LAB REPORT FORMAT

Each written submission for the MTR 241 lab exercises will include two parts: a letter which states the findings of the exercise and a report. The report will consist of two parts: a body and an appendix. The report will present material under five or more headings while the appendix will contain data, calculations and any other related material. The letter will be presented first and the report second. Each group will submit their own letter and report.

Letter Requirements

1. Each letter will be issued by a testing organization that each group will name.
2. The letter for each exercise will be addressed to an individual whose name and address you can make up.
3. Each letter will have a subject line following the salutation.
4. Each letter will state what type of analysis was performed, identify the material or design which was tested, and state the date of the lab analysis.
5. If there is no specification for the exercise, the letter will state or refer to the factual findings of the lab analysis.
6. If the analysis was intended to determine whether the material or design, which was tested met some standard, then the letter will clearly state whether the material or design meets that standard.
7. Each letter will refer to the accompanying report.
8. Each letter will close with the name and signature of the authors of the written submission.

A sample letter is provided at the end of this document.

Report Body Requirements

Use 12 point font, either Times New Roman or Arial, with 1.5 times or double line spacing.

Title This will include the words "Lab Report No." and the report number and be followed on the next line by the name of the particular exercise being reported on. The title will be centred at the top of the first page of the report.

Each report body will include a number of sections. The first five sections listed below will be included in all reports. **The last two sections will be included only if there is a standard against which the result is to be compared.** The format of each section should be the same as is shown here, with the heading given in bold text or underlined (but not both). Note that reports must be written in past tense whenever a reference to work already done is made. In other parts of the reports, e.g. when discussing the results, present tense will be used.

Specification This section will state whether the sample is to be compared against a specification and if so what that specification is. The source of each specification must be noted.

Procedure This section will include a reference to a published procedure. This procedure will usually be found in blackboard under the lab subsection. If the procedure, which was followed in the lab did not exactly follow the published procedure, all departures from the procedure must be described.

Sample Description A brief description of all samples which were analyzed or the materials which were used is required. (Refer to Lab 1)

Data and Calculations One sample of each calculation is included twice, once with symbols and/or words, and once with numbers substituted into the equation. If the calculations take up too much space then this section will consist of simple statements of where the data (data sheet) and the calculations may be found at the rear of the report. **(note that all calculations must be typed and NOT hand-written)**

Results This section will present the product of the calculations and any other findings. Any graphs or tables, which present the results should be included with this section or be presented on a following page. The specific requirements for presentation of these types of information may vary with each lab exercise.

Conclusion If the material is being tested to determine whether it meets some standard, a conclusion will be included in the report. This conclusion will note whether the material meets the standard or not.

Recommendation If the material was tested to determine whether it met some standard, a recommendation will be required. This recommendation will be based on the conclusion provided in the preceding section.

Any values, which are presented separately whether in a table or figure, must be referred to in the text of the relevant section(s). This usually requires that those tables and figures be numbered. Note also that the titles of tables and figures must fairly represent the information contained there. (i.e. Figures and tables must have a caption)

Report Appendix Requirements

An appendix will follow the report body. The following points apply:

1. The appendix must start with a title page which will be on a separate sheet.
2. Each appendix will present the laboratory data first. (i.e. The raw data collected)
3. The next page(s) in the appendix will show the necessary equations followed by the calculations. Identify all of the symbols in the equations. If the calculations consist of one or more unique calculations, then all of those calculations must be shown. If repetitive calculations are to be done, then the equations should be followed by sample calculation(s). Use appropriate headings to identify the parts of the appendix.
4. Specification/standard shown here if it is too large for the "Specification" section.

Data record requirements

Data sheets will be created in the lab by each group. The following expectations apply to the data sheets:

1. Each group will have **one and only one data record per lab session**. There will be no "good" copies made; the data record will be produced and completed in the lab. If a lab exercise extends over two or more weeks, there will be a separate data record for each week. Note that any measurements (which will be of oven-dried masses) that must be taken a day or two after a scheduled lab

session may be recorded on the earlier data sheet as long as the date of these measurements is noted along with the later values.

2. Each data record will be created during the lab session. More than one page may be needed for the data during a lab session. Data sheets must be numbered.
3. Each data sheet will clearly show at the top of the sheet the number and title of the exercise and then immediately below show the title "DATA SHEET".
4. The (first) data sheet for each scheduled lab session must clearly present all relevant identifying information. This will include, but not necessarily be limited to, group members, date and time, sample number and location.
5. The lab data that the data sheet(s) is intended to record will follow the identifying information which is referred to in point 4. Data is expected to be presented in a clear and organized fashion. Titles should be used where appropriate. Whenever appropriate, information should be recorded in tables.
6. When information has recorded in error on a data sheet, the incorrect information should be struck out (~~like this~~). Do not erase or obliterate incorrect information.
7. If calculations are performed during the lab session, these should be clearly recorded and identified on the data sheet.

Data sheets will be collected for signature before groups exit the lab (A3087). When possible, these sheets will be returned immediately; if necessary, the sheets may be returned the following day.

Sample Letter

The sample letter shown on the following page is a guide. The particular details will of course vary with the particular analysis of each lab exercise.

Students are expected to develop their own phrasing for their letters.

Your group can create the client names and addresses, which are to be used for successive lab exercises.

J & M Testing Corporation, Inc.
c/o Seneca College, Newnham Campus
1750 Finch Avenue East
Toronto, Ont. M2J 2X5

January 23, 2015

Mr. Bob Martin, CEET
Northwest Aggregate Supply Ltd.
38760 Fourth Line
Rochester Twsp., Ont.

Dear Mr. Martin,

Petrographic Number Analysis, Sample 2015-A-205

A petrographic number analysis was performed on the sample received from Northwest Aggregate Supply with number 2014 -A-205 on January 20, 2015. The analysis was performed on January 22, 2015.

The petrographic number for this sample was determined to be 247.

Documentation for this determination is appended to this letter.

Yours sincerely,

A. Grad
Laboratory Technician