



Petroleum AI Field Report

Less artificial. More intelligence.

October 15, 2026 - SOP, Hazmat, and SDS Assistants for Dispatch and Drivers

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QUESTION THE HYPE. KEEP IT FLOWING.

SOURCED. NOT SOLD.

Bottom line

an SOP and SDS assistant is a search engine over your own documents with a writing layer on top. It is worth piloting at the dispatch desk for routine "where is that in our procedures" questions. It is not an emergency tool, and it does not replace the shipping papers, emergency response information, or SDS access the regulations already require.

1. THE OPERATOR PROBLEM

Dispatch fields procedure questions all day. Can this compartment take ULSD after gasoline without a flush? What PPE does the driver need for a solvent-based lube drop versus DEF? What do we do about a weeping fitting on a customer tank? What is our rule on backing at residential stops? The answers sit in a binder at the plant, a shared drive, supplier SDS PDFs in someone's inbox, and the memory of the senior dispatcher.

When that goes wrong, the cost shows up fast: a driver acts on a remembered procedure that changed last year, the SDS on file is a superseded revision, a new hire waits on hold during a small spill, or training records no longer match the written program. Three rules frame the problem:

- 49 CFR 172.602 requires emergency response information for hazmat in transport, maintained the same way as shipping papers and "immediately accessible" to the driver. It may be paper or electronic. eCFR shows Title 49 current as of Oct 9, 2026; the section was last amended Aug 4, 2026 (91 FR 49329).
<https://www.ecfr.gov/current/title-49/subtitle-B/chapter-I/subchapter-C/part-172/subpart-G/section-172.602>
- 29 CFR 1910.1200(g)(8) requires SDSs to be readily accessible each shift. Electronic access is allowed only if there are "no barriers to immediate employee access." Under (g)(9), for employees who travel between workplaces, SDSs may stay at the primary facility, but the employer must ensure employees "can immediately obtain the required information in an emergency."
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200>
- The 2024 HazCom update: employers must update labels, the written program, and training for substances by Nov 20, 2026, and for mixtures by May 19, 2028. OSHA moved these dates (from Jul 20, 2026 and Jan 19, 2028) in a final rule published and effective Jan 15, 2026 (FR Doc. 2026-00653).
<https://www.federalregister.gov/documents/2026/01/15/2026-00653/hazard-communication-standard>

Interpretation: an assistant on a driver's phone can be an extra path to the information. Do not count it as the path that satisfies "immediately accessible." Dead phones, dead zones, and wrong answers are all barriers.

2. WHAT ACTUALLY DOES THE WORK

- Retrieval (search over your documents). Finding the right passage is the core job. Embedding search is machine learning. Classic keyword search is not AI and often works fine on a small library.
- Generative AI writes the plain-English answer from the passages found and should cite them. This is where the main risk lives. NIST's Generative AI Profile calls it confabulation: confidently presenting false content.
<https://nvlpubs.nist.gov/nistpubs/ai/NIST.AI.600-1.pdf>

- Plain rules do the safety work: only current document versions are searchable, SDSs past their review date are flagged, and any question mentioning a spill, fire, exposure, or injury returns the emergency card and call instructions instead of a generated answer. None of that is AI.
- Speech-to-text, if drivers ask by voice, is machine learning.

My view: the rules layer and the document cleanup decide whether this works. The model choice matters less.

3. DATA REQUIRED AND WHERE IT LIVES

- SOPs, driver handbook, spill response and plant procedures: shared drive, SharePoint, or Google Drive, usually Word or PDF, often in several versions.
- Supplier SDSs: supplier portals, emailed PDFs, and the plant binder. Record each revision date.
- Product master: ERP product codes mapped to the right SDS and to the proper shipping name and UN number used on shipping papers.
- PHMSA's 2024 Emergency Response Guidebook, public online and as a mobile app.
<https://www.phmsa.dot.gov/training/hazmat/erg/emergency-response-guidebook-erg>
- Training records (HR or LMS), to show which version of a procedure people were trained on.
- The assistant's own question log, which becomes your best list of gaps in the procedures.

4. BUILD, BUY, OR CONFIGURE WHAT YOU OWN

Configure (Microsoft 365): Copilot Studio agents can use SharePoint as a knowledge source. Microsoft's documentation says that with user authentication configured, the agent surfaces only content the asking user can access, and with "Allow ungrounded responses" turned off it returns a knowledge answer only when the answer includes an in-text citation; uncited answers are withheld. Check licensing first.

<https://learn.microsoft.com/en-us/microsoft-copilot-studio/knowledge-copilot-studio>

Configure (Google Workspace): NotebookLM answers from the sources you load, with inline citations. Google states that for Workspace users, uploads, queries, and responses are never reviewed by humans or used to train AI models. It fits a dispatch-desk pilot; it is not a driver app.

<https://workspaceupdates.googleblog.com/2024/09/notebooklm-now-available-as-additional-service.html>

Buy: telematics platforms are adding configurable agents (see section 7), and SDS management services sell hosted libraries with mobile access. Interpretation: judge SDS vendors on supplier update feeds and version control first, chat features second. Any accuracy figure a vendor quotes is a claim until you test it on your own questions.

Build: a custom retrieval app on your own stack only makes sense if someone will own it after launch. For most small distributors, configure first.

5. A 30-DAY PILOT

- Scope: dispatch desk only, one plant or terminal, three document sets: driver handbook, SDSs for your top 25 products by volume, and the spill and incident procedure. No driver access during the pilot.
- Week 1: one current version of each document, SDS revision dates logged, duplicates retired. The safety lead writes a 40-question test set from real dispatcher questions, with the correct answer and source for each.
- Weeks 2 to 4: dispatchers use the assistant alongside their normal process.
- Human review point: the dispatcher reads the cited passage before relaying anything to a driver. The safety lead reviews the question log weekly.

- Measure: test-set score (right answer, right citation); time to answer against a stopwatch baseline; wrong or uncited answers caught; answers citing a superseded document; false alarms, meaning routine questions wrongly pushed to the emergency path.
- Stop condition: any confident wrong answer on a hazmat, PPE, or emergency question; a test-set score below the threshold the safety lead sets before day 1; or dispatchers no longer checking citations.

6. CONTROLS AND FAILURE MODES

- Audit trail: log every question, answer, cited document and version, user, and time. Keep it with your safety records.
- Permissions: read-only access to one curated library folder. Only the safety or compliance lead adds or retires documents. No access to HR, customer, or billing files.
- Sign-off: the safety lead owns the library and test set. The operations manager signs off before any driver rollout. Rerun the test set whenever documents change.
- Failure modes: stale SDS revisions, conflicting old binder versions, confabulated answers, answers drawn from general knowledge instead of your documents, dead zones, and new hires trusting the tool over their training.
- Never automated: emergency response decisions, stop-work calls, hazmat classification and shipping paper entries, incident reporting decisions, and SOP changes. Shipping papers and emergency response information stay in the cab regardless.

7. CURRENT DEVELOPMENT

On Oct 13, 2026, Samsara announced that Agent Studio, a no-code builder for chat and voice agents, is available to all customers. The release describes a food distributor's "Driver Wingman" agent that answers new drivers' questions on parking, personal conveyance rules, and fuel stops from the company's own policies. Samsara's claim: agent adoption on its platform is up 7x since June.

<https://www.bnnbloomberg.ca/press-releases/2026/10/13/adoption-of-samsara-ai-agents-accelerates-across-physical-operations/>

Interpretation: fleets already on Samsara can test a policy assistant without new software. The coverage reviewed does not describe human review or escalation controls for driver-facing agents, so the controls above are on you.

<https://www.fleetowner.com/technology/autonomous-vehicles/news/55411954/samsara-launches-ai-agent-platform-for-fleet-reporting-compliance-and-driver-support>

DEEPER READS

1. OSHA 29 CFR 1910.1200, Hazard Communication (full text, including (g)(8) and (g)(9)):
<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200>
2. eCFR 49 CFR 172.602, Emergency response information:
<https://www.ecfr.gov/current/title-49/subtitle-B/chapter-I/subchapter-C/part-172/subpart-G/section-172.602>
3. Microsoft Learn: Knowledge sources in Copilot Studio:
<https://learn.microsoft.com/en-us/microsoft-copilot-studio/knowledge-copilot-studio>

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