

Position of independent Russian experts

1. Russian experts report that the Russian side has fulfilled all the conditions of the WADA Executive Committee decision of 20 September 2018 regarding the transfer of the electronic archive (Archive) and biological material from the Moscow Laboratory for further use by the Agency in the interests of the investigation conducted by the WADA Intelligence and Investigations Department (I&I).

1.1. As you know, after making two copies of the Archive (one copy for the WADA Intelligence and Investigation Department and one copy for the Russian side), the Investigative Committee of the Russian Federation (ICR) conducted a comprehensive examination¹ of these materials in the framework of a criminal case against Grigory Rodchenkov, former director of the Moscow Laboratory.

General conclusions about the results of these examinations indicate there has been no intentional interference by any persons with the LIMS electronic databases and original analytical data (raw and pdf files) aimed to falsify, delete and otherwise modify them since their removal from the Laboratory by WADA experts in July 2016. Investigation agencies have not in any way worked with the databases in the Laboratory until their removal by WADA experts in January 2019.

ICR officials only visited the Laboratory upon a written request by the Laboratory administration for a check-up and maintenance of the freezer where the biological samples were stored.

Russian experts are ready to further cooperate with representatives of the I&I to establish the truth with respect to the previous accusations against the Russian side.

1.2. The results of the negotiation process between the Russian experts and the I&I specialists on various issues of the Archive examination (conducted by both sides independently) indicate the usage of the G. Rodchenkov's testimonial evidence and the so called "LIMS provided by a whistleblower" as the "benchmark" for the assessment of the Moscow Laboratory LIMS credibility.

However, the opinion of the Russian independent experts is not taken into consideration along with the proofs of the Russian Investigative Committee (the

¹ The Competent body of a foreign State, having sufficient and legal grounds, on the basis of international agreements and the principle of reciprocity, is entitled to request the Competent body of the Russian Federation to conduct procedural or investigative activities needed to access the results of procedural or investigative activities, including forensic evidence in a criminal case investigated in the territory of the Russian Federation.

testimonial evidence and the expertise results) and the fact that the Moscow Laboratory system administrator had to work without any documentation on the LIMS system.

The I&I ignores the Russian technical specialists' opinion that after the emigration to the USA (August – November 2015), G. Rodchenkov, O. Migachev and T. Sobolevsky had the possibility to completely alter the LIMS version they had taken from Russia to fabricate future accusations against Russian athletes and to conceal their own illegal actions during their work in the Moscow Laboratory. In October 2017, 2 years after his emigration, G. Rodchenkov handed this electronic database version over to WADA as a “LIMS provided by a whistleblower”.

The afore mentioned opinion of the Russian experts is based on the indisputable technical possibility of making such falsifications because all the necessary changes could be made with the help of O. Migachev, the LIMS developer, using any home computer/ laptop. It was impossible to detect any traces of such actions afterwards.

Moreover, the LIMS version taken out of the Moscow Laboratory by G. Rodchenkov, O. Migachev and T. Sobolevsky wasn't used in the USA as a software product (in the regular twenty-four-hour operation mode), it was stored on an electronic data medium that also confirms there was a possibility of its modification by the concerned parties in order to prove their “high-profile doping exposures”.

It should be noted that having emigrated to the USA in November 2015, G. Rodchenkov resolved to make official statements incriminating the Russian sports only in May 2016 (half a year later). Meanwhile the Russian technical experts are unanimous that any LIMS version (as well as any other software product) not used in the regular operation mode can be altered without any clues (without leaving any traces of a manipulation made) even in a shorter period of time, according to one's targets and objectives.

On the contrary, the Moscow Laboratory LIMS (the copy of which was handed over to the WADA mission in January 2019 in compliance with the forensics

requirements) continued to operate daily on the eponymous LIMS server that also worked without turning off for a long time (at least since November 2015).

Such a circumstance excludes the possibility of introducing intentional changes (distortions) to the Moscow Laboratory LIMS in order to falsify the data and the information on the server containing the results of the doping tests, if a person doesn't enjoy the so-called administrator rights.

Russian specialists have determined that the developer of the LIMS system O. Migachev and his colleague T. Sobolevsky enjoyed the administrator rights of the Moscow Laboratory LIMS.

As the result of the investigations made by the Russian experts it was determined that the LIMS used in the Moscow Laboratory had been modified and changed from time to time (from 2012 to 2015), and after the emigration of G. Rodchenkov (November 2015), O. Migachev and T. Sobolevsky (August 2015) till June 2016 was actually administrated through the Internet from Los Angeles (the administrator rights allowed to make any changes and deletions including fabrications without leaving any clues).

In this context the Moscow Laboratory LIMS was occasionally changed and distorted from November 2015 to June 2016 from abroad (from the IP-address of California, USA, the account 'olegmigachev') and by that time had essential differences from the so called 'LIMS provided by a whistleblower'² taken out to the USA by G. Rodchenkov, O. Migachev and T. Sobolevsky (which might also have been partially fabricated from November 2015 till May 2016 or even till its handing over to WADA in October 2017).

² There are no new records in this information system since August 2015.

At the same time, the LIMS backup³ was made in the Moscow Laboratory on the daily basis which led to the storage of different versions of this system in the laboratory computers (till the end of 2016).

Subsequently the leadership of the Moscow Laboratory (after the system administrator E. Mochalov was hired) systemized the process of the LIMS backup and the local Laboratory computer network was cut off from the external access through the Internet (in June 2016) that excluded the possibility for further activities of the malefactors aimed at distorting the system.

The Russian independent experts (technical specialists were also involved) gave detailed and comprehensive answers (including 31 questions, supplementary questions, necessary clarifications and explanations) to all accusations of ‘the suspicious activities in the Moscow LIMS’ discovered by the I&I investigators who claimed them to be ‘deliberate manipulations aimed at information concealment’.

Besides, the Russian experts submitted to the I&I a technical report, an animated film and pictorial diagrams elucidating the Moscow Laboratory system administrator’s activities, the procedure of data collection and processing in the Laboratory as well as the fact that the deletions of intermediate (temporary) files which became irrelevant and the information unrelated to the laboratory studies were legitimate.

Critical remarks of the Russian experts regarding the technical report provided by the digital forensic specialists of the University of Lausanne were also submitted to the I&I. These remarks emphasize the fact that the results of the investigations carried out by the Swiss specialists straightly contradict their own conclusions.

As for the so called ‘LIMS provided by a whistleblower’, the Russian experts inform that in spite of numerous requests the I&I has not submitted either its forensic

³ The LIMS backup was recorded on the LIMS server hard disk on the daily basis. Then, according to the existed practice, the backup was recorded on the optical disk (CD-RW) and was stored in the safe of the Moscow Laboratory accounting department. The said procedure was renewed every 7 days, i.e. 7 optical disks were used to record the backup on a daily basis. The unused backup (irrelevant or already saved on optical disks) was deleted from the LIMS server hard disk whenever necessary. However, there remained a possibility to recover the backup particularly with the help of specialized computer programs during the Archive copies examination carried out by the University of Lausanne specialists.

copy for a relevant analysis to be made or a technical report on the copy investigation conducted by the foreign forensic specialists.

In this regard, the Russian independent experts consider the I&I management-led comparison of the Moscow LIMS copy (obtained with the help of forensic equipment ensuring data integrity) and the 'LIMS provided by a whistleblower' version obtained in an obscure way on an unknown medium to be inappropriate.

2. Russian experts note that in its Report (The report of September 6, 2019, the subsequent I&I reports, hereinafter – the Report) the Intelligence and Investigations Department made incorrect and, in some cases, wrong conclusions when presented the investigation results.

2.1. Russian experts, drawing attention to Section 6.1 of the I&I Report (Explanatory Note on Comfortable Satisfaction), inform that this criterion is not applicable to forensic conclusions on the results of the electronic databases examination and to digital forensics in general.

Given the ongoing ICR investigations into multiple doping crimes committed in 2012–2015 by Grigory Rodchenkov, who is hiding and protected by the United States, the criterion of "comfortable satisfaction" used in the I&I Report to assess the objectivity and authenticity of the electronic archive of the Moscow Laboratory, as well as alleged intentional interference with it, is absolutely unacceptable.

2.2. Moreover, despite repeated requests from the Russian side, which proved its openness in implementing the WADA Executive Committee decisions of 20 September 2018, the I&I did not provide any convincing evidence of the authenticity and legality of obtaining the version of the so-called "LIMS provided by a whistleblower", as well as the legitimacy of its use for comparison with the Moscow LIMS, which was obtained in January 2019 using technical means to ensure the invariability and safety of information.

2.3. At the same time, the I&I admits contradictions in its own conclusions, stating in one case that "**cogent evidence**" is needed to establish that the athlete knowingly engaged in conduct that involved the commission of an ADRV (para. 10.1.1. of the Report), and in the other – it virtually accuses Athlete "X", stating that

“the veracity of a Raw Data file was highly questionable, despite passing the Integrity Test” due to mismatch of sample records in the “LIMS provided by a whistleblower” and the Moscow LIMS (Annexure A to the Report, para. 10.1.2.1 and 15 – 15.1.2).

2.4. Besides, the I&I in its investigation of prospective cases of the use of doping by athletes and the allegedly established "interventions in the Moscow LIMS with a view to adjusting data" does not explore the option of Grigory Rodchenkov intentionally distorting the information in the "LIMS provided by a whistleblower" (before it was handed over to WADA) and Moscow LIMS (in 2012-2015), including with a view to concealing his own doping crimes.

The Investigative Committee of the Russian Federation in its turn established that Grigory Rodchenkov had extorted money from athletes for covering up positive doping tests. Besides, the Committee confirmed that Grigory Rodchenkov and his accomplices had deliberately "contaminated" clean samples of athletes and manipulated the results of their tests for personal enrichment⁴.

2.5. Besides, the Investigative Committee of the Russian Federation obtained evidence that in 2012–2013, Grigory Rodchenkov tasked the experts of the Moscow Laboratory to synthesize metabolites of trenbolone, oxandrolone and other substances prohibited in sports from biomaterials of unidentified persons to possibly use them later for lucrative purposes (to implement a plan to intentionally contaminate a sample of an athlete in order to extort money from them for concealing "presumptive positive" samples).

⁴ https://www.1tv.ru/news/2016-10-16/312076-imenitye_sportsmeny_i_trenery_rasskazali_o_tom_kto_takoy_grigoriy_rodchenkov (in Russian); https://www.1tv.ru/news/2018-01-17/339576-sk_rf_sobraniye_dopolnitelnye_dokazatelstva_nedostovernosti_pokazaniy_grigoriya_rodchenkova (in Russian); https://www.1tv.ru/news/2016-11-30/315119-v_skr_rasskazali_o_promezhutochnyh_itogah_rassledovaniya_po_delu_eks_glavy_moskovskoy_antidopingovoy_laboratorii_grigoriya_rodchenkova (in Russian); https://www.1tv.ru/news/2017-11-08/335846-sledstvennyy_komitet_rossii_ne_nashel_dokazatelstv_dopingovoy_programmy_v_rf (in Russian); https://www.1tv.ru/news/2017-11-08/335881-skr_ob_yavil_grigoriya_rodchenkova_v_mezhdunarodnyy_rozysk_i_budet_dobivatsya_ego_ekstraditsii_v_rossiyu (in Russian); https://www.1tv.ru/news/2018-04-24/344495-beglyy_himik_v_osadke_grigoriyu_rodchenkovu_uzhe_ne_veryat_v_sportivnom_arbitrazhnom_sude (in Russian); https://www.1tv.ru/news/2018-05-11/345335-skr_peredal_wada_dokumenty_oprovergayuschie_pokazaniya_grigoriya_rodchenkova (in Russian)

2.6. In addition, the testing carried out by Russian forensic experts revealed a program (a "data.php" script written in PHP) that can be used to automatically falsify .pdf files (derived from .raw files), both locally and remotely (using the LIMS webserver), regardless of the sample test results without using the .raw files. It was established that the program was modified several times, the latest being on 14 June 2015. All of the above suggests that Grigory Rodchenkov and his accomplices had used this program to manipulate .pdf files modifying "clean" ones to "contaminated" ones and vice versa.

Russian experts report that an unidentified person had been using this program to falsify .pdf files and then input tampered and false records of samples in the Moscow LIMS at least up until 2015. In addition, Russian experts state that if the I&I has not discovered the effect of this script on the records in the "LIMS provided by a whistleblower", this software product cannot be deemed "authentic" and "correct" without proper in-depth studies (for instance, generating .pdf and .txt files from .raw files).

More details on the script in question can be found in the Technical Report of the Russian side.

2.7. The testing by Russian forensic experts revealed a mechanism embedded in the LIMS that purposely tampered sample test results. That mechanism was deeply integrated in the system. It can be stated that it was incorporated in the system during its development. It had been managed by the system administrator at least up until 2015. Records of samples the mechanism was used to tamper with dated 2012-2015. The reports generated on the samples that were "subject to cover-up" or "presumptive positive" were automatically complemented with the information that those samples contained no prohibited doping substances (for instance, "The analysis indicated that the samples do not contain prohibited doping substances"). Only users enjoying full administrator rights are authorized to view the real information on the samples.

Therefore, it stands to reason that the system administrator, who as a matter of fact had developed the LIMS and had full control over all the data stored in the

system, was involved in the falsification of test results. This is yet another circumstance proving that certain pieces of information contained in the Moscow LIMS are false.

For more detailed description of the work of the "mechanism" see the technical report provided by Russia.

2.8. Besides, Russian experts state that, if the described mechanisms (p. 2.6 p. 2.7) are missing from the LIMS provided by the Whistleblower, this software product presented by WADA as a benchmark can hardly be called "LIMS system" as a derivative of the Moscow LIMS. In this case, "some evidence" offered by WADA I&I consists of an incomplete version of a software product which, in terms of its configuration, only partially resembles the Moscow LIMS and contains a number of borrowings from the latter but is in fact fabricated (presumably by former system administrator O. Migachev at the direction of G. Rodchenkov). Moreover, for the LIMS provided by the Whistleblower to be legitimately used in further I&I investigation, the content of its every record requires double-checking by means of comparison with relevant .raw files and results of tests on biological material possessed by WADA.

We also note that the Investigative Committee of the Russian Federation established that, in August and September 2017, G. Rodchenkov on multiple occasions approached the Director of the Moscow Laboratory offering him money and asylum in the U.S. in return for handing over the database containing primary results of athletes' anti-doping tests (raw data).⁵ Russian experts consider it possible that G. Rodchenkov needed the raw data to delete all the files that were at odds with the fake LIMS provided by the Whistleblower so that the information fabricated and presented by him to WADA would appear "most convincing".

Furthermore, we affirm that not a single Russian athlete was aware of such a scheme being operated in the Moscow Laboratory in 2012–2015 to falsify the results of doping tests. Consequently, we insist that it is the primary testing results (the .raw files) or the relevant biological material (some of which is at WADA's disposal – for 2013, 2014, and 2015) that should be used as grounds for possible suspicions concerning the use of prohibited substances by Russian athletes.

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https://www.1tv.ru/news/2017-11-08/335846-sledstvennyy_komitet_rossii_ne_nashel_dokazatelstv_dopingovoy_programmy_v_rf

Also noteworthy is the widely known fact that in 2014 G. Rodchenkov destroyed 1,417 doping samples with athletes' biomaterial to get rid of the evidence of his manipulations with sample test results. In the meantime, the fact that the test results for those destroyed samples (reflected in the Moscow LIMS and, possibly, in the LIMS provided by the Whistleblower) are presently regarded by I&I as authentic and reliable.

2.9. From a legal perspective, the International Standard for Laboratories (ISL) requires that laboratories have an internal chain of custody procedure for control of and accountability for all samples from their collection through disposal. Nevertheless, there are no mandatory provisions requiring that laboratories use the special LIMS system for this. Therefore, the ISL does not regulate the way the LIMS system is operated and managed in a given laboratory.

However, the LIMS used by the Moscow Laboratory (the same as the LIMS provided by the Whistleblower⁶ – Rodchenkov) had not ensured the integrity of the authentic data on sample analysis and allowed an interested person(s) with administration rights to make any intentional modifications of the analysis results without leaving any traces in the information system log files (i.e without evidence).

2.10. To support the abovementioned conclusion, I&I in its preliminary report (of 13 May 2019) states that *"Within the Moscow LIMS, the Logs identify most, but not all actions taken by users in the system. With the appropriate level of access ("administration rights") and system knowledge, actions can be undertaken in the database without generating a Log"*.

Thus, "LIMS provided by a whistleblower" as a programme product by Oleg Migachev (the author of the Moscow LIMS) also did not provide the credibility of the data it contained and allowed to introduce any deliberate distortions into the results of their analysis by an interested person (persons) with administrator rights without displaying the signs of these actions in the relevant information system journals (i.e. without any evidence).

This information is another evidence of the fact that any data, including from the Moscow LIMS (for instance, through abduction of the tables with the use of the remote access or through other ways) could be introduced to the "LIMS provided by

⁶ If I&I provides evidence that it is in fact a derivative of the Moscow LIMS.

a whistleblower" in order to further provide WADA with a fake LIMS presented as "the true LIMS".

2.11. Concerning the remote access, preliminary I&I Report (p. 8.1.) contains the following information: *"12,269 actions were conducted through remote access in the "LIMS provided by a whistleblower". 6523 of them occurred in 2013, while 5746 in 2014. In 2012 and 2015 no actions through remote access have been recorded. In Moscow data journals, experts reported 3743 actions through the remote access. 2 of them took place in 2012, 114 in 2013, 733 in 2014, 1344 in 2015 and 1541 in 2016. 2885 of these 3743 actions were conduction between November 10, 2015 and June 9, 2016"*. It is further stated that the circumstances revealed "need additional research", yet, the subsequent I&I Report of September 6, 2019 does not contain any comments regarding this matter.

As a result of the forensic examination, Russian forensic experts found that users with administrator rights (tim.sobolevsky and oleg.migachev) were able to get a remote access not only to the LIMS server but also to the LIMS operating system (up to June 9, 2016). I.e. "an administrator" could introduce any changes and use any programmes applying to databases and data stored on servers through the remote access.

Thus, it was potentially possible to change (distort, delete, etc.) the results of any research in the Moscow LIMS and in the "LIMS provided by a whistleblower" (before it was handed over to WADA in 2017) in the way advantageous for users tim.sobolevsky and oleg.migachev, including in order to conceal their own offences in doping. A more detailed description is contained in the Technical Report provided by the Russian side.

Meanwhile, repeated requests by the Russia side to conduct a comprehensive research of some programme product called "the LIMS provided by a whistleblower" in order to ascertain its veracity are ignored by the I&I under various pretexts as the relevant analysis will undermine the trust both to the information provided by the whistleblower and to the investigation itself.

2.12. Russian experts emphasize unreliable conclusions set out in p. 9.2.3. of the I&I Report of September 6, 2019, regarding "the deletion of any data". As a result of the investigation conducted by the Russian forensic experts as well as of the additional interrogation of the system administrator of the Moscow laboratory by experts, it was found that he conducted all actions in order to maintain proper operation and sustainability of the system. A detailed description of the administrator's actions can be found in the Technical Report provided by the Russian side and in responses to the questions.

Russian experts state that the system administrator prevented an irreversible loss of information from the LIMS server requested by the I&I. Russian experts once again draw the I&I's attention to the fact that the system administrator did not have technical description or other instructions regarding the LIMS configuration.

Moreover, during the presence of the I&I staff in the Moscow laboratory in December and January 2018 and in April 2019, nobody restricted their communication with the system administrator in order to ascertain the circumstances as well as to obtain details and clarifications on the issues of interest. However, the I&I staff did not have such questions during their three long-time visits to the Moscow laboratory.

2.13. This later resulted in the ill-posed problems for the forensic experts of the Lausanne University who admitted at the meeting on September 5, 2019 that they had not known the circumstances surrounding the administration of the Moscow LIMS in 2016-2019, as well as the working conditions of the system administrators of the Moscow Laboratory.

2.14. As to the alleged "incidents of information deletion (zeroing) on the secondary HDD of the Moscow Laboratory LIMS server revealed by the I&I", the following was established by Russian criminalists.

The execution time of the «*mkfs.ext4*» (HDD formatting) command launched on 17 December 2018 by the Moscow Laboratory sysadmin, is no more than 17

seconds. The I&I conclusion on deletion (zeroing) of a 1 Tbyte hard disk within 17 seconds is beyond technical capabilities.

Moreover, the analysis of the command sequences identified (in the existing and deleted files) revealed no commands by which this HDD could have been "zeroed".

Thus, the execution of this command within the time mentioned above led to no information loss on this HDD.

The issue of system time tampering at the moment of HDD formatting is described in detail in the Russian technical report and answers to the questions, being no valid arguments either to put claims before the Russian side.

It is established that the Moscow Laboratory sysadmins, periodically and as required, altered the system time for any 2015 date, also while configuring LIMS for the year to come⁷ with a view to ensure safe and sustainable LIMS operation, because the latest stable LIMS modification was introduced by the developer (Oleg Migachev) exactly in January 2015. Such routine steps were quite frequent, bearing in mind that after Mr.Migachev had emigrated to the USA in August 2015, there was absolutely NO documentation on operating and administering the LIMS system.

2.15. The Russian experts emphasize that WADA management was repeatedly suggested setting up a group of independent experts (from the Russian side and WADA designees) for conducting a joint open investigation on the so-called "doping dossier" which would have facilitated the establishment of truth within short terms, as well as bringing to responsibility those athletes caught in taking doping.

At the same time, the said suggestions were renounced which led to a number of key biased assessments in the IIR investigation where the so-called "LIMS provided by a whistleblower" is featured as the main argument. At that, the investigation is aimed at upholding the credibility of Whistleblower information.

The Russian experts also mention that a number of conclusions by Digital Forensic Examination Report of the University of Lausanne (of 15 August 2019) either distort the findings of their own investigations or uprightly contradict them. Comments are given on this issue by Russian criminalists in the "Counter research" (sent to WADA on 8 October 2019).

⁷ In the end of 2015 for 2016, in the end of 2016 for 2017 etc.

We also note that the final report of the I&I, on the basis of which the recommendations for CRC were prepared, was not agreed with the Russian independent

Summing up the above mentioned, the Russian experts consider the I&I investigation improper.

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