

X02.3 Manage Polychlorinated Biphenyl (PCB) Hazards

Technical Document

WELL Building Standard™ version 2 (WELL v2™), Q1 2022 addenda



HOW TO USE THIS DOCUMENT:

This document is intended to serve as a guide on how to create a project **technical document** to **manage risks of human exposure to hazardous materials ubiquitously used in past construction practices**.

This document is meant to demonstrate an acceptable degree of detail for

- predocumentation submission
- documentation submission

For precertification documentation submission:

To achieve WELL Precertification, project teams may submit intent-stage or implementation-stage documents for pursued features, or any combination of the two. An intent-stage document is typically a draft document that has not yet been implemented in the actual project, while implementation-stage documents describe final and implemented strategies. Intent and implementation-stage documents should be similar in terms of level of detail. For final WELL Certification documentation approval, all documents are required to be implementation -stage. To learn more about intent-stage vs. implementation-stage documentation, review the [precertification guide](#) in our knowledge base.

Intent-stage language is indicated in this sample document with **green text and in parentheses**. For an intent-stage technical document, the inspection report or action plan do not have to be completed yet. This document cannot simply state that the feature requirements will be implemented; the documentation should include adequate detail such that a WELL Reviewer will be able to confirm the document complies with all of the WELL feature part requirements.

For documentation submission:

The level of detail is up to the discretion of the project team, but the documents must include specific details demonstrating that the actual requirements have been enacted in the project boundary. The Feature cannot be demonstrated solely through a confirmation that the requirements have been or will be implemented.

This document and similar tools are intended to assist projects in their pursuit of WELL v2 but use of this document and/or similar tools are in no way a guarantee of achievement of any rating, certification or other designation, and no representation or warranty is made regarding the likelihood of achieving any rating, certification or other designation, and IWBI shall have no liability resulting from the use or content of this document or similar tools or resources or from any action taken or inaction occurring in reliance on this document or similar tools or resources.

Note: The below document is based on the Q1 2022 addenda of the WELL Building Standard™ version 2 (WELL v2™). Project teams are required to implement the feature requirements from the addenda version assigned to their project or any more recent addenda version.

FEATURE PART REQUIREMENTS:

For All Spaces

The following requirements are met:

- a. *Project is in a building constructed or last renovated before the institution of any applicable laws banning or restricting PCBs, and is undergoing renovation work that disturbs (i.e., partially or fully removes) materials likely to contain PCBs such as caulking, fluorescent light ballasts and capacitors of appliances fabricated before 1980.*
- b. *An inspection strategy for assessing PCB-related risks is implemented and contains the following:*
 - 1. *Determination of locations where materials potentially containing PCBs may be disturbed.*
 - 2. *If caulk is to be disturbed or removed, analysis of the presumably PCB-containing material following protocols mandated by local laws or, in absence of local laws, by any applicable US EPA⁶ or ISO testing methods.*
- c. *If PCBs are found in disturbed materials, an action plan is implemented and contains the following:*
 - 1. *Notification of remedial work to relevant authorities and building occupants.*
 - 2. *Preventative measures against the spread of PCB-containing dusts and human exposure during remediation activities, including restricting access for those not involved in the work.*
 - 3. *Protective measures for workers, including chemical-resistant gloves, clothing protection, goggles and respirators.*
 - 4. *Waste handling that minimizes the spread of contaminated debris and safe disposal of PCB-containing waste in locations allowed by applicable local regulations.*

WELL Core Guidance:

Meet these requirements for the extent of developer buildout.



The below sample documentation is intended to provide guidance in creating a technical document. It is not a template. You may note included components that are not required to demonstrate compliance with this Feature.

Example document for Feature X02.3

The following example is for a new construction interiors project in an existing building in the United Kingdom. The base building was built after PCB related laws were enacted locally.

X02.3 - Technical Document for [PROJECT NAME]

[PROJECT NAME] is a new construction interiors project in an existing building [EXISTING BUILDING NAME.] [EXISTING BUILDING NAME] was built in [Ex: 2005] after the United Kingdom banned usage of PCBs in 1981. No inspection or action plan is required. Here is a link to confirmation that PCBs have been banned: <https://www.gov.uk/guidance/polychlorinated-biphenyls-pcbs-registration-disposal-labelling>.

The following example is for an interiors project that moved into an existing building built in the United Kingdom in 1983 after PCBs were banned (1981), but with remaining inventory that contained PCBs may still have been sold. It is unclear if PCBs may be located within the interior project's WELL project boundary.

X02.3 - Technical Document for [PROJECT NAME]

[PROJECT NAME] is a new construction interiors project within an existing building built in 1983 in the United Kingdom after PCBs were banned in 1981. However, products still in inventory were still being sold and installed from before the ban (e.g. ballasts in lighting provided by the base building and caulks around base building windows), so there is a chance that products containing PCBs were installed in the project's base building. Please see the inspection strategy that was implemented and the action plan that was followed to remove the PCBs that were discovered (*intent-stage: inspection strategy can be planned or if the inspection has occurred, action plan can be planned*)

Inspection Strategy

- *Ex: Inspection strategy for assessing PCB-related risks:*
 - a. A professional inspector who specializes in PCB detection and remediation was hired (*intent-stage: will be hired*).
 - b. The inspector evaluated (*intent-stage: will evaluate*) all building elements within the WELL project boundary that could be disturbed during the interiors construction process that are on the following list:
 - i. Fluorescent light ballasts
 - ii. Caulks
 1. For caulks that might be disturbed or removed, analysis of the presumably PCB-containing materials followed ISO testing methods.
 - iii. Floor finishes
 - iv. Transformers and capacitors
 - v. Electrical equipment including voltage regulators, switches, re-closers, bushings, and electromagnets
 - vi. Oil used in motors and hydraulic systems
 - vii. Old electrical devices or appliances containing PCB capacitors
 - viii. Cable insulation
 - ix. Thermal insulation material including fiberglass, felt, foam and cork
 - x. Adhesives and tapes
 - xi. Oil-based paints
 - xii. Plastics

Action Plan

- *Ex: The inspection report determined that there are no PCB containing materials located within the project. No action plan is required.*
- *Ex: The inspection report indicated that there are PCB containing materials within the project. The full (intent-stage: planned) action plan for materials that may be disturbed is attached. Below is a summary of the sections of the plan that address X02.3 a-d:*
 - a. **Notification of remedial work to relevant authorities and building occupants:**
 - i. *Ex: After the inspection was completed, the local authorities [INSERT LOCAL AUTHORITIES' NAME] were notified of the presence of PCBs. Immediately afterwards, the office occupants were notified by signage in the main lobby and by email regarding the presence of PCBs and the plan to remediate them while the office was largely empty due to COVID-19 quarantine practices. The email included dates that the office would be entirely closed for remediation. For more details, see page [INSERT PAGE NUMBER] of the PCBs Action Plan.*
 - b. **Preventative measures against the spread of PCB-containing dusts and human exposure during remediation activities, including restricting access for those not involved in the work:**
 - i. *Ex: The office was closed during all PCB remediation to everyone except the remediation team. During remediation, the space was negatively pressurized to prevent the spread of dust to other areas within the base building. The floor and other furniture was covered during remediation to prevent PCB-containing dust from contaminating them. For more details, see page [INSERT PAGE NUMBER] of the PCBs Action Plan.*
 - ii. *Ex: In addition to closing the building while remediation was going on, the remediation team followed US EPA guidelines on Steps to Safe PCB Abatement Activities found here: <https://www.epa.gov/pcbs/steps-safe-pcb-abatement-activities>. For more details, see page [INSERT PAGE NUMBER] of the PCBs Action Plan.*
 - c. **Protective measures for workers, including chemical-resistant gloves, clothing protection, goggles and respirators:**
 - i. *Ex: Worker safety measures:*
 - *Workers were required to wear protective clothing including: full-body coveralls, rubber boots, disposable gloves and protective eyewear.*
 - *Workers were each required to wear half-face dual cartridge HEPA filter respirators during all remedial work. Filters were replaced in conjunction with manufacturer requirements.*
 - *Equipment and tools were washed before leaving the contaminated area.*
 - *Any workers with exposed skin were required to wash their skin before leaving the contaminated area.*
 - *For more details, see page [INSERT PAGE NUMBER] of the PCBs Action Plan.*
 - d. **Waste handling that minimizes the spread of contaminated debris and safe disposal of PCB-containing waste in locations allowed by applicable local regulations.**
 - i. *Ex: PCB disposal was completed to meet United Kingdom guidelines listed on the following website in the "Dispose of PCBs" section: <https://www.gov.uk/guidance/polychlorinated-biphenyls-pcbs-registration-disposal-labelling>*
 - ii. *Ex: [NAME OF DISPOSAL CONTRACTOR] has over 20 years of experience in hazardous waste disposal, including PCB waste. They follow the protocols listed on the US EPA landing page for Steps to Safe PCB Abatement Activities (<https://www.epa.gov/pcbs/steps-safe-pcb-abatement-activities>), specifically requirements listed in: 40 CFR 761.62.*

TIPS FOR MULTIPLE LOCATIONS

- Organizations participating in WELL at Scale should indicate which locations are pursuing this feature, and then submit the specific details for the locations selected for an audit.