



AIHA
CONNECT™
2025





CARBON TETRACHLORIDE (CTC)

TSCA Regulation

Final Rule

Publication date: December 18, 2024

Effective January 17, 2025

Kansas City, MO | May 19-21 | 2



EXCLUSIONS

This rule does not apply if:

- Carbon tetrachloride (CTC) is solely present unintentionally in trace quantities with another chemical substance or mixture.

TSCA SECTION 6(A) SUMMARY

Prohibition from the manufacture, processing, distribution and use of CTC for the following conditions of use:

- Processing
- Industrial and commercial use
- Industrial and commercial specialty uses, including use as a laboratory chemical

Workplace^{mi1} Chemical Protection Program (WCPP) for conditions of use includes:

- Inhalation exposure concentration limits
- Workplace exposure monitoring
- Exposure controls

Slide 4

mi1 The way i read this all of these are prohibited uses. I'm not sure that was the intent.

Lab use is an allowed use.

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TSCA SECTION 6(A) SUMMARY

Downstream notification requirements for:

- Manufacturing (including imports)
- Processing
- Distribution in commerce

Recordkeeping requirements for:

- Manufacturing (including imports)
- Processing
- Distribution in commerce
- Engagement in industrial or commercial use

APPLIES TO CTC PRODUCTS

Including:

- Manufacturers (includes importers to US)
- Producers (including importers)
- Processors
- Distributors
- Users or
- Disposal

NOTE: This does not apply to CTC solely present unintentionally in trace quantities with another chemical substance or mixture.



COMPLIANCE DEADLINES

Effective Date of Rule: January 17, 2025

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Prohibitions from the manufacture, processing, and distribution of CTC:

- June 16, 2025 – For these conditions of use:
 - Processing
 - Industrial and commercial
- December 18, 2025 - For these conditions of use:
 - Industrial and commercial use as a laboratory chemical (specialty)
 - Laboratory chemical use by the U.S. Department of Defense



Slide 7

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needs to be rewritten - after Dec 18th.. you can use them as a laboratory chemical with controls as outlined in § 751.709

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COMPLIANCE DEADLINES

Existing chemical exposure limit (ECEL) Compliance

- September 9, 2026 – Non-Federal Owners/Operators (NF O/O)
- September 20, 2027 – Federal Agency/Federal Contractor (FA/FC)
 - Within 4 months from introduction of CTC after June 11, 2026, compliance with the ECEL is required.
 - If satisfactory monitoring results are available within 5 years prior to February 18, 2025, these results may be used.

Initial Monitoring

- June 11, 2026 – NF O/O
- June 21, 2027 – FA/FC
 - Initial monitoring shall take place within 30 days of introduction of CTC into the workplace.



COMPLIANCE DEADLINES

Establishment of Regulated Areas

- September 9, 2026 – NF O/O
- September 20, 2027 – FA/FC

Direct Dermal Contact Controls (DDCC)

- June 16, 2025 – NF O/O
- September 20, 2027 – FA/FC

Exposure control procedures and plan – established and implemented by December 3, 2027

- An exposure control plan must be established and implemented; including documentation on the hierarchy of controls



COMPLIANCE DEADLINES

Workplace Information and Training for potentially exposed persons

- September 9, 2026 – NF O/O
- September 20, 2027 – FA/FC

Respiratory Protection

- September 9, 2026 – NF O/O
- September 20, 2027 – FA/FC
 - Within three months after receipt of any exposure monitoring that indicates exposures exceeding the ECEL, respiratory protection is provided
 - A written respiratory protection program consistent with the requirements of 29 CFR 1910.134(c)(1), (c)(3) and (c)(4) must be developed/implemented



COMPLIANCE DEADLINES

Dermal Protection - Laboratory

- June 16, 2025 – NF O/O
- September 20, 2027 – FA/FC

Workplace Restrictions for Industrial and commercial specialty uses, including use as a laboratory chemical

- June 16, 2025 – NF O/O
- December 18, 2025 – FA/FC



COMPLIANCE DEADLINES

Downstream Notification – Manufacturers (including importers), processors, or distributors in commerce must notify (in writing) the TSCA restrictions of CTC to companies whom CTC is shipped

- February 18, 2025 – Manufacturers (including importers)
- June 16, 2025 – Processors or distributors in commerce



COMPLIANCE DEADLINES

Recordkeeping Requirements - Manufacturers (including importers), processors, distributors in commerce, or those engaged in industrial or commercial use of CTC must maintain the following records by:

- February 18, 2025
 - Ordinary business records
 - WCPP compliance
 - Workplace requirements for laboratory use compliance



WORKPLACE CHEMICAL PROTECTION PROGRAM (WCPP) REQUIRED FOR THESE USES:

- Manufacturing and processing for export
- Domestic manufacture, except where CTC is manufactured solely as a byproduct
- Import
- Processing as a reactant in the production of hydrochlorofluorocarbons, hydrofluorocarbons, hydrofluoroolefins and perchloroethylene
- Processing, including incorporation into formulation, mixture, or reaction products for agricultural products manufacturing, vinyl chloride manufacturing, and other basic organic and inorganic chemical manufacturing
- Processing, including repackaging for use as a laboratory chemical



WORKPLACE CHEMICAL PROTECTION PROGRAM (WCPP) REQUIRED FOR THESE USES:

- Processing, including recycling
- Industrial and commercial use as an industrial processing aid in the manufacture of agricultural products and vinyl chloride
- Industrial and commercial use in the elimination of nitrogen trichloride in the production of chlorine and caustic soda and the recovery of chlorine in tail gas from the production of chlorine
- Disposal



WCPP FOR CTC REQUIRES:

Requirements per 40 CFR Part 751 Subpart H – Carbon Tetrachloride

Initial monitoring and SEG Development – by June 11, 2026 (NF O/O) or June 21, 2027 (FA/FC)

SEG Development and Monitoring for CTC Users

Compliance with EPA exposure limits – by September 9, 2026 (NF O/O) or September 20, 2027 (FA/FC)

ECEL – 0.03 ppm 8-Hour TWA

Action Level - 0.02 ppm 8-Hour TWA

Regulated areas must be established and maintained wherever airborne concentrations of CTC exceeds or can reasonably be expected to exceed the ECEL – By September 9, 2026 (NF O/O) or September 20, 2027 (FA/FC)

Direct Dermal Contact Controls (DDCC) – by June 16, 2025 (NF O/O) or September 20, 2027 (FA/FC)

Hierarchy of Controls must be applied to ensure no person exposed to at or above the ECEL or after December 3, 2027



Slide 16

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This slide has some new info but repeats the compliance dates. It is hard to read in the table. What if we removed from table and didn't include the dates? Same for the following slide.

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WCPP FOR CTC REQUIRES:

Requirements per 40 CFR Part 751 Subpart H – CTC (Continued)

Full Exposure Control Plans implemented – by December 3, 2027

	Documenting selection of controls and maintenance of controls
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Respiratory Protection by September 9, 2026 (NF O/O) or September 20, 2027 (FA/FC)

	Within three months after receipt of any exposure monitoring that indicates exposures exceeding the ECEL, respiratory protection is provided.
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	A written respiratory protection program consistent with the requirements of 29 CFR 1910.134(c)(I), (c)(3) and (c)(4) must be developed/implemented.
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Dermal Protection – by June 16, 2025 (NF O/O) or September 20, 2027 (FA/FC)

Workplace Restrictions for Industrial and Commercial Use as a Laboratory Chemical – by June 16, 2025 (NF O/O) or December 18, 2025 (FA/FC)

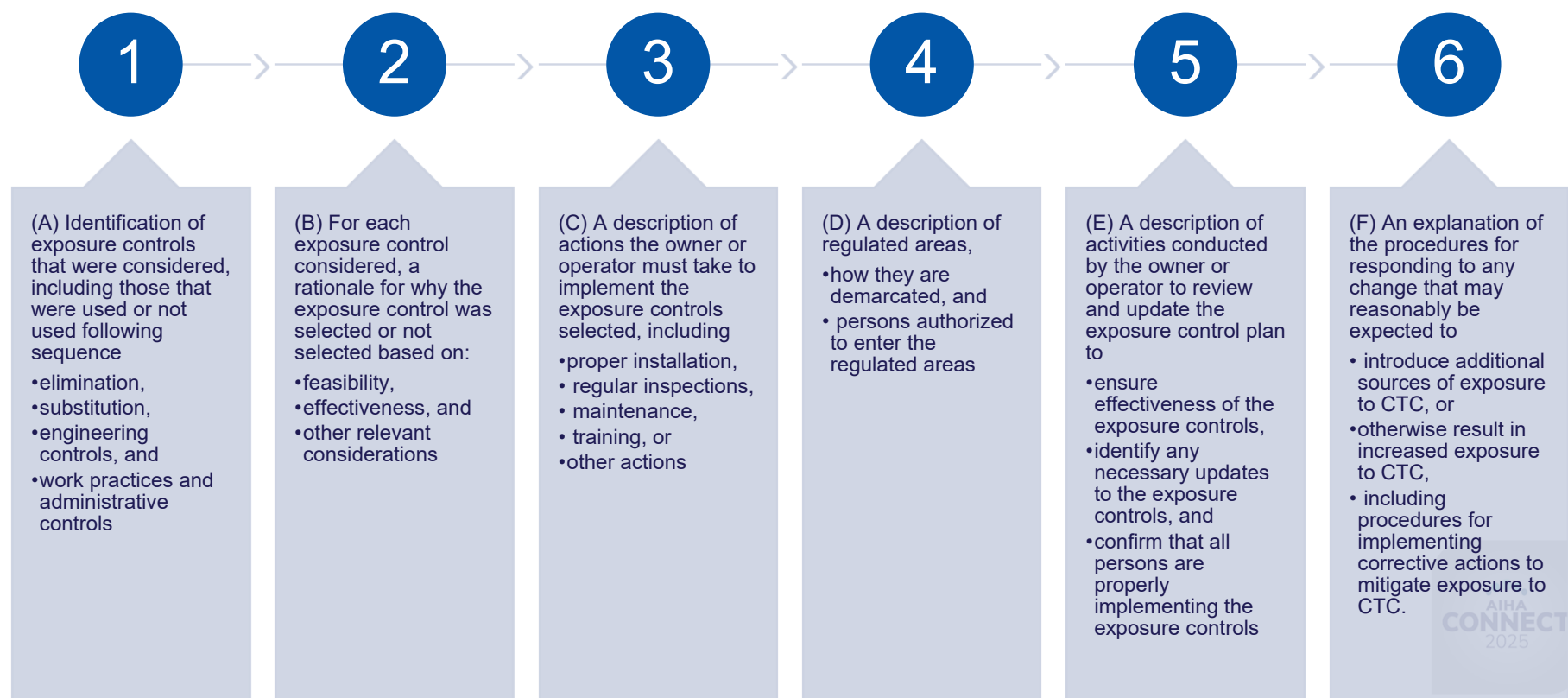
Workplace Information and Training for potentially exposed persons – by September 9, 2026 (NF O/O) or September 20, 2027 (FA/FC)

Recordkeeping and notification requirements



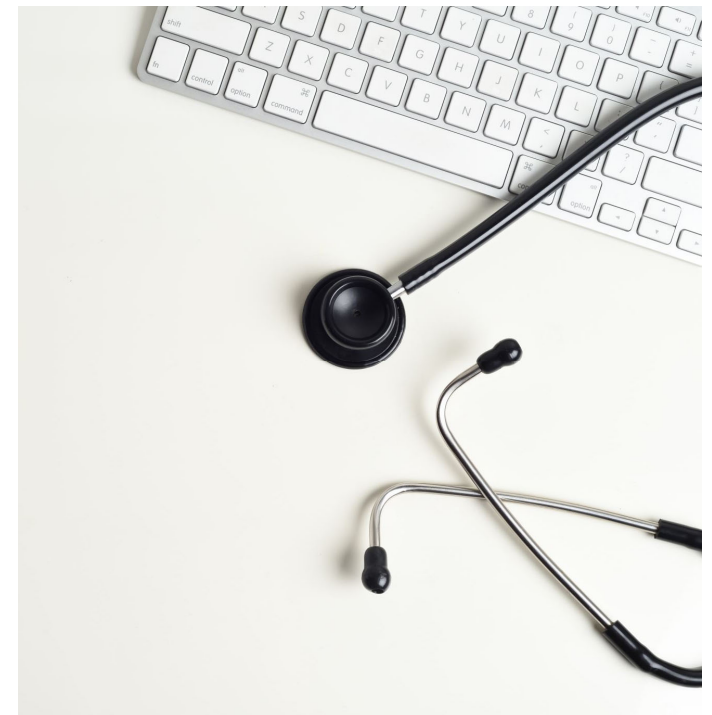
TSCA WCPP - EXPOSURE CONTROL PLANS

DUE DECEMBER 3, 2027



EXPOSURE CONTROL PLAN REQUIREMENTS

- The owner or operator must not implement a schedule of personnel rotation as a means of compliance with the ECEL.
- The owner or operator must maintain the effectiveness of any controls implemented.
- The exposure control plan must be reviewed and updated as necessary, but at least every 5 years, to reflect any significant changes.





EXPOSURE CONTROL PLAN AVAILABILITY

- Owners or operators must make the exposure control plan and associated records available to potentially exposed persons, including
 - Exposure monitoring records
 - Respiratory protection program implementation
 - Dermal protection program implementation
- Owners or operators must notify potentially exposed persons of the availability of the plan and associated records within 30 days of the date that the exposure control plan is completed and at least annually thereafter.





EXPOSURE CONTROL PLAN AVAILABILITY

The owner or operator must provide the specified records at a reasonable time, place, and manner upon request by the potentially exposed person.



EXPOSURE MONITORING RECORD REQUIREMENTS FOR OWNERS/OPERATORS

(1) For each monitoring event of CTC required under this subpart, must also document the following:

- (i) All measurements that may be necessary to determine the conditions that may affect the monitoring results;
- (ii) The identity of all other potentially exposed persons whose exposure was not measured and whose exposure is intended to be represented by the area or representative sampling monitoring;
- (iii) Use of established analytical methods;
- (iv) Compliance with the Good Laboratory Practice Standards or use of a laboratory accredited by the AIHA or another industry-recognized program; and
- (v) Information regarding air monitoring equipment including:
 - Type, maintenance, calibrations, performance tests, limits of detection, and any malfunctions.

(2) Copies of exposure monitoring notifications provided to affected individuals

PERSONNEL BREATHING ZONE SAMPLING OPTIONS

- For each potentially exposed person or representative of each potentially exposed person's you must determine exposure per below:
 - The owner or operator has taken one or more personal breathing zone air samples for at least one potentially exposed person in **each job classification** in a work area during **every work shift**, and the person sampled is expected to have the **highest CTC exposure**.
 - Personal breathing zone air samples taken during one work shift may be used to represent potentially exposed person exposures on other work shifts where the owner or operator can **document** that the **tasks performed and conditions** in the workplace are **similar across shifts**.



PERSONNEL BREATHING ZONE PERIODIC MONITORING REQUIREMENTS

Air concentration condition

If all initial exposure monitoring is below the ECEL action level (<0.02 ppm 8-hour TWA)

If the most recent exposure monitoring indicates that airborne exposure is above the ECEL (> 0.03 ppm 8-hour TWA)

If the most recent exposure monitoring indicates that airborne exposure is at or above the ECEL action level but at or below the ECEL (≥ 0.02 ppm 8-hour TWA, ≤ 0.03 ppm 8-hour TWA)

If the two most recent (non-initial) exposure monitoring measurements, taken at least seven days apart within a 6-month period, indicate exposure is below the ECEL action level (<0.02 ppm 8-hour TWA)

If the owner or operator engages in a condition of use for which WCPP ECEL would be required but does not manufacture, process, use, or dispose of CTC in that condition of use over the entirety of time since the last required monitoring event

Periodic exposure monitoring requirement

Periodic exposure monitoring is required at least once every five years.

Periodic exposure monitoring is required within three months of the most recent exposure monitoring.

Periodic exposure monitoring is required within six months of the most recent exposure monitoring.

Periodic exposure monitoring is required within five years of the most recent exposure monitoring.

The owner or operator may forgo the next periodic exposure monitoring event. However, documentation of cessation of use of CTC is required; and periodic monitoring would be required when the owner or operator resumes the condition of use.



USE OF OBJECTIVE DATA

Objective data generated within the last 5 years prior to February 18, 2025, that demonstrates to EPA that CTC cannot be released in the workplace in airborne concentrations at or above the ECEL action level (0.02 ppm 8-hour TWA) and that the data represents the highest CTC exposures likely to occur under conditions of use.

ADDITIONAL MONITORING REQUIREMENTS

Additional exposure monitoring must be conducted whenever there has been a:

- Change in the production, process, control equipment, personnel or work practices or other reason that may reasonably be expected to result in new or additional exposures above the ECEL .
- Start ups or shutdowns, or ruptures, malfunctions or other breakdowns or if an unexpected releases occurs that may lead to exposure to potentially exposed persons. Prior monitoring data cannot be used to meet this requirement.

MONITORING REQUIREMENTS - OBSERVATION

- Owners and operators must provide potentially exposed persons or their designated representatives an opportunity to observe CTC exposure monitoring .
- When monitoring observation requires entry into a regulated area, the owner or operator must provide the observers with the required PPE.
- Only persons who are authorized to have access to facilities classified in the interest of national security must be permitted to observe exposure monitoring conducted in such facilities.

EXPOSURE MONITORING RESULTS NOTIFICATION

Inform each person whose exposures are monitored or who is part of a monitored exposure group and their designated representatives of any monitoring results within 15 working days of receipt of those monitoring results. This notification must include the following:

- Exposure monitoring results;
- Identification and explanation of the ECEL and ECEL action level;
- Statement of whether the monitored airborne concentration of CTC exceeds the ECEL action level or ECEL;
- If the ECEL is exceeded, descriptions of any exposure controls implemented by the owner or operator to reduce exposures to or below the ECEL;
- Explanation of any required respiratory protection provided;
- Quantity of CTC in use at the time of monitoring;
- Location of CTC use at the time of monitoring;
- Manner of CTC use at the time of monitoring; and
- Identified releases of CTC;



EXPOSURE MONITORING RESULTS NOTIFICATION

Notice must be written in plain language and either provided to each potentially exposed person and their designated representatives individually in a language that the person understands

or

posted in an appropriate and accessible location outside the regulated area with an English-language version and a non-English language version representing the language of the largest group of workers who do not read English.

PROVISION OF RESPIRATORY PROTECTION

- Ensure that each person who enters a regulated area is supplied with a respirator selected in accordance with this rule and must ensure that all persons within the regulated area are using the provided respirators whenever CTC exposures may exceed the ECEL.

PROHIBITED ACTIVITIES IN REGULATED AREAS

- The owner or operator must ensure that, within a regulated area, persons do not engage in non-work activities which may increase CTC exposure.
- The owner or operator must ensure that while persons are wearing respirators in the regulated area, they do not engage in activities which interfere with respirator performance.

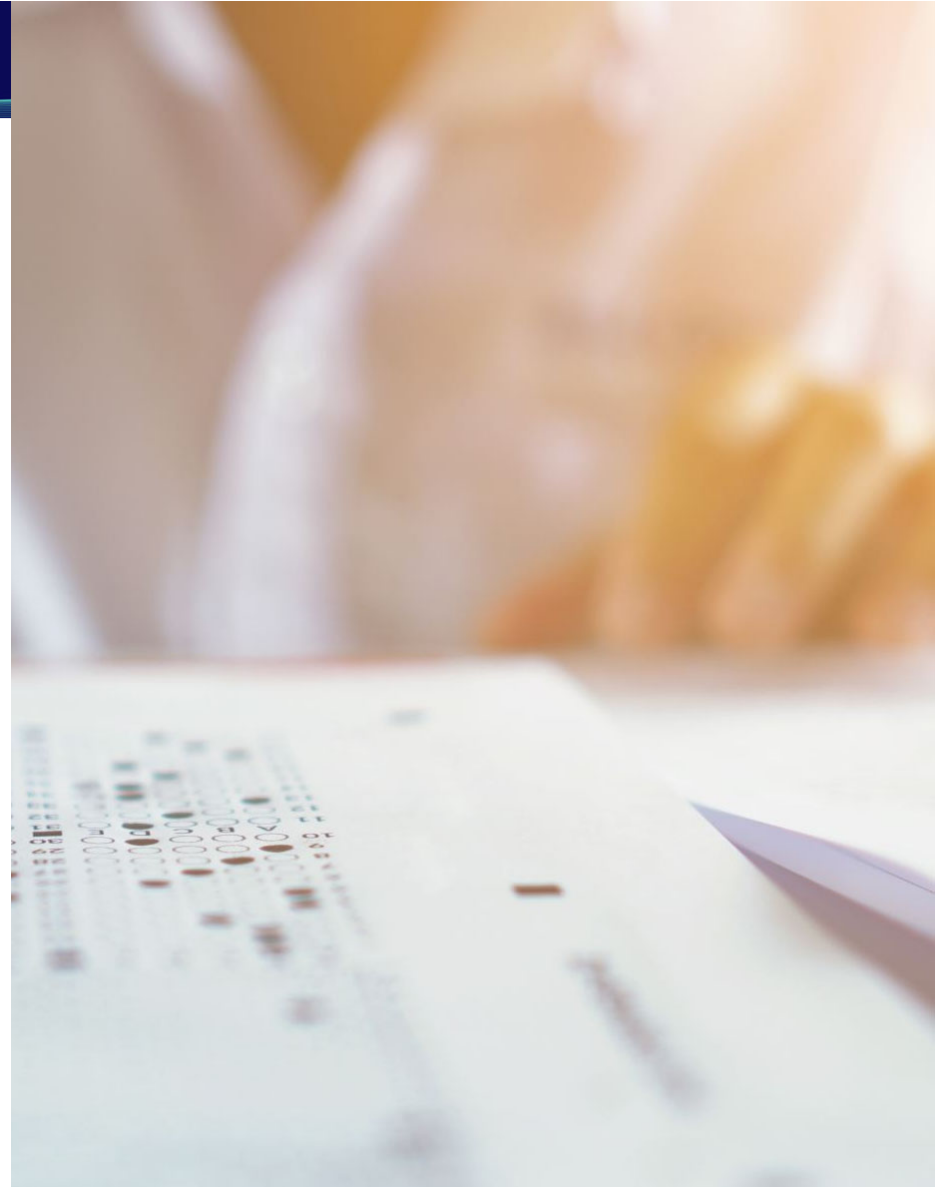
DIRECT DERMAL CONTACT CONTROLS (DDCC).

- Ensure that all persons are separated, distanced, physically removed, or isolated to prevent direct dermal contact with CTC or from contact with equipment or materials on which CTC may exist.
- Institute one or a combination of elimination, substitution, engineering controls, or administrative controls to prevent all persons from direct dermal contact. Demonstrate where not feasible.
- Dermal protection must be used when required controls do not completely prevent direct dermal contact
- Where an owner or operator cannot demonstrate that direct dermal contact to carbon tetrachloride is prevented through the use of controls required above and has not demonstrated that it has appropriately supplemented with dermal protection, this will constitute a failure to comply with the DDCC requirements.

GENERAL RECORDKEEPING REQUIREMENTS

General records

- All persons who manufacture (including import), process, distribute in commerce, or engage in industrial or commercial use of CTC must maintain ordinary business records, such as:
 - Downstream notifications
 - Invoices
 - Bills-of-lading
- Record related to compliance with the prohibitions, restrictions, and other provisions of the rule.



WORKPLACE CHEMICAL PROTECTION PROGRAM COMPLIANCE REQUIREMENTS:



EXPOSURE MONITORING
RECORDS



EXPOSURE CONTROL PLANS



RESPIRATORY PROTECTION
USED AND PROGRAM
IMPLEMENTATION



DIRECT DERMAL CONTACT
CONTROLS (DDCC)
PROGRAM



LAB USE - WORKPLACE RECORD REQUIREMENTS:



IMPLEMENTED CONTROL
MEASURES



LABORATORY VENTILATION
PROGRAM & MAINTENANCE
RECORDS



DERMAL PROTECTION USED
AND PROGRAM
IMPLEMENTATION



RETENTION

Owners or operators must retain the records required under this section for a period of five years from the date that such records were generated.



QUESTIONS??





THANK YOU FOR ATTENDING!

Add Speaker Name(s) Credentials, Headshots, and Contact Info
(if applicable)