

**ATTACHMENT G.1:
RAW MATERIALS USED ON SITE**

The few raw materials use (to be used) on site are recorded in Table G.1.

Table G.1 Details of Process related Raw Materials, Intermediates, Products, etc., used or generated on the site

Ref. N ^o or Code	Material/ Substance ⁽¹⁾	CAS Number	Danger ⁽²⁾ Category	Amount Stored (tonnes)	Annual Usage (tonnes)	Nature of Use	R ⁽³⁾ - Phrase	S ⁽³⁾ - Phrase
1.	Vermiculite		Non hazardous	1.2	0.5	Inert material for lab smalls	None	None
2.	Oil Dry		Non hazardous	0.25	0.25	Collection of spillages	None	None
3.	Detergent		Non hazardous	0.1	0.1	Tanker washings	None	None
4.	Fire fighting foam		Non-hazardous	2.5	0	Foam production for fire fighting	None	None
5.	Laboratory Chemicals	Various primarily flammable	Hazardous	0.01	0.05	Various chemicals and solvents used in lab analyses	Various	Various
6.	Laboratory Chemicals	Various	Non-hazardous	0.005	0.01	Various chemicals used in lab analyses	None	None
7.	Engine Oil		Non-hazardous	0.05	0.05	Vehicle maintenance	None	None
8.	Hydraulic Oil		Non-hazardous	0.02	0.02	Lubrication of moving parts	None	None
9.	Diesel	68334-30-5	Harmful	5	5	Crane and vehicle movements	None	None
10.	Rodenticide/Bait		Non-hazardous	0	< 0.001	Vermin eradication	None	None

Notes: 1. In cases where a material comprises a number of distinct and available dangerous substances, please give details for each component substance.

2.c.f. Article 2(2) of SI N^o 77/94

3.c.f. Schedules 2 and 3 of SI N^o 77/94

**ATTACHMENT G.2:
ENERGY AND RESOURCE CONSUMPTION**

Table G.2 records the energy and resource consumption by AVR-Safeway Ltd. for the period 2001 – 2004.

TABLE G.2: ENERGY AND RESOURCE USE

		2001	2002	2003	2004	2005 (PROPOSED)
WASTE HANDLED	(tonnes)	1,400	8,700	17,900	23,100	31,000
ABSOLUTE						
WATER	(litres)	540,000	580,000	360,000	400,000	350,000
ELECTRICITY	(units)	2,734	2,350	3,431	3,630	4,300
DIESEL	(litres)	4,500	5,200	4,750	5,010	5,200
RELATIVE (/tonne)						
WATER	(litres)	385.7	66.7	20.1	17.3	11.3
ELECTRICITY	(units)	1.95	0.27	0.19	0.16	0.14
DIESEL	(litres)	3.21	0.60	0.27	0.22	0.17

RESOURCE AND ENERGY MINIMISATION

Historic:

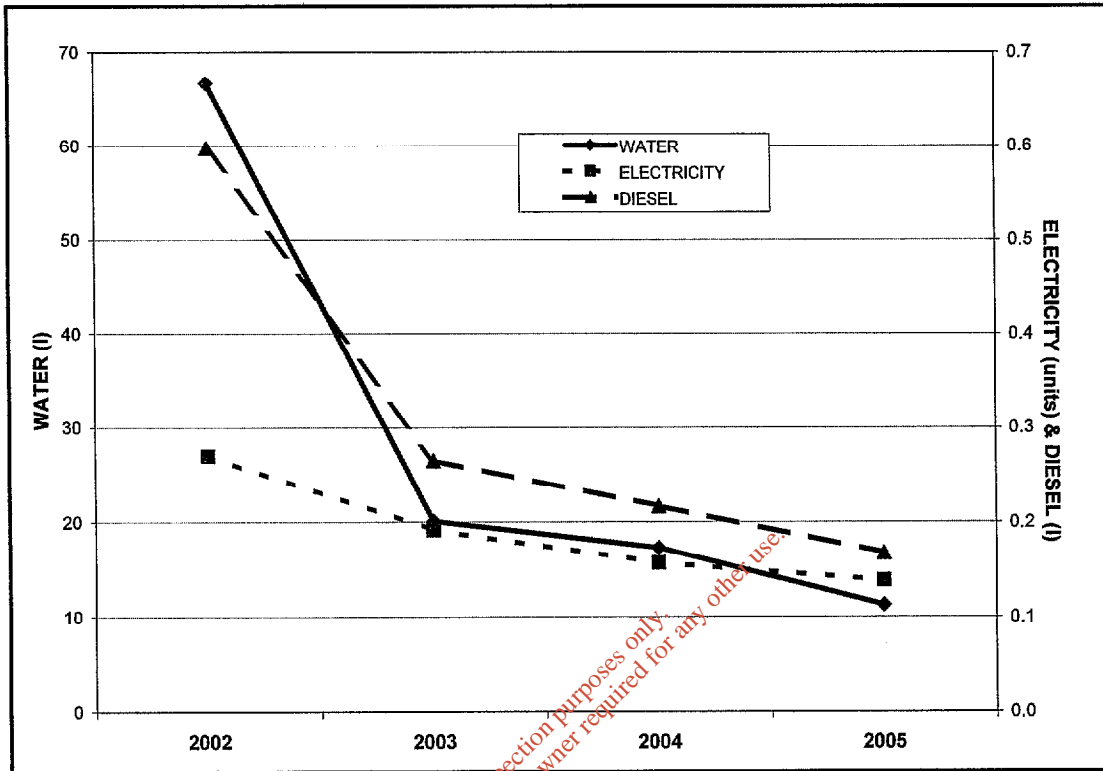
Table G.2 records the resource and energy usages in both absolute and relative (per tonne of waste) terms. The figures for 2001 reflect the start-up of the facility and are excessive. For example a lot of the water consumed was used for testing the bunds etc. Currently the bunds are tested using recycled water. Since 2002 there has been a steady decline in consumption on a per tonne basis as shown in Figure G.2 below. This is principally due to the more efficient use of resources due primarily to the increase in throughput.

Effect Of The Fuel Blending Facility:

Water consumption will not change significantly.

Electricity consumption will increase due to the additional pumps etc. to be installed in the fuel blending facility. Mixing of the tank contents will be achieved by means of circulation through mixing nozzles (inductors). The chosen nozzles will be of the most efficient design and will be mounted at the optimum location.

FIGURE G.2: RESOURCE AND ENERGY CONSUMPTION PER TONNE WASTE



Diesel fuel is used for vehicle movements on site and the crane. It is intended that both will be reduced with the advent of the fuel blending facility because:

- Tanks will not need to be unloaded from their skellys for storage. Thus there will be less use of the crane.

Future Resource and Energy Consumption:

It has been an aim to reuse the rinse water from tank washing for the initial washing. Issues with the removal of grit and other solids have hampered the effort, but solutions are being found.

Energy efficiency is a major consideration in the purchasing and operating policies of AVR-Safeway.