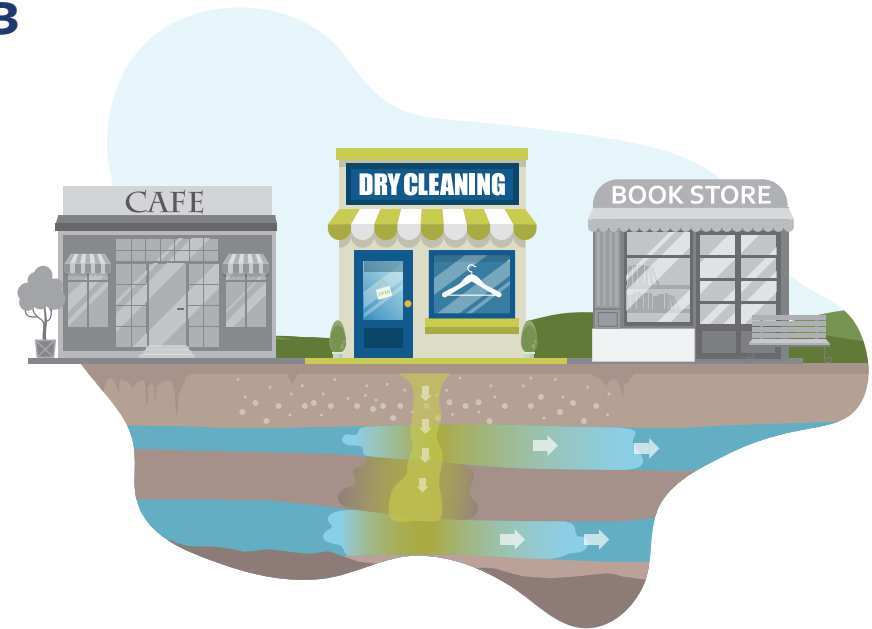


# The Dirty Side of Dry Cleaning: Liabilities & Transaction Considerations

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**Q & A Document** - March 28, 2023



**1. Other than the 5 year review where the EPA re-evaluates a site, what are some other examples for when sites could be reopened? And what would draw the attention of the site to the EPA?**

LPS - RCRA Corrective Action (EI-Current Human Exposure Under Control; RFI/CA); CERCLA (Removal/Remedial Actions/UAOs/Pre-remedial and Remedial Investigations/Five Year Reviews (FYRs)-OSWER Directive 9200.2-84, NPL Scoring).

MM - Another potential opener is when the regulation or standards change. For example, vapor intrusion rules and guidance have reopened a number of sites that were previously closed. These new rules equated to a substantial change in conditions.

**2. Can you explain the common law issue in a bit more detail?**

LPS - Again the common law was, negligence, nuisance, trespass, those kinds of old-fashioned remedies that you can be liable for, and those are not strict liability. Those you have to actually do something, but those are also potential liabilities that are not eliminated by the no further action letter, little threat, no further action. Letters are limited to the statutory protections liability. Common law is fault-based remedies. Negligence is a failure to comply with a standard of care, trespass is physical invasion of land, nuisance is unreasonable and substantial interference with use of property.

**3. Is there a lender liability potential if after a Phase I the lender chooses insurance instead of PH2 and during loan term, a tenant/upper floor resident discovers health issues due to chlorinated carcinogens? Has there been litigation for that type of scenario?**

MM - Generally, no. The lender is not an owner, and it's not an operator generally, right? The EPA rule has clearly stated that actions taken by a lender during a term of its loan, such as you know, the usual things that lenders do to monitor their loans, would not create liability under CERCLA. Now under common law again, you'd have to show that somehow the bank was negligent and I just don't see it, unless there's a special situation. I don't see the lender being liable. The only way the lender would conceivably be liable is if the responsible party was, asking for some financing to fix a problem. But even in that situation lenders have been found not to be liable generally.

LPS - Lender will generally only be liable if it exercises control over the site or takes title. Secured creditor exemption will protect lender if it forecloses without performing AAI and then takes commercially reasonable steps to sell. However, since what constitutes as commercially reasonable will vary and some states have statutory requirements, it is usually good to do a phase 1 and then do sampling so a due care plan can be implemented.

**4. My understanding is that soil excavated at a dry cleaner would only be listed as waste if there is a documented record of a release. What is your interpretation of this?**

LPS - If the soil is contaminated, it will be listed as waste.

**5. Can you clarify what you mean by the leaking coin-operated machines?**

MM - In the 1970s, several washaterias employed coin operated dry cleaning equipment. This equipment was a perc operated psuedo dry to dry machine. The equipment was a maintenance nightmare for the washaterias and was quickly removed from service. Therefore, washateria or laundromats are potential users of this equipment during this time period.

LPS - there were laundries that had coin-operated dry cleaning units. Also, some laundries conducted on-site dry cleaning.

**6. Is there a hazardous release reporting responsibility when testing reveals vapor levels in exceedance of VISLs?**

LPS - Not for federal purposes or states that use the RQ approach.

**7. PFAS? Thought there would be discussion on this.**

LPS - I believe I mentioned I recently had a site where PFAS showed up at dry cleaner site probably from clothing coating.

**8. When reviewing database radius reports, when we see a dry cleaner within the one-mile search radius, is there any standard distance that can be considered as safe? Understanding groundwater will make a difference, but wondering if there's a rule of thumb.**

MM - One must look at the groundwater units and the transport pathways. Sites with fast moving groundwater units can have very long plumes. Sites with slow moving or extremely low permeable groundwater units have short plumes. Some knowlegde of the local geology is important. It is also possible to impact mutilple groundwater bearing units depending on the significance and duration of the releases from the dry cleaner. Other transport pathways include sanitary sewer lines. There was a period of time when ABS pipe was used for sewer pipe. The chlorinated solvents melted the pipe creating multiple release points. PVC pipes have a little more resistance but are also known to degrade in the presence of solvent releases. Boiler blow-down discharges into sewer systems can also melt the pipe creating a release point. Discharges to storm sewers are also problematic as they are not designed to be water tight.

LPS - EPA has search radius for CVOC and petroleum vapor intrusion. However, there can be preferred pathways in urban areas, such as sewers so it will be site specific.

**9. In practice, are you seeing QEPs using E2600-15 as part of their Phase 1 ESAs; and if not, how are they typically addressing subsurface vapor migration/encroachment?**

MM - So my experience is that it's kind of an evolving area. I'm seeing it more and more today than I did back when it came out, and I'm having to ask fewer times for that. So I'm just going to say that's one of those things that I think over time people are becoming more and more knowledgeable about. And so you're seeing it being addressed. Is it addressed appropriately? That's a whole different question.

LPS - I remember that's really about the site. The target site is not the dry cleaner. It doesn't have a dry cleaner. The question is, are other molecules coming on to the target property. And that again is something you're going to have to evaluate. As Mike said, the geology prefers pathways, you know, if it's right next door. I had a deal this week, in fact, where it is a property right next door. The consultant said it was a REC. The bar went out and got another consultant. He said it was not a REC. So we are now working that out. But you know they don't want to have a REC because they were trying to go through Environmental Review for funding for formal housing. But again, you are talking about my property affected by an off-site dry cleaner - it's not that this dry cleaner is on the site directly, that is not as important there.

**10. Can you clarify the characteristic vs listed waste discussion?**

MM - Dry Cleaner waste from a perc machine is a listed hazardous waste (Spent Halogenated Solvent). Soil and or groundwater with solvents within the material may or may not be a listed hazardous waste. It depends on the source of the chemicals. If the solvents in soil or groundwater are derived from the waste stream, they would be considered a listed hazardous waste. If they originate from a release from the machine, you will need to do TCLP to determine their hazardous classification. Some states have more guidance on this topic.

LPS - PCE waste at dry cleaner site will be considered listed waste. Consultants often perform TCLP to determine if soil needs to be managed as HW but this is incorrect. Even if the soil passes TCLP, it will still be HW. Option at this point is either to manage as HW or try to do contained-in determination.

**11. I'm not sure why any environmental professional would not identify a dry cleaner as a REC in a Phase I? There is no upside and all downside risk.**

MM - Agreed, but not all cleaners dry clean onsite. In addition, some cleaners use "green" solvents which would not be elevated to the level of REC.

LPS - EPs can get pressure from lawyers and clients especially when former Phase 1 did not flag dry cleaner as REC.

**12. In your experience, does that mean that all investigation-derived waste from a property with a dry cleaner should be disposed of as hazardous waste? Or is it only if solvents on the F List are detected, or only if the concentrations are in excess of a remediation objective? (I'm trying to get a handle on the threshold for determining haz vs. non-haz in this scenario).**

MM - So investigation-derived waste have special exemptions in record. We don't have time to go through that. But I would strongly suggest that if someone's dealing with investigation-derived waste, they get with their disposal company because they will know the answer to that question.

**13. Relating to historical dry cleaners, when you're reviewing a fire insurance map and you see sites listed as "Chinese Laundry", should those be treated as dry cleaners?**

Chinese laundry usually refers to a wet laundry facility. However, the age of the laundry is also important. Many of the "Chinese laundry" use open solvent baths to clean the clothes. Better to err on the side of caution in this case.

LPS - I have seen laundries have PCE. But not yet Chinese.

**14. Can you explain the PFAS at dry cleaning sites more? Are you saying the clothes people bring in are impacted with PFAS?**

LPS - The stain-resistant clothes and rugs were due to PFAS. Apparently they can be mobilized during dry cleaning presentation.

**15. Does New York have MS4? Mike mentioned contamination was occurring - why was there contamination with a sanitary sewer?**

MM - We cleaned up. Then we got reopened where they would dump stuff in the dumpster; when it rains stuff comes out of the dumpster and goes into the dry wells, and the dry wells are bare dirt. So you must look at all those factors to see whether you know this. There's been a problem with the way the underground injection well program is enforced. Some septic systems should have never been allowed for commercial properties. I mean, when you have a gas station or a dry cleaner that just shouldn't happen. But we have a lot of those, and then we have dry wells. For example, Long Island's are a leading source of contamination. So you have to look at the property. It's a part of your start. We know the historic contaminant. What was it? What were these? Some have dry wells here. I look at it holistically to see, to try to evaluate. What is the chance that if there was a release that it got into the environment.

LPS - Dry cleaner manufacturer manuals instructed operators to hook into the sewer system. Lots of plumes from leaking sewers across the country. 1990s studies documented these problems in California and Florida.

**16. Can you talk about older solvents, like Stoddard, and when that was used? Also when was PCE first used?**

MM - Stoddard solvent has been used for an extensive period of time. It was the solvent of choice through the mid 1900s. Around 1950, PCE started to become the solvent of choice. By 1960, almost all new cleaners used PCE. In the late 1990s, new dry cleaners started to convert back to Stoddard solvent based on the environmental issues associated with PERC. These are general guidelines and not hard fast dates. Other solvents were also used in the 1940s and 1950s due to the availability of Stoddard solvent.

**17. When conducting a Phase I ESA and nearby properties within 1,000 to 2,000 feet are listed as current or former dry cleaners with no spills or violations, should it be recommended that the subject property be investigated to make sure it has not been impacted by the surrounding dry cleaner listings?**

LPS - Might identify as a REC but phase 2 not necessarily required. Client could always try to get insurance in lieu of sampling.

**18. You are finding PFAS at dry cleaner sites now and not PCE?**

LPS - Yes, I had a dry cleaner site that was PFAS only. But more common to find both.

**19. Great presentation, thank you! Two questions please: 1) Do closed loop dry cleaning machines present less risk of a release than other types of machines? 2) Does the fact that a commercial unit is very small serve as valid rationale for assuming there was no space for a dry cleaning machine? If so, what square footage is typically needed for a machine?**

MM - Closed Loop Machines produce less waste, therefore, they potentially pollute less. However, if the dry cleaner mismanages the waste, it will also cause a release. Both types of machines cause environmental problems. The problems are generally less for the closed loop system.

**20. Your examples of dry cleaning contamination is sensationalism. Most plumes are confined to areas beneath the cleaners and do not cause widespread/regional contamination.**

MM - So that's a really geologic question. But in my experience, the examples that Larry showed are not uncommon, where they extend very far off the properties. But again, in areas where we have very little groundwater transport, they are very small, and they can be very well confined to the property, and even over very short distances. Dallas, Texas is an area where we have a lot of shale and limestone areas, but they also have some.

LPS - There are enough examples of plumes that are up to a mile long or regional in scope that this is not sensationalism. It depends on the local geology and existence of preferential pathways. Urban spills and vapors can spread through sewers.

**21. Larry, you mentioned the plumes you identified in the Bronx, are they particularly worse than in the other boroughs of NYC? If so, could it be anything to do with sewers being installed at a different time than in other boroughs or difficulties installing sewers there with the bedrock being shallow/inconsistent depths?**

LPS - I did intend to give the impression things were worse in the Bronx. What I was trying to convey is that I knew of several plumes on Third Avenue in the Bronx that were not on any database. All boroughs have dry cleaner plumes. Dry cleaners are the 2nd largest category of state superfund sites - over 200!

**22. Can you explain the PFAS at dry cleaning sites more? Are you saying the clothes that are brought in are impacted with PFAS?**

LPS - Stain and water resistant clothing were treated with chemicals that had PFAS.

**23. I am performing a shopping center and they aren't registered with our DSCA program. DSCA suggested they may use a non-regulated solvent. Can the shopping center be held liable? They're also performing an ESA on a shopping center.**

LPS - Generally current shopping center owner and tenant can be liable. If the spill came from a former tenant who preceded the current owner, it is possible there could be third party defense under CERCLA and state version. Aside from CERCLA, owner could be liable if plume migrates off-site and impacts adjacent properties.

**24. What is your recommendation for identification of an adjoining off-site or proximate up-gradient off-site dry cleaner as a concern to a subject property when conducting an ESA, if there is no documented release?**

MM - I would identify the cleaner as a REC unless you have sound argument why it is not a REC. We typically try to research the type of solvent they used, the distance from the property boundary, underground utilities, etc. If we can determine a reasonable reason not to include them as a REC, we do.

LPS - Based on the revised REC definition, it can be a REC.

**25. If PFAS is turning up on clothing, is it at a high enough concentration to be of concern?**

MM - Unfortunately, the PFAS issue is still very new. Risk-based standards are still in development. The agencies are taking a protective approach to the PFAS issue. There are also a number of issues associated with the sampling and potential for cross contamination. I would say the jury is still out, but the data is suggesting that this will be a big problem in the future.

LPS - The screening levels are PPT. Only need a few molecules.

**26. Is there a time period that the coin-operated dry cleaning machines were generally used?**

MM - Generally in the 1970s. The latest I have seen a coin operated machine was early 1980s.

**27. Auto repair sites. 1980s site closed by state for solvents. Should we now list it as a REC as there is no listing of type of solvent or the quantity. It often states impacted soils.**

LPS - Are you saying it received closure? If so, could be CREC or HREC depending if there is residual contamination. If not evidence of cleanup, then seems like a REC.

**28. Another odd question that came up. A site was being transferred to an Indian tribe. There was a 1920-2010 used cemetery. No one had knowledge of how bodies were prepared or if formaldehyde preservatives were used. We listed it as a REC and got lots of push back. What are your thoughts?**

MM - There are many issues with cemetery sites including formaldehyde. If the site is in close proximity, I would probably look at it as a REC.

LPS - I had a site in Long Island that was impacted by formaldehyde from adjacent cemetery. It was enrolled in the brownfield program. You could sample for formaldehyde.

**29. Ohio has created a BFPP defense from State liability matching the AAI on federal level. Opinion on whether other states should replicate ?**

LPS - Many states follow AAI but others like NJ do not. AAI has its flaws so I'm agnostic.

**30. In California, State and Federal agencies will not require property owners to clean up their properties unless they caused the contamination problems. Other than indoor air concerns, why do we care if a dry cleaner operated on an adjacent site especially if there are no identified contamination concerns with the off-site dry cleaners?**

LPS - My experience in California is that it depends if groundwater is being used for drinking water but California allows for a human health assessment to risk the problem away. Vapors can migrate in urban areas. In sandy desert areas where gw is very deep, the CVOCs will tend to sink and not migrate horizontally.

**31. What about dry cleaners on upper floors of buildings? Usually there are air regulations imposing work practices .**

LPS - Vapors can get into HVAC and porous building materials.

**32. Why would you put the recommendation in a side letter, instead on the summary?**

LPS - I like that approach to avoid the Ashley problem (not following recommendations could be evidence of failure to exercise appropriate care).

**33. Is there an acceptable and common attenuation factor utilized for evaluating vapor intrusion into a building?**

LPS - I believe EPA has recommendations but states may use different factors.



**34. I have heard the comment that Larry mentioned that “EPA has identified that dry cleaners are the number 1 type of site that are becoming Superfund sites”. Can we get a citation link for that EPA statement?**

LPS - EPA told the ASTM E1527 task force this fact in one of our meetings but look at the last few rounds of new NPL listings. The new subsurface vapor pathway is causing sites to be listed.

**35. I have found that one of the most common points of disagreement among us consultants is whether or not offsite dry cleaning operations pose 1) a REC and 2) a true liability risk. What is your perspective?**

LPS - Not only among consultants but also lawyers. It really depends on site specific conditions. It is more likely to be a problem in urban or suburban areas. Length of time, when they operated, and subsurface conditions all contribute to the opinion. But the State Coalition of Dry Cleaners did two studies that revealed that 75% to 80% of past dry cleaners have impacted the environment.

**36. Is ASTM considering extending the search distance for dry cleaner and related databases to make sure we identify facilities that may have a plume over a mile?**

LPS - It didn't during the past revisions.

**37. I am assisting a client who bought the dry cleaning operation (as 4th owner) before it was discovered that contamination had occurred during an earlier ownership. How can I demonstrate that our client bought into a site in 2000 that was already contaminated from the 1980s and 1990s? The property owner is dragging our client into their mess.**

LPS - I have found degradation products can be evidence of historic spills. Also, are they using closed-loop system, is there now secondary containment and solvent-grade epoxy flooring that could minimize impacts of any spills?

## COMMENTS

Banks must conduct risk assessment not on minimum potential outcomes but on moderate to high potential outcomes. Since the probability of a release from a dry cleaner is 75-85% and the worst case scenarios for dry cleaners can be 7 figures, we need to make an assumption that a release could impact more than just the immediate area of the cleaner.

Groundwater contaminants from dry cleaners typically sink, so the plume is not necessarily an exposure, unless the groundwater is being used by pumping it for use.

For a vapor exposure the concentrations need to be detectable, it needs to be close to the source or a huge quantity before sinking out of site.

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