

UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

RONALD A. BLOUCH JR.,

Plaintiff,

v. Civil Action No. _____

NSF INTERNATIONAL, *et al.*,

Defendants.

MEMORANDUM IN SUPPORT OF COMPLAINT

ISO 14025, ISO 14020, AND EN 15804 COMPLIANCE ANALYSIS: *The Governing Standard Requires What the Defendants Excluded*

Submitted in Support of Blouch v. NSF International et al.

July 2026

I. PURPOSE AND DISCLOSURE

Plaintiff conducted independent scientific research into commercial hand dryers over a period of nearly three years. That program, recorded contemporaneously across more than two hundred restrooms and preserved in a complete chain of custody, produced 462 timed drying trials, 342 microbiological tests, and ten studies and one synthesis review, published with permanent DOIs. It documents systemic failures in the environmental certification of these products: certified drying times that cannot be achieved under field conditions, amplification of airborne microbial load in the air the product directs at users, dispersal of contaminated water onto surrounding surfaces, and universal mold colonization at the device. [Exhibits A, B, H, I, J, GGGG, HHHH]

The counts stated in this memorandum are the reference figures Plaintiff adopts across all filings. They arise from honest, hands-on field research and are stated as the most accurate counts the evidence supports, with their basis set out in full in the testing-counts summary and methodology. [Exhibits GGGG, HHHH] Where a figure rests on reconstruction or on data not yet transcribed, that is disclosed there rather than concealed.

Plaintiff presented this research to Defendants in a detailed settlement demand. Defendants responded through UL Solutions' Associate General Counsel with a series of defenses, each narrowing the scope of the obligations Defendants contend their certifications carry. Those defenses are addressed in Section VII below, after the governing standard and the product's operation have been set out — because the defenses answer questions the standard's own structure raises, and cannot be evaluated until that structure is on the table.

While preparing a response, Plaintiff examined ISO 14025 — the international standard Defendants cite as governing their Environmental Product Declarations — line by line, together with its parent standard ISO 14020, the definitional standard ISO 14050, the life cycle assessment standards ISO 14040 and ISO 14044, and EN 15804, the standard UL selected as its reference framework. That examination established that the standard Defendants invoke contains mandatory provisions requiring precisely the assessments Defendants contend are excluded.

The convergence is the central finding of this memorandum. Plaintiff completed the research above before reading ISO 14025. The deficiencies Plaintiff identified through direct observation and the provisions ISO 14025 makes mandatory describe the same failures from opposite directions — one through field measurement, the other through regulatory requirement. This memorandum sets out that convergence, provision by provision.

This analysis was prepared with the assistance of artificial-intelligence systems, as disclosed in Plaintiff's AI Use Affidavit. The scientific findings, the testing, and every factual judgment are Plaintiff's own; the systems assisted with reading, organization, and arithmetic. Where any prior document conflicts with the analysis contained here, this document is definitive.

II. HOW A TYPE III ENVIRONMENTAL DECLARATION IS BUILT

This memorandum begins not with the dispute but with the system, because the dispute cannot be understood until the system is. A Type III Environmental Product Declaration — an EPD — is built from three documents in a fixed sequence that ISO 14025 lays out without ambiguity.

Understanding what each document is for, and which obligations attach to which document, resolves the entire matter.

The analysis that follows addresses principally UL and Smart EPD — the entities whose declarations and certificates expressly invoke the ISO 14025 system. NSF International and SGS

North America are addressed in the complaint according to their respective roles in the certification and testing structure. The point here is the narrower one: where a defendant invoked ISO 14025, or operated a Type III declaration program under it, the governing standard required the very assessments omitted from the hand-dryer certifications.

A. The three documents.

The Product Category Rule (the PCR). The program operator first writes a set of Product Category Rules under ISO 14025. The PCR is the governing document: it establishes the product's function, the functional unit, the system boundaries, the testing methodology, the parameters to be reported, and the format of the declaration. Critically, ISO 14025 does not leave the content of the PCR to the operator's discretion. The standard *directly requires* that the PCR include hazard-and-risk assessment methodology (§6.7.1(f)) and identify materials and substances that can adversely affect human health across all life cycle stages (§6.7.1(g)). These are mandatory requirements of PCR construction. They are not routed to any other document, and they carry no condition.

The Life Cycle Assessment (the LCA). ISO 14025 addresses the LCA only briefly, handing its methodology to the ISO 14040 series — ISO 14040 for framework and ISO 14044 for requirements. The LCA generates the quantified environmental data the PCR calls for. And here the standard provides an election that matters to everything that follows: ISO 14025 §6.8 defines two methodological options for the LCA, distinguished by a single feature — whether a life cycle impact assessment, an LCIA, is performed. The LCA's characterization of human-health toxicity exists only if the LCIA is performed. The LCIA is optional.

The Environmental Product Declaration (the EPD). The EPD reports the results. ISO 14025 §7.2.1 requires that the EPD follow the format and include the parameters identified in the PCR. Among the EPD's mandatory core content, §7.2.1(i) requires a content declaration covering materials and substances that can adversely affect human health, in all stages of the life cycle. The EPD therefore reports two things: the LCA's data, and the content the PCR required — and the human-health content descends from the PCR, not from the LCA.

B. The sequence is binding, and deficiency propagates.

The relationship among the three documents is sequential and binding: the PCR prescribes, the LCA measures, the EPD reports. Each obligation attaches to a specific document at a specific step,

and a deficiency at any step propagates to the declaration that depends on it. This propagation is why a single false figure can be dispositive. UL's own counsel states that the drying-time measurement exists solely to calculate the product's expected energy consumption. The drying time therefore determines the energy figure; the energy figure determines the carbon figure; the carbon figure determines the environmental claims the declaration makes. If the certified drying time is wrong, every value derived from it is wrong by the same factor.

UL bound itself to this system in the PCR's own words: the PCR states that it "addresses the cradle to end of life environmental impacts of hand dryers and complies with ISO 14025." (Ex. W.) Having bound its entire declaration to the standard, UL does not get to select which of the standard's provisions apply. Nor is the binding general only. The PCR cites the operative provisions by number, twice. It provides that comparability of hand dryer declarations "will be in accordance with the requirements for comparability as described in ISO 14025, Sections 4, 5.6, and 6.7.2," and that data quality requirements "shall be treated according to the provisions of ISO 14044:2006, Section 4.2.3.6, as referenced in ISO 14025 in Section 6.7.1 and 6.7.2." (Ex. W.) Sections 6.7.1 and 6.7.2 are the provisions whose subsections (f) and (g) carry the hazard and human-health requirements. UL named them.

III. THE HUMAN-HEALTH OBLIGATION SURVIVES THE LCA CONCESSION

With the architecture in view, the load-bearing point of this memorandum can be stated plainly, and a concession made without cost.

UL, and Smart EPD after it, elected the LCA option that does not include an LCIA. Plaintiff concedes that election without reservation. The election was UL's to make. The LCA may characterize human-health toxicity only where the LCIA is performed; UL declined to perform it; the LCA UL produced does not carry that characterization. All of this is granted. Plaintiff advances no claim under any life cycle impact assessment provision, and asks that the LCIA election not be raised again as though it disposed of anything, because it does not.

The concession costs nothing, for a single structural reason: the human-health and hazard obligations never resided in the LCIA. They reside in the construction of the PCR (§6.7.1(f), (g)), in the core content of the EPD (§7.2.1(i)), and in the additional environmental information the declaration must carry (§7.2.3) — a category the standard defines as information *other than* that

derived from the LCA, precisely because the LCA, with or without the LCIA, was never the instrument assigned to it. Every one of these obligations attaches to the functional unit UL defined. UL's election not to perform the optional LCIA left every one of those mandatory provisions standing.

The consequence is that UL, in its correspondence, has defended the one document Plaintiff has already surrendered. UL points to the LCA and observes, correctly, that a life cycle assessment without an LCIA does not assess human-health toxicity. That is true, conceded, and beside the point. The obligation to assess human health was never assigned to the LCA. It lived in the PCR that ISO 14025 required UL to build, and it flowed into the EPD as core content. The obligation survives the concession intact.

Two independent defects. This memorandum establishes two independent defects, and the Court may rest on either. The first is omission: ISO 14025 required UL's PCR and EPD to address the human-health, hazard, and use-stage impacts arising within the functional unit, and they did not. The second is false data: independent of any omitted assessment, the drying-time figure UL accepted and reported cannot be achieved under field conditions, and that figure drives the energy and carbon values the declaration reports. The first defect concerns what the certification excluded. The second concerns whether what it included was true. Neither depends on the other, and either alone is sufficient.

IV. THE FUNCTIONAL UNIT UL DEFINED, AND WHAT IT CONSISTS OF

The obligation that survives the concession attaches to a specific object: the functional unit UL itself defined. UL's EPD defines it as "the drying of 100,000 hand dryings, to dryness equaling 0.25 grams of residual water or less." [Exhibit CC] This is the quantified performance of the product system under ISO 14025 §3.14 and ISO 14040 §3.20. It is what UL certified, and it defines the boundary of the product's environmental evaluation. UL drew that boundary.

That threshold is itself a weakened one. The NSF P335 protocol for hygienic commercial hand dryers sets a residual-moisture specification of 0.1 gram; UL's PCR certifies to 0.25 gram — two and a half times weaker — and the PCR committee recorded that it "considered" P335 in creating the PCR. The committee thus had the stricter hygienic standard before it, and both wrote a weaker threshold and declared no hygienic parameter at all.

A. The functional unit is a physical event with a fixed set of constituents.

The functional unit is not an abstraction, and it is not an interval of energy. It is a physical event, repeated 100,000 times, and that event has an irreducible set of constituents. Every one of the 100,000 cycles requires, at minimum: a dryer, electricity, a wall, a floor, air, hands, water, time and dryness. None is optional. A cycle cannot occur without a machine to perform it, power to drive it, a mounting surface to hold it and a floor beneath, air as its working medium, hands as its object, water as the substance it removes, time over which it acts, and the dryness that completes it. The ninth of these is UL's own: the unit is not defined by duration but by endpoint, and the endpoint is dryness. A cycle in which the machine runs and the hands do not reach 0.25 grams is not a cycle UL certified. It is the machine operating, and the declared service not occurring. NSF fixed the same element independently, at 0.1 gram within one operating cycle or fifteen seconds. Neither certifier defined the event by how long it takes. Both defined it by whether it finished. These are not conditions adjacent to the functional unit. They are what the functional unit is made of.

Two of these constituents are entailed by the PCR's own method, not merely by common sense. The PCR requires that the dryer be tested "at a mounted height of 44 ± 2 inches (112 ± 5 cm) from the floor." (Ex. W, App. II, §8.1.2.) A mounting surface and a floor are therefore entailed by the geometry the PCR itself prescribes; the certified result cannot be produced by a dryer suspended in free space.

Every one of these constituents is "environmental" by the standard's own definition. ISO 14025 §3.18 defines environmental impact by explicit reference to ISO 14001:2004, which defines "environment" as the surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, "humans, and their interrelation." [Exhibit Zb] The air is environmental; the water is environmental; the hands — being human — are environmental; the wall and floor are the surroundings themselves. There is no constituent of the functional unit that falls outside "environment" as the governing standard defines it. This is developed in Section V and forecloses the defense that the impacts at issue are matters of "safety" rather than environment.

B. What the functional unit does: it removes the water and puts it in the room.

A hand dryer performs its function by blowing the water off the hands with a high-velocity jet of air. Hands freshly washed carry approximately 7.31 grams of water. (Ex. F.) Reaching the dryness the PCR certifies — 0.25 grams or less — means nearly all of that water is driven off the hands each

cycle. That water does not disappear. It is displaced into the surrounding space: into the air, onto the required mounting surface and the adjacent wall, onto the floor, and onto the user. Removing the water from the hands and depositing it elsewhere is not a side effect of the product; it is what the product does.

The water so displaced is not clean water. It is wash water carrying microbial load, dispersed by downdraft-dispersal dryers on an airstream exceeding 400 miles per hour and deposited onto the mounting surface, the wall, the floor, and the user. The output flow entailed by the functional unit is therefore a contaminated output flow.

C. The consequences, measured within the boundary UL drew.

Air and microbial amplification. The dryer draws ambient restroom air across its internal components and expels it at high velocity onto the user's wet hands. The air delivered to the hands contains bacteria and fungi amplified by a median factor of 49.6× under the original LB-agar methodology and 110× under broader-spectrum TSA methodology, compared with the ambient restroom air. [Exhibits A, I]

Causal attribution. This amplification is attributable to operation of the dryer. In restrooms equipped with both a hand dryer and a white-paper-towel dispenser, Plaintiff sampled, in the same room on the same day with the same media, the ambient air, the white paper towel, and the dryer output air. Across the broad-spectrum corpus those three resolve to medians of 2 CFU for ambient air, 1 CFU for the white paper towel — statistically indistinguishable from ambient at $p = 0.24$ — and 200 CFU for dryer output. Because both interventions are tested in the identical room at the same moment, every environmental confounder is held constant. Because the ambient air, the towel, and the dryer were sampled in the same room, on the same day, using the same media, the greatly elevated dryer result cannot be attributed to ambient deposition alone. The room supplies the baseline; operation of the dryer produces the amplification. Plaintiff does not contend, and need not establish, whether that amplification arises from entrainment, concentration, internal contamination, redistribution, or a combination of mechanisms. [Exhibits A, I]

Mold. Across the formal wandering-plume observational set, visible mold was present on or under the dryer at the air-outlet zone at 100% of the downdraft-dispersal installations audited. [Exhibit J] Mold was additionally observed at two insert-type installations — an Aike unit at a ramen

restaurant and a Dyson AB14 at a Whole Foods. Plaintiff documents this co-occurrence as an observed condition at the device, and has observed the same condition informally across more than two hundred restrooms visited over the course of the research.

User exposure and the residual. At the manufacturer's claimed drying times of eight to fifteen seconds, hands remain wet, carrying a mean of 2.83 grams of residual water — more than eleven times the 0.25-gram threshold the functional unit certifies, and more than twenty-eight times the 0.1-gram specification NSF Protocol P335 sets for the same product. Achieving that threshold requires seventy to ninety seconds, during which the user stands in the amplified output. [Exhibits B, H]

These interactions are not peripheral to the functional unit. They are the functional unit in operation. Air delivery, water removal, water destination, microbial load, surface contamination, and user exposure all occur during each drying event the functional unit measures. Nothing documented in Plaintiff's complaint occurs outside the boundary UL drew. Each of these interactions is established at a single cycle. One drying event cannot occur without a dryer, electricity, a wall, a floor, air, hands, water, time and dryness, and the case requires no more than one. What follows is additional and independent. UL elected to express its functional unit as one hundred thousand repetitions of that event, and a repeated event leaves a record: water and biological material deposited during one use remain on the device, the wall and the floor, and later cycles occur in the environment earlier cycles created. UL applied the multiplier of one hundred thousand to operational energy and reported the product of that multiplication. It applied it to nothing else. The water, the microbial load and the surface deposition arising from those same one hundred thousand events appear nowhere in the declaration.

D. The PCR inventories none of it, while claiming complete coverage.

Having defined the functional unit as the removal of water from hands, and having claimed complete life-cycle coverage, the PCR omits the contaminated water output flow its own functional unit necessarily produces, and the mold that output flow accompanies. The PCR's declared parameters cover global warming, acidification, eutrophication, smog, ozone depletion, resource depletion, primary energy, and water as a resource. Not one parameter addresses the microbial output, the dispersed wash water, or the mold. The single module in the EN 15804 architecture reserved for the product's use-stage emissions — module B1 — was given over to

reporting operational energy instead, a repurposing UL recorded in its own footnote and which Section VIII addresses in full. Nor was it the only such repurposing. A second footnote in the same document records a second departure: "EN 15804 defines B4 as the module for reporting product replacement impacts. This PCR deviates from this approach by using B3 for reporting replacement energy use." (Ex. W, fn. 2.) The two are not alike in consequence. Moving replacement impacts from B4 to B3 relocates replacement reporting between two modules that both concern replacement, and displaces nothing. Moving operational energy into B1 filled the one module reserved for what the product discharges during use, and displaced the discharge entirely. What the second footnote establishes is the baseline: UL announced module departures as a matter of practice, and justified none of them.

This is, in the vocabulary of the life cycle assessment UL invoked, a burden shifted rather than a burden borne. An assessment that reports a favorable energy and carbon figure while the water and the microbial load it omits are displaced onto the walls, the floor, and the user has not reduced the product's environmental burden; it has moved that burden out of the accounting and into the room. Burden-shifting of exactly this kind — improving one reported impact by exporting another that goes unreported — is the failure the life cycle framework exists to expose, not to license.

E. The defect requires no interpretation of the word "environment."

This conclusion rests on three things no one can dispute: what the dryer does (blows the water off the hands), where that water goes (off the hands and into the room — it cannot vanish), and what the PCR's own method requires (a dryer mounted on a surface, above a floor). The displaced water is an output of the very function the PCR defined. An environmental accounting that measures the energy used to move the water, but never accounts for the water it moved, is incomplete on its face. Plaintiff need not prove that "environment" means the restroom. Plaintiff need prove only that water blown off a person's hands lands somewhere — and that the PCR never says where.

V. THE INTERPRETIVE LAYER: "ENVIRONMENT" REACHES HUMAN HEALTH

The functional-unit argument in Section IV wins without any contested reading of the word "environment." This Section supplies the layer beneath it: even if the reach of "environment" were contested, the standard's own text resolves it, and resolves it against UL. This is the foundation and

the fallback — it proves the point is correct — and it forecloses any attempt to escape the functional-unit argument by narrowing the word.

A. The binding definition.

ISO 14025 §3 provides that the terms and definitions of ISO 14050 and the standard itself apply throughout. The preamble binds every defined term to every use of that term. ISO 14025 §3.18 defines "environmental impact" as "any change to the environment ... resulting from an organization's environmental aspects," expressly citing ISO 14001:2004 as the source. ISO 14001:2004 §3.5 defines "environment" as the "surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation." [Exhibit Zb] This is the only definition of "environment" in the entire standards family UL invoked. There is no competing definition in ISO 14020, in ISO 14025, or in EN 15804. Humans are in the definition. Human-health interactions during product use are environmental interactions by the governing standard's own terms.

Two further provisions in the standards UL selected for its methodology state the same position independently of ISO 14001. ISO 14040 sets out the key features of a life cycle assessment, and among them is comprehensiveness: "LCA considers all attributes or aspects of natural environment, human health and resources. By considering all attributes and aspects within one study in a cross-media perspective, potential trade-offs can be identified and assessed." [Exhibit Za, §4.1.5] ISO 14044 defines the endpoints against which an assessment measures harm in the same three terms: a category endpoint is an "attribute or aspect of natural environment, human health, or resources, identifying an environmental issue giving cause for concern." [Exhibit Z, §3.36] Neither provision is qualified or limited to any phase of the assessment.

The definitional structure therefore runs four deep, across every standard in the family UL entered. ISO 14001 places humans inside the definition of environment. ISO 14025 adopts that definition. ISO 14040 states that life cycle assessment considers human health as one of three subjects. ISO 14044 defines the endpoint universe in the same terms. Human health is not adjacent to environmental assessment in the ISO framework. It is one of its subjects.

The second sentence of ISO 14040 §4.1.5 supplies the reason. Comprehensiveness exists so that "potential trade-offs can be identified and assessed." An assessment that reports a favorable carbon figure while omitting the microbial load and dispersed water it displaces into the room has

not identified the trade-off. It has concealed it, in the one document the methodology provides for exposing it.

B. The definition would be surplusage on UL's reading.

The standard's substantive provisions confirm the definition and foreclose the narrow reading as a matter of construction. ISO 14025 §7.2.3(a)(2) requires consideration of toxicity related to human health; §7.2.3(a)(3) of geographical and location-specific aspects; §7.2.3(k) of the potential for incidents. If "environment" in the standard meant only global impact categories such as energy and carbon, each of these provisions would be surplusage — the standard would command consideration of human-health, location, and incident impacts that, on UL's reading, no EPD could ever address. A governing standard is not read to render its own mandatory provisions meaningless. The provisions exist because "environment," in the standard's use, reaches exactly these impacts.

C. The parent standard and the life-cycle command.

Two further provisions independently reach the same result. ISO 14020, the parent standard, requires at §4.2.2 that declarations address aspects related to the "actual circumstances" of use — the conditions in which the product operates, not the conditions of a test chamber — and at §4.7.2 that requirements be expressed in terms of performance rather than descriptive characteristics. Having named the product's function "hygienic," UL was bound to treat hygienic performance as a measurable characteristic; the contention that "hygienic" is mere labeling cannot survive §4.7.2. And ISO 14025 §5.3 closes with an affirmative command that disposes of the LCA-scope defense directly: "Relevant environmental aspects that have not been covered by LCA shall be addressed using other appropriate methods." An aspect not reached by the LCA is not thereby excused; it must be addressed by other means and made part of the declaration. The bacterial amplification, water dispersal, and surface colonization, whether or not the LCA reached them, were required by §5.3 to be addressed. They were not addressed at all.

VI. THE MANDATORY PROVISIONS UL FAILED

The obligations established above are not a single link that UL might break. They are independent, overlapping mandates, each attaching to the functional unit UL defined, each sufficient on its own. To prevail, UL would have to defeat each of them separately.

A. UL's stated exclusions name only capital and personnel.

ISO 14025 §5.3 requires that all relevant environmental aspects of the product throughout its life cycle be taken into consideration and become part of the declaration, and that any exclusion of a life cycle stage be stated and justified. UL's PCR states exactly two exclusions: capital equipment and personnel impacts. Health was not among them. Under §5.3, an aspect is either included and assessed, or excluded and justified. UL did neither.

The disclosure UL made was itself a mandatory act, not a courtesy. ISO 14025 §6.7.1(j) requires the PCR to state "information on which stages are not considered, if the declaration is not based on an LCA covering all life cycle stages," and §7.2.1(j) carries the identical requirement into the EPD. UL's representation that only capital equipment and personnel were excluded is a §6.7.1(j)/§7.2.1(j) disclosure, and those provisions required the list to be complete. The use-stage health, microbial, and water impacts were omitted from a list the standard required to be exhaustive. The omission is therefore not merely an unjustified exclusion under §5.3; it is an incomplete mandatory disclosure under §6.7.1(j) and §7.2.1(j).

B. The requirement stated three times, and carried into the EPD.

The hazard-and-health requirement does not appear once. ISO 14025 §6.7.1(f) requires the PCR to include "requirements for provision of additional environmental information, including any methodological requirements (e.g. specifications for hazard and risk assessment)." Hazard and risk assessment is the standard's own explicit example. Section 6.7.1(g) requires the PCR to identify "materials and substances that can adversely affect human health ... in all stages of the life cycle." These two requirements are restated verbatim for comparability at §6.7.2(f) and (g). The standard sets the requirement twice in the PCR provisions — in construction and in comparability — each mandatory, neither reaching the LCIA. The requirement recurs, in all, at the life-cycle basis provision of §5.3, at PCR construction under §6.7.1(f) and (g), at comparability under §6.7.2(f) and (g), in the core content of the EPD at §7.2.1(i), in the anti-omission requirement of §7.2.4(d), in the business-to-consumer content rule at §9.2.1, and in the third-party verification §9.4 compels — seven independent points in a single standard, no one of which UL satisfied.

The requirement then enters the EPD as core content. ISO 14025 §7.2.1(i) requires the EPD to include a "content declaration covering materials and substances ... that can adversely affect human health and the environment, in all stages of the life cycle." This is core EPD content in §7.2.1

— not additional information in §7.2.3 — and the exclusion clause UL relies upon, which resides in §7.2.3, cannot reach it. The standard admits one narrow escape from §7.2.1(i), and it is conditioned the way every other departure in this standard is conditioned: "With appropriate justification, requirement i) does not apply to proprietary information relating to materials and substances covered by intellectual property rights or similar legal restrictions." No such justification appears in UL's Product Category Rule or in its Environmental Product Declaration.

The business-to-consumer rule bars omission outright. ISO 14025 §9.2.1 forecloses the omission from a further direction. For a business-to-consumer declaration — and UL's EPD is expressly business-to-consumer, as its own scope states — §9.2.1 provides that no part of the content required by the PCR shall be omitted or simplified. The content required by §6.7.1(f), §6.7.1(g), and §7.2.1(i) was omitted in its entirety. Where the exclusion clause and the "where relevant" qualifier contest whether the content was required, §9.2.1 removes even the discretion to omit it once required: for a business-to-consumer declaration the omission is categorically barred.

C. The exclusion clause fails on its own terms.

UL's entire defense rests on one clause in §7.2.3, which excludes "information and instructions on product safety unrelated to the environmental performance of the product," together with that section's "where relevant" qualifier. The clause cannot bear the weight, for several independent reasons.

- **The operative word is "unrelated."** Bacterial amplification during the functional unit is the product's environmental performance — the product interacting with the environment, which includes humans, during its defined operation. It cannot be unrelated to environmental performance because it is environmental performance.
- **The same section classifies as environmental what the clause purports to exclude as safety.** Section 7.2.3(a)(2) names "toxicity related to human health," and §7.2.3(h) names "hazard and risk assessment on human health and the environment," among the environmental issues the declarant is to take into consideration. Whether that consideration is compelled or recommended does not matter to the point: the drafters placed human-health toxicity and hazard assessment inside a list of environmental issues. A provision does not classify a subject as an environmental issue in its enumerated list and exclude the same subject as unrelated product safety in its closing clause. What the

section commands outright is its opening sentence: a declaration "shall include, where relevant, additional information related to environmental issues." The exclusion reaches genuinely unrelated product safety — electrical and fire safety, the territory of UL 499 — not the health assessment §7.2.3 addresses. UL's own document confirms the boundary. Section 5.1 requires the declaration to carry a "statement of conformance with relevant product safety standards" according to Appendix III, and Appendix III lists UL 499, UL 507, the CSA and IEC 60335 appliance safety standards, the EN 55014 and IEC 61000 electromagnetic compatibility standards, and the RoHS and WEEE directives. No hygiene standard appears in it. (Ex. W, App. III.) Product safety, in UL's own conformance regime, is electrical, electromagnetic and hazardous-substance safety. Hygiene — the function the PCR declared at §1.2 — appears nowhere in that regime, and nowhere among the declared parameters.

- **The clause cannot reach the PCR or the core EPD content.** Situated in §7.2.3, the exclusion governs additional-information reporting. It cannot reach backward into §6.7.1(f) and (g), which govern PCR construction, nor override §7.2.1(i), which is core EPD content.
- **"Where relevant" is a gate, not an exit.** The qualifier requires the operator to determine relevance; it does not permit the operator to skip the determination. Once the gate is open, the standard provides that the enumerated items shall "as a minimum" be considered.

The function statement is not a label; it is a mandatory act. ISO 14025 §6.7.1(a) requires the PCR document to include the "product category definition and description," with function, technical performance and use given as the standard's own examples of what that description comprises. UL discharged that obligation in a single sentence — the only statement about hygiene anywhere in the thirty-seven-page PCR: hand dryers "are electric devices used to provide a hygienic method to dry hands in public washrooms." [Exhibit W, §1.2] That sentence is not marketing copy and not a product-identification tag. It is the functional definition the governing standard compelled UL to supply, written by UL, in the document UL authored. Having been required to state the product's function, and having stated it as hygienic drying, UL cannot now describe the word as incidental. Either UL meant it — and a PCR that defines a hygienic function while establishing no hygiene evaluation has omitted the assessment of the very function it declared — or UL did not mean it, and the mandatory functional definition in a document purchasers are entitled to rely upon is itself a misrepresentation. Both roads end in liability.

For a product whose PCR defines its function as "a hygienic method to dry hands," the relevance of its hygienic and microbial impact is established by UL's own functional definition. UL never assessed these aspects at all; silence is not a determination of irrelevance.

The clause describes pollution, whatever it is called. Consider the same facts in a setting no one would mislabel. If a factory drew in river water and discharged it carrying bacteria at fifty to a hundred times the intake concentration, no one would call that discharge a matter of "product safety." They would call it pollution — an environmental impact. The hand dryer does precisely this to the air of the room: it draws in ambient air and delivers it to the user's hands carrying microbial load amplified many times over, during the functional unit UL defined. Cleaner input, dirtier output, discharged into the room during the product's operation. That is environmental performance, not collateral product safety.

D. Two realized incidents under §7.2.3(k).

ISO 14025 §7.2.3(k) requires consideration of the "potential for incidents that can have impact(s) on the environment." Plaintiff does not rely on potential. Two incidents are realized and measured. Wash water dispersed onto the floor by an airstream exceeding 400 miles per hour is a realized water-deposition event, occurring during the functional unit, that creates the very slip-hazard condition §7.2.3(k) exists to capture. And mold colonization present at the device across 100% of the downdraft-dispersal installations in the formal observational set, and at insert-type installations as well, is a biological incident, not a potential one. [Exhibit J] The provision is not merely satisfied; it is doubly satisfied by two observed certainties, neither of which the EPD reports.

E. The anti-omission provision.

ISO 14025 §7.2.4(d) requires that additional environmental information be unlikely to result in misinterpretation, "particularly through the omission of certain facts." UL's EPD omits actual field drying performance, the biological contamination of the output air, the water dispersal onto restroom surfaces, the mold colonization at the device, and any health impact on the user. A purchaser reading the EPD concludes the dryer dries hands in roughly eight seconds, consumes a small fraction of the energy it actually consumes, is hygienic, and has minimal use-stage impact. Every one of those conclusions is wrong, and every wrong conclusion results from an omitted fact. That is the misinterpretation §7.2.4(d) forbids.

VII. UL'S DEFENSES, AND WHY EACH FAILS ON THE STANDARD'S OWN TERMS

Only now, with the architecture, the obligation, and the injury established, do UL's defenses become legible. UL has had two opportunities to respond to Plaintiff's analysis. Through its Associate General Counsel for Litigation and Disputes, UL offered six positions across two letters. [Exhibits GGG, III] They divide into two arguments, and the standard defeats both.

A. "The certification requires no health or toxicity reporting."

UL's first argument, spanning its defenses that hand dryer EPDs do not pertain to hygiene, do not pertain to safety, and are limited by the §7.2.3 exclusion clause, is that the certification carried no obligation to assess or report the product's human-health impact. Sections III through VI dispose of it. The obligation did not live in the LCA UL declined to complete; it lived in the PCR ISO 14025 required UL to build and in the EPD's core content. The governing definition of "environment" includes humans, so the impacts at issue are environmental performance, not "unrelated" product safety. And the requirement is stated three times in the PCR provisions the exclusion clause cannot reach. UL characterizes the use-stage damage as a safety matter outside the environmental scope of an EPD; to sustain that characterization, UL would have to identify a constituent of the functional unit — dryer, electricity, wall, floor, air, hands, water, time, or dryness — that falls outside "environment." There is none.

B. "The 8.355-second drying time was Excel's number, not ours."

UL's second argument is that it did not certify the drying time — that the figure was supplied by the manufacturer and UL bears no responsibility for it. This argument fails on Section 8 of the standard UL bound itself to, which exists precisely to place that responsibility on the certifier regardless of who supplied the data.

ISO 14025 §8 establishes a multi-layer verification system, and every layer is the program operator's responsibility. The PCR review (§8.1.2) must confirm the PCR was developed in accordance with §6.7.1 — the provision UL's PCR does not satisfy. Data verification (§8.1.3) must confirm representativeness, reproducibility, and plausibility. Declaration verification (§8.1.4) must confirm the information is "valid and scientifically sound." UL's own Product Category Rule is more specific still, and it disposes of the argument on UL's own terms. Appendix I requires third-party verification by a certified body testing laboratory recognized in the IECCEB Scheme, with direct or

on-site third-party testing of the Dry Time Testing used to determine the reported dry time. It provides that the dry time test "shall be performed in full by the certified third party," and that "use of manufacturer's employees, vendors and affiliates are prohibited as hand drying test panelists." It requires the results to be documented by individual test panelist, with test date, test equipment and calibration expiration, test environment conditions, and the derivation of the minimum published dry time. (Ex. W, App. I.) Section 3.2 requires that "the hand dry time shall be third party tested and verified," and Section 5.1 requires the declaration itself to carry "a statement of third party verification of reported dry time." A certifier that wrote those requirements did not decline to certify the drying time; it required the drying time to be independently tested, verified, and declared. A certifier who accepts a supplier's figure without verifying it has not escaped the verification duty; it has breached it. Confirmation that information is valid and scientifically sound is certification — there is no functional distinction between the terms. UL now says it did not certify the drying time; §8.1.4 required UL's verifier to confirm that very figure was valid and scientifically sound, and the verifier did.

The figure that verification passed is unattainable by the products certified under it. Plaintiff conducted 462 field trials using UL's own gravimetric methodology and found zero compliance with the certified drying time; the mean residual water at the claimed times was 2.83 grams, more than eleven times the 0.25-gram threshold. [Exhibits B, H] The near-perfect correlation of results across three independent manufacturers establishes that the limitation is physical rather than specific to any one machine. The phrase is not borrowed from a drying-curve model; it is drawn from the physical record itself. A certified endpoint that cannot be reproduced once across 462 physical trials, using the very gravimetric method the certification prescribes, is not merely unsupported. For currently manufactured downdraft dispersal dryers it is unattainable under the conditions the certification purports to describe. A verification procedure that cannot catch an unattainable result is defective, and the certifier that operated it is responsible for what it certified.

C. The verifier was not independent, and the data was not consistent.

Two further failures compound the verification breach. ISO 14025 §8.2.1 requires that the verifier not have been involved in developing the declaration. UL selected its own EPD Project Manager to verify the EPD produced by the program he managed — a structural conflict the standard prohibits, and one UL's own Product Category Rule prohibits in its own words. Table 8 of the PCR, the verification block every declaration under it must complete, offers a choice of external or internal

verification and states the condition on the second: "if internal, then verifier must not have been connected in any manner with the EPD or LCA." (Ex. W, Table 8.) The verifier was the manager of the programme that produced the declaration. The defect is not one of independence alone. UL designated its declaration business-to-consumer in the Product Category Rule itself — Table 1 states the primary audience as "Business to business (B to B) and/or Business to consumer (B to C)" (Ex. W, Table 1) — and §9.4 provides that verification "shall, in the case of Type III environmental declarations used for business-to-consumer communication, be carried out by a third party." Figure 3 of the standard records the same rule on the face of the verification block: third-party verification is optional for business-to-business communication and mandatory for business-to-consumer. A third party is a person or body "recognized as being independent of the parties involved." §3.10. The programme operator's own employee is not one. The verification the standard made mandatory was therefore not merely compromised; it was not obtained. And ISO 14025 §6.3(d) requires the program operator to safeguard the consistency of data within a program. Two certificates exist for the same product, under the same functional unit, at the same 0.25-gram threshold and the same eight-second dry time:

- The UL EPD reports operational energy of 0.01325 MJ per use and global warming potential of 286 kg CO₂eq per 100,000 uses. [Exhibit CC]
- The SmartEPD certificate reports operational energy of 0.12 MJ per use and global warming potential of 174 kg CO₂eq per 100,000 uses. [Exhibit AA]

The energy figures differ by a factor of approximately nine; the global warming potential reported by the SmartEPD certificate is roughly 39 percent lower than the UL EPD's for the identical product. Thomas P. Gloria signed both as scientifically sound. Both cannot be. And the SmartEPD certificate assigns three roles that ISO 14025 requires to be independent — program operator, independent critical reviewer, and independent external verifier — to a single individual — Anna Lasso — who also sat on the PCR committee whose rules both certificates claim to follow. [Exhibit AA]

D. What UL did not defend.

Across two formal responses, UL did not assert that 8.355 seconds to 0.25 grams is accurate. It did not dispute zero compliance across Plaintiff's 462 field trials. It did not explain the ninefold energy discrepancy between the UL and SmartEPD certificates for the identical product. UL defended the scope of its obligations; it did not defend the truth of its data.

The reliance the standard creates is legally cognizable. The consequence is not merely regulatory. A certification body that issues a declaration a purchaser is entitled to rely upon, and that reports data this far from the truth, exposes itself to liability for negligent misrepresentation under Restatement (Second) of Torts §552 — liability the Third Circuit has affirmed against a testing-and-certification defendant in *Brand Marketing Group v. Intertek Testing Services*, 801 F.3d 347 (3d Cir. 2015). The entitlement to rely is not incidental, and it is not the purchaser's alone. ISO 14025 §7.1 requires that details of the PCR be available upon request "to the purchaser or user of the product." The standard's stated objectives at §4(b) include assisting "purchasers and users to make informed comparisons between products." And §3.16 defines a consumer as an individual member of the general public "purchasing or using goods, property or services for private purposes." A person who uses a certified hand dryer in a public restroom is a user within §7.1, a user within §4(b), and a consumer within §3.16. The EPD's representations — including its statement of a "hygienic" product — are made to be relied upon by that person.

VIII. EN 15804: THE STANDARD UL SELECTED

The foregoing rests on ISO 14025 and ISO 14020. This Section addresses EN 15804, the European standard UL voluntarily selected as its reference framework, which independently confirms the same obligations from outside the LCA. Plaintiff makes no claim under any life cycle assessment provision of EN 15804; that methodology is conceded. EN 15804 is addressed only where it mirrors the binding requirements of ISO 14025 and where UL's own treatment of it is revealing. Because this memorandum quotes EN 15804 only by clause and in short operative passages, and does not reproduce or attach the standard, nothing here trespasses the standard's copyright.

A. UL selected the standard, and cannot disclaim what it invoked.

UL's PCR states that it "follows the approach established by EN 15804 for categorizing the various life cycle stages," and that although EN 15804 is designed for building and construction products, "consistency with EN 15804 will increase the utility of this PCR" by allowing the hand dryer results to be contextualized with construction products. (Ex. W.) No authority required a 2016 hand-dryer PCR to track a European construction-sector standard. UL adopted it by choice, to borrow the construction-EPD framework's credibility. Having invoked the framework's authority, UL cannot disclaim the framework's requirements. EN 15804 is, moreover, an implementation of the very standard UL concedes governs its work: it was prepared to conform to ISO 14025 and lists ISO

14025 among the documents indispensable to its application. It is not a foreign instrument; it is the ISO 14025 family, applied to a sector.

The framework's own non-LCA categories. EN 15804 §5.4.4 makes the point structurally: it creates two categories of mandatory EPD information expressly "not derived from LCA" — physical data on use-stage functional performance, and information on emissions to indoor air, soil, and water during use. Both describe what UL omitted; both sit outside the life cycle assessment entirely, so UL's election to forgo the LCIA does not reach them. The two are not conditioned alike. The second, on emissions to indoor air, is tied to the publication of harmonised measurement methods and is addressed in subsection D below. The first is not. Information characterising the product's technical and functional performance during the use stage carries no such condition. In the framework UL adopted, how well and how quickly the product performs its function during use is information sitting outside the life cycle assessment altogether.

B. Module B1: the slot reserved for emissions, filled with energy.

EN 15804 defines module B1 as the category for the environmental aspects and impacts connected to the normal use of the product — the emissions the product releases while performing its function — and it expressly removes energy from B1, placing operational energy in module B6. B1 is the emissions module. UL knew this. UL's PCR recites, in a footnote, that EN 15804 defines B1 as the category for "emissions directly from the product" and B6 as the category for operational energy — and then states that "this PCR deviates from this approach by using B1 for reporting operational energy use." (Ex. W, fn. 1.)

The significance is difficult to overstate, and it is the center of the EN 15804 analysis. The single module in the entire architecture reserved for what the product discharges during use was given over to the one quantity the standard excludes from it. Having identified the emissions module and recorded its purpose, UL entered energy in its place, and reported no use-stage product emissions at all. The record confirms this at the certificate level as well as the PCR level: the UL EPD's B1 column carries the operational-energy and derived figures, not the product's emissions. [Exhibit CC] A hand dryer, in its normal use, discharges water stripped from the user's hands — water carrying the microbial load measured in this matter — into the air and onto the surfaces of the room. That discharge is precisely the environmental aspect B1 exists to capture. UL identified the module, recorded its purpose, and left it empty of the very data it exists to hold. Plaintiff does not

contend that EN 15804 imposed any obligation on UL; it did not, and no claim rests on it. What the framework establishes is what UL knew and what UL chose. The framework UL elected conditions departure from the module categorisation on two acts, not one: a deviation is to be transparently reported and justified. UL's footnote performs the first. It offers no justification, in the footnote or anywhere else in the thirty-seven-page document. And the framework supplied a course for a module a declarant does not intend to fill: an undeclared module is marked ND. Two courses were open within the framework UL adopted, and each would have left the certifier on record — declare module B1, or mark it ND. UL took neither, and entered operational energy instead.

C. UL's own impact-assessment election falsifies its disclaimer.

UL's EPD represents that life cycle assessments are "not meant to assess human health toxicity." [Exhibit CC] UL's own Product Category Rule contradicts that representation. At §4.7 the PCR directs that in North America "all impact categories shall be calculated using the TRACI 2.1 set of impact assessment methods." (Ex. W.) TRACI 2.1 includes impact categories for human health. UL then set out, in Table 2 of the same document, the six impact categories to be reported: global warming, acidification, eutrophication, smog creation, ozone depletion, and fossil depletion. Not one of TRACI's human-health categories appears. Plaintiff does not contend that any calculation requirement bound a program operator who performed no LCIA; that is conceded. The point is narrower and survives the concession entirely: the methodology UL's disclaimer describes as nonexistent is the methodology UL itself elected. UL adopted an impact-assessment method that assesses human health, and then selected around it. UL's disclaimer does not describe a limitation of the discipline; it describes a choice UL made, recast as a limitation of the discipline.

D. The reporting condition UL will invoke, and why it does not reach here.

EN 15804 conditions one of its use-stage reporting provisions — the reporting of regulated dangerous substances to indoor air, soil, and water — on the publication of harmonized measurement methods by CEN Technical Committee 351. UL may be expected to argue that, absent such published methods, no obligation attached. The condition attaches to that separate provision alone. It does not attach to the definitional question of what module B1 is for, and it does not attach to the binding obligations in ISO 14025 §§6.7.1(f), 6.7.1(g), and 7.2.1(i), none of which depends on any CEN measurement method. This memorandum rests on those ISO 14025 obligations and on the B1 definition.

IX. UNIVERSAL OMISSION IS NOT A DEFENSE

One defense remains, and it will be raised whether or not it appears in correspondence: that no EPD program in the hand-dryer sector conducts the health or emissions assessment Plaintiff contends is required, and that universal omission establishes reasonableness. The premise does not help UL, for two reasons.

First, the instrument is capable of the assessment. As Section VIII establishes, the standard UL selected defines human toxicity as an impact category with a specified methodology. The limitation UL describes is a description of UL's choice, not of the instrument. Second, universal disregard does not excuse an imperative precaution. In *The T.J. Hooper*, 60 F.2d 737, 740 (2d Cir. 1932), Judge Learned Hand held that "a whole calling may have unduly lagged in the adoption of new and available devices [T]here are precautions so imperative that even their universal disregard will not excuse their omission." The danger here is measured, not speculative: a product that amplifies microbial contamination by 49.6× to 110× in the air it directs at users, disperses contaminated water onto surrounding surfaces during every use, and shows visible mold colonization across every downdraft-dispersal installation in the formal observational set. And the "industry practice" of omitting health assessment was not established by independent professional consensus. It was set by PCR committees seated with manufacturer representatives and competing certifiers, with no public-health official, no consumer representative, and no independent researcher — the composition documented in Section X. An industry practice designed by the parties who benefit from the omission is not evidence of reasonable professional conduct.

X. THE PCR REVIEW PANEL WAS NOT INDEPENDENT

Independence is not an internal housekeeping preference. For the owner of a certification mark it is a condition of holding the mark at all. In *Idaho Potato Commission v. M & M Produce Farm & Sales*, 335 F.3d 130 (2d Cir. 2003), the Second Circuit vacated an order that had barred a licensee from seeking cancellation of a certification mark, holding that a no-challenge provision in the licensing agreement was unenforceable because it violated the public policy embodied in the Lanham Act, and remanded for consideration on the merits of allegations that the mark owner had discriminatorily refused to certify, imposed standards for certification beyond what the mark was registered to certify, and lacked the independence necessary for certification mark owners. The Eleventh Circuit cited that decision in *Warren Technology, Inc. v. UL LLC*, 962 F.3d 1324, 1329 (11th

Cir. 2020), when identifying what a nationally recognized testing laboratory may be answerable for — failure to meet its own standards for testing, inconsistent interpretation or application of the standard, and lack of independence. What ISO 14025 requires of a programme operator, the Lanham Act requires of a mark owner, and neither requirement is satisfied by the arrangement described in this section.

ISO 14025 §8.1.2 requires that the PCR be reviewed by an independent third-party panel, and §8.2.3 requires the program operator to ensure a "reasonable mix" of interested-party perspectives — a category ISO 14025 §5.5 defines to include not only manufacturers and trade associations but purchasers, users, consumers, non-governmental organizations, and public agencies. UL's PCR committee comprised ten manufacturer representatives — four from Excel Dryer, three from World Dryer, and three from Hokwang — and two UL staff. (Ex. W, §1.1.) No public-health official, no consumer representative, and no independent scientist sat on it. For a declaration designated business-to-consumer, §9.3 is specific: the interested parties involved in the development of the declaration or programme "shall include representatives of both consumer interests and environmental interests." Neither was present.

The three-member review panel fares no better, and its defect is documented in the PCR itself. The panel chair authored one of the two manufacturer-commissioned life cycle assessments the PCR relied upon — the assessment commissioned by Excel Dryer. (Ex. W, §§1.6, 1.9; Ex. WWW.) A second panelist co-authored the other — the assessment commissioned by Dyson. (Ex. W, §§1.6, 1.9; Ex. FF.) Two of the three reviewers of the rules thus sat in review of work their own firms had produced for the manufacturers those rules would govern. That is not independent review within the meaning of §8.1.2, and it is not the reasonable mix of perspectives §8.2.3 requires. An industry practice designed and reviewed by the parties who benefit from it is evidence of capture, not of reasonable professional conduct.

XI. THE FRAMEWORK UL DID NOT SELECT

A recognized ISO framework exists for a declaration confined to carbon and energy, and it states its own limits in terms. ISO 14067:2018, Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification, provides at §1 that it “addresses only a single impact category: climate change,” and that it “does not assess any social or economic aspects or impacts, or any other environmental aspects and related impacts potentially arising from the life

cycle of a product.” [Exhibit MMMM] A declaration prepared under ISO 14067 owes nothing on hygiene, on hazard, or on what a product emits into the room where it operates, because the standard expressly excludes those subjects.

That exclusion is the point. ISO 14067 rests on the same life cycle methodology ISO 14025 uses: §2 lists ISO 14044:2006 among its normative references, documents whose content “constitutes requirements of this document.” [Exhibit MMMM] The two instruments share a foundation and differ in scope, and when ISO wanted the narrower scope it wrote the limitation into the scope clause. A standard does not disclaim what it never contained. The comprehensiveness principle of ISO 14040 — that life cycle assessment considers all attributes of natural environment, human health, and resources — is the default. ISO 14067 is the exception, and it is an exception ISO had to state expressly to create.

ISO 14067 is also explicit that it is not the instrument that carries product category rules. Its Foreword records that the requirements and guidance on product category rules, on verification, and on communication were placed in other standards of the family rather than in the carbon-footprint standard. [Exhibit LLLL] The carbon standard points to the ISO 14025 system for precisely the obligations at issue here.

The carbon-only path was available when UL chose. ISO/TS 14067:2013 was in force in 2015 and 2016, when the hand-dryer Product Category Rule was developed. It likewise addressed “only one impact category: climate change,” and expressly provided for the adoption of product category rules developed in accordance with ISO 14025 where consistent with its own terms. [Exhibit LLLL] It was withdrawn and replaced by ISO 14067:2018. Neither edition imposes any obligation regarding hygiene, hazard, or use-stage emissions to the room.

The significance is this. In its correspondence UL has described its hand-dryer declarations as energy reports carrying no obligation to assess or report human-health impact. That description states the scope of a carbon-footprint declaration. It does not state the scope of the Type III environmental declaration UL prepared. Both instruments were available. UL selected ISO 14025, wrote a Product Category Rule under it, and recorded in that document that the PCR complies with ISO 14025. (Ex. W.) Having selected the broader declaration system — the system whose defining function is the product category rule, and whose mandatory content reaches hazard, human

health, and the use stage — UL cannot defend the declaration it produced as though it had selected the narrower carbon-only framework it did not use.

Plaintiff makes no claim under ISO 14067 and does not contend UL was required to select it. The point is one of election. The obligations UL now describes as absent are absent from a standard UL did not choose. They were present in the standard UL did choose, and UL bound its Product Category Rule to that standard in the document's own words. Nor was the carbon-only path available only in principle. It is in use in this product category. Dyson, a hand dryer manufacturer whose products are certified under NSF Protocol P335 and whose commissioned life cycle assessment the UL Product Category Rule relied upon, publishes no Type III environmental declaration under ISO 14025; it reports under ISO 14067. [Exhibit NNNN] Plaintiff draws no conclusion from that election. It establishes only that the narrower instrument UL now describes was available, was known within this product category, and was selected by a competitor at the time UL selected the broader system.

A. Two possibilities.

The election admits of two explanations, and both are before the Court.

UL understood the difference. It knew ISO 14025 carried human-health and hazard obligations and that the carbon-footprint standard did not. It selected the broader instrument regardless, and did not perform the obligations that instrument carried. The two paths differ in market value: ISO 14025 produces an Environmental Product Declaration, a recognized credential accepted in green-building certification, while ISO 14067 produces a carbon-footprint study report, which is not. Plaintiff states that difference as a fact and draws no conclusion from it. What UL understood about the difference when it selected ISO 14025, and what it was told, is a matter for discovery.

UL did not understand the difference. It believed an Environmental Product Declaration to be a document about electricity and carbon. That is what UL's Associate General Counsel described, in writing, twice, after receiving Plaintiff's analysis. [Exhibits GGG, III] It is not what ISO 14025 is. On this explanation a Product Category Rule governing an entire product category, and the declarations issued under it, were written under a standard its authors had not read to its terms, and that rule has governed declarations since.

Plaintiff does not know which. The documents establish what UL selected, what the standard required, and what UL produced. They do not establish what UL understood. That record is in UL's possession.

XII. THE CONVERGENCE

Plaintiff identified every deficiency documented in the complaint through direct field measurement before discovering that ISO 14025 requires its evaluation. The two accounts — one built from the restroom floor upward, the other from the standard's text downward — arrive at the same list of failures. False drying-time and energy claims, established by 462 field trials at zero compliance, are required to be assessed by the plausibility and soundness provisions of §8 and the performance provision of §7.2.3(b). Bacterial amplification, at 49.6× and 110× over ambient, is required by §7.2.3(a)(2), §6.7.1(f), and §6.7.1(g). Water dispersal is required by §5.3 and by EN 15804's use-stage emissions provisions. Surface contamination and mold are required by §7.2.3(k). The complaint and the standard describe the same failures from opposite directions.

The convergence is not coincidental. ISO 14025's verification, data-quality, and anti-omission provisions exist as safeguards against exactly what UL's hand-dryer program did: certify the global lifecycle impacts the product handles well, while excluding the local operational impacts it handles catastrophically.

XIII. CONCLUSION

A note on the measurements cited above. The figures in this memorandum rest on 931 individual tests conducted at 226 stores across five states and the District of Columbia, examining 169 hand dryers and 94 paper-towel dispensers, across 1,076 culture dishes from which approximately 50,000 bacterial and fungal colonies were hand counted. Every result is public, replicable, and open for inspection and debate. Every counting decision is documented and every error found and corrected is disclosed in the record. The complete methodology and the underlying data are published at handdryerstudy.com. Nothing in this memorandum asks the reader to accept a figure on the author's authority; each is offered with the method that produced it.

ISO 14025 is the international standard governing the documents UL produced, and UL bound itself to it in the PCR's own words. The human-health and hazard obligations reside in the PCR that ISO 14025 required UL to build, and in the EPD's core content — not in the LCA UL declined to

complete. They attach to the functional unit UL defined: 100,000 dryings to 0.25 grams of residual moisture, performed in the rooms where the product operates. Every constituent of that functional unit is environmental by the standard's own definition. The impacts occur inside the boundary UL drew, during the process UL defined.

UL's PCR omits mandatory requirements; its EPD reports impossible data for what it included and omits the data the standard required; its verification chain confirmed as valid a drying time its certified products cannot achieve; its EPD verifier was the program operator's own employee; and its PCR review panel was composed of the parties the rules would govern. Each deficiency independently establishes a material failure of the certification and an independent factual basis for the claims pleaded. The drying-time claim goes directly to the declared performance and to the energy calculation derived from it. The functional-unit analysis establishes bacterial amplification, water dispersal, and mold contamination as further independent failures. Each ground stands on its own.

The physics and the measurements are Plaintiff's only contribution. The functional unit is UL's. The standard is UL's. The boundary is UL's. Every obligation that governs is UL's own, in the standard UL chose. The conclusion follows from UL's own record, and it is left to the Court to draw.

APPENDICES

The complete provision-by-provision compliance analysis is set out in the accompanying comprehensive analysis of UL's PCR and EPD against the ISO 14025 standards series. [Exhibit LLL]
The testing counts on which this memorandum relies, and the full methodology behind them, are set out in the testing-counts summary and methodology. [Exhibits GGGG, HHHH]