APPENDIX #1

Proposed Penalty Changes for Class 1 Substances.

Currently all Class 1 substances are recommended for a Class A penalty.

The proposal would increase penalties for all Class 1 substances - except cocaine - to the new Class AA penalty.

Cocaine has been excluded due to commission experience that positives may be the result of human drug use and not a deliberate attempt to administer the drug to the horse, which could be an aggravating factor. The committee can leave the “A” penalty where it is for this drug or increase it alone with all the other Class 1 substances.

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
3,4-methylenedioxypyprovalerone	MDPV, “bath salts”	Methylenedioxypyrovalerone is a stimulant of the cathinone class which acts as a norepinephrine-dopamine reuptake inhibitor. It was first developed in the 1960s by a team at Boehringer Ingelheim.	A		AA	
Alfentanil	Alfenta	Narcotic used to control pain and keep patients asleep during surgery.	A		AA	
Aminorex	Aminoxafen, Aminoxaphen, Apiquel, McN-742, Menocil	Aminorex is a weight loss stimulant drug. It was withdrawn from the market after it was found to cause pulmonary hypertension.	A		AA	
Amphetamine	Speed, Upper	Amphetamine is a potent central nervous system stimulant that is used in the treatment of attention deficit hyperactivity disorder, narcolepsy, and obesity.	A		AA	
Anileridine	Leritine	Anileridine is a synthetic analgesic drug and is a member of the piperidine class of analgesic agents developed by Merck & Co. in the 1950s.	A		AA	
Apomorphine	Apokyn, Ixense	Dopamine promoter used to treat loss of muscle movement control caused by Parkinson's disease.	A		AA	
Benzylpiperazine	BZP	Recreational drug with euphoriant and stimulant properties. The effects produced by BZP are comparable to those produced by amphetamine. It is often claimed that BZP was originally synthesized as a potential antihelminthic (anti-parasitic) agent for use in farm animals.	A		AA	
Carfentanil	Wildnil	Carfentanil or carfentanyl is an analog of the synthetic opioid analgesic fentanyl. Schedule II substance under the Controlled Substances Act and is used as a tranquilizing agent for elephants and other large mammals. A unit of carfentanil is 100 times as potent as the same amount of fentanyl, 5,000 times as potent as a unit of heroin and 10,000 times as potent as a unit of morphine.	A		AA	
Cathinone	khat, kat, qat, quat, chat, catha, Abyssinian tea, African tea	Cathinone is a monoamine alkaloid found in the shrub Catha edulis and is chemically similar to ephedrine, cathine, methcathinone and other amphetamines. It is probably the main contributor to the stimulant effect of Catha edulis.	A		AA	
Chlorpromazine	Thorazine, Largactil	Antipsychotic used to treat mental illness, behavioral disorders, tetanus, blood disorders such as porphyria, and severe nausea and vomiting. It can also reduce anxiety before surgery.	A		AA	
α-Cobratoxin		α-Cobratoxin is a substance of the venom of certain Naja cobras. It is a nicotinic acetylcholine receptor (nAChR) antagonist which causes paralysis by preventing the binding of acetylcholine to the nAChR. In 2011, an investigation showed that cobratoxin could inhibit nociception, the sensation of pain.	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Cocaine		Stimulant, recreational drug, and topical numbing agent. Increases heartrate ann blood pressure.	A3	If it is determined by the State Veterinarian/Equine Medical Director; the Stewards, or the Racing Authority that the finding of cocaine or morphine was unintentional and not based upon an attempt to affect the outcome of a race, the Stewards or Racing Authority may elect to assign a Class B penalty to the trainer.	A	Does not appear to be a deliberate administartion but a failure to safeguard the horse from contamination.
Codeine		Narcotic used to treat pain and supress cough.	A		AA	
Darbepoetin	Aranesp	Bone marrow stimulant used to treat anemia caused by kidney failure or chemotherapy.	A		AA	
Dermorphin	Frog Juice	Dermorphin is a hepta-peptide first isolated from the skin of South American frogs belonging to the genus Phyllomedusa. The peptide is a natural opioid that binds as an agonist with high potency and selectivity to mu Opioid receptors. Dermorphin is approximately 30–40 times more potent than morphine but theoretically may be less likely to produce drug tolerance and addiction.	A		AA	
Dextromoramide	Palfium, Narcolo	Dextromoramide is a powerful opioid analgesic approximately three times more potent than morphine but shorter acting. It is subject to drug prohibition regimes, both internationally through UN treaties and by the criminal law of individual states.	A		AA	
Diamorphine	Morphine diacetate, Heroin	Opioid most commonly used as a recreational drug for its euphoric effects. Medically it is used in several countries to relieve pain or in opioid replacement therapy.	A		AA	
Donepezil	Aricept	Cognition-enhancing medication, used to treat Alzheimer's disease.	A		AA	
Endorphins	Endorphinate, Forskolin	Endorphins are endogenous opioid neuropeptides and peptide hormones in humans and other animals. They are produced by the central nervous system and the pituitary gland. Inhibit stress and pain.	A		AA	
Enkephalins	Encephalin	Either of two compounds that occur naturally in the brain. They are peptides related to the endorphins, with similar physiological effects. They are internally derived and bind to the body's opioid receptors.	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Erythropoietin (EPO)	Epogen, Procrit, ESAs.	Erythropoietin, also known as hematopoietin or hemopoietin, is a glycoprotein cytokine secreted by the kidney in response to cellular hypoxia; it stimulates red blood cell production (erythropoiesis) in the bone marrow.Recombinant erythropoietin is a man-made version of natural erythropoietin. It is produced by cloning the gene for erythropoietin. Recombinant erythropoietin drugs are known as erythropoietin-stimulating agents (ESAs). These drugs are given by injection and work by stimulating the production of more red blood cells. These cells are then released from the bone marrow into the bloodstream.	A		AA	
Ethylmorphine	Dionin	Ethylmorphine is an opioid analgesic and antitussive (cold medicine). . It is not marketed in the US but is approved for use in various countries around the world. In the US it is a schedule II drug (single-entity) and schedule III drug (in combination products).	A		AA	
Ethylphenidate	EPH	Ethylphenidate is a stimulant novel psychoactive substance that is an analogue of the prescription drug methylphenidate (Ritalin®). Methylphenidate is used commonly for the treatment of attention deficit hyperactivity disorder. Due to its stimulant effects ethylphenidate is being abused.	A		AA	
Etorphine HCl	M99	Etorphine is a semi-synthetic opioid possessing an analgesic potency approximately 1,000–3,000 times that of morphine.	A		AA	
Fentanyl	Sublimaze	Narcotic used to treat severe pain. Controlled substance High risk for addiction and dependence. Can cause respiratory distress and death when taken in high doses or when combined with other substances, especially alcohol.	A		AA	
Hydrocodone	Hycodan, Vicodin, Norco	Semisynthetic opioid derived from codeine, one of the opioid alkaloids found in the opium poppy. It is a narcotic analgesic used orally for relief of moderate to severe pain, but also commonly taken in liquid form as an antitussive/cough suppressant. Hydrocodone is an opioid, and acts as a selective agonist of the μ-opioid receptor, the main biological target of the endogenous neuropeptide β-endorphin.Hydrocodone is prescribed predominantly within the United States, with the International Narcotics Control Board reporting that 99% of the worldwide supply in 2007 was consumed in the United States. Several common imprints for hydrocodone are M365, M366, M367.	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Hydromorphone	Dilaudid	Narcotic used to treat severe pain. An opioid analgesic derived from morphine and used mainly as an analgesic. It has a shorter duration of action and is more potent than morphine.	A		AA	
Hydroxyamphetamine	Paradrine, Hydroxyamphetamine, Oxamphetamine, Norpholedrine	Derivative of amphetamines which stimulates the sympathetic nervous system. Hydroxyamphetamine is intended mainly as local eye drops for diagnostic purposes. It is indirect sympathomimetic agent which cause dilation of the eye pupil before diagnostic test.	A		AA	
Levorphanol	Levo-Dremoran	A narcotic analgesic used to treat severe pain; may be habit-forming. It is nearly as effective orally as by injection.	A		AA	
Lofentanil		Lofentanil is one of the most potent opioid analgesics known and is an analogue of fentanyl, which was developed in 1960. It is most similar to the highly potent opioid carfentanil, only slightly more potent.	A		AA	
Mazindol	Sanorex	Stimulant sympathomimetic amine, which is similar to amphetamine. It stimulates the central nervous system, which increases heart rate and blood pressure, and decreases appetite.	A		AA	
Meldonium	Mildronate, etc.	Meldonium may be used to treat coronary artery disease.These heart problems may sometimes lead to ischemia, a condition where too little blood flows to the organs in the body, especially the heart. Because this drug is thought to expand the arteries, it helps to increase the blood flow as well as increase the flow of oxygen throughout the body.Meldonium is a limited-market pharmaceutical, developed in 1970 by Ivars Kalviņš at the USSR Latvia Institute of Organic Synthesis, and now manufactured by the Latvian pharmaceutical company Grindeks and several generic manufacturers.	A		AA	
Meperidine	Demerol	A narcotic analgesic that can be used for the relief of most types of moderate to severe pain, including postoperative pain and the pain of labor. Prolonged use may lead to dependence of the morphine type; withdrawal symptoms appear more rapidly than with morphine and are of shorter duration.	A		AA	
Mephentermine	Wyamine	Mephentermine is a cardiac stimulant. It was formerly used in Wyamine nasal decongestant inhalers and before that as a stimulant in psychiatry. It has been used as a treatment for low blood pressure.	A		AA	
Metaraminol	Aramine	An adrenergic agonist that acts predominantly at alpha adrenergic receptors and also stimulates the release of norepinephrine. It has been used primarily as a vasoconstrictor in the treatment of hypotension.	A		AA	
Methadone	Dolophine	Narcotic used to treat moderate to severe pain. It can also treat narcotic drug addiction.	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Methamphetamine	Desoxyn	Stimulant used to treat ADHD. It can also help obese patients lose weight. Classified as a controlled substance and can cause rapid or irregular heartbeat, delirium, panic, psychosis, and heart failure.	A4	Recommended Penalty B if testing can prove presence of only levo-methamphetamine is present in sample.	AA	
Methaqualone	Quaalude	Sedative and hypnotic medication that increases the activity of the GABA receptors in the brain and nervous system. When GABA activity is increased, blood pressure drops and the breathing and pulse rates slow, leading to a state of deep relaxation. It is a member of the quinazolinone class.	A		AA	
Methcathinone	Catnip, M-Cat	Monoamine alkaloid and psychoactive stimulant, a substituted cathinone. It is used as a recreational drug due to its potent stimulant and euphoric effects and is considered to be addictive, with both physical and psychological withdrawal occurring if its use is discontinued after prolonged or high-dosage administration. It is usually snorted, but can be smoked, injected, or taken orally. Methcathinone is listed as a Schedule I controlled substance by the Convention on Psychotropic Substances and the United States' Controlled Substances Act, and as such it is not considered to be safe or effective in the treatment, diagnosis, prevention, or cure of any disease, and has no approved medical use. Possession and distribution of methcathinone for the purpose of human consumption is illegal under any/all circumstances in the United States and is either illegal or highly regulated in most jurisdictions worldwide.	A		AA	
Methylhexanamine (Methylhexaneamine)	Geranamine, Forthane	Indirect sympathomimetic drug invented and developed by Eli Lilly and Company and marketed as an inhaled nasal decongestant from 1944 until it was voluntarily withdrawn from the market in 1983. Since 2006 methylhexanamine has been sold extensively under many names as a stimulant or energy-boosting dietary supplement under the claim that it is similar to certain compounds found in geraniums, but its safety has been questioned as a number of adverse events and at least five deaths have been associated with methylhexanamine-containing supplements. It is banned by many sports authorities and governmental agencies.	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Methylphenidate	Ritalin	Stimulant used to treat ADHD and narcolepsy. It is taken by mouth or applied to the skin. Controlled substance and Schedule II drug which may cause rapid or irregular heartbeat, delirium, panic, psychosis, and heart failure.	A		AA	
Methydihydromorphinone	Metopon	Opioid analogue that is a methylated derivative of hydromorphone which was invented in 1929 as an analgesic. Metopon is sometimes used in medicine, although longer acting than hydromorphone, Metopon is less potent and its oral bioavailability is fairly low. Metopon is listed under Schedule II of the US Controlled Substances Act 1970, meaning it has an accepted medical use, but at this time it is not produced commercially and is seen only in laboratory research.	A		AA	
Mitragynine	Kratom	Mitragynine is an indole-based opioid-receptor agonist and the most abundant active alkaloid in the plant Mitragyna speciosa, commonly known as kratom and biak-biak. Dry kratom leaf contains roughly 1.2–2.1% mitragynine. The general subjective effects of mitragynine have been summarized in various reviews and include improved mood and analgesia, with some subjects experiencing relaxation and others stimulation (paradoxical effects).	A		AA	
Morphine	Morphabond, Kadian	Schedule II opiod agonist which binds to opiate receptors in the Central Nervous System (CNS). This drug alters the perception of and response to painful stimuli while producing generalized CNS depression.	A6	If it is determined by the State Veterinarian/Equine Medical Director; the Stewards, or the Racing Authority that the finding of cocaine or morphine was unintentional and not based upon an attempt to affect the outcome of a race, the Stewards or Racing Authority may elect to assign a Class B penalty to the trainer.	AA	
myo-inositol trispyrophosphate (ITPP)	ITPP Hexasodium Salt	Myo-inositol trispyrophosphate is an inositol phosphate, a pyrophosphate, a drug candidate, and a putative performance-enhancing substance, which exerts its biological effects by increasing tissue oxygenation. ITPP is a membrane-permeant allosteric regulator of hemoglobin that mildly reduces its oxygen-binding affinity, which shifts the oxygen-hemoglobin dissociation curve to the right and thereby increases oxygen release from the blood into tissue.	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Nikethamide	Coramine	Nikethamide is a stimulant which mainly affects the respiratory cycle. Widely known by its former trade name of Coramine, it was used in the mid-twentieth century as a medical countermeasure against tranquilizeroverdoses, before the advent of endotracheal intubation and positive-pressure lung expansion. It is no longer commonly considered to be of value for such purposes. In alternate terminology, it is known as nicotinic acid diethylamide, which meaningfully emphasizes its laboratory origins, and of which its common name is derived as a blend.	A		AA	
Oxycodone	Percodan	Oxycodone is a semisynthetic derivative of codeine that acts as a narcotic analgesic more potent and addicting than codeine. An extended-release (ER) form of oxycodone (Xtampza ER) was approved for the management of daily, around-the-clock pain management in April, 2016. Also, a controlled substance with high risk for addiction and dependence. May cause respiratory distress and death when taken in high doses or when combined with other substances, especially alcohol.	A		AA	
Oxymorphone	Numorphan	Narcotic used to treat moderate to severe pain. Schedule II opioid analgesic drug with an abuse liability similar to morphine and other schedule II opioids. It can also help anesthesia work better during surgery and ease anxiety caused by heart-related breathing problems. Can cause respiratory distress and death when taken in high doses or when combined with other substances, especially alcohol.	A		AA	
Pemoline	Cylert	Pemoline is a stimulant drug of the 4-oxazolidinone class. Pemoline passes the blood–brain barrier and acts as a surrogate for dopamine, not affecting endogenous intracellular dopamine. Schedule IV drug that is no longer generally available in the United States as a result of the FDA withdrawing approval of pemoline as an indicated treatment for ADHD, due to its implication in liver failures among children who were receiving the medication.	A		AA	
Pentylenetetrazol	Metrazol, Nioric, PTZ	CNS stimulant whose epileptogenic properties have been used to study seizure phenomenon and to identify pharmaceuticals that may control seizure susceptibility. As a non-competitive GABA antagonist, PTZ is specifically used in seizure assays as a method of assessing the excitability of the central nervous system and GABA activity. Was also formerly used as a circulatory and respiratory stimulant.	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Phenazocine	Narphen	Phenazocine is an opioid analgesic drug, which is related to pentazocine and has a similar profile of effects. Effects of phenazocine include analgesia and euphoria, also may include dysphoria and hallucinations at high doses, most likely due to action at κ-opioid and σ receptors.	A		AA	
Phencyclidine (PCP)	Sernylan, Angel Dust	Mind-altering drug that may lead to hallucinations (a profound distortion in a person's perception of reality). It is considered a dissociative drug, leading to a distortion of sights, colors, sounds, self, and one's environment. PCP was developed in the 1950s as an intravenous anesthetic, but due to the serious neurotoxic side effects, its development for human medical use was discontinued. Ketamine (Ketalar), an anesthetic used for surgery and painful procedures was developed instead and is structurally similar to PCP.	A		AA	
Phendimetrazine	Bontril, etc.	Similar to an amphetamin, Phendimetrazine stimulates the central nervous system to increase heart rate and blood pressure and also acts as an appetite supressant.	A		AA	
Phenmetrazine	Preludin	Phenmetrazine is a stimulant drug that was previously used as an appetite suppressant, but has since been withdrawn from the market. Chemically, phenmetrazine is a substituted amphetamine with a morpholine ring. In clinical use, phenmetrazine produces less nervousness, hyperexcitability, euphoria and insomnia than drugs of the amphetamine family.	A		AA	
Picrotoxin	Cocculin	Poisonous crystalline plant compound, first isolated by the French pharmacist and chemist Pierre François Guillaume Boullay in 1812. Due to its interactions with the inhibitory neurotransmitter GABA, picrotoxin acts as a stimulant and convulsant. It mainly impacts the central nervous system, causing seizures and respiratory paralysis in high enough doses.	A		AA	
Piritramide	Dipidolor, Piridolan	Diphenylpropylamine with intense narcotic analgesic activity of long duration. It is a derivative of Meperidine with similar activity and usage. Piritramide is a diphenylpropylamine and opioid receptor agonist, with analgesic activity.	A		AA	
Remifentanil	Ultiva	Potent, short-acting synthetic opioid analgesic drug. It is given to patients during surgery to relieve pain and as an adjunct to an anaesthetic. Remifentanil has a rapid onset and rapid recovery time.	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Snake Venoms	Cobra Venom	While most snake venoms are poisons that effect the cardiovascular system or the localised area of the bite, cobra venom is a powerful neurotoxin that acts as a painkiller when administered in small quantities. By deadening the nerves that lead from the source of pain to the brain, cobra venom can allow a horse to ignore physical problems and run through them.	A		AA	
Strychnine	Strychnos Nux-Vomica	Highly toxic, colorless, bitter, crystalline alkaloid used as a pesticide, particularly for killing small vertebrates such as birds and rodents. Strychnine, when inhaled, swallowed, or absorbed through the eyes or mouth, causes poisoning which results in muscular convulsions and eventually death through asphyxia. While it has no known medicinal effects, in the past the convulsant effect was believed to be beneficial in small doses. The most common source is from the seeds of the Strychnos nux-vomica tree.	A		AA	
Sufentanil	Sufenta, Dsuvia	Sufentanil is an opioid analgesic that is used as an adjunct in anesthesia, in balanced anesthesia, and as a primary anesthetic agent. It is administered by the intravenous, epidural and sublingual routes. The sublingual form is used for the management of acute pain in adults that is severe to warrant the use of an opioid analgesic in certified medically supervised healthcare settings, including hospitals, surgical centers, and emergency departments	A		AA	

Class 1 - Drug/Substance	Trade Name(s)		Existing Penalty Class	Special Notation	Proposed PENALTY Class	Comments
Synthetic cannabis	Spice, K2, Kronic	Synthetic cannabinoids are a class of molecules that bind to cannabinoid receptors in the body–the same receptors the cannabinoids in cannabis plants, such as THC and CBD–attach to. They are typically consumed through smoking, although more recently they have been consumed in a concentrated liquid form. They have been marketed as herbal incense, or "herbal smoking blends" and sold under common names like K2, Spice, and Synthetic Marijuana. They are also often labeled "not for human consumption." When synthetic cannabinoid blends first went on sale in the early 2000s, it was thought that they achieved the psychoactive effects through a mixture of natural herbs. Laboratory analysis in 2008 showed that this was not the case. Today, synthetic cannabinoids are the most common new psychoactive substances to be reported. A large and complex variety of synthetic cannabinoids are designed in an attempt to avoid the legal restrictions making synthetic cannabinoids designer drugs. Most synthetic cannabinoids are agonists of the cannabinoid receptors, and many have been designed based on THC, the natural cannabinoid with the strongest binding affinity to the CB1 receptor, which is linked to the psychoactive effects or "high" of marijuana. These synthetic analogs often have greater binding affinity and	A		AA	
Ziconotide	Prialt	Atypical analgesic agent for the amelioration of severe and chronic pain. Derived from Conus magus, a cone snail, it is the synthetic form of an ω-conotoxin peptide. It is 1,000 times as powerful as morphine. The FDA approved ziconotide when delivered as an infusion into the cerebrospinal fluid using an intrathecal pump system.	A		AA	