(PTO.)

Annex 5.3 Forms to be Submitted to MOI

Annex 5.3.1 Request Form for Transport Permit

Form: DIW-13-AP-FN-20(03)

	<u>Permiss</u>	ion Reque	st Form for Off-Site Train	nsport of W	/aste or Unuse	d Materials.	
	A	s defined	under the Notification (of MOI No	6 B.E. 2540(1	<u> 1997)</u>	
No.:		(D				
				Date:		•••••	
~ .			CO				
Sub			r permission to off-site tation of MOI, No.1 B.E.			ed materials	under
To:				(0	Contract to the second second		
Atta	ichment:	1. Copy	of Factory License or F	orm: Raw	, Ngor 4 (compl	ete set)	
		2. Copy	of Certificate of Juristic	Person Re	egistration, tog	ether with co	opy of opy of ps (in eration 6) which 6 B.E. ows: Operator (4)
		ID car	d of the power authorize	d persons			
		3. Detai	ils of disposal method of	waste or u	nused material	S	
		4. Lette	r of Power of Attorney	(Original)	affixed 30-Bal	nt duty stam	os (in
		case o	f proxy operator)				
		5. Flow	chart of production production	ess of was	te or unused m	aterials gener	ation
		6. Notif	fication of waste or unus	ed material	s details (Forn	: Raw Ngor	6)
	and the second second		actory			•••••	
			Factory Reg				
Loca	ated at			Telephor	ie:	•••••	
Dag			· · · · · · · · · · · · · · · · · · ·				
			o off-site transport of wa	and the second second			
		-	properties under the Not (date) and				
2340	J(1997),	between	(date) and	(uate)	Detail	s are as iono	ws:
No	Section	Article	Name of Waste or	Time/	Volume	Method	Operator
•			Unused Materials (3)	Year	(Ton/Year)	of	(4)
1		-				Disposal	
2							
3							
4				L	1 11/2/3		<u> </u>
			tion in accordance with	the second second	it criteria by s	trictly monit	oring
tran	sport and d	lisposal in	order to prevent the troul	oles.			-
	For your i	nformation				en e	
	,				Yours fa	ithfully,	•
				(Factory Lice	ense's holder)

Explanation:

- (1) refers to Number of company letter (if any)
- (2) refers to Director General of Department of Industrial Works
- (3) refers to Waste or unused materials which have characteristics and properties under the Notification of Ministry of Industry No. 6 B.E. 2540(1997)
- (4) refers to Disposer / recycler (identify name or company name or Factory name, etc.)

Attachment No. 3

- 1. In case of using other disposal service contractors
 - 1.1 Holding Type 101 factory licensee for hazardous waste disposal, a letter of consent or waste disposal contract must be attached.
 - 1.2 In case of recycle, reuse, recovery, exchange of waste or unused materials must be
 - Attached a copy of factory license of recycler
 - Attached details of production process, recycled waste volume including waste management generated from the recycling process
 - Attached a disposal contract or letter of consent to dispose waste or unused materials
- 2. In case of self-landfilling, a landfill layout, according to DIW criteria in the appendix 2, together with clay quality test and HDPE sheet.
- 3. In case of self-incineration, a certified document of efficient incinerator, according to DIW criteria in the appendix 2, must be attached.
- 4. In case of disposal by other methods, certified documents to affirm the operation result must be attached.

Attachment No. 6

Form Raw Ngor 6 refers to the Notification of waste or unused materials details – Appendix of Notification of MOI No. 6 B.E. 2540 (1997) (Data of hazardous waste from the previous year)

Form: DIW-13-AP-FN-21(03)

Permission Request Form for Off-Site Transport of Waste or Unused Materials As defined under the Notification of MOI No 1 B.E. 2541(1998)

No.:	••••••	(I		Date:		••••	••••
Subj			permission to off-site t ation of MOI, No.1 B.E.			ed materials u	nder
To:	••••••			(2)		
Atta	chment:	1. Copy	of Factory License or F	orm: Raw	Ngor 4 (compl	ete set)	
		2. Copy	of Certificate of Juristic	e Person Re	gistration, tog	ether with cop	y of
		ID ca	rd of the power authoriz	ed persons			
100		3. Detai	ls of disposal method of	waste or u	nused material	s	
		4. Letter	r of Power of Attorney f proxy operator)	** * *		and the second second	s (in
- 1 - 184		5. Flow	chart of production production	cess of was	te or unused m	aterials genera	ition
		er og de state og det er og de state o	sis result report of lead				
			ticular of waste or unus	for figure and a first of the con-		Section 2 No.	3)
*		(p.m.				3,110.	-
s is. Sizi							
			ictory			• • • • • • • • • • • • • • • • • • • •	
Туре	of Busine	ss	Factory Re	egistration l	Number:		••••
Loca	ted at			Teleph	one:		
Rea	iest for nei	rmission to	o off-site transport of w	aste or unu	sed materials t	for dienoeal av	hich
4			properties under the Not				
	**						
2341	(1998), 1	beiween	(date) and	(date)	Detail	s are as follow	'S:
No	Section	Article	Name of Waste or	Time/	Volume	Method of	Operator
•			Unused Materials (3)	Year	(Ton/Year)	Disposal	(4)
1							
2							
3	-					* *	
4						<u> </u>	
	This is fo	r your act	ion in accordance with	the set or	it criteria by s	trictly monito	ring
trans	port and d	isposal in o	order to prevent the trou	bles.			
		42		:			
	For your is	nformation					
					Yours fa	aithfully,	
							Y
					Factory Lies	ense's holder	• /
							TO.)

Explanation:

- (1) refers to Number of company letter (if any)
- (2) refers to Director General of Department of Industrial Works
- (3) refers to Waste or unused materials which have characteristics and properties under the Notification of Ministry of Industry No. 1 B.E. 2541(1998)
- (4) refers to Disposer / recycler (identify name or company name or Factory name, etc.)

Attachment No. 3

- 1. In case of using other disposal contractors, a copy of factory license of the said contractors together with letter of consent or disposal contract must be attached. For example: landfilling a copy of factory license type 101 for centralized waste adjustment, waste or unused materials recycle in Section 1, Article 1-10. The operator name must be identified (may not be factory name).
- 2. In case of self-landfilling, a landfill layout, according to DIW criteria in the appendix 2, article 1.1, must be attached together with clay quality test.
- 3. In case of self-incineration, a certified document of efficient incinerator, according to DIW criteria in the appendix 2, article 1.2, must be attached.
- 4. In case of recycle of waste or unused materials, according to article 3 of section 2, a copy of factory license of recycler must be attached, together with details of production process, recycled waste volume including waste management generated from the recycling process.
- 5. In case of tipping into lowlands, map of land and a letter of landlord consent must be attached.
- 6. In case of dispatch to others for fertilizer process, the procedures and operator's name must be attached.

Attachment No. 6 Result report of leachate extraction procedure

- 1. Registered laboratory with Department of Industrial Works in waste or unused materials analysis
- State laboratory

Annex 5.3.2 Notice of Details of Wastes or Unusable Materials Attached to the Ministry of Industry No.6 [B.E. 2540 (1997)] (Ro Ngo 6)

	Date :	
I,	Factory o	perator, office located
at,	Village, Lane/Soi	, Roac
and the contract of the contra	, Sub-District/Sub-Area	
District/Area	, Province	, Tel
Fax	,Factory Registration no	located a
•••••	,Village, Lane/S	Soi
Road	, Sub-District/Sub-A	Area
District/Area		••••••••••
Tel	, Fax	, hereby notify of details
	le materials as per the following partic	
Article 1.	The details about the wastes an	nd unuseful materials and
	disposal method Shown in Documer	nt no. 1
Article 2.	Sketch map of the place of storage,	Shown in Document no. 2
	detoxification, disposal, discarding	or landfilling
Article 3.	Transportation details	Shown in Document no. 3
Article 4.	Landfill and monitoring	Shown in Document no. 4
	action plan	
Article 5.	Emergency response plan	Shown in Document no. 5
	for any accident	
	Signed:	
	(
	The o	wner of factory.

DETAILS ON WASTES OR UNUSABLE MATERIALS AND DISPOSAL METHOD

Oudon	Belongin	g in Annex	Name of wastes or	Quantity	Disposal	Damade
Order	Section	Article	unusable materials	Quantity	method	Remark
						_
	::	<u></u>	:			
		e afa, e e				
	100					_
						· · · .

Signed:	• • • • •	• • • •	• • • • •	
· ()		
The owner of facto				

	JICA
Ann	ex 5.3

SKETCH MAP OF PLACE OF STORAGE, DETOXIFICATION, DISPOSAL OR LANDFILL

Signed:

The owner of factory.

MOVEMENT AND TRANSPORT

1.	Meth	od of movement and transport.
2.	The	container the vehicle time and the residue and the residue.
۷.	THE	container, the vehicle type and the vehicle registration number.
3.	The	transportation route for storage, detoxification, disposal
	disca	rding or landfilling.
4.	That	ransporter (if any) :-
-7.	4.1	Name
		Address / Office
	4.2	Name
		Address / Office
5.	Conv	of Uniform Industrial Hagardona waste west Cont
5.	Сору	of Uniform Industrial Hazardous waste manifest.
		Signed :
		The owner of factory.

LANDFILL AND MONITORING PLAN (IF ANY)

1. Landfill procedure

2. Monitoring procedure

Signed:

The owner of factory.

	EMER	GENCY RESPON	ISE PLAN	
1. While	storing			
	* .			
				·
2. While	moving or tr	ansporting		
3. While	detoxifying,	disposing, disca	rding or landfilli	ng
	en e			
		•		
			• •	
		•		
		Signed:		
		(:)
			The owner of fa	ictory.
	5			

Annex 6

Annex to Chapter 6 of the Main Report

Annex 6.1 Non-HW DB User's Manual

1. To start the program, click Start --> NonHIW as in Figure 1

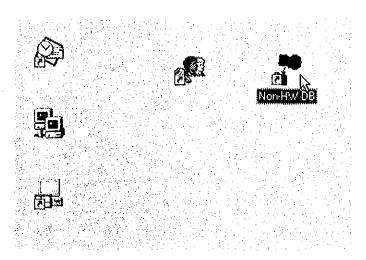


Figure 1

2. After enter to the program, the following screen will appear. Login name and Password should be correctly filled and click "Login" button as in Figure.2

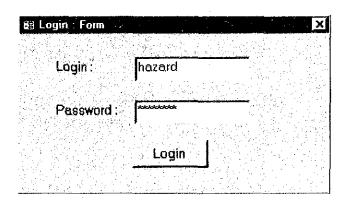


Figure 2

3. After the password is verified, the main menu will appear as in Figure 3

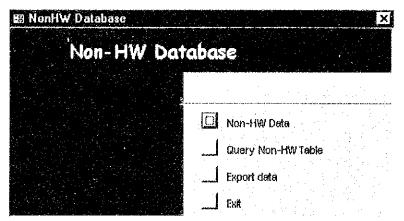


Figure 3

4. In the main menu click [Non-HW Data] and the Factory Data form will appear as in Figure 4.

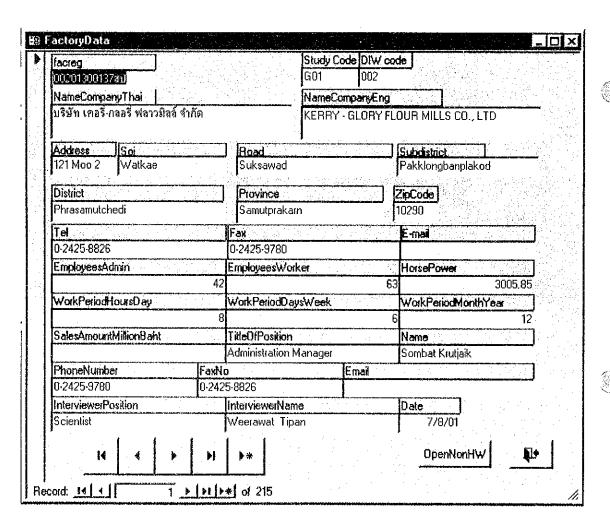


Figure 4

- User can use

 User can use

 It is to show the previous, next, and last data and also add new data
- To view a Non-HIW data of the factory, click OpenNonHW and the following form will appear as in Figure 5.

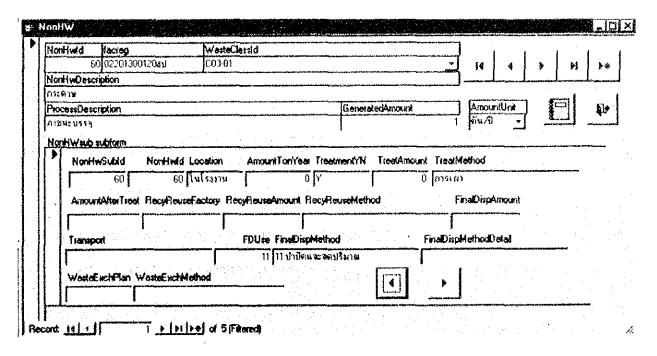


Figure 5

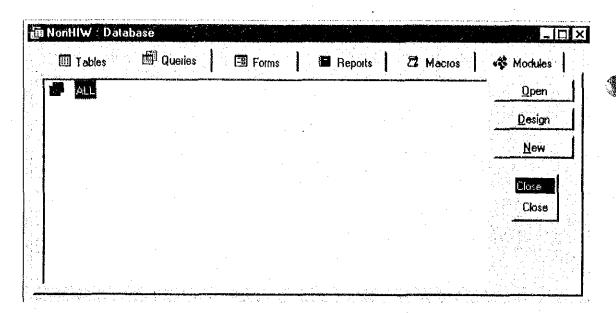
• To print the report, click and the preview print will appear as in Figure 6

0020130013777	ป นรีพัท เกอรี่-ทลอ	รี่ ฟลาวมิสล์ จำกัด	Samutpraku		
₩08-01	น้ำมันเครื่อง	การซ่อมบำรุง	o ลบ.ม <i>ก</i> ป้		
	นอกโรงงาน	0 N			
C03-01	กล่องกระคาษ	การบรรจุ	o ต้น/ปี		
	นอกโรงงาน	0 14			
C01-01	แป้งข้าวโพค	กระบวนการผลิต	o ต้น/ปี่		
	นอกโรงงาน	И 0			

Figure 5

• To exit, click

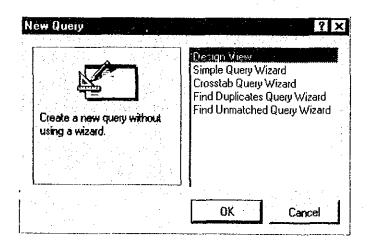
5. To make a Query using Non-HW data, in the main menu click [Query Non-HW Table] and the Queries form will appear as in Figure 6



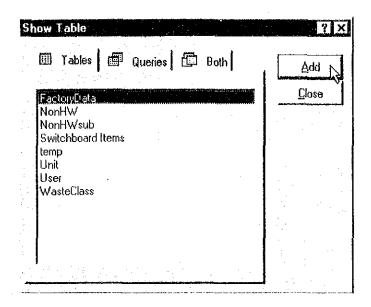
A query is a series of actions such as sorting data, choosing data by predetermined criteria, and selecting tables and fields. You can also do substantial calculations with queries. Once you make a query and save it with a specific name, you do not need to go through all the actions again. Instead, you can simply run the query to do the series of actions.

Steps to Create a New Query (Below is an example to make a query which shows data in a field "FactoryData*" in a database table "FactoryData" in the Non-HW DB in an ascending order.)

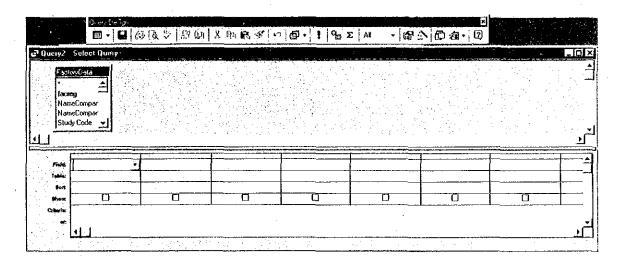
Click New A and the next screen will appear



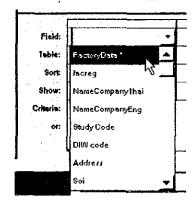
Select [Design View]



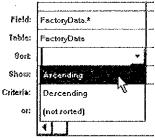
Select the table and the next screen will appear



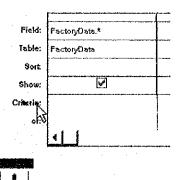
Select the fields from the Field List that you want to select the Query Design grid, along with any fields you will use for selection criteria.



Enter the type of sort.



Enter the criteria for creating the result set in the Query Design grid.



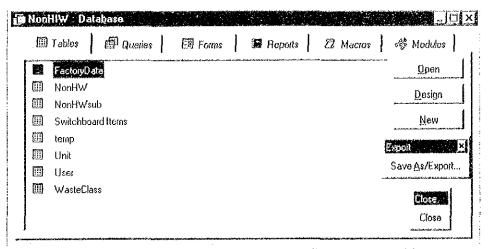
Click the Run button and will appear like next screen with all the data selected.



If you want different query repeats the same steps. Close the windows to go back to the main menu.

6. To export a data of Non-HW DB, in the main menu click [Export data] and the next screen will appear.

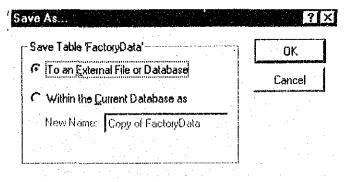




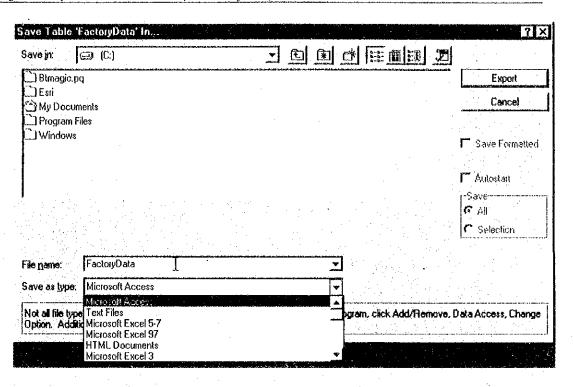
You can export tables of Non-HW DB to a different file format. In this way you can use different applications to manage the data.

Steps to Export Data

• Select the tables in the [Tables windows] and click [Save As/Export] button and the next screen will appear.



Select [To an External File or Database] and click [ok]

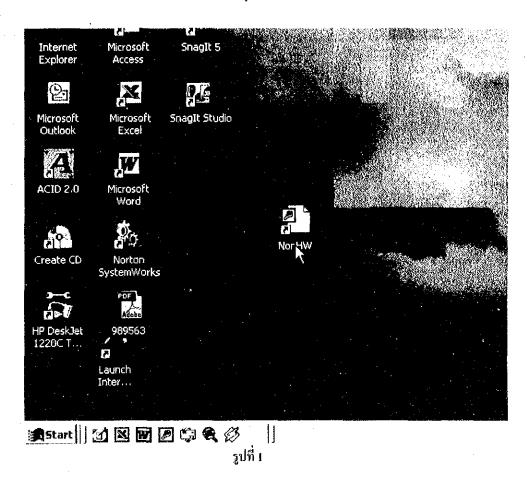


- Select the location to save the file, enter the file name, select the type of file and click the [Export] button. To export another table, repeat the same steps.
- 7. To exit the system, click [Exit] in the main menu.

Non-HW DB User's Manual in Thai

การใช้งานโปรแกรม Non-HIW

1. เข้าใช้โปรแกรมโดยกลิ๊กที่ Start --> Non-HIW ดังรูปที่ 1



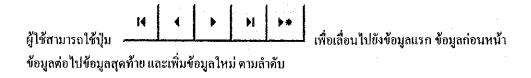
2. เมื่อเข้าสู่โปรแกรมจะปรากฏฟอร์มสำหรับตรวจสอบผู้ใช้ ซึ่งจะต้องใส่ชื่อ Login และ Password ให้ถูกต้อง แล้วคลิ๊กที่ปุ่ม "Login" ดังรูปที่ 2

🗐 Login : Form		×
Login :	hazard	-
Password:	skeletakolokolok	-
	Login	
	รูปที่ 2	

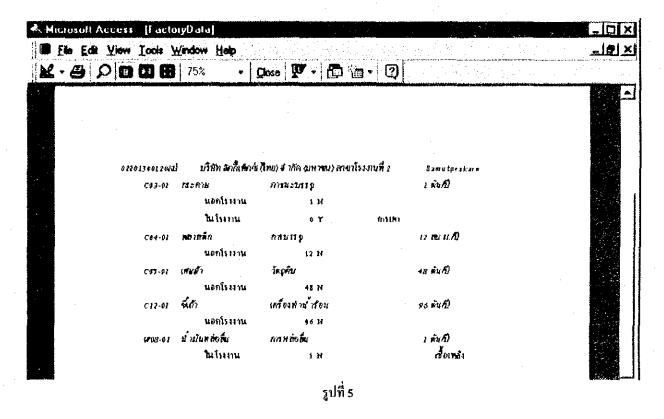
ถ้าผ่านการตรวจสอบผู้ใช้แล้ว จะปรากฏฟอร์มแสดงข้อมูล โรงงาน ดังรูปที่ 3

∃ FactoryData							
facreg 0020130013781	E-2014 A. State and Anti-Carl Service April 2014 (1994)	Study Code DIW cod G01 002	de				
NameCompanyThai		NameCompanyEng	na indra d'arabémient na malar d'arbet				
บริษัท เคอร์-กลอรี ฟลาวมิลล์ จำก	์ด		OUR MILLS CO., LTD				
Address Soi	Road		Subdistrict				
121 Moo 2 Walkae	Suksawac		Pakklongbanplakod	_			
District	Province		ZipCode				
Phrasamutchedi	Samutprak		10290	_			
Tel	Fax		E-mail]			
0-2425-8826	0 2425 9780		HorsePower				
EmployeesAdmin	EmployeesW	orker					
	42	63	3005.85				
WorkPeriodHoursDay	WorkPeriodi)aysWeek	WorkPeriodMonthYear]			
	8	8	12				
SalesAmountMillionBaht	TitleOfPositio	on .	Name]			
	Administration	n Manager	Sombat Krutjaik	March 1			
PhoneNumber	FaxNo	Email]			
0-2425-9780	0-2425-8826						
InterviewerPosition	InterviewerN	ame	Date	:			
Scientist	Weerawat T	ipan	7/8/01				
	> 1 > *		OpenNonHW I	•			
Record 14 4 1 1							

รูปที่ 3



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6. เมื่อใช้งานเสร็จเรียบร้อยแล้วให้ออกจากโปรแกรมโดยคลิ๊กที่ปุ่ม

Annex 6.2 Manifest DB User's Manual

1. To enter the program, click Start → Manifest.

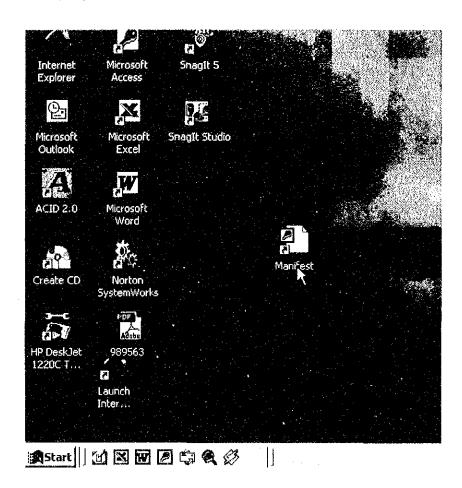


Figure 1

2. Then the following form will appear. Fill Login and Password, and click "Login" bottom as in Figure 2.

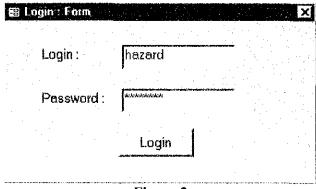


Figure 2

3. After password is verified, the following form will appear as in Figure 3

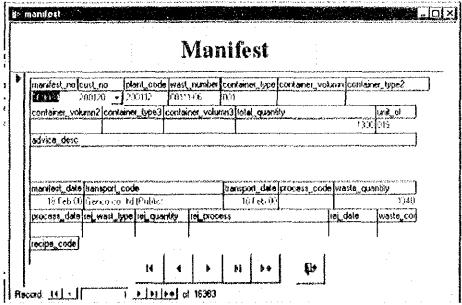


Figure 3

- User can use User can use to show the previous, next, and last data and also add new data.
- 4. To exit, click

- - a. Then create a new Query at New and the Dialog will appear.
 - b. Choose "Design View" button and click OK as in Figure 4.

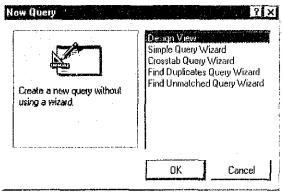


Figure 4

c. Choose manifest and click "Add" and "Close" buttons respectively as in Figure 5

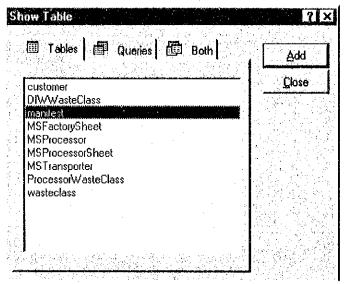


Figure 5

d. And the result will appear as in Figure 6.

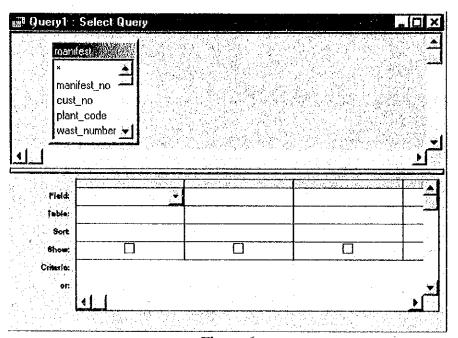


Figure 6

e. Then double click on the icon result of which is wanted. The data will be displayed as in Figure 7

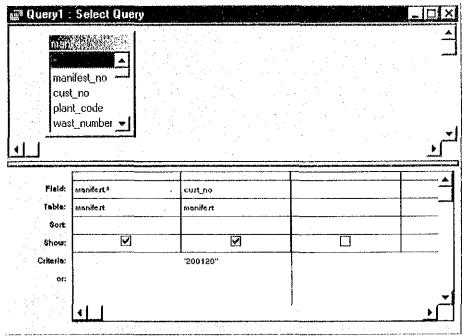


Figure 7

f. Fill the condition, such as cust_no = "200120" in Criteria, then click to display the result as in Figure 8

ia .	(luciy)	Select Un	et))										L D X
		manifest	plant_teds	work_russbo	eerine e	799		unit of 9	Manifest d	***	transport_code	1	*Indepents
	069084	200120	200112	00111-06	001		1300	019	18/2/00 15	52:07	Genco co ,itd (Publi	c)	18/2/90 15
	078699	200120	209121	00120-01		;	9000	019	21/8/00 15	51:50	บใช้ท เมเซต์ทราบล์ «	กกัด	21/8/00 15
	078748	200120	200121	00120-01			8000	019	22/8/00 16:	09.19	บริษัท เนเชอร์ทรานส์ 🤈	จากัด	22/8/00 16
	079906	200120	200121	60120-01			8600	019	9/12/00 16	08:07	บริษัท เนเซอร์ทรานส์ จ	∳ากัด	9/12/00 16
Г	080212	200120	200121	00120-01		:	8800	D19	16/9/00 15	06 58	บริษัท เนเชอร์ทรานส์ ฯ	ากัด	16/9/00 15
	083213	200120	200121	00120-01		i	8500	019	13/11/00 15	11 58	บริษัท เนเชอร์ทราบส์ *	กกัด	13/11/00 15
	083585	200120	200121	00120-01			8000	019	20/11/00 15:	41:37	บริษัท เนเซอร์ทรานส์ -	ากกัด	20/11/00 15
Г	083928	200120	200121	00120-01	• •		8500	019	27/11/00 15	05:48	บริษัท เนเซลร์ทรานส์ จ	∳ ากัด	27/11/00 15
	089024	200120	200121	00120-01		` :	6300	019	4/10/01 15:	49.20	บริษัท เนเซอร์ทรานส์	ากัด	4/10/01 15
	091107	200120	200121	00120-01			10000	019	: 6/5/01 15.	31:54	บริษัท เนเขอร์ทรานส์ จ	ำกัด	6/5/01 15
-	091971	200120	200121	00120-01			7700	019	25/8/01 13	05 06	บริษัท เนเรอโทรานส์ ^ส	ั กกัด	25/8/01 13
T	i				0	0 ()						
Re	cont 14	<u>J</u>	12 2 14	11 of 12		•		*******					•

Figure 8

g. Correct the data then close Dialog. Then, the program will ask if data needs to be saved or not. Click "Yes" button as in Figure 9. After that put name of the query in the box "Query Name:" such as "Query1" and click OK button.

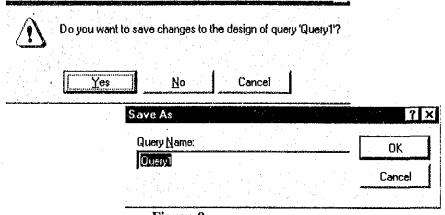


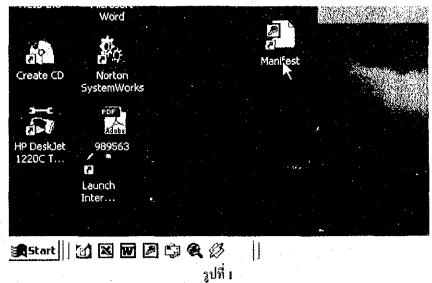
Figure 9

h. The user also can use this query to print a report.

Manifest DB User's Manual in Thai

คู่มือการใช้งานฐานข้อมูล Manifest

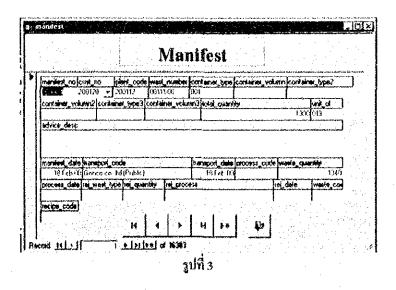
1. การเข้าใช้โปรแกรมโดยคลิ๊กที่ Start -> Manifast



2. เมื่อเข้าสู่โปรแกรมจะปรากฏฟอร์มสำหรับครวจสอบผู้ใช้ ซึ่งจะต้องใส่ชื่อ Login และ Password ให้ถูกต้อง แล้วคลิ๊กที่ปุ่ม "Login" คังรูปที่ 2

8 : Login Form	×
Login:	hazard
Password:	Adokkhhokk
	Login

3. ถ้าผ่านการตรวจสอบผู้ใช้แล้ว จะปรากฏฟอร์ม ดังรูปที่ 3

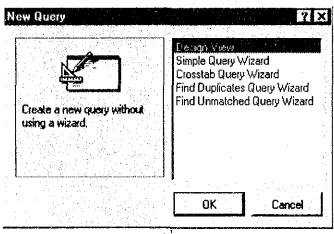


ผู้ให้สามารถใช้ปุ่ม ผ่าง ผ่าง เพื่อเลื่อนไปยังข้อมูลแรก ข้อมูลก่อนหน้า ข้อมูลต่อไป ข้อมูลสุดท้าย และเพิ่มข้อมูลใหม่ ตามลำดับ สามารถทำการแก้ไขข้อมูลที่ต้องการ โดยใช้ Mouse คลิ๊กเลือกที่ข้อมูล แล้วพิมพ์ข้อมูลใหม่ลงไป

4. เมื่อใช้งานเสร็จเรียบร้อยแล้วให้ออกจากโปรแกรมโดยคลิ๊กที่ปุ่ม

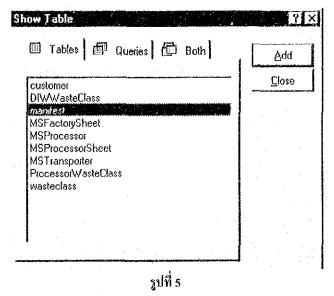
5. การสืบค้นและรายงานผล สามารถทำได้โดยการใช้ Queries โดยคลิ๊กที่แถบ

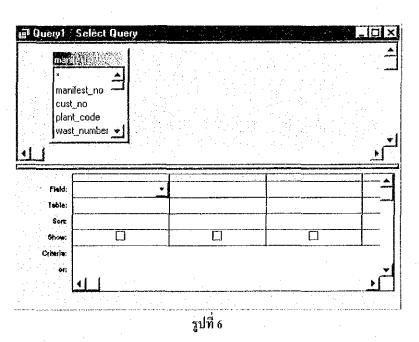
แล้วสร้างแบบสอบถามใหม่ที่ปุ่ม New จะปรากฏ Dialog ให้เลือก โดยเลือก "Design View" แล้วคลิ๊กปุ่ม OK ดังรูปที่ 4



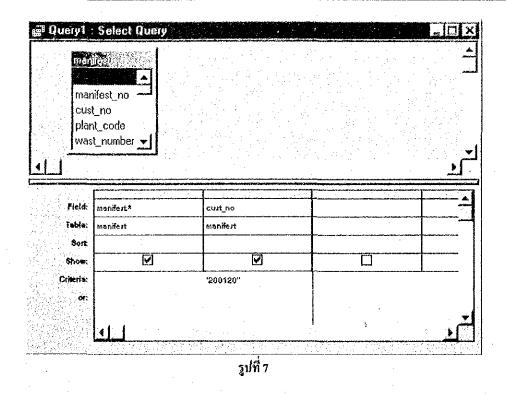
รูปที่ 4

เลือกตารางข้อมูล manifest แล้วคลิ๊กที่ปุ่ม "Add" และปุ่ม "Close" ตามลำดับ ตั้งรูปที่ 5 แล้วจะได้ผลลัพธ์ ตั้งรูปที่ 6 ตามถ้ำคับ





หลังจากนั้นให้ดับเบิ๊ลคลิ๊กเลือกข้อมูลที่ต้องการแสดงผล และข้อมูลที่เป็นเงื่อนไข ซึ่งข้อมูลดังกล่าวจะปรากฏ ในช่องค้านถ่าง ตัวอย่างคังรูปที่ 7



ใส่เงื่อนไขที่ต้องการเช่น cust_no = "200120" ในช่อง Criteria หลังจากนั้นให้คลิ๊กที่ปุ่ม เพื่อดูผลลัพธ์ที่ได้ ดังตัอย่ งรู ที่ 8

Huert	seles (,U)	ety:						- 100
069084	200120	200112	00111-06	001	1300	018	18/2/00 15:52 07 Genco co ,ftd (Public)	18/2/00 1
078699	200120	208121	00120-01	1	9000	819	21/8/00 15:51:50 ปริษัท เนเซอร์ทรานส์ จำกัด	21/8/00
078748	200120	200121	00120-01		9000	D19 .	22/8/00 16:09:18 ปริธัท เนเ ซต์ทรานด์ จำกัด	22/8/00
079908	200120	200121	00120-01		9600	019	8/12/00 16:08:07 บริษัท เนเซลร์ทรานส์ จำกัด	9/12/00
080212	200120	200121	00120-01		8900	019	16/9/00 15:06:58 บริษัท เนเซอร์ทรานด์ จำกัด	16/9/00
083213	200120	200121	00120-01		9500	019	13/11/00 15/11:58 บริษัท เมเซอร์ทรานด์ จำกัด	13/11/00
093585	200120	200121	00120-01		8000	019	2011/00 15.41:37 ปริษัท เมเซล์ทรานส์ จำกัด	20/11/00
083320	200120	200121	00120-01	i	8500	019	27/11/00 15:05:48 ปริษัท เนเซอร์ทรานด์ จำกัด	27/11/00
089024	200120	200121	00120-01		6300	018	4/10/01 15:49:20 ปริษัท เมเซอร์ทราบส์ จำกัด	4/10/01
081107	200120	200121	00120-01		10000	019	6/5/01 15:31:54 บริษัท เนเ ซอร์ทร าณ ด์ จำกัด	6/5/01
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1				0	0 0			
ecord 14		12 3 1	4 3 + d 12		New Proper	6,36,3	NAME OF THE PARTY	*******

รูปที่ 8

ตรวจสอบความถูกค้องแล้วปีค Dialog นี้ จะมีการถามว่าค้องการ Save หรือไม่ ให้เลือกที่ปุ่ม "Yes" คังรูปที่ 9 จะมีข้อความให้ใส่ชื่อแบบสอบถาม ให้ใส่ชื่อแบบสอบถามในช่อง "Query Name:" เช่น ชื่อ "Query!" แล้วคลิ๊กที่ปุ่ม OK

	Do you want to save	1'?			
	Yes	<u>N</u> o	Cancel		
********	Save A	3			7 ×
	Query Otter	Name:		_{geri} ng i a mang mana antandhida	OK Cancel
	айан МПЧ үнөүлчүн	ar yang dalah dan dalah dan dalah da	รูปที่	9	and the state of t

ผู้ใช้สามารถนำแบบสอบถามนี้ไปใช้สำหรับการทำรายงานได้ต่อไป

Annex 12

Annex to Chapter 12 of the Main Report

Annex 12.1 Survey Sheet of IWM Plan for the Paint Industry

Survey sheet for Paint manufacturing factory survey The Study on the Master Plan on Industrial Waste Management in the Bangkok Metropolitan area and Its Vicinity in the Kingdom of Thailand

1. General Information

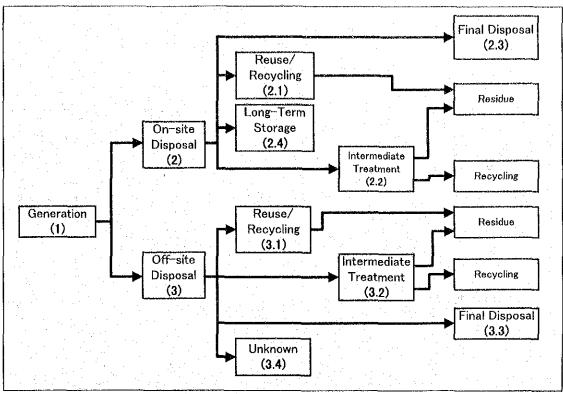
1. Name of Company	(Thai):
	(English):
2. Factory Registration No.	
3. Address	
4. Number of employees	Employees in the factory persons
	Hereof in the Administration persons
	Total Employees persons
5. Engine Power (Ror Ngor.4)	Horse power
6. Total Production Amount	(ton or m ³ /year)
7. Production Flow Chart	(Please attach catalog copies)

2. Interviewee and Interviewer

2.1 Interviewee	1. Title of Position	
	2. Name	
	3. Phone Number	
	4. Facsimile Number	
	5. E-mail Address	
2.2 Interviewer	1. Title of Position	
	2. Name	
	3. Signature	
2.3 Date of Interview		

3. Outline of Factory	
Q.1 What types of paints are you manufac	turing in your factory? (Plural answers are allowed)
[] 1. Organic solvent type dried by air	(i fural answers are anowed)
2. Organic solvent type dried by baking	
[] 3. Water thinnable type dried by air	
4. Water thinnable type dried by baking	
[] 5. Non solvent type (Powder coating)	
[] 6. Non solvent type (Road-marking pain	ts)
7. Thinner	
[] 8. Others (i.e. Paint-brush etc) (Please s	pecify:)
Q.2 What are the paints manufactured at y	our factory used for?
	(Plural answers are allowed)
] 1. Buildings (i.e. for post-coating on cor	struction site)
2. Building Materials (i.e. for pre-coating	g in factory)
] 3. Steel Structures	
] 4. Marine Usage	
] 5. Motor Vehicles (for new vehicles)	
6. Motor Vehicles (for repainting of used	d vehicles)
7. Electrical Appliances	
8. Industrial Machinery	
9. Metallic Products	
]10. Wooden Products	
]11. DIY (Do it yourself) Usage (Home u	se)
]12. Road Markings	
[]13. Others	
(Please	specify
)

4. Industrial Waste (IW) Management
Following figure shows typical IW flow of paint manufacturing factory. Please complete Q.3 – Q.11 referring to the figure.



IW flow of paint manufacturing factory

4.1 Waste Generation

Q.3 Waste Generation Amount [Please refer "(1)" on above flow]

No.	Waste	Generated amount (ton or m3/year)	Reason for generation			
. 1	Waste paints					
2	Waste solvents					
3	Sludge					
4	Waste plastics					
. 5	Waste acid					
6	Waste alkaline					
7	Ash					
8	Waste metals					
9	Dust					
10	Glass					
11	Waste paper					
12	Waste wood					
13	Cotton wastes					
14	Others					

4.2 On-site disposal (Treatment, Reuse/Recycling, Long-term Storage and Final disposal)

Q.4 On-site Disposal Amount [Please refer "(2)" on above flow]

No.	Waste		On-site c	lisposal	amoun	t (ton	or m3/	year)	
1	Waste paints	 1							
2	Waste solvents								
3	Sludge		3 Tab (4		_				
4	Waste plastics			1					
5	Waste acid								
6	Waste alkaline	 T							
7	Ash								
8	Waste metals								• • • • •

9	Dust		 1.							 					•		
10	Glass	4 5	7.		 -									-			- 1
11	Waste paper				٠.,	٠.		-		 -	 		 				
12	Waste wood			-	 	- 7			25								
13	Cotton wastes	-	 -		 		 ٠.				 						
14	Others				 		 1	:		:	 1.	.7	- 1			:	

On-site Reuse/Recycling Amount [Please refer "(2.1)" on above flow] 0.5

No.	Waste	On-site Reuse/Recycling Amount (ton or m3/year)
1	Waste paints	
2	Waste solvents	
3	Sludge	
4	Waste plastics	
5	Waste acid	
6	Waste alkaline	
7 .	Ash	
8	Waste metals	
9	Dust	
10	Glass	
11	Waste paper	
.12	Waste wood	
13	Cotton wastes	
14	Others	

On-site Intermediate Treatment Amount [Please refer "(2.2)" on above flow] Q.6

No.	Waste	On-site Intermediate Treatment Amount (ton or m3/year)
1	Waste paints	
2	Waste solvents	
3	Sludge	
4.	Waste plastics	
5	Waste acid	
6	Waste alkaline	
7	Ash	
8	Waste metals	
9	Dust	
10	Glass	
11	Waste paper	
12	Waste wood	
13	Cotton wastes	
14	Others	

0.7 On-site Final Disposal Amount [Please refer "(2.3)" on above flow]

No.	Waste	On-site Intermediate Treatment Amount (ton or m3/year)
1	Waste paints	
2	Waste solvents	er i kalendaria eta erregia eta eta eta eta eta eta eta eta eta et
3	Sludge	
4	Waste plastics	
5	Waste acid	
6	Waste alkaline	
7	Ash	
8	Waste metals	
9	Dust	
10	Glass	
11	Waste paper	
12	Waste wood	
13	Cotton wastes	
14	Others	

Q.8 Long-term Storage [Please refer "(2.4)" on above flow]

No. Waste		Long-term Storage Amount (ton or m3/year)	Reason for storage				
1	Waste paints						
2	Waste solvents						
3	Sludge						
4	Waste plastics						
5	Waste acid						
. 6	Waste alkaline						
7	Ash						
. 8	Waste metals						
9	Dust						
10	Glass						
11	Waste paper						
12	Waste wood						
13	Cotton wastes						
14	Others						

4.3 Collection

Q.9 Who collects wastes generated in your factory? (Tick each applicable column. Plural answers are allowed)

Ño.	Wastes	Category of collector							
INO.	vvasies	а	b.	C.	d.	e.			
1	Waste paints				: 1				
2	Waste solvents								
3	Sludge			1.1					
4	Waste plastics	10 100							
5	Waste acid								
6	Waste alkaline								
7	Ash								
8	Waste metals	, '							
. 9	Dust	4.2							
10	Glass								
11	Waste paper	. 1.5							
12	Waste wood								
13	Cotton wastes					1.			
14	Others								

Category of collector

- Local Administration a.
- b. Private Company [GENCO, Technochem, Recycle Engineering, Sita Thai (Waste collector for Siam Cement), BYL Environmental Services (Waste collector for City Siam Cement)]
- Private Company (Other than those in category "b".) c.
- Waste buyer d.
- Others e.

Off-site Disposal (Treatment, Reuse/Recycling and Final Disposal) Off-site Disposal Amount [Please refer "(3)" on above flow] 4.4

Q.10

No.	Waste	Off-site Disposal Amount (ton or m3/year)
1	Waste paints	
2	Waste solvents	
3	Sludge	
4	Waste plastics	
5	Waste acid	
6	Waste alkaline	
7	Ash	
8	Waste metals	
9	Dust	
10	Glass	
11	Waste paper	
12	Waste wood	The state of the s
13	Cotton wastes	
14	Others	

Q.11 Reuse/Recycling, Treatment and Final disposal amount [Please refer "(3.1)"-"(3.4)" on above flow]

Cate	gory of Agents					
	a. Local Adm	ninistration				
		or Siam Cer				ring, Sita Thai (Waste /aste collector for City
	c. Private Co d. Waste buy e. Others	ompany (Oth /er	er than tho	se in categ	gory b.)	
	gory of Disposal suse/Recycling 2. Int	ermediate T	reatment	2 Ein	al Disposal	4. Unknown
1. 130	case/recycling 2. Int	enneurate i	leatilient		al Disposal /Cost or price	4. UNKNOWN
No.	Waste	Category of	Amount of discharge (ton or	Category	Cost or price	Category of disposal by agents (if known)
		condition	m3/year)	of Agent	(Baht/ton or m3)	by agents (it known)
Exa mpi e.	Waste paints	В	2 ton	b	10,000Baht/ton	2.
1	Waste paints	1.7		11 11 11 11		
2	Waste solvents		that the same			
3	Sludge					and the second second
4	Waste plastics					
5	Waste acid					
6	Waste alkaline					
7	Ash					
8	Waste metals					
9	Dust					
10	Glass			1 4		
11	Construction Wastes					
12	Waste paper, Waste wood					
13 14	Cotton wastes	·	<u> </u>			
14	Others	<u> </u>	<u> </u>		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Q.12 How do you manage the waste for reduction and reus	se/recycling in your
factory? (Plural answers are allowed)	
12-1 <u>Minimization Methods for Waste Paint</u>	
1. Reuse/recycling	
[] a. Being reworked into marketable products	
[] b. Thermal recycling as fuel	
[] c. Waste segregation	
[] d. Others (please	
specify:)	
[] e. No reuse/recycling for minimization	
2. Production control	
[] a. Proper planning and inventory control	
b. Standardization of raw material/formulation	
[] c. Improvement of color matching	
[] d. Proper size of production run	
[] e. Use of Computerized Color Matching system	
[] f. Others (please	
specify:)	
[] g. No production control for minimization	•
3. Quality control	
a. Reduction of stock-samples	
[] b. Reduction of off-specification products	
[] c. Others (please	
specify:	
[] d. No quality control for minimization	
4. Stock control	
[] a. Reduction of obsolete products	
[] b. Taking inventory	
[] c. Others (please	
specify:)	•
[] d. No stock control for minimization	
5. Others	÷
[] a. Use for other purpose (i.e. paint for drums)	
[] b. Others (please	
specify:)	
spoony	
12-2 <u>Minimization Methods for Waste Solvent</u>	
1. Reuse/recycling	
[] a. Reuse for cleanup solvent	и ж
b. Classification of cleanup solvent	
[] c. Others (please	*
specify:)	
[] d. No reuse/recycling for minimization	
2. Production control	
[] a. Scraping products well from tanks	•
[] b. Production sequence from light to dark color	
[] c. Production sequence for similar color	
[] d. Cleaning by formulated solvent	
[] e. Shortened pipelines	
[] f. Shortened piperines [] f. Covering of let-down tanks	
C. L. LANGGINS DE BELLUEWII IZHKN	· · · · · · · · · · · · · · · · · · ·

Change	Reuse/recyclin of Containers (Siz (Please	e/Materials)
Othora		specify)
-4		ethods for Other Wastes (Sludge, Waste plasti
	Wastes	Minimization Methods
.		(Rows may be added if necessar
Futu	ire Management o	

Q.14 Are there any future plans to improve the treatment and final disposa
system of IW in your factory?
[] 1. No, basically we will apply the present management.
[] 2. Yes, we intend to improve present the treatment and disposal system of our
company. (Pleases specify the plan):
[] 3. Yes, we have a specific plan to improve the treatment and disposal system in
our factory.
(Pleases specify the plan):
Q.15 How will a possible future rise in off-site disposal cost of IW affect your
factory?
[] 1. The present costs of waste disposal are not significant and an increase in
disposal costs will have little impact on our business.
[] 2. The present costs of waste disposal are significant and a substantial rise in
disposal costs will affect the price of our products.
[] 3. The present costs of waste disposal are very significant and a substantial rise
in disposal costs will threaten our business.
[] 4. No matter how expensive the disposal cost is, an improved waste
management is necessary to have an environmentally friendly image of products.
[] 5. Others (Please specify:)
(1 loase specify
5. Financial Matters
Q.16 What percentage of the production cost is for IW management (IWM)?
[] 1
[] 2. I don't know.
6. Evaluation of the Present IW system
Q.17 Which of the following phrases describes best the present status of IWM in
your factory?
[] 1.There is no problem with the present IWM.
[] 2. There are some problems with present IWM.
(Pleases specify the problems):
Q.18 What do you think are the problems of the present IWM in your factory?
(Plural answers are allowed)
[] 1. We do not know the difference between hazardous and non-hazardous
waste.
r a a significant and the state of the state
[] 3. There is no or only limited services available for industrial waste treatment.
[] 4. The cost of industrial waste treatment is high.

]	5. The reuse and recycling of industrial waste is no-existent or limited.
[] .	6. Others (Please specify
	• • • •)
Q.1	9	What measures and actions do you think need to be taken to solve the above
	pro	oblems? (Plural answers are allowed)
] -	1. The formulation and enforcement of relevant laws and regulations.
[]	2. The guidance on proper IWM to the factories (generators).
[]	3. The introduction of financial and economic incentives to promote prope
- 4:		
] :	4. The preparation of the guidelines for proper IWM.
[]	5. Development of the waste reuse and recycling market.
[]	6. Development of intermediate treatment facilities for industrial waste.
[] .	7. Development of final disposal facilities for industrial waste.
[]	8. Others (Please specify:)
Q.2	0	Are you familiar with the ISO 14001 environmental management systems?
	.]	1. Yes. We've already installed it.
[]	2. Yes. We have a plan to install it.
[]	3. Yes. However, we have no plan to install it.
[.]	4. No. We are not familiar with it.
		그는 이 보이 먹다는 회에는 다른 사람들은 것 같은 모양이다. 생길이
	- 1	

---- Thank you very much for your cooperation!! ----

Annex 12.2 Waste Flow of 11 Paint factories Surveyed

12.2.1 All type of waste

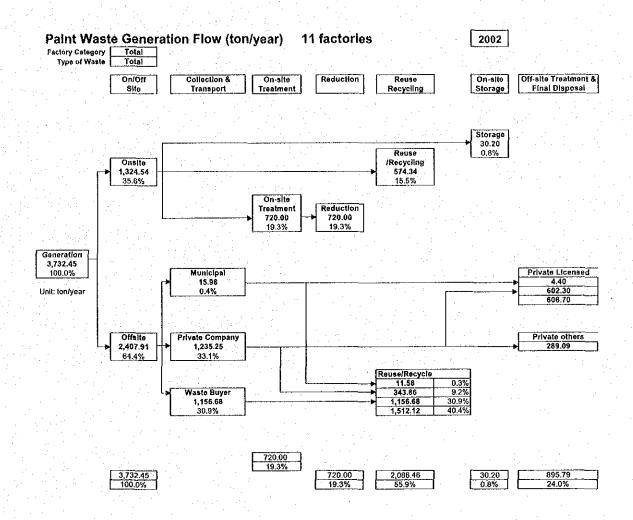


Figure 12-1: Waste Flow of 11 Paint factories surveyed (all type)

12.2.2 By type of waste

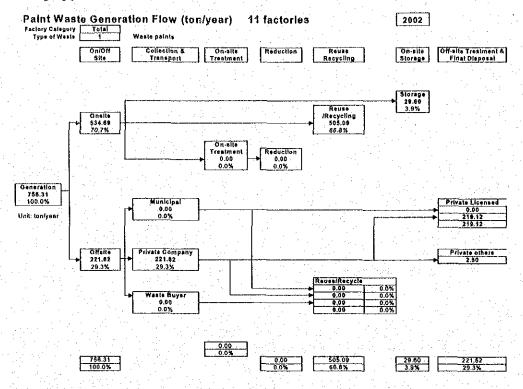


Figure 12-2: Waste Flow of 11 Paint factories surveyed (waste paint)

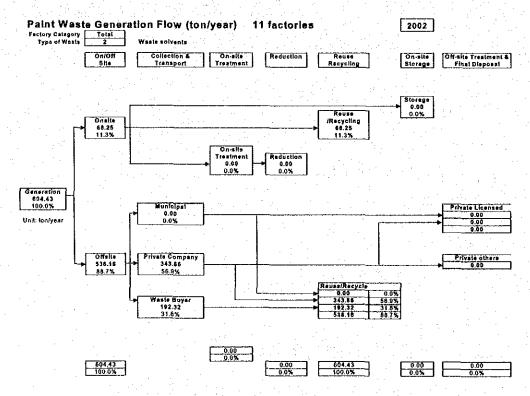


Figure 12-3: Waste Flow of 11 Paint factories surveyed (waste solvent)

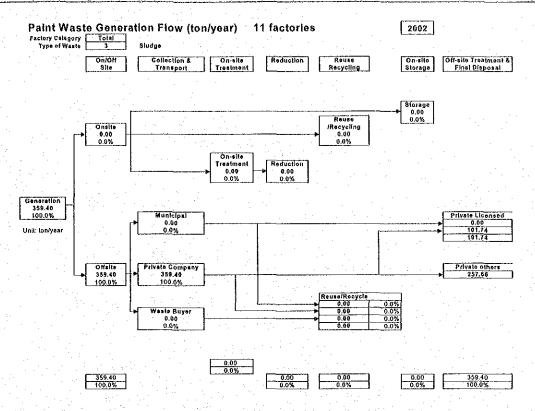


Figure 12-4: Waste Flow of 11 Paint factories surveyed (sludge)

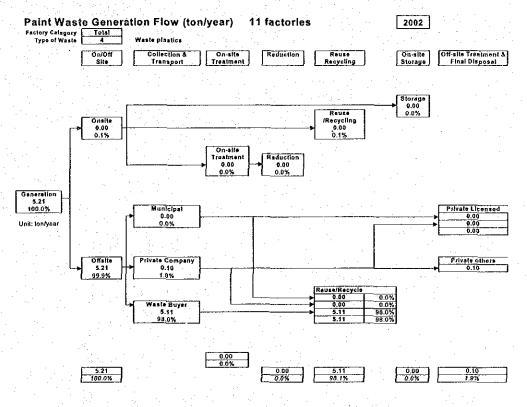


Figure 12-5: Waste Flow of 11 Paint factories surveyed (waste plastics)

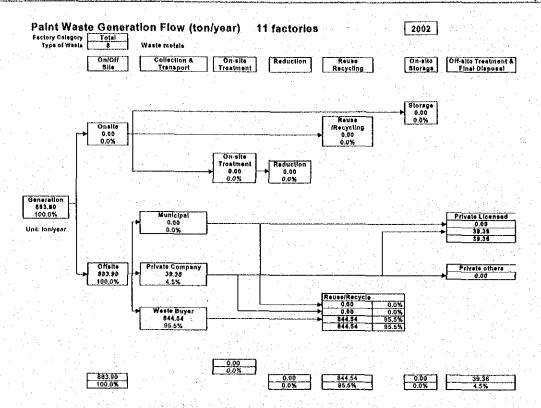


Figure 12-6: Waste Flow of 11 Paint factories surveyed (waste metals)

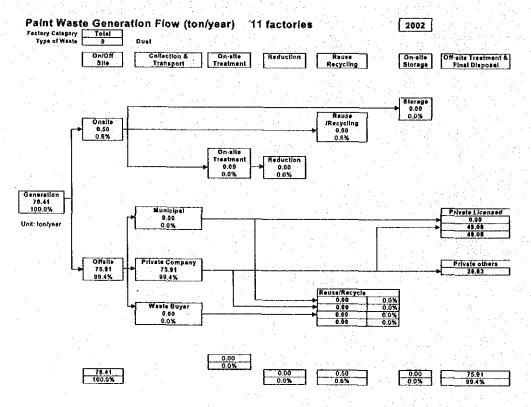


Figure 12-7: Waste Flow of 11 Paint factories surveyed (dust)

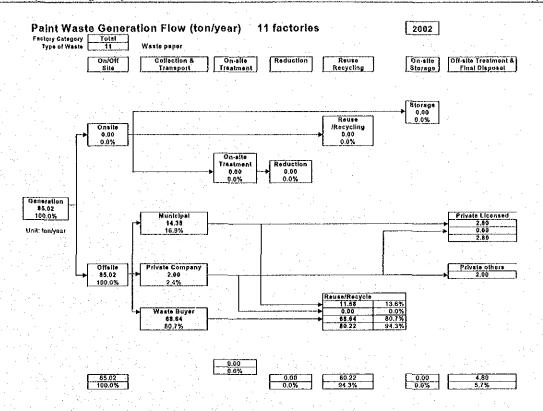


Figure 12-8: Waste Flow of 11 Paint factories surveyed (waste paper)

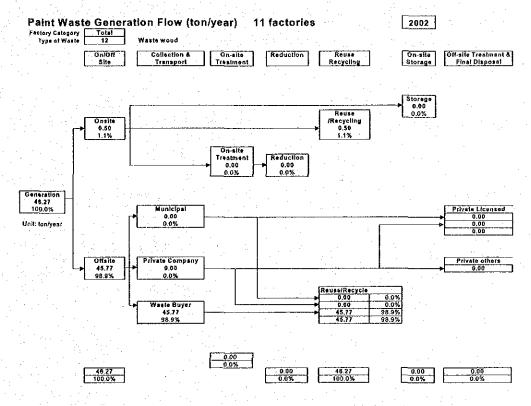


Figure 12-9: Waste Flow of 11 Paint factories surveyed (waste wood)

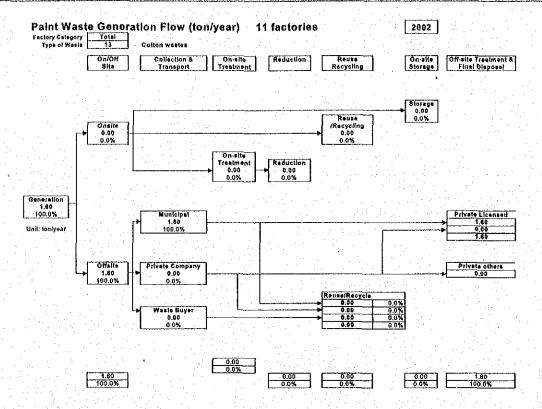


Figure 12-10: Waste Flow of 11 Paint factories surveyed (cotton waste)

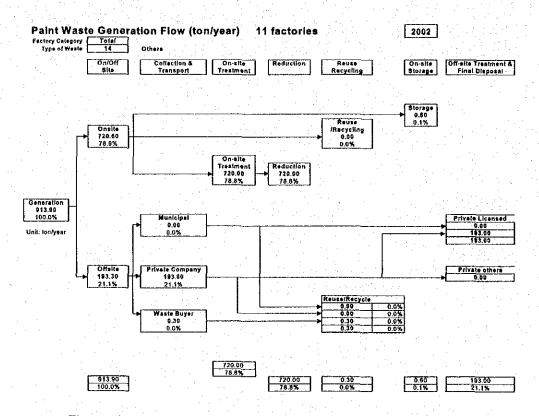


Figure 12-11: Waste Flow of 11 Paint factories surveyed (others)

Annex 12.3 Waste Flow of Paint Factories in the Study Area

12.3.1 All type of waste

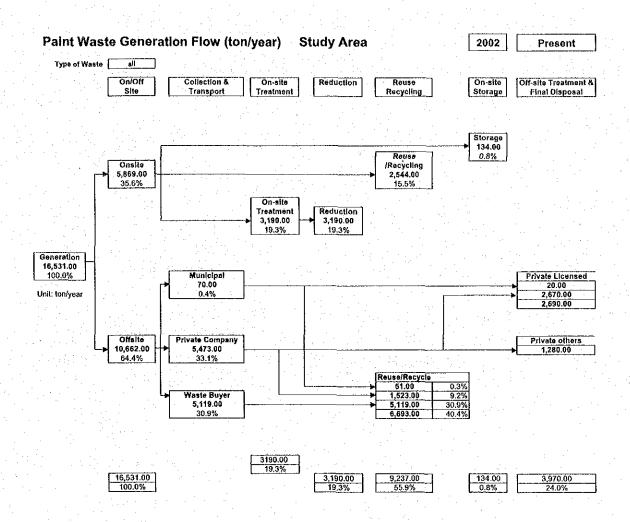


Figure 12-12: Waste Flow of Paint Industry in the Study Area (all type)

12.3.2 By type of waste

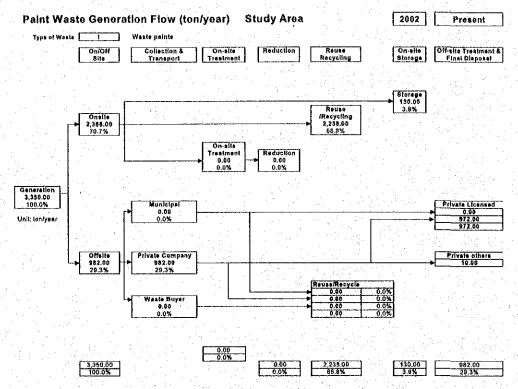


Figure 12-13: Waste Flow of Paint Industry in the Study Area (waste paint)

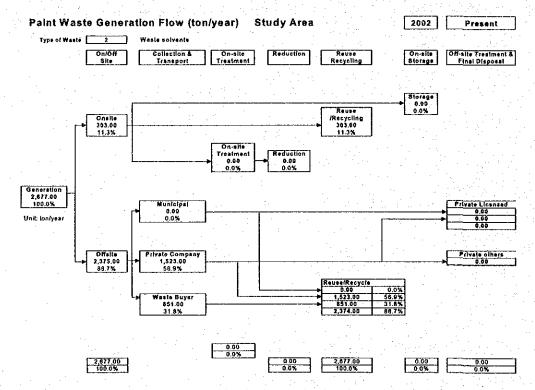


Figure 12-14: Waste Flow of Paint Industry in the Study Area (waste solvent)

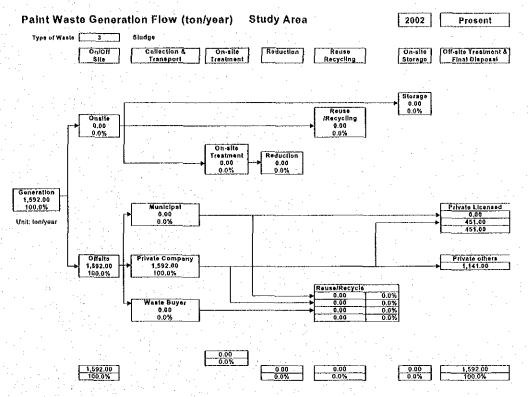


Figure 12-15: Waste Flow of Paint Industry in the Study Area (Sludge)

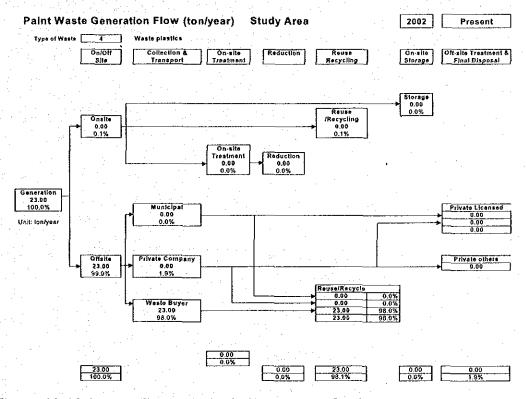


Figure 12-16: Waste Flow of Paint Industry in the Study Area (waste plastics)

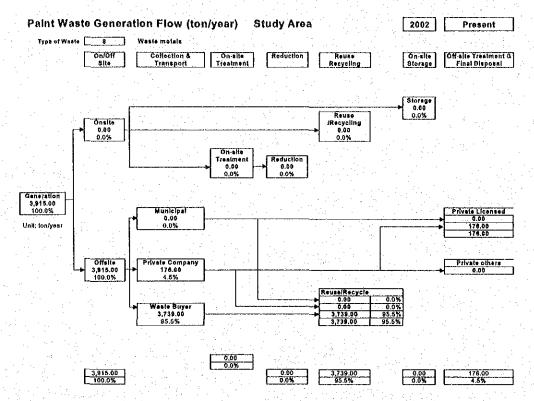


Figure 12-17: Waste Flow of Paint Industry in the Study Area (waste metals)

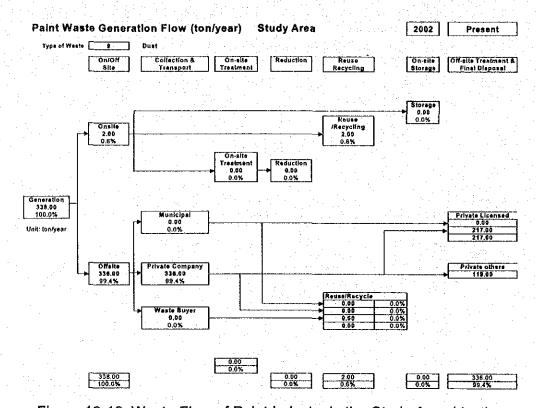


Figure 12-18: Waste Flow of Paint Industry in the Study Area (dust)

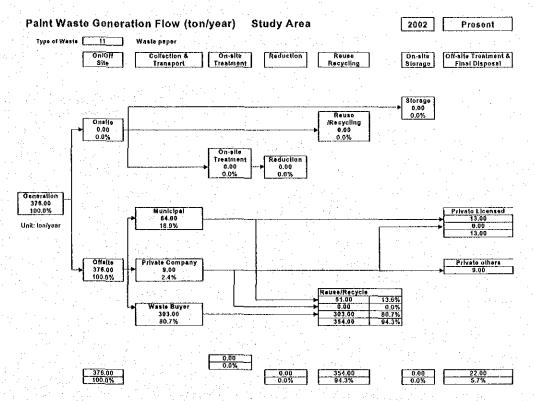


Figure 12-19: Waste Flow of Paint Industry in the Study Area (waste paper)

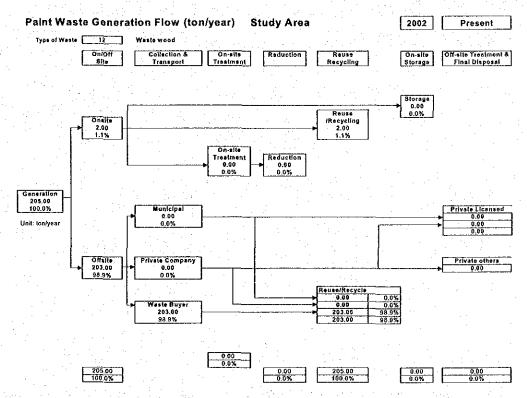


Figure 12-20: Waste Flow of Paint Industry in the Study Area (waste wood)

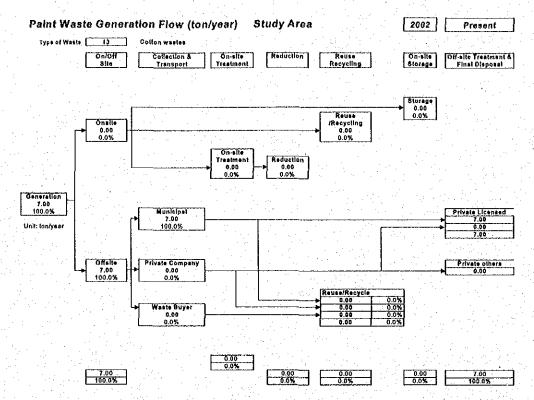


Figure 12-21: Waste Flow of Paint Industry in the Study Area (cotton waste)

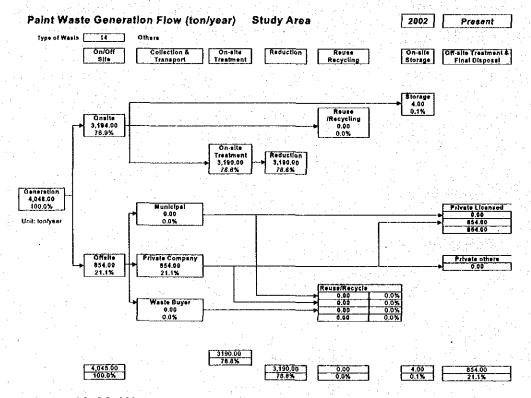


Figure 12-22: Waste Flow of Paint Industry in the Study Area (others)