COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

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Dry Cleaner Guidance for Calculating Amounts for Toxics Use Report

Under the Toxics Use Reduction Act (TURA), dry cleaners that have 10 or more full-time employee equivalents and use 1,000 or more pounds of perchloroethylene (Perc) in a calendar year are required to file a Toxics Use Report with the Massachusetts Department of Environmental Protection (MassDEP). The first reports are for 2009 use and are due by July 1, 2010. In filling out a Toxics Use Report, dry cleaners must quantify their use of Perc (on the Form S) and their emissions of Perc (on the State-only Form R). Provided below is guidance on filling out the required forms and example forms filled out for you.

Form S

You should enter the amount (in pounds) of Perc added to your machine(s) in calendar year 2009 in the space "Otherwise Used," and enter this same amount in the space "Generated as Byproduct."

State-only Form R

The entire byproduct amount is emissions, either emissions to the air or in hazardous waste shipped off-site (an incidental amount also goes out in clothes but is too small for TURA reporting purposes). Dry cleaners should contact their manufacturers to obtain best engineering estimates of how much Perc is emitted annually in normal operations, and should also ask their waste haulers to determine if they can supply an estimate of how much Perc is annually shipped from the facility in waste.

If these parties cannot supply a reasonable estimate of how much Perc is emitted to air and shipped in waste, dry cleaners should follow the 3 steps below[1] to estimate the amount of Perc shipped in waste and emitted to air, as a default measure, to meet the TURA requirement of best engineering estimate.

[1] Derived from *The California Dry Cleaning Industry Technical Assessment Report,* 2006, California Air Resources Board, at: http://www.arb.ca.gov/toxics/dryclean/finaldrycleantechreport.pdf. The amounts used are for a normalized average of 46,600 pounds of clothes cleaned during one year.

Step 1. Multiply the amount of Perc used during the year by the applicable percentage in the table below to estimate the amount of Perc shipped as hazardous waste sludge for the type of machine that your facility uses. Please note that:

- Converted machines are those that have been converted from vented to closed-loop.
- Primary machines use refrigerated condensation. Primary machines are often referred to as third generation.
- Secondary machines utilize additional controls, such as carbon adsorbers. Secondary machines may be referred to as fourth or fifth generation.

Machine Type	% of use shipped as hazardous waste sludge
Converted	19.5%
Primary (Spin Disk Only)	53.0%
Primary (Cartridge Only)	30.2%
Primary (Combo)	44.4%
Primary (Average)	38.7%
Secondary (Spin Disk Only)	63.7%
Secondary (Cartridge Only)	51.4%
Secondary (Combo)	66.3%
Secondary (Average)	61.1%

Step 2. Count up the number of filters that you disposed during the year, and multiply by 10.98 pounds of Perc per filter. (If you have actual data on how much Perc was contained in your filters, use that instead of this default estimate). If you do not know how many filters you disposed during the year, refer to the table below for the expected number of waste filters each machine type generates in cleaning 46,600 pounds of clothes. The typical number of gallons of Perc used by each machine type to clean 46,600 pounds of clothes also is included to assist you in comparing your work load to these average values. Add the amount of Perc in your waste filters to the amount of hazardous waste sludge from Step 1.

Type of Machine	# filters	gal used
Converted	22	106
Primary (Spin Disk Only)	0	73
Primary (Cartridge Only)	18	97
Primary (Combo)	14	79
Primary (Average)	10	86
Secondary (Spin Disk Only)	0	65
Secondary (Cartridge Only)	10	60
Secondary (Combo)	6	59
Secondary (Average)	5	61

Step 3. Since all Perc not shipped as hazardous waste (i.e., in sludge and filters) is emitted to air, subtract the combined amount from Steps 1 and 2 from the total use of Perc from the calendar year to obtain the total estimated air emissions.

Example: A dry cleaner using a secondary machine with combination spin disk and cartridge filters added 100 gallons of Perc to the machines in calendar year 2009 (100 gallons times 13.5 pounds per gallon equals 1,350 pounds). If the waste service company cannot supply a reasonable estimate of how much Perc was shipped by the facility, the dry cleaner would estimate that 66.3% was shipped as waste sludge, or 0.663 x 1,350 pounds = 895 pounds. In addition, if 10 filters were used, the dry cleaner would estimate another 110 pounds of Perc disposed of with the filters (10 filters x 10.98 lbs of Perc/filter), for a total hazardous waste disposal of 1,005 pounds. The dry cleaner would estimate the difference between this amount and total use of Perc as air emissions (1,350 – 1,005 = 345). The dry cleaner would enter the following amounts in pounds in its Toxics Use Report:

Used: 1350	enter as “Otherwise Used” on Form S, Section 1.e.
Byproduct: 1350	enter as “Generated as Byproduct” on Form S, Section 1.f.
Air emissions: 345	enter as “Fugitive or non-point air emissions” on State-only Form R, Section 5.1 and as “Total on-site disposal or other releases” in Section 8.1b, columns B, C, and D
Hazardous waste: 1005	enter as “Total Transfers” on State-only Form R, Section 6.2.A and as “Total off-site disposal or other releases” in Section 8.1d, columns B, C, and D

Questions? Please call Rick Reibstein at the Office of Technical Assistance at 617-626-1062 or Lynn Cain at MassDEP at 617-292-5711. For information about alternatives to perc in dry cleaning, please contact Joy Onasch at the Toxics Use Reduction Institutute (TURI) at joy@turi.org or 978-934-4343.

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Toxics Use Report

Form S Cover Sheet

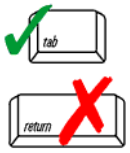
2009
Reporting Year

Joe's Cleaner
Facility Name

[obtain from DEP]
DEP Facility ID Number

Section 1: General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Facility Name and Address:

Joe's Cleaner
a. Name

100 Dry Cleaner Avenue
b. Street Address

Anytown
c. City

MA
d. State

12121
e. Zip Code

f. Are you making a trade secret claim for any information submitted in this COVER SHEET and/or Form S(s)? Yes ☐ No ☒

g. If YES, attach a statement substantiating the claim. This copy is: Sanitized ☐ Unsanitized ☐

h. Are all chemicals only used to treat wastewater? Yes ☐ No ☒
(if yes, then there are no production units associated with this facility).

[Fill in]
i. Taxpayer Identification Number
(Federal Employer Identification Number or FEIN)

NA
j. Toxics Release Inventory (TRI) Identification Number

Section 2: Certification Statement

I hereby certify that I have reviewed this and all attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and information in these documents are accurate based on measurements and/or reasonable estimates using data available to the preparers of these documents. I am aware that there are significant penalties for willful or intentional submission of false or incomplete information. I agree on behalf of the filing facility to remit the required Toxics Use Fee (as determined on the Fee Worksheet form) to the Commonwealth of Massachusetts, as required by 301 CMR 40.03. I further certify that the information contained within this filing, as it pertains to TURA billing, is true and correct.

[Sign]
a. Authorized Signature

[Fill in]
b. Date (MM/DD/YYYY)

[Fill in]
c. First Name (Print)

[Fill in]
d. Last Name (Print)

[Fill in]
e. Position/Title

[Fill in]
f. Email Address

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Toxics Use Report

Form S Cover Sheet

2009
Reporting Year

Joe's Cleaner
Facility Name

[obtain from DEP]
DEP Facility ID Number

Section 3: Chemicals Previously Reported That Are Not Reportable This Year [Skip this section]

In this section, you may provide information on any chemical reported last year that is not subject to reporting this year. If you substituted a non-listed chemical for a TURA chemical, you may identify the substitution.

The codes to explain why the chemical is not reportable are: [1] Chemical Below Threshold But > 0; [2] No Chemical Use in Reporting Year; [3] Chemical Substitution; [4] Chemical Eliminated (No Substitution); [5] Decline in Business; [6] Other (Explain below in the additional comments section); [7] Chemical no longer reportable under TURA. Check all the codes, up to four, that apply.

a.1 _____ CAS # of chemical not reportable (if applicable)
a.2 _____ Chemical Name

a3. Explanation of why the chemical Is not reportable (check codes): ☐ [1] ☐ [2] ☐ [3] ☐ [4] ☐ [5] ☐ [6] ☐ [7]

a.4 _____ CAS # of chemical substituted for TURA chemical
a.5 _____ Chemical Name

b.1 _____ CAS # of chemical not reportable (if applicable)
b.2 _____ Chemical Name

b.3 Explanation of why the chemical Is not reportable (check codes): ☐ [1] ☐ [2] ☐ [3] ☐ [4] ☐ [5] ☐ [6] ☐ [7]

b.4 _____ CAS # of chemical substituted for TURA chemical
b.5 _____ Chemical Name

c.1 _____ CAS # of chemical not reportable (if applicable)
c.2 _____ Chemical Name

c.3 Explanation of why the chemical Is not reportable (check codes): ☐ [1] ☐ [2] ☐ [3] ☐ [4] ☐ [5] ☐ [6] ☐ [7]

c.4 _____ CAS # of chemical substituted for TURA chemical
c.5 _____ Chemical Name

d.1 _____ CAS # of chemical not reportable (if applicable)
d.2 _____ Chemical Name

d.3 Explanation of why the chemical Is not reportable (check codes): ☐ [1] ☐ [2] ☐ [3] ☐ [4] ☐ [5] ☐ [6] ☐ [7]

d.4 _____ CAS # of chemical substituted for TURA chemical
d.5 _____ Chemical Name

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Toxics Use Report

Form S Cover Sheet

2009
Reporting Year

Joe's Cleaner
Facility Name

[obtain from DEP]
DEP Facility ID Number

e.1 _____ e.2 _____
CAS # of chemical not reportable (if applicable) Chemical Name

e.3 Explanation of why the chemical Is not reportable (check codes): ☐ [1] ☐ [2] ☐ [3] ☐ [4] ☐ [5] ☐ [6] ☐ [7]

e.4 _____ e.5 _____
CAS # of chemical substituted for TURA chemical Chemical Name

f. Do you have more chemicals not subject to reporting this year? Yes ☐ No ☐

Section 4: Facility-Wide Listing of Production Units

A PRODUCTION UNIT is best thought of as the combination of the process (or activities) used to produce a product or service and the product or service. In this section, please identify the PRODUCTION UNITS at the facility, then use the production unit number to report on chemical use in the Form S.

If there has been a substantial change in a PRODUCTION UNIT from the previous reporting year, the PRODUCTION UNIT must be given a new, unique number.

1
a. Production Unit #

Is this production unit IN USE for the reporting year of this submittal?

☒ Yes ☐ No

b. Describe the Process:

Dry cleaning

c. Describe the Product:

Dry cleaned clothes

Enter up to four (4) six-digit NAICS Codes that best describe the Product from this Production Unit:

812320
d. NAICS Code

e. NAICS Code _____

f. NAICS Code _____

g. NAICS Code _____

h. Check the appropriate description for the unit of product:

☐ area ☐ dollar ☐ hours ☐ kilowatt ☐ length ☐ N/A ☐ number ☐ volume ☒ weight

Production Process Step Information For This Production Unit

i. Enter the production process codes to identify the process steps that involve TURA-reportable chemicals as an input, output or throughput. (See the reporting guidance document for the list of production process codes and instructions on when a given code needs to be listed.)

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Toxics Use Report

Form S Cover Sheet

2009
Reporting Year

Joe's Cleaner
Facility Name

[obtain from DEP]
DEP Facility ID Number

1. BB-01 Process Code	2. Process Code	3. Process Code	4. Process Code
5. Process Code	6. Process Code	7. Process Code	8. Process Code
9. Process Code	10. Process Code	11. Process Code	12. Process Code
13. Process Code	14. Process Code	15. Process Code	16. Process Code
17. Process Code	18. Process Code	19. Process Code	20. Process Code
21. Process Code	22. Process Code	23. Process Code	24. Process Code

Section 4: Facility-Wide Listing of Production Units (continued)

List the TURA-reportable chemicals associated with this production unit. If a chemical is associated with ALL the process steps entered in i. above, check ALL. If a chemical is associated with some but not all of the process steps, check the numbers that correspond to the process codes entered in i. above (i.e. box 1 below corresponds to the process code entered in i.1).

j. Production Unit Number: 1 (Prod. Unit #)

k. TURA Chemical: 127-18-4 (CAS #) Perchloroethylene (Chemical Name)

Check "All" or the numbers that correspond to the process codes entered in i. **All.** ☒

1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7. ☐ 8. ☐ 9. ☐ 10. ☐ 11. ☐ 12. ☐

13. ☐ 14. ☐ 15. ☐ 16. ☐ 17. ☐ 18. ☐ 19. ☐ 20. ☐ 21. ☐ 22. ☐ 23. ☐ 24. ☐

l. TURA Chemical: CAS # Chemical Name

Check "All" or the numbers that correspond to the process codes entered in i. **All.** ☐

1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7. ☐ 8. ☐ 9. ☐ 10. ☐ 11. ☐ 12. ☐

13. ☐ 14. ☐ 15. ☐ 16. ☐ 17. ☐ 18. ☐ 19. ☐ 20. ☐ 21. ☐ 22. ☐ 23. ☐ 24. ☐

m. TURA Chemical: CAS # Chemical Name

Check "All" or the numbers that correspond to the process codes entered in i. **All.** ☐

Massachusetts Department of Environmental Protection
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Form S Cover Sheet

2009
Reporting Year

Joe's Cleaner
Facility Name

[obtain from DEP]
DEP Facility ID Number

1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7. ☐ 8. ☐ 9. ☐ 10. ☐ 11. ☐ 12. ☐

13. ☐ 14. ☐ 15. ☐ 16. ☐ 17. ☐ 18. ☐ 19. ☐ 20. ☐ 21. ☐ 22. ☐ 23. ☐ 24. ☐

n. TURA Chemical

CAS #

Chemical Name

Check "All" or the numbers that correspond to the process codes entered in i. **All.** ☐

1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7. ☐ 8. ☐ 9. ☐ 10. ☐ 11. ☐ 12. ☐

13. ☐ 14. ☐ 15. ☐ 16. ☐ 17. ☐ 18. ☐ 19. ☐ 20. ☐ 21. ☐ 22. ☐ 23. ☐ 24. ☐

o. Are there more chemicals to report for this production unit? ☐ Yes ☒ No

p. Have additional production units been added to this facility? ☐ Yes ☒ No

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Bureau of Waste Prevention – Toxics Use Report

Form S

Chemical Use Facility-Wide and by Production Units

2009
Reporting Year

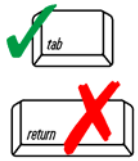
Joe's Cleaner
Facility Name

[Obtain from DEP]
DEP Facility ID Number

Perchloroethylene
Chemical Name

Section 1: Facility-Wide Use of Listed Chemical

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



127-18-4
a. MA DEP CAS #

Perchloroethylene
b. Chemical Name (Dioxin should be in grams, decimal points may be used)

Facility-wide use of chemical identified in a. Enter the total amount (in POUNDS, except for dioxin) for each applicable category. **NOTE:** 'Generated as byproduct' (item f.) means all waste containing the listed chemical before the waste is handled, transferred, treated, recycled or released. Please refer to the reporting instructions before completing this section.

c. Manufactured

d. Processed

1,350
e. Otherwise Used

1,350
f. Generated as Byproduct

g. Shipped In Or As Product

h. Production Ratio

Section 2: Materials Balance

When the amounts reported in c, d and e in Section 1 are added together, the sum will in many cases equal the sum of f and g. In other words, lines c, d and e will often form a "materials balance." If lines c, d and e are not in approximate balance, you may use this section to explain why. Indicate all the reasons that apply by entering the number of pounds on the appropriate line below (e.g., 4,000 Chemical was held in inventory).

a. Chemical Was Recycled On Site

b. Chemical Was Consumed Or Transformed

c. Chemical Was Held In Inventory

d. Chemical Is a Compound

e. Other

f. Did anything non-routine occur at your facility during the reporting year that affected the data reported?

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Toxics Use Report

Form S

Chemical Use Facility-Wide and by Production Units

2009
Reporting Year

Joe's Cleaner
Facility Name

[Obtain from DEP]
DEP Facility ID Number

Perchloroethylene
Chemical Name

☐ Yes* ☒ No *If your answer is Yes, you may explain in Section 4.l. on Page 3.

Section 3: Chemicals Used in Waste Treatment Units

a. Is this chemical used to treat waste or control pollution?

☐ Yes ☒ No* *If your answer is No, please skip ahead to Section 4.

b. Please enter the amount of the chemical (in pounds) used to treat waste or control pollution.

_____
Pounds

c. Did the use of this chemical for waste treatment or pollution control increase or decrease by 10 percent or more compared with the previous reporting year?

c.1 ☐ Yes* ☐ No *If your answer is Yes, you may explain in Section 4.l. on Page 3.

c.2 ☐ Yes ☐ No Are there more chemicals to report? (Use ONLY if ALL chemicals are used to treat waste or control pollution).

Section 4: Toxics Use by Production Unit

1
a. Production Unit #

Use

b. Quantity of Chemical Code:

☒ 1. ≤ 5,000 lbs. ☐ 2. > 5,000 ≤ 10,000 lbs. ☐ 3. > 10,000 lbs. ≤ 100,000 lbs.

☐ 4. > 100,000 lbs. ≤ 500,000 lbs. ☐ 5. > 500,000 lbs.

c. Did the use of this chemical in this production unit increase or decrease by 10 percent or more compared with the previous reporting year and/or did you implement toxics use reduction?

☐ Yes ☒ No* *If your answer is No, skip ahead to g. below.

Process code(s) where most significant changes occurred (up to three in descending order)	Type of Change (Enter "I" for Increase, "D" for Decrease)	Technique Code(s) (up to three per process code)		
d.1.	2.	3a.	3b.	3c.
e.1.	2.	3a.	3b.	3c.
f.1.	2.	3a.	3b.	3c.

Byproduct

g. Was byproduct generated for this chemical less than 1 percent of use in this production unit?

☐ Yes* ☒ No *If your answer is Yes, skip ahead to l. on Page 3.

h. Did the byproduct generated for this chemical in this production unit increase or decrease by 10 Percent or more compared with the previous reporting year and/or did you implement toxics use reduction?

☐ Yes ☒ No* *If your answer is No, skip ahead to l. on Page 3.

	Process code(s) where most significant changes occurred (up to three in descending order)	Type of Change (Enter "I" for Increase, "D" for Decrease)	Technique Code(s) (up to three per process code)		
i.	1.	2.	3a.	3b.	3c.
j.	1.	2.	3a.	3b.	3c.
k.	1.	2.	3a.	3b.	3c.

l. Are there more production units that use this chemical? ☐ Yes ☒ No

Section 4: Toxics Use by Production Unit (continued)

a. Production Unit #

m. You may add any comments or explanations regarding chemical use and/or byproduct generated in this production unit, chemical use in waste treatment (from Section 3), and non-routine occurrences at your facility (from Section 2).

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention – Toxics Use Report

Form S

Chemical Use Facility-Wide and by Production Units

2009
Reporting Year

Joe's Cleaner
Facility Name

[Obtain from DEP]
DEP Facility ID Number

Perchloroethylene
Chemical Name

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State Only Form R/Form A

To be completed for State only reportable chemicals and State only required NAICS filers. This form contains a portion of the fields used in the US EPA Form R and Form A. When filling out this form, please refer to instructions in US EPA's Toxic Chemical Release Inventory Reporting Forms and Instructions.

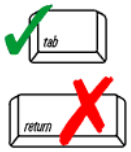
[Obtain from DEP]
Facility ID

Joe's Cleaner
Facility Name

2009
Reporting Year

Perchloroethylene
Chemical Name

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Section 1 Toxic Chemical Identity - Chemical-Specific Information

127-18-4
1.1 CAS Number

Perchloroethylene
1.2 Toxic Chemical or Chemical Category Name

Please note that DEP does not accept the US EPA chemical category identifiers ('N###'); please refer to Appendix B of DEP's Toxics Use Reporting Forms and Instructions for the appropriate Massachusetts reporting number for chemical categories).

Are you filing a Form R? [You should answer "yes" to this question.]

☒ yes - continue to Section 4 (note: Sections 2 and 3 are not required for State Only reporting)
☐ no - fill out only the State Only Form A section below.

State Only Form A

☐ This chemical meets the Form A filing eligibility criteria (i.e., the annual reporting amount did not exceed 500 pounds this reporting year, including no more than 2,000 pounds total disposal or releases to the environment, AND the amount manufactured, processed or otherwise used did not exceed 1 million pounds). Note: A Form A may not be filed for PBT chemicals.

Are there additional Form A chemicals to report? ☐ yes (paper filers copy this page as necessary)
☐ no

Section 4

Enter the maximum amount of the toxic chemical onsite at any time during the calendar year:

03 [see range codes below]
4.1 Two-Digit Code From TRI Instruction Package

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention - Toxics Use Report

State Only Form R/Form A

To be completed for State only reportable chemicals and State only required NAICS filers. This form contains a portion of the fields used in the US EPA Form R and Form A. When filling out this form, please refer to instructions in US EPA's Toxic Chemical Release Inventory Reporting Forms and Instructions.

[Obtain from DEP]
Facility ID

Joe's Cleaner
Facility Name

2009
Reporting Year

Perchloroethylene
Chemical Name

Two-Digit Codes From TRI Instruction Package

Range Code	From...	To...
01	0	99
02	100	999
03	1,000	9,999
04	10,000	99,999

Section 5

All quantities should be entered in **pounds**, except for dioxin, which should be entered in grams.

Quantity of the toxic chemical entering each environmental medium onsite in pounds per year:

5.1-2 Air Emissions: ☐ check if not applicable

345
5.1 Fugitive or non-point air emissions

5.2 Stack or point air emissions

Section 5 (cont.)

5.3 Discharges to receiving streams or water bodies: ☒ check if not applicable

Total Release

5.4 Underground injection onsite to Class I or Class II-V wells: ☒ check if not applicable

5.4.1 Underground Injection onsite to Class I Wells

5.4.2 Underground Injection onsite to Class II-V Wells

5.5 Disposal to Land Onsite: ☒ check if not applicable

5.5.1A RCRA Subtitle C landfills

5.5.1B Other landfills

5.5.2 Land treatment/application farming

5.5.3A RCRA Subtitle C Surface Impoundment

5.5.3B Other Surface Impoundments

5.5.4 Other Disposal

Section 6

Transfers of the toxic chemical in wastes to off-site locations

6.1.A Total Quantity Transferred to POTWs: ☒ check if not applicable

6.1.A.1 Total Transfers to POTWs

6.2 Transfers to Other Off-site Locations: ☐ check if not applicable

1005
6.2.A Total Transfers

Section 7A

On-site Waste Treatment Methods and Efficiency: ☒ check if not applicable

1. General Waste Stream Code: 7A.1a

   Waste Treatment Method(s) Sequence 3-character codes:

7A.1b.1	7A.1b.2	7A.1b.3	7A.1b.4	7A.1b.5	7A.1b.6	7A.1b.7	7A.1b.8

   Waste Treatment Efficiency Estimate: (7A.1c)

   ☐ greater than 99.9999% ☐ greater than 99.99% to 99.9999% ☐ greater than 99% to 99.99%

   ☐ greater than 95% to 99% ☐ greater than 50% to 95% ☐ greater than 0% to 50%

2. General Waste Stream Code: 7A.2a

   Waste Treatment Method(s) Sequence 3-character codes:

7A.2b.1 | 7A.2b.2 | 7A.2b.3 | 7A.2b.4 | 7A.2b.5 | 7A.2b.6 | 7A.2b.7 | 7A.2b.8

Waste Treatment Efficiency Estimate: (7A.2c)

☐ greater than 99.9999% ☐ greater than 99.99% to 99.9999% ☐ greater than 99% to 99.99%

☐ greater than 95% to 99% ☐ greater than 50% to 95% ☐ greater than 0% to 50%

3. General Waste Stream Code: 7A.3a

Waste Treatment Method(s) Sequence 3-character codes:

7A.3b.1 | 7A.3b.2 | 7A.3b.3 | 7A.3b.4 | 7A.3b.5 | 7A.3b.6 | 7A.3b.7 | 7A.3b.8

Waste Treatment Efficiency Estimate: (7A.3c)

☐ greater than 99.9999% ☐ greater than 99.99% to 99.9999% ☐ greater than 99% to 99.99%

☐ greater than 95% to 99% ☐ greater than 50% to 95% ☐ greater than 0% to 50%

Do you have additional Section 7A On-site Waste Treatment Methods information to report?

☐ yes (paper filers, please copy this page as necessary) ☐ no - continue to Section 7B.

Section 7B

On-Site Energy Recovery Processes: ☒ check if not applicable.

Energy Recovery Methods 3-character code(s): 1 | 2 | 3 | 4

Section 7C

On-Site Recycling Processes: ☒ check if not applicable. Recycling Methods 3-character code(s):

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10

Section 8

Enter data as pounds per year.	Source Reduction and Recycling Activities	Column A Prior Year	Column B Current Rpt. Year	Column C Following Year	Column D 2nd Following Yea
	8.1a Total on-site disposal underground injection & landfills				

Massachusetts Department of Environmental Protection
Bureau of Waste Prevention - Toxics Use Report

State Only Form R/Form A

To be completed for State only reportable chemicals and State only required NAICS filers. This form contains a portion of the fields used in the US EPA Form R and Form A. When filling out this form, please refer to instructions in US EPA's Toxic Chemical Release Inventory Reporting Forms and Instructions.

[Obtain from DEP] Facility ID
Joe's Cleaner Facility Name
2009 Reporting Year
Perchloroethylene Chemical Name

8.1b Total on-site disposal or other releases	NA	345	345	345
8.1c Total off-site disposal underground injection & landfills				
8.1d Total off-site disposal or other releases	NA	1005	1005	1005
8.2 Quantity used for energy recovery onsite				
8.3 Quantity used for energy recovery offsite				
8.4 Quantity recycled onsite				
8.5 Quantity recycled offsite				
8.6 Quantity treated onsite				
8.7 Quantity treated offsite				

8.8 Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes: _____ pounds/year

8.9 Production Ratio or activity index: NA

8.10 Did your facility engage in any source reduction activities for this chemical during the reporting year? ☐ yes - continue below ☒ no

[If yes, see codes on next page]

	Source Reduction Activities [enter code(s)]	Methods to Identify Activity (enter codes)		
8.10.2		a	b	c
8.10.3		a	b	c

Are there additional State Only Form R chemicals to report?
☐ yes - continue with additional State Only Form Rs as needed ☒ no

Section 8.10.2 / 8.10.3 Source Reduction Activities Codes

Good Operating Practices
W13 Improved maintenance scheduling, record keeping, or procedures
W14 Changed production schedule to minimize equipment and feedstock changeovers
W19 Other changes made in operating practices

Inventory Control
W21 Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life
W22 Began to test outdated material — continue to use if still effective

W23 Eliminated shelf-life requirements for stable materials
W24 Instituted better labeling procedures
W25 Instituted clearinghouse to exchange materials that would otherwise be discarded
W29 Other changes made in inventory control

Spill and Leak Prevention
W31 Improved storage or stacking procedures
W32 Improved procedures for loading, unloading, and transfer operations
W33 Installed overflow alarms or automatic shut-off valves
W35 Installed vapor recovery systems
W36 Implemented inspection or monitoring program of potential spill or leak sources
W39 Other changes made in spill and leak prevention

Raw Material Modifications
W41 Increased purity of raw materials
W42 Substituted raw materials
W49 Other raw material modifications made

Process Modifications
W51 Instituted re-circulation within a process
W52 Modified equipment, layout, or piping
W53 Used a different process catalyst
W54 Instituted better controls on operating bulk containers to minimize discarding of empty containers
W55 Changed from small volume containers to bulk containers to minimize discarding of empty containers
W58 Other process modifications made

Cleaning and Degreasing

W59 Modified stripping/cleaning equipment
W60 Changed to mechanical stripping/cleaning devices (from solvents or other materials)
W61 Changed to aqueous cleaners (from solvents or other materials)
W63 Modified containment procedures for cleaning units
W64 Improved draining procedures
W65 Redesigned parts racks to reduce drag out
W66 Modified or installed rinse systems
W67 Improved rinse equipment design
W68 Improved rinse equipment operation

Section 8.10.2 / 8.10.3 Methods to Identify Activity Codes

T01 Internal pollution prevention opportunity audit(s)
T02 External pollution prevention opportunity audit(s)
T03 Materials balance audits
T04 Participative team management
T05 Employee recommendation (independent of a formal company program)
T06 Employee recommendation (under a formal company program)
T07 State government technical assistance program
T08 Federal government technical assistance program
T09 Trade association/industry technical assistance program
T10 Vendor assistance
T11 Other