

**DATA D**

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**SURVEY ON PRIVATE SWM  
ENTERPRISES**

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*D.1 SURVEY TO SOLID WASTE  
TRANSPORTATION  
ENTERPRISES*

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 1)**

**1. General Data**

1.1	Company Name	MULTICERRILLOS	
1.2	RUT	6.396.896-K	
1.3	Address	1) Present  Lo Errazuriz, 126 (Cerrillos)	2) Future (if applies)
1.4	Share Capital	40 Million\$	
1.5	Year of Establishment	1984	
1.6	Number of Employees	1) Total: 9	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	20.5 Million \$	

**2. Information on Interviewee**

2.1	Name	Pedro Gajardo
2.2	Title or Position	Manager / Director
2.3	Telephone	538 68 56
2.4	Fax	-----

### 3. Activities

3.1	Number of Vehicles Owned	1) Trucks (type and capacity): 5 hoist trucks 2) Vans: 3) Other:		
3.2	Other Main Equipment and Facility	- 40 containers (9m <sup>3</sup> ) - repair shop -		
3.3	Main Clients	Indura, Cristal Chile, Pinturas Brundel, Evercript, Imprenta Selecta, Cabo de Hornos, Rein, Licores Michan, General Electric, Inval (Total Number:34)		
3.4	Types of Waste Dealt With	1. MSW ( %)	2. ISW ( 100 %)	3. Medical SW ( %)
3.5	Average Amount of Waste Collected	3,500 m <sup>3</sup> / month		
3.6	Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 80 % 1b) Cerros de Renca: 20 % 1c) Lepanto:	
		2) Recyclers		
		3) Others		

### 4. Intention to Expand SWM Activities

Multicerrilos is interested in expanding its activities in the future. However, the present Declaration System hinders the possibility to make intermediate business, since the amount of waste collected has to match the amount disposed in the landfill. This administrative requirement leaves no room for waste recovery by transporters

5. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Paper, cardboard and plastic have the greatest recycling possibilities on the basis of the amounts produced.

Multicerrillos strongly supports the introduction of transfer station as the most appropriate alternative for efficient waste transportation. However, it may find objection by the landfills because they do not like to receive more than one document (declaration system form) from each truck.

The remote location of new landfill site seriously damages small transporters.

The only company allowed to have its own landfill (because of generating complicated type of waste) is "Pizarreño" at Camino de Melipilla.

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 2)**

**1. General Data**

1.1	Company Name	MULTIASEO S.A.	
1.2	RUT	88.842.000-2	
1.3	Address	1) Present Pelayo Bezanilla 4154 (Estacion Central)	2) Future (by 1996) Ctra. General San Martin 9600
1.4	Share Capital	800 Million\$	
1.5	Year of Establishment	1985	
1.6	Number of Employees	1) Total: 40	Operation: 80 % Administration: 20 % Other: ( %)
1.7	Annual Sales	700 Million \$	

**2. Information on Interviewee**

2.1	Name	Rodrigo Leiva
2.2	Title or Position	Manager of Operations
2.3	Telephone	776 41 55
2.4	Fax	776 48 50

### 3. Activities

3.1 Number of Vehicles Owned	<p>1) Trucks (type and capacity): 24 trucks (17 multibucket, 7 hook-lifter)</p> <p>2) Vans: 6 (transportation of personal and repair tools)</p> <p>3) Other: 2 Isuzu trucks for glass collection</p>		
3.2 Other Main Equipment and Facility	<p>- 400 containers (10, 20 and 30 m<sup>3</sup>)</p> <p>- 20 compacting units (50% monoblock, 50% post-fix)</p> <p>-</p>		
3.3 Main Clients	<p>Ideal, Watts, Lever, 2 en 1, Lanchile, Ladeco, Home-Center, Pinturas Sterling, Cecinas JK, Nutreco, Coca-Cola, Pepsi, CCU, Becker, Laboratorios Chile, Matisen (Total Number: 300 )</p>		
3.4 Types of Waste Dealt With	1. MSW ( %)	2. ISW ( 100 %)	3. Medical SW ( %)
3.5 Average Amount of Waste Collected	4,000 tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	<p>1a) Lo Errazuriz: ISW readily assimilated as MSW</p> <p>1b) Cerros de Renca: all remaining waste</p> <p>1c) Lepanto:</p>	
	2) Recyclers	<p>Cristalerias Chile (this company started a glass recycling campaign 6 months ago. Multiaseo is in charge of collecting the drums from supermarkets. Highly efficient service is requested so as not to obstruct normal selling activities and preserve valuable space. The ISUZU trucks are used specifically for this purpose).</p>	
	3) Others	<p>Regular trucks are used for transporting glass from beer and bottling plants to recycling plants</p>	

#### 4. Intention to Expand SWM Activities

Very keen on expanding. The new location is partly thought out to accommodate future expansion possibilities. Multiaseo (through its mother company "COMPAGNIE GENERALE DES EAUX" from France) obtained the tender called by Emeres regarding the construction and operation of transfer stations for new MSW landfills. However, the project is now stalled because the municipalities that conform Cerros de Renca called a separate tender for the same purpose (won by KIASA, from U.S.A.). The Intendente rejects the idea of having two parallel systems working in the future. Multiaseo would be also interested in engaging in a similar project for ISW if the possibility came up.



5. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The future appearance of transfer stations has caused some concern among some of the Multiaseo's clients. The characteristics of the waste they produce make it unfit for being accepted in a transfer station (bad smell, etc.). On the other hand, the direct transport to the landfill would translate into very high costs.

The present near monopolistic situation regarding final disposal (only three landfills, no alternatives) goes in detriment of transporters, who are forced to comply with all requirements set by the landfills. Any attempt at complaining may result in a prohibition to further dispose at the landfill. For instance, no protection against inaccurate or broken down scales is given. The transporter must accept the visually estimated or rounded up weight set by landfill operators.

The existing low disposal costs do not provide incentives for recycling. However, the lack of government resources (for monitoring and even for protection from scavengers) make recycling and waste separation unattractive.

Multiaseo has found poor professional capability among the inspectors from environmental and sanitary authorities. Certain requirements show a lack of technical criteria and flexibility that hinder efficiency (a graphic example by the transporter: a waste storage room is required even if the industry has the technology for turning waste into clean air).

Next are Multiaseo's comments on the Declaration System (Act 5081):

The act was drafted without previous consultation with the main parties involved (which are not many).

The system was applied to 100% of the industries, not just those generating hazardous waste (aprox. 5%). This resulted in increased administrative costs for industries and in lost time for transporters (the waiting time for completing filling up procedures translated into a 20% decrease in collection capacity for MULTIASEO).

Not everyone followed the system (including Cerros de Renca).

The appropriate infrastructure for implementing the system was lacking (scales, etc).

At this time there is a need for information on the future steps that will be taken. Industries are confused about the near future situation and feel compelled to follow the system without much conviction.

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 3)**

**1. General Data**

1.1	Company Name	STARCO S.A.	
1.2	RUT	88.446.500-1	
1.3	Address	1) Present Panamericana Norte 4241	2) Future (by mid 1996) Quilicura
1.4	Share Capital	900 Million\$	
1.5	Year of Establishment	1982	
1.6	Number of Employees	1) Total: 650	Operation: 92 % Administration: 8 % Other: ( %)
1.7	Annual Sales	4,300 Million \$	

**2. Information on Interviewee**

2.1	Name	Fernando Pinochet
2.2	Title or Position	Assistant Manager of Operations
2.3	Telephone	734 40 62
2.4	Fax	734 40 62



5. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The technical capability and training of people involved in waste management is very low in Chile. There are only a few academic experts and a few professionals who studied abroad with sufficient knowledge on the subject. Most managers of private SWM companies have experience but no technical training. This is also true of municipal authorities in charge of WM. They are ignorant and they spread misconceptions that create further ignorance (e.g., regarding recycling and composting). Waste collection contracts are relatively expensive for the municipalities (in relation to their budgets), so that many times the solutions adopted are not technically sound but a compromise involving also economic and political issues.

Taxes for waste collection are included as part of the real estate tax. However, since middle and low class families are exempted from the latter, the poorest municipalities receive lower revenues to allocate to waste management solutions. The municipality of El Monte, for instance, is operating its own unauthorized dumping site arguing that any other solution is beyond its economic possibilities.

As the future disposal costs are expected to increase, mayors are trying to extend the present situation in order to save money.

At present, intermediate treatment is not a profitable activity due to the lack of enforcement by the authorities. The industries operate as they please. There is no need for a cadastre; production data for specific types of industries would suffice for the purpose of identifying and monitoring the generation of hazardous waste.

Most of the informal recycling market (90%) is concentrated in two locations:

- Costanera de los Pobres con Sierra Bella
- Guillermo Mann (antes de Lo Encalada)

It is very organized. Some drivers from the authorized waste transportation companies participate in such market despite the explicit prohibition of company managers.

Waste separation in search of animal feed takes place in the surrounding area to Lo Errazuriz.

Most illegal dumping results from construction and demolition waste, although sometimes such waste is dumped in authorized places that require filling materials (e.g. Panamericana Norte at MR boundary).

\* (under the contract with the municipalities they must collect all waste discharged by both households and industries up to 200 l/day or 54kg/day. Payment for the excess waste discharged by industries is received through the municipality or directly from the industry by means of an agreement previously established. In total ISW accounts for 2-5%, mainly in the form of waste food)

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 4)**

**1. General Data**

1.1	Company Name	EMPRESA DE RESIDUOS RESITER Y CIA. LTDA.	
1.2	RUT	89.696.400-3	
1.3	Address	1) Present  Jose Joaquin Prieto 9750 (El Bosque)	2) Future (if applies)
1.4	Share Capital	5 Million US\$	
1.5	Year of Establishment	1983	
1.6	Number of Employees	1) Total: 520	Operation: 85 % Administration: 6 % Other: 9 % (maintenance)
1.7	Annual Sales	7 Million US\$	

**2. Information on Interviewee**

2.1	Name	Enrique Peñafiel
2.2	Title or Position	Technical Assistant Manager
2.3	Telephone	527 39 02
2.4	Fax	558 32 15

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): 104 collection trucks (12 to 20m <sup>3</sup> ) 2) Vans: 15 (supervision duties) 3) Other: 19 trucks for other purposes		
3.2 Other Main Equipment and Facility	- 35 self compacting containers - 15 stationary containers (the bigger ones) -		
3.3 Main Clients	7 municipalities (San Bernardo, Maipu, Cerrillos, La Cisterna, San Ramon, Providencia, Buin), supermarkets (Unimark, Multiahorro, Montserrat; 80% of market), food industries, manufacturers, agricultural industries, 12 hospitals and clinics		
3.4 Types of Waste Dealt With	1. MSW (75%)	2. ISW (24%)	3. Medical SW (1%)
3.5 Average Amount of Waste Collected	3,500 to 4,000 tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: ISW, Medical Waste and 70% of MSW  1b) Cerros de Renca: 1c) Lepanto: 30 % of MSW	
	2) Recyclers		
	3) Others		

#### 4. Intention to Expand SWM Activities

The owners of Resiter have economic interests in many other industrial sectors. In front of the unclear situation that surrounds the SWM sector, they prefer to explore expansion in other fields while this sector becomes stable (location of future landfills, transfer stations, new regulations on hazardous and liquid waste, etc.). The company is, however, permanently on the outlook for expansion possibilities. It has recently acquired two medium-size contracts from mining companies.

Resiter is already engaged in street sweeping activities which account for 7% of the company's income. In terms of volume, the waste collected represents a very small portion of the total.

#### 5. Other Comments

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

In the past, Resiter has done some waste separation tests to evaluate reutilization possibilities. The results (60 to 70% organic matter) revealed the market unprofitable. The variability of international prices for raw materials is also a problem. The illegal dumping is carried out by about 50 trucks (tipping lorries) from 30 transporters making 2 trips per day: this means 12,500 ton/month and approximately 40% of the waste collection market. Part of this waste is separated for animal feeding.

**SURVEY TO**  
**SOLID WASTE TRANSPORTATION ENTERPRISES**  
(Survey # 5)

**1. General Data**

1.1	Company Name	RESIDUOS SOLIDOS SANTA FE	
1.2	RUT	50.664.900-5	
1.3	Address	1) Present Camilo Henriquez 3967 (Puente Alto)	2) Future (if applies)
1.4	Share Capital	22 Million\$	
1.5	Year of Establishment	1990	
1.6	Number of Employees	1) Total: 6	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	30 Million \$	

**2. Information on Interviewee**

2.1	Name	Octavio Martinez
2.2	Title or Position	Administrative Manager
2.3	Telephone	287 16 53
2.4	Fax	287 16 53



### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): 3 compacting trucks (8 tones) 2) Vans: 3) Other:	
3.2 Other Main Equipment and Facility	- 10 containers (1.5m <sup>3</sup> ) - workshop -	
3.3 Main Clients	supermarkets, vegetable factories, transportation, university (Total Number: 20)	
3.4 Types of Waste Dealt With	1. MSW ( %)	2. ISW ( 100 %)
3. Medical SW ( %)		
3.5 Average Amount of Waste Collected	60 tones / month (service provided 7 days a week)	
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 100 % 1b) Cerros de Renca: 1c) Lepanto:
	2) Recyclers	
	3) Others	

### 4. Intention to Expand SWM Activities

No real ambition for expansion (4 or 5 trucks at the most). Concentrate on those clients that generate homogeneous waste and try to renew the equipment (trucks). Also, past experience has left the company with little interest for expansion (see item 5).

5. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company).

The owners of Santa Fe tried to start a recycling plant (with some wormculture treatment for organic matter) in 1985. The lot measured 137 hec. and did not really create a problem for the surrounding population. The SESMA, however, did not support the project and it had to be closed down. It is the transporter's view that the government concentrates too much on its monitoring role and too little in supporting and educating the private sector. It should promote recycling as a means to increase the life of landfills.

Illegal dumping is reflection of low educational level. Illegal dumping site:

- Av. Tobalaba in its final stretch (Canal San Carlos from Lo Caña until its beginning).

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 6)**

**1. General Data**

1.1	Company Name	SERVICIO Y TRANSPORTES TRANSBASA S.A.	
1.2	RUT	97.705.090-3	
1.3	Address	1) Present Camino Sta. Margarita parcela 19 ( San Bernardo)	2) Future (if applies)
1.4	Share Capital	70 Million\$	
1.5	Year of Establishment	1994	
1.6	Number of Employees	1) Total: 9	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	60 Million \$ (60% from SWM)	

**2. Information on Interviewee**

2.1	Name	Roberto Bass / Sergio Morales
2.2	Title or Position	Manager / Chief of Operations
2.3	Telephone	559 34 40
2.4	Fax	559 34 40

### 3. Activities

3.1	Number of Vehicles Owned	1) Trucks (type and capacity): 2 hoist truck 2) Vans: 3) Other: 1 truck / 1 van (for transportation of small boats)		
3.2	Other Main Equipment and Facility	- 17 containers (12-14 m <sup>3</sup> ) - small warehouse -		
3.3	Main Clients	The main sector serviced is tanneries.  (Total Number: 15)		
3.4	Types of Waste Dealt With	1. MSW ( %)	2. ISW ( 100 %)	3. Medical SW ( %)
3.5	Average Amount of Waste Collected	178 Tones / month		
3.6	Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 90% 1b) Cerros de Renca: 8 % (aluminum hidroxide waste; enforced by sanitary authorities) 1c) Lepanto: 2%	
		2) Recyclers		
		3) Others		

### 4. Intention to Expand SWM Activities

In the past they have tested waste separation to evaluate recycling possibilities. The conclusions were favorable (40% recyclable) and it is their opinion that recycling could be a profitable alternative. However, the present declaration system hinders that possibility. Maybe recycling should be addressed from a centralized point of view (by means of a tender). The prevailing company would receive and separate all waste from transporters: some would go the recycling and the rest to the landfill.

It is the company's policy to stay small and concentrate on a few clients that meet certain requirements: 1) compatible with the containers' capacity; 2) minimum waste generation of 40m<sup>3</sup>/month.

5. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Disposal fees should be established on the basis of volume because that is what, in the long term, sets the landfill's capacity. Weight is not such a significant variable; it may, furthermore, contribute to compacting the refuse.

Illegal dumping is mainly for construction waste. The solutions for ending such activities are: 1) to strictly control the generators and transporters (Act 5081 was drafted for that purpose but the idea was left unfinished; it is still not legally enforced); 2) provide further resources to the police (many illegal dumping takes place near police stations which at present lack manpower to act).

Two places where illegal dumping takes place:

- The length of Panamericana Sur (also called General Velazquez) up to Los Cerrillos.
- Americo Vesputio at the area of Renca.

The company De Marco used to have (and maybe still has) its own dumping site located at La Reina, in front of the Centro de Energia Nuclear (at the bottom of the hill; end of Bilbao).

Sanitary authorities are ignorant regarding the real hazard of some wastes. For instance, they force Transbasa to dump aluminum hidroxide at Cerros de Renca because of its supposed characteristics of hazard. This translates into additional (maybe unnecessary) costs for them and for the industries.

Consensus for the location of new landfill should be achieved by providing compensations to the inhabitants of the area.

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 7)**

**1. General Data**

1.1	Company Name	DIEGUEZ Y DIEGUEZ LTDA. (DISAL)	
1.2	RUT	79.651.730-1	
1.3	Address	1) Present  Julio Pavez Ortiz 6109 (Penalolen)	2) Future (if applies)
1.4	Share Capital	not provided	Million\$ / Million US\$
1.5	Year of Establishment	1963	
1.6	Number of Employees	1) Total: 35	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	not provided	Million \$ / Million US\$

**2. Information on Interviewee**

2.1	Name	Juan Carlos Fernandez
2.2	Title or Position	Chief of Solid Waste Traffic
2.3	Telephone	238 07 23
2.4	Fax	284 17 93

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): 9 trucks . 4 compacting (12 m <sup>3</sup> ) . 5 hoist truck (9.5 m <sup>3</sup> ) 2) Vans: 3) Other: 1 compacting trailer/container (70 m <sup>3</sup> ) (not yet used)		
3.2 Other Main Equipment and Facility	-	-	-
3.3 Main Clients	El Mercurio, Hoescht (chemical), Constructure Texas, Basf, Telnal (glasses), Indalum, Femosa, supermarkets (Total Number: )		
3.4 Types of Waste Dealt With	1. MSW ( %)	2. ISW ( 80 %)	3. Medical SW ( 20 %)
3.5 Average Amount of Waste Collected	1.750 tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: (% distribution not given) 1b) Cerros de Renca: 1c) Lepanto:	
	2) Recyclers		
	3) Others		

**4. Intention to Expand SWM Activities**

The company expects a sustained annual growth rate of 10%.

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

(no further comments)



**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 8)**

**1. General Data**

1.1	Company Name	DEMARCO S.A.	
1.2	RUT	88.277.600-K	
1.3	Address	1) Present Fleming 9831 (Las Condes)	2) Future (if applies)
1.4	Share Capital	4 Million US\$	
1.5	Year of Establishment	1981	
1.6	Number of Employees	1) Total: 600 in the MR (1,500 in Chile)	Operation: 80 % Administration: 20 % Other: ( %)
1.7	Annual Sales	Not provided	Million \$ / Million US\$

**2. Information on Interviewee**

2.1	Name	Abelardo Troncoso
2.2	Title or Position	Engineer of Studies and Projects
2.3	Telephone	212 36 04
2.4	Fax	212 36 06

### 3. Activities

3.1 Number of Vehicles Owned	<p>1) Trucks (type and capacity): 200 compacting trucks (14, 15 and 19 m<sup>3</sup>), 60 tipper lorries,</p> <p>2) Vans: some 4WD for inspection and supervision</p> <p>3) Other: 6 sweeping vehicles, 4 bulldozers, 1 frontal-load trailer</p>		
3.2 Other Main Equipment and Facility	<p>- repair shop (keeps 93 % of trucks permanently in operation)</p> <p>- warehouse</p> <p>-</p>		
3.3 Main Clients	<p>14 Municipalities / Petrox, Nestle Chile S.A., Peugeot Chile, Supermercados Cosmos, Mc Donald's, Laboratorios Cosméticos Procobel, Clinica Vitacura, Curtiembre Talca, Cemento Melon, Indura, Compañia Nacional del Cuero (Total Number: 133)</p>		
3.4 Types of Waste Dealt With	1. MSW ( 80 %)	2. ISW ( 14 %)	3. Medical SW ( 6 %)
3.5 Average Amount of Waste Collected	31,000 Tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	<p>1a) Lo Errazuriz:</p> <p>1b) Cerros de Renca:</p> <p>1c) Lepanto:</p> <p>All three landfills are used. The disposal site for municipal waste is decided by the municipality.</p>	
	2) Recyclers		
	3) Others		

**4. Intention to Expand SWM Activities**

In July 1993 Demarco becomes a corporation, with the new associate owners being Kenbourne (Kiasa) and Sociedad Chilena Ecologia y Medio Ambiente. Presently, 15% of the country's population is served by Demarco. The company operates its own sanitary landfills outside the MR. The preferred target areas those with high urban and industrial concentration.

The company's philosophy is to persue the development of new and related activities.

Specifically, the mid-term objectives are:

- . evaluate the profitability waste treatment activities
- . increase the market share for ISW
- . ensure customer satisfaction
- . provide more automated services
- . improve equipment and labor productivity

(see attached brochure)

**5. Other Comments**

(The opinions expressed under this item corespond to the interviewee, and do not necessarily coincide with those of the company)

(no further comments)

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 9)**

**1. General Data**

1.1	Company Name	EMPRESA NACIONAL DE SERVICIOS AMBIENTALES (ENASA S.A.)	
1.2	RUT	96.580.270-3	
1.3	Address	1) Present  Yungay 0515 (La Granja)	2) Future (if applies)
1.4	Share Capital	481 Million\$	
1.5	Year of Establishment	1990	
1.6	Number of Employees	1) Total: 500	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	155 Million \$	

**2. Information on Interviewee**

2.1	Name	Eugenio Rivero Gajardo
2.2	Title or Position	Operations Manager
2.3	Telephone	525 34 07 , 525 90 68
2.4	Fax	525 90 68

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): 70 trucks (50% 16ton, 50% 12ton) . 60 compacting trucks . 10 tipper lorries 2) Vans: 3) Other:		
3.2 Other Main Equipment and Facility	- Washing equipment - -		
3.3 Main Clients	5 municipalities (Pedro Aguirre Cerda, Macul, El Bosque, La Granja, La Pintana), David del Curto S.A. (fruit plant) (Total Number: 6 )		
3.4 Types of Waste Dealt With	1. MSW ( %)	2. ISW ( %)	3. Medical SW ( %)
3.5 Average Amount of Waste Collected	18,560 tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz:  1b) Cerros de Renca:  1c) Lepanto:	
	2) Recyclers		
	3) Others		

### 4. Intention to Expand SWM Activities

Any expansion possibilities are of interest to Enasa, specially those involving MSW (the incompatibility of certain types ISW with MSW make it relatively unattractive)

**5. Other Comments**

**(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)**

(no further comments)

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 10)**

**1. General Data**

1.1	Company Name	TRANSPORTES SEGALI-ORTEGA	
1.2	RUT	50.348.450-1	
1.3	Address	1) Present Camino La Vara (parcela #2)	2) Future (if applies)
1.4	Share Capital	20 Million\$	
1.5	Year of Establishment	1975	
1.6	Number of Employees	1) Total: 13	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Sergio Ortega
2.2	Title or Position	Associate
2.3	Telephone	528 35 77
2.4	Fax	521 72 38

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): 10 trucks . 8 container trucks (8.5 tones) transporting to recyling plant . 2 tipper lorries (2 tones) 2) Vans: 3) Other:		
3.2 Other Main Equipment and Facility	- - -		
3.3 Main Clients	Pollo Aristia <div style="text-align: right;">(Total Number: 1)</div>		
3.4 Types of Waste Dealt With	1. MSW (    %)	2. ISW ( 100 %)	3. Medical SW (    %)
3.5 Average Amount of Waste Collected	700 tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz:  1b) Cerros de Renca: 100 %  1c) Lepanto:	
	2) Recyclers	70 % of total amount collected is taken to the recycling plant	
	3) Others		



**4. Intention to Expand SWM Activities**

Segali Ortega manifests no interest to expand.

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

This company works exclusively in the collection of waste generated by Pollos Aristia, a chicken raising and slaughtering company. The waste collected has two possible destinations:

· Cerros de Renca landfill (including mainly paper, cardboard and excrements)

· A recycling plant located in Melipilla (Huenchun area) in which animal guts and feathers are transformed into animal food

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 11 )**

**1. General Data**

1.1	Company Name	FOSA QUICK	
1.2	RUT	3.988.841.-6	
1.3	Address	1) Present General Velasquez 1845 (Estacion Central)	2) Future (if applies)
1.4	Share Capital	60 Million\$	
1.5	Year of Establishment	1993	
1.6	Number of Employees	1) Total: 5	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	26 Million \$	

**2. Information on Interviewee**

2.1	Name	Doris Chamod
2.2	Title or Position	Manager
2.3	Telephone	779 48 23
2.4	Fax	779 48 23

### 3. Activities

3.1	Number of Vehicles Owned	1) Trucks (type and capacity): 2 vacuum truck (5 m <sup>3</sup> ) 2) Vans: 3) Other:		
3.2	Other Main Equipment and Facility	- 1 collecting tank - unclogging unit - vacuum pump	- pH analyzer	
3.3	Main Clients	Sporadic clients who depend on local demand		
3.4	Types of Waste Dealt With	1. MSW ( 50 %)	2. ISW ( 50 %)	3. Medical SW ( %)
3.5	Average Amount of Waste Collected	550 tones/month		
3.6	Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 1b) Cerros de Renca: 50% (ISW) 1c) Lepanto:	
		2) Recyclers		
		3) Others	Collectors specially designed by EMOS at San Joaquin and Quilicura: 50% (MSW)	

### 4. Intention to Expand SWM Activities

The company has no intentions to expand its operations.
---

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Fosa Quick is engaged in the following activities :

- sewage collection from septic tanks for households which do not benefit from the municipal sewage system
- collection of industrial waste in semi-solid or sludge state
- Cleaning of septic tanks and industrial waste pools
- technical consulting regarding these matters

It is the manager's opinion that certain factories generating waste with high pH level (such as pork meat producers) should be subject to continuous inspection.

Since the company started its operations, the sanitary authorities have never requested an official characterization of the waste disposed at Cerros de Renca. This is proof of insufficient control over the industries.

Both truck drivers and landfill guards engage in the forgery of waste disposal documents in order to obtain illegal profits. The receipts are not identified by serial number thus allowing the existence of such fraudulent practice.

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 12)**

**1. General Data**

1.1	Company Name	HIDRAGUAS S.A.	
1.2	RUT	96.511.800-4	
1.3	Address	1) Present J. Alessandri 277 (La Reina)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total: 60	Operation: 62 % Administration: 33 % Other: 5%
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Fernando Valenzuela
2.2	Title or Position	Assistant Manager of Machinery and Transportation
2.3	Telephone	273 49 60
2.4	Fax	273 49 60

### 3. Activities

<p>3.1 Number of Vehicles Owned</p>	<p>1) Trucks (type and capacity): 3 heavy duty trucks (10 tones) 3 small trucks (4 tones)</p> <p>2) Vans: 3 vans</p> <p>3) Other: 1 small excavator, 1 small bulldozer</p>							
<p>3.2 Other Main Equipment and Facility</p>	<p>-</p> <p>-</p> <p>-</p>							
<p>3.3 Main Clients</p>	<p>The company onlt transports its own waste. (Total Number: )</p>							
<p>3.4 Types of Waste Dealt With</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">1. MSW ( %)</td> <td style="width: 33%;">2. ISW ( %)</td> <td style="width: 33%;">3. Medical SW ( %)</td> </tr> <tr> <td colspan="3">4. Construction waste (60 % soil, 40% debris)</td> </tr> </table>		1. MSW ( %)	2. ISW ( %)	3. Medical SW ( %)	4. Construction waste (60 % soil, 40% debris)		
1. MSW ( %)	2. ISW ( %)	3. Medical SW ( %)						
4. Construction waste (60 % soil, 40% debris)								
<p>3.5 Average Amount of Waste Collected</p>	<p>600 tones/month</p>							
<p>3.6 Destination of Waste Collected</p>	<p>1) Landfill (type and %)</p> <p>2) Recyclers</p> <p>3) Others</p>	<p>1a) Lo Errazuriz: All construction waste and 50% of soil (lower grade)</p> <p>1b) Cerros de Renca:</p> <p>1c) Lepanto:</p> <p>Bilbao dumping site: 50% of soil (higher grade) (see Other Comments)</p>						

### 4. Intention to Expand SWM Activities

The company does not intend to expand its operations.

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Hidraguas' main activity is the construction of pools, so that all the waste they transport (soil and debris) is the result of such operation.

The Bilbao dumping site is located on Bilbao with Padre Hurtado. This place is exclusively for construction waste disposal and a fee is collected from all trucks entering the site.

There is an illegal dumping site just behind the company's location, at Valenzuela Llano road.

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 13)**

**1. General Data**

1.1	Company Name	SERLIMPIO LTDA.	
1.2	RUT	78.125.880-6	
1.3	Address	1) Present Angamos, 286 (Santiago)	2) Future (if applies)
1.4	Share Capital	75 Million\$	
1.5	Year of Establishment	1982	
1.6	Number of Employees	1) Total: 32	Operation: 78 % Administration: 22 % Other: ( %)
1.7	Annual Sales	190 Million \$	

**2. Information on Interviewee**

2.1	Name	Flavio Navarrete Mondino
2.2	Title or Position	Manager
2.3	Telephone	222 10 35
2.4	Fax	634 55 31



### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): . 7 compacting trucks (7, 12 and 15 m <sup>3</sup> ) . 2 tipper lorries (10 tones) 2) Vans: 4 vans 3) Other: 1 reservoir truck (5m <sup>3</sup> ), 2 street sweepers	
3.2 Other Main Equipment and Facility	- 150 containers (1.5m <sup>3</sup> ) - -	
3.3 Main Clients	Argos, Atlas Corp., EPSA, Citroen, Cristaleria Chile, FACH, FINCARD, General Motors, Industria Quimica, Cristaleria Lirquen, Loncoleche, Terminal de Buses Santiago (Total Number: )	
3.4 Types of Waste Dealt With	1. MSW ( %)	2. ISW (100 %)
3.5 Average Amount of Waste Collected	5.5 Tones/month	
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 5 % ISW 1b) Cerros de Renca: 95 % ISW 1c) Lepanto:
	2) Recyclers	
	3) Others	

**4. Intention to Expand SWM Activities**

The company plans to expand as long as the demand for its services increases. A higher environmental awareness is a key issue affecting the potential growth of the company.

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Serlímpio Ltda. is devoted exclusively to the transportation of solid waste of industrial origin. The transportation of this types of waste is highly dangerous, so the company must pay extreme attention to the hygiene of both its personnel and vehicles. For this purpose, all the trucks are sprayed with O<sub>3</sub>.

According to the interviewee, the location of the new landfill in Til Til should involve the construction of at least 4 transfer stations. These should be placed on the beltway of Santiago (Americo Vespucio Av.), every 90°.

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 14)**

**1. General Data**

1.1	Company Name	EMPRESA PELANTARO	
1.2	RUT	4.665.642-3	
1.3	Address	1) Present  Pasaje Pelantaro (Estacion Central)	2) Future (if applies)
1.4	Share Capital	40 Million\$	
1.5	Year of Establishment	1977	
1.6	Number of Employees	1) Total: 14	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	15 Million \$	

**2. Information on Interviewee**

2.1	Name	Jose Gregorio Silva Lopez
2.2	Title or Position	owner
2.3	Telephone	779 55 53
2.4	Fax	779 55 53

### 3. Activities

3.1	Number of Vehicles Owned	1) Trucks (type and capacity): 3 vacuum trucks for septic tank cleaning (3m <sup>3</sup> , 4m <sup>3</sup> , 5m <sup>3</sup> ) 2) Vans: 1 van 3) Other:		
3.2	Other Main Equipment and Facility	- sewer cleaning equipment - 1,000 drain pipes - 3 electrical units for drain cleaning		
3.3	Main Clients	Industrial clients: Abastible, Codigas, Bast Chile, Cemento Polpaico, Ceramicas Cordillera. Areas of household septic tank cleaning: Arrayan, Colina, Lo Curro, Los Dominicos, Pirque, San Bernardo.		
3.4	Types of Waste Dealt With	1. MSW (70 %)	2. ISW (30 %)	3. Medical SW ( %)
3.5	Average Amount of Waste Collected	320 tones/month		
3.6	Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz:  1b) Cerros de Renca: 30 % (ISW)  1c) Lepanto:	
		2) Recyclers		
		3) Others	Collectors specially designed by EMOS: 70 % (MSW) (see Other Comments)	

### 4. Intention to Expand SWM Activities

The company aims at a steady growth rather than engaging in large expansions. The interviewee estimated a 10% growth by the end of this year. The current policy is to reinvest 60% of the annual sales into renovation of the equipment.

5. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The main activity of Pelantaro is the cleaning of septi tanks and industrial waste pools.

The interviewee judged the new landfill location in Montenegro to be a favorable outcome for the company. The additional distance to be travelled will mean higher transportation fees and increased profits.

Next are the locations of collectors specially designed by EMOS for the disposal of household waste from septic tanks:

- . Libertad 848 (Melipilla)
- . Las Rosas with Ruta 68 (Curacavi)
- . Road to Maipo, east of the crossing with Rafael Gualda Palma (Buin)
- . Northern network (Santiago):
  - 1) Camara del Nuevo Emisario
    - . Americo Vespucio/San Martin
    - . Avenida Costanera Sur, 20m east of crossing with 5 de Febrero
  - 2) Camara Colector D = 2,000
    - . Panamericana Sur/Lo Espino
  - 3) Camara Colector D= 1,550
    - . South sidewalk of Plaser/Artemio Gutierrez
    - . General Velasquez/Canal A-H
    - . Andres Bello (in front of Club Deportivo U.C.)

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 15)**

**1. General Data**

1.1	Company Name	J.J. BARZELATTO Y CIA. LTDA.	
1.2	RUT	87.711.300-k	
1.3	Address	1) Present Avenida Presidente Eduardo Frei Montalva 3981 (Conchali)	2) Future (if applies)
1.4	Share Capital	not provided	
1.5	Year of Establishment	1950	
1.6	Number of Employees	1) Total: 110	Operation: 88 % Administration: 9 % Other: 3 %
1.7	Annual Sales	not provided	

**2. Information on Interviewee**

2.1	Name	Jorge Barzelatto
2.2	Title or Position	Associate
2.3	Telephone	736 94 99
2.4	Fax	736 88 62

### 3. Activities

3.1	Number of Vehicles Owned	1) Trucks (type and capacity): 4 tipper lorries (10 tones, 3 tones) 2) Vans: 3) Other:		
3.2	Other Main Equipment and Facility	not provided		
3.3	Main Clients	The company only transports its own waste. (Total Number: )		
3.4	Types of Waste Dealt With	1. MSW ( 5 %)	2. ISW ( 95 %)	3. Medical SW ( %)
3.5	Average Amount of Waste Collected	2-3 tones/month		
3.6	Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 1b) Cerros de Renca: 100% 1c) Lepanto:	
		2) Recyclers		
		3) Others		

### 4. Intention to Expand SWM Activities

The company has no intention to expand its operations

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The company manufactures wood and cardboard packaging for different uses. The main sectors serviced are fishery, canned food and furniture manufacturing.

Mr. Barzelatto would not provide further information.



**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 16)**

**1. General Data**

1.1	Company Name	MULTITRANCER	
1.2	RUT	8.692.690-0	
1.3	Address	1) Present  Coyaique 6177 (Estacion Central)	2) Future (if applies)
1.4	Share Capital	10 Million\$	
1.5	Year of Establishment	1992	
1.6	Number of Employees	1) Total: 4	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	3 Million \$	

**2. Information on Interviewee**

2.1	Name	Rosa Escobedo
2.2	Title or Position	owner
2.3	Telephone	778 44 76
2.4	Fax	-----

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): 2 hook lift trucks 2) Vans: 3) Other:		
3.2 Other Main Equipment and Facility	- 4 containers (9m <sup>3</sup> ) - -		
3.3 Main Clients	JK, Cecinas San Pablo <div style="text-align: right;">(Total Number: 2 )</div>		
3.4 Types of Waste Dealt With	1. MSW (    %)	2. ISW ( 100 %)	3. Medical SW (    %)
3.5 Average Amount of Waste Collected	47 Tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 100% (ISW) 1b) Cerros de Renca: 1c) Lepanto:	
		2) Recyclers	
		3) Others	

### 4. Intention to Expand SWM Activities

As long as disposal costs continue to increase, there is an incentive for the waste transporters to find new fields of activity.

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The interviewee thinks there should be more than one final disposal site as means to avoid having a monopoly for such a key facility.

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 17)**

**1. General Data**

1.1	Company Name	ACEROS COX LTDA.	
1.2	RUT	9.467.000-2	
1.3	Address	1) Present Juana Wever 4866 (Estacion Central)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1979	
1.6	Number of Employees	1) Total: 80	Operation: 78 % Administration: 22 % Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Roberto Sanchez
2.2	Title or Position	Mechanical Execution Engineer
2.3	Telephone	779 81 92
2.4	Fax	776 40 88

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): 1 tipper lorry (6m <sup>3</sup> ) 2) Vans: 2 vans 3) Other: 1 tractor	
3.2 Other Main Equipment and Facility	- 2 cranes - -	
3.3 Main Clients	This is an iron plates manufacturer transporting its own waste.	
3.4 Types of Waste Dealt With	1. MSW ( %)	2. ISW ( 100 %)
3.5 Average Amount of Waste Collected	40 Tones/month	
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 100% (ISW) 1b) Cerros de Renca: 1c) Lepanto:
	2) Recyclers	
	3) Others	

**4. Intention to Expand SWM Activities**

In the field of SWM, the company only aims at transporting its own waste.

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

No further comments

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 18)**

**1. General Data**

1.1	Company Name	MAPOLENO S.A. (Manufacture de Polietileno S.A.)	
1.2	RUT	92.615.000-6	
1.3	Address	1) Present  Avenida Einstein 1071 (Recoleta)	2) Future (if applies)
1.4	Share Capital	Not provided	
1.5	Year of Establishment	1960	
1.6	Number of Employees	1) Total: not provided	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Not provided	

**2. Information on Interviewee**

2.1	Name	Felix Segovia
2.2	Title or Position	Manager
2.3	Telephone	621 85 15
2.4	Fax	-----

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): 4 tipper lorries (6 tones) 2) Vans: 3) Other:		
3.2 Other Main Equipment and Facility	- 1 compacting unit - -		
3.3 Main Clients	This is a polyethylene manufacturer that transports its own waste.		
3.4 Types of Waste Dealt With	1. MSW (    %)	2. ISW ( 100 %)	3. Medical SW (    %)
3.5 Average Amount of Waste Collected	not provided		
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz:  1b) Cerros de Renca: 100%  1c) Lepanto:	
	2) Recyclers		
	3) Others		



**4. Intention to Expand SWM Activities**

No further information would be provided

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

No further information would be provided

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 19)**

**1. General Data**

1.1	Company Name	Fernando Solis Garcia	
1.2	RUT	6.582.825-1	
1.3	Address	1) Present  Jose Joaquin Perez 4809 (Quinta Normal)	2) Future (if applies)
1.4	Share Capital	Not provided	
1.5	Year of Establishment	1994	
1.6	Number of Employees	1) Total: 16	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	20.4 Million \$	

**2. Information on Interviewee**

2.1	Name	Fernando Solis Garcia
2.2	Title or Position	owner
2.3	Telephone	773 23 08
2.4	Fax	773 23 08

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): . 1 compacting truck . 1 tipper lorry 2) Vans: 3) Other:	
3.2 Other Main Equipment and Facility	- - -	
3.3 Main Clients	Lever Chile S.A.  (Total Number: 1 )	
3.4 Types of Waste Dealt With	1. MSW (    %)	2. ISW ( 100%)
3. Medical SW (    %)		
3.5 Average Amount of Waste Collected	30 Tones/month	
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz:  1b) Cerros de Renca: 40 %  1c) Lepanto:
	2) Recyclers	60 % (see Other Comments)
	3) Others	

#### 4. Intention to Expand SWM Activities

The company aims at a steady growth; a 20% growth is estimated by the end of the year.

#### 5. Other Comments

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The compacting truck is used for transporting solid waste (mainly of municipal nature) to Cerros de Renca. The remaining waste is the result of a separation procedure to recover recyclable material. It is then transported to the following recyclers by means of the tipper lorry:

- . paper and cardboard: Vera y Giannini, Papelera Puente Alto, Recuperadora Carrascal.
- . metals: foundry
- . plastic: is taken to Vina del Mar and used to produce garbage bags (name of the recycler was not provided)
- . glass: Cristal Toro, Cristalerias Chile
- . wood structures: different places

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 20)**

**1. General Data**

1.1	Company Name	PRODUCTOS ROCHE LTDA.	
1.2	RUT	8.292.999-3	
1.3	Address	1) Present Avenida Quilin 3750 (Macul)	2) Future (if applies)
1.4	Share Capital	Not provided	
1.5	Year of Establishment	1971	
1.6	Number of Employees	1) Total: 120	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Not provided	

**2. Information on Interviewee**

2.1	Name	Alfredo Finch
2.2	Title or Position	Human Resources Manager
2.3	Telephone	221 36 17
2.4	Fax	221 01 48

### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): ----- 2) Vans: ----- 3) Other: -----		
3.2 Other Main Equipment and Facility	-		
3.3 Main Clients	This an animal food manufacturing company. It is registered in PROCEFF's data base as an eterprise that transpors its own waste, but that is no longer true.		
3.4 Types of Waste Dealt With	1. MSW ( %)	2. ISW ( 100 %)	3. Medical SW ( %)
3.5 Average Amount of Waste Collected	1.2 Tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 1b) Cerros de Renca: 42% (CaCO <sub>3</sub> ) 1c) Lepanto:	
	2) Recyclers		
	3) Others	PROPAC (paper and cardboard recycler): 58%	

### 4. Intention to Expand SWM Activities

The company has no intention to engage once more in the trasportation of its own solid waste or to undertake any other SWM activity.

**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

During the manufacturing of animal food, minerals and vitamins are added to the process, such as  $\text{CaCO}_3$ . The residue from this substance is kept in plastic bags and disposed at the landfill.

The other waste generated are paper and cardboard, which are collected free of charge by the company PROPAC.

Just behind the company's location there is an open field that serves as an illegal dumping site.

**SURVEY TO  
SOLID WASTE TRANSPORTATION ENTERPRISES  
(Survey # 21)**

**1. General Data**

1.1	Company Name	COINCA S.A.	
1.2	RUT	87.803.800-2	
1.3	Address	1) Present Fundo La Gloria El Pangal (Limache)	2) Future (if applies)
1.4	Share Capital	560 Million\$	
1.5	Year of Establishment	1980	
1.6	Number of Employees	1) Total: 570	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	2,400 Million \$	

**2. Information on Interviewee**

2.1	Name	Hugo Cruzar
2.2	Title or Position	Control Manager
2.3	Telephone	273 12 93 , 273 92 31
2.4	Fax	273 12 93



### 3. Activities

3.1 Number of Vehicles Owned	1) Trucks (type and capacity): . 70 compacting trucks (12 to 14 m <sup>3</sup> ) . 4 tipper lorries (8 m <sup>3</sup> ) 2) Vans: 3) Other:		
3.2 Other Main Equipment and Facility	- 2 bulldozers - 2 excavators -		
3.3 Main Clients	La Reina, Peñaflores, Melipilla (plus 17 other municipalities outside the Metropolitan Region)  <div style="text-align: right;">(Total Number: 20)</div>		
3.4 Types of Waste Dealt With	1. MSW (100 %)	2. ISW ( %)	3. Medical SW ( %)
3.5 Average Amount of Waste Collected	40,000 Tones/month		
3.6 Destination of Waste Collected	1) Landfill (type and %)	1a) Lo Errazuriz: 9 % 1b) Cerros de Renca: 1c) Lepanto: 1d) Own landfill and other landfills outside the MR: 91 %	
	2) Recyclers		
	3) Others		

### 4. Intention to Expand SWM Activities

Steady growth is the company's short and long term policy.

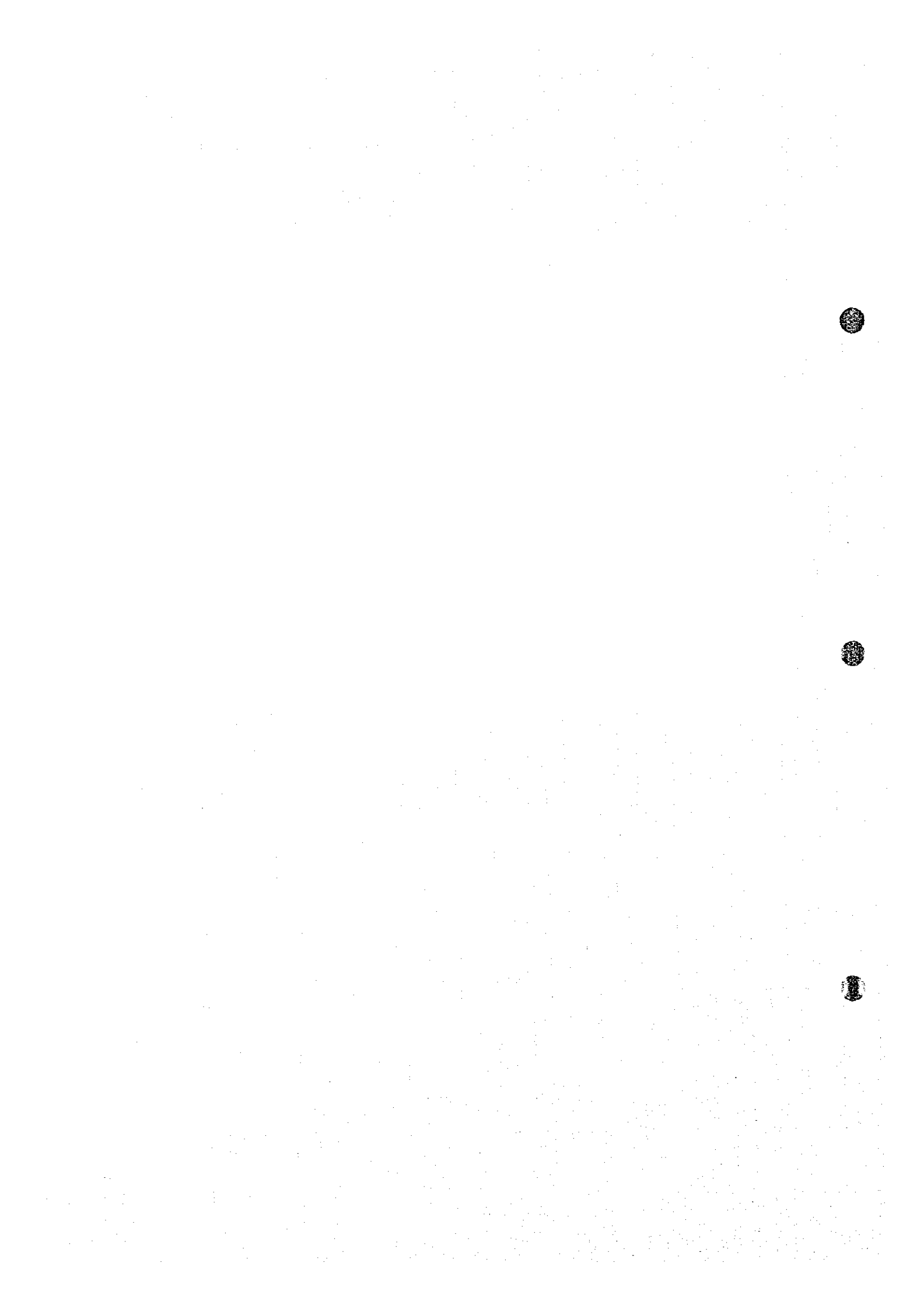
**5. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Coinca S.A. is a very large company whose main operation takes place outside the MR, where it owns 4 landfills (San Antonio, Los Andes, Limache, La Ligua). The data provided in this questionnaire corresponds to the operation of the company in all of Chile. Disaggregated data for the MR could not be obtained.

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*D.2 SURVEY TO SOLID WASTE  
LANDFILLS*



**SURVEY TO  
SOLID WASTE LANDFILL  
(Survey # 1: Authorized Landfill)**

**1. General Data.**

1.1 Company Name	EMERES ( Empresa Metropolitana de Residuos Sólidos )	
1.2 RUT	79.670.770-4	
1.3 Address	1) Present Las Rejas Sur # 1616 (Estación Central)	2) Future (if applies) -----
1.4 Share Capital	53,946,872 \$	
1.5 Year of Establishment	1987	
1.6 Number of Employees	1) Total: 150	Operation: 140 ( 93 %)
		Administration: 10 ( 7 %)
		Other: ---- ( %)
1.7 Annual Sales	1,900 Million \$	

**2. Information on Interviewee.**

2.1 Name	Francisco López
2.2 Title or Position	Administrative and Financial Director
2.3 Telephone	7413956
2.4 Fax	7413956

### 3. Activities

3.1 Area of Landfill	40 Há.
3.2 Years of Operation	8 years
3.3 Type and Number of Equipment Owned	- 6 leachate extraction pumps - electrogen equipment
3.4 Other Main Equipament an Facility	- 2 frontal loading units      - 5 bulldozers - 2 excavators                      - 1 soil flattener - 4 trucks for inside logistics ( 12 m <sup>3</sup> ) - 1 maintenance truck
3.5 Main Clients	21 Municipalities: Providencia, Ñuñoa, LaReina, Est. Central, Pedro Aguirre Cerda, San Joaquín, Macul, Peñalolén, Cerrillos, Maipú, Lo Espejo, San Miguel, La Cisterna, La Granja, La Florida y San Ramón. - GASCO
3.6 Types of Waste Disposed	1. MSW                      2. ISW                      3. Medical SW ( 100 % )                      ( -- % )                      ( -- % )
3.7 Average Amount of Waste Disposed	100 Tones/month
3.8 Tipping Fee	Private: - \$ 15,000/ truck (capacity 3 ton ) - \$ 6,000/ ton  Municipality: - \$ 2,000/ton

#### **4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

. The original operation plan included a useful life until December 1994. Due to the inexistence of an alternative disposal site, Lo Errazuriz will stay operating until December 1995. The amount of waste received will be progressively reduced.

. The biogas generated at the site is extracted and managed by GASCO.

**SURVEY TO  
SOLID WASTE LANDFILL  
(Survey # 2: Authorized Landfill)**

**1. General Data**

1.1 Company Name	Cerro de Renca Mayors Council	
1.2 RUT	69.071.200 - 8	
1.3 Address	1) Present: - Blanco Encalada #1335, Renca (Municipalidad de Renca) - Av. Américo Vespucio #1701, Quilicura (landfill)	2) Future (if applies) -----
1.4 Share Capital	Not provided	
1.5 Year of Establishment	1979	
1.6 Number of Employees	1) Total: 193 (Private Interprise; Constructora Frederiksen)	Operation: 192 (99,5 %)
		Administration: 1 (0,5 %)
		Other: ---- (%)
1.7 Annual Sales	Not provided	

**2. Information on Interviewee**

2.1 Name	Patricio Sánchez Saavedra
2.2 Title or Position	Executive Secretary of the Council
2.3 Telephone	6411788
2.4 Fax	6411882



### 3. Activities

3.1 Area of Landfill	44 Há.
3.2 Years of Operation	9
3.3 Type and Number of Equipment Owned	-----
3.4 Other Main Equipment an Facility	- frontal loader - 3 bulldozer - 1 D - 8
3.5 Main Clients	- 16 Municipalities: Santiago, Recoleta, Independencia, Vitacura, Lo Barnechea, Las Condes, Quinta Normal, Lo Prado, Pudahuel, Cerro Navia, Renca, Huechuraba, Conchalí, Colina, Lampa, Quilicura. - Privates
3.6 Types of Waste Disposed	1. MSW (70 %)      2. ISW (30 %)      3. Medical SW (-- %)
3.7 Average Amount of Waste Disposed	50.000 Tones/month
3.8 Tipping Fee	Private: - \$ 2.200/ton Municipality: - \$ 1.051/ton

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The landfill was constructed and is presently managed by the Cerros de Renca mayors council, which includes 16 municipalities. The mayor of Renca is presently presiding the council.

The latest plan devised by the sanitary authorities includes a closing date for March 1996. The amount of waste received until then will be slowly diminished. The biogas produced is extracted and sold by GASCO.

**SURVEY TO  
SOLID WASTE LANDFILL  
(Survey # 3: Authorized Landfill)**

**1. General Data**

1.1 Company Name	Vertedero Lepanto S.A.	
1.2 RUT	78.248.010 - 3	
1.3 Address	1) Present: Camino Los Morros, Fundo Lepanto, (San Bernardo)	2) Future (if applies) -----
1.4 Share Capital	Not provided	
1.5 Year of Establishment	1978	
1.6 Number of Employees	1) Total: 20	Operation: 4
		Administration: 6
		Other: 10 worker
1.7 Annual Sales	Not provided	

**2. Information on Interviewee**

2.1 Name	Agustín Garcés
2.2 Title or Position	Operational Manager
2.3 Telephone	8571130
2.4 Fax	8571655

### 3. Activities.

3.1 Area of Landfill	- 19 Há (first phase) - 7 Há (second phase)		
3.2 Years of Operation	6 years		
3.3 Type and Number of Equipment Owned	- 1 frontal loader		
3.4 Other Main Equipment an Facility	Private enterprises: - 2 bulldozers - 3 trucks, capacity 3 m <sup>3</sup>		
3.5 Main Clients	- 7 Municipalities: La Pintana, San Bernardo, Puente Alto, Buin, El Bosque, Paine and Pirque. - Privates		
3.6 Types of Waste Disposed	1. MSW (90%)	2. ISW (10%)	3. Medical SW (--%)
3.7 Average Amount of Waste Disposed	18 - 20 Tones/month		
3.8 Tipping Fee	- \$1.400/ton		

### 4. Other Comments

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Lepantos' first operational phase has an area of 19 Há for the disposal of solid waste produced by its clients. Such phase has a useful life of 5 years. However, given that the closing of the other two authorized landfills will increase the solid waste burden of Lepanto, the useful life of this landfill will be reduced in its first phase.

It is planned that the second phase starts with an area of 7 Há which could be modified to 21 Há depending on the needs.

The biogas produced by landfill is extracted and used for its own consumption by Carozzi - Costa enterprise.

**SURVEY TO  
SOLID WASTE LANDFILLS**  
(Survey # 4: Unauthorized pure landfill )

**1. General Data**

1.1	Company Name	EULOGIO GORDO y CIA.	
1.2	RUT		
1.3	Address	1) Present  Palmas Lo Errazuriz (Cerrillos)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	no one was available at the site
2.2	Title or Position	
2.3	Telephone	
2.4	Fax	

**3. Activities**

3.1	Area of Landfill	4 Ha.
3.2	Year of Operation	1980
3.3	Type and Number of Equipment Owned	- - -
3.4	Other Main Equipment and Facility	
3.5	Main Clients	(Total Number: )
3.6	Type of Waste Disposed	1. MSW                      2. ISW                      3. Medical SW
3.7	Average Amount of Waste Disposed	Tones/month
3.8	Tipping Fee	\$/ton

4. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Located just next to the Lo Errazuriz Landfill, there is a large area made up of sand extraction pits and divided into several lots (approximately 40) corresponding to different owners. Two of these lots are registered in the CDSI data base under the names of "Eulogio Gordo y Cia." and "Palmas Lo Errazuriz" as final destination for waste. The vast majority of the area, however, consists of uncontrolled illegal dumping. The origin of such a large illegal dumping site within the urban area must be found in the early 80's, when no consideration was given to environmental impact and it was implicitly accepted that industries would dump their waste in these pits.

At present, numerous families have installed their shacks in the area and they benefit from scavenging activities both at Lo Errazuriz and at the illegal dumping site. Upon consultation with the person in charge of environmental matters at the municipality of Cerrillos, he explained two main reasons that difficult waste dumping prevention at this site:

the proximity to the landfill means that waste collection trucks are a usual sight in the area; many of them make a slight turn and unload waste at this site;

Lack of resources; he works alone, without assistants, and cannot spend the whole day at the site trying to prevent illegal dumping.

All types of waste are found here, including empty drums from industries. It is not considered a safe area, as some times scavengers have reacted violently.

**SURVEY TO  
SOLID WASTE LANDFILLS  
(Survey # 5: Unauthorized Pure Landfill )**

**1. General Data**

1.1	Company Name	MUNICIPALIDAD DE EL MONTE	
1.2	RUT		
1.3	Address	1) Present  Sector La Cantera El Monte	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total: 1	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Juan Vera
2.2	Title or Position	Laborer/Guard
2.3	Telephone	
2.4	Fax	



**3. Activities**

3.1	Area of Landfill	½ hectare
3.2	Year of Operation	1987
3.3	Type and Number of Equipment Owned	- - -
3.4	Other Main Equipment and Facility	
3.5	Main Clients	Exclusively for receiving waste from the municipality.
3.6	Type of Waste Disposed	1. MSW (100%)      2. ISW ( %)      3. Medical SW ( %)
3.7	Average Amount of Waste Disposed	13 Tones/month (three trucks per day)
3.8	Tipping Fee	The municipality owns the landfill.

4. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

(This site is not in manifest system)

The municipality of El Monte, 50 km to the southwest of Santiago, has refused for the last eight years to dispose its municipal waste at the authorized landfills. The reason argued by the mayor is very clear: lack of financial resources to assume the disposal costs. The municipality has therefore created its own dumping site. It is a fenced enclosure ½ hec. in area located on the outskirts of town, next to a hill and near a pig farm. Only one worker is in charge of operating the site and, according to him, specific instructions forbid the disposal of ISW. Some "authorized" scavengers engage in the separation of paper and cardboard. The site receives three truck loads per day and one bulldozer operates every six months. No signs of spontaneous fire are visible and the worker confirmed that no fire has occurred in the last two years. The waste is exposed to an aerobic decomposition process (because of the stony soil), which forecloses the appearance of methane gas and, therefore, hinders the possibility of fire.

**SURVEY TO  
SOLID WASTE LANDFILLS  
(Survey # 6: Unauthorized Pure Landfill )**

**1. General Data**

1.1	Company Name	EMILE STRANDSKY	
1.2	RUT		
1.3	Address	1) Present  Ecuador 1352 (Renca)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Emile Strandsky
2.2	Title or Position	Land Owner
2.3	Telephone	
2.4	Fax	

### 3. Activities

3.1	Area of Landfill	5 hec.		
3.2	Year of Operation	1982		
3.3	Type and Number of Equipment Owned	-		
3.4	Other Main Equipment and Facility			
3.5	Main Clients	Siderurgica Aza is the only client of Mr. Strandsky		
3.6	Type of Waste Disposed	1. MSW ( %)	2. ISW ( 100 %)	3. Medical SW ( %)
3.7	Average Amount of Waste Disposed	waste sheets (Fe <sub>2</sub> O <sub>3</sub> ): 10 tones/day slag: 15-20 tones/day steel dust: 2 tones/day		
3.8	Tipping Fee	waste sheets: US\$3/ton slag: US\$1.5/ton steel dust: US\$25/ton		

### 4. Other Comments

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Siderurgica Aza has contracted the company STIN for the transportation of its waste. Aza is the only client of STIN and the transporter has an agreement with Mr. Strandsky, a brick manufacturer, under which it is allowed to dump the waste in his sand extraction pits. According to Mr. Strandsky no other wastes are dumped in his lot.

This site is registered in the manifest system as "Patio Monterrey-Aza".

**SURVEY TO  
SOLID WASTE LANDFILLS  
(Survey # 7: Unauthorized Pure Landfill )**

**1. General Data**

1.1	Company Name	unidentified	
1.2	RUT		
1.3	Address	1) Present Botadero La Montaña Panamericana Norte km.14 (Quilicura)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	no one was available at the site
2.2	Title or Position	
2.3	Telephone	
2.4	Fax	

**3. Activities**

3.1	Area of Landfill	5 hec.		
3.2	Year of Operation			
3.3	Type and Number of Equipment Owned	-		
3.4	Other Main Equipment and Facility			
3.5	Main Clients	(Total Number: )		
3.6	Type of Waste Disposed	1. MSW ( %)	2. ISW ( %)	3. Medical SW ( %)
3.7	Average Amount of Waste Disposed	Tones/month		
3.8	Tipping Fee	\$/ton		

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

This area is recorded in the CDSI data base as one of the final destinations for waste. It is recorded under both names of "Botadero La Montaña" and "Botadero Panamericana Km14" as there are in fact two lots lying next to each other. The field investigation confirmed that the site has been recovered and no longer serves as place for disposal. Furthermore, there is a plan to turn the area into a location for industrial facilities, after allowing some time for the settling down of the waste dumped in the past.

**SURVEY TO  
SOLID WASTE LANDFILLS**  
(Survey # 8: Unauthorized pure landfill)

**1. General Data**

1.1	Company Name	MINERAL SANTA ADELA	
1.2	RUT	2.214.600-2	
1.3	Address	1) Present Camino Lonquen, parcela 3 (Maipu)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1974	
1.6	Number of Employees	1) Total: 20	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Julio Martinez
2.2	Title or Position	Manager/Owner
2.3	Telephone	539 90 14
2.4	Fax	

### 3. Activities

3.1	Area of Landfill	2 Ha.
3.2	Year of Operation	1974
3.3	Type and Number of Equipment Owned	- usual sand and dirt extraction equipment - -
3.4	Other Main Equipment and Facility	
3.5	Main Clients	Pizarreño and some local construction companies (Total Number: )
3.6	Type of Waste Disposed	1. MSW ( %)      2. ISW ( %) 3. Medical SW ( %) 4. Construction Waste ( 100 %)
3.7	Average Amount of Waste Disposed	1,000 Tones/month
3.8	Tipping Fee	\$M 2.5/year



4. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Mr. Martinez began his sand extraction business 20 years ago. Since 3 years ago he has been receiving waste for disposal at the existing pit. His main client is Pizarreño, a manufacturer of roofing materials including asbestos, but he also receives waste from local construction companies. The newly agreed contract with Pizarreño establishes an annual disposal fee of \$2.5 million per year, where the average daily amount received is 30 tones. Both Mr. Martinez and Pizarreño follow the manifest system. Eventhough the landfill is not authorized, PROCEFF prefers to allow its operation in front of the lack of facilities that could receive hazardous waste such as asbestos.

There are several other sand extraction pits used as disposal sites for construction waste. The municipalities allow these operations as long as the site owners present an adequate site recovery plan. PROCEFF is also displaying some lenience towards such sites because they are well managed and provide an appropriate disposal for construction waste.

This site is registered in the CDSI data base as "Camino Lonquen".

**SURVEY TO  
SOLID WASTE LANDFILLS**  
(Survey # 9: Unauthorized Landfill with Recycling )

**1. General Data**

1.1	Company Name	JOSE DIEGUEZ	
1.2	RUT		
1.3	Address	1) Present  Viña Santa Rosa del Peral Parcela 19 (Puente Alto)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total: unknown	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	(No one was available at the site)
2.2	Title or Position	
2.3	Telephone	
2.4	Fax	

**3. Activities**

3.1	Area of Landfill	12 hec.
3.2	Year of Operation	1990
3.3	Type and Number of Equipment Owned	- - -
3.4	Other Main Equipment and Facility	
3.5	Main Clients	(Total Number: )
3.6	Type of Waste Disposed	1. MSW                      2. ISW                      3. Medical SW (Pruning and street sweeping waste)
3.7	Average Amount of Waste Disposed	undetermined
3.8	Tipping Fee	\$/ton

4. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

(This site is not registered in the CDSI data base)

This lot is identified by the sanitary authorities as an illegal dumping site. The access to the area is through a dirt track and through a fenced (apparently locked) entrance. There were no guards or keepers to prevent us from going in.

The visual inspection conveys the sense of a recycling yard. The different recyclable materials (glass, scrap, tyres, wood structures) are piled together in different areas. Another area stands out as a pile of construction waste.

At the time of the visit, the only other people in the lot consisted of three persons who were unloading a truck containing pruning waste. They assured that their boss had an agreement with the land owner, Mr. Dieguez, to dump the waste there.

**SURVEY TO  
SOLID WASTE LANDFILLS**  
(Survey # 10: Unauthorized Landfill with Recycling )

**1. General Data**

1.1	Company Name	Mario Heresmann	
1.2	RUT		
1.3	Address	1) Present Panamericana Norte km. 17.5 (Quilicura)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	no one was available
2.2	Title or Position	
2.3	Telephone	
2.4	Fax	

**3. Activities**

3.1	Area of Landfill	5 hec.
3.2	Year of Operation	
3.3	Type and Number of Equipment Owned	At the time of the visit, the following vehicles were visible: - 1bulldozer - 1tipper lorry - 1fork lift
3.4	Other Main Equipment and Facility	
3.5	Main Clients	(Total Number: )
3.6	Type of Waste Disposed	1. MSW                      2. ISW                      3. Medical SW 4. Construction waste
3.7	Average Amount of Waste Disposed	Tones/month
3.8	Tipping Fee	\$/ton

**4. Other Comments**

(The opinions expressed under this item corespond to the interviewee, and do not necessarily coincide with those of the company)

(This site is not registered in the CDSI data base)

Mr. Heresmann has requested formal permission to SESMA for starting recycling operations. Presently, it is used as both a landfill for construction waste and a recycling yard for middleman activities (transfer station). The different types of materials are piled up separately. These are: drums, rubber tyres and paper. At the time of the visit, four persons were in charge of making paper bales that seemed ready to be sold and transported.

**SURVEY TO  
SOLID WASTE LANDFILLS  
(Survey # 11: Unauthorized Landfill with Recycling)**

**1. General Data**

1.1	Company Name	DAGOBERTO BAEZA	
1.2	RUT		
1.3	Address	1) Present Av. Brasil 854 (Renca)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	(various workers found at the site)
2.2	Title or Position	
2.3	Telephone	
2.4	Fax	

**3. Activities**

3.1	Area of Landfill	10 hec.		
3.2	Year of Operation	1985		
3.3	Type and Number of Equipment Owned	- - -		
3.4	Other Main Equipment and Facility			
3.5	Main Clients	(Total Number: )		
3.6	Type of Waste Disposed	1. MSW ( %)	2. ISW ( %)	3. Medical SW ( %)
3.7	Average Amount of Waste Disposed	Tones/month		
3.8	Tipping Fee	\$/ton		



4. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Different and independent activities are carried out in this unauthorized disposal/recycling site. The owner, Mr. Baeza (who was not available for an interview), rents the space to different people who carry out independent activities:

Drums recycling: after burning the remaining content (chemicals in many cases), the drums are repaired, repainted and resold. Some of the drums are brought by the industries for this specific purposes, while others are collected by the recyclers themselves.

Scrap collection, separation and reselling (according to one of the recyclers, the going price for scrap is \$2,000/kg, as opposed to \$15,000/kg for the raw material.

Wood collection and storage (this is mainly for personal use as fuel).

There is yet another area allocated for the dumping of slag. One of the former clients for this activity was Siderurgica Aza.

According to one person self identified as a relative of Mr. Baeza, there is plan for discontinuing the present operation and transforming the lot into a parking yard for municipal buses.

**SURVEY TO  
SOLID WASTE LANDFILLS**  
(Survey # 12: Unauthorized landfill with recycling )

**1. General Data**

1.1	Company Name	BAVARIA S.A.	
1.2	RUT		
1.3	Address	1) Present  Fundo San Pedro San Francisco Mostazal (owned by Miguel Cats)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1985	
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Luis Morales
2.2	Title or Position	Farmer and caretaker
2.3	Telephone	
2.4	Fax	

### 3. Activities

3.1	Area of Landfill	600 m <sup>2</sup>		
3.2	Year of Operation	1985		
3.3	Type and Number of Equipment Owned	- farming machinery - -		
3.4	Other Main Equipment and Facility			
3.5	Main Clients	(Total Number: )		
3.6	Type of Waste Disposed	1. MSW ( %)	2. ISW ( %)	3. Medical SW ( %)
3.7	Average Amount of Waste Disposed	Tones/month		
3.8	Tipping Fee	\$/ton		

### 4. Other Comments

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Bavaria S.A. is a food manufacturer (dried meat, smoked beef, etc.) also owning this large piece of farming land in San Francisco Mostazal (several Has.). The food waste is brought to the farm where it is dumped in a small lot without treatment. The waste is left under the action of the environment for one year, at which time it has become an exceptional fertilizer and is then spread over the farming land. Waste generated in the farm as a result of chicken raising also follows the same "recycling" process.

The amount of food waste arriving from the manufacturing plant is the equivalent of 1 truck every other day. Unlike the manufacturing plant where the waste is originated the site is located outside of the MR.