Date: August 29, 2016

- To: Engineering Management (Dr. Fry)
- From: Development Group (Engineer Name 1, Engineer Name 2...)
- Re: Subject Matter

#### Introduction

Here there should be a regurgitation of the problem statement.

# Background

Here there should be a summary of the subject matter theory that will be used to solve the problem. This section should include a brief summary of the governing physics and any equations that will be used along with a description of the variables.

$$y = mx + b$$
 eq. 1

Where:

Y = quantity of interest
m = slope of the linear relationship
x = measured quantity
b = intercept

# **Experimental Design**

#### Apparatus

This section should include a detailed description of the experimental device on which the experiments will be performed. It will also provide information about the hardware and techniques that will be used to perform measurements and collect data. Typically there will be figures. The figures should be referenced in the body of the report with a description of what is contained in the figure. In this section the figure will usually contain a diagram of the apparatus being described, with key components identified.



Figure 1. You should provide enough information in the figure caption that the reader can understand the content without reading in the body of the report

# Method

This section should contain a description of the methodology that you will use to solve the problem. It will usually contain a table with the experimental test plan. That plan will include a column for every I/O point or variable that will be manipulated or measured.

Test Condition	I/O #1 (units)	I/O #2 (units)	I/O #3 (units)
#1			
#2			
#3			

Table 1. Summary of the test plan

# **Expected Results**

Here you should describe what you expect the outcome of the experiment to be. You can also include an appendix with sample calculations if necessary.

# Safety

This section is last, but it is very important. It should contain the following four things:

- 1. A list of all of the potential hazards in the experiment and how you plan to mitigate the risk while performing your work
- 2. A safe startup procedure
- 3. A safe shutdown procedure
- 4. Emergency procedures