

Bioremediation of Oil Contaminated Soils in Newfoundland

Susan Brown

9200900

Technology 4000

Bachelor of Technology Program

Note: The report should have a cover which presents the title and author information, and be securely and attractively presented. Copy shops offer a variety of bindings that are professional looking yet inexpensive (Cerlox, spiral, etc.). It is best to avoid plastic covers and covers with windows as they tear easily.

A blank page follows the cover of the report. This blank page adds to the appearance of the report. It also provides space for comments from the project supervisor or other examiners. (If the page is used for comments, it can be removed before the report is placed in the library.)

**Bioremediation of Oil
Contaminated Soils in Newfoundland**

Prepared by
Susan Brown
9200900
Technology 4000
Bachelor of Technology Program
Fisheries and Marine Institute of
Memorial University of Newfoundland
March 15, 2000

Prepared for
Program Committee
Bachelor of Technology Program
Fisheries and Marine Institute of
Memorial University of Newfoundland

Note: This is the cover page and the first official page of the report. It is considered page i of the prefatory parts of the report, but it is not numbered.

11 Black Crescent
St. John's, NF A1C 4M8

March 15, 2000

Program Committee
Bachelor of Technology Program
Fisheries and Marine Institute of
Memorial University of Newfoundland
P. O. Box 4920
St. John's, NF A1C 5R3

Dear Program Committee:

Here is my report, *Bioremediation of Oil Contaminated Soils in Newfoundland*, which you asked for on December 10, 1999.

As the words imply, the letter of transmittal is the letter which transmits the report from one organization to another or from one person to another. It is sometimes paper clipped to the outside of a report. However, it is often bound as part of the report; in this case, it should come immediately after the title page.

What you write in this letter is much like what you would say to the reader if you delivered the report to him/her in person; therefore, you should write this letter in the first person (that is, use the pronouns *I, me, my*, etc.) even if you decide to use the third person in the report itself. Your letter should open with a reference to the original request (see above). The body of the letter can give a brief and personal overview of the project (helpful comments about the report, reference to sections of special interest, expression of appreciation to those who helped with the report, etc.), or it can briefly discuss the purpose and main contents of the report. Don't worry that you may be repeating some of what you say in the Executive Summary or the Introduction. This is perfectly acceptable.

The conclusion should express willingness to answer questions or discuss findings.

Sincerely,

Susan Brown

Susan Brown

Note: This is the second page of the report. It is considered page ii of the prefatory parts of the report, but it is not numbered.

Executive Summary

The Executive Summary (also called Synopsis, Abstract, Epitome, Précis, Digest, or Summary) is a much condensed overview of the entire report. It follows the Letter of Transmittal (when the Letter of Transmittal is bound as part of the report) and comes before the Table of Contents. The Summary is a very important part of the report because it is the first information the reader encounters, and it should encourage him/her to read further. It identifies the purpose of the report, presents the major findings from the body of the report, and briefly states the conclusions *and* recommendations. For those readers who have neither the time nor the inclination to read the entire report, the Summary is *the* most important part of the report. The following are guidelines for writing a Summary:

- The Summary should always be written *after* the report proper, but it should be placed at the front of the report (numbered page iii, iv, etc., of the prefatory parts).
- An acceptable summary of a report can be written by taking each major division of the report and condensing it into one paragraph. For example, a report consisting of an introduction, four sections of discussion (the body), conclusions, and recommendations could be condensed into a six- or seven-paragraph summary.
- The Summary should be succinct (< 1/8 as long as the report), interesting, and *informative* (not simply descriptive). It should include specific conclusions and recommendations.
- The Summary should be written with the audience clearly in mind to ensure they are told what they need to know in language they can understand.

Acknowledgements

This section is optional; however, if a writer wishes to acknowledge the support and/or assistance of individuals, this is one way to do it. Some people choose to acknowledge people in the letter of transmittal, especially if the number of individuals is small.

TABLE OF CONTENTS

Letter of Transmittal.....	ii
Executive Summary	iii
Acknowledgements	iv
List of Illustrations	vi
1.0 Introduction	1
1.1 Purpose	1
1.2 Background	1
1.3 Scope	2
1.4 Methodology	2
2.0 Procedure and Findings.....	3
2.1 Sample Second-level Heading	4
2.2 Another Second-level Heading	4
2.2.1 Sample third-level heading	4
2.2.2 A second third-level heading.....	4
3.0 Conclusions	5
4.0 Recommendations	6
References	7
Appendix A: Photographs of XYZ Analysis.....	8
Appendix B: Raw Data from the XYZ Analysis.....	10

List of Illustrations

Figure 1. Physical Appearance of Soil/Sand Assays	3
Table 1. Observations from XYZ Analysis	4
Table 2. Results from XYZ Analysis of Soil/Sand Assays	4

Note: The figures and tables are not present in this sample report. They are listed here for format purposes.

1.0 Introduction

1.1 Purpose

Called by other names (aim, goal, problem, etc.), this section should precisely state the purpose of the report using the *present* tense. The purpose section of the initial proposal can become the purpose section of the report.

1.2 Background

Both the problem and its context should be explained in this section. The problem must be clearly defined and sufficient background information must be provided to allow the reader to understand the discussion that follows.

Background can include a *brief* theory/literature review (a more detailed review of the literature may be provided in the report body); and/or it may establish the context for the project by describing events leading up to the existing situation, what projects (if any) have been done previously, and why this project or study is necessary. It can also include background information about a particular business or organization which might be associated with the project. This section should provide the reader with whatever knowledge/facts s/he will need in order to read the body of the report intelligently. Research material included in this section must be documented appropriately (APA style). The Background section of the proposal will provide the basis for this section, although it may require some minor changes/enhancement.

1.3 Scope

The scope explains the boundaries of the report; that is, it tells the reader what is (and possibly is not) part of the project. This section reveals/previews the report content by identifying the sections or topics of the report. If there are limiting factors, it identifies those limitations which have been imposed on the project by either the person(s) authorizing it or the person undertaking it (for example, cost, time in which the project is to be completed, depth of the study, etc.). This section can be created by rewriting the Scope section of the initial project proposal in the *present* tense.

1.4 Methodology

This section explains the research methodology; that is, it describes how the information for the report was collected (whether it was through library research, interviewing, experimentation, etc.) and identifies the sources which were consulted. This section should provide the reader(s) with enough information to evaluate the quality of the research conducted. Even in primary research reports that usually require a detailed Procedure section, it is appropriate to include a general Methodology section in the Introduction. This section should be written in the *past* tense.

2.0 Procedure and Findings

This is another example of a first-level heading. It is formatted exactly like the first first-level heading: 1.0 Introduction. (Note: Each new *main* heading begins on a new page.) This sample report illustrates the APA standard format for headings; many formats exist.

This section is the first part of the report body. The body of the report consists of divisions that come after the Introduction and before the Conclusions and Recommendations sections. In primary research projects, which are based on original research, Procedure and Findings may be an appropriate heading; this heading will not, however, be appropriate for all reports. The body should be divided into appropriate major divisions, each of which should be headed by a caption that specifically describes the contents below it.

The report may be written in either the personal style (with *I's*, *we's*, etc.) or the impersonal style (without *I's*, *we's*, etc.). It is a matter of preference and/or company policy. Some prefer use of the first person because this personal style of writing tends to be more direct and concise; others prefer the formality of the third person. The important thing is to be consistent in the use of one style or the other.

As well, the pages of the various parts of the report must be numbered properly. The prefatory pages are numbered with lower-case Roman numerals and the body pages are numbered with Arabic numbers. The page numbers of the report body often appear in the upper right-hand corner; however, writers sometimes create headers or footers that include page numbers. It is important to decide how to paginate and then be consistent in doing so.

2.1 Sample Second-level Heading

This is another example of a second-level heading. It is formatted exactly like the second-level headings in the Introduction section.

2.2 Another Second-level Heading

If a section is subdivided, there must be at least two subsections. (It is not possible to divide something and not produce at least *two* parts.) Some subdivisions are, in turn, further divided. Each of these additional divisions must be specifically described by a third-level heading.

2.2.1 Sample third-level heading. This is an example of a third-level heading. Again, it is important to remember that if a section is subdivided, there must be at least two subsections. If a report requires more than three levels of headings, the *APA Style Manual* should be consulted for direction on how to format the headings.

2.2.2 A second third-level heading. The following are important points about how to format first-, second-, and third-level headings.

- First-level headings: centered (may be larger or bolded), uppercase and lowercase letters, no end punctuation.
- Second-level headings: begin at margin (flush left), underlined, uppercase and lowercase letters, no end punctuation.
- Third-level headings: indented, underlined, uppercase letter for first word only, end with a period, the first sentence of the paragraph begins on same line.

3.0 Conclusions

The conclusion(s) drawn should be based on the findings. There should be no new findings introduced in this part of the report; the writer(s) should simply summarize the information that has already been presented and state the conclusions which logically follow.

If the impersonal writing style is being used in the report, it must be maintained in this section. It is possible to present a summary without using the pronouns *I* or *we*. It is obvious the conclusions are the writer's unless s/he states otherwise.

4.0 Recommendations

Recommendations are suggested actions. They should be drawn directly from the conclusions. If there are several recommendations, they should be listed (bulleted or enumerated) with an appropriate lead-in sentence/clause. The following is an example of such a lead-in written in the impersonal (third person) style: *The results of this study support the following recommendations.*

In some situations, conclusions and recommendations may be combined under one heading; however, in most lengthy reports they are presented separately for clarity. If combined under one heading, the conclusions should be presented first.

References

Note: Only references cited in the report are included in the References list. Entries must be arranged in alphabetical order by the surname of the first author (according to the APA documentation style).

Appendix A: Photographs of XYZ Analysis

Note: Each appendix should have a title page.

Appendix A

(The actual appended material)

Note: Material placed in appendices is generally supplementary material that enhances the report. It is often material which is of interest to the reader but not essential to the reader's understanding of the report. It can, however, be material that needs to be in the report but is too big to fit into the report body.

If a report has only one appendix, it should simply be labelled Appendix. If a report has more than one appendix, however, each one should be labelled with a capital letter in the order in which it is mentioned in the report body.

Sources should be acknowledged and appendices must be referred to in the body of the report. The writer may refer the reader to an appendix in any of the following ways:

- See Appendix A for a ...
- (See Appendix A.)
- Appendix A provides ...

**Appendix B: Raw Data from the
XYZ Analysis**

Appendix B

(The actual appended material.)

Blank Fly Page

Back Cover