WEP Warwick Evans Publishing

International Journal of Social Sciences and Public Administration

ISSN: 3005-9836 (Print), ISSN: 3005-9585 (Online) | Volume 10, Number 3, Year 2026
DOI: https://doi.org/10.62051/ijsspa.v10n3.06
Journal homepage: https://ijsspa.org

Legal Liability for Data Falsification by Third-Party Environmental Service Providers: A Study Centered on Data-Chain Governance and the Reconstruction of Causation

Jilun Zhu*

College of Arts and Science, New York University, New York, United States
*Corresponding Author E-mail: jz5095@nyu.edu

ABSTRACT

This is because third-party environmental service providers undertake environmental monitoring, environmental impact assessment (EIA), automatic monitoring operation and maintenance, vehicle emission testing, and carbon-emission verification. Practically, however, the falsification of data does not always occur in the form of a simple report, which would be considered outright false. It is disseminated over sampling, analysis, transmission, signing and other nodes, and it comes in the nature of chain and technical forms. Current law already has administrative, civil, and criminal layers of liability, but each layer runs into difficulty in use. Administrative penalties do not easily pierce affiliation and re-entrustment structures. In criminal cases, chain-like division of labor weakens proof of intent. Civil joint liability under Article 65 of the Environmental Protection Law has for a long time been constrained by the difficulty of proving causation. Using typical criminal and administrative cases released in 2023 and 2024, and empirical studies in air monitoring, water monitoring, and carbon-emission reporting, this article focuses on the causation problem in the application of Article 65. The article argues that Chinese law does not need a new concept of causation here. Within the existing framework of adequate causation, different presumptions should be set for different kinds of third-party services, namely continuous discharge-monitoring operation and maintenance, one-time testing and certification, and EIA and carbon-emission verification. This should be supported by statutory duties to keep audit logs and by adverse-inference rules when such logs are missing.

KEYWORDS

Third-Party Environmental Service Providers; Environmental Monitoring Data; Data Falsification; Causation Presumption; Audit Logs; Process Traceability.

1. INTRODUCTION

The original rationale for introducing third-party environmental service providers was clear. They were meant to replace the closed arrangement in which polluting enterprises monitor themselves and report their own data, and to provide an outside check on the objectivity of environmental information. There was some initial empirical evidence that supported such an expectation. Applying the Chinese air-monitoring data, Niu et al. (2020) discovered that the quality of certain pollutant indicators increased in those regions, where the introduction of the third-party monitoring occurred [1]. This was also the conclusion of research by Zhao et al. (2021), which examined the sections of national surface-water assessment [2].

The macro-level findings do not, however, eliminate what has been occurring on the micro level. As soon as the monitored party pays the bill and chooses whether to continue the contract or not, the concept of technical neutrality begins to drop. In the examination of continuous emissions monitoring

systems (CEMS), Wang et al. (2022) cautioned that the usage of online monitoring equipment alone will fail to guarantee data quality. The absence of a fundamental process of verifying the integrity of data means that falsification just shifts to less visible technical axioms [3]. The same problem is demonstrated in the carbon field. Speaking of the punishment of carbon-market data reporting, Yang (2023) noted that in case of an absence of real hard demand for trace-retention and verification, the rule of penalty would fall in reality [4]. In 2024, the Interim Regulations on the Administration of Carbon Emission Trading came into effect and increased the regulatory level of the carbon-data fraud [5]. Paper rules nevertheless rely on enforcement, and enforcement is the future point of weakness.

The magnitude of the issue can also be seen via enforcement statistics. In a press conference in December 2024, the Ministry of Ecology and Environment stated that since the joint special rectification campaign started in October 2022, 1, 968 third-party environmental monitoring institutions were investigated and punished for fraud, and 167 criminal cases had been transferred [6]. What these numbers are in real life cases is the question. The three criminal cases that are characteristic of the Supreme People Procuratorate released in 2024 provide a relatively clear image. The Qingdao Lin Mouxin case was a situation where there was a resale of shell environmental-impact-assessment qualifications. In the case of Hangzhou H Testing Company, it was found that there was tampering of testing data and destruction of original records. The case of higher-level cheating in the Guangzhou G Motor Vehicle Testing Company was a scenario in which cheating occurred at the hardware level using on-board diagnostics (OBD) simulators [7]. The eighteenth group of standard enforcement cases issued by the Ministry of the Ecology and Environment in the same year had the same tendencies of falsification spreading through many nodes [8].

There is one point passing through these cases. Falsehood is no longer something done once. It consists of the operations distributed along the data chain from sampling and analysis to transmission to issuance. When the legal regulations continue to focus primarily on the issue of whether the final report is an illusion, most of the manipulation that has been accomplished in the levels above it will remain hidden.

The problem has been observed in the current literature, but the debate still concludes with the suggestion to implement more effective oversight or control. This paper attempts to go beyond that. It asks three questions. What are the legal structural challenges in seeking liability against data falsification by third party environmental service providers in the existing legal structure? Why does the causation in the civil joint liability as provided by Article 65 of the Environmental Protection Law [9] turn out to be the primary practical bottleneck? And what can be the criterion for ascertaining causation established in the context of the prevailing doctrine of Chinese law?

2. EMPIRICAL OBSERVATION OF CHAIN-LIKE FALSIFICATION

The framing of falsification of third-party data as just the act of a falsified report fails to provide the framework of the behavior. In reality, manipulation in most instances starts long before the report is constituted. A reading of the three typical cases that were publicized by the Supreme People's Procuratorate in 2024 [7] and the notices of enforcement that are issued by the ministry of ecology and the environment [8] demonstrate two general forms of chain-like falsification. A tidy typology into four steps or five links is not to be taken in this case since real life scenarios are untidy and approaches tend to intersect. A coercive classification would be just smoothing out the things.

2.1. There is a Lack of Physical-layer and Hollowing out of Qualifications.

The essence of the first mode is the general erosion of the physical work in front-end. The initial location of the data chain is cleared.

An extreme of this mode is the Qingdao Lin Mouxin case [7]. The J Company and Y Company that were under the control of Lin Mouxin never conducted any environment-impact-assessment work

following registration. The certificate holder of qualification Jin Mouyan was in an affiliation arrangement where she lent out her qualification certificate by getting an affiliation fee of 35, 000 yuan, but she never took part in the preparations, reviews, and inspections of any project on site. One such move was especially dramatic after being asked to do it by Lin Mouxin, when she presented personal photos which were then used to create image records indicating that an engineer had been in the project site. The firm sold the qualification pages of environmental-impact-assessment with the company seal but at prices of 300 to 3, 500 yuan per set, and sold them to downstream middlemen who made a profit. This way, 927 forms and environmental-impact-assessment reports were created and 799, 100 yuan was received. The ecological and environmental authorities subsequently discovered that 25 of these reports had severe quality flaws wherein the targeted protection areas were missing and the hidden ecological protection areas were present. The approvals that were associated were suspended and the projects were at a halt [7].

The thing that is prominent in this case is not technical sophistication. The scheme was crude. The analysis of effects on the environment was not actually conducted but the documents appeared to be full: the signature of the engineer, the company seal, and site photographs were present. To manipulate the financial results, this was not done at the very core of technical analysis. There was just a lack of front-end site work. That then brings a straightforward question on attribution. When there is no physical truth at the end of the front end, the subsequent analysis, review and issuance which rely on the former is rendered hollow on the factual front. However, the present rules of administration, such as the Measures of the Determination and Management of Fraudulent Data of Environmental Monitoring [10] and Measures of Supervision and Management of Inspection and Testing Institutions [11] remain largely concerned with whether the data records are maintained in a standard format. The instruments that check the actual occurrence of the physical activity are still weak.

2.2. Technical Tampering at the Data Layer and the Dispersion of Responsibility

The latter mode is more complicated and difficult to reveal. There was front-end physical work, or at least some of it, but what was generated and processed was tampered with in a technical fashion.

The case of Hangzhou H Testing Company represents the common look of such a mode [7]. H Testing Company did conduct business in environmental testing and did conduct a little sampling but between December 2020 and February 2022 did systematically defraud in multiple ways, including taking fewer samples than were required or no samples, analysis of diluted samples, replacing actual samples with standard ones, manipulating or creating test results, and destroying original records. It made 47 false tests and made gross money of over 790, 000 yuan illegally.

There is another point that is worth attention in this case. Accountability within the organization was segregated by the hierarchy. Generally, or unintentionally, the general manager Xu Mouyu ordered, condoned, or permitted various departments to participate in falsifications. The middle of the scheme was covered by the deputy general manager, Lu Mouli. The technical head Liu Mou collaborated during sampling, experiments and at report issuance stages. The court eventually established that the company had committed a unit crime. The procuratorate approached Xu Mouyu and Lu Mouli as those who were directly involved in it and Liu Mou as others who were directly responsible. The clues regarding the lower-level staff not reaching the level of criminal prosecution were passed to the ecological and environmental authorities and the market-regulation authorities, where the staff is to receive administrative punishments [7]. This division of labor where the managers and the executors should be liable to criminal and administrative liability, respectively is not surprising. But it reveals the even greater challenge. As the falsification chain is split into individual activities, it is scarcely possible to get everyone down one line of liability.

The case of the Guangzhou G Motor Vehicle Testing Company reveals cheating of equipment and software technologically [7]. The firm purchased OBD simulators to substitute real vehicle diagnostic

devices, purchased counterfeit repair orders of vehicles which returned to the company in the context of reinspection, artificially reduced the percentage of exhaust-gas collection and installed fake speed sensors in breach of the law. In this way, more than one thousand vehicles that did not meet the standard passed inspection. During the stage of examination for prosecution, the defense raised a revealing argument. It claimed that the wrong data were automatically captured by the system and tried to shift responsibility to the equipment and software. The procuratorate therefore repeatedly inspected the testing process on site, reviewed the backstage data-audit process, and consulted the ecological and environmental monitoring center about the criteria for determining whether unusually constant test data could be treated as falsification. It then confirmed that the testing personnel could know the key process data and had actively chosen to report false results.

The defense was not accepted, but it exposed a difficulty that is becoming more common. Once falsification is embedded in software and hardware operations, traditional evidence collection centered on paper files can scarcely detect it. If the procuratorate had not carried out this kind of first-hand review, the direction of the case might have been very different.

If these three cases are read together with the 2022 case involving falsified carbon-emission-report data by Zhongtan Nengtou and other institutions [12], and with the empirical findings of Wang et al. (2022) on CEMS data quality [3], the core risks of current chain-like falsification can be preliminarily summarized as shown in Table 1.

Table 1. Core Risk Landscape of Chain-Like Falsification

Fraud Pattern	Representative Case	Defining Feature	Gap in the Current Legal Response
Physical-layer absence (front end)	Lin Mouxin case (sale of shell qualifications)	Site work never actually happened, but the documents were complete	No mandatory verification that physical activity actually took place, such as real-time video archiving
Tampering with original records (middle stage)	H Testing Company case (fabricated data)	Some work was done, but the original records were later deleted, changed, or replaced	Duties to preserve original records and requirements for electronic data integrity remain underspecified
Cheating with instruments and software (middle and back end)	G Testing Company case (OBD simulator); CEMS data-quality problems	Fraud is embedded in equipment operation, and there may be no trace on paper	No mandatory audit-log requirement, and evidence collection still lags behind falsification techniques

It is important to point out that the above classification is simplistic due to its analytical purpose. In practice, two or more methods tend to be combined. One of the situations can be both irregular site work and manipulation of original records. Nevertheless, there is yet one purposeful use of separating the modes. Various modes cause different legal issues and this requires various instruments of control. This will be argued in the point below.

3. DIFFICULTIES IN APPLYING CURRENT RULES OF LIABILITY

3.1. Administrative Penalties, Piercing Responsible Subjects, and Administrative-Criminal Coordination

Normative changes affecting the administrative side have been abundant in recent years. The Measures of the Determination and Handling of Fraudulent Environmental Monitoring Data incorporates acts, including tampering, fabrication, and teaching other types of fraudulent environmental monitoring [10]. The 2025 revision of the Measures of the Supervision and Administration of Inspection and Testing Institutions puts even more pressure on the personal responsibility of legal representatives, technical heads, and authorized signatories and draws a distinction between false and inaccurate reports [11]. Public monitoring, self-monitoring, and entrusted technical services fall under the same framework and use video monitoring, network transmission, and retention of data [13] after the Regulation on Ecological and Environmental Monitoring, which comes into effect on January 1, 2026. Its overall trend is positive. There is a shift in regulation towards process verification and not qualification entry.

However, administrative penalties have a very tangible issue of piercing the responsible subjects, and the case of Lin Mouxin makes this even more evident. The signatory in fact was not the legal representative, Wang Mou, who was pursuing the instructions of Lin, nor the authorized signatory, the affiliated Jin Mouyan [7]. When administrative punishment applies only to the formal institution to which one is named and the individuals named, the individual who actually operated the falsification chain might escape during the initial round of punishment. It was a similar feature of the 2022 case of Zhongtan Nengtou [12], and in the eighteenth batch of enforcement cases that the Ministry of Ecology and Environment published, the cross-regional practice and multi-layer re-entrustment structures were also present in many cases [8].

In criminal prosecution, the judicial interpretation of the Supreme People's Court and the Supreme People's Procuratorate was issued in 2023 and personnel of third-party institutions were criminally responsible for the crime of giving a false certification document [14]. The average cases published by the Supreme People Procuratorate in 2024 indicate how this charge has been implemented in the environmental-impact assessment, works of environmental testing, and exhaust testing [7]. There is the border that must be handled. Fraudulent financing of false certification documents is a crime that is intentional. The conclusion that the management accepted and permitted falsification was possible in the case of H Testing Company was possible due to the verbal testimony and the record of meetings [7]. Where the directions of management are communicated in most other instances, by innuendoes or researched inquisitiveness, it is far much more difficult to demonstrate that they were aware of the conduct and condoned it. The defence case of the G Testing Company that the data were automatically retrieved under a system did not have success but raised an indication of a more frequent strategy to come, namely, to put falsification in the context of semi-automated systems and then claim that the operator was merely going by the book.

There is one more point which should be remembered. Criminal law must only apply to willful acts. Information anomalies due to carelessness including a lack of technical capacity or insufficient technical capacity, insufficient calibration, or poor training of the staff should not be treated as the crime of issuance of falsified certification papers. Measures of Supervision and Administration of Inspection and Testing Institutions distinguish false reports on the ground of intent and inaccurate reports on the basis of negligence at the level of administrative law [11]. This difference must also be maintained in cases that involve administrative cases that relate to criminal cases.

These challenges at the administrative and criminal tier are significant, yet, at least, the orientation of normative growth is rather apparent: more specific tasks of process trace retention, clearer criteria of evidence of intent, etc. Civil joint liability is a more challenging matter, and there is little evidence of effective responses to it.

3.2. Civil Joint Liability and the Problem of Causation - The Main Focus of This Paper

3.2.1. The Normative Premise of Article 65 and a Review of the Literature

Article 65 of the Environmental Protection Law states that environmental-impact-assessment institutions, environmental-monitoring institutions, and institutions concerned with the functioning and upkeep of environmental-monitoring equipment and pollution-controlling facilities shall jointly be liable along with the other related parties that caused the pollution and ecological damage in case of fraud of environmental service activities with respect to environmental pollution and ecological harm [9].

This was a fairly systematic analysis of this provision provided by Xu (2016). He interpreted it as some kind of special liability through the professionally neutral stand and the duties laid under the statute of environmental service organizations and not a continuation of the liability in relation to the contract [15]. The entire reasoning behind this opinion is that the law brings liability to the third party at a time when it did not gain service fees, but when it is a central location within the institutional system and has the power to be a manipulative factor in the judgment of regulation and social dependency.

It is an effective starting point, as this analytical framework does not approach an important challenge of Articles 65 implementation very heavily. The article imposes the responsibility on the third party to be liable for the environmental pollution and ecological harm arising. This has been interpreted in the judicial practice to mean that causation between the falsification and the damage to the environment must be established. Just here is the point where the Article 65 application has come to systematic trouble.

It must also be raised that the scenario of monitoring pollution-discharge was mostly used by Xu to develop his discussion. Nevertheless, third-party environmental services do not present homogeneity. This is because preparation of environmental-impact-assessment reports, operation and maintenance of emission monitoring, completion acceptance testing, and carbon-emission validation are at different stages of the data chain, and vary in the extent to which they directly and continuously impact the regulatory decisions. The issue of causation under the same theory is challenged at various levels of difficulty in different service settings.

3.2.2. The But-For Standard: Why the But-For Standard is not Applied in this Context.

The simplest causation test used in traditional tort analysis is the but-for test. It is very straightforward: whether the damage would have still happened, even if the defendant had not acted?

In third-party falsification, that criterion has an inconvenient outcome. Consider the most usual case. A company continues to emit more than the limit and leaves the third party to monitor its production. The third party after that releases a false report of compliance. Ask the but-for question. In the absence of such a false report, would the enterprise have still released more than the standard? Almost certainly yes. The emissions produced by the enterprise are not as per what the report mentions, but rather they are due to the will of the enterprise itself as well as its physical operations. Ask the next question. Did the falseness of the report cause the environmental damage to occur? On the physical level, again yes. Whether the report is true or false has no bearing on the path through which the pollutants gain access to the environment.

This is the most powerful defense that the third-party institution has in a civil litigation. It is able to declare that its release of pollutants was nominal and it produced a report. Although the institution might not have caused the pollution, it was not proven to be wrong in the report. What is really forceful about the but-for defense is found within the logic of the but-for standard. It renders the joint liability in Article 65 difficult to be triggered even when the falsification has already been made.

In 2023, the Supreme People's Court passed Provisions on Several Issues Concerning Evidence in Civil Litigation over Ecological and Environmental Torts. These specifications brought some significant procedural correction by obliging defendants to carry the burden of demonstrating the nonexistence of causation [16]. That is the reversal of the burden of proof. However, the point must be observed distinctly. Reversing the burden of proof provides an answer to a procedural inquiry on who would need to prove causation. It does not alter the substantive criterion of determining causation. There is no reason why at the substantive standard the burden can be preserved as but-for, and the third party can still discharge the burden comparatively easily, since at the physical level the discharger of the pollutants was the enterprise and not the third party.

3.2.3. Reconstruction within the Framework of Adequate Causation - The Main Claim of This Paper

To lift out of the predicament brought by but-for, one is not required to bring a whole new concept of law on board. Another direction has already been offered by the existing theory of adequate causation in Chinese tort law.

The rudimentary reasoning behind adequate causation is that there is no particular necessary-condition dependency between the act and the damage. The only thing it demands is that it can cause this kind of harm to a certain extent under the normal experience. The issue is whether in normal conditions, the act is sufficient to cause this kind of a damage.

In case this criterion is applied to setting the third-party falsification, there must be one major redefinition initially. It is the damage that will have to be redefined, not the act.

In that case the damage can be stated as being all pollution; then the third party really is not the cause in the but-for sense. But when the damage is redefined as that aspect of pollution which remained and grew as regulation failed to intervene in time, the chain appears to be different. The third party issues a false report which indicates compliance. That report is the basis for the regulatory authority to consider the enterprise as compliant and initiate no enforcement procedures. The illegal release of the enterprise remains beyond the time during which it is to be found and halted. Pollution accumulates. The damage becomes larger.

In this redefined chain, the false report does not create pollution. That has to be acknowledged. What it does is remove an institutional brake that should have been there. It allows the discharge to continue past the point at which, under truthful reporting, discovery and intervention would reasonably have occurred. Under ordinary experience, adequate causation between the false report and the expanded part of the damage can therefore be established. A false report showing compliance is, in ordinary circumstances, enough to keep the regulator from launching inspection and enforcement, and in that way to let unlawful discharge continue.

A brief comparative note is useful here. Foreign law has developed a Loss of Chance theory, which treats the loss of a chance to obtain a better result as an independent actionable harm. That idea can provide a point of reference for the present discussion, and it has been used more often in medical-negligence cases in French law and English law. But directly transplanting it into Chinese environmental tort law faces two obstacles. First, the tort-liability part of the Civil Code of China does not expressly recognize loss of chance as an independent type of damage. Second, in the environmental field it is much harder to quantify how much pollution could have been avoided if regulation had intervened in time than it is, in the medical field, to estimate how much the cure rate would have improved if diagnosis had been made in time. For this reason, the argument here is developed within the existing framework of adequate causation in Chinese law rather than through a direct import of a foreign concept. The intuition behind loss of chance remains useful. The real harm of falsification lies in damaging the signaling function of the governance system. But Chinese law already has doctrinal tools that can carry that point.

3.2.4. A Three-Tier Scheme of Presumptions by Service Type

The argument above clears the causal chain at the theoretical level, but judicial application still needs a more detailed arrangement. Different types of third-party services sit at different points in the data chain, and their connection with final environmental damage is not equally strong. For that reason, a three-tier scheme of presumptions should be built according to service type.

Tier one is continuous operation and maintenance of pollution monitoring. If the third party is responsible for the operation and maintenance of an online pollution-source monitoring system, for example CEMS operation and maintenance, its data directly and continuously serve the regulatory authority's real-time judgment about the enterprise's emissions. Once falsification occurs, such as modifying parameters, filtering abnormal values, or overwriting exceedance data, what the regulatory authority receives is a false appearance of normal emissions, and enforcement intervention is systematically delayed. The study by Wang et al. (2022) already shows the seriousness and prevalence of data distortion in this setting [3].

In this kind of situation, the strongest presumption of causation should apply. Once it is proven that the third party falsified data during the period of operation and maintenance and that the enterprise discharged above the standard during the same period, it should be presumed that there is adequate causation between the falsification and the continuation or expansion of the damage. If the third party wants to avoid liability, it must prove either that the regulatory authority would not have taken enforcement measures even if the data had been reported truthfully, or that the enterprise's excessive discharge was unrelated to the monitoring item that it maintained. In practice this kind of rebuttal is very difficult, because it requires the third party to prove a counterfactual situation.

Tier two is one-time testing and certification. If the third party undertakes a specific environmental test for a particular project, such as testing for completion acceptance or testing before an application for a pollutant-discharge permit, its report serves an administrative approval decision at a specific point in time. Most of the reports involved in the H Testing Company case were of this type [7].

In this situation, the strength of the presumption should be somewhat weaker. It should be necessary to prove that the relevant administrative approval decision substantially relied on the false report, for example that the ecological and environmental authority approved completion acceptance or issued a pollutant-discharge permit on that basis, and that the enterprise in fact engaged in conduct that did not meet emission standards after approval. The third party can rebut the presumption by proving that the administrative authority also relied on other independent sources of information when it made the approval decision, or that the enterprise's polluting conduct was unrelated to the indicators covered by the testing report. The presumption should be weaker at this tier because a one-time report differs from continuous operation and maintenance. It provides information only at one time slice, and its influence on regulatory judgment is limited in time.

Tier three is environmental-impact assessment and carbon-emission verification. The peculiarities of the environment-impact-assessment reports and carbon-emission verification reports are that these are not directly related to the single act of pollutant discharge. They are used to serve more macro decisions regarding planning approval or a market transaction. In the case of the Lin Mouxin, out of the 927 cases that were filed as false environmental-impact-assessment, 25 cases were discovered to have severe quality issues that resulted in the closure of the projects [7]. This in itself demonstrates that the tie between a falsified environmental-impact-assessment report and a given environmental harm is more protracted and unpredictable.

In such a case, a strong assumption cannot be applied. The plaintiff in question ought to be tasked with the responsibility of demonstrating that the falsified report played a significant role in the decision to approve the project and that the project being covered under said approval actually resulted in the detectable damage to the environment. However, the third party must not be left out

by claiming that it was just a report and some other party constructed the project. The joint liability should be determined once the plaintiff has finished producing the evidence on those aspects.

The reason behind this tiered design is to prevent two extremes. The one is to compel the plaintiff to make causation out of nothing in all the cases, and this would have the effect of putting Article 65 into a dormancy in practice. The other is to have a single strong presumption in all environments, which would expose them to unreasonable liability. The scheme rather distributes the burden of demonstrating causation based on the actual contribution and impact of the third party on the data line, and it does so under the Chinese law in a narrower sense of the implementation of adequate causation and burden-of-proof principles.

The workings of this scheme are yet to be determined. It remains to be studied how the three levels of presumption are themselves more or less legal in form, in what cases the three levels ought to be judicially interpreted as against being guided by cases, how the various levels ought to relate with the rules existing in the 2023 evidence provisions. Partly technical, here we cannot properly discuss them. The provision given at this level is just a skeletal outline, and it has yet to be tried out with respect to further judgments.

4. INSTITUTIONAL RESPONSE: DUTIES TO KEEP PROCESS TRACES AND ADVERSE INFERENCE RULES

The discussion in Section 3 focuses on doctrinal difficulties in ex post liability. But the effectiveness of liability finally depends on whether evidence can actually be obtained. If falsification leaves no verifiable traces when it happens, any theory of causation will lack evidentiary support afterward. For this reason, another dimension of improvement lies in ex ante institutional design.

4.1. The Statutory Duty to Keep Audit Logs

At a general level, the Regulation on Ecological and Environmental Monitoring already requires prevention of fraud and stronger network transmission [13]. The Measures for the Supervision and Administration of Inspection and Testing Institutions also strengthen the duty to preserve original records [11]. The general direction is correct. But there is still a key gap at the level of technical detail. Current rules do not expressly require analytical instruments connected to environmental monitoring networks to have the audit-trail function turned on.

Audit trails are a built-in function common in analytical instruments. They record, in an irreversible way, the operator of each parameter change, the time of the change, and the values before and after the change. In pharmaceutical and food-safety regulation, this function has long been treated as a legal requirement, for example under U.S. Food and Drug Administration 21 CFR Part 11 on electronic records and electronic signatures. In China's environmental monitoring field, however, it has not yet been made a statutory duty, even though many instruments already have this function at the hardware level and it is simply not required to be turned on when the instrument is installed.

If legislation or departmental rules make complete preservation of audit logs a statutory duty, the supporting rules of evidence should change as well. More specifically, an adverse-inference rule should be introduced. Once an enforcement inspection or a lawsuit shows that a third-party institution turned off the audit-trail function without justified reason, reinstalled the operating system and caused the logs to disappear, or left traces of data overwriting that cannot be reasonably explained, the testing conclusions issued during the relevant period should be presumed unreliable.

Such an assumption ought not to be black and white. It should also be left to a third party to prove it by showing a plausible reason why the logs were missing, which could be equipment failure with a prompt repair history or an upgrade of the system that was reported to the regulatory authority.

However, there must be a high threshold for rebuttal. The fact that the system crashed or it was switched off by mistake should not be accepted so easily.

The practical implications of this rule may be regarded with reference to the case of the G Testing Company. That is where the procuratorate was required to provide the resources for first-hand examination before it was able to breach the defense that the information was mechanically generated by the system [7]. Had audit logs been a legal requirement and the equipment used by the defendant had not had comprehensive audit documentation, the prosecutorate would not have had to go one data point at a time demonstrating how they had been manipulated. It might have been based on negative implication per se. That would make the gathering of evidence easier, and also would offer a more objective standard of evidence in instances where the administrative enforcement is handing over a case to the criminal process. According to Yang (2023), it is only through the attachment of legal consequences to the lack of technical trace-retention that technical trace-retention has real force [4]. Audit logs cannot be used later as evidence just because they have value. It is also prior deterrence. As soon as operators are informed that changes of all parameters would be forever in the stored data, the cost of falsification is expected to increase.

4.2. Independence Safeguards and Separation of Authority

In addition to technical tools and evidence rules, there is another simpler explanation why the third parties cease to tell the truth. It is found in the incentive structure. Even as long as the client pays and, in addition, determines whether or not the contract will be renewed, the economic dependence of the third party is a continuing compliance risk source. Both the Niu et al. and Zhao et al. studies demonstrate that external supervision has the ability to enhance the quality of data; however, the impact here relies upon the independence and persistence of the supervision mechanism [1, 2]. In the theory of responsive regulation, Braithwaite (2006) also notes that punishment is not sufficient to ensure sustainable compliance but that structural modification of incentives also requires implementation [17].

The institutional tools in concrete form must comprise at least the following: rules of recusal in entrustment, so that the monitored enterprise does not directly select the testing body and remunerate the testing fee at the same time; periodic rotation, so that a certain third party does not work with the same client so much that after too many years he/she decides to get a test; and random cross-review and spot checks. A required physical separation between physical maintenance and data transmission is also interesting in a technically dense environment like CEMS operation and maintenance. That is, the organization that is in charge of the day-to-day care of the equipment must never at the same time manage the transmission of data and data management. This would limit the convenience of falsification which occurs when both the physical device and digital channel are under the control of one subject. The G Testing Company case gives a point of reference. In case the right to operate the testing equipment, and the right to submit the data were possessed by two separate subjects, the ability to replace an actual diagnostic device with a simulator would have been less.

These independent measures do not act as rules of liability per se, but their role is direct. On the one hand, they decrease the motive to falsify. However, they complicate the purpose of falsification. By doing so, the rules of liability and the evidence rules that were mentioned above can be applied in a less falsified and more traceable environment. Practices of local pilots already exist. The trick is to elevate them to national normative standards and to relate them to the rules of liability above.

5. CONCLUSION AND LIMITATIONS OF THIS STUDY

The key challenge of punishing third-party environmental service providers through civil liabilities is not that the law cannot provide punitive principles. The greater issue about it is that Article 65 of the Environmental Protection Law remains stuck on causation. In the conventional but-for model,

any third party organization could easily indicate that they did not release pollutants and simply produced a report. That does not go away even when falsification has been discovered and even in cases where the burden of proving has been overturned. The actual inquiry is that of what proportion of the harm the false report permitted to happen or prevail.

The discussion here is that this issue can still be managed under the current system of sufficient causation of Chinese law. The third party is not such that he or she is the direct cause of pollution. The point is that a false report can prevent the regulator from intervening at the time when it should intervene, and thus, permit pollution or further pollution to take place. After restating the issue in that format, various assumptions may be established for various types of services, such as persistent service operation and maintenance of discharge, single testing and certification, and impact assessment and verification of carbon emissions on the environment. Article 65 no longer needs to be just a rule on paper.

Two institutional supports derive from that perception. One is to convert audit logs, parameter-change records, and any other process traces into actual statutory obligations and to practice adverse inference in cases where such logs are absent without valid reason. The other one is to decrease the economic dependence of the third party on the client by recusal in entrustment, rotation, and cross-review and separation of authority. When the liability, evidence, and independence protection flow, it will be more difficult to commit data falsification and will be harder to refute in the future.

There are also obvious restrictions in this article. The materials of the case represent mostly the standard cases published by the Supreme People's Procuratorate and the notices of enforcement of the ministry of ecology and environment. These resources tend to be based on the more serious extreme and do not have the ability to address the more prosaic grey-area violations in practice. This three-level plan suggested here is merely a template as well. It has yet to be tested on a larger number of judgments and case materials. The article fails to address the issue of internal recourse once the joint liability is proven. That is an important question; however, it is another question.

REFERENCES

[1] Niu, X., Wang, X., Gao, J., and Wang, X. 2020. Has third-party monitoring improved environmental data quality? An analysis of air pollution data in China. Journal of Environmental Management 253 (2020), 109698. https://doi.org/10.1016/j.jenvman.2019.109698

[2] Zhao, L., Hong, M., and Wang, X. 2021. Has Third-Party Monitoring Improved Water Pollution Data Quality? Evidence from National Surface Water Assessment Sections in China. Water 13, 20 (2021), 2917. https://doi.org/10.3390/w13202917

[3] Wang, X., Xu, L., Zhang, Q., Zhang, D., and Zhang, X. 2022. Evaluating the data quality of continuous emissions monitoring systems in China. Journal of Environmental Management 314 (2022), 115081. https://doi.org/10.1016/j.jenvman.2022.115081

[4] Yang, B. 2023. Clarifying Penalties and Tightening the Law: Penalty Design for Carbon-Market Data Reporting Accountability [in Chinese]. Journal of Beijing University of Technology (Social Sciences Edition) 23, 2 (2023), 43-55. https://doi.org/10.12120/bjutskxb202302144

[5] State Council. 2024. Interim Regulations on the Administration of Carbon Emission Trading [EB/OL]. Decree No. 775 of the State Council, effective on 2024-05-01. Accessed on 2026-03-13. https://www.mee.gov.cn/zcwj/gwywj/202402/t20240205_1065850.shtml

[6] Ministry of Ecology and Environment. 2024. Transcript of Questions and Answers at the Regular Press Conference in December [EB/OL]. Accessed on 2026-03-13. https://www.mee.gov.cn/ywdt/xwfb/202412/t20241225_1099274.shtml

[7] Supreme People's Procuratorate. 2024. Typical Cases of Procuratorial Organs Punishing Crimes of Falsification by Third-Party Environmental Service Institutions According to Law [EB/OL]. Accessed on 2026-03-13. https://www.spp.gov.cn/spp/xwfbh/dxal/202406/t20240606_656629.shtml

[8] Ministry of Ecology and Environment. 2024. The Eighteenth Batch of Typical Ecological and Environmental Enforcement Cases, Targeting Falsification by Third-Party Environmental Service Institutions [EB/OL]. Accessed on 2026-03-13. https://www.mee.gov.cn/ywgz/sthjzf/zfzdyxzcf/202408/t20240808_1083614.shtml

[9] Standing Committee of the National People's Congress. 2014. Environmental Protection Law of the People's Republic of China [EB/OL]. Promulgated on 2014-04-24, effective on 2015-01-01. Accessed on 2026-03-13. https://flk.npc.gov.cn/detail?id=2c909fdd678bf17901678bf76c1d0717

[10] Ministry of Environmental Protection. 2015. Notice on Issuing the Measures for the Determination and Handling of Fraudulent Environmental Monitoring Data [EB/OL]. Huanfa [2015] No. 175. Accessed on 2026-03-13. https://www.mee.gov.cn/xxgk2018/xxgk/xzgfxwj/202301/t20230117_1013425.html

[11] State Administration for Market Regulation. 2025. Measures for the Supervision and Administration of Inspection and Testing Institutions [EB/OL]. Revised by Order No. 101 of the State Administration for Market Regulation. Accessed on 2026-03-13. https://www.samr.gov.cn/zw/zfxxgk/fdzdgknr/fgs/art/2025/art_bff8f35d8f114acca7643bddd77e9505.html

[12] Ministry of Ecology and Environment. 2022. The Ministry of Ecology and Environment Publicizes Typical Cases Involving Falsification of Data in Carbon Emissions Reports by Zhongtan Nengtou and Other Institutions [EB/OL]. Accessed on 2026-03-13. https://www.mee.gov.cn/ywgz/ydqhbh/wsqtkz/202203/t20220314_971398.shtml

[13] State Council. 2025. Regulation on Ecological and Environmental Monitoring [EB/OL]. Decree No. 820 of the State Council, effective on 2026-01-01. Accessed on 2026-03-13. https://www.mee.gov.cn/zcwj/gwywj/202511/t20251106_1132216.shtml

[14] Supreme People's Court and Supreme People's Procuratorate. 2023. Interpretation on Several Issues Concerning the Application of Law in Handling Criminal Cases of Environmental Pollution [EB/OL]. Fa Shi [2023] No. 7. Accessed on 2026-03-13. https://www.court.gov.cn/zixun/xiangqing/408592.html

[15] Xu, C. 2016. On the Joint-and-Several Liability of Environmental Service Organizations [in Chinese]. Journal of Henan University of Economics and Law 2016(4), 121-131.

[16] Supreme People's Court. 2023. Provisions on Several Issues Concerning Evidence in Civil Litigation over Ecological and Environmental Torts [EB/OL]. Fa Shi [2023] No. 6. Accessed on 2026-03-13. https://gongbao.court.gov.cn/Details/d2d048539eec6322f6872d1acb423c.html

[17] Braithwaite, J. 2006. Responsive regulation and developing economies. World Development 34, 5 (2006), 884-898. https://doi.org/10.1016/j.worlddev.2005.04.021