



Meter Recovery Case Study 413

An analysis and report of the disposition of 220,000 retired watt hour meters for a mid-size electric utility.

ScrapSafe

ScrapSafe, Inc.
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Part of the ScrapSafe process is to provide documentation to the utility and its stakeholders of the disposition of material (asset recovery) and the safe disposal of hazardous waste (environmental stewardship). The following tables list the results for one lot of material processed. There were 7,582 meters in this lot.

Certificate of Destruction

Model # analysis

Lot # 122412USA

Itron/Sang/Schlum

Model	Count	Total
C1S	604	
JSS	779	
12 others	<u>625</u>	2008

West/ABB/Elster

Model	Count	Total
D4S	525	
AB1	389	
6 others	<u>284</u>	1198

Landis/Duncan

Model	Count	Total
MSII	1526	
MQ-S	240	
4 others	<u>568</u>	2334

GE

Model	Count	Total
I-70S	739	
IR-70S	440	
16 others	<u>863</u>	2042

Disposal details

Material	Weight #	Units	Recycler
Aluminum	5,571		Berg
Glass	10,970		Glass Mgmt. Inc.
Plastic	3,610		Berg
Magnetics	385		Berg
Steel	28		Berg
Lamination & coils	7,042		Berg
Stainless steel	232		Berg
Copper	1,506		Berg
Brass	36		Berg
Electronics*	261		Berg
Mercury relays*		422	AERC Recycling
Batteries*		459	Battery Solutions
Lead seals*	1.2	185	Berg

*In this lot of 7,582, there were 597 meters with hazardous waste. It is our experience that there is hazardous material in virtually every lot we process.

ScrapSafe provides sufficient detail to satisfy the most stringent requirements of federal state and local regulations. In addition, asset recovery values can be assessed, as can hazardous material disposal.

Summary of hazardous waste disposed of in licensed facilities*

Mercury devices were found in 421 meters:

5	GE VRM-65	(1unit had 2 mercury devices)
1	GE VRM-66	
415	GE IR-70	

Batteries were found in 459 meters:

444	GE IR-70
11	Itron CIS
7	Other models

Lead seals were found in 185 meters:

101	GE I-50-S	13	Sang. J2MS-11
47	GE IR-70-S	14	Other models
10	Duncan MK-S		

A significant part of the ScrapSafe process provides detailed tracking of meters by either or both utility and manufacturer serial numbers. The chart below is a representative sample of this type report.

Serial number analysis (sample)

Utility S/N	Mfgr. S/N	Mfgr.	Model	Notes*
93189	36390752	GE	I-50-S	Lead
67155	26440613	GE	I-50-S	Lead
5249541	4607867	Elster	AIT+	Battery/mercury
92099	7582901	Duncan	MK-S	Lead
N/A	21522941	Sangamo	J2MS-11	Lead
4000133	G089965497	GE	IR-70-S	Lead, mercury

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About ScrapSafe



ScrapSafe, Inc., was founded in 2010 by retired GE Meter Division executives and others, with a unique process to dispose safely and economically of retired electromechanical watt hour meters. With the advent of the Smart Grid and with AMR and AMI integration happening, the need to demonstrate environmental stewardship and effective asset recovery was- and is- acute.

In addition to watt hour meters, ScrapSafe also processes gas and water meters. ScrapSafe collects meters from utility storage sites and can provide warehousing and aging of meters as required.

Case Study 413

This case study details the results of de-manufacturing, recycling, disposition and reclamation of 7,582 retired electromechanical watt hour meters. These are the results of one of several lots processed. ***It should be noted that in every lot of meters processed there was hazardous material present.***



In most cases, the hazardous material consisted of wetted mercury relays/switches, lead seals, lithium batteries and electronic components (printed circuit boards).

MRI[®] The ScrapSafe Meter Recovery index

In the process of de-manufacturing over 1,000,000 pounds of obsolete meters, ScrapSafe has recorded the content, components (including hazardous material) and weight of virtually every model of watt hour meter ever manufactured. Our database- MRI[®]- is extensive. We can accurately forecast and ultimately report the amount of glass, plastic, copper, steel, mercury, lead, PCBs and other content. Then, based on prevailing market conditions, can determine the value of recovered assets.



Smart meters and wise decisions

Whether you are tasked with making decisions to maximize asset recovery, to provide environmental stewardship or to ensure efficient smart meter integration, ScrapSafe has a solution that is economically sound and environmentally responsible.



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