**Red River Manufacturing**

**Student Instructions**

Follow these steps in completing the case:

1. Build an Excel workbook containing four separate worksheets: Excavator; Small Boat Motors; Excavator Scenario Analysis; and Small Boat Motors Scenario Analysis. The Excavator-NPV and Small Boat Motors-NPV worksheets should use the NPV Template provided. The Excavator Scenario Analysis and Small Boat Motors Scenario Analysis worksheets should consist of the scenario summary reports produced by Excel’s Scenario Manager.
2. Prepare a 1-page memorandum with exhibits that addresses the questions raised using the Memorandum Template provided. Be sure to consider not only the NPV, IRR, and discounted payback period of each project, but also the riskiness of the projects based on the scenario analysis and other qualitative factors and whether the company can afford one or both of the expansion projects.

**NPV Template**

The NPV analysis should be prepared using the following template for each quarter of each product’s life:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Year 15** | |
|  | **Initial** | **Quarter 3** | **Quarter 4** |
| **Initial Cash Flows** |  |  |  |
| Land | $$$ |  |  |
| Building | $$$ |  |  |
| Equipment | $$$ |  |  |
| Initial change in NWC | $$$ |  |  |
|  |  |  |  |
| **Recurring Cash Flows** |  |  |  |
| Sales |  | $$$ | $$$ |
| Cost of sales |  | $$$ | $$$ |
| Non-traceable factory costs |  | $$$ | $$$ |
| Selling costs |  | $$$ | $$$ |
| Administration costs |  | $$$ | $$$ |
| Research & development |  | $$$ | $$$ |
| Investment tax credit |  | $$$ | $$$ |
| Income tax |  | $$$ | $$$ |
| Net operating cash flows |  | $$$ | $$$ |
| CCA |  | $$$ | $$$ |
| Ongoing change in NWC |  | $$$ |  |
|  |  |  |  |
| **Terminal Cash Flows** |  |  |  |
| Sale of land |  |  | $$$ |
| Capital gains tax |  |  | $$$ |
| Sale of building |  |  | $$$ |
| Recapture/terminal Loss |  |  | $$$ |
| Sale of equipment |  |  | $$$ |
| PV of future CCA deduction |  |  | $$$ |
| Terminal change in NWC |  |  | $$$ |
|  |  |  |  |
| **Net Cash Flow** | $$$ | $$$ | $$$ |
| **Discount Rate** | %%% |  |  |
| **Quarterly NPV** | $$$ | $$$ | $$$ |
| **Total NPV** | $$$ |  |  |
| **Quarterly IRR** | %%% |  |  |
| **Annual IRR** | %%% |  |  |
| **Discounted Payback** | Year, Quarter | $$$ | $$$ |

**Memorandum Template**

The following template should be used to prepare the memorandum:

|  |
| --- |
| **Memorandum**  To:  From: (Student Name)  **Subject:**  Date:    **Excavator Project Analysis**  **Small Boat Motor Project Analysis**  **Recommendations** |

**Grading Rubric**

You will be graded using the following criteria.

**Quality of Spreadsheet: 20%**

|  |  |
| --- | --- |
| Physical Appearance | /5 |
| Input Section | /5 |
| Automation | /10 |

**Thoroughness of Analysis: 60%**

|  |  |
| --- | --- |
| NPV: Excavator | /20 |
| Scenario Manager: Excavators | /5 |
| NPV: Small Boat Motors | /20 |
| Scenario Manager: Small Boat Motors | /5 |
| Project Recommandations | /10 |

**Memo Layout and Writing Quality: 20%**

|  |  |
| --- | --- |
| Layout | /5 |
| Grammatical and Spelling Errors | /5 |
| Writing Style | /10 |