AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

June 10, 1996

TO: Workshop Participants and
Other Interested Parties

FROM: Richard J. Smith
Deputy Director

AIRBORNE TOXIC CONTROL MEASURE (ATCM) FOR EMISSIONS OF PERCHLOROETHYLENE FROM DRY CLEANING OPERATIONS

WORKSHOP REPORT

On February 7, 1996, the District conducted a public workshop to discuss implementation and enforcement of the state Airborne Toxic Control Measure for emissions of perchloroethylene from dry cleaning operations. The workshop report is attached for your review.

If you have any questions or comments, please call Natalie Zlotin at (619) 694-3312 or me at (619) 694-3303.

Richard J. Smith

RICHARD J. SMITH
Deputy Director

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Attachment

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AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

AIRBORNE TOXIC CONTROL MEASURE FOR EMISSIONS OF PERCHLOROETHYLENE FROM DRY CLEANING OPERATIONS

WORKSHOP REPORT

A workshop notice was mailed to all facilities in San Diego County involved in dry cleaning operations using perchloroethylene (perc). Notices were also mailed to all Chambers of Commerce and all Economic Development Corporations, the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (ARB), and other interested parties.

On October 13, 1993, ARB adopted the Airborne Toxic Control Measure (ATCM) regulating perc emissions from dry cleaning operations. The rule became effective in San Diego County on October 1, 1994. The District will implement and enforce the ATCM without formally adopting it, as allowed by state law and in accordance with the procedure approved by the Air Pollution Control Board on July 25, 1995.

The workshop to discuss ATCM implementation was held on February 7, 1996 and was attended by 27 people. The workshop comments and District responses are as follows:

1. WORKSHOP COMMENT

The phase-out date for transfer machines seems to keep changing. Has the final phase-out date been established?

DISTRICT RESPONSE

Yes. The final phase-out date for transfer machines is October 1, 1998. This date is established by the ATCM and cannot be changed by the District.

2. WORKSHOP COMMENT

If an existing facility relocates or sells their equipment, will the facility be considered "new" and therefore subject to the secondary control system requirements?

DISTRICT RESPONSE

An existing facility (in operation prior to October 1, 1994) which relocates is considered "existing" for the purposes of the ATCM and is not subject to the secondary control system requirements.

Equipment at existing facilities which is sold to a new owner may or may not be subject to the secondary control system requirements depending on whether the buyer is an existing facility or a new facility. Equipment which is sold to another existing facility is not subject to the secondary control requirements. However, equipment which is sold to a new facility (not in operation prior to October 1, 1994) is subject to the secondary control requirements.

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3. WORKSHOP COMMENT

What will the Environmental Training Course involve?

DISTRICT RESPONSE

The ATCM sets forth an environmental training requirement for operators of dry cleaning facilities. Each facility must have at least one full time employee who has successfully completed an ARB approved environmental training course. The one-day course will provide dry cleaners with an understanding of the requirements of the ATCM. Topics will include: health effects of perc, perc usage and emissions, working with perc, dry cleaning equipment and operations, the ATCM control requirements, operation and maintenance practices, leaks and leak detection, spills and emergency response, and other state and local regulations. Several persons in San Diego County have been certified by ARB to provide this training course.

4. WORKSHOP COMMENT

Does the District intend to offer the course?

DISTRICT RESPONSE

No. The District does not intend to offer the course. However, the Compliance Advisory recently issued by the District contains a list of instructors certified by ARB (or applied for such certification) that are presently teaching this course in San Diego County. This list is also available from the District.

5. WORKSHOP COMMENT

Who can teach the course?

DISTRICT RESPONSE

Any person certified by ARB can become a course instructor. In order to be certified, instructors must be able to demonstrate a background in, and knowledge of, the following: operation and maintenance of dry cleaning systems, pollution prevention procedures, and environmental regulations pertaining to dry cleaning operations in California. Persons or organizations seeking to qualify as instructors must submit an application to ARB for approval.

6. WORKSHOP COMMENT

Will the District accept ARB's approval of instructors?

DISTRICT RESPONSE

Yes.

7. WORKSHOP COMMENT

What date will facilities be required to complete the course by?

DISTRICT RESPONSE

Facilities will be required to have at least one trained operator by November 1, 1996.

8. WORKSHOP COMMENT

Will the District send out notices informing dry cleaning facilities of the availability of the course and the date by which the course must be completed?

DISTRICT RESPONSE

Yes. This information has been included in the Compliance Advisory recently sent to all dry cleaning facilities.

9. WORKSHOP COMMENT

Will the District take a portion of the fees charged for the course?

DISTRICT RESPONSE

No. The District will not receive any portion of the fees charged by the instructors.

10. WORKSHOP COMMENT

Will there be a condition in the Permit to Operate requiring that the owner or operator successfully complete the course?

DISTRICT RESPONSE

Yes. The appropriate condition will be added to all existing and new permits.

11. WORKSHOP COMMENT

Will there be a fine for not completing the course? If so, what will the fine amount be and how will facilities find out about it?

DISTRICT RESPONSE

Facilities which fail to complete the course will be in violation of the ATCM and the Permit to Operate. Violations are subject to a maximum fine of $1000 per day. This information has been included in the Compliance Advisory recently sent to all dry cleaning facilities.

12. WORKSHOP COMMENT

Will failure to successfully complete the course affect the ability to obtain or renew a permit?

DISTRICT RESPONSE

For existing facilities, as indicated in the District's response to Workshop Comment #10, an appropriate condition requiring that the facility have at least one trained operator will be added to facility permits upon renewal after November 1, 1996. Thereafter, failure to have a trained operator will be a violation of the ATCM and the facility permit. Provided that the facility agrees to comply with the training requirement, such violation will not necessarily preclude the District from renewing a permit. If, however, a facility refuses to comply with the requirement, the District may petition the Hearing Board of the San Diego Air Pollution Control District to revoke or suspend the permit.

For new facilities, a condition will be added to the Authority to Construct requiring that the facility provide the District with a record of certification of a trained operator within three months of startup. The final Permit to Operate will not be issued until the facility has provided the record of certification.

13. WORKSHOP COMMENT

The Imperial County APCD sent notices to the dry cleaners in their district stating that all facilities must take the training course offered by the ARB Compliance Division in Barstow on April 17, 1996. Several dry cleaners in Imperial County feel that Barstow is too far away for them to travel for the course. Could these facilities take the course in San Diego when it becomes available?

DISTRICT RESPONSE

Yes. The Imperial County APCD will allow facilities in that district to take the course in San Diego when it is available.

14. WORKSHOP COMMENT

The District Operation and Maintenance Checklists which were distributed along with the Workshop Notice appear to require daily records . This is more frequent than required by the ATCM and is too burdensome for the dry cleaners. Several dry cleaners have developed their own checklists. Is it possible to use an alternative checklists in lieu of the District's suggested format?

DISTRICT RESPONSE

Yes. Alternative checklists may be submitted to the District for approval to be used in lieu of the District's suggested format.

Please note that the District's checklist must be completed at least weekly, not daily. The District has reformatted its checklist onto one single page. The revised checklist has been sent along with the Compliance Advisory to all dry cleaning facilities. Those facilities that have already begun using the original District checklist may continue to do so or to use the revised checklist.

15. WORKSHOP COMMENT

What equipment is subject to the ARB equipment pre-certification program?

DISTRICT RESPONSE

Manufacturers of dry cleaning machines equipped with specified controls are required to test the control equipment and submit the test results to ARB for review. ARB will "pre-certify" equipment which meets the ATCM requirements. The District will consider such equipment to be in compliance with the ATCM.

16. WORKSHOP COMMENT

What is the District's policy regarding the frequency of compliance inspections at dry cleaning facilities?

DISTRICT RESPONSE

The District's policy is to conduct compliance inspections at dry cleaning facilities annually.

17. WORKSHOP COMMENT

Will the District continue to enforce Rule 67.8 (Dry Cleaning Facilities Using Halogenated Organic Solvent) considering that perc has been determined to be an exempt compound?

DISTRICT RESPONSE

Yes. Rule 67.8 regulates perc as a halogenated organic compound not as a volatile organic compound (VOC). Therefore, Rule 67.8 applies to perc regardless of its status as a VOC. Furthermore, perc has been identified by the United States Environmental Protection Agency (EPA) as a hazardous air contaminant and by the ARB as a toxic air contaminant. Perc is regulated under the ATCM as a toxic air contaminant, not as a VOC. The District will continue to enforce Rule 67.8 until October 1, 1998 at which time all facilities must be in compliance with the equipment requirements of the ATCM. Rule 67.8 will then be repealed and dry cleaning facilities will be subject only to the ATCM. During the interim period while both rules apply, the ATCM requirements will supersede Rule 67.8 in cases where the two rules conflict.

18. WORKSHOP COMMENT

What are the District requirements for petroleum based dry cleaning solvents?

DISTRICT RESPONSE

Rule 67.2 (Dry Cleaning Equipment Using Petroleum-Based Solvent) applies to any dry cleaning facility which uses a petroleum based organic solvent. The rule requires any facility which consumes 600 gallons per year or more of petroleum-based organic solvent to reduce the total emissions of the solvent by 90%. Facilities which consume less than 600 gallons per year must still maintain usage records and meet several operation and maintenance requirements.

19. WORKSHOP COMMENT

Are petroleum based solvents considered VOCs or hazardous air pollutants?

DISTRICT RESPONSE

Most petroleum based solvents are considered VOC's since they are comprised primarily of aliphatic hydrocarbons similar to kerosene. The classification of petroleum based solvents as hazardous air pollutants depends on the specific chemical constituents of each particular solvent. The Federal Clean Air Act has a list of 189 hazardous air pollutants. A petroleum based solvent may contain one of these. For example, many petroleum based solvents contain some amounts of benzene which is considered a hazardous air pollutant. EPA is scheduled to publish a National Emission Standard for Hazardous Air Pollutants for petroleum based dry cleaning operations by November 15, 2000.

20. WORKSHOP COMMENT

Do petroleum based solvents contribute to smog formation?

DISTRICT RESPONSE

Yes. Generally, VOCs react with nitrogen oxides in the presence of sunlight to form photo-chemical smog. Since most petroleum based solvents contain VOCs, most will contribute to smog formation.

21. WORKSHOP COMMENT

Is California the only state that requires permits for petroleum dry cleaning facilities which use the Exxon Drycleaning Fluid 2000 Solvent?

DISTRICT RESPONSE

The Exxon Drycleaning Fluid 2000 Solvent is a clear colorless petroleum hydrocarbon which is similar to Stoddard Solvent but with a higher flash point (147°F). Use of this solvent will result in VOC emissions.

Rule 10 requires that a District permit be obtained prior to the installation or operation of any machine which may cause the issuance of air pollutants. Therefore, a District permit must be obtained before installing or operating a dry cleaning machine in which the Exxon Drycleaning Fluid 2000 Solvent will be used.

The District has no knowledge of whether petroleum dry cleaning facilities using this solvent are required to have permits in other states. In general, the stringency of permitting requirements in a state depends on a region's air quality. Because VOC's are ozone precursors some states which do not violate the National Ambient Air Quality Standard for ozone may have less stringent permitting requirements for VOC sources (such as petroleum dry cleaners). Still other states may require permits, but only for large facilities.

The District has structured its permitting requirements based on several factors including San Diego County's "non-attainment" status for the ozone standard.

22. WORKSHOP COMMENT

What disposal options are available to dry cleaners for their wastewater?

DISTRICT RESPONSE

Perc is considered a hazardous waste in California and as such may not be discharged to the municipal sewer. The San Diego Metropolitan Wastewater Department is working on a program to require dry cleaners to certify that they do not discharge perc to the sewer. Dry cleaners must either evaporate the wastewater or dispose of it as a hazardous waste .

23. WORKSHOP COMMENT

What are the District requirements for wastewater evaporators?

DISTRICT RESPONSE

The ATCM requires only that wastewater evaporators be operated to ensure that no liquid perc or visible emulsion is allowed to vaporize. Pursuant to District Rule 11, permits are not required for wastewater evaporators associated with dry cleaning operations provided that the concentration of halogenated compounds in the water being evaporated in the unit does not exceed 400 ppm by weight. Any wastewater evaporator may be used provided that the water being evaporated does not contain a visible emulsion and does not contain more than 400 ppm by weight halogenated compounds.

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PERC DRY CLEANING CHECKLISTS

FOR

CLOSED-LOOP MACHINE WITH REFRIGERATED CONDENSER

FACILITIES SHOULD BEGIN USING THESE CHECKLISTS UPON RECEIPT.

OPERATION AND MAINTENANCE CHECKLIST
FOR CLOSED LOOP MACHINE WITH REFRIGERATED CONDENSER

COMPONENT	O&M REQUIREMENT	DATE FOR MONTH OF: _____ 19____						
		1	2	3	4	5	6	7
REFRIGERATED CONDENSER	Air outlet temperature at or below 45ºF during cool-down (record temperature)							
BUTTON & LINT TRAPS	Cleaned each day and lint placed in tightly sealed container							
DOORS & ACCESS PANELS	Kept closed at all times except when required for proper O&M							
WASTEWATER EVAPORATOR (if applicable)	Operated to ensure that no liquid PERC is vaporized (if liquid PERC is present, decant off PERC portion and return it to still)							
CARTRIDGE FILTERS (if applicable)	Drained in their housing for 24 hours (standard) or 48 hours (adsorptive), prior to being replaced							
	Placed in sealed hazardous waste containers after being drained or, if applicable, dried, stripped, or otherwise treated in a closed system to reduce the volume of PERC prior to disposal							
STILL & MUCK COOKER	Do not exceed 75% of capacity							
	Cooled to 100ºF or less before being emptied or cleaned (record temperature)							
SOLVENT MILEAGE	Total pounds of clothes cleaned per day:							
	Total gallons of PERC added per day:							
	Total pounds of clothes cleaned month-to-date:							
	Total gallons of PERC added month-to-date: Tank reading on first day of month:							

COMPONENT	O&M REQUIREMENT	DATE FOR MONTH OF: _____ 19____						
		8	9	10	11	12	13	14
REFRIGERATED CONDENSER	Air outlet temperature at or below 45ºF during cool-down (record temperature)							
BUTTON & LINT TRAPS	Cleaned each day and lint placed in tightly sealed container							
DOORS & ACCESS PANELS	Kept closed at all times except when required for proper O&M							
WASTEWATER EVAPORATOR (if applicable)	Operated to ensure that no liquid PERC is vaporized (if liquid PERC is present, decant off PERC portion and return it to still)							
CARTRIDGE FILTERS (if applicable)	Drained in their housing for 24 hours (standard) or 48 hours (adsorptive), prior to being replaced							
	Placed in sealed hazardous waste containers after being drained or, if applicable, dried, stripped, or otherwise treated in a closed system to reduce the volume of PERC prior to disposal							
STILL & MUCK COOKER	Do not exceed 75% of capacity							
	Cooled to 100ºF or less before being emptied or cleaned (record temperature)							

SOLVENT MILEAGE								
	Total pounds of clothes cleaned per day:							
	Total gallons of PERC added per day:							
	Total pounds of clothes cleaned month-to-date:							
	Total gallons of PERC added month-to-date:							

COMPONENT	O&M REQUIREMENT	DATE FOR MONTH OF: _____ 19____						
		15	16	17	18	19	20	21
REFRIGERATED CONDENSER	Air outlet temperature at or below 45ºF during cool-down (record temperature)							
BUTTON & LINT TRAPS	Cleaned each day and lint placed in tightly sealed container							
DOORS & ACCESS PANELS	Kept closed at all times except when required for proper O&M							
WASTEWATER EVAPORATOR (if applicable)	Operated to ensure that no liquid PERC is vaporized (if liquid PERC is present, decant off PERC portion and return it to still)							
CARTRIDGE FILTERS (if applicable)	Drained in their housing for 24 hours (standard) or 48 hours (adsorptive), prior to being replaced							
	Placed in sealed hazardous waste containers after being drained or, if applicable, dried, stripped, or otherwise treated in a closed system to reduce the volume of PERC prior to disposal							
STILL & MUCK COOKER	Do not exceed 75% of capacity							
	Cooled to 100ºF or less before being emptied or cleaned (record temperature)							

SOLVENT MILEAGE								
	Total pounds of clothes cleaned per day:							
	Total gallons of PERC added per day:							
	Total pounds of clothes cleaned month-to-date:							
	Total gallons of PERC added month-to-date:							

COMPONENT	O&M REQUIREMENT	DATE FOR MONTH OF: _____ 19___									
		22	23	24	25	26	27	28	29	30	31
REFRIGERATED CONDENSER	Air outlet temperature at or below 45°F during cool-down (record temperature)										
BUTTON & LINT TRAPS	Cleaned each day and lint placed in tightly sealed container										
DOORS & ACCESS PANELS	Kept closed at all times except when required for proper O&M										
WASTEWATER EVAPORATOR (If applicable)	Operated to ensure that no liquid PERC is vaporized (if liquid PERC is present, decant off PERC portion and return it to still)										
CARTRIDGE FILTERS (If applicable)	Drained in their housing for 24 hours (standard) or 48 hours (adsorptive), prior to being replaced										
	Placed in sealed hazardous waste containers after being drained or, if applicable, dried, stripped, or otherwise treated in a closed system to reduce the volume of PERC prior to disposal										
STILL & MUCK COOKER	Do not exceed 75% of capacity										
	Cooled to 100°F or less before being emptied or cleaned (record temperature)										

SOLVENT MILEAGE												MONTHLY TOTAL	
	Total pounds of clothes cleaned per day:												
	Total gallons of PERC added per day:												
	Total pounds of clothes cleaned month-to-date:												A
	Total gallons of PERC added month-to-date:												B

Tank reading on first day of month: [ ] C

Tank reading on last day of month: [ ] D

PERC consumption this month (E) = Total solvent added (B) + tank reading on 1st day (C) - tank reading on last day (D) - [ ] E

Note: Carry over values in A, B, C, D, and E to the annual solvent mileage log sheet

ANNUAL SOLVENT MILEAGE LOG*

MONTH	A TOTAL POUNDS OF CLOTHES CLEANED	B TOTAL GALLONS OF PERC ADDED	C TANK READING ON 1ST DAY	D TANK READING ON LAST DAY	E PERC CONSUMPTION

ANNUAL TOTALS [ ] [ ]

AVERAGE ANNUAL SOLVENT MILEAGE = $\frac{\text{TOTAL POUNDS CLEANED}}{\text{TOTAL PERC CONSUMPTION}}$ = [ ]

* OBTAIN VALUES FOR COLUMNS A, B, C, D, AND E FROM DAILY O&M CHECKLISTS

PERC DRY CLEANING
WEEKLY LIQUID LEAK AND VAPOR LEAK INSPECTION CHECKLIST

VAPOR DETECTOR USED*: _____
DATE PERFORMED: _____
PERFORMED BY: _____

COMPONENT	IS THERE A LEAK?		PARTS ORDERED (Date or "NONE")	PARTS RECEIVED (Date)	PARTS INSTALLED (Date)	REPAIR COMPLETED (Date)
	YES	NO				
Hose and Pipe connections						
Fittings						
Couplings						
Valves						
Pumps						
Door Gaskets and Seating						
Filter Gasket and Seating						
Solvent Tank						
Solvent Containers						
Water Separator						
Muck Cooker						
Still						
Exhaust Damper						
Diverter Valve						
Cartridge Filter Housing						
Lint Basket						
Lint Storage Containers						
Button Trap						

* **AFTER APRIL 1, 1996 A HALOGENATED-HYDROCARBON DETECTOR OR A PORTABLE GAS ANALYZER MUST BE USED TO DETECT VAPOR LEAKS.**

- **LEAKS MUST BE REPAIRED WITHIN 24 HOURS UNLESS PARTS MUST BE ORDERED**
- **PARTS MUST BE ORDERED WITHIN TWO WORKING DAYS OF DETECTION OF LEAK**
- **ORDERED PARTS MUST BE INSTALLED WITHIN FIVE WORKING DAYS AFTER RECEIPT**
- **A FACILITY WITH A LEAK THAT HAS NOT BEEN REPAIRED AFTER THE END OF THE 15 TH WORKING DAY AFTER DETECTION SHALL NOT OPERATE THE DRY CLEANING EQUIPMENT, UNTIL THE LEAK IS REPAIRED, WITHOUT A LEAK-REPAIR EXTENSION FROM THE APCD.**