

## 2-1 Procedure of determining businesses and substances requiring notification

Businesses that satisfy all three requirements shown in Table 2-2 below are required to submit notifications under the PRTR system.

**Table 2-2 Conditions for businesses that must submit notifications**

Is running a business that falls under a category requiring notification (→ pl-17)  
The number of full-time employees is 21 or more (→ pl-19)  
The quantity handled falls under either of the following two conditions:  
a) Owns an business establishment that handles a specified substance <sup>\*2</sup> with the annual handling quantity <sup>\*1</sup> larger than the designated value (→ pl-21), and  
b) Owns a specific requirement facility (→ pl-32).

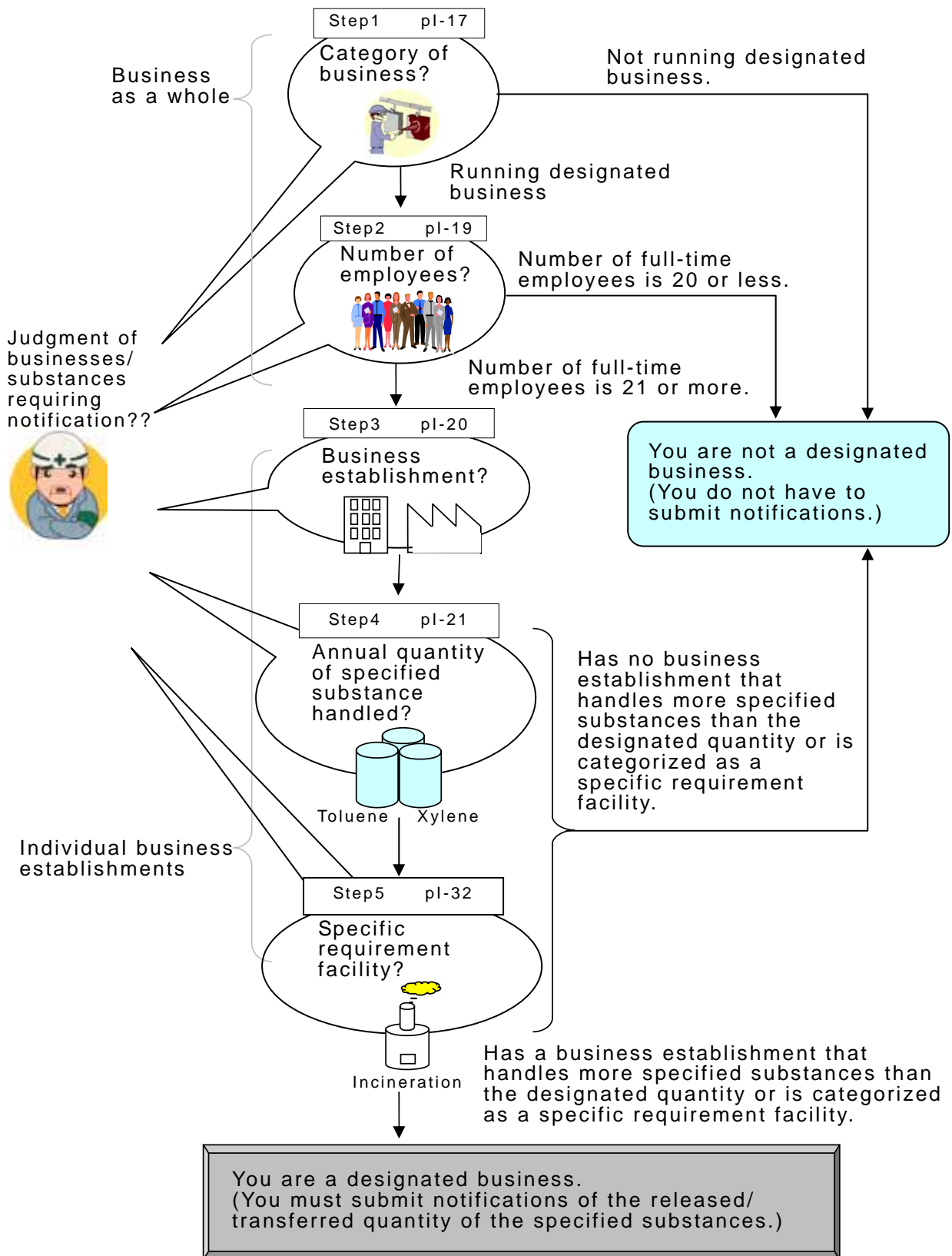
\*1: Quantity handled in the fiscal year (from April to March)

\*2: Specified substances (Class 1 designated chemical substances) are those that continuously exist at large in the environment and fall under either of the following toxicity conditions.

Likely to pose danger to human health or ecological systems.  
Causes a chemical reaction to occur after being released to the environment and easily generates toxic chemical substances, even if the substance itself does not pose a hazard to human health or ecological systems.  
Likely to destroy the ozone layer.

Of those specified substances, 12 substances including benzene, which have been assessed as carcinogenic and require especially careful handling, are designated as “Specific class 1 designated chemical substance.”

To determine whether your business must submit notifications under the PRTR system according to the Law, and what substances require the quantity released or transferred to be calculated and notified, refer to the flow chart (Fig. 2-3) on the next page, description of each step, and examples for ABC Industry Co., Ltd.



**Fig. 2-3 Procedure of determining businesses and substances requiring notification**

Reference page

· Part II 1. Procedure of judging businesses and substances requiring notification (→ [pII-3](#))

### **Step1 Check business categories.**

Check whether your business is one of those described below. If part of your business falls under the categories shown below, you are categorized as a business requiring notification.

Metal mining  
Crude petroleum and natural gas production  
Manufacturing  
Electricity industry  
Gas industry  
Heat supply industry  
Sewage industry  
Railway industry  
Warehouse industry (limited to a warehouse used to store agricultural products or a warehouse used to store gas or liquid in a storage tank.)  
Petroleum wholesale industry\*  
Scrap iron wholesale industry\*\*  
Automobile wholesale industry\*\*  
Fuel retail industry  
Laundry industry  
Photography industry  
Automobile maintenance industry  
Machinery and equipment repair industry  
Product testing industry  
Measurement certification industry (excluding general measurement certification industry)  
Household waste disposal industry (limited to the industry of disposal of garbage)  
Industrial waste disposal industry (including industry of disposal of industrial waste under special management)  
Higher educational institutions (including facilities affiliated to the institution and excluding institutions only for humane sciences)  
Research institutes for natural science

\* limited to the industry that collects substances which have been enclosed in an air conditioner for a car or removes an air conditioner for a car which has been attached to the body of car

\*\* limited to the industry which collects substances which have been enclosed in an air conditioner for a car

Official duties are classified depends on the category of business handled. If the business falls under one of the above categories, it must make notification as well

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Business establishment B

Manufacture and delivery of coated metal plates



Manufacturing  
(metal product manufacturing)

Running designated business

Reference page

- Part II 1-1 Judgment of designated businesses (→ [pII-6](#))
- Part II 2. Q&A Q23–Q26 (→ [pIII-125–126](#)), Q29–Q31 (→ [pIII-127–128](#)),  
4-1-1 Classification of type of industry (→ [pIII-165](#)),  
4-1-2 Outline of designated types of industry (→ [pIII-172](#))

**Step2. Check the number of full-time employees.**

Check whether you have 21 or more full-time employees.

The number of full-time employees means the sum of such employees in the country as a whole, including those in your main office, branches and all representative offices.

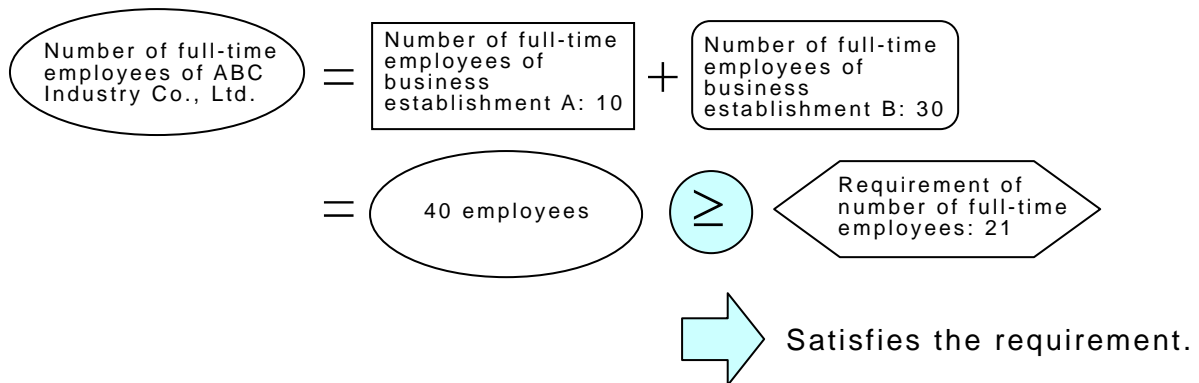
- \* Those who fit into the following categories are regarded as full-time employees.

Those who are employed without definition of employment period or with an employment period of one month or longer as of April 1 of the relevant fiscal year

Those who were employed for 18 days or more during February and March of the previous fiscal year must also be included in the number of full-time employees.

Temporary employees, part-timers and casual staff who fit into category or .

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Reference page

- Part II 1-2 Judgment of full-time employees (→ [pII-8](#))
- Part III 2. Q&A Q27 (→ [pIII-126](#)), Q32-Q33 (→ [pIII-129](#)), Q121 (→ [pIII-158](#))

**Step 3 Study business establishments for judging the annual quantity of specified substances handled.**

Study whether you have a “business establishment”\* that runs a business falling under a designated business category (→ pI-17) for which the annual quantity handled must be calculated.

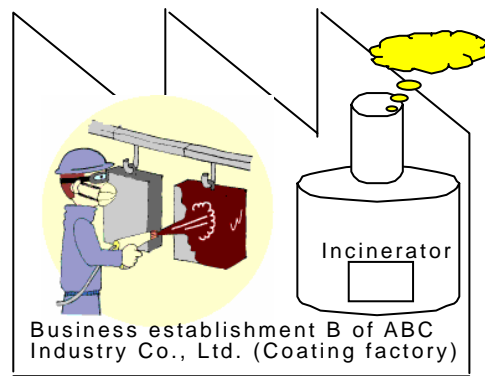
\* Includes the case where a business falls under two or more categories, one of which requires notification.

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Merely concludes contracts and manages employees.

**Annual quantity handled need not be calculated.**



Metal plates are coated.

**Annual quantity handled must be calculated.**

Reference page

- Part II 1-3 Study of business establishment that must assess the annual quantity of specified substances handled, etc (→ pII-10)
- Part III 2. Q&A Q12-Q16 (→ pIII-120-121), Q19-Q21 (→ pIII-122-124)

**Step4 Judge the annual quantity of specified substances handled.**

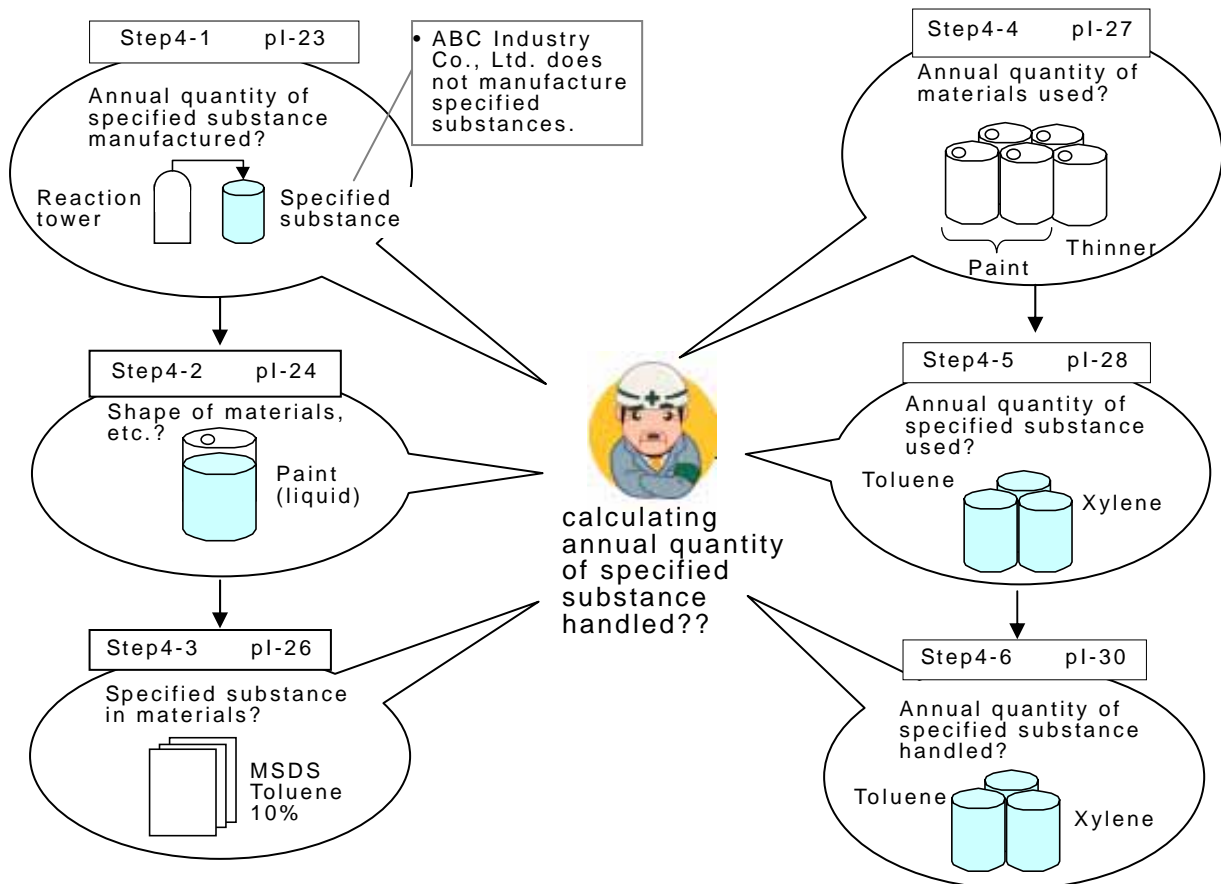
Calculate the annual quantity of specified substances handled by business establishment as shown in Fig. 2-4.  
 If the quantity of one or more specified substances handled by the business exceeds the annual quantity, the business must submit notifications.

Specified substance  
 (Class 1 designated chemical substance)..... 1 t/year  
 Specific class 1 designated  
 chemical substance..... 0.5 t/year(500 kg/year)

Specified substances whose annual quantity handled is larger than the designated value require notification of released/transferred quantity.

\* In this manual, the annual quantity handled is calculated as follows for simplicity.

$$\text{Annual quantity of specified substance handled} = \text{Annual quantity of specified substance manufactured} + \text{Annual quantity of specified substance used}$$



**Fig. 2-4 Procedure of calculating annual quantity of specified substance handled**

Reference page

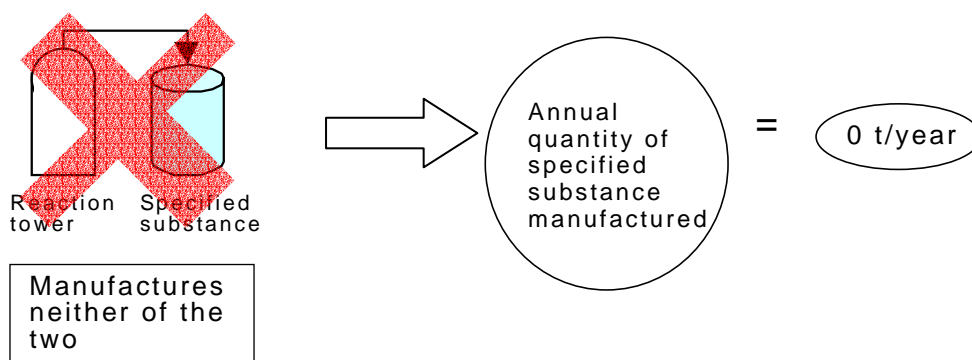
- Part II 1-4 Judgment of the annual quantity of specified substances handled  
(→ [pII-14](#))
- Part III 2. Q&A Q34–Q38 (→ [pIII-130–131](#)), Q41 (→ [pIII-132](#)),  
Q44(→ [pIII-133](#)),  
4-2-1 Major raw materials and materials used by each industry  
(→ [pIII-187](#)),  
4-2-2 Specified substances included in raw materials and  
materials  
(→ [pIII-191](#)),  
4-2-3 Specified substances in petroleum fuel and lubricating oil  
(→ [pIII-200](#)),  
4-2-4 List of specified substances (→ [pIII-203](#))



**Step4-1. Check the annual quantity of specified substance manufactured.**

Check whether your establishments manufacture specified substances, and check the annual quantity manufactured.

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Reference page

- Part II 1-4-1 Check of annual quantity of specified substance manufactured (→ [pII-16](#))
- Part III 2. Q&A Q47–Q49 (→ [pIII-134](#)), Q80 (→ [pIII-144](#)), Q92 (→ [pIII-148](#))

**Step4-2 Check the shape of raw materials and materials used.**

Check whether raw materials or materials of the following shape are used in your establishments (refer to the chart on the next page).

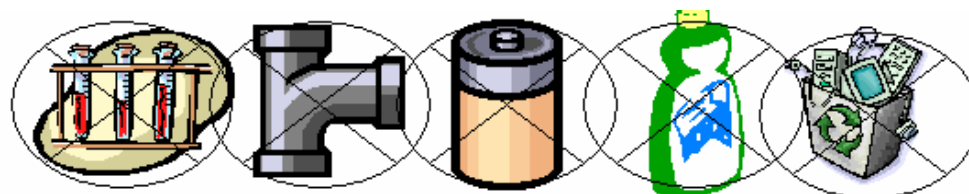
**Shape of raw materials or materials (products) you must assess the used quantity of\***

Shape	Example
1. Gaseous or liquid form	Solvents, adhesives, paints, gasoline, etc.
2. Solid not of specific shape (such as powder)	Additives (in powder), reagents (in powder), etc.
3. Solid of specific shape that melts, evaporates, or dissolves while it is being handled	Plated metallic electrodes, ingots (aluminum block to be used by melting), etc.
4. Materials that may be released to the environment while they are being processed by refining or cutting	Asbestos-containing materials, parts of cutting tools, etc.

\* Note that the usage of the following raw materials and materials need not be assessed.

**Shape of raw materials or materials (products) whose usage need not be assessed**

- Products whose specified substance content is less than 1% (in the case of specific class 1 designated chemical substance: 0.1%) (low in content)
- Solid objects (excluding powder or particulate matters) (such as metal plates and pipes)
- Products used in tightly sealed state (such as dry-cell batteries)
- Products for general consumers (such as household detergents and insecticides)
- Recycled resources (such as metal chips and empty cans)



Those containing small quantities of specified substances

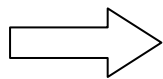
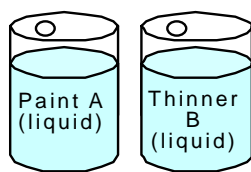
Solid objects

Products used in tightly sealed state

Products for general consumers

Recycled resources

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Usage must be assessed.

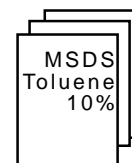
Liquid matter

Reference page

- Part II 1-4-2 Check the shape of raw materials and materials used (→ pII-20)
- Part III 2. Q&A Q54–Q72 (→ pIII-136–141), Q75, Q77 (→ pIII-142–143), Q80 (→ pIII-144), Q101–Q105 (→ pIII-151–152)

**Step4-3 Study the specified substances contained in raw materials or materials.**

Check by using MSDS if the content of the specified substances exceed the following values.



Specified substance (Class 1 designated chemical substances)  
 ..... Mass percentage of 1 %  
 Specific class 1 designated chemical substances  
 ..... Mass percentage of 0.1%

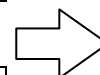
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**Paint A**

Substance No.	Name of Specified Substance	Content	Specific class <sup>*1</sup>	Judgment <sup>*2</sup>
63	Xylene	20%	1	
69	Hexavalent chromium compounds	3.0%	1	
227	Toluene	10%	1	
230	Lead and its compounds	20%	1	

**Thinner B**

Substance No.	Name of Specified Substance	Content	Specific class <sup>*1</sup>	Judgment <sup>*2</sup>
63	Xylene	40%	1	
227	Toluene	10%	1	



Calculate the annual usage of all the specified substances.

\*1: "1" represents class 1 designated chemical substance, and "Specific class 1" represents specific class 1 designated chemical substance.

\*2: Marked with " " when the content of class 1 designated chemical substance is 1% or higher, and when the content of specific class 1 designated chemical substance is 0.1% or higher.

Reference page

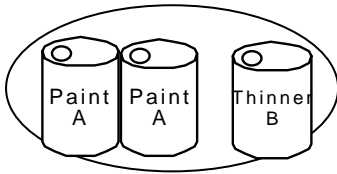
- Part II 1-4-3 Study the specified substances contained in raw materials or materials (→ [pII-26](#))
- Part III 2. Q&A Q34-Q43 (→ [pIII-130-132](#)), Q50-Q53 (→ [pIII-135](#))

**Step4-4 Calculate the annual quantity of raw materials or materials used.**

Calculate the annual quantity used of raw materials or materials by using the following formula.

$$\begin{array}{c} \text{Annual usage} \\ \text{of} \\ \text{raw materials} \\ \text{/materials} \\ \text{t/year} \end{array} = \begin{array}{c} \text{Annual quantity} \\ \text{of} \\ \text{raw materials} \\ \text{/materials} \\ \text{purchased} \\ \text{(or bought in)} \\ \text{t/year} \end{array} - \begin{array}{c} \text{Stock of} \\ \text{raw materials} \\ \text{/materials} \\ \text{at end of} \\ \text{fiscal year} \\ \text{t} \end{array} + \begin{array}{c} \text{Stock of} \\ \text{raw materials} \\ \text{/materials} \\ \text{at beginning of} \\ \text{fiscal year} \\ \text{t} \end{array}$$

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Annual usage of materials, etc.

(Paint A)

$$\begin{array}{c} \text{Annual} \\ \text{usage of} \\ \text{paint A} \\ \text{t/year} \end{array} = \begin{array}{c} \text{Annual} \\ \text{quantity of} \\ \text{paint A} \\ \text{purchased} \\ \text{20 t/year} \end{array} - \begin{array}{c} \text{Stock of} \\ \text{paint A at} \\ \text{end of fiscal} \\ \text{year} \\ \text{2.4 t} \end{array} + \begin{array}{c} \text{Stock of} \\ \text{paint A at} \\ \text{beginning} \\ \text{of fiscal} \\ \text{year} \\ \text{4.5 t} \end{array}$$

$$= \text{22.1 t/year}$$

(Thinner B)

$$\begin{array}{c} \text{Annual} \\ \text{usage of} \\ \text{thinner B} \\ \text{t/year} \end{array} = \begin{array}{c} \text{Annual} \\ \text{quantity of} \\ \text{thinner B} \\ \text{purchased} \\ \text{10 t/year} \end{array} - \begin{array}{c} \text{Stock of} \\ \text{thinner B at} \\ \text{end of fiscal} \\ \text{year} \\ \text{1.8 t} \end{array} + \begin{array}{c} \text{Stock of} \\ \text{thinner B at} \\ \text{beginning of} \\ \text{fiscal year} \\ \text{1.1 t} \end{array}$$

$$= \text{9.3 t/year}$$

Reference page

- Part II 1-4-4 Calculate the annual quantity of raw materials or materials used (→ pII-28)
- Part III 2. Q&A Q66 (→ pIII-139), Q72-Q74 (→ pIII-141-142), Q76 (→ pIII-142), Q92 (→ pIII-148)

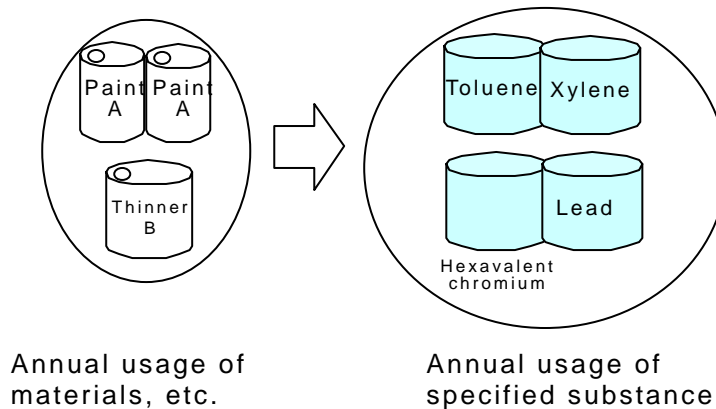
**Step4-5. Calculate the annual quantity of specified substance used.**

Calculate the annual usage of the specified substance by using the following formula\*.

$$\text{Annual usage of specified substance (t/year)} = \text{Annual usage of raw materials or materials (t/year)} \times \text{Percentage of specified substance contained in raw materials or materials (\%)} \div 100$$

\* If a specified substance is contained in multiple raw materials or materials, add up all the amounts in every raw material or material.

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(Toluene)

$$\begin{aligned} \text{Annual usage of toluene (t/year)} &= \text{Annual usage of paint A (22.1 t/year)} \times \text{Percentage of toluene in paint A (10\%)} \div 100 \\ &+ \text{Annual usage of thinner B (9.3 t/year)} \times \text{Percentage of toluene in thinner B (10\%)} \div 100 \\ &= \text{3.14 t/year} \end{aligned}$$

(Xylene)

$$\begin{aligned} & \text{Annual usage of xylene} \\ & \text{t/year} \\ & = \left[ \begin{array}{l} \text{Annual usage} \\ \text{of paint A} \\ 22.1 \text{ t/year} \end{array} \right] \times \left[ \begin{array}{l} \text{Percentage of} \\ \text{xylene in paint} \\ \text{A} \\ 20\% \end{array} \right] \div 100 \\ & + \left[ \begin{array}{l} \text{Annual usage} \\ \text{of thinner B} \\ 9.3 \text{ t/year} \end{array} \right] \times \left[ \begin{array}{l} \text{Percentage of} \\ \text{xylene in} \\ \text{thinner B} \\ 40\% \end{array} \right] \div 100 \\ & = 8.14 \text{ t/year} \end{aligned}$$

(Chromium (IV) compounds)

$$\begin{aligned} & \text{Annual usage} \\ & \text{of hexavalent} \\ & \text{chromium} \\ & \text{compound} \\ & \text{t/year} \\ & = \left[ \begin{array}{l} \text{Annual usage} \\ \text{of paint A} \\ 22.1 \text{ t/year} \end{array} \right] \times \left[ \begin{array}{l} \text{Percentage of} \\ \text{hexavalent} \\ \text{chromium} \\ \text{compound in} \\ \text{paint A} \\ 3.0\% \end{array} \right] \div 100 \\ & = 0.663 \text{ t/year} \end{aligned}$$

(Lead and its compounds)

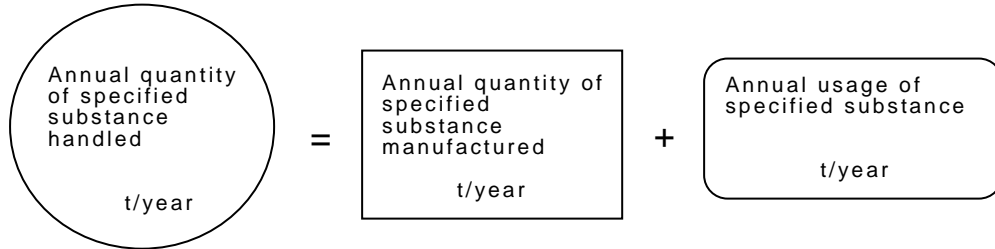
$$\begin{aligned} & \text{Annual usage} \\ & \text{of lead and its} \\ & \text{compounds} \\ & \text{t/year} \\ & = \left[ \begin{array}{l} \text{Annual usage} \\ \text{of paint A} \\ 22.1 \text{ t/year} \end{array} \right] \times \left[ \begin{array}{l} \text{Percentage of} \\ \text{lead and its} \\ \text{compounds in} \\ \text{paint A} \\ 2.0\% \end{array} \right] \div 100 \\ & = 0.442 \text{ t/year} \end{aligned}$$

Reference page

- Part II 1-4-5 Calculate the annual quantity of specified substance used (→ pII-30)

**Step4-6 Calculate the annual quantity of the specified substance handled by establishment.**

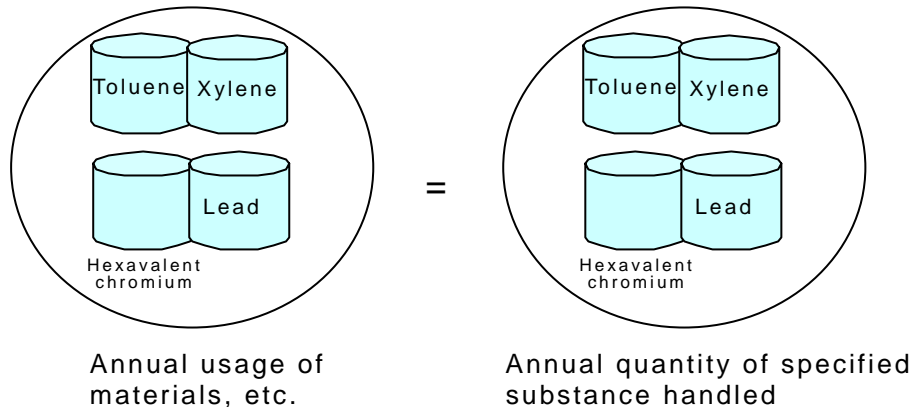
Calculate the annual quantity of the specified substance handled by using the following formula.



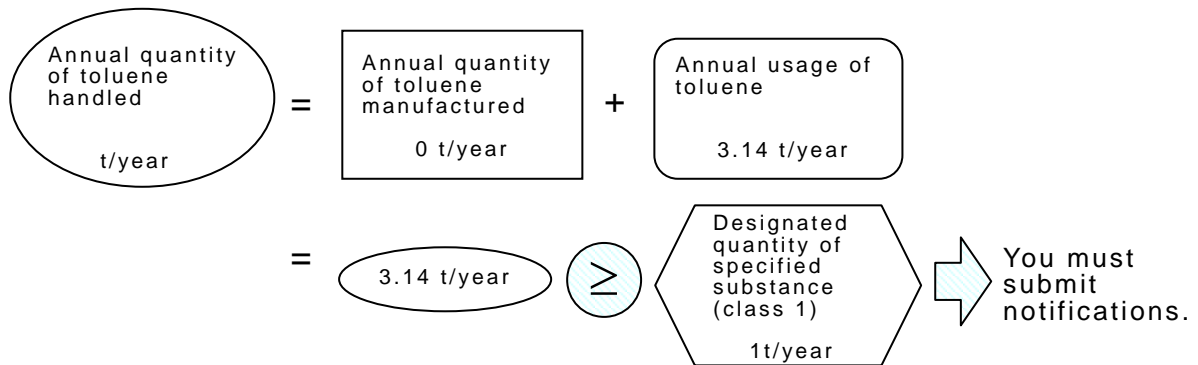
Compare the calculated annual quantity handled and the following designation, and determine whether your business must submit notifications, and if so, the substances that must be notified.

Specified substance (Class 1 designated chemical substance)  
 ..... 1 t/year  
 Specific class 1 designated chemical substance  
 ..... 0.5 t/year (500kg/year)

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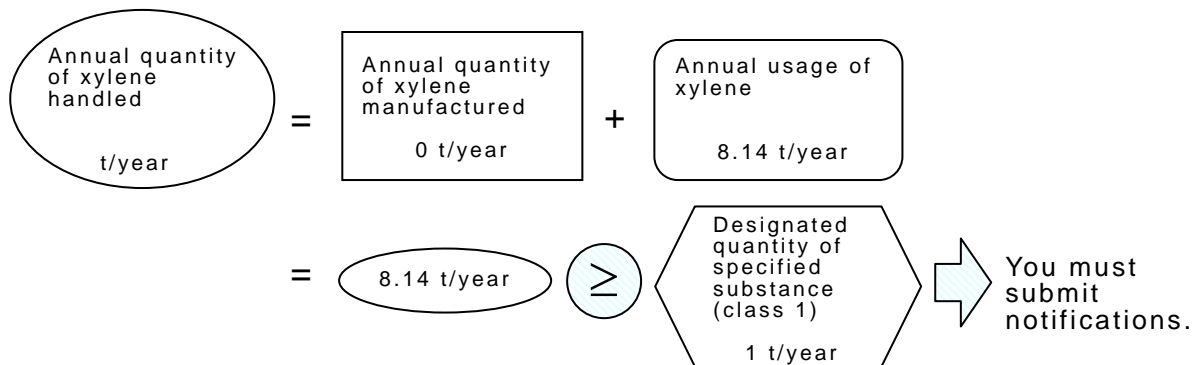


(Toluene)

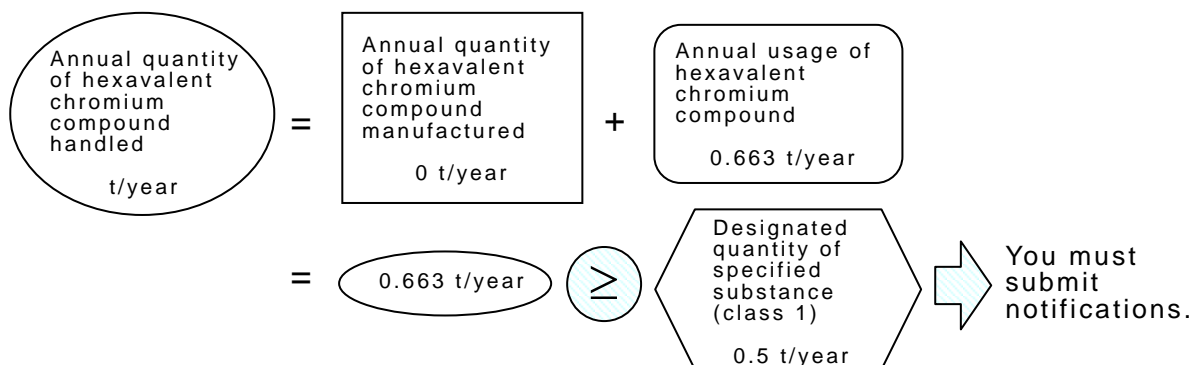




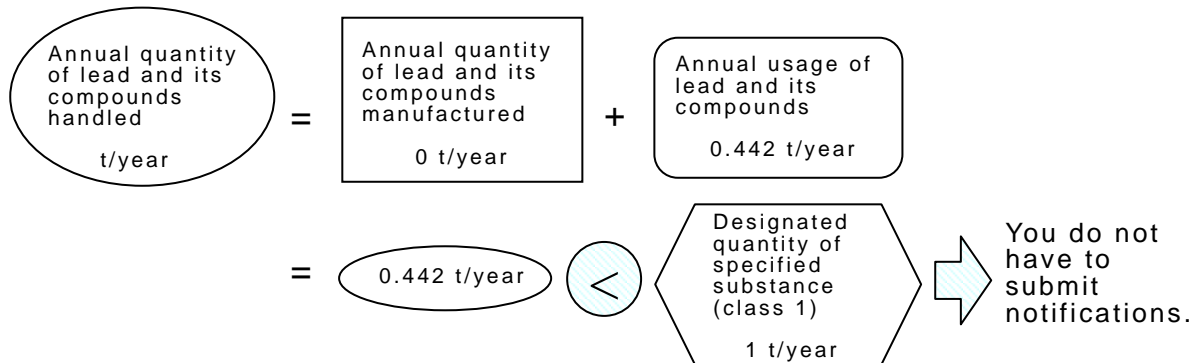
(Xylene)



(Hexavalent chromium compound)



(Lead and its compounds)



ABC Industry Co., Ltd. must submit notifications.



Specified substances to be notified:

- Toluene
- Xylene
- Chromium(IV) compounds



\* Since the annual quantity of lead and its compounds handled is less than the designated value, the released/transferred quantity need not be calculated or notified.

Reference page

- Part II 1-4-6 Calculate the annual quantity of the specified substance handled by establishment (→ pII-32)

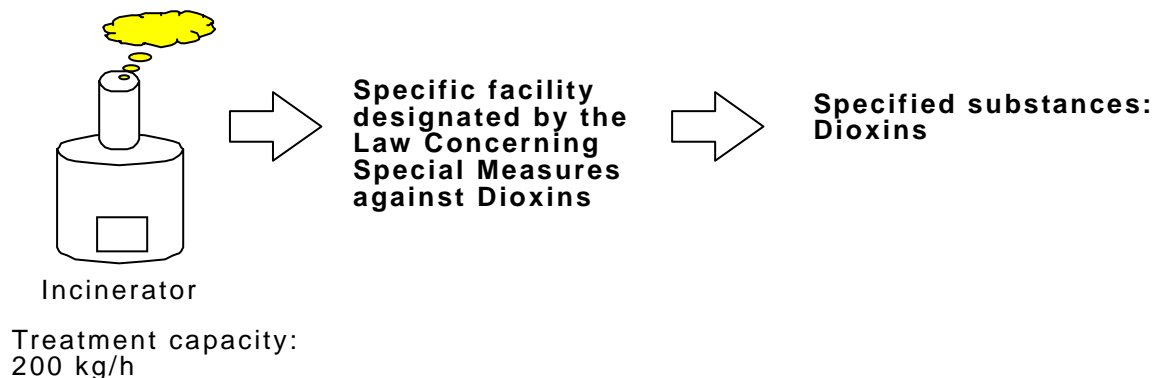
**Step5..... Judge the specific requirement facilities.**

Study whether you have the following specific requirement facilities.

- |   |   |   |
|---|---|---|
| a. Businesses engaged in metal mining, or crude oil and natural gas mining      | → | Buildings, structures and other facilities  |
| b. Businesses engaged in sewage water business                                  | → | Sewage treatment plants   |
| c. Businesses engaged in waste treatment or industrial waste treatment business | → | General waste treatment facilities or industrial waste treatment facilities           |
| d. Businesses engaged in either one of the specified categories of business     | → | Specific facilities designated by the Law Concerning Special Measures against Dioxins |

If you have any of the above facilities, you must submit notifications. The substances you must notify are those contained in exhaust gas/effluent released from specific requirement facilities subject to measurement under other ordinances (substances requiring notification under the PRTR system and dioxins, among those that satisfy the effluent standard items of the Clean Water Law).

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Reference page

- Part II 1-5 Judge the specific requirement facilities (→ [pII-34](#))
- Part III 2. Q&A Q23 (→ [pIII-125](#)), Q43-Q44 (→ [pIII-132-133](#)), Q56 (→ [pIII-136](#)), Q112-Q118 (→ [pIII-154-157](#)), Q120-Q124 (→ [pIII-158-160](#))
- 4-1-3 Provisions in each law and regulation for facilities which fall under special requirement facilities (→ [pIII-181](#))