

Green Tech Manufacturing Company: Fraud and the Independent Auditor

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Background

Assume that you are an audit senior for Andrew and Andrew, CPAs, LLP. Your client is Green Tech Manufacturing Company. The client, a privately held company, is involved in the production and sales of solar panels. Its primary customers are builders and home supply stores. You are reviewing the income statement accounts. Your audit staff person, Jessica Kirner, has done some preliminary audit work in this area, as indicated by her comments and tick marks. Jessica has been called to another client, and you are taking over this audit area. You have some work papers relevant for the audit of income statement accounts. These are **W/Ps I-1 through I-4**. *Note:* Identifying information has been altered and removed; any resemblance to actual companies or individuals is coincidental.

Questions

The questions are organized in five parts (**Parts I.–V.**). These are presented next.

Part I: Initial Analysis

Please refer to the Planning Comments and Internal Control Questionnaire (**W/P I-1**) and the Income Statement with Common-Size information (**W/P I-2**) to answer these questions in **Part I**.

Consider the income statement and the related common-size accounts.

- A. What trends and patterns do you see?
- B. What account(s), in particular, should be investigated more? Please be specific, and discuss your concerns.

Part II: Additional Information

Consider your findings in **Part I**.

- A. What additional information would you like to obtain? Where could you get this information?
- B. What are the costs of obtaining this information? What are the benefits of obtaining this information?

Part III: Analysis of Information

You have the Selling, General and Administrative (S, G, and A) Expense Detail (**W/P I-3**) and Sample of Cancelled Checks (**W/P I-4**). Please consider your findings in **Part I** and **Part II**, and also use **W/P I-3** and **W/P I-4** to answer the questions in **Part III**.

- A. The client has a problem. What is the problem?

* The authors are Associate Professors at University of St. Thomas. Solutions may be obtained from authors.

- B. Who could have done this? Why do you think this?
- C. Consider the fraud triangle. Identify and define each part of the fraud triangle. Apply the fraud triangle to this situation. Try to speculate on motive, opportunity, and rationalization.

Part IV: Recommendations

- A. Consider what recommendations you could make to help the client prevent future frauds. Try to think of at least three recommendations.
- B. Discuss how your recommendations would affect the parties involved.

Part V: Select One Recommendation

- A. Assume you have to select one recommendation. What would it be?
- B. Explain the advantages and disadvantages of this recommendation.

Green Tech Manufacturing Company
12/31/2015
Planning Comments

Workpaper I-1
Initials J. A. K.
Date 1-15-16

Memo from Jessica Kirner January 15, 2016

There has not been turnover in the top four client people: Marvin Green, Owner; Jacob Merriweather, treasurer; Maeve Rehnart, accountant; and Lucinda Washburn, factory manager. While talking at various times with these client people, I learned that a small piece of land was purchased from a nearby landowner, and the factory was expanded. In addition, some new equipment was purchased. This expansion is to allow a new product—Solar Panel Plus (Model X-4) to be produced. Builders are requesting this new solar panel as it is easier to install than the other models.

Marvin thinks the new products will be a great seller. Marvin has a new office; he is in the corner office now. Jacob just got back from a three-month paternity leave to take care of his new baby. He was able to work from home, so he said he is just about up-to-date. Maeve is getting a divorce and has missed some work to attend attorney meetings and court dates. Lucinda recently completed the second level factory manager/computer certification, so that she can run the new software related to the expansion.

In addition to reading Jessica’s memo, you can talk briefly with four individuals. Here are a few of their comments.

Comments from primary individuals:

Owner, Marvin Green: I’m not really into all of the accounting, but we seem to have less cash than I would expect. Sales are up, but I’m not sure why we are not generating more cash.

Treasurer, Jacob Merriweather: We took a loan of about \$600,000 from the bank in the beginning of 2015. This notes payable is for the factory expansion.

Accountant, Maeve Rehnart: Where did the cash go? Well, we bought new equipment, added to our factory, and bought some land. These acquisitions reduced our cash. I can show you the contracts for the PPE.

Factory Manager, Lucinda Washburn: We have added to our building and added productive capacity. I can give you a tour and show you the new area and items.

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Green Tech Manufacturing Company
12/31/2015
Internal Control Questionnaire

Workpaper: I-1
Initials: J. A. K.
Date: 1-10-16

Internal Control Activity	Response	Comments
1. Does client have an internal control manual?	Yes.	Manual updated in May 2015.
2. Does client have independent checks on performance?	No.	Because of Jacob Merriweather's paternity leave, as well as the factory addition and the new product line, everyone has been too busy to check the work of others.
3. Does client have adequate documents and records?	Yes.	The accounting system is computerized. All paper and electronic documents are pre-numbered.
4. Does client have physical control over assets and records?	Yes.	File cabinets, storage rooms, and vault are locked. Passwords are required to access all critical computer programs and applications.
5. Does client have proper authorization of transactions and activities?	No.	An individual tends to authorize transactions in his or her area. Lucinda Washburn authorizes all factory activities. Maeve Rehnhart authorizes cash disbursements. Jacob Merriweather authorizes banking relationships and investment strategies.
6. Does client have adequate separation of duties?	No.	Accountant Maeve Rehnhart authorizes cash disbursements and prepares checks. Treasurer Jacob Merriweather handles deposits and authorizes banking activities.

Green Tech Manufacturing Company		Workpaper I-2		
12/31/2015		Initials <u>J. A. K.</u>		
Income Statement with Common-Size Information		Date <u>1-15-16</u>		
Income Statement	For Year Ending	Common-Size	For Year Ending	Common-Size
	12/31/2015	12/31/2015	12/31/2014	12/31/2014
	Unaudited		Audited	
Sales Revenue	\$ 11,000,000	100%	\$ 8,000,000	100%
Cost of Goods Sold Expense	\$ 8,250,000	75%	\$ 5,920,000	74%
Gross Profit	\$ 2,750,000	25%	\$ 2,080,000	26%
S,G and A Expenses	\$ 2,420,000	22%	\$ 1,520,000	19%
Operating Income	\$ 330,000	3%	\$ 560,000	7%
Interest Expense	\$ 121,000	1%	\$ 80,000	1%
Income before Taxes	\$ 209,000	2%	\$ 480,000	6%
Income Tax Expense	\$ 62,700	1%	\$ 144,000	2%
Net Income	\$ 146,300	1%	\$ 336,000	4%

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Green Tech Manufacturing Company		Workpaper I-3	
12/31/2015		Initials <u>I. A. K.</u>	
S G & A Expense Detail		Date <u>1-15-16</u>	
Selling, General and Administrative Detail			
<u>Account Descriptions</u>	<u>Detail Amounts</u>	<u>Subtotal</u>	<u>Subtotal</u>
	<u>12/31/2015</u>	<u>12/31/2015</u>	<u>12/31/2014</u>
<u>Corporate Headquarters</u>	<u>Unaudited</u>	<u>Unaudited</u>	<u>Audited</u>
<u>Depreciation</u>			
Office Building	\$ 100,000.00	\$ 100,000.00	\$ 100,000.00
<u>Utilities</u>			
Heating and Cooling	\$ 121,000.00		
Electricity	\$ 47,000.00		
Water	\$ 15,000.00	\$ 183,000.00	\$ 125,000.00
<u>Repairs and Maintenance</u>			
Ace Supplies	¥ \$ 16,000.00		
XYZ Furnace and Air	\$ 50,000.00		
Fred's Painting	\$ 35,000.00		
Norstein Electrical	\$ 32,000.00	\$ 133,000.00	\$ 45,000.00
<u>Administrative</u>			
<u>Salaries and Benefits</u>			
Executive	\$ 550,000.00		
Managers	\$ 282,000.00		
Customer Reps	\$ 300,000.00		
Support	\$ 90,000.00	\$ 1,222,000.00	\$ 928,000.00
<u>Training</u>			
Enhanced Communications	\$ 40,000.00		
M and R Motivation	¥ \$ 50,000.00		
Computer Strategies	\$ 30,000.00		
Diversity Plus	¥ \$ 18,000.00	\$ 138,000.00	\$ 47,000.00
<u>Travel</u>			
Executive	\$ 60,000.00		
Customer Reps	\$ 75,000.00	\$ 135,000.00	\$ 102,000.00
<u>Entertainment</u>			
Customer Meetings	\$ 37,000.00		
Holiday Party	\$ 9,000.00	\$ 46,000.00	\$ 36,000.00
<u>Professional Services</u>			
<u>Auditing</u>			
Andrews and Andrews	\$ 42,000.00	\$ 42,000.00	\$ 37,000.00
<u>Tax</u>			
Andrews and Andrews	\$ 16,000.00	\$ 16,000.00	\$ 14,000.00
<u>Legal</u>			
Norris and Morris	¥ \$ 33,000.00		
Claremont and Cirrus	\$ 2,000.00	\$ 35,000.00	\$ 17,000.00
<u>Consulting</u>			
Acme Consulting	¥ \$ 38,000.00		
Environo Consultants	\$ 65,000.00		
ProProfits Business Power	\$ 4,000.00		
MAR Software Consulting	¥ \$ 50,000.00	\$ 157,000.00	\$ 37,000.00
<u>Engineering</u>			
Factory Synergy	\$ 68,000.00		
Chemstart Performance	¥ \$ 45,000.00		
High Power Engineering	¥ \$ 47,000.00		
Mechanix Water Tech	\$ 53,000.00	\$ 213,000.00	\$ 32,000.00
Totals		\$ 2,420,000.00	\$ 1,520,000.00
<u>Tickmark Legend</u>			
¥ Selected expenses as <u>sample</u> items to test. Traced vendor name and check amount to scanned copy of check paid by and received from the bank. (See Workpaper series I-4).			

Green Tech Manufacturing Company
Sample of Cancelled Checks
For Year Ending 12/31/2015

Workpaper I-4
Initial J. A. K.
Date 1-15-16

(1) Front and Back of Check #2001

Green Tech Manufacturing Company 1117 Industrial Road Bloomington, MN 55422	2-402/710	#2001
	Date: <u>February 2, 2015</u>	
Payee: <u>ACE Supplies, Inc.</u>	<u>\$ 16,000.00</u>	
<u>Sixteen thousand and no/100s-----</u>	<u>¥</u>	
<u>Water pipe repair</u>	Signed <u>Maeve Rehnhart</u>	
Second state bank 31-0041 1967 5607198002 2001		

Pay to Order of Prime Bank Farmington, MN For Deposit Only #100-376-0871 Ace Supplies, Inc. 2-6-15

(2) Front of Check and Back of Check #2007

Green Tech Manufacturing Company 1117 Industrial Road Bloomington, MN 5422	2-402/710	#2007
	Date: <u>March 19, 2015</u>	
Payee: <u>Acme Consulting</u>	<u>\$ 38,000.00</u>	
<u>Thirty-eight thousand and no/100s-----</u>	<u>¥</u>	
<u>Installation Assistance for New Computers</u>	Signed <u>Maeve Rehnhart</u>	
Second state bank 31-0041 1967 5607198002 2007		

Deposit Only 3/24/15 Capitol View Bank St. Paul, MN #179-675 Acme Consulting

(3) Front and Back of Check #2017

Green Tech Manufacturing Company 1117 Industrial Road Bloomington, MN 55422	2-402/710	#2017
	Date: <u>April 22, 2015</u>	
Payee: <u>Chemstart Performance</u>	<u>\$ 45,000.00</u>	
<u>Forty- five thousand and no/100s-----</u>	<u>¥</u>	
<u>Engineering Support for New Product Line</u>	Signed <u>Maeve Rehnhart</u>	
Second state bank 31-0041 1967 5607198002 2017		

Chemstart Performance Northfield Division #147-0099 Deposit Only 04-25-2015 Farmer's State Bank Northfield, MN

(4) Front and Back of Check #2025

Green Tech Manufacturing Company 1117 Industrial Road Bloomington, MN 55422	2-402/710 #2025
	Date: <u>June 29, 2015</u>
Payee: <u>MAR Software Consulting</u>	<u>\$ 50,000.00</u>
Fifty- thousand and no/100s-----	¥
<u>Consulting for New Factory Design</u>	Signed <u>Maeve Rehnhart</u>
Second state bank 31-0041 1967 5607198002 2025	

MAR Software Consulting Capitol View Bank St. Paul, MN #179-675 July 5, 2015 Deposit Only

(5) Front and Back of Check #2035

Green Tech Manufacturing Company 1117 Industrial Road Bloomington, MN 55422	2-402/710 #2035
	Date: <u>July 30, 2015</u>
Payee: <u>Norris and Morris Law Firm</u>	<u>\$ 33,000.00</u>
Thirty- three thousand and no/100s-----	¥
<u>Tax Advice for Potential Acquisition</u>	Signed <u>Maeve Rehnhart</u>
Second state bank 31-0041 1967 5607198002 2035	

Pay to Order of Big First Bank Minneapolis, MN Norris and Morris Deposit Only #417-22-0954 August 5, 2015

(6) Front and Back of Check #2045

Green Tech Manufacturing Company 1117 Industrial Road Bloomington, MN 55422	2-402/710 #2045
	Date: <u>September 22, 2015</u>
Payee: <u>M and R Motivation</u>	<u>\$ 50,000.00</u>
Fifty- thousand and no/100s-----	¥
<u>Training for Executives</u>	Signed <u>Maeve Rehnhart</u>
Second state bank 31-0041 1967 5607198002 2045	

Capitol View Bank St. Paul, MN #179-675 September 24, 2015 Deposit Only Restricted Endorsement

(7) Front and Back of Check of #2051

Green Tech Manufacturing Company 1117 Industrial Road Bloomington, MN 55422	2-402/710 #2051
	Date: <u>October 15, 2015</u>
Payee: <u>Diversity Plus</u>	<u>\$ 18,000.00</u>
<u>Eighteen thousand and no/100s-----</u>	<u>¥</u>
<u>Training for Managers</u>	Signed <u>Maeve Rehnhart</u>
Second state bank 31-0041 1967 5607198002 2051	

Diversity Plus 10/18/2015 Central City Bank St. Paul, MN ACCT# 88-19071 Deposit Only

(8) Front and Back of Check of #2058

Green Tech Manufacturing Company 1117 Industrial Road Bloomington, MN 55422	2-402/710 #2058
	Date: <u>November 5, 2015</u>
Payee: <u>High Power Engineering</u>	<u>\$ 47,000.00</u>
<u>Forty- seven thousand and no/100s-----</u>	<u>¥</u>
<u>Engineering Outsourcing</u>	Signed <u>Maeve Rehnhart</u>
Second state bank 31-0041 1967 5607198002 2058	

High Power Engineering Deposit Only November 7, 2015 Capital View Bank St. Paul, MN Deposit Only ACCT# 179-675

¥ Traced vendor name and check amount to S G, and A Expense Detail (See W/P I-3).

Teaching Notes

Case Learning Objectives

The primary learning objective of this case is to introduce students to forensic accounting. The specific learning objectives are:

1. To use analytical procedures to identify unusual changes which should be investigated.
2. To consider what information would be useful to investigate the unusual changes, and the costs and benefits of such information.

3. To identify the possible problem.
4. To speculate who could be behind the problem.
5. To apply the fraud triangle in a particular situation.
6. To make recommendations to prevent such a fraud in the future.
7. To comprehend the costs and benefits of such recommendations.

Implementation Guidance

We have used this case as part of the final exam in the undergraduate introductory auditing course. In this application, the students completed the case analysis in class. However, this case also could be assigned for class discussion or as a written take-home project. An instructor would have some flexibility in deciding how to use the case. This case is appropriate for an introductory course in auditing or forensic accounting.

Suggested Solutions

Part I: Initial Analysis

Please refer to the Planning Comments and Internal Control Questionnaire (W/P I-1) and the Income Statement with Common-Size information (W/P I-2) to answer these questions in **Part I**.

Consider the income statement and the related common-size accounts.

- A. What trends and patterns do you see?
 - The sales revenue, cost of goods sold expense, and gross profit have all increased in dollar amounts, but stayed relatively stable as percentages of sales revenue.
 - Selling, general and administrative (S, G, and A) expenses have increased significantly in dollars, \$900,000, and as a percentage of sales revenues, from nineteen percent to twenty-two percent.
 - Interest expense has also increased by \$31,000, perhaps due to the factory addition. The percentage is stable at one percent.
 - The income before taxes has decreased, in amount, \$271,000, and as a percentage of sales revenue, the decrease is four percent.
 - The income tax expense has decreased \$81,300, or one percent of sales revenue.
 - The net income has decreased by \$189,700, or three percent of sales revenue.
- B. What account(s), in particular, should be investigated more? Please be specific, and discuss your concerns.
 - The big increase in S, G, and A expenses should be investigated. This account increased in both amount, which is \$900,000, and in percentage of sales revenue, which is three percent. These changes are disproportional to the other changes on the income statement.
 - The Planning comments adds to the concerns about this large increase in the expense account. Marvin Green, the owner, does not know why the company does not have more cash.
 - The Internal Control Questionnaire indicates three weaknesses in internal control. These are in independent checks on performance, proper authorization of transactions and activities, and adequate separation of duties. The auditor should be alert for problems related to these weaknesses.

Part II: Additional Information

Consider your findings in **Part I**.

- A. What additional information would you like to obtain? Where could you get this information?

- More information about the S, G, and A expenses would be useful. This information could include accounting documents such as the general ledger, journal entries, cash disbursements journal, and S, G, and A detailed schedules.
 - The bank statements showing the checks paid would be useful. Some of the checks paid may relate to S, G, and A expenses.
 - Copies or scans of cancelled checks would be useful, again, because some of the checks may relate to S, G, and A expenses.
 - The four main individuals should be interviewed to determine what is included in S, G, and A expenses, and why the expenses have increased so much.
- B. What are the costs of obtaining this information? What are the benefits of obtaining this information?
- The costs are the auditor time and effort in deciding what information is needed, obtaining it, and analyzing it.
 - The benefits are possibly finding and investigating a problem. A problem could turn out to be a material misstatement in the financial statements. Alternatively, the auditor may be able to rule out a problem and go on to other audit work.

Part III: Analysis of Information

You have the Selling, General and Administrative (S, G, and A) Expense Detail (**W/P I-3**) and Sample of Cancelled Checks (**W/P I-4**). Please consider your findings in **Part I.** and **Part II.**, and also use **W/P I-3** and **W/P I-4** to answer the questions in **Part III.**

- A. The client has a problem. What is the problem?
- The problem is that there are four cancelled checks that were deposited to the same checking account.
 - The auditor would not expect that four different companies, apparently different suppliers or vendors, would be depositing checks into the same checking account.
 - The checking account is #179-675 at Capital View Bank.
 - The checks are: #2007 to Acme Consulting for \$38,000.00; #2025 to MAR Software Consulting for \$50,000.00; #2045 to M and R Motivation for \$50,000.00; and #2058 to High Power Engineering for \$47,000.00.
 - Apparently, these checks are for some sort of consulting or engineering projects. These types of expenses can be abused, because the output of the project may be difficult to value. The output may be an engineering study or a new process. The output is not tangible and the value is difficult to determine. These types of expenses can be used to hide a theft of cash (checks).
- B. Who could have done this? Why do you think this?
- Two people seem likely suspects. First, the accountant, Maeve Rehnhart, should be considered. She is getting a divorce. She may need money. Maeve has signed all the checks, including the four suspicious checks. Two suppliers have names that sound like Maeve Rehnhart. These are MAR Software Consulting and M and R Motivation. In addition, she did not give a straightforward explanation for why the company did not have more cash. She tried to distract the auditor by showing the contracts for the PPE.
 - The treasurer, Jacob Merriweather, should be considered. He has just returned from a three-month paternity leave. A baby is expensive, so Jacob may need more money. As treasurer, Jacob is in charge of cash management, and he has access to the checking account.

- C. Consider the fraud triangle. Identify and define each part of the fraud triangle. Apply the fraud triangle to this situation. Try to speculate on motive, opportunity and rationalization.
- Motivation is the reason a perpetrator begins the fraud. It is a financial pressure. Maeve may have motivation because of her divorce. Jacob may have motivation because of a new baby.
 - Opportunity is the way in which the fraud can continue undetected for a time. Maeve is the accountant, so she does the recordkeeping. She also has custody over cash, in that she signs the checks. This poor separation of duties might allow her to steal. Jacob is the treasurer so he has access to the checking account. He also has authorization, so he might be take advantage of poor separation of duties and write checks to himself.
 - Rationalization is the self-justification a perpetrator explains the fraud to himself/herself (also called reframing). Maeve may feel that she has worked so hard helping the company expand, that she deserves more pay. Or, she may feel that she will pay the money back after she recovers from her divorce. Jacob might feel that because he has a new baby, he needs and deserves more money.

Part IV: Recommendations

- A. Consider what recommendations you could make to help the client prevent future frauds. Try to think of at least three recommendations.
- Implement independent checks on performance.
 - Implement proper authorization of transactions and activities.
 - Implement adequate separation of duties.
- B. Discuss how your recommendations would affect the parties involved.
- The four top people, and maybe other employees, would have to learn how to do additional tasks.
 - They would have to do more work.
 - They would have more formalized roles and responsibilities.

Part V: Select One Recommendation

- A. Assume you have to select one recommendation. What would it be?
- This recommendation will vary among students.
 - A common choice is to implement adequate separation of duties.
- B. Explain the advantages and disadvantages of this recommendation.
- The advantage of adequate separation of duties is a “second set of eyes” on the activities. There would be more checks and balances if the duties were split up.
 - The disadvantage of adequate separation of duties is the cost. The company might have to hire another employee, in order to split up the duties. Paying another employee might be difficult for this small company.

Concluding Comments

This case is a way to introduce students to suspicious activity in an audit area. Students take on the role of an independent auditor (or fraud auditor) of a small company. After they discover unusual fluctuations in some income statement accounts (in particular, in some expense accounts), they consider what additional information would be useful. They identify what the problem is and speculate who could be behind it. They also apply the fraud triangle to the situation and provide recommendations to prevent future frauds in the company.