders' Cup also provides a team of experienced regulatory veterinarians to inspect all pre-entered horses and assist the KHRC veterinarians in assessing the approximately 180 Breeders' Cup horses on site. Each Breeder's Cup Panel veterinarian was paired with a KHRC veterinarian for the purpose of the race week inspections. The in-install inspection procedures were consistent with KHRC pre-race exams:

- 1) Horses are identified by lip tattoo or microchip.
- 2) The overall condition of the horse is assessed.
- 3) The eyes are inspected for evidence of conditions associated with visual impairment.
- 4) The forelimbs are palpated and passively flexed and manipulated.
- 5) The horse is jogged in-hand.

All Breeders' Cup horses were observed on track and examined in their barns throughout the week. The KHRC veterinarians and Breeders' Cup Veterinary Panel met daily to discuss the results of their examinations. Horses were re-inspected as warranted based on the group's discussions. No reservations were expressed regarding the condition of Life at Ten (LAT). Dr. Bentz noted and recorded a subtle abnormality in LAT's gait. Dr. Farmer reported that Dr. Bentz' observation was discussed by the group after the initial round of pre-race exams was performed. The group determined it was not necessary to re-examine LAT. Dr. Bentz failed to make that notation on the exam card, leaving an incomplete record that includes what appears to be an unanswered question regarding LAT's fitness to race.

II. DRUG TESTING AND COMPLIANCE ENFORCEMENT

Per 810 KAR 1:018 Section 3(6) syringes from randomly selected races were collected from veterinarians at the time of race day administration of anti-bleeder medications on November 5th and 6th. The Breeders' Cup Ladies' Classic was one of the races for which syringe collection was performed. The residual contents of syringes used to treat LAT, as well as the residual contents of all other collected syringes associated with Todd Pletcher trained horses were subjected to analysis at the Florida Racing Laboratory. Furosemide and aminocaproic acid, consistent with administrations reported in veterinarian submitted treatment sheets, were detected in each pair of syringes. No prohibited substances were detected.

Pre-race blood samples for the purpose of TCO₂ analysis were collected from all horses entered in Breeders' Cup Championship races. These samples were collected by KHRC veterinary technicians within the 30 minutes prior to the horses' departure from their barns for the staging area in the ¾ chute. LAT's sampling was performed by KHRC veterinary technician, Jenna Hardy. All TCO₂ samples were determined to be in compliance with 810 KAR 1:018 Section 20. On Monday, November 8, Dr. Scollay contacted the Florida Racing Laboratory with instructions to retain all TCO₂ blood samples associated with races on November 5 and 6 after completing routine TCO₂ analysis. The laboratory was directed to subject the remaining portion of the TCO₂ blood samples collected from Todd Pletcher trained horses (not having been subjected to post race testing) to full instrumental screening analysis. No prohibited substances were detected in any of the samples.

It is worth noting that for the most comprehensive analysis, both blood (serum) and urine should be submitted to the laboratory. However, that is not to say that analysis of a single matrix (serum) alone is of little merit. The mass spectral reference library is applied fully to both serum and urine analysis, so theoretically there is no analytic difference between matrices. However, some substances are rapidly cleared from the blood but can be detected for longer periods of time in the urine—due to the short window of opportunity for detection in the blood. For those substances, analysis of urine is a key aspect of enforcement.

The limited volume of serum available after TCO₂ analysis may have also contributed to analytic limitations. Multiple extractions—prepared for the analysis of substances with similar chemical properties—are necessary to effect the full scope of instrumental analysis. For horses that fail to produce urine at post-race sampling, additional tubes of blood are collected to facilitate the preparation of multiple extractions in an effort to remedy deficiencies resulting from the lack of a matrix (urine). The instrumental screening was limited by the volume of serum available in the single blood tube routinely submitted for TCO₂ analysis. The Florida Racing Laboratory was consulted and Dr. Scollay was advised that after FRL chemists assessed the available sample volumes, the laboratory was able to

prepare extractions that were targeted at the detection of substances associated with Class A and Class B penalties (810 KAR 1:028) in recognition of their abilities to affect a horse's performance. Samples analyzed were determined to be clear of Penalty Class A and Class B substances. Screening for Class C and D substances was more limited in scope and may be considered to have been incomplete.

III. LAT MEDICAL RECORDS

Prior to November 5, 2010

Records were provided from five veterinary practices. LAT's owner also submitted billing records for veterinary services provided to the mare. There was a gap from September 30, 2008 to July 27, 2009 in the veterinary records provided. During that time the filly generated published works at Keeneland, Santa Anita, and Churchill Downs but for the interval of January 11, 2009-June 28, 2009 no published works were generated—indicating a layoff, the cause of which cannot be determined in the medical records provided. It is worth noting that not all layoffs are of medical origin, and the determination of causation would be purely speculative based on the information provided. Also absent were veterinary treatment records for April 17, 2010 when LAT raced at Hawthorne Racecourse. There are no records for veterinary service prior to January 24, 2008. It should be noted that the veterinarians' records provide an inventory of services performed by each practice, but are not medical records in the sense that the documents contain neither subjective nor objective information regarding the results of examinations or laboratory tests nor justification for any treatments administered. Therefore, a review of the documents provided can only offer an interpretation of the health of the horse based on the veterinary services provided over time. This form of record keeping is the current practice in racetrack veterinary practice, and does not reflect nonconformity by the veterinarians providing the records. The AAEP Racing Committee has recognized deficiencies in existing racetrack veterinary recordkeeping practices and has identified recordkeeping as a priority to be addressed.

The owner's billing records and the veterinary service inventories were reconciled; there were no discrepancies.

The overall impression from the veterinary service inventories is that LAT was fundamentally healthy and sound. There is no record of radiographic (x-ray) or ultrasonographic imaging having been performed. Intra-articular injections were infrequent, and predominantly involved the administration of chondroprotective medications. These medications are administered to maintain the health of joints under high athletic demand, and prevent use-associated injury. Other than in the days following the 2010 Breeders' Cup Ladies' Classic, blood and serum chemistry

analyses were performed at intervals consistent with monitoring health rather than for the purpose of diagnosing disease.

The majority of veterinary care was directed at 1) moderately aggressive management of the filly's respiratory tract and 2) protection of her gastrointestinal tract. (As records were only reviewed for LAT, it cannot be determined if this is standard management practice by the trainer and veterinarians or if this particular horse presented challenges in the prevention and/or mitigation of EIPH.)

The records provided do not suggest any history of 'tying up' or orthopedic disease.

IV. NOVEMBER 5, 2010 THROUGH NOVEMBER 15, 2010

Veterinary records indicate that on November 5, LAT was treated by Dr. Bo Landry with the approved medications Salix (furosemide) and Amicar (aminocaproic acid) by intravenous injection. This information is consistent with both the race day treatment sheet submitted by Dr. Landry and the results of the Florida Racing Lab's analysis of the residue in syringes used to treat the mare as permitted by 810 KAR 1:018 Section 6. Following her participation in the 2010 Breeders' Cup Ladies' Classic LAT was attended by Dr. Ken Reed. Dr. Reed administered a sedative/analgesic (detomidine) and initiated oral and intravenous fluid and electrolyte replacement therapy. Records indicate that no other treatment was performed until the following day. On November 6, Dr. Reed collected blood for a complete blood count (CBC) and serum chemistry analysis, administered the non-steroidal anti-inflammatory medications phenylbutazone and Banamine (flunixin); administered the antibiotic gentamycin; and repeated the oral electrolyte and fluid replacement administration. Antibiotic treatment with gentamycin was continued for a total course of 5 days and included the addition of the antibiotic potassium penicillin from November 7-10. CBC and serum chemistry analysis was performed daily November 6 through November 8, November 10 and again on November 15.

KHRC Equine Medical Director, Dr. Mary Scollay consulted Dr. Stephanie Valberg for interpretation of the serum chemistry results associated with LAT. (Dr. Valberg is Professor and Director of the University of Minnesota Equine Center. She is internationally recognized for her work on muscle disorders in large animals and has a particular research interest in metabolic myopathies including recurrent exertional rhabdomyolysis—commonly referred to as 'tying up'.) A review of the serum chemistry results indicates that there is evidence of some degree of muscle injury to LAT. This is based on initial out-of-range measures of two enzymes present in skeletal muscle cells, CK (creatine kinase) and AST (aspartate aminotransferase). The VetScan serum chemistry analyzer provided a read out for CK at 2909 U/L on November 6 that was significantly above the normal range. A read out for AST (1824 U/L) was above the normal range on November 10. The extent of injury cannot be determined by the testing results because 1) the samples

were not diluted to provide an actual value for the first day post racing and 2) inconsistencies in results raised questions related to the calibration of the testing equipment. It is also not possible to determine when the muscle damage occurred relative to the running of the Breeders' Cup Ladies' Classic based on these chemistry analyzer print outs. It is not unusual to detect some degree of elevation in muscle enzymes in clinically normal horses following exercise but values of AST > 1824 are likely above a normal post exercise change and may indicate a significant degree of muscle damage.

Dr. Scollay also requested that Dr. Fairfield Bain review the hematology and chemistry results. (Dr. Bain is a Diplomate of the American College of Veterinary Emergency and Critical Care, the American College of Veterinary Pathology, and the American College of Veterinary Internal Medicine.) Dr. Bain expressed concern that the mare's potassium (K⁺) values on November 7 and 8 were reported at critical, potentially life-threatening, levels yet treatment records reflect antibiotic administrations only. It is clear from the veterinary records that the mare was not critically ill at the time those samples were collected. Therefore, sample degradation or instrument failure must be considered as a potential cause of the elevated K⁺ within the sample—which likely did not have any relationship to the K⁺ level in her circulating blood. When red blood cells are damaged and their outer membranes rupture releasing contents into the blood, K⁺ levels increase. Another consequence of red blood cell damage is an elevation in CK and AST. The lack of consistency between the blood and serum chemistry analysis results and the clinical presentation of the patient, and lack of physical exam findings in the veterinary records, cause the analytic results to become questionable. Further support for the likelihood of sample degradation affecting serum chemistry analysis is that an elevation in AST is indicative of a muscle injury a *minimum* of 24 hours prior to blood sample collection. Given that the first blood sample was analyzed approximately 9 hours after the Breeders' Cup Ladies' Classic post time, it would be necessary to accept that a muscle injury was sustained by LAT prior to early morning on November 5 and would have been expected to clinically manifested itself during the day.

Additionally, the veterinary treatment administered to LAT after the Breeders' Cup Ladies' Classic and through November 15, 2010 is fairly non-specific and neither supports nor refutes a diagnosis of 'tying up' or rhabdomyolysis. Administration of antibiotics is not a conventional treatment for 'tying up' and may have been performed in response to a mild elevation in total white cell count. Absence in the record of any physical exam findings precludes any definitive conclusions with respect to the condition of LAT following the Breeders' Cup Ladies' Classic 2010.