



Field data in. Defensible reports out.

WHITE PAPER

Why Do I Need Trace If I'm Already Using AI?

Trace turns the AI workflow you already have into audit-ready environmental deliverables.

THE MAIN IDEA

AI assistants are excellent at initial drafting. Environmental deliverables are judged on something else: data lineage, statutory compliance, and exact formatting. **Trace plugs into the AI you already use and adds the system of record beneath it:** every value traceable to its source, every citation verifiable, every report export-ready.

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THREE TAKEAWAYS

1

Keep your AI assistant. Trace plugs into it. Through Model Context Protocol (MCP), the assistant your team already uses, such as Claude or ChatGPT, remains your conversational front end while Trace runs data pipelines, template logic, and document compilation behind it.

2

Traceability, not just text. Every concentration, unit, and flag in a Trace report links back to its source. Discrepancies between CoCs, field logs, and lab results are flagged for review, not smoothed over.

3

From chat to client-ready. Reports export directly to formatted .docx, with language validated against EPA, OSHA, TSCA, RCRA, state standards, and ASTM E1527-21 / E1903. No reformatting, no unverified citations.

1 What AI Assistants Already Do Well

If you are running environmental work through a general-purpose AI assistant, you have made a smart call. These models draft narrative sections quickly, summarize long documents, answer regulatory questions, and handle light data work. Trace is built on the same conviction, which is why it connects to your AI rather than replacing it.

2 What Deliverables Demand

A Phase I ESA, asbestos survey, or SWPPP is not judged on how well it reads. It is judged on five requirements that sit outside what any conversational model is designed to guarantee:

- **Complete data, provably complete.** A multi-method work order carries thousands of values across dozens of pages. Every non-detect row, dilution factor, and reporting limit has to survive into the report, and you have to be able to prove it did.
- **Reconciled records.** Handwritten CoCs, field logs, and lab results routinely disagree: a transposed sample ID, a time mismatch, a missing analyte. Catching those conflicts systematically is part of the deliverable.
- **The finished document.** Clients receive formatted documents with sections, headers and footers, photo logs, and appendices, not chat output that needs hours of manual Word work per report.
- **Answers under challenge.** When a regulator, lender, or opposing counsel asks where a number came from, the answer has to be a line from that value back to its source document.
- **Consistent output.** The same scope should read the same way across projects, offices, and authors: the same terminology, the same boilerplate, the same format. A conversational model produces different text every time it is asked, so consistency has to be enforced by the system underneath it.

3 What Trace Adds to Your Workflow

	Your AI alone	Your AI + Trace
Analytical data	Summarizes what fits in context; completeness must be checked by hand.	Full work orders parsed server-side into structured datasets; every row traceable to its source.
Field records	Works from what you paste in; conflicts between sources can pass unnoticed.	CoCs, field logs, and lab results cross-checked; discrepancies flagged for review.
Deliverable	Loose text you reformat in Word by hand.	Direct export to formatted .docx with sections, headers/footers, photo logs, and appendices.
Compliance	Broad general knowledge; standards may be stale, citations unverified.	Validated against EPA, OSHA, TSCA, RCRA, state standards, and ASTM E1527-21 / E1903, with citations.
Memory	Templates, licenses, and company records re-supplied each session.	Persistent workspace: organization records, templates, inspector licenses, project history.
Accountability	A chat transcript.	An audit trail from raw source data to the final report.

4 What Trace Ingests

Trace consumes the full paper trail of an environmental project. Three categories cover it.

Structure: your reports, your look

Feed Trace your historical deliverables in PDF or Word and it extracts the complete report architecture: page layouts, portrait and landscape section breaks, running headers and footers, and required appendices. It also captures your style profile (typography, brand colors, table styling), reusable boilerplate with decision rules and bracketed placeholders such as [SITE ADDRESS] and [CLIENT NAME], and branding assets including logos, PE/PG stamps, and signature blocks.

Data sources: the raw record

- **Laboratory packages (COAs).** Full analytical packages across standard methods such as EPA 8260, 8270, 6010, 8082, Method 9, PLM/TEM asbestos, and PFAS, structured into persistent tabular datasets holding sample IDs, analytes, concentrations, detection limits, units, and data qualifiers.
- **Chains of custody.** Machine-generated or handwritten custody sheets, digitized and reconciled against laboratory COAs on sample IDs, collection timestamps, matrix types, preservatives, and signatures, so discrepancies surface upfront.
- **Field notes and inspection logs.** Technician logs, boring logs, monitoring well construction details, PID/FID screening readings, water quality stabilization parameters, and asbestos and lead sample inventories.

- **Site photography.** Field photos arranged automatically into standardized multi-column photo logs with numbers, captions, directional views, and observations.
- **Regulatory and historical records.** For example, historical aerials, Sanborn maps, topographic maps, EDR and GeoSearch database reports, agency file reviews, permits (NPDES, SWPPP, Title V), and Safety Data Sheets.

Administrative, credential, and memory records

Trace digitizes inspector licenses and certifications (Asbestos Building Inspector, Lead Risk Assessor, PE, PG, CIH) with license numbers, issuing states, and expiration dates, and attaches them to sign-offs. It also retains organizational standards, client report preferences, and site history across sessions, so every deliverable follows your firm's quality management plan.

YOUR DATA STAYS YOURS

- Files uploaded to Trace, and everything built from them, including datasets, reports, and templates, remain your firm's property. They live in your workspace and are visible only to the members your organization's owner has invited.
- Your documents are used for one purpose: producing your deliverables. They are never used to train AI models, ours or our providers'.
- Every edit Trace makes is a proposal. It stays pending until someone on your team accepts or rejects it, so the record of authority is always yours.
- Everything Trace retains is in plain sight in your workspace: your records, your session history, and memory notes you can open, edit, and clear at any time. There is no hidden profile built about you or your clients.
- External AI assistants reach Trace only through a connector you authorize, and every session runs visibly in your workspace where you can step in at any point.
- Your deliverables are never locked in. Reports export to formatted Word documents whenever you want them.
- Every upload is scanned for malware before it enters your workspace. Hosted on AWS in the United States, encrypted in transit and at rest.

5 What You Gain Over an AI-Only Workflow

The difference shows up in three places: how long a report takes, how much of it you have to re-check, and how well it holds up afterward.

Efficiency	Accuracy	Compliance
No manual data entry. Report artifacts, CoCs, and field logs become structured datasets on upload, not transcription work. No reformatting. Reports compile straight to your firm's .docx template: sections, photo logs, appendices. Nothing re-supplied. Templates, boilerplate, licenses, and site history persist across every project.	Complete extraction. Sample IDs, analytes, concentrations, detection limits, units, and qualifiers are preserved, with no context-window truncation. Discrepancies surfaced. CoCs, field logs, and COAs are cross-checked; conflicts are flagged for review instead of passing into the report. Data-linked. Values come from the source dataset, never generated; each one links back to its source.	Current standards. Language is validated against regulatory standards such as EPA, OSHA, TSCA, RCRA, state tables, and ASTM E1527-21 / E1903, with verifiable citations. Credentials enforced. Inspector licenses and expiration dates are tracked and attached to sign-offs, so an expired cert never reaches a report. Audit-ready by default. Every deliverable carries a data lineage from raw source files to final text. Consistent by design. Every report draws on the same templates, boilerplate, and standards, so the same scope reads the same way across projects, offices, and authors.

In economic terms: a typical deliverable carries the hours spent transcribing and QA-ing lab data, the hours spent formatting the report in Word, and the exposure from a single wrong value in a document that goes out under your firm's name. Trace reduces the first two and puts a verifiable source behind the third.

6 Start Exploring Trace

Getting started begins with a conversation. Our professional services team builds your report structures and style profiles from your historical deliverables, loads your SOPs and teaches Trace how you operate, and runs your first deliverables alongside your staff.

Bring your most challenging report to onboarding and judge the results for yourself, then compare what Trace generated against the report you formatted by hand.

TO GET STARTED

Contact us at erblue.com/contact to begin exploring Trace, and our team will follow up to scope your firm's setup. Already standardized on an assistant such as Claude or ChatGPT, or on your own internal agents? They connect directly to the Trace MCP endpoint, so your team keeps its current workflow from day one.