UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE ADMINISTRATOR

In the Matter of:	)	
	)	
Taotao USA, Inc.,	)	
Taotao Group Co., Ltd., and	)	**Docket No.**
Jinyun County Xiangyuan Industry	)	**CAA-HQ-2015-8065**
Co., Ltd.,	)	
	)	
Respondents.	)	

Respondent's Motion in Limine to Exclude Testimony and Evidence of Ronald M. Heck, John Warren, Amelie Isin, and Dr. James J. Carroll.

Comes Now, Respondents, TaoTao USA, Inc., TaoTao Group Co. Ltd., and Jinyun County Xiangyuan Industry Co., LTD., (hereafter "Respondents"), and pursuant to 40 C.F.R. Section 22.16(a) and 22.22(a)(1), file this Motion requesting that the Honorable Court issue an Order excluding the expert testimonies of Complainant's expert witnesses, Amelie Isin, John Warren, Ronald M. Heck, and Dr. James J. Carroll (CX180, CX179, CX176, CX192-CBI).

INTRODUCTION – THE STANDARD FOR ADMISSABLE EVIDENCE IN AN ADMINISTRATIVE PROCEEDING

A presiding officer in an administrative proceeding serves as both arbiter and gatekeeper on any questions raised on the admissibility of evidence and testimony. Pursuant to the Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties and 40 C.F.R. 22.22(a)(1), a "presiding officer shall admit all evidence which is not irrelevant, immaterial, unduly repetitious, unreliable, or of little probative value, except that evidence relating to settlement which would be excluded in the federal courts under Rule 408 of the Federal Rules of Evidence (28 U.S.C.) is not admissible." 40 C.F.R. 22.22(a)(1).

Presiding judges lack a specific statutory framework to guide their discretionary review and striking of expert witness testimony and instead rely on Federal Rule of Evidence 702 to inform their judicial decisions on the admissibility of evidence and testimony. See *In the Matter of Aquakem Carbie, Inc*., 2010 EPA ALJ Lexis 9, at *5-6 (ALJ 2010) (quoting *In re Euclid of Virginia, Inc*., 2008 EPA App. Lexis 13, at *94-95 (EAB 2008).

Rule 702 provides judges with the following framework for determining the admissibility of expert testimony:

> Rule 702: If scientific, technical, or other specialized knowledge will assist a trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principals or methods, and (3) the witness has applied the principles and methods reliably to the facts of the case. Fed. R. Evid. 702.

Expanding upon Rule 702, the U.S. Supreme Court in *Daubert v. Merrell Dow Pharmaceuticals, Inc*. clearly defined the Court's role as gatekeeper in determining the admissibility of expert testimony and held that a judge or presiding officer is required to assess the reliability, relevancy, and utility of expert testimony before allowing expert testimony into evidence. *Daubert v. Merrell Dow Pharmaceuticals, Inc*. 509 U.S. 579, 113 S. Ct. 2786 (1993).

Reliability of Testimony:

The Daubert decision sets forth the following factors to aid courts in determining whether an expert's testimony is "reliable" and therefore admissible:

1. Whether the expert's theory or technique can or has been tested;
2. Whether the expert's testimony is a subjective opinion that cannot be reasonably assessed for reliability;

3. Whether the potential rate of error of the theory when applied is known;
4. Whether there is the existence and maintenance of standards and controls concerning the theory's operation; and
5. Whether the theory has been generally accepted by the scientific community. *Daubert*, 113 S. Ct. at 2796-97.

While Daubert informed courts to assess the reliability of the expert, the Supreme Court in *Kumho Tire Co. v. Carmichael* held a Court's gatekeeper function also permits it to exclude all unreliable testimony, whether scientific in nature or not. *Kumho Tire Co. v. Carmichael*, 119 S.Ct. 1167 (1999). An expert who appears knowledgeable based on his or her educational background and specialized knowledge can similarly be disqualified for relying on scientific or underlying research methodologies that are unreliable. See *United States v. Frazier*, 387 F.3d 1244 (11th Cir. 2004).

A. The Insufficiency of Amelie Isin's Expert Testimony

The expert testimony of Amelie Isin is inadmissible since Isin's ("Isin") experience, training, and educational background fall within the areas of environmental engineering and compliance, and Complainant designated Isin to testify on unrelated matters outside the scope of her areas of knowledge and expertise. Specifically, the Environmental Protection Agency ("EPA") designated Isin as an expert who can provide relevant testimony on the following subjects: 1) the EPA's sampling of Respondent's engines; 2) the selection of engine samples from Respondent's places of business, 3) the inspection of the vehicles and the processes used, 4) oversight of the inspections, 5) the calculation of the civil penalties in this matter, 6) the gravity component of the EPA's civil penalty assessments, 7) the economic benefits obtained by Respondent, 8) the financial history of Respondents, 9) the overall penalty calculation, 10) the Respondents'

history of compliance, 11), Respondents' willful negligence; and 12) and Isin's analysis of the catalytic converters.

Isin's lack of expertise, education, and experience in the aforementioned areas of designation necessitates the dismissal of her testimony pursuant to the Consolidated Rules of Practice Governing the Administration of Assessment of Civil Penalties and the Revocation/Termination or Suspension of Permits, (Consolidated Rules) and 40 C.F.R. Part 22.

Further, under Federal Rule of Evidence 702, Isin lacks the qualifications to serve as a subject-matter expert witness because Isin is qualified as an engineer and is not a statistician, economist, catalytic converter expert, or business analyst, and does not possess the requisite "knowledge, skills, experience, training, and education" to testify or form a relevant and reliable opinion on issues related to economics (or economic damages), economic penalties based on the gravity component, the financial history of Respondent, and all findings on the catalytic converters and their emissions testing and results—including the processes utilized to gather and test the engines that informed the EPA's investigation and that served as the basis for the Agency's liability and penalty assessments.

1. Isen's Methodology for Sampling Vehicles for Testing is Unreliable and Lacks Substantive Peer-Reviews and Established Testing Parameters.

Isen has failed to show she possesses the requisite experience, training, and education to ensure the underlying methodology for selecting engines for testing is reliable under Daubert and that Isen deployed a scientifically or statistically sound methodology for selecting vehicles to analyze. Further, Isen has been unable to show that her inspection process and sampling of vehicles per engine class was standardized and

possessed a consistently known error rate subjected to peer review. If she could establish the aforementioned factors, Isen would be able to show that her mechanism for selecting a random sampling of 35 vehicles as a representative body of 109,000 vehicles is a consistent and reliable sample. A claim that a sample is "representative enough to be reliable" fails as an argument. *Reynolds v. Giuliani*, 118 F. Supp. 2d 352, 374 (S.D.N.Y. 2000). In fact, any criticism that "a sampling protocol was not random or otherwise reliable" will "undermine a survey's reliability and probative value," and this is particularly true when the binomial probability distribution is in play, as in this case. *Id*. at 367. In this matter, Isen provides no basis for her methodology in selecting vehicles or proof as to the sufficiency of the methodology she used in selecting vehicles from different engine classes to represent a whole body of 109,000 engines. Nor did Isen ensure that the "randomness component" associated with this type of testing has been met through some underlying methodology that is reliable.

Isen's education and background is in engineering, and she lacks a substantive background or education in economics, statistical analysis, catalytic converters, emissions, the law, or legal standards. To testify as to the economic-benefit component, the gravity component, the relevancy of the penalties assessed, and the willful negligence component, Isen needs to establish that she has the "knowledge, skills, training, and experience" to meet the guidelines of Rule 702 for purposes of reliabily and admissibility. Yet, Isen has failed to establish her background or training in statistical sampling and economics to establish the probative value and reliability of her testimony on the economic benefit component or the relevancy of the penalties assessed and the significance of the gravity component. Nor does Isen have a basis for her methodology in

pulling a small number of 35 vehicles for testing purposes and using this marginal amount as a baseline for drawing scientific and structural conclusions as to all 109,000 engines. In addition, Isen is said to be ready to testify about the catalytic converters and their results without stating her background and skills in this particular area.

Furthermore, Isen has provided the tribunal with no information to establish her education or expertise in the law, making it impossible for her to effectively testify to issues such as liability, causation, willful negligence, and the appropriateness of a particular penalty. Allowing an engineer to testify to issues generally reserved for a lawyer is the equivalent of asking a trained attorney with no technology background to provide testimony on nanotechnology.

For all of the foregoing reasons, Isen's testimony is insufficient to survive a Daubert attack or to meet the provisions of Rule 702, and Respondents respectively request that it be stricken and not admitted.

B. Ronald Heck's Expert Testimony Lacks Statistical Reliability and is Based on the Mere Parroting of Reports Conducted by Other Analysts and is Not the Result of Reliable Testing Methodologies.

All testimony of expert witness, Ronald Heck, (Ph.d) is subject to a Daubert challenge and should be deemed inadmissible because the testimony is not based on Heck's own experimentation, knowledge, testing, or on any reliable testing methodology. Plus, Heck lacks the background and requisite knowledge to make the conclusions asserted in his report **(Ex. CX176).** Mr. Heck, in fact, does nothing more than parrot test results from other organizations, including SGS Canada, Inc. (SGS), Eastern Research Group (ERG), and California Environmental Engineering, LLC (CEE); and the entire substance of his report is based on his analysis of reports that he possesses no personal

knowledge of in terms of how the results were achieved or the methodologies used to reach those conclusions.

First, Heck observed Respondent's certificates of conformity for ten engine families—an analysis that included exhibits CX001 through CX010—and simultaneously analyzed the test results for catalytic converters tested by SGS Canada Inc (CX 125-CX133), by Eastern Research Group, (CX-63, CX-66, CX-86, CX-89, CX-147 CX-152), and EPA Region 9 (marked as CX-144). Heck has no experience conducting the above-mentioned tests onsite or alongside the above-mentioned testing entities, and if he does, he fails to proffer this expertise or his familiarity with the company's tests or processes. Further, Heck has no expertise, training, or personal knowledge to attest to the reliability and methodology of those tests performed—all of which he holistically used to conclude that the ratios of precious metals within the 35 vehicles surveyed by the agencies are not compliant with the certificates of conformity filed with EPA. At the same time, Heck, who has a background in chemical engineering and who relies on a book he co-authored on catalytic converters, proffers no evidence as to why he has the knowledge, skills, experience, and training to confirm the reliability of the data produced by these testing entities outside his control.

Heck bases his entire testimony on the catalytic converters' precious metal concentrations and the alleged violations of Respondent by relying solely on test results produced by SGS, ERG and EPA. Heck also states no basis for establishing that the tests conducted were reliable, or that he can attest to the existence of standards and controls in developing the test results to survive a Daubert challenge to the tests' overall reliability and peer-approved methodology. A Daubert challenge is appropriate since Heck is unable

to attest to whether the test results achieved by the entities SGS, ERG, and EPA, are generally accepted by the scientific community or that they are reliable and based on acceptable methodologies. Instead, Heck merely parrots the test results produced by EPA and others as a basis for his conclusion. Under Rule 702, Heck is required to show that his testimony is based on sufficient facts or data and that his data is the product of reliable principles or testing methods stemming from his own area of expertise, knowledge, training, and education. He also must show he has applied the principles and methods reliably to the facts of the case. Fed. R. Evid. 702.

Given Heck's reliance on EPA data and information provided by third-party providers—and his lack of a statement or understanding as to the methodologies used by those providers—Heck is unqualified to render an expert opinion or to conclude that the tests results reliably show a violation occurred and the extent of any proclaimed compliance issue. In fact, Heck, who has some background in the Clean Air Act vehicle certification program, goes on to state that "[s]tudies to date have not provided a reliable method or model for determining what emission rate a given catalytic converter with a specified precious metals ratio will achieve in a given application." He added that, "Reliable results can only be obtained by testing a catalytic converter's performance in a particular application." (Ex. CX176, ¶ 21). Yet, he failed to state what that application is, and whether it has been met here.

Heck also states that "emissions data obtained from the low mileage tests performed by CEE are not indicative of how the catalytic converters would perform to reduce emissions at the end of the vehicles' useful lives." (Ex. CX176, ¶ 31).

A thorough analysis of Heck's report, and his inability to state test results or opinions based on reliable testing methods or his own expertise, makes his opinion inconclusive at best and certainly outside the parameters of acceptable expert testimony when compared against the background of the Daubert factors and Rule 702.

Without proof that Heck bases his opinion on sufficient facts or data, or on reliable principles and testing methods that he has personal knowledge of and can attest to, his testimony should be stricken from the record.

C. The Testimony of John Warren is Unreliable Since Warren Fails to Establish the Engine Sample Size Was Large Enough to Demonstrate Reliability and Randomness in Testing.

EPA Expert Witness John Warren falls short of proffering sufficient data, to establish that a sample of 35 engines is sufficient to make an assessment as to the precious metals concentration of all catalytic converters in the engine classes examined by the EPA. Nor is Warren able to establish that reliable testing methods were used to support his conclusion that "it is very unlikely that a catalytic converter taken from a vehicle labeled as belonging to engine families CTAOC.049MC1, DTA0x0.12A1T, ETAOXO.12A1t, DTAOC.049MC2, DTAOX.124AAA, DTAOXO.15G2T, ETAOC.049MC2, DTAOC.150MC2, FTAOXO.15GT2T, or GTAOXO.15G2T, if tested, would show success that the catalytic converter had Pt, Pd, and Rh in the certified ratio." (Ex. CX179, ¶ 21).

Instead, John Warren, a Ph.D. in mathematics, relies on mere conclusory statements, noting that all of the catalytic converters analyzed for this matter are in his opinion "homogenous within each engine family at the time of manufacture." *Id*. at ¶ 14. In his analysis and report, Warren fails to establish what testing principles or peer-

reviewed statistical analysis he is relying upon to summarily conclude that the 35 engine samples surveyed create enough "randomness" within the confines of the study to reliably use a binomial probability distribution calculation to infer that deficiencies in precious-metal concentrations are consistent across all 109,000 vehicles in the engine classes.

Under Daubert and Federal Rule of Evidence 702, any testimony that survives a challenge must be based on sufficient facts or data, and all testimony admitted must be the product of reliable testing principals and methods. Fed. R. Evid. 702. Further, there must be an assurance that the expert applied the relevant principles and methods reliably to develop their conclusion.

"In statistical analysis, as the sample size (of the number of items) increases the confidence interval of an estimated statistic becomes narrower."[1] In this particular matter, Warren concludes that the binomial probability distribution is an effective method for concluding that all of the engines in the examined Tao Motors engine classes are likely to suffer from the same lack of conformity in their catalytic converter precious-metal concentration. However, Warren makes this draconian assessment without addressing the reliability of depending on 35 vehicle samples out of a universe of 109,000 engines as a basis for concluding that all of the vehicles are incompliant.

Research suggests such a small sample, without proof of how the methodology works, or that it is the result of reliable principles and methods, is less likely than other sample sizes to be correct. [1] In fact researchers who evaluate the issue of reliability in testing have found that "determining the right sample size is often times critical since the

[1] Huairui Guo, Edward Pohl, & Athanasios Gerokostopoulos, "Determining the Right Sample Size for Your Test: Theory and Application", p. 1, 2013 Reliability and Maintainability Symposium (2013).

cost of tests is usually high and obtaining prototypes is often not easy." "If the sample size used is too small, not much information can be obtained from the test, limiting one's ability to draw meaningful conclusions; on the other hand, if it is too large, information obtained through the tests may be beyond what's needed, thus incurring unnecessary costs."[2]

At no point in his testimony does Warren point to reliable evidence to show that the testing of 35 engines out of 109,000 is a large enough universe of engine tests to conclude that no engine in these classes is likely to contain the correct precious metal concentrations pursuant to the certificates of conformity. Warren also fails to address the "randomness factor" in how the vehicles tested were selected for analysis.[3] With the vehicles pulled from different locations at different times, the randomness of their selection plays a role in whether the methodology for establishing consistency in the final test results is reliable. [4] "The value of the binomial random variable is the number of 'successes' out of a random sample of 'n' trials, in which the probability of success on a particular trail is π."[5]

While Warren relies on a binomial probability distribution, he fails to address the issue of whether the engines were selected with enough randomness to effectively survive a Daubert challenge or to provide details on the sampling and testing methods used to prove that the methods were reliable enough for admissibility.

Dr. James Carroll's Testimony and Report should be Excluded because his Report is Self-Contradictory and Largely based on a Subjective Opinion that Cannot be Reasonably Assessed for Reliability.

[2] Id. at 1.
[3] Sampling Distributions, University of Florida – Department of Statistics (Spring 2005) http://www.stat.ufl.edu/STA6166/SPRING05/Sampling%20Distributions.pdf
[4] Id.
[5] Id. at 1.

Dr. Carroll prefaces his report with the disclaimer that, "[t]his report does not constitute an audit, review, or compilation of financial statements, or other activity defined by professional standards. This report does not express an opinion concerning the fairness of financial statements as representing the financial position of an individual or organization." (**CX192)**.

Despite this disclaimer, Dr. Carroll proceeds to opine that Respondent's Accounts Receivable should be re-characterized and adjusted to reduce Accounts Payable by several million dollars and re-characterize this as equity, along with adding amounts for Accounts Receivable. (**CX192)**

Dr. Carroll undertakes these adjustments, changing Respondent's tax returns to reflect a substantially higher net worth than shown by Respondent's tax returns. In drawing his conclusions, Dr. Carroll appears to primarily rely on Respondent's 2012-2015 tax returns and RMA Annual Statement Studies. (**CX192)**. However, his specific statements relating to this re-characterization are limited to his subjective views, and based on assumptions and general statistics rather than the evidence. (**CX192)**.

Under the first model relating to Accounts Payable, Dr. Carroll's analysis hinges on his impression that many companies have Accounts Payable equal to 1 or 2 months of purchases. (**CX192)**. Based on this, Dr. Carroll then re-characterized 80% of Respondent's Accounts Receivable to equity, several million dollars. (**CX192)**. Under the second model, Dr. Carroll conducts the same analysis based on RMA data for other companies to determine an average for these other companies. (**CX192)**. Based on this, Dr. Carroll then re-characterized about 93%, of Respondent's Accounts Receivable to

equity. (**CX192)**. This entire approach is speculative and based only on general averages or Dr. Carroll's subjective experience.

Under the first model relating to Accounts Receivable, his analysis hinges on the general statement that many Accounts Receivable are equal to 1 to 2 months of Gross Receipts. (**CX192)**.

Based on Dr. Carroll's personal experience that many Accounts Receivable are equal to 1 to 2 months of Gross Receipts, he concludes this is a basis for Model 1. (**CX192)**. Model two is based of similar logic, this time using an average of other companies based on RMA data. (**CX192)**. This entire approach is speculative and based only on general averages or Dr. Carroll's subjective experience.

Dr. Carroll's models and analysis are nothing more than a subjective opinion that cannot be reasonably assessed for reliability. Further, Dr. Carroll expressly states that his report is not an audit, review, or compilation of financial statements, or other activity defined by professional standards.

If Dr. Carroll is going to undertake an audit, review, or compilation of financial statements, which is essentially what he has done, it must be conducted within the professional standards applicable to CPAs. Here, it is not, and this further highlights the fact that this report is nothing more than a subjective opinion based on general principles, general statistics, and not conforming to the professional standards required by a CPA. Because Dr. Carroll's testimony is a subjective opinion that cannot be reasonably assessed for reliability, his testimony is not reliable and is inadmissible.

Further, pursuant to 40 C.F.R. 22.22(a)(1), this testimony is of little probative value. Dr. Carroll attempts to re-characterize several million dollars in Accounts Payable to equity in order to inflate Respondent's net worth, which he suggests would allow Respondent to pay the fine or take on debt to pay the fine. However, he wholly omits any explanation as to how the changes to Respondent's net worth, after Dr. Carroll's calculations, would translate into Respondent being more likely to obtain any financing for purposes of paying a penalty or would otherwise increase the funds Respondent has available to pay any penalty.

In fact, Dr. Carroll seems to suggest the very opposite by stating, "[t]his report does not express an opinion concerning the fairness of financial statements as representing the financial position of an individual or organization." **(CX192)**. Yet, after acknowledging this, Dr. Carroll proceeds to draw conclusions that are entirely based on Respondent's "adjusted" income tax return amounts, after Dr. Carroll's subjective adjustments were made. Accordingly, Dr. Carroll's testimony is of little, if any, probative value and should be excluded.

As Dr. Carroll was only recently disclosed, Respondent may further address his testimony and report in its Response to Complainant's Third Motion to Supplement the Prehearing Exchange.

CONCLUSION

For the reasons stated above, Complainant requests that this Tribunal issue and order excluding the foregoing documents and expert witness testimonies from this matter.

Respectfully Submitted,

06/23/17
Date

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CERTIFICATE OF CONFERENCE

Counsel for the Respondent has confirmed that Counsel for Complainant is opposed to the foregoing motion.

/s/David Paulson
David Paulson

CERTIFICATE OF SERVICE

This is to certify that the foregoing motion in the Matter of Taotao USA, Inc., et al., Docket No. CAA-HQ-2015-8065, was filed and served on the Presiding Officer this day through the Office of Administrative Law Judge's E-Filing System.

I certify that a copy of the foregoing Motion was sent this day via certified mail for service on Complainant's counsel as follow:

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