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Statement of Work
NEMI RoHS Transition Task Group
Assembly Process Standards

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Purpose:

The purpose of this project will be to develop a document that defines the assembly process, and by doing so, will determine the component specifications that are needed for a lead free soldering to be successfully implemented. In addition to providing the process documents the industry specifications (IPC, Jedec, etc) that require revisions due to lead free soldering will be identified.

Objective:

The intent is to provide the electronics assembly industry with a document that can be used as to define the conditions that will exist when assembling aboard assembly with a lead free soldering process. This document will also serve as the basis for identifying the industry standards that will need to be changed.

Scope of Work:

This project encompasses 2 areas. The first is a process definition document that describes the lead free process. The second is to identify the industry standards that will need to be modified to reflect the lead free process.

1 – Assembly Process Description Document

As part of the ongoing industry efforts towards developing a lead free soldering process there is a need for component standards that accurately reflect the real life conditions that will be encountered during soldering operations. Before these standards can be developed a process must be fully defined that covers all aspects assembly - SMT, Rework, Wave Solder, Manual Rework, etc. This includes the soldering temperatures for all component types covering the solder joint, package materials, and the PCB.

With this in mind the document that will be developed from this work group will be from inputs form the participating members who are currently performing lead free assembly. This will include the full temperature profile used for assembly in the following areas

- SMT Initial Reflow
- SMT Hot Gas Rework
- Wave Solder
- PTH Manual

2 – Industry Standards

There are numerous industry standards that reflect both acceptance criteria and test conditions for the electronics industry. There are several standards but there are 2 main documents that are affected – the IPC 610 workmanship standards and Jedec 020 MSL document. This group will provide inputs to how these document need to be changed to reflect the conditions of lead free assembly.

As a second phase of Industry Standards we will identify the other specifications that will need to be updated to reflect lead free assembly. The IPC spec tree (see appendix A) will be used as the main document identify theses specifications.

Project Outcome:

- Release of White Paper on Lead Free Soldering
- Provide Input to the IPC 610
- Identify Industry Specifications that need Revision due to Lead Free Soldering
- Provide Input on those Standards that are Process Related

Sharing of Information:

It is expected that the results will be shared with all NEMI members and the industry overall.

Schedule/Milestones:

Review IPC 610 and Jedec 020 Specs	Complete
Compile Basic Process Conditions from Participants Input	February 16 th , 2004
Supply Input to IPC 610 Sub-Committee	Preliminary - February 22 nd , 2004 Additional Input - March 22 nd , 2004
Identify Other Industry Specifications that need Revision	March 29 th 2004
Release Formal White Paper on Process	April 26 th , 2004
Provide Input to IPC Specifications related to the Process	TBD

Specification and Standards:

This group will define the lead free process criteria that can be used to modify / develop existing Industry Standards. It is not anticipate that any new standards will be required.

Project Participants:

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Resources Required and Source:

Inputs for all activities will be provided from the participating companies that are outlined under project participants.

This project will not be doing any development activities that will require the purchase of any material.

Appendix A – IPC Spec Tree

