



AUTOMATED PRELIMINARY SCREENING

Label & PPE Boundary Review

Report generated August 18, 2026

Prepared for	[REDACTED]
Job ID	SAMPLE-LB-01
Order ID	SAMPLE — redacted production test run
Review type	Automated release

AT A GLANCE — 12 FINDINGS

2 CRITICAL	6 SIGNIFICANT	4 OBSERVATION	0 INFORMATION
----------------------	-------------------------	-------------------------	-------------------------

Arc Flash Files is a product of PEFG, PLLC.

PEFG — automated preliminary screening, not a licensed engineering service. See the disclaimer on the following page before relying on anything in this report.



EXECUTIVE SUMMARY

What to look at first

12 findings across 3 severity levels — full detail begins on the following page.

SEVERITY DISTRIBUTION



PRIORITY SHORTLIST

- LB-PPE-02-1 · ppe
42 labels above 40 cal/cm² instruct the worker that appropriate PPE is required
- LB-MODE-01-8 · maintenance mode
Nothing on any label addresses maintenance mode or dual-state values
- LB-CONT-06-2 · content
No date on any of the 99 labels
- LB-CONT-05-3 · content
One equipment identifier uses a different site prefix from all 98 others

BY CATEGORY

ppe	3
content	5
maintenance mode	1
coverage	1
physical	1
program	1



Label & PPE Boundary Review

Job SAMPLE-LB-01 · Order SAMPLE — redacted production test run · Automated release

SAMPLE — redacted. Client name, address, personnel and contact details removed; equipment tags, manufacturer and model names pseudonymised. Engineering findings unchanged.

Read before relying on anything below.

****This is an automated preliminary screening. It is not engineering practice.****

This report was generated by an automated document-review tool. It is provided for informational purposes only. It is not a stamped or sealed engineering review, is not a professional engineering opinion, and does not constitute a determination of code compliance by any Authority Having Jurisdiction.

Findings are limited to what is visible in the documents submitted. Absence of a finding does not indicate compliance. All findings must be independently verified by the Engineer of Record against the code edition and local amendments adopted by the Authority Having Jurisdiction for this project.

Arc Flash Files is a product of PEFGLLC ("PEFGLLC"), a licensed Illinois professional engineering firm.

No engineer-client relationship is created by this report. PEFGLLC ("PEFGLLC") is a licensed Illinois professional engineering firm. This product is an automated preliminary screening — it is not rendered as a licensed professional engineering service, is not a stamped or sealed deliverable, and does not create an engineer-client relationship. PEFGLLC assumes no responsibility for design decisions made in reliance on this report.

You are responsible for confirming that the file you upload is the document you intend to have analyzed. Verify it before you submit — the intake step asks you to confirm this, and the report identifies the file it reviewed on its first page. An incomplete or partial submission — an extract, a summary page, a single sheet of a larger set, or a document missing the appendices the review depends on — is a valid submission of the correct type and will be reviewed and billed as one; the review will report the missing content as findings, and that consumes your payment. The one exception is a submission this engine refuses outright because it is not the kind of document this product reviews: that produces no review, no report, and consumes no paid unit.

Submission details

Report	Label & PPE Boundary Review — Report LB-01
Submittal reviewed	2023-11-02 Arc Flash Labels.pdf (33 pages, 99 labels)
Client identity	Redacted for public release

CRITICAL (2)



LB-PPE-02-1 · ppe · issue

Critical

42 labels above 40 cal/cm² instruct the worker that appropriate PPE is required

Forty-two of the ninety-nine labels report incident energy above 40 cal/cm², topping out at 131.5 cal/cm². Every one of them carries the same body text as the low-energy labels: "Appropriate PPE Required."

At these energies commercially available protective equipment and normal work practices are not a viable protection strategy. A label reading "Appropriate PPE Required" at 131.5 cal/cm² tells a worker to select PPE for a condition where PPE selection is not the answer. The DANGER signal word is present, which is a partial mitigation, but the instruction line contradicts it: the signal word says stop and the body text says gear up.

This is the single most consequential finding in this review. It affects nearly half the label set, and it affects the labels on the highest-energy equipment in the facility.

Driving input: the incident energy value and the fixed "Appropriate PPE Required" line, present together on 42 labels

RECOMMENDED ACTION

Replace the body text on the above-threshold labels with an instruction appropriate to the hazard — that the equipment is not to be worked energized and that engineering controls or an established electrically safe work condition are required. Separately, refer these 42 buses back to the study for hazard-elimination review; a facility with 42 % of its labeled equipment above the practical PPE ceiling has a design problem, not a labeling problem.

Source: page 14 — among others — p. 14 (131.5 cal/cm², 480 VAC, 340 in boundary); p. 15 (106.6, 87.4); p. 5 (102.8, 53.6); p. 20 (102.4, 100.3); p. 22 (100.6, 102.6)

Code ref: none — general observation

Confidence: high

LB-MODE-01-8 · maintenance mode · issue

Critical

Nothing on any label addresses maintenance mode or dual-state values

No label carries a normal-state and reduced-state pair, and none carries any conditional statement. Every label presents a single value as if it were the only condition.

The facility is a data center with medium-voltage transformers (MVT), main switchboards (SWBD), generator switchboards (GSB), UPS distribution (UDS, PNL), static/isolation bus (SIB) and PDUs — the equipment class where energy-reducing maintenance settings are most commonly installed. This review cannot determine whether any such method exists, because no study was submitted.

The reason this is scored critical rather than as an observation: if an energy-reducing method does exist at any of the 42 above-40 buses and the printed value is the reduced-state value, a worker who does not engage the mode is relying on a number that does not describe the condition they are in. That is the failure mode this check exists to catch, and this submittal cannot rule it out.

RECOMMENDED ACTION

Confirm from the study whether any labeled equipment has an energy-reducing maintenance setting, zone interlock or equivalent. If any does, both states must appear on the label with the condition under which each applies.

Source: page not applicable — all 99 labels — no dual-state block or conditional statement appears on any of them

Code ref: none — general observation

Confidence: medium

SIGNIFICANT (6)



LB-CONT-06-2 · content · issue

Significant

No date on any of the 99 labels

Not one label carries a label date, a study date, a revision, or a study reference. The submittal has no cover sheet or transmittal either. The only date associated with this set is in the filename.

Nothing on the equipment tells a worker how old the values are, and nothing ties any label back to the calculation that produced it. Undated labels outlive the system they describe, and this set is at minimum two to three years old judging by the filename.

RECOMMENDED ACTION

Add a date and a study reference to every label. This is the cheapest fix in this report and it is the one that keeps the rest of the label program auditable.

Source: page not applicable — all 99 labels — the lower portion of each label, where a date line would sit, carries only the Location field

Code ref: none — general observation

Confidence: high

LB-CONT-05-3 · content · issue

Significant

One equipment identifier uses a different site prefix from all 98 others

Ninety-eight labels use the site prefix SITE-A. One reads B SITE-B.XFMR.01D-2-6 P.

Every other XFMR label in the same family reads B SITE-A.XFMR.01D-2-8 P, B SITE-A.XFMR.01D-2-7 P, B SITE-A.XFMR.01D-1-7 P, B SITE-A.XFMR.01C-2-8 P, B SITE-A.XFMR.01C-2-7 P, B SITE-A.XFMR.01C-2-6 P, B SITE-A.XFMR.01C-1-7 P, B SITE-A.XFMR.01B-2-7 P. The SITE-B label sits in sequence between B SITE-A.XFMR.01D-2-7 P and B SITE-A.PDU.01D-1-3 P, so its position confirms it belongs to the same group.

A single-character difference in an equipment tag breaks the link between the label and the study row and the one-line entry for that equipment. It will not be found by anyone searching for SITE-A.XFMR.01D-2-6.

RECOMMENDED ACTION

Correct the label and confirm the corresponding study row and one-line tag use SITE-A.

Source: page 24 — p. 24, left column, Location: B SITE-B.XFMR.01D-2-6 P, adjacent to Location: B SITE-A.PDU.01D-1-4 P

Code ref: none — general observation

Confidence: high



LB-CONT-04-5 · content · issue

Significant

25 kV approach boundaries should be verified against the adopted edition

Ten labels are for 25000 VAC equipment and carry limited approach 72 in and restricted approach 33 in. Every 480 V, 415 V and 208 V label carries limited 42 in and restricted 12 in.

The shock approach boundaries in the governing workplace standard are given per voltage band, and both the band boundaries and the values have changed across editions. This review cannot verify these numbers — no code text was supplied as grounding, and the checklist forbids citing a table from memory. What can be said is that the 25 kV values differ in kind from the low-voltage values in a way that suggests a different table row was used, and that the specific value 33 in should be confirmed against the band the adopted edition assigns to 25 kV.

RECOMMENDED ACTION

Supply the adopted edition of the workplace standard and re-run this check, or have the Engineer of Record verify the 72 in / 33 in pair against the edition's table directly.

Source: page 6 — p. 6 (25000 VAC / 72 in Limited Approach / 33 in Restricted Approach, Location B SITE-A.MVT.01B P); the nine other 25000 VAC labels carry the same values

Code ref: none — general observation

Confidence: medium

LB-PPE-04-6 · ppe · issue

Significant

No PPE specification of any kind appears on any label

Every label says "Appropriate PPE Required" and then specifies no PPE. There is no arc rating, no category, no garment description, no glove class, and no reference to a facility electrical safety program document that would define what "appropriate" means.

This makes finding 1 worse — a worker at a 131.5 cal/cm² label has neither a prohibition nor a specification — but it is also a finding in its own right across all 99 labels. Compare the other label set in this test set (report LB-02), which specifies a glove class on every label.

RECOMMENDED ACTION

Either add the arc rating required, or add a reference to the program document that defines it. A label that says "appropriate" and nothing else has moved the decision to the worker without giving them the input.

Source: page not applicable — all 99 labels — the "Appropriate PPE Required" line, which is the only PPE content on any label

Code ref: none — general observation

Confidence: high

LB-PPE-03-7 · ppe · issue

Significant

No glove class on any label, on a set spanning 208 V to 25 kV

The shock hazard half of every label gives nominal voltage, limited approach and restricted approach, but no voltage-rated glove class. The set spans four voltage classes including 25 kV. Glove class is the one shock-PPE parameter that changes with voltage, and it is the one a worker needs at the point of selecting equipment.

RECOMMENDED ACTION

Add glove class per label, matched to the nominal voltage printed alongside it.

Source: page not applicable — all 99 labels — the shock hazard block, below the "Shock Risk when cover is removed" line

Code ref: none — general observation

Confidence: high



LB-COV-04-9 · coverage · issue

Significant

Service equipment and available fault current marking cannot be assessed

Neither check can be run. The submittal contains no facility one-line, no indication of which equipment is service equipment, and no available-fault-current marking on any label. The identifiers suggest a main switchboard group (SITE-A.SWBD.01A through SITE-A.SWBD.11) and a main transfer switch (SITE-A.MTS.H - LOAD), but nothing establishes what is service equipment for this facility.

These are separate requirements from the arc flash label, with different content, and satisfying one does not satisfy the other.

RECOMMENDED ACTION

Identify the service equipment and confirm it carries the installation-code marking separately from these labels.

Source: page not applicable — the label set as a whole — no label carries an available fault current value or a calculation date

Code ref: none — general observation

Confidence: high

OBSERVATION (4)

LB-CONT-05-4 · content · issue

Observation

Whitespace inconsistency in PNL identifiers

Two identifiers carry an internal space that their siblings do not: SITE-A.PNL.01D-2- 7 and SITE-A.PNL.01D-2-8, against SITE-A.PNL.01A-1-7, SITE-A.PNL.01A-1-8, SITE-A.PNL.01B-1-7, SITE-A.PNL.01B-1-8, SITE-A.PNL.01C-2-7, SITE-A.PNL.01C-2-8, SITE-A.PNL.01D-1-7.

Lower severity than finding 3 because a human reading the physical label will not be misled, but it will defeat an exact-match lookup against a study table or asset register.

RECOMMENDED ACTION

Normalize the identifiers.

Source: page 25 — p. 25, Location: SITE-A.PNL.01D-2- 7 and Location: SITE-A.PNL.01D-2- 8

Code ref: none — general observation

Confidence: medium



LB-PHYS-01-10 · physical · issue

Observation

Label material, environment and placement not identified

The submittal identifies no label material, no expected service environment, and no placement on the equipment. The set includes outdoor-plausible equipment — chillers CH-3 through CH-15 and generator switchboards — where material and environment determine whether the label is still legible in five years.

Placement matters specifically here because of finding 1: a 131.5 cal/cm² label that a worker must approach the equipment to read has already failed at its job.

RECOMMENDED ACTION

Provide the label specification and a placement schedule.

Source: page not applicable — the submittal as a whole — it contains labels only, with no specification or placement schedule

Code ref: none — general observation

Confidence: high

LB-PROG-01-11 · program · issue

Observation

No responsible party and no update trigger

Nothing on any label or in the submittal identifies who owns label currency or what events trigger re-labeling. Compare LB-02 in this test set, whose labels carry the line "Changes in equipment settings or system configuration will invalidate the calculated values and PPE requirements" — a warning this set does not have.

RECOMMENDED ACTION

Name the responsible party and add an invalidation warning to the label template.

Source: page not applicable — the submittal as a whole; every label's footer area, which carries only the Location field

Code ref: none — general observation

Confidence: high

LB-CONT-07-12 · content · issue

Observation

The DANGER threshold is applied consistently but is stated nowhere

Signal words track the incident energy correctly — see the checks-with-no-finding section below. What the submittal never states is what threshold is being applied. Reading it off the data, DANGER begins somewhere between 30.2 cal/cm² (WARNING) and 47.7 cal/cm² (DANGER).

The threshold is a program decision. Recording it nowhere means the next person to generate labels for this facility will have to reverse-engineer it, and may not land on the same number.

RECOMMENDED ACTION

State the signal-word threshold in the labeling program document.

Source: page 4 — p. 4 (30.2 cal/cm², WARNING) versus p. 12 (47.7 cal/cm², DANGER)

Code ref: none — general observation

Confidence: high