POLLUTION PREVENTION/WASTE MINIMIZATION

EXECUTIVE SUMMARY

TT ELECTRONICS IRC
CORPUS CHRISTI, TEXAS

2005-2009
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INTRODUCTION

The Pollution Prevention/Hazardous Waste Minimization Plan at TT Electronics IRC, was developed to comply with current regulatory requirements, help protect our environment, and reduce costs associated with waste generation disposal. IRC, Corpus Christi, has always been concerned with waste minimization as seen in past efforts. Although the absolute amount of hazardous waste generated is increasing in our plant, we are producing significantly more product with a relatively smaller amount of waste generation.

This plan was prepared to fulfill the requirements of Senate Bill 1099 of the 72nd Texas Legislature, The Solid Waste Disposal Act, and 31 TAC Section 335.471-335.480.

In addition to legislative requirements, reducing hazardous waste generation will not only result in a safer workplace and cleaner environment, but economic benefits will also be realized.
DESCRIPTION OF THE FACILITY

TT Electronics IRC (International Resistive Company)
4222 South Staples Street
Corpus Christi, Texas 78411-2702

EPA ID# TXD089602684
TCEC Registration #34546
TRI #78411NTRNT4222S
Air Permit #29673
SIC CODE #3675

Contact: Janice Johnson, Safety Officer
361-985-3129

TT Electronics IRC is a member of TT Electronics, a multinational company based in the United Kingdom.

The IRC Advanced Film Division, Corpus Christi, manufactures resistive devices utilizing unique proprietary resistor film systems. These resistors take the form of surface mount and through-hole discrete resistors, resistor network products, temperature sensing resistors, and high power substrates.

The products are sold primarily in the automotive, test and process control, instrumentation, military, and computer markets.

IRC occupies a 100,000 square foot plant in Corpus Christi that has been designed to support their special processes. The facility includes both Class 100 and Class 1000 clean rooms; thin film sputtering; thick film print/fire equipment, and plating lines.

The plant presently employs approximately 300 people. The plant continues to grow as a result of new product lines as well as present product line growth objectives.
HAZARDOUS WASTE INFORMATION

<table>
<thead>
<tr>
<th>WASTE STREAM</th>
<th>DESCRIPTION</th>
<th>POINT OF GENERATION</th>
<th>POUNDS 2004 (APPROXIMATE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0005</td>
<td>ETCHING SOLUTION</td>
<td>100 CLEAN ROOM</td>
<td>2400</td>
</tr>
<tr>
<td>0007</td>
<td>SPENT Cu PLATING SOLUTION</td>
<td>PLATING AREAS</td>
<td>5000</td>
</tr>
<tr>
<td>0007</td>
<td>SPENT Ni PLATING SOLUTION</td>
<td>PLATING AREAS</td>
<td>5000</td>
</tr>
<tr>
<td>0008MT</td>
<td>PLAT SOLTN, HEAVY METAL</td>
<td>100 CLEAN ROOM</td>
<td>546</td>
</tr>
<tr>
<td>0009MT</td>
<td>KCN SOLID(PLATING BATH)</td>
<td>100 CLEAN ROOM</td>
<td>159</td>
</tr>
<tr>
<td>0021</td>
<td>WASTE SOLVENT WIPES</td>
<td>PLANT WIDE</td>
<td>4000</td>
</tr>
<tr>
<td>0024</td>
<td>PAINT RELATED WASTE</td>
<td>PLANT WIDE</td>
<td>4000</td>
</tr>
<tr>
<td>0029</td>
<td>Sn/Pb PLATING SOLUTION</td>
<td>PLATING AREAS</td>
<td>12000</td>
</tr>
<tr>
<td>0033MT</td>
<td>SPENT KCN STRIP SOLUTION</td>
<td>100 CLEAN ROOM</td>
<td>382</td>
</tr>
<tr>
<td>0034</td>
<td>FILTERS/WIPES(Cu &amp;Ni)</td>
<td>PLATING AREAS</td>
<td>300</td>
</tr>
<tr>
<td>0037</td>
<td>RAGS/FILT CONTAINING Pb</td>
<td>PLANT WIDE</td>
<td>2000</td>
</tr>
<tr>
<td>0038</td>
<td>LAB PACKS</td>
<td>PLANT WIDE</td>
<td>800</td>
</tr>
<tr>
<td>0043</td>
<td>MICROPURE CDF</td>
<td>THICK FILM GET</td>
<td>400</td>
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<tr>
<td>0050</td>
<td>PHOTORESIST STRIPPER</td>
<td>100 CLEAN ROOM</td>
<td>1600</td>
</tr>
<tr>
<td>0051</td>
<td>FLUORESCENT LIGHT BULBS</td>
<td>PLANT WIDE</td>
<td>1000</td>
</tr>
<tr>
<td>0053</td>
<td>PLATING FILTER BED</td>
<td>THICK FILM GET</td>
<td>6000</td>
</tr>
<tr>
<td>0056</td>
<td>NON-HAZARDOUS LAB PACKS</td>
<td>PLANT WIDE</td>
<td>800</td>
</tr>
</tbody>
</table>

**TRI REPORTING CHEMICALS**

| LEAD | PLANT WIDE |

**PRIORITIES**
Our largest waste stream is our photo resist stripper waste stream. We are replacing this material with NaOH (Sodium Hydroxide), which can be neutralized. This waste stream was initially changed from the flammable acetone to the corrosive stripper. We will now actually be;

1. Causing less hazardous material to enter the plant.
2. Decreasing cost of the material needed.
3. Generating less hazardous waste as sodium hydroxide can be neutralized.

Our other concern is in decreasing the lead content of product in both the Tan Film and Thick Fil areas. The decreasing of lead will:

1. Cause less hazardous materials to enter the plant.
2. Possible cost decrease.

REDUCTION GOALS

Ongoing plant wide:
- Auto Sensors reusing reels.
- Thick Film reusing boxes.
- Plant wide cardboard recycling.
- Continued Facilities energy reduction program.

2005
- Thick Film implement 70% Lead free process for 70% of customers
- Tan Film Reduce NMP usage to about 50% of current levels

2006
- Tan Film implement 5% lead free of all devices built

2007
- Tan Film implement 15% lead free of all devices built
- Additional reduction of NMP of 10%

2008
- Tan Film implement 40% lead free of all devices built

2009
- Tan Film implement 60% lead free of all devices built

2010
- Tan Film implement 80% lead free of all devices built

ENVIRONMENTAL AND HEALTH CONSIDERATIONS

The projects we propose will reduce hazardous waste generation and/or the severity of hazards present at our facility. This results in a decrease of materials entering the atmosphere through normal usage, evaporation, transportation, and disposal of materials. The decrease can only have a positive impact on environmental as well as health issues.

FUTURE REDUCTION GOALS

We will continue to periodically review all of our waste streams for potential reductions. We continue to add new products, and although our absolute amount of hazardous waste is growing,
CERTIFICATE OF COMPLIANCE
CERTIFICATE OF COMPLIANCE

This document certifies that the pollution prevention plan has been completed and meets the specific requirements of Senate Bill 1099 of the 72nd Texas Legislature, the Solid Waste Disposal Act, and 31 TAC 335.471-335.480, and that the information provided herein is true, correct, and complete.

This document also certifies that the person whose signature appears below has the authority to commit the corporate resources necessary to implement this plan.

___________________________________________________________________
John Nelson, Vice-President and General Manager                           Date