**BEFORE NEW ERA ADR**

*CASE NO. 24061701*

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In the Matter of the Arbitration Between:

UNITED STATES ANTI-DOPING AGENCY **("USADA"** or **"Claimant"**),
Claimant

v.

SHADRACK KIPTOO BIWOTT (**"Mr. Biwott"** or **"Respondent"**),
Respondent.

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**FINAL AWARD**

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I, THE UNDERSIGNED ARBITRATOR, having been duly designated and sworn, and having duly heard the allegations, arguments, submissions, proofs, and evidence submitted by the Parties do hereby FIND and AWARD as follows:

## I. INTRODUCTION

1.1 This case arises from Respondent's urine and blood samples collected out-of-competition on January 25, 2024, both of which tested positive for recombinant erythropoietin ("EPO"). EPO is classified as a non–specified substance prohibited at all times according to the World Anti-Doping Agency ("WADA") Prohibited List. The default sanction for use and presence of a non-specified substance is four years unless and until the athlete can meet their burden of proof to qualify for any reduction.

1.2 2.8EPO is a non–specified substance prohibited at all times under the WADA Prohibited List and is included in the category of Erythropoietins and Agents Affecting Erythropoiesis. EPO has been included on the Prohibited List since its inception in 2004. EPO is a glycoprotein that stimulates red blood cell production and is a naturally occurring substance in the human body produced by the kidneys. Recombinant EPO is manufactured by recombinant DNA technology and is produced by mammalian cells into which the human EPO gene has been introduced.

1.3 As USADA's Chief Science Officer, Dr. Matthew Fedoruk, explains, laboratories can reliably differentiate between endogenous EPO—produced by the body—and exogenous EPO—produced outside the body. This is accomplished by laboratories' use of

> "a sensitive and specific technique using polyacrylamide gel electrophoresis (PAGE) [which differentiates between exogenous and

> endogenous EPO] based on molecular weight. During electrophoresis, proteins migrate through the gel according to their size, with smaller proteins moving faster and further than larger ones . . . [Gel] [i]mages are analyzed by the laboratories using specialized software which allows for the evaluation of the EPO band characteristics relative to the positive and negative controls which then need to fulfill the quality and identification criteria described in the WADA [technical document] in order to be reported as an AAF. A second opinion from another WADA-accredited laboratory is also required [to confirm the AAF]."

1.4 EPO is an injectable drug and can only be obtained via prescription in the United States, although it can also be purchased illicitly through black market websites and in other countries—such as Mexico—over the counter. EPO is one of the most notorious performance enhancing substances, due to its well-known and proven effectiveness in increasing athletic endurance. Increased red blood cell production afforded by EPO bolsters an athlete's oxygen carrying capacity, which enhances endurance during exercise and expedites the recovery process. These effects are particularly beneficial for endurance athletes such as long-distance runners; indeed, the majority of AAFs for EPO in athletics in 2021 and 2022 involved long-distance runners specializing in distances of 3000m or greater.

1.5 The Athlete denies having ever knowingly used EPO and he takes the view that he has advanced certain physiological theories for his positive tests as well as challenged the scientific validity of the WADA test used to determine the presence of exogenous EPO in a sample. The Athlete undertook a number of steps to find the reasons for his positive tests. He accepts, however, that if he is unsuccessful on his defense, he must face a four year period of ineligibility and disqualification of results arising after sample collection, with the start date for any such suspension being the date of commencement of his provisional suspension.

## II. THE FACTS/PROCEDURAL HISTORY

2.1 Respondent is a 39-year-old elite-level long distance runner. He has a current USA Track & Field ("USATF") membership and has consistently held a USATF membership since 2012. Because he is an elite-level athlete, USADA added Respondent to the National Testing Pool ("NTP") from November 2016 through December 2017. USADA then added Respondent to the Registered Testing Pool ("RTP") in January 2019, and he remains in the RTP to date.

2.2 He has competed at a high level collegiately and professionally, and a few of his athletic accomplishments include garnering multiple All-American honors at the University of Oregon and achieving multiple top five finishes at major events such as the Boston and New York Marathons. Although he competed at the USATF Olympic Marathon Trials on February 3, 2024, Respondent did not finish the event.

2.3 It was uncontroverted that each year he spent in the NTP and RTP, USADA provided Respondent with anti-doping education. Through this education, USADA informed Respondent that he was responsible for everything that went into his body. He was required to complete an anti-doping tutorial each year before filing his whereabouts for Quarter 1. Each tutorial includes

an online assessment that all athletes are required to complete with 100% accuracy. And each year, Respondent correctly identified strict liability as the concept that athletes are responsible for everything that goes into their bodies.

2.4 USADA collected both a urine and a blood sample from Respondent during an out-of-competition test on January 25, 2024, approximately one week before the Olympic Marathon Trials. USADA sent his urine sample to the WADA-accredited laboratory in Los Angeles, California (the "UCLA Laboratory"), and the UCLA Laboratory reported Respondent's urine sample as an Adverse Analytical Finding ("AAF") for EPO. USADA sent Respondent's blood sample to the WADA-accredited laboratory in Salt Lake City, Utah (the "SMRTL Laboratory"), and the SMRTL Laboratory also reported Respondent's blood sample as an AAF for the presence of EPO.

2.5 On February 23, 2024, USADA sent Respondent a letter notifying him of his AAF with respect to the urine sample and imposed a provisional suspension against him. Respondent requested testing of the B sample, and on March 18, 2024, USADA notified Respondent that the B sample confirmed the presence of EPO in the urine sample. The same day, March 18, 2024, USADA notified Respondent that the SMRTL Laboratory had also reported his blood sample as an AAF for EPO. Respondent did not timely request analysis of the blood B sample, so it was deemed waived under the rules.

2.6 USADA interviewed Respondent on April 9, 2024, and Respondent explained that he did not know what caused his positive test.

2.7 USADA charged Respondent with ADRVs for the use and presence of EPO in both his urine and blood samples on June 5, 2024, and Respondent requested a hearing on June 14, 2024. The next business day, June 17, 2024, USADA contacted New Era Arbitration to initiate this proceeding.

2.8 After USADA provided its opening brief, Respondent requested a continuance for the purpose of conducting private testing to determine whether he is a carrier of the c.577del gene variant or any other genetic mutations that could account for his positive EPO results in this matter. The Arbitrator granted a continuance and rescheduled the merits hearing for January 22, 2025. On December 16, 2024, Respondent submitted his pre-hearing brief, which included his private blood test results confirming that he was not a carrier of the c.577del variant or any other genetic mutation responsible for causing his positive tests for EPO.

2.9 In the face of these results, Respondent elected to challenge the scientific validity of the EPO testing methodology. Pursuant to Article 3.2.1 of the Code, analytical methods approved by WADA are presumed to be scientifically valid, and any athlete challenging the scientific validity must first notify WADA of the challenge and the basis for the challenge. Respondent failed to notify WADA prior to submitting his brief, and USADA raised this issue with the Arbitrator. The Arbitrator then directed Respondent to inform WADA of the challenge given that as between the Athlete and USADA, USADA 1) was likely to have the entire case file that would have had to have been presented to WADA, 2) USADA would know to whom to report at WADA which is not specified under the WADA Code, and 2) WADA would have communicated with USADA

about the case in response to the notice of the challenge. On December 19, 2024, Respondent notified WADA of the challenge, and USADA provided WADA with the case file as required by Code Art. 3.2.1 the following day. On December 30, 2024, WADA informed USADA that it will not intervene in these proceedings but reserved all appeal rights.

2,10 After multiple party-agreed and requested continuances of the hearing date in this case spanning several months, the evidentiary hearing was eventually held on May 7, 2025, remotely.

2.11 On the date written below, the Arbitrator issued this Award.

## III. JURISDICTION

3.1 Respondent has a current USA Track & Field ("USATF") membership and has consistently held a USATF membership since 2012.

3.2 USATF is the National Governing Body recognized as such for the United States by the United States Olympic and Paralympic Committee and is the national federation for the United States recognized as such by World Athletics, the international sports governing body for the sport of athletics worldwide.

3.3 Because Respondent is an elite-level athlete, USADA added Respondent to the National Testing Pool ("NTP") from November 2016 through December 2017. USADA then added Respondent to the Registered Testing Pool ("RTP") in January 2019, and he remains in the RTP to date and was in the RTP for all relevant times related to the sample collections that gave rise to USADA's charging of Respondent with an ADRV. This set of facts and processes meets the legal standards for jurisdiction in this arbitration under the USADA Protocol for Olympic and Paralympic Movement Testing.

3.4 In addition, no Party objected to jurisdiction and all Parties participated in these proceedings fully and without objection.

3.5 Accordingly, the Arbitrator determines that jurisdiction is proper here.

## IV. PARTY SUBMISSIONS

4.1 USADA submits, in summary, that the testing and analysis conducted on the blood and urine samples of Respondent followed the appropriate technical document and the methods used for analyzing the samples of Respondent are scientifically valid and follow the required standards, and that Respondent has not met the required standard for challenging the scientific validity of the processes and methods used. To the extent that Respondent argues otherwise, there is no basis for Respondent's arguments.

4.2 USADA seeks the following relief: A four year period of ineligibility from the date of Respondent's acceptance of his provisional suspension, with no reduction, and forfeiture of all results occurring after sample collection.

4.3 The Athlete submits, in summary, that certain physiological aspects of his case could have caused his positive test and that the test that was used to analyze his samples was the wrong and inavlid test and the later updated standard should have been applied. The Athlete also

challenges the scientific validity of the tests for exogenous EPO in general.

4.4 In summary, the Athlete seeks the following relief: that he be found to have not committed an ADRV and that he face no sanction. However, he accepts that if his ADRV is found to be valid then he should face a four year suspension, commencing on the date of commencement of his provisional suspension, and the disqualification of any results arising after sample collection.

## V. ANALYSIS

5.1 Respondent argues that Technical Document TD2024EPO should have been applied to the analyses of his urine and blood samples collected on January 25, 2024, rather than Technical Document TD2022EPO, which was the Technical Document that was applied to his samples.

5.2 According to the International Standard for Laboratories ("ISL"), "Technical Documents are issued to provide direction to the Laboratories, ABP Laboratories and other stakeholders on specific technical or procedural issues." The ISL continues that "[o]nce approved, a Technical Document becomes an integral part of the ISL and supersedes any previous publication on a similar topic." Thus, until a Technical Document is approved and in effect, the current Technical Document provides the governing rules and procedures for analyses. Regarding analyses concerning ERAs—such as EPO—the "EPO" series of Technical Documents apply.

5.3 In this case, the applicable Technical Document in force at the time Respondent's urine and blood samples were analyzed was TD2022EPO, not TD2024EPO, as Respondent claims. This is because TD2024EPO was not approved until March 11, 2024, by which time both laboratories had completed all analyses on Respondent's A samples and urine B sample (Respondent waived testing of his blood B sample by not requesting analysis). The confirmation procedure on the urine sample was conducted by the UCLA Laboratory on February 15, 2024, and the confirmation procedure on the blood sample was conducted by the SMRTL Laboratory on February 28, 2024. Respondent requested testing of his urine B sample, and the confirmation procedure on that sample was completed on March 7, 2024.

5.4 Although the ISL states that the most recently approved Technical Document shall be applied if it would lead to a result that benefits the athlete, that provision does not apply here because all analyses had been completed before TD2024EPO was approved on March 11, 2024. As of March 7, 2024—the date on which the confirmation procedure on the urine B sample was performed—the most recently approved Technical Document was TD2022EPO, and at most TD2024EPO or some version of it was in draft form and unapproved. Accordingly, TD2024EPO is entirely inapplicable in this matter, and the analyses were all properly conducted under TD2022EPO.

5.5 Respondent's claim that his April 2, 2024, request to have his sample(s) retested using the IEF-PAGE analytical method was unjustly denied does not have sufficient grounding because, as Respondent acknowledges, TD2022EPO does not require that tests be confirmed by a different analytical method. Not only does the Technical Document not require the results from the initial testing procedure to be confirmed by a different analytical method in the confirmation procedure, but there is also no right for the athlete to request additional testing under a different method.

Whether either of these conditions should or should not be the case is not something an Arbitrator can address and it remains up to the drafters and decisionmakers to address.

5.6 Respondent bases his case on the assertion that the SAR-PAGE analytical method is not scientifically valid, despite the fact that SAR-PAGE is a WADA-approved method under the Technical Document (and has been since TD2013EPO).

5.7 The Arbitrator does not need to and in fact cannot address challenges to the scientific validity of WADA-approved testing methods, absent such challenges meeting a basic showing. The World Anti-Doping Code has accounted for such arguments and states that "[a]nalytical methods or *Decision Limits* approved by WADA after consultation within the relevant scientific community or which have been the subject of peer review are presumed to be scientifically valid." WADA Code Art. 3.2.1. An athlete can only rebut this presumption if they can establish it is more likely than not that the analytical methods are not scientifically valid. *Id*. This Arbitrator accepts that the burden of proof on an athlete in this situation is, under any possible reading of the WADA Code, to make a showing by a balance of probability. If an athlete successfully rebuts the presumption, the burden then shifts to the Anti-Doping Organization to prove to the arbitrator's comfortable satisfaction that the analytical methods are in fact scientifically valid.

5.8 Detection of EPO in an anti-doping context is premised on the inherent differences between endogenous EPO—a naturally produced protein by the human body—and exogenous EPOs—any kind of EPO originating outside the human body. Although both endogenous and exogenous EPOs share the same sequence of amino acids, exogenous EPOs, because of the recombinant technology used to synthesize them as drugs, have a different charge and molecular mass. This difference is readily detectable using the SAR-PAGE analytical method, which is routinely used in analyzing both urine and blood samples. TD2022EPO requires that before any analysis takes place, samples must first undergo immunopurification, which is the use of an antibody-based method to specifically isolate and purify EPO from the urine or blood sample. After immunopurification, SAR-PAGE analysis is applied to the sample.

5.9 SAR-PAGE uses an electrophoretic gel—containing various athletes' samples and positive and negative control samples—which is placed between two electrodes. The samples migrate through the gel based on their molecular mass as they are exposed to the current from the electrodes. A technique called Western Blotting is then used, which transfers the EPO from the electrophoretic gel to a membrane. Highly sensitive EPO antibodies are added, which bind to the EPO proteins in the membrane, and a chemiluminescence agent is applied to reveal the location of the proteins. Endogenous EPO is present in nearly all samples (except in rare instances of sample degradation or recent EPO use causing the body to cease production of endogenous EPO), and is identified by a single "band" that appears in a predictable location in the membrane. Exogenous EPO is identified by a separate "smear" because exogenous EPO has a different molecular mass and charge than endogenous EPO, so proteins from exogenous EPO migrate through the gel differently than endogenous EPO proteins. This analytical process is known as the Initial Testing Procedure.

5.10 Once exogenous EPO is detected in a sample, TD2022EPO requires the results to be verified via a Confirmation Procedure. The confirmation procedure outlined in TD2022EPO

requires a new aliquot of the athlete's sample. The analysis is then conducted anew using both negative and positive quality control samples to confirm the result of the Initial Testing Procedure. The positive quality control sample contains the appropriate ERA(s) for the substance being confirmed (in this case, EPO). The appropriate ERA for the quality control sample is identified by the location of the smear detected in the Initial Testing Procedure. TD2022EPO requires SAR-PAGE or SDS-PAGE analysis in Confirmation Procedures involving EPO (the ERA detected in Respondent's samples).

5.11 If the Confirmation Procedure affirms the result obtained in the Initial Testing Procedure, an AAF cannot be reported until a Second Opinion has been provided by an expert from the WADA EPO Working Group from a different WADA-accredited laboratory. The Second Opinion expert is provided the analytical data from the first laboratory and must separately review and affirm the results obtained by the first laboratory. Only then can an AAF be declared in accordance with the Technical Document.

5.12 The SAR-PAGE method was developed by the WADA-accredited laboratory in Austria in 2008 by Dr. Christian Reichel and his laboratory. Dr. Reichel is a member of the WADA EPO Working Group, and as an eminent expert on EPO detection in anti-doping, he has submitted an expert report in this matter explaining the method in detail. The SAR-PAGE method is based on the SDS-PAGE method, which was developed in 1967 and has been cited thousands of times in various peer-reviewed papers and journals over the last 50-plus years. SAR-PAGE and SDS-PAGE function nearly identically aside from the use of a slightly different detergent (used to denature proteins in the sample) which facilitates the proteins' movement through the electrophoretic gel. SAR-PAGE is an improvement on SDS-PAGE because the different detergent used in SAR-PAGE does not bind to certain kinds of EPO. This makes SAR-PAGE more practical for detecting as many EPO varieties as possible.

5.13 Before WADA approved the SAR-PAGE method in TD2013EPO, the method was subjected to considerable review and scrutiny. Dr. Reichel first presented the method in 2009 at a WADA symposium, and the method was published in a peer-reviewed journal and subsequently discussed by the WADA EPO Working Group. After receiving approval from the EPO Working Group, SAR-PAGE was reviewed and approved by the WADA Laboratory Expert Advisory Group, which is responsible for managing the accreditation process of anti-doping laboratories around the world. Before WADA-accredited laboratories were permitted to implement SAR-PAGE, each laboratory was required to prove that it could properly utilize and apply the method and that the method was fit for purpose via assessment by external experts who are members of the International Laboratory Accreditation Cooperation. This rigorous process is the same for all analytical methods used by WADA-accredited laboratories.

5.14 After each laboratory was approved to implement the SAR-PAGE method, WADA continued to monitor performance of the method to ensure compliance with the ISL and Technical Document by sending each laboratory blind and double-blind external proficiency samples. This is part of WADA's External Quality Assessment Scheme ("EQAS"). Even the slightest error in analyzing and reporting results for the proficiency samples can lead to suspension or revocation of the laboratory's accreditation.

5.15 Respondent's expert, Dr. Chen, makes several unfounded criticisms which Respondent includes in his brief. Respondent's reliance on Dr. Chen to provide the foundation for his entire case is misplaced because unlike USADA's experts in this matter—who both sit on WADA's EPO Working Group—Dr. Chen has never worked in a WADA-accredited laboratory. Nevertheless, Respondent has staked his case on Dr. Chen and his misinformed claims.

5.16 First, Respondent alleges that the testing method is incapable of identifying the specific type of EPO in the sample, which—he claims—invalidates the entire method. However, the Technical Document does not require laboratories to identify the exact ERA formulation. Such a requirement would be superfluous considering that *all* exogenous erythropoietins are prohibited in sport. Dr. Miller explains that during the initial testing procedure, the smear attributed to the presence of EPO in a sample analyzed with the SAR-PAGE method will vary based on a number of factors including the specific type of EPO the athlete used, the amount of EPO the athlete used, the frequency of administration, the timing of the most recent administration, and the method of administration. This information is uniquely available to the athlete and not the laboratory, which means it is not reasonable to expect the laboratory to be able to exactly match the positive control during the confirmation procedure to the smear obtained from the initial testing procedure. For that reason, the Technical Document does not require the positive control to identically match the initial testing procedure smear. The SAR-PAGE (and IEF-PAGE) method is equipped to identify EPO and other ERAs, which is adequately fit for purpose in reporting a positive test for a prohibited substance. It is sufficient that "the appropriate ERA"—here, EPO—is used during the confirmation procedure, which both laboratories did in analyzing Respondent's samples.

5.17 Respondent next argues that the SAR-PAGE method is invalid because it does not have a reliable second and independent method such as IEF-PAGE to validate the result. But this simply ignores the multiple safeguards that TD2022EPO builds into the analytical process such as requiring negative quality control samples and immunopurification, as well as requiring a confirmation procedure and finally a second opinion from another WADA-accredited laboratory provided by an expert on the WADA EPO Working Group. These reliable layers of protection and stringent requirements ensure accuracy of the methodology. Therefore, the mere fact that TD2022EPO did not require a second method such as IEF-PAGE for the confirmation procedure does not render the method invalid. And having both Respondent's blood and urine test positive for EPO conclusively establishes the accuracy and reliability of the method and the presence of the prohibited ERA.

5.18 Respondent then repeats Dr. Chen's claim that the SAR-PAGE method allows for false positives due to improper processing of the sample. But Dr. Chen is misinformed on this point as well. To begin, Dr. Chen plainly misinterprets the study upon which he bases this conclusion. In the study Dr. Chen references titled "Sensitivity and specificity of detection methods for erythropoietin doping in cyclists," 4 of 24 test subjects who were taking a placebo returned a presumptive positive finding for EPO during the initial testing procedure, but each of those results were properly reported as negative after routine confirmation procedure analysis corrected the initial testing procedure findings. Furthermore, Dr. Chen mistakenly claims the confirmation procedure was conducted at a different laboratory when both the initial testing procedure and the confirmation procedure were conducted by the same laboratory—and the laboratory utilized the same SAR-PAGE testing methodology for the confirmation procedure that was used in the initial

testing procedure. In fact, the authors of the study conclude that the SAR-PAGE analysis "did not show false positive results after confirmation analysis."

5.19 This study—which Dr. Chen cites as identifying the shortcomings of the SAR-PAGE method—in fact *supports* the validity of the testing methodology and illustrates precisely how the built-in safeguards in the testing process are supposed to work. Each presumptive positive was subjected to a confirmation procedure which corrected the presumptive finding, when appropriate. The study shows that the testing methodology was 100% accurate when performed in accordance with the Technical Document.

5.20 Respondent, based on Dr. Chen's report, next argues that the SAR-PAGE method cannot prevent false positives caused by sample overloading (the supposed use of too much of the athlete's sample). As a starting point, TD2022EPO has guardrails in place to prevent overloading such as limiting the size of the aliquot to be analyzed. The Technical Document also accounts for any possible overloading by requiring the amount of EPO in the athlete's initial testing procedure sample to match the concentration of EPO in control samples for the confirmation procedure. This is required to facilitate interpretation and uniformity of the sample and is not an improper or nefarious practice. In any event, as Dr. Miller explains in his expert report, sample overloading *does not cause negative samples to appear positive*. And there is no indication that either of Respondent's samples display any signs of being overloaded in this case.

5.21 In a similar vein, Respondent also adopts Dr. Chen's claim that the SAR-PAGE method cannot prevent false positives caused by non-specific interactions. A non-specific interaction is when an antibody used in the sample preparation process binds to proteins or molecules other than the target protein—here, EPO—which could theoretically cause a false positive result. But non-specific interactions are effectively negated through the multiple safeguards in place throughout the analytical process. TD2022EPO (and TD2024EPO, for that matter) directs laboratories to use methods that limit the risk of non-specified interactions. One such method involves using a specific primary antibody in the Western Blot phase of the analysis through which the necessary chemiluminescence can be achieved without introducing additional antibodies. Notably, both the UCLA and SMRTL laboratories used this method in confirming the AAFs in the urine and blood samples, respectively.

5.22 None of these claims assist Respondent in carrying his burden of proving it is more likely than not that the SAR-PAGE method is not scientifically valid. The method has been approved by WADA after consultation within the relevant scientific community and has served as the basis for hundreds of AAFs over the past 10-plus years. The method is presumed valid under the rules and in fact is valid.

5.23 In adhering to TD2022EPO—which incorporates scientifically valid tests and processes such as the SAR-PAGE analytical method—the UCLA and SMRTL laboratories detected the presence of exogenous EPO in Respondent's urine and blood samples, respectively. A single positive test is all that is needed to establish an ADRV. However, this ADRV is uniquely supported by *two* clearly positive tests from *two* different sample types—urine and blood—collected on the same day and analyzed by *two* separate WADA-accredited laboratories. After the initial testing procedures were positive for EPO in both samples, the laboratories confirmed those

findings through the mandated confirmation procedures. Both samples were then subjected to the second opinion process, which requires a member of the WADA EPO Working Group—not involved in the initial testing and confirmation procedures—to review the analysis, check the analysis against the requirements in the applicable Technical Document, and provide a reasoned opinion either confirming or rejecting the findings from the first laboratory.

5.24 Here, Dr. Sven Vos, director of the WADA-accredited laboratory in Kreischa, Germany, provided the second opinion on the urine sample. Dr. Yvette Dehnes, director of the WADA-accredited laboratory in Oslo, Norway, provided the second opinion on the blood sample. In this case, no fewer than four scientists from four WADA-accredited laboratories reviewed the samples and confirmed the findings of EPO. As part of their second opinion review, Drs. Vos and Dehnes also confirmed that the analysis for each sample was conducted in accordance with TD2022EPO.

5.25 Not only did scientists at four separate WADA-accredited laboratories detect the presence of EPO in Respondent's samples, but the scientists also reached those conclusions utilizing different analytical methods as permitted by TD2022EPO. Dr. Miller explains in his expert report that during the sample preparation process, the UCLA laboratory utilized an immunopurification method called StemCell ELISA for Respondent's urine sample, while the SMRTL laboratory opted for a magnetic bead immunopurification method in analyzing the blood sample. TD2022EPO requires immunopurification using one of those methods, and the method used for the initial testing procedure can be the same method for the confirmation procedure. The fact that two separate immunopurification methods were used between the urine and blood samples lends even greater confidence to the validity and accuracy of the positive results because the laboratories reached the same results using different validated methods during the analytical process.

5.26 The overwhelming nature of the evidence in this case becomes even more apparent when compared with other recent EPO cases such as the 2018 CAS case *Cardoso v. UCI*. There, the athlete provided both urine and blood samples during out-of-competition sample collection, and the athlete's A urine sample was analyzed via SAR-PAGE method and was positive for EPO, while the blood sample was negative. The athlete requested analysis of his B urine sample, and the B sample result was "doubtful but inconclusive regarding the presence of recombinant EPO" so it was reported as an Atypical Finding instead of an Adverse Analytical Finding. Nevertheless, UCI pursued the matter as an ADRV and charged the athlete with a use violation. Despite the fact that the athlete's B sample was "doubtful but inconclusive" and his contemporaneously drawn blood sample was negative, the panel *still* concluded that the athlete committed a use violation "based on the reliable analytical data from the A sample of the [athlete] and the UCI experts' evidence . . . ." The athlete received a four-year sanction.

5.27 Instead of a single urine A sample testing positive, *both* Respondent's urine and blood A samples tested positive. And instead of a "doubtful but inconclusive" B sample result, here, Respondent's urine B sample confirmed (and he waived testing of his blood B sample). Moreover, the urine and blood analyses were conducted by two different laboratories using two different immunopurification techniques and arrived at the same conclusion.

5.28 In considering Respondent's AAFs, it is also noteworthy that USADA collected the urine and blood samples from Respondent only a week before the Olympic Marathon Trials. The timing of Respondent's EPO use is noteworthy because although an athlete can dope at any point in the sporting calendar, including the off-season, it follows that a distance running athlete like Respondent would have been particularly motivated to dope in the lead up to the Olympic Trials. While the Code is clear that "the success or failure of the *Use* or *Attempted Use* of a *Prohibited Substance* or *Prohibited Method* is not material" for an athlete to have committed an ADRV, the timing of Respondent's AAFs in relation to the Olympic Trials is further corroboration. And, as USADA explained in its opening brief, the majority of recent AAFs for EPO in athletics involved long-distance runners such as Respondent.

5.29 Despite the overwhelming evidence of his ADRV, Respondent—in his one explicit challenge of the test results—repeats Dr. Chen's claim that the smear characteristics shown in the standards for the documentation package concerning the positive blood test "are not as sharp as they should be, even according to WADA's technical documents." Dr. Miller explains that Dr. Chen is apparently referring to the darbepoetin standard in the documentation package, which is a separate ERA and is not at all relevant in this case. In any event, the Technical Document is silent on the expected sharpness of the darbepoetin reference standard band.

5.30 Respondent also proposes other explanations for his two AAFs based on a possible genetic variant and health conditions (including prior covid). But neither factor accounts for Respondent's AAFs in this matter, as both claims appear to have no scientific basis.

5.31 Specifically, Respondent alleges that his positive tests could have been caused by the c.577del genetic variant, which has been shown to cause false positives for exogenous EPO in a miniscule number of cases in the East Asian population. But the c.577del variant was definitively ruled out as the cause of Respondent's AAFs in this case.

5.32 As a condition of confirming the AAFs in accordance with TD2022EPO, WADA's Senior Manager for Science and Medicine Laboratory Operations, Dr. Vinicius Sardela reviewed Respondent's prior samples that had been screened for EPO, and after confirming that Respondent had never tested positive for EPO, Dr. Sardela informed the UCLA Laboratory in a letter on February 21, 2024, that "there is enough analytical evidence to conclude that the Athlete does not carry the EPO c.577del variant."

5.33 Respondent asserted that the Technical Document requires "testing" to rule out the presence of the c.577del variant. TD2022EPO requires a comparison between the athlete's current sample under investigation and previous samples the athlete has provided that had been analyzed for ERAs. TD2022EPO Art. 3.2.4 clarifies that "if the test result(s) for the other analyzed blood *Sample(s)* are a *Negative Finding* for rEPO . . . then this constitutes evidence that the *Athlete* does not carry the EPO c.577del variant." Genetic variants do not come and go. If Respondent had the c.577del variant, his prior samples all would have been positive for EPO. But as WADA already confirmed, Respondent does not carry any such variant because all of his prior samples were negative for EPO.

5.34 In addition to WADA's determination that Respondent does not carry the c.577del variant, Respondent's own private blood test confirmed he does not carry the variant. And as Dr. Miller explains in his expert report, the smear present in Respondent's urine sample from January 25, 2024 does not remotely resemble those seen in urine samples collected from people who do have the c.577del variant. Furthermore, Dr. Miller describes how the smear from the blood sample shows a very similar smear to the urine sample collected at the same time. Dr. Miller notes that the blood sample shows a smear, not a double band, and a double band is commonly observed in samples from people carrying the c.577del mutation.

5.35 Dr. Chen claims that "almost all positive tests might be from genetic mutation and might not be from real rEPO doping". In reaching his conclusion, Dr. Chen disregards that the global rate of 0.14% presented in that study is *solely* attributable to people of East Asian ancestry, and not all positive tests for EPO—including the instant matter—involve that population.

5.36 Respondent's pre-hearing brief makes references to being infected with COVID and RSV in the months leading up to sample collection and further mentions that two of his brothers developed erythrocytosis as adults. Dr. Chen also referenced the potential effect of bone marrow issues in his expert reports. Putting aside the paucity of evidence of in the record on these matters, none of these factors would cause Respondent's AAFs in this matter, which Respondent appears to acknowledge by not advancing any substantive arguments on these points. In his expert report, Dr. Miller explains that neither COVID nor RSV would cause an AAF for EPO. Dr. Miller further explains that erythrocytosis simply refers to the elevated levels of red blood cells, which also would not cause an AAF for EPO. Naturally high levels of endogenous EPO can be one of the causes of erythrocytosis, although elevated levels of endogenous EPO do not cause an AAF because, as described above, the analytical methods are specifically designed to detect exogenous EPO.

5.37 Once a violation has been established, the appropriate sanction length must be determined. EPO is a non–Specified Substance prohibited at all times under the WADA Prohibited List, so the default period of ineligibility is four years unless Respondent can prove that his violation was unintentional, in which case the period of ineligibility would be reduced to two years. Respondent appears to concede that should he be found to have committed the charged ADRVs, the only available sanction is four years, considering that he offered no arguments supporting a reduced sanction. USADA agrees. Four years is the appropriate and only available sanction in this case because Respondent has not identified the source of his positive test or presented any evidence sufficient for a reduction. Respondent does not dispute that if an ADRV is found the four year suspension period applies.

5.38 As further support for imposing the default period of ineligibility, there is a commonly cited passage in CAS cases: "the currency of [a] denial is devalued by the fact that it is the common coin of the guilty as well as the innocent," which rings true in this matter. As the CAS panel in *IWBF v. UKAD & Gibbs* articulated, "[t]o permit an athlete to establish how a substance came to be present in his body by little more a denial that he took it would undermine the objectives of the Code and Rules." That panel logically concluded that "[m]ore must sensibly be required by way of proof, given the nature of athlete's basic personal duty to ensure that no prohibited substances entered his body." Furthermore, the CAS panel in *WADA v. Daiders & FIM* explained, "[t]he

person charged cannot discharge that burden merely by showing that he made reasonable efforts to establish the source, but that they were without success."

5.39 As a final note, in addition to considering the lack of evidence Respondent has adduced regarding his intent, it is important to recall that EPO is only administered via intravenous or subcutaneous injection, so the possibility of an athlete encountering EPO via contamination or another innocent scenario is practically non-existent, as Respondent himself acknowledged in his pre-hearing brief. In sum, Respondent has not adduced facts to satisfy his burden, and the appropriate sanction is a four-year period of ineligibility with disqualification of results achieved on and after the date of sample collection.

5.40 USADA has established that Respondent committed ADRVs for the use and presence of EPO in both his urine and blood samples collected out-of-competition on January 25, 2024. The EPO analytical methods used in confirming Respondent's AAFs are valid. Both of Respondent's samples—urine and blood—collected on January 25 were analyzed at two separate laboratories using different immunopurification methods and were reported as positive for EPO. This constitutes sufficient evidence that Respondent committed the charged ADRVs. Indeed, exogenous EPO is the only explanation for Respondent's AAFs, since Respondent is not a carrier of the c.577del variant, nor could his various health issues or erythrocytosis—to the extent he even has it—have caused the positive findings in not one, but two separate samples analyzed independently at different laboratories.

5.41 For the foregoing reasons, the Arbitrator finds that USADA has met its burden, and the Athlete did not meet his burden of showing that it is more likely than not that the analytical methods used here are not scientifically valid, or that he had any other defense to the presence of EPO in his samples on the date in question. Accordingly, the Arbitrator finds that the Athlete has violated Articles 2.1. and 2.2 of the Code for the presence and use of a prohibited substance, and the default four-year period of ineligibility should be imposed beginning February 23, 2024, the date Respondent was provisionally suspended. In addition, any of Respondent's competitive results achieved on and after the date of sample collection shall be disqualified.

## VI. AWARD/DECISION

6.1 The Arbitrator hereby determines and awards as follows:

6.1.1 The presence of exogenous EPO in the Respondent's blood and urine samples is established, the Respondent is found to have committed his first ADRV, and Respondent has not sustained his burden to establish a reduction in the standard sanction.

6.1.2 As a result, a four (4) year period of ineligibility shall apply, commencing on February 23, 2024, the date of Respondent's provisional suspension, and any of Respondent's competitive results achieved on and after the date of the collection of Respondent's samples on January 25, 2024, shall be disqualified or invalidated, as appropriate.

6.2 The parties shall bear their own attorneys' fees and costs associated with this

arbitration; and

6.3 This Award shall be in full and final resolution of all claims and counterclaims submitted to this Arbitration. All claims not expressly granted herein are hereby denied.

IT IS SO ORDERED, AWARDED, AND DETERMINED.

Dated: August 26, 2025

Jeffrey G. Benz, Arbitrator