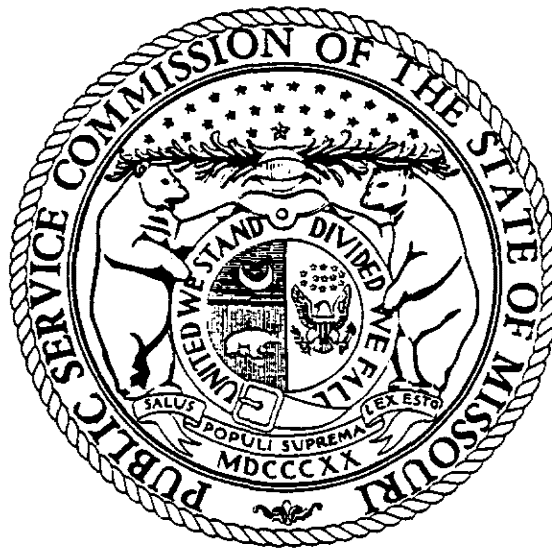


MANAGEMENT AUDIT  
OF  
THE RAYTOWN WATER COMPANY

CASE NO. WO-93-194



PREPARED BY THE  
MISSOURI PUBLIC SERVICE COMMISSION  
MANAGEMENT SERVICES DEPARTMENT

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OCTOBER 1993

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## **CHAPTER I: INTRODUCTION**

### **Authority**

The Missouri Public Service Commission (PSC, Commission) determined that a sufficient number of questions were raised during the proceedings in the last rate case (Case No. WR-92-85) for The Raytown Water Company (Raytown, Company) to justify the staff of the Commission's Management Services Department (MSD staff) to conduct a management audit of the Company.

Representatives from the MSD staff and the Commission staff met with representatives from the Company on December 7, 1992 to discuss the interest of the PSC in performing a management audit of the Company. The performance of a management audit of all utilities that provide regulated service to Missouri utility customers is a Commission policy goal. The Company had not previously been subject to a management audit.

At the December 7, 1992 meeting, the management audit process was explained to the Company and primary contacts for the MSD staff at the Company were identified. In addition, the roles of the Company and MSD staff for the purposes of this audit were identified and procedures for the conduct of the audit were agreed upon by all parties present. Subsequent to this initial meeting, a formal motion was filed on December 16, 1992 with the PSC requesting a Commission order for a focused management audit, to be performed by the MSD staff, of The Raytown Water Company.

On January 6, 1993, the Commission ordered a focused management audit of selected management processes associated with the organization structure, strategic planning processes, and operations and maintenance areas in Case No. WO-93-194.

### **Purpose and Scope**

The purpose of the Management Services Department is to promote and encourage efficient and effective utility management. This purpose contributes to the overall mission of the PSC, which is to ensure that customers receive safe and adequate service at the lowest possible cost while providing utilities with the opportunity to earn a fair return on their investment. The purpose of the management audit is to:

- Provide a source of information to the Commission which describes the operations and management systems of utilities operating within the State of Missouri;
- Provide the Commission, Company, and public with a composite view of the relative strengths and weaknesses of the Company's organization, policies, procedures, and practices;
- Recommend improvements in those operating policies, procedures, and practices where necessary; and
- Follow up on the Company's progress in achieving those improvements.

This management audit report of The Raytown Water Company contains the results of the MSD staff's efforts to accomplish the goals of the Commission order. Specific functional areas which were set forth in the order and reviewed during the audit include the following:

- Organization Structure;
- Strategic Planning Processes; and
- Operations and Maintenance.

These functions are discussed in more detail in the following chapters.

### **Audit Approach**

The MSD staff has conducted this focused management audit of The Raytown Water Company with attention to issues of management economy, efficiency, and concern for operational effectiveness. The management audit process began with a preliminary review of documents filed with the Commission, such as the Company's unaudited financial statements, consumer complaint data, tariffs, and testimony and filings in prior cases to which the Company was a party. The MSD staff also worked in conjunction with other Commission staff personnel, primarily in the water and sewer, consumer services, accounting, and financial analysis departments, to obtain additional input and knowledge about the Company, and to help the MSD staff focus on specific areas of review.

After the preliminary survey work was completed, the MSD staff conducted extensive interviews with all Company employees. Formal information requests were utilized for gathering other pertinent data. Field work began on January 21, 1993 and concluded on June 4, 1993. Upon a thorough analysis of the information, recommendations were formulated and a draft report was circulated internally to the MSD staff, the appropriate Commission technical staff and to the Company

for review and comment. The final report is to be filed with the Company's Implementation Plan, a document which describes how senior management will address the recommendations cited in the report.

### **Criteria of Evaluation**

The criteria that were used to evaluate the Company's management processes and practices are grounded on the basic principles of management relating to the primary functions of management that are used to plan, organize, direct, and control its operations. For management to effectively fulfill its responsibilities, management processes and practices must be designed to require and to effectuate an integrated cycle of management actions that function collectively to provide a sound basis for management's execution of its planning, organizing, directing, and controlling functions to accomplish the planned results of the organization in an efficient and economic manner. Efficient performance results in an ability to accomplish objectives and measurable goals in a reliable and timely fashion with minimal use of resources. Economical performance accomplishes these objectives and measurable goals at a cost commensurate with the relative benefits and risks.

The following criteria were used to evaluate the effectiveness of the Company's management processes and practices:

- Have objectives and goals been clearly defined with proven relevance to efficient and economic performance?
- Are goals measurable, reasonably attainable and consistent with established broader objectives, and do they recognize the risks associated with not achieving those objectives?
- Are adequate controls implemented to provide reasonable assurance that the Company's objectives and goals will be achieved efficiently and economically?
  - Is the system properly designed, such that planned activities can be executed as designed and objectives and goals can be attained?
- Have controls been implemented which ensure that cost-effective action is taken to minimize deviations from anticipated results?
  - Is the cost-benefit relationship considered by management during the design process?
  - Is the potential loss associated with any risk weighed against the cost to control it?
- Have controls been implemented which require adequate levels of authorization and approval of activities and transactions?

- Have controls been implemented to require timely monitoring which encompasses supervision, observation and testing activities, and appropriate reporting to responsible individuals on progress toward planned goals?
- Does adequate documentation exist to show the exercise of authority and responsibility; compliance with policies, procedures, and standards of performance; supervision, observation and testing activities; and verification of planned performance?
  - Does the Company define the basis for approval and authorization of programs, procedures, and operations?
  - Does the Company define the objective(s) for each program, intermediate goals and performance standards, levels of responsibility, and appropriate operational procedures?
  - Does the Company's management information system design result in the provision of timely operational performance data, in an appropriate format with the necessary level of detail for management to take timely corrective action to evaluate and improve scheduling, productivity, and cost progress?
- Have the Company's established objectives and goals been achieved?

Senior management's control of its operations and expenses are dependent upon the effective execution of the management cycle. Failure to successfully execute each step in the management cycle reduces the operating performance of the organization, and increases operating costs.

### Company Overview

The Raytown Water Company is a public utility corporation which provides water service, subject to Commission jurisdiction, in a service area mostly in the City of Raytown, Missouri. The Company's 20 square-mile service territory in Raytown is generally bounded by 50th Street to the north, Woodson Road to the east, Missouri 350 Highway to the south, and Blue Ridge Cutoff to the west. Approximately 800 of the Company's 6,700 customers live in a two square-mile area northeast of Raytown, within the city limits of Independence, Missouri.

According to senior management, the potential for growth in Raytown is limited because a large percentage of the land in the Company's service territory has already been developed. In addition, the Company's service territory is bounded on all sides by a municipal water system or a public water district. There has been a 2.1% increase in commercial growth since 1987, and only a



1.6% total increase in residential customer growth since 1987. The numbers of total customers by year and by classification for 1987 through 1992 are listed in the table below.

The Raytown Water Company  
Total Customers By Year and Classification (1987 - 1992)

|                                            | <u>1987</u>  | <u>1988</u>  | <u>1989</u>  | <u>1990</u>  | <u>1991</u>  | <u>1992</u>    |
|--------------------------------------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Residential                                | 6,135        | 6,173        | 6,209        | 6,222        | 6,242        | 6,233          |
| Commercial                                 | 380          | 380          | 382          | 384          | 385          | 388            |
| Industrial                                 | 19           | 19           | 19           | 19           | 19           | 19             |
| Non-Profit                                 | 46           | 58           | 59           | 59           | 59           | 61             |
| Total                                      | <u>6,580</u> | <u>6,630</u> | <u>6,669</u> | <u>6,684</u> | <u>6,705</u> | <u>6,701</u>   |
| Percentage of growth<br>over previous year |              | <u>0.76%</u> | <u>0.59%</u> | <u>0.22%</u> | <u>0.31%</u> | <u>(0.06%)</u> |

Source: Data Request 6 of Rate Case No. WR-92-85, unaudited annual reports to the PSC (1987-1992).

The Company currently buys the water it provides to its customers from the City of Kansas City, Missouri (Kansas City), as the Company is not actively involved in the production or treatment of water. The Company entered into a 20-year contract with Kansas City in 1991. The contract allows Kansas City to curtail the supply of water to the Company between 5:00 p.m. and 11:00 p.m., during Kansas City's peak periods. This curtailment clause required the Company to build water storage of at least one million gallons by 1996.

The amount of water billed and purchased from Kansas City since 1987 is presented in the table below.

The Raytown Water Company  
Gallons of Water Billed and Purchased (1987-1992)

| <u>Year</u> | <u>Billed</u> | <u>Purchased</u> | <u>% Lost &amp;<br/>Unaccounted For</u> |
|-------------|---------------|------------------|-----------------------------------------|
| 1987        | 517,465,700   | 597,546,200      | 13.40                                   |
| 1988        | 583,503,200   | 665,111,500      | 12.27                                   |
| 1989        | 513,189,800   | 585,183,500      | 12.30                                   |
| 1990        | 491,622,900   | 547,067,000      | 10.13                                   |
| 1991        | 510,253,400   | 554,147,500      | 7.92                                    |
| 1992        | 483,295,300   | 518,535,200      | 6.80                                    |

Source: Data Requests 7 and 8 of Case No. WR-92-88,  
information submitted by senior management June 18, 1993.

The Company has been able to steadily reduce the percentage of water deemed lost and unaccounted for since 1989. Senior management attributes this primarily to more timely and concerted efforts towards fixing breaks in the system.

The Company business office has been in the same building on 63d Street since the 1930s. It is the opinion of the MSD staff that the overall condition of the building appears to be deteriorating and that the building's age, condition, and small size render it impractical for senior management to perform satisfactory renovations. Further, MSD staff is aware that the Company's current financial position prohibits renovation activity or the building of a new business office.

The Company constructed an office (in the northeast quarter of the break room) for the president and general manager in the spring of 1993. This project cost approximately \$1,500 for materials and office furniture, and was completed primarily with internal resources. The posting function is also performed in this office.

The office has a window and an open door, which facilitates communication with field personnel. The working foreman's desk has also been relocated from the meter shop to the break room, and is located next to the PC which is used for data entry on field-related activities.

Senior management expressed a persistent and ongoing need for a new business office throughout the management audit. The MSD staff believes that a new office building should be considered in future strategic planning, based upon the Company's ability to generate adequate funding without further increases in water rates. The MSD staff acknowledges that it may be several years before a new office building will be constructed. The cost of a new building is unknown, and would require a documented analysis regarding location and needs of the building.

A majority of the Company's common stock has been owned by the same family since its incorporation in 1925. The Company's founder was the father of the current Chairman of the Board of Directors. The Company is currently managed by the Chairman of the Board and two of her five sons, (the president and general manager, and the assistant manager). The president and general manager will assume majority ownership of the Company's common stock from the Chairman of the Board in 1994.

Two other sons of the Chairman of the Board also currently serve as outside members of the Board of Directors. There are also two other outside Board members who are not family members, but both have considerable utility experience. There is currently one vacancy on the Board, after a long-time member retired from the Board in April 1993.

The current Chairman of the Board was elected to that position by the Board in April 1993, and had been previously serving as president since 1969. The president and general manager was elected to that position by the Board in 1993, and had been previously serving as general manager since 1981. In 1993, the position now called the assistant manager position was created, replacing the plant superintendent position that was created in 1949. According to senior management, the Company filled the plant superintendent position from 1949 through the 1970s. The position was not filled from the 1970s to 1990.

The Company currently has nine other full-time employees. These include five field personnel (working foreman, three field workers, and a meter reader) and four business office personnel (accounting supervisor, billing clerk, final billing clerk, and a posting clerk). The listing of employees by position for the years 1988 through 1992 is shown in the following table:

**The Raytown Water Company**  
**Full-Time Staffing Levels (1988-1992)**

|                           | <u>1988</u> | <u>1989</u> | <u>1990</u> | <u>1991</u> | <u>1992</u> |
|---------------------------|-------------|-------------|-------------|-------------|-------------|
| President                 | 1           | 1           | 1           | 1           | 1           |
| General Manager           | 1           | 1           | 1           | 1           | 1           |
| Assistant Manager         |             |             | 1           | 1           | 1           |
| Working Foreman           | 1           | 1           | 1           | 1           | 1           |
| Field Personnel           | 3           | 3           | 3           | 3           | 4           |
| Accounting Supervisor     |             |             |             | 1           | 1           |
| Business Office Personnel | <u>3</u>    | <u>3</u>    | <u>3</u>    | <u>3</u>    | <u>3</u>    |
| Total                     | <u>9</u>    | <u>9</u>    | <u>10</u>   | <u>11</u>   | <u>12</u>   |

Source: Information Request RW-28

Most employees have been with the Company for many years, but three positions have been added since 1990. Part-time employees were used considerably in the 1980s, but their use has curtailed in the 1990s. The plant superintendent position was created in 1990, and renamed as the assistant manager in 1993. The accounting supervisor, a newly-created position, was filled in 1991. The Company's fourth field worker began work in 1992, as directed by the Commission's report and order in the Company's last rate case.

The Chairman of the Board is responsible for working with the Board to review Company activities and establish Company direction. The Chairman of the Board also serves in an advisory role, as well as being consulted on major regulatory changes.

The president and general manager is responsible for determining project priorities and overall Company direction. This position is also responsible for supervising all field and business office activities, and is the primary contact for regulators and the media. The president and general manager represents the Company at meetings with a myriad of civic and governmental organization, both during the day and after hours. This position also handles all after-hours calls.

The assistant manager is responsible for identifying and implementing projects associated with environmental issues and data processing. The assistant manager is also responsible for special projects and overall supervision of the business office.

The working foreman is responsible for overseeing the daily field activities. This includes supervision of three field workers and a meter reader, and involves plant construction and maintenance, the repair shop, and meter reading functions.

The accounting supervisor is involved in the daily activities of the business office, including clerical as well as all accounting-related functions. The accounting supervisor handles accounts payable, accounts receivable, bank reconciliations, and all external reports and outside correspondence. The position also handles payroll in the absence of the assistant manager.

The Company's annual revenues and expenses for 1990 through 1992 are presented below, and were obtained from the Company's annual unaudited financial statements filed with the PSC.

The Raytown Water Company  
1990-1992 Selected Income Statement Data (000s)

|                                      | <u>1990</u>  | <u>1991</u>  | <u>1992</u>  |
|--------------------------------------|--------------|--------------|--------------|
| Operating Revenues                   | <u>1,218</u> | <u>1,321</u> | <u>1,554</u> |
| Operating Expense                    | 951          | 1,072        | 1,076        |
| Maintenance Expense                  | 70           | 94           | 129          |
| Depreciation Expense                 | 54           | 59           | 53           |
| Other Expense                        | <u>55</u>    | <u>52</u>    | <u>64</u>    |
| Total Utility Op. Exp.               | <u>1,130</u> | <u>1,277</u> | <u>1,322</u> |
| Net Utility Op. Income               | 88           | 44           | 232          |
| Net Other Income & Ded.              | (4)          | 3            | 3            |
| Interest Expense                     | <u>32</u>    | <u>32</u>    | <u>186</u>   |
| Income Before<br>Extraordinary Items | <u>52</u>    | <u>15</u>    | <u>49</u>    |

Source: Unaudited annual reports to the PSC (1990-1992).

The Company experienced an 8% increase in revenues between 1990 and 1991 that was primarily attributable to an 18.6 million gallon increase in the amount of water sold. Revenue growth from 1991 to 1992 was solely attributable to the surcharge collected for carrying costs related to the new water tower. The Company actually sold about 5% less water in 1992 than in 1991. Senior management stated that unusually wet weather, especially during the spring, was the primary cause for reduced sales volume in 1992.

There was a negligible increase in the Company's total operating expenses in 1992 over 1991. The Company's largest annual operating expense is for the purchase of water from Kansas City. This amounted to \$617,528; \$676,096, and \$654,832 for 1990, 1991, and 1992, respectively. These expenses are expected to increase to approximately \$750,000 in 1993, due to Kansas City's recent 17-18% increase in wholesale water rates to the Company. According to senior management, the Company typically experienced annual increases from Kansas City of 3-5% prior to 1993.

Maintenance expense increased in 1992 with the addition of several field programs resulting from the Company's most recent rate case, as well as increased construction activity. Interest expense has risen considerably because of the \$3 million bond that was issued in 1992.

The Company's annual assets and liabilities for 1990 through 1992 are presented below, and were obtained from the Company's annual unaudited financial statements filed with the PSC.

**The Raytown Water Company**  
1990-1992 Selected Balance Sheet Data (000s)

|                                      | <u>1990</u>    | <u>1991</u>    | <u>1992</u>    |
|--------------------------------------|----------------|----------------|----------------|
| Net Plant                            | \$2,354        | \$2,369        | \$3,540        |
| Current Assets                       | 186            | 188            | 2,931          |
| Deferred Debits                      | <u>43</u>      | <u>164</u>     | <u>375</u>     |
| Total Assets                         | <u>\$2,583</u> | <u>\$2,722</u> | <u>\$6,846</u> |
| Equity Capital                       | \$1,549        | \$1,547        | \$1,797        |
| Long-term Debt                       | 113            | 97             | 3,240          |
| Current Liabilities                  | 326            | 450            | 1,113          |
| Deferred Credits                     | 389            | 423            | 491            |
| Contributions in Aid of Construction | <u>205</u>     | <u>205</u>     | <u>205</u>     |
| Total Liabilities & Other Credits    | <u>\$2,582</u> | <u>\$2,722</u> | <u>\$6,846</u> |

Source: Unaudited annual reports to the PSC (1990-1992).

Most of the differences in assets, liabilities and other credits between 1991 and 1992 correspond to the activity associated with new tower construction. The increase in net plant for 1992

is primarily attributable to the new tower construction, as are the ending current asset and current liability balances. The Company's increase in equity capital represents the 1992 issuance of preferred stock in conjunction with the tower construction (\$230,700 @ 10% dividends). The increase in long-term debt also represents the above-mentioned bond proceeds.

The current construction program will increase rate base by more than 150%. The Company has not been able to recover its authorized rate of return in recent years and virtually had no source of funding to finance the new tower construction. With these financial constraints, a surcharge tariff allowed the Company to collect a preset level of funds to meet the financial requirements for new tower construction.

In Case No. WR-92-85, the Commission approved an annual revenue increase of almost \$390,000. This amount included an annual surcharge of \$114,000 to pay for the carrying costs of funds borrowed to construct required storage facilities. The bill for an average residential customer using 6,000 gallons monthly rose approximately 30% after the last rate case.

A customer's bill is based upon three factors: service charge, usage charge and a tower surcharge. The current bi-monthly service charge is \$9.33 for a  $\frac{5}{8}$ -inch meter. Most residential customers are served by a  $\frac{3}{4}$  inch meter. A water usage charge of \$2.39 per 1,000 gallons is assessed for both residential and business customers. The current tower surcharge assessed to each residential customer is \$2.58.

### **Recommendations**

There are 48 recommendations for improvement which are described in subsequent chapters of the management audit report. They are listed numerically within the context of the reports major chapters: Strategic Planning, Financial Management, and Operations and Maintenance.

The MSD staff acknowledges that most of the recommendations have benefits that are primarily qualitative in nature. Attempts to quantify potential savings have been performed on several recommendations, and are described in the following table.

Most recommendations can be implemented at costs of under \$1,000. Attempts to quantify estimated out-of-pocket costs of implementation have been performed on several recommendations, and are also described in the following table.

Most recommendations have a priority listed as "high". The MSD staff believes that senior management should implement nearly all of these recommendations in 1993 or the first six months

of 1994. These recommendations usually can be addressed at minimal cost, or have such an impact that their implementation is critical to the ongoing operations of the Company. Recommendations with a priority listed as "medium" should be performed as operating revenues permit, or be scheduled for implementation in the last six months of 1994.



# RAYTOWN WATER COMPANY

## Matrix of Recommendations, Estimated Implementation costs and savings, and priority for Implementation

| <u>Number</u> | <u>Recommendation</u>                                                                                                                                                                                                                                                                                                                                                                             | <u>Estimated Costs of Implementation</u> | <u>Estimated Cost Savings</u>                                                                                                                                                                             | <u>Priority</u> |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1.            | CHAPTER II: STRATEGIC PLANNING<br>Define the Company's mission statement and establish policies, procedures and practices necessary for developing and implementing an effective strategic planning process.                                                                                                                                                                                      | Minimal                                  | Provide overall general corporate direction and philosophy. Should establish a strategy for attaining corporate objectives.                                                                               | High            |
| 2.            | Develop, implement, and regularly revise a formal, documented rolling three-to-five-year long-range plan. The plan should detail strategic goals, construction projects, marketing and public relations activities, technological changes (e.g., incorporating the use of plastic pipe in the system), means for financing future projects under consideration, and anticipated completion dates. | \$1,000                                  | Consultant expertise may be necessary. Better scheduling and coordinating of projects.                                                                                                                    | High            |
| 3.            | Eliminate the assistant manager position.                                                                                                                                                                                                                                                                                                                                                         | \$5,000                                  | Costs reduced \$36,000 annually. Remaining work could be distributed to other employees, which MSD staff estimates to be up to \$5,000 annually in additional wages or outside contractor labor expenses. | High            |
| 4.            | Develop and implement recruiting and hiring procedures which are designed to select applicants having the highest level of knowledge, skill, and experience necessary to improve the operational performance of the Company.                                                                                                                                                                      | Minimal                                  | Ensures senior management that most qualified candidate is selected.                                                                                                                                      | High            |
| 5.            | Develop a formal succession plan for key management positions.                                                                                                                                                                                                                                                                                                                                    | Minimal                                  | Provide orderly transition if management turnover occurs.                                                                                                                                                 | Medium          |

|     |                                                                                                                                                                                           |         |                                                                                                                                                                                                                                           |        |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 6.  | Develop and implement formal competitive bidding procedures for all major equipment purchases and contracts.                                                                              | Minimal | Helps ensure that best value is considered in purchasing from more than one vendor.                                                                                                                                                       | High   |
| 7.  | Develop and implement a formal policy for performing documented needs analysis prior to making major equipment purchases.                                                                 | Minimal | Documentation assures all needs are considered when purchases are made.                                                                                                                                                                   | High   |
| 8.  | Continue to negotiate with the City of Independence to provide wholesale water to the Company for its Independence customers.                                                             | Minimal | Water costs to Independence customers reduced by \$25,000 annually.                                                                                                                                                                       | Medium |
| 9.  | Develop and implement a plan for training employees in the use of the computer system and for regularly assessing data processing requirements for future software and hardware upgrades. | \$1,000 | Improved training should result in greater computer utilization, and increased efficiencies in overall operations. Efficiencies gained should reduce operating expenses by \$5,000 (eliminates time associated with manual calculations). | High   |
| 10. | Determine and implement the most cost-effective way to automate the remaining field-related data.                                                                                         | \$1,000 | Inclusion of all field data increases the efficiency of overall operations for analysis and testing purposes.                                                                                                                             | High   |
| 11. | Install the unused PC in the president and general manager's office and take action to implement the full capabilities of this technology to achieve operational efficiencies.            | \$1,000 | Software available to customize management reports, contractor inspections, and other information to manage operations better.                                                                                                            | Medium |
| 12. | Provide all Board members with a written agenda and summarized financial information prior to all Board meetings.                                                                         | Minimal | Allow adequate time for all Board members to understand Company financial performance, and to ask pertinent questions.                                                                                                                    | High   |
| 13. | Require the Board of Directors to actively participate in all major decision-making processes.                                                                                            | Minimal | Ensures all Board members carry out their fiduciary responsibility.                                                                                                                                                                       | High   |
| 14. | Formalize the schedule for Board of Directors' meetings.                                                                                                                                  | Minimal | Ensures all Board members can adjust personal schedules to make all meetings.                                                                                                                                                             | High   |

|     |                                                                                                                                                    |         |                                                                                                                   |        |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------|--------|
| 15. | Continue to actively seek and elect an additional outside Board member.                                                                            | Minimal | Obtain additional business expertise.                                                                             | High   |
| 16. | Formalize position descriptions for the Board of Directors.                                                                                        | Minimal | Ensures all Board members have adequate understanding of their roles.                                             | High   |
| 17. | <b>CHAPTER III: FINANCIAL MANAGEMENT</b><br>Automate the general ledger during 1993.                                                               | \$1,000 | Greater accuracy, timeliness of pertinent financial data. Quicker to respond to third-party information requests. | High   |
| 18. | Develop a formal capital additions budget and a formal operating budget.                                                                           | Minimal | Schedule long term, short term projects optimizing cash flow strategies.                                          | High   |
| 19. | Determine the most cost-effective checking account services, and implement their usage.                                                            | Minimal | Determine best value for checking account services received. Savings of \$500 annually.                           | Medium |
| 20. | Require reimbursement to the Company on a monthly basis for personal usage of Company business office labor and equipment.                         | Minimal | Eliminate appearance of cross-subsidization, more accurately match of revenues and expenses.                      | High   |
| 21. | Implement cost accounting procedures and practices which require charging non-regulated businesses for the use of Company resources.               | Minimal | Reduce appearance of cross-subsidization, more timely match of revenues to expenses.                              | High   |
| 22. | Institute a formal policy for review of gasoline credit card purchases.                                                                            | Minimal | Prevent potential unauthorized use of resources.                                                                  | High   |
| 23. | Incorporate pertinent accounting data into the work order system.                                                                                  | \$1,000 | Provide centralized summary of project costs. Also allows for a better tie-in of accounting data.                 | High   |
| 24. | <b>CHAPTER IV: OPERATIONS &amp; MAINTENANCE</b><br>Read the City of Kansas City's water meter monthly to verify the accuracy of the bill received. | Minimal | Ensure Company is billed properly for its largest monthly expense.                                                | High   |

|     |                                                                                                                                                                                                                       |          |                                                                                                                                           |        |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 25. | Perform a study to determine the efficiency of the existing meter reading routes and adjust the routes as determined appropriate.                                                                                     | \$1,000  | Ensure that routes are optimally scheduled.                                                                                               | High   |
| 26. | Investigate utilization of a hand-held meter reading device, with appropriate software to link the device with the existing computer billing system.                                                                  | \$20,000 | Improve productivity of meter readers, enhance water usage estimation practices, improve billing function efficiencies.                   | High   |
| 27. | Develop a policy to periodically check inside remote meters to determine they are accurately recording water usage.                                                                                                   | Minimal  | Assure accurate readings are being taken.                                                                                                 | Low    |
| 28. | Ensure that meter books are placed in the vault or a similar fire proof location when not in use.                                                                                                                     | Minimal  | Ensure safety overnight in the event of fire or tornado.                                                                                  | Medium |
| 29. | Develop, formalize and utilize consistent criteria for estimating customer water usage.                                                                                                                               | Minimal  | Minimize complaints/inquiries to the business office.                                                                                     | Medium |
| 30. | Develop customer deposit criteria consistent with Commission rules that is not based upon customer address or neighborhood.                                                                                           | Minimal  | Treat all customers fairly regardless of residence.                                                                                       | Medium |
| 31. | Refund customer deposits with interest on a timely basis according to the Company's tariff.                                                                                                                           | \$2,000  | Ensure compliance with Commission tariff, prevent paying customers 6% interest while earning 3% in the bank.                              | High   |
| 32. | Determine the propriety of current charges for insufficient funds check handling (\$13) and after-hours service turn-ons (\$10), and file appropriate market rates to recoup costs in the Company's next rate filing. | Minimal  | Customers causing the expense will pay a fairer share of the expense incurred, as opposed to the general body of rate payers paying more. | Medium |
| 33. | Review the need for the third cash drawer and if found necessary, implement effective control procedures to ensure the security of these funds.                                                                       | Minimal  | Potential control problems if there is a third cash drawer, which is unnecessary for an entity the size of Raytown.                       | Medium |

|     |                                                                                                                                                                                                      |         |                                                                                                                                        |        |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------|--------|
| 34. | Develop and implement a time reporting sheet to be completed by all business office and management personnel.                                                                                        | Minimal | Ensure proper allocating of time to specific project or category. Allows for more timely senior management review and follow-up.       | High   |
| 35. | Distribute position descriptions to appropriate personnel.                                                                                                                                           | Minimal | Assist in employee understanding of job expectations.                                                                                  | Medium |
| 36. | Develop performance appraisal forms that provide realistic performance objectives for each employee and perform annual employee appraisals.                                                          | Minimal | Involve employee in the appraisal process documented justification for salary increases.                                               | Medium |
| 37. | Develop standards for routine tasks and use them to more accurately to plan, organize, direct and control maintenance and construction activities.                                                   | \$1,000 | Guide employee development in areas where above-average time is needed to complete projects.                                           | High   |
| 38. | Communicate work standards to all field employees and solicit employee input into their development.                                                                                                 | Minimal | Employee involvement in standards development may elicit greater employee acceptance.                                                  | High   |
| 39. | Consider authorizing field personnel to take payments from customers in the field when service is about to be turned off.                                                                            | Minimal | Reduce duplicative trips to subsequently reconnect customers.                                                                          | Medium |
| 40. | Place greater emphasis on safety issues, including formalizing safety training for all field personnel.                                                                                              | \$2,000 | Safety issues should be top priority.                                                                                                  | High   |
| 41. | Ensure that vehicle and equipment logs are completed on a timely basis by all personnel, and that usage is regularly monitored to determine that resources are being appropriately utilized.         | Minimal | Ensure vehicle and equipment condition is being maintained and serviced on a timely basis, and that it is used as originally intended. | High   |
| 42. | Develop and implement a formal vehicle replacement policy that includes elements such as vehicle purchasing justification, procedures for competitively bidding vehicles and vehicle specifications. | Minimal | Ensure all needs of a vehicle are incorporated into the purchasing decision.                                                           | Medium |

|     |                                                                                                                                                        |          |                                                                                                                                                                    |        |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 43. | Evaluate the cost/benefits of installing two-way radios in all service vehicles.                                                                       | \$2,000  | Improved field communications, eliminate downtime considerably, obtain current status of all employees away from office.                                           | High   |
| 44. | Provide field personnel with necessary hand tools and equipment to effectively perform their work.                                                     | \$1,500  | Reduce unnecessary trips to meter shop for locating tools, ensure more timely completion of projects.                                                              | High   |
| 45. | Purchase the necessary inventory and equipment to complete valve exercising and meter testing programs.                                                | \$24,000 | Complete required exercising and testing on a timely basis. Assists in the scheduling of work. Eliminates \$1,000 expense associated with 55 gallon drums of acid. | Medium |
| 46. | Correct all deficiencies cited in the 1993 PSC Water Department inspection report.                                                                     | \$5,000  | Correct several deficiencies that are unappealing to look at, as well as a physical hazard.                                                                        | Medium |
| 47. | Determine when pipe replacement is more cost effective than repair and develop a policy to guide field personnel accordingly.                          | Minimal  | Reduce duplicative repairs in a given area, improved scheduling efficiency of work.                                                                                | High   |
| 48. | Document progress observed regarding work performed by outside contractors and utilize documentation for project scheduling and future contractor use. | Minimal  | Ensure contractor is meeting schedule and all project specifications, and provide room for documentation of overall performance.                                   | High   |

## CHAPTER II: STRATEGIC PLANNING

This chapter presents the results of the MSD staff's review of the Company's strategic planning process. This included a review of the Company's mission statement, objectives and measurable goals, strategy for achieving objectives, and performance reporting for management's review and evaluation.

The Company has a particularly strong need for an effective strategic planning process. This is due to several challenges that are occurring or will be taking place soon. First, the president and general manager will assume management control from the Chairman of the Board in 1994. Second, the Company has recently completed the new tower, adding two million gallons of storage capacity. Third, the Company is attempting to fully automate its accounting, customer, and plant records. Fourth, the Company is responsible for implementing several field programs which will require considerable resources. Fifth, the Company has recently filed for a rate increase which would increase rates approximately 30% for an average residential customer. Sixth, the Company must continue to work with other entities such as wholesalers, various utilities and governmental agencies regarding its water supply, physical relocation and moving of plant, property tax assessments, and other potentially expensive and time-consuming issues.

The strategic planning process establishes corporate objectives and goals, and the policies and program strategies necessary to achieve these objectives. The planning process generally used is a top-down approach, which begins with an analysis of internal strengths and weaknesses, and an evaluation of external constraints and opportunities.

The Company does not have a formal mission statement for strategic planning purposes. However, senior management stated that a list of projects to address management efficiency issues was developed during the course of the rate audit in 1992. This list has not been formalized nor has it been made available to the Board of Directors or other Company personnel. The president and general manager stated that the items on the list have not been prioritized or organized.

The Company engages in primarily informal planning when it is known that a major project needs to be addressed. The six board members, outside legal counsel, and the assistant manager are typically involved. The Company does not have a formal long-range planning document, nor a

formal process to address planning requirements for major projects. The president and general manager stated that the Company utilizes ad hoc meetings to address issues requiring planning.

The Company has a population growth and water usage study which was prepared for the Raytown area by an outside consulting engineer, Larkin and Associates (Larkin). The following chart depicts the historical and projected number of residential customers, estimated population, and the average monthly water usage for the Raytown area:

**The Raytown Water Company**  
**Larkin & Associates Study of Historic and Projected Populations**

| Calendar Year | # of Customers | Estimated Population | Average Usage/Mo. |
|---------------|----------------|----------------------|-------------------|
| Historic      |                |                      |                   |
| 1970          | 6,500          | 22,750               | 6,692             |
| 1975          | 6,558          | 22,953               | 5,926             |
| 1980          | 6,441          | 22,543               | 7,314             |
| 1982          | 6,496          | 22,736               | 6,005             |
| 1984          | 6,487          | 22,704               | 6,550             |
| 1986          | 6,555          | 22,942               | 6,340             |
| 1988          | 6,630          | 23,205               | 7,334             |
| 1990          | 6,666          | 23,331               | 6,145             |
| Projected     |                |                      |                   |
| 2000          | 7,359          | 25,756               | 6,538             |
| 2010          | 8,124          | 28,434               | 6,538             |

Source: Information Request RW-27

The chart shows that the average monthly usage within the Company's service area has fluctuated from 5,926 gallons in 1975 to 7,334 gallons in 1988, with an average monthly usage of 6,538 gallons over the period studied. The population projections utilized an average of 3.5 people per connection. The Larkin study also detailed historical and projected water demands, which are provided in the following chart:



The Raytown Water Company  
Larkin & Associates Study of Historic and Projected Water Demands

| Calendar Year                                                       | Quantity Sold 1000's Gal | Annual Average Demand Daily Rate MGD | Maximum Month Average Daily Rate MGD | Maximum Day MGD | Peak Hour Rate MGD |
|---------------------------------------------------------------------|--------------------------|--------------------------------------|--------------------------------------|-----------------|--------------------|
| Historical                                                          |                          |                                      |                                      |                 |                    |
| 1970                                                                | 462,246                  | 1.42                                 | 1.78                                 | 2.81            | 6.46               |
| 1975                                                                | 526,665                  | 1.62                                 | 2.04                                 | 3.22            | 7.38               |
| 1980                                                                | 565,334                  | 1.74                                 | 2.17                                 | 3.48            | 8.00               |
| 1982                                                                | 468,145                  | 1.44                                 | 1.80                                 | 2.88            | 6.62               |
| 1984                                                                | 509,923                  | 1.57                                 | 1.96                                 | 3.14            | 7.22               |
| 1986                                                                | 498,751                  | 1.54                                 | 1.92                                 | 3.08            | 7.08               |
| 1988                                                                | 583,503                  | 1.79                                 | 2.25                                 | 3.58            | 8.23               |
| 1990                                                                | 491,622                  | 1.52                                 | 1.89                                 | 3.04            | 6.99               |
| Projected                                                           |                          |                                      |                                      |                 |                    |
| 2000                                                                | 644,187                  | 1.98                                 | 2.48                                 | 3.96            | 9.10               |
| 2010                                                                | 711,182                  | 2.19                                 | 2.74                                 | 4.38            | 10.07              |
| Column 3 = Column 2 (x) Water Loss Factor 1.145 (/) 365             |                          |                                      |                                      |                 |                    |
| Column 4 = Column 3 (x) 1.25 Factor calculated from Company records |                          |                                      |                                      |                 |                    |
| Column 5 = Column 3 (x) 2.00 Factor calculated from Company records |                          |                                      |                                      |                 |                    |
| Column 6 = Column 5 (x) 2.30 Factor used in hydraulic studies       |                          |                                      |                                      |                 |                    |

Source: Information Request RW-27

The Larkin study shows that the area has been characterized by limited growth since 1970. As mentioned earlier, the growth factor is small because a majority of the land in the service area has already been developed and the service territory is bordered on all sides by a city or neighboring water district, eliminating the potential for land expansion. The president and general manager stated that recent aerial photographs of the service area revealed approximately 200 acres of undeveloped land, which justifies the population growth shown above. The Larkin projected numbers assumed a continued smaller growth rate of 1% per year. This growth may not occur in actual population growth, but may result from increased usage by each customer.

The president and general manager stated that Larkin recommended the Company build a 2.5 million gallon tank, which would be sufficient to meet projected future demands. The recently-constructed tower is undersized by 500,000 gallons, as the Company could not generate the funds necessary for constructing a 2.5-million gallon tower.

The president and general manager stated that the only known main extensions for 1993 and 1994 are to connect the new water tower to the existing water transmission system. The Company

was able to contract out for the replacement of 11 new 2" galvanized mains with the remaining bond proceeds in the fall of 1993. This was attributable to lower than anticipated bids for the new tower and related transmission mains.

According to the president and general manager, land developers typically give three to six months notice prior to the initiation of new housing developments. New housing development notices are given approximately three times each year.

The City of Raytown is currently developing a long-range planning document, known as the Comprehensive Master Plan. The most recent long-range planning document was prepared in 1969, and is outdated. The new plan is extended to the year 2015, and will outline the city's goals, objectives and policies. The goals, objectives, and policies are to be found through a survey which *solicits community opinions on issues, attitudes, directions and future directions*. The city plan will incorporate new base area maps which detail new streets, lots, waterways, city/political boundaries, major pipelines (above and below ground), as well as active and inactive railways and natural gas wells.

The Company does not utilize a formal budgeting process for either capital or operational expenses. The Company was ordered to prepare a budget during the last rate case. The president and general manager is in the process of developing a budget for 1994 operating expenses. To assist in preparation of future budgets, the assistant manager has contacted nearby water utilities to obtain budget-related documents used by those entities.

The Company does not have a formal written purchasing policy concerning the number of bids required and the performance of a cost/benefit analysis prior to making purchase and contract decisions. The president and general manager stated that the Company primarily uses an informal, undocumented least-cost basis for procurement decisions. According to senior management, three bids are generally taken on major purchases. Currently, the Company does not require the Board of Directors to approve or evaluate alternatives when making decisions on major purchases and contracts.

The Board of Directors meets on a quarterly basis, but plans to begin meeting every two months starting in April 1993. The Board has formed an audit committee, which is comprised of the president and general manager, and two outside board members, to address issues which arise between the quarterly Board meetings and require immediate attention. The Company does not have

job descriptions for Board members. The Company is currently in the process of selecting one new outside board member.

Senior management stated that a formal succession plan for key positions has not been considered by the Company or its Board. The president and general manager indicated that if he were to leave the Company for an extended period of time, there would probably be no one employee who could run the Company. This assumes that the Chairman of the Board continues with eventual retirement plans during 1993.

The Company has recently taken an active role in an Independence neighborhood council. Senior management stated that the \$3,600 council sponsorship fee is necessary, given the amount of public relations and other types of non-quantifiable benefits associated with being involved in the neighborhood council.

### **Findings, Conclusions, and Recommendations**

The following discussion presents a summary of findings, conclusions, and recommendations pertaining to the strategic planning functions of the Company. This review identifies 17 areas requiring management's attention.

- Company Goals/Mission Statement
- Long-Range Planning
- Management Staffing
- Employee Recruitment Process
- Succession Planning
- Computer Resources Planning
- Competitive Bidding
- Needs Analysis
- Alternate Wholesale Water Supplies
- Data Entry
- Personal Computer Utilization
- Board Meeting Information
- Board Member Involvement
- Board Meetings Being Formally Scheduled

- Board Member Replacement
- Board of Director Job Descriptions

### **Company Goals/Mission Statement**

The Company does not have a formal mission statement or strategic plan. Senior management indicated that a list of projects to address management efficiency was initially developed during the course of the rate audit during 1992. The list has expanded considerably since, but has not been formalized, organized, or prioritized by senior management for implementation purposes.

The purpose of a mission statement is to define the future direction of an organization (3- to 10-year time horizon). The mission statement should identify and address the Company's business interests and the needs of the Company's primary constituents who have an interest in the operations of the organization (customers, shareholders, financial institutions, federal and state regulators, and others). The strategic planning process should be designed to address the development of operational requirements necessary to the achievement of the objectives and goals of the Company's mission.

An effective strategic planning process is dynamic in nature, requiring ongoing review, evaluation and corrective action by management as internal and external changes occur and is focused on the accomplishment of the Company's mission. The strategic planning process is designed to fulfill management's primary function to plan, organize, direct and control critical resources (human, financial, technology and time) in a manner to achieve the Company's mission with timely and economical results.

The development of a corporate mission is most often the responsibility of the Board of Directors of an organization. Developing goals and operational strategies which support the achievement of the Company's mission is the combined responsibility of both senior management and the Board in collaboration. Senior management has responsibility for implementing the plan, while the Board is responsible for monitoring operational results to ensure timely and economical performance is achieved as planned.

It is the evaluation of the MSD staff that the Board of Directors should develop a Company mission statement. This will result in the need to initiate policies, procedures and practices critical to the successful development of the strategic plan. Senior management and the Board need to work together to define the future goals and mission of the Company, and identify quantifiable strategies

for achieving the goals set forth. This may require considerable planning and coordination between senior management and the Board.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Define the Company's mission statement and to establish policies, procedures and practices necessary for developing and implementing an effective strategic planning process.

**Long-Range Planning**

The Company does not have a formal documented long-range plan, which is a necessary and critical part of the strategic planning process. However, the Company currently participates in the City of Raytown's long-range planning activities, which includes developing a formal action plan called the New Comprehensive Master Plan. This plan includes the development of base area maps for the city limits, ideas for existing available land use, environmental analysis, a population analysis, economic analysis, regional impacts and influences, emergency preparedness, a thoroughfare and transportation plan, and other plans which ultimately may impact Company's operations. The City's plan should be evaluated by the senior management as it is developed and updated for incorporation into the Company's long-range plans and goals.

The president and general manager has developed a list of ideas and projects to be performed. This list has been an ongoing project since the Company's most recent rate case. This list can be utilized for developing strategies for implementing the goals and strategies of the organization. The MSD staff reviewed this list early in the management audit process, and attempted to organize the list according to general topical functions. This organized data was subsequently returned to the Company in the spring of 1993.

The quantity, complexity, and capital-intensive nature of the projects facing the Company dictate the need for formal documentation of the planning process. Senior management needs to develop formal, documented long-range plans which identify in detail Company goals, weaknesses to be addressed, alternatives available, implications and costs required to implement each alternative, and a detailed analysis of manhour, equipment, material requirements for each project under consideration and a means for evaluating progress towards the goals.

In order to provide the means for management control, the Company should implement performance reporting systems which compare actual results to those which were planned, and identify deficiencies which require senior management's corrective action. The culmination of these

specific details into a formal document would provide a sound basis by which senior management could plan, organize, direct and control its operations.

A formal long-range planning document should provide senior management with a detailed guide as it works to develop and complete future projects which can be anticipated. In addition, a formal, documented long-range plan will help ensure that necessary financing is budgeted, revenue requirements and operating cost projections are detailed, manhour requirements can be met, necessary equipment is available, and needed materials are available prior to the initiation of future projects.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Develop, implement, and regularly revise a formal, documented rolling three-to-five-year long-range plan. The plan should detail strategic goals, construction projects, marketing and public relations activities, technological changes (e.g., incorporating the use of plastic pipe in the system), means for financing future projects under consideration, and anticipated completion dates.*

### **Management Staffing**

It is MSD staff's conclusion that there is insufficient workload to warrant the need for the assistant manager position. This conclusion is based on the MSD staff's review and observations of the Company's written job description for this position, actual duties performed, and the time requirements associated with this work load. The Company's written position (job) description for the assistant manager lists primary duties and responsibilities for environmental issues, special projects, information services and office supervision. A copy of the position description is attached and marked as Exhibit RW-1.

The Company stated that the assistant manager position was created due to increased interaction with regulatory bodies such as the PSC and the Missouri Department of Natural Resources (DNR). It is the MSD staff's position that the work requirements necessitated by these regulatory bodies is neither sufficient in volume or duration to justify a full-time management position.

The Company has recently had increased work requirements which are associated with the construction of its new water tower and participation in the rate case that it filed to recover the cost of construction. The Commission has also required the Company to implement effective meter testing and valve operation programs to comply with requirements of existing regulation. DNR has recently required the Company to develop a backflow prevention plan.

Previous to the Company's recent rate case (Case No. WR-92-85), it had been 10 years since the Company filed a rate case. It is the MSD staff's evaluation that following the conclusion of the Company's upcoming rate case, the work requirements associated with rate cases will terminate and the work associated with senior management's development of a backflow prevention plan will terminate with the completion of this plan.

It is also important to note the limited growth in the Company's customer base in years 1987-1992, which is presented in the overview section of this report. In addition, future growth is forecasted at approximately 1% per year. The MSD staff concludes that the basic work units for both management and non-management employees, which are influenced by customer volume and area of the Company's distribution system, are not expected to contribute to the need for additional management employees in the near future.

Therefore, based on the MSD staff's audit findings, the Company should eliminate the assistant manager position and re-assign those duties to the president and general manager, accounting supervisor, and the working foreman. To accomplish the intent of this recommendation, the management responsibilities which are presently assigned to the assistant manager position should become the responsibility of the president and general manager. The operational responsibilities of the assistant manager position should be assigned to the accounting supervisor and the working foreman based on the knowledge, skill and experience required to perform this work. If present or future work requirements exceed the reasonable capacity of the reduced management work force, the Company should utilize overtime hours and/or qualified outside resources to meet temporary peaks in workload requirements.

***MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:***

***Eliminate the assistant manager position.***

**Employee Recruitment Process**

The Company has not utilized appropriate recruitment processes to obtain managerial expertise. MSD staff noted during the management audit that the Company's search and selection of an assistant manager was not based upon a pool of potentially qualified applicants, but rather was a position that was filled by a family member of the owners of the Company.

The Company did not advertise for the position or seriously attempt to attract the most qualified candidate. Based upon the salary of the assistant manager position and the location of the

position in a metropolitan area, the MSD staff believes the Company could have attracted a highly qualified candidate with prior utility experience and/or engineering and managerial expertise. While practices of nepotism often raise questions of propriety, in this case it is of particular concern. The MSD staff is of the opinion that the creation of the assistant manager position was not based on valid resource requirement needs, as is indicated previously, and the position was not filled using an appropriate criteria and method for selecting a qualified candidate.

**MSD STAFF THEREFORE RECOMMENDS THAT COMPANY MANAGEMENT:**

*Develop and implement recruiting and hiring procedures which are designed to select applicants having the highest level of knowledge, skill, and experience necessary to improve the operational performance of the Company.*

### **Succession Planning**

The Company has not prepared a formal succession plan for key management positions. The president and general manager will assume a majority interest in the Company from the Chairman of the Board, who is nearing retirement. The Chairman of the Board currently performs a significant amount of manually-prepared bookkeeping activities which parallel the computer system being incorporated for billing, service order reports, and financial reports. Through cross-training these activities are gradually being turned over to other business office personnel.

It is the MSD staff's opinion that there are no personnel currently employed who would be responsible for daily activity should the president and general manager leave the Company or be away for an extended period of time. Senior management and the Board of Directors should develop a succession plan in order to guide the daily activities of the Company in lieu of the president and general manager's absence.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Develop a formal succession plan for key management positions.*

### **Computer Resources Planning**

The Company does not have a formal computer training program for its employees, nor does it have a formal needs assessment plan for determining the future computer mechanization requirements of the Company. Several employees also expressed dissatisfaction with the computer software, the training provided, and the prospects of future training.



The lack of understanding of several aspects of the software purchased adversely affects the productivity and morale of employees and the utilization of computer systems as a means to increase the efficiency, productivity, and effectiveness of office operations. First, the computer appears to be inefficient because employees have not been properly trained in its use. According to senior management, the supplier stated that additional training beyond the five days of training typically provided would be provided at no additional cost. Second, employees believe that the work they perform on the computer is a wasted effort, because they are required to perform additional manual supporting documentation as back-up.

The Company needs to develop a formal plan for adequately training employees in the use of all aspects of the software systems owned by the Company. This plan would prove useful for training new employees in the future, if necessary. The plan should also set goals and objectives for reducing the need for manual support documentation of computer input data, as well as verifying the accuracy of the computer's data processing efforts, and implementing the full capabilities of computer operations to improve efficiencies.

It is the opinion of the MSD staff that the Company should be able to realize increased operating efficiencies of up to 25% through implementation of cost-effective hardware and software. The MSD staff estimates that this annual savings should be around \$5,000.

*MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:*

*Develop and implement a plan for training employees in the use of the computer system and for regularly assessing the data processing requirements for future software and hardware upgrades.*

### **Competitive Bidding**

The Company does not have written policies and procedures regarding competitive bidding for major purchases. During the course of the management audit, senior management was unable to provide documentation on a timely basis concerning the software and hardware purchased for automating billing functions and service reports. Details concerning the number of vendors contacted, the vendor names, bids quoted, and capabilities of the software were not provided on a timely basis. This documentation became available at least 100 days after the initial request for such documentation was made, which leads the MSD staff to conclude that a competitive bidding process and a detailed analysis of the capabilities of the computer systems offered were not performed.

A formal competitive bidding policy should require that detailed specifications be developed, and that a formal request for proposal be sent to at least three viable competitors. All bid packages submitted should be thoroughly evaluated using weighted criteria, with a formal decision-making process being used to document all aspects of the purchase. Such policies and procedures should increase the likelihood of purchasing a product or service which will provide cost-effective results and be supported by the supplier/manufacturer several years into the future. These policies and procedures will also ensure that the Company has thoroughly evaluated all the options available in order to make the most effective long-term decision. Maintaining documentation of this process will provide the basis for evaluating in the future whether purchased items have performed as planned and determining whether purchasing procedures require change.

*MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:*

*Develop and implement formal competitive bidding procedures for all major equipment purchases and contracting activities.*

#### **Needs Analysis**

The Company does not perform a documented needs analysis prior to making equipment purchases. Field personnel indicated that some equipment which was purchased during 1992 may not be of an appropriate size or capacity to satisfy work requirements.

Effective purchasing policies require that senior management assess the needs of the organization and its workforce prior to implementing a plan of action. This includes actions such as major equipment purchases and computer software and hardware purchases. Senior management should discuss with its employees what specific equipment needs and capacities are necessary prior to making purchasing or contracting decisions.

*MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:*

*Develop and implement a formal policy for performing documented needs analysis prior to making major equipment purchases.*

#### **Alternate Wholesale Water Supplies**

The Company has only recently began seeking an alternative wholesale water supplier for its Independence customers. Senior management has recently met with officials of the City of Independence water system, and it was learned that the Company's Independence customers could

be hooked up to that system without adversely affecting the Company. The Company would still collect revenues from these customers, even though the City of Independence would be responsible for the water system.

Senior management indicated that the cost of water currently is about 25% lower in Independence. This would probably result in a net overall water rate for a typical residential customer living in Independence to be about 10% less than for a typical residential customer living in Raytown. Senior management does not anticipate any contractual problems with receiving an estimated 15% reduction in the amount of water purchased from Kansas City. The Company also stated that to serve its Independence customers would require less than 10% of the Independence water system's capacity.

This could also potentially address another concern of senior management. There have been several recent inquiries from a group of the Company's Independence customers to seek permission to hook up to City of Independence water system.

*MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:*

*Continue to negotiate with the City of Independence to provide wholesale water to the Company for its Independence customers.*

### Data Entry

The Company needs to complete the automation of outstanding remaining inventory and maintenance related items. As of mid-June 1993, automated inventories were complete on several major areas. This included almost 7,000 meters, and approximately 500 fire hydrants, as well as its vehicles and equipment.

With regard to testing, the Company has only entered 64 records into its meter inventory program out of the approximately 400 meters tested through mid-June 1993. The balance of records are expected to be entered into the system during the summer of 1993. In addition, there are another 400-plus meters scheduled to be tested in the fall of 1993. Test histories have only been completed and entered into the system on 52 of the Company's 463 fire hydrants.

The Company recently implemented the valve exercising software program. Senior management indicated that data entry for the valve program will coincide with the beginning of the valve exercising program, which is scheduled to start in the late summer of 1993.

It is critical that this remaining information be entered on a timely basis, preferably by the end of 1993. The Company should consider hiring temporary data entry personnel in areas where these services can be cost-effectively utilized in order to become current with the workload. The Company has previously used this type of contracted labor successfully with meter inventories, meter histories, and fire hydrants. The MSD staff believes that the remaining amount of data entry can be performed at a cost of around \$1,000. This includes contracted labor time, plus Company personnel time associated with review of data being entered into the system.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Determine and implement the most cost-effective way to automate the remaining field-related data.*

#### **Personal Computer Utilization**

The Company does not fully utilize all personal computer (PC) equipment on hand. During the MSD staff field work, it was discovered that a PC was in its original packing container on the floor in the Chairman of the Board's office. The president and general manager does not currently utilize a PC, but expressed considerable interest in having a PC on his desk.

There are a number of repetitive functions that could be automated to facilitate various recordkeeping functions, such as after hours reports, work assignment sheets, documentation of field inspections, and other management reporting activities. The MSD staff believes that this PC should be moved into the president and general manager's office, and be set up to become fully operational. The primary benefit would result in greater amounts of information available to assist in the decision-making process. The cost to implement this recommendation is expected to be about \$1,000.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Install the unused PC in the president and general manager's office and take action to implement the full capabilities of this technology to achieve operational efficiencies.*

#### **Board Meeting Information**

The Board of Directors does not receive adequate management information to make the most timely and cost-effective decisions. Several directors told the MSD staff that very little financial operating data is provided at Board meetings. In addition, outside vendor data should be provided to help in all decision-making.

The MSD staff suggests that a written agenda be submitted to all directors at least one week in advance of each Board meeting. This should give each director ample opportunity to ask questions that will help ensure that each Board member is carrying out their fiduciary responsibility. The primary benefit will result in having greater amounts of information available for the Board to make more informed decisions. The costs incurred will result primarily from postage and copying of information for distribution prior to Board meetings.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Provide all Board members with a written agenda and summarized financial information prior to all Board meetings.*

**Board Member Involvement**

The Board of Directors currently is not actively involved in the decision-making process. Several directors told the MSD staff that very little formal discussion occurs regarding significant Company operations (data processing, other technology, equipment, maintenance programs, etc.) at Board meetings. For example, the Company does not require formal Board approval for all major purchases and contracts.

It is the MSD staff's recommendation that the Board should become more active in the Company's operations. The president and general manager indicated that this will be the case in the future, as two new outside Board members were elected in April 1993. Given the upcoming challenges that the Company faces, it is incumbent that the Board become more involved in timely and cost-effective decisions being implemented.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Require the Board of Directors to actively participate in all major decision-making processes.*

**Board Meetings Being Formally Scheduled**

The Board of Directors does not meet on a regularly scheduled basis. The number of Board meetings ranged from three to six per year since the late 1980's. Senior management stated that Board meetings are scheduled on an as-needed basis.

It is the opinion of the MSD staff that the Board should establish a regular schedule for meeting. Based upon discussions with senior management and the Board, it appears that the Board could most effectively carry out its duties if it met every two months. In addition, committees set

up within the context of the Board should meet at least once every four months. Given the workload for the next several years, it is imperative that the Board meet regularly to ensure that management oversight activities are properly carried out in a cost-effective manner.

It is appropriate for senior management to solicit potential time conflicts with other Board member schedules, and then to work around those to establish a certain time. For example, the first Friday or third Tuesday of the odd- or even-numbered months could be selected. Potential travel and scheduling concerns could also be resolved in advance, such as the need to make airline arrangements well in advance.

The primary benefit would be to help ensure that each Board member attends as many meetings as possible by having advance notification of potential meeting dates. The costs to incur this recommendation are minimal, and would probably require the meetings being held away from the Company business office periodically.

***MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:***

***Formalize the schedule for Board of Directors' meetings.***

#### **Board Member Replacement**

The Company has not yet replaced the outside Board member who recently retired. Senior management is actively seeking a degreed professional from Independence to better address the needs of the Company's 754 customers who reside in Independence. The Company has recently taken an active role in the Independence neighborhood councils. Senior management stated that the \$3,600 council sponsorship fee is necessary, given the amount of public relations and other types of non-quantifiable benefits associated with being involved in the neighborhood council.

The MSD staff believes it is important to fill the remaining Board position with the most qualified candidate that the Company can find. The benefits of another business perspective to the Board could also help the Company be managed more effectively.

***MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:***

***Continue to actively seek and elect an additional outside Board member.***

### **Board of Directors Job Descriptions**

The Company does not have formal job descriptions for the Board of Directors which outline the specific duties and responsibilities of Board members. The lack of job descriptions has several disadvantages. For example, a Board member may not have a comprehensive understanding of the Board's expectations. Comprehensive job descriptions provide a thorough explanation of the duties and responsibilities for each Board member, and would provide the basis for establishing Board accountability. Job descriptions would also define the authority which the Board and its members have for decision making purposes and the level of involvement expected of the Board in the Company's day-to-day operations.

It is the opinion of the MSD staff that each Board member should be directly involved in the development of job descriptions to help ensure that all Board members and senior management have a clear understanding of the requirements for achieving successful performance.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

**Develop formal position descriptions for the Board of Directors.**

### **CHAPTER III: FINANCIAL MANAGEMENT**

This chapter represents the MSD staff's analysis of the Financial Management function. This included a review of the Company's accounting, cash management, risk management and data processing processes.

The Company's accounting function is the responsibility of the president and general manager, and the Chairman of the Board. The Company is gradually moving this responsibility to the accounting supervisor as the various accounting functions are in the process of being automated. The accounts receivable, payroll, and accounts payable programs were automated in June, July, and August 1992.

The accounts receivable (billing) function is run each day as soon as the meter reader finishes a book, and subsequently reviewed by the chairman for reasonableness. The posting function is performed after regular business hours so as not to tie up the Company's computer system and printer.

The accounts payable function appears to have some duplication of effort. The accounting supervisor is responsible for generating system-developed vendor checks (for recurring-type purchases). This information is subsequently entered into the Chairman of the Board's manually-prepared general ledger. The Chairman of the Board produces other vendor checks manually, which are entered into the automated accounts payable program. As the Chairman of the Board nears retirement, this function will gradually reside with the accounting supervisor's automated system. Checks are processed on or around the 10th and 25th of each month.

The general ledger currently is not automated. Senior management indicated that the general ledger will be automated during 1993, but could not be more specific as to when the conversion would occur.

Risk management activities are the overall responsibility of the president and general manager. The Company's outside counsel performs a review of the Company's analysis regarding procurement of insurance coverage, and recommends the carrier, coverage levels, deductibles, and premiums to the Board.



The Company is operating under very tight cash constraints. The Company went almost 10 years between its 1982 and 1991 rate relief filings. According to senior management, approximately \$60,000 in collected customer deposits have been used for operating expenses.

The Company has approximately \$500,000 in excess bond proceeds associated with the construction of the new tower, and related connections to the distribution system. Most of this is being used to replace old 2" galvanized mains with 6" ductile iron and accompanying fire hydrants.

The Company is making monthly interest-only payments of \$16,000 on the \$3 million bond issue until 1995. Principal reductions of approximately \$15,000 per month will be made beginning in 1995.

The Company purchased a computer system on March 2, 1992 from Computer Resources Corporation located in Louisville, Kentucky. The computer system was purchased at a total cost of \$16,650. This system included: one WYSE Decision central processing unit, a tape drive, one WYSE 550 monitor, five WYSE 160 workstations, an eight-port sharing device, two printers, a modem, Xenix and MS DOS operating systems, and a Utility Management System.

Software options purchased by the Company totaled \$1,870. The software options included: payroll, accounts payable, customer service/complaints, and a maintenance program. This purchase included a 90-day start-up warranty, which began when the equipment was installed and was on-line. An additional one-year maintenance contract was purchased for \$1,700.

Both the 90-day and the one-year warranties include all parts, labor, and travel expense from the vendor's nearest office. This includes a four-hour response time guarantee and temporary replacement equipment if the repairs cannot be made immediately. On February 13, 1993 the Company renewed the maintenance contract at a cost of \$1,600 per year.

The purchase price of the computer system typically includes five days of in-office training, with additional training available at no additional charge if necessary. However, Company personnel consistently cited a lack of training as a major problem with the implementation and application of the computer system in day-to-day operations. Manual backup systems are currently required by the Chairman of the Board for many of the computer activities.

Computer backups are performed at the end of each working day. The backup diskette is dated and stored in the Company's mini-safe, which is located within a walk-in safe that contains a fire wall. A weekly diskette backup is performed each Friday and stored in a safety deposit box at Boatmen's First National Bank of Raytown. An alternate tape is picked up at that time to be used

the following Friday. A backup of year-end computer information is maintained at the bank until the external auditors have completed their review of year-end financial statements.

The Company's financial records are usually stored in the safe. However, the MSD staff observed that the documents are not always returned to the safe each evening. This usually occurs if the person using the resource is not finished with it, or if it was required in another work station. According to senior management, the Company does not have backup systems for its manually-prepared financial records.

The Company issued \$230,700 in preferred stock in 1992. The primary purpose for the stock issuance (10% cumulative preferred dividends) was to help the Company pay the necessary bond issue closing costs in excess of the 2% allowable from bond proceeds. The \$3 million bond matures in 2012, and carries a market interest rate of 7.5%. The preferred stock issue improved the Company's equity ratio from 32.69% to 36.57% as of late March 1992.

The bond issue could not be sold unless all bond closing costs were covered. Without this preferred stock issue, senior management contends that the Company would not be able to pay these closing costs, and would not be able to obtain the low-cost financing. As a result, the Company would not have been able to undertake construction programs necessary to maintain safe and adequate service.

### **Findings, Conclusions, Recommendations**

The following discussion presents a summary of findings, conclusions, and recommendations pertaining to the financial management function of the Company. This review identifies seven areas requiring management's attention:

- General Ledger Automation
- Budgeting
- Bank Account Consolidation
- Reimbursement of Personal Usage
- Work Performed for Non-Utility Business
- Gasoline Credit Card Purchases
- Capturing Financial Data

### **General Ledger Automation**

The Company's general ledger system is not automated. The Chairman of the Board has been responsible for the accuracy of the general ledger for many years, but is gradually retiring from active day-to-day involvement in Company operations. The Chairman of the Board has relied upon cumbersome manual systems in order to generate appropriate financial statements, but expressed considerable concern about the benefits of automation.

An accounting supervisor position was created in 1991 to help with the conversion to an automated general ledger system. It is the opinion of the MSD staff that the Company should convert to an automated general ledger system during 1993. It may be necessary for the Company's outside accountant to assist senior management in the data conversion process. As of mid-June 1993, there has not been significant progress made toward automating the general ledger. The Company plans to use year-end 1993 balances as a starting point.

The benefits of an automated general ledger include more timely generation of data, greater accuracy of data, and the ability to identify selected data faster for trending analysis. There should also be reduced costs associated with researching and responding to rate case information requests. It should also assist external auditors in compiling information for their year-end review and help to reduce external auditor fees. According to senior management, the general ledger can be automated for about \$3,000, including software-related expenses. Additional costs may be incurred if external auditors are involved with the conversion process. The Company should incorporate this recommendation with the inclusion of the work order accounting information recommendation discussed later in this chapter.

***MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:***

***Automate the general ledger during 1993.***

### **Budgeting**

The Company currently has no formal documented budgeting process, but utilizes an informal budget process on selected construction projects. It is the opinion of the MSD staff that formalized capital additions and operating budgets would give senior management guidance in planning revenues and expenses, as well as providing a means of conducting periodic variance analyses of these cash flows. Another important element of a formal budget is its control function. By utilizing an annual budget and performing periodic reviews, senior management should be able to monitor its revenues

and expenses and develop a budget variance for the difference between actual and budgeted amounts. An effective budgeting system that includes variance analysis should provide senior management with timely information on specific areas that may need improvement, or could be managed more cost-efficiently. Variance report summaries providing monthly operating summaries in the form of financial statements and operating information (number of customers, average consumption, and average rates) would be useful to both senior management and the Board in identifying problem areas and in developing long-range goals.

A rolling three-year budget used and developed in combination with a long-range planning document would provide an effective means for long-range planning. Budgeting is an integral part of effective cash flow management and cost control, and its development should be linked to performance goals. A major advantage of a budget is its function in planning and scheduling for major construction projects. Whether the budget is broken down by quarter or month, it would help senior management determine the amount of cash funds which must be available periodically for prudent investment decisions to be made while considering the needs of individual projects. By having a formal budget available for reference, the Company should improve its ability to financially plan for the necessary cash outlays involved with individual major construction projects.

The assistant manager has recently contacted other local water companies for guidance in budget development. There should be minimal expense associated with implementing this recommendation.

*MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:*

*Develop a formal capital additions budget and a formal operating budget.*

### **Bank Accounts Consolidation**

The Company has not analyzed the cost-effectiveness of its checking accounts and other financial services. The Company currently has checking accounts at three local banks in its service territory.

Senior management should analyze the current arrangement, and determine if economies of scale could be realized by using one bank. It is the MSD staff's opinion that savings of up to \$500 could be realized annually in terms of lower service charges or additional interest income.

*MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:*

*Determine the most cost-effective checking account services, and implement their usage.*

### Reimbursement of Personal Usage

The president and general manager does not reimburse the Company on a timely basis for personal usage of Company business office labor and field equipment. Non-utility related usage of labor and equipment is tracked on a periodic basis, with semi-annual reimbursements being made to the Company.

The MSD staff reviewed supporting documentation for reimbursement associated with non-utility labor and equipment. The documentation was not complete with regard to actual equipment reimbursement from the related non-utility entities. Senior management's claim of payment made by these affiliated entities was not available for one of the two payments reviewed.

The Company recently developed a rental rate table which details hourly charges for rental equipment used and subsequently reimbursed owned by the Company. The MSD staff reviewed this table and deemed the charges to be reasonable based upon comparisons with local equipment rental firms. Senior management stated that the working foreman computes all non-utility equipment and vehicle usage from log books maintained by field workers. This information is given to the accounting supervisor, who uses the Company rental rate reimbursement table to compute the bill due to the Company.

Given the frequency and extent of non-utility labor and equipment usage by the president and general manager, it is necessary to reimburse the Company each month. Timely reimbursement reduces the likelihood that a non-utility business is being subsidized by the utility, and will help to ensure that all non-utility costs are being properly reimbursed to the Company. Senior management indicated that the Company currently is being reimbursed quarterly.

#### ***MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:***

*Require reimbursement to the Company on a monthly basis for personal usage of Company business office labor and equipment.*

### Work Performed for Non-Utility Businesses

The Company appears to be continuing the practice of having employees perform non-utility work during regular working hours. The MSD staff learned that some of the president and general manager's other business interests are conducted at the Company, such as the receipt of rental payments on commercial and residential real estate. The MSD staff also observed another employee working on payroll matters that were unrelated to the Company's regulated operation.

While it is not necessarily improper for non-regulated work to be performed at utility offices using regulated entity resources, those expenses should be appropriately charged to the non-regulated business. In this instance, the MSD staff found incomplete documentation of the Company being reimbursed for the use of human resources and for such work performed. During the management audit, the MSD staff learned that the president and general manager does reimburse the Company on a quarterly basis (calculated on a competitive per hour rate), for equipment utilized for non-regulated business purposes.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Implement cost accounting procedures and practices which require charging non-regulated businesses for the use of Company resources.*

**Gasoline Credit Card Purchases**

The Company does not properly monitor usage of gasoline credit cards. The MSD staff reviewed selected credit card gasoline purchases in late 1992 and early 1993. The assistant manager's credit card bills were considerably higher than those of field employees and seemed high, given that the majority of the assistant manager's time is spent in the business office.

The president and general manager was unable to justify the level of gasoline credit card purchases made by the assistant manager over the period reviewed. However, the president and general manager stated that gasoline credit card purchases for all employees will be monitored each month in the future. The MSD staff believes that proper monitoring of these expenditures will result in greater control of scarce corporate resources. The cost to implement this recommendation is minimal.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Institute a formal policy for review of gasoline credit card purchases.*

**Capturing Financial Data**

The Company's new system for tracking work orders does not include the accumulation of accounting data. The current form has adequate room for entry of the appropriate financial information by major work order or account number, but the Company does not currently use this.

It is the opinion of the MSD staff that the current system should be expanded to track accounting data. The benefit would be from more timely and accurate data entry into an on-line

system that automatically updates all other pertinent files. It would allow senior management the opportunity to review all relevant data about a particular project. This should cost around \$2,000 for the necessary software and programming changes to the current system.

*MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:*

*Incorporate pertinent accounting data into the work order system.*

## **CHAPTER IV: OPERATIONS AND MAINTENANCE**

This chapter presents the results of the MSD staff's review of the Company's operations and maintenance processes. The chapter is organized into three sections: Business Office Operations, Field Operations and Construction and Maintenance Control Processes. These sections provide an overview, MSD staff's findings, conclusions and recommendations.

### **BUSINESS OFFICE OPERATIONS**

#### **Overview**

The Company's business office is located at 9820 East 63rd Street in Raytown, Missouri. Business office functions include: establishing new service for customers including determining the amount of customer deposits, billing and final billing, preparing "trouble cards" or service orders, posting receipts, and accounting responsibilities.

Six of the Company's 11 full-time staff are employed in the business office. Three of these six employees are management employees including the Chairman of the Board, the president and general manager, and the assistant manager. Staffing levels have remained relatively constant for the past 10 years, with periodic employment of other part-time personnel.

Business office productivity and the work load of all business office personnel and the meter reader were reviewed during the management audit. In addition, the Company's automated systems, customer relations (including criteria used to determine deposits), and meter reading procedures were reviewed.

The primary stockholder is the Chairman of the Board, who performs a number of business office tasks. The chairman has general ledger responsibilities, reviews all meter books for high and low usage patterns, makes adjustments to meter read estimates, prepares trouble cards, handles business office traffic, answers the telephone and performs other clerical duties.

The president and general manager performs a variety of duties including setting priorities for the Company's projects and ensuring their implementation, analyzing project costs, serving as liaison between senior management and the Board of Directors and as a primary contact for regulatory agencies. This position also works with the Company's foreman to establish field work to be



performed, as well as making on-site visits to ensure that work is being done correctly. The president and general manager reports to the Chairman of the Board.

The Company's assistant manager is responsible for identifying environmental issues that could impact the Company, special projects (such as the back flow program), and the selection and implementation of new software programs. The assistant manager also assists in identifying ways to computerize manual procedures and eliminate duplicative efforts, and to provide supervision and guidance to the accounting supervisor. The assistant manager reports to the president and general manager.

The remaining business office personnel include the accounting supervisor whose primary responsibility is trouble shooting particularly for the new computer system. The accounting supervisor prepares a weekly delinquency report for customers whose bills are 60 days past due and prepares a shut-off list for customers who fail to pay. The accounting supervisor also prepares a year-end total Accounts Payable Report and performs other business office duties during employee absences. The accounting supervisor reports to the assistant manager.

The Company employs a final billing clerk who prepares all final bills for customers moving within or outside the service territory, and establishes service for new customers. The final billing clerk also maintains deposit recordkeeping and reconciles the bank statement for that account. This position also assists in handling telephone and customer walk-in traffic.

The billing clerk is responsible for the billing process, and handles the processing for customer checks returned for insufficient funds. This position also assists in handling telephone and customer walk-in traffic, as well as cleaning the office.

A posting clerk is responsible for posting payments into the computer. This position, which was recently expanded to full-time, is responsible for opening and sorting all mail. The posting clerk also prepares all bank deposits.

One meter reader covers the service territory. Readings are recorded by hand into 64 meter books that represent the various routes. The meter reader reads approximately two books each morning and returns to the Company each afternoon to pick up the orders for service turn-offs and turn-ons.

### **Findings, Conclusions and Recommendations**

The following discussion presents a summary of findings, conclusions, and recommendations pertaining to the Business Office operations of the Company. This review identifies 11 areas requiring management's attention:

- Water purchases from the City of Kansas City
- Rerouting meter books, and reading automation
- Verification of accuracy of remote meters
- Storage location of meter books
- Consistent criteria for estimating water usage
- Consistent criteria for requiring deposits
- Refunding customer deposits, usage for general operating expenses
- Charges for returned checks, after hours service
- Access to cash drawers
- Lack of time keeping records
- Employee awareness of position descriptions

### **Water Purchases from the City of Kansas City**

The Company does not read the meter that records the water purchases it makes from Kansas City. Because the Company purchases its water from Kansas City and does not operate a treatment facility, its largest monthly expenditure is the water it must purchase to provide its customers. The Company indicated that its water bill will average \$65,000 per month after Kansas City's recent 17-18% increase in its wholesale rates.

Reading the meter that records the Company's water usage would be relatively easy to accomplish. The Company has an experienced meter reader who could read the meter on a monthly basis. The meter is located within Raytown and would require approximately 90 minutes to read, allowing for water in the wells and the use of a toxic gas sniffer at each of the eight meter supply points. This would allow senior management to track unusual reads and ensure that the Company is being billed accurately.

Given the large and rising expenditure the Company incurs each month from Kansas City and given the ability it has to readily read the meter, it is MSD staff's opinion the Company should verify these billings.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Read the City of Kansas City's water meter monthly to verify the accuracy of the bill received.*

**Rerouting the Company's Meter Book System and Consideration of Utilizing a Hand Held Meter Reading Device**

The Company has not conducted a study of its meter reading routes since the early 1970s, and meter routes are not currently organized in an efficient manner. The MSD staff concluded from observations of the meter reader that portions of the existing 64 routes (1) exclude meters that are in close proximity such as being across the street and (2) some of the routes stop in the middle of a block. Such organization of the routes encourages the meter reader to read meters out of book sequence in order to eliminate the need for repeating visits to a particular area.

The Company is on a two-month billing cycle and has 64 meter books to read (one book for each route). Approximately one-half of the books are read and billed during one month, while the other half are read and billed the following month. Senior management has not provided the meter reader with a target number of daily reads to be made, other than one-half of the books are to be read each month. However, the meter reader stated that approximately 200 meters must be read daily in order to remain current for the billing cycle. Meter reading activities are performed each morning, and service orders are worked each afternoon.

Because senior management has not walked the routes with the meter reader nor conducted any recent analysis to determine the length of time it should take to read the meters, the Company is unaware of the current work load for meter reading. It is the opinion of the MSD staff that routes could potentially be read in approximately six weeks, as opposed to their currently scheduled cycle of eight weeks. Enhanced organization of the routes would provide the meter reader additional time to perform service orders as well as other tasks in the afternoons.

In addition to re-routing, the Company could gain efficiencies by utilizing a hand-held meter reading device to assist the meter reading function. This would eliminate the need to take meter books out into the field where they are subject to the elements. Rainy weather currently requires a second employee to record the meter readings while inside the truck so the pages of the meter books do not get wet. The meter reader walks the route while the second employee follows in the truck, and records the readings as the meter reader calls them.

Each meter book contains up to four years of customer usage data. The current books have 1992 and year-to-date 1993 customer usage data. A new series of books will be started in 1996, therefore, there would be no readily available historical data in 1996 with the current paper records having data from 1992 through 1995.

When the weather is inclement, the reads are estimated by the meter reader or the Chairman of the Board. However, all meter books are turned over to the Chairman of the Board after the readings are recorded for review. The Chairman of the Board reviews the meter books to note any particularly high or low reads, with follow-up activities being done as deemed necessary.

A hand-held meter reading device would serve a number of functions. It would eliminate the need for meter books that are subject to deterioration from weather conditions and only one employee would be required to read meters during rain or snow. In addition, a hand held device would have programmed read parameters for each meter read that would serve to alert the reader to excessively high or low consumption. Because the system has the ability to track the time meters are read, it would assist senior management in scheduling and identifying work volume. Other utility companies who employ the hand-held devices report that meter reading accuracy also is improved significantly.

The MSD staff contacted two vendors to provide a range of amounts that senior management might expect to pay to implement a hand-held meter reading device. The Company would also be required to purchase software to allow the hand-held device to interface with the Company's existing billing system. Based upon this information, the Company could anticipate spending \$13,500 to \$22,000 for two hand-held devices and the appropriate software to utilize its existing billing program. The second hand-held device is required as a stand-by should one malfunction.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Perform a study to determine the efficiency of the existing meter reading routes and adjust the routes as determined appropriate.

Investigate the utilization of a hand-held meter reading device, with appropriate software to link the device with the existing computer billing system.

**Verification of Accuracy of Remote Meters**

The Company has no policy in place to regularly check its 170 inside remote meters. These meters are read by a remote device for accuracy, and it is necessary to ensure that they have not been tampered with by a customer. In order to strengthen management control procedures, the Company

should periodically check these meters to ensure they are working properly and water is not being diverted.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Develop a policy to periodically check inside remote meters to determine they are accurately recording water usage.*

**Storage Location of Meter Books**

The Company indicated that there are times when meter books are not placed in the vault over night. The meter books are currently a very valuable source of Company information, as they are the source document the meter reader uses to direct activities of the existing routes. Usage information could be extracted from the billing system if these documents were lost or destroyed. Each book provides up to four years of historical usage information, and could cause significant disruption should they be destroyed or stolen.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Ensure that meter books are placed in the vault or a similar fire-proof location when not in use.*

**Consistent Criteria for Estimating Water Usage**

The Company indicated that no consistent criteria exist for developing customer bill estimates. Historical bill data is primarily used, but there are no specific written guidelines. Informal estimation guidelines have been informally established and used by the Chairman of the Board for over 35 years. When weather prohibits meter reading, the Company must estimate customer water usage in order to stay current with its billing schedule.

In addition, both the meter reader and the Chairman of the Board may be involved in estimating meter reads. Because this activity may be performed by two different employees and given the lack of a specific procedure used to estimate bills, the process lacks the appropriate consistency necessary for this activity.

The Company should develop a consistent way to estimate water usage for customers when weather does not permit normal meter reading, and adhere to the procedure. This procedure should be filed in the form of a tariff pursuant to Rule 4 CSR 240-13.020(3)(c)1. This procedure should also be communicated to its customers so they are informed as to how the Company estimates bills.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Develop, formalize and utilize consistent criteria for estimating customer water usage.*

**Consistent Criteria for Requiring Deposits**

The Company currently requires deposits for all customers regardless of their perceived risk to the Company or their ability to pay. The exception exists for customers who are willing to complete a form requesting the deposit be waived, and having the form notarized outside the Company.

Deposits are normally \$35, but the Company indicated that customers who reside in specific residential areas of Raytown are required to pay a deposit of \$50. Senior management stated that customers living in these areas are more likely to leave the Company's service territory owing money than customers living in other service territory areas. The Company tracks these specific residences in a book kept at the front counter in the business office. Residences that are to be assessed a \$50 deposit are highlighted with a green marker. This practice also is not in compliance with Commission rules 4 CSR 240-13.030 and 4 CSR 240-10.040.

It is the opinion of MSD staff that this practice is discriminatory. There are several other criteria the Company could use in determining deposits for its customers other than location of residence. For example, the Company could use the \$35 rate for all customers, or determine a deposit amount commensurate with the previous water usage of each residence, the latter of which may justify a higher deposit. Automatically assessing new customers a higher rate of deposit simply because they move into a specific neighborhood or have an address that is considered to be a low income neighborhood is unjust.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Develop customer deposit criteria consistent with Commission rules that is not based upon customer address or neighborhood.*

**Refunding Customer Deposits on a Timely Basis**

The Company does not routinely review its records and return deposits to customers with the appropriate interest on a timely basis. The Company is required by its tariff to return deposits with 6% interest to be paid within 12 months from the time deposits are made (if no late notices are sent). As described previously, the Company has the policy of requiring deposits for all customers

regardless of their ability to pay, or their credit history, unless the customer completes a notarized "waiver of deposit" document.

The Company indicated that a special effort is made to return deposits to Independence customers, and that all appropriate deposit refunds with interest have been made to them. The Company has expressed concern regarding the possibility of losing its Independence customers to the water system within the City of Independence. The Company notes that this has been a political issue within recent years, and therefore tries to show extra concern for this group of customers. The Company also makes an effort to inform its senior citizen customers either verbally or in writing that they should contact the water company after a year of service and request their deposit be given back with interest.

Senior management indicated that it had received approximately \$68,000 in customer deposits, yet the balance in this account as of December 31, 1992 was approximately \$17,000. The Company stated that it uses the deposit money for a variety of general operating expenses, which is consistent with the practice of other utilities.

The Company's computer system does not currently flag customers who have had a deposit with the Company for 12 consecutive months, or are approaching one year. No consistent effort is made to refund deposits except in the case where a customer is leaving the Company's service territory.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Refund customer deposits with interest on a timely basis according to the Company's tariff.*

**Charges for Returned Checks and After Hours Service**

The Company has not determined the appropriate price to charge for after hours service calls or handling insufficient funds checks. The Company currently charges customers \$13 if their check is returned by the bank for insufficient funds, and \$10 for after hours service calls. The Company performs approximately four to six after-hours service turn-ons per week.

Most businesses currently charge up to \$20 per insufficient funds checks to cover banking charges and the internal office handling of such checks. In addition, a \$10 service charge for after hours turn-ons is low in the opinion of the MSD staff, when considering the average hourly overtime wage of approximately \$10 per hour, plus the vehicle-related expenses.

The MSD staff believes the Company should consider increasing charges for both insufficient funds checks and after-hours service calls. At a minimum, the MSD staff believes the Company should charge between \$15 and \$20 for both insufficient funds checks and after-hours service calls. These charges should also be filed with the Commission, and would assist the Company in more fairly recouping its expenses from the customers who are responsible for them. In addition, the extra charges may serve as a deterrent to customers who otherwise would write an insufficient funds check or would require an after-hours water turn-on.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Determine the propriety of current charges for insufficient funds check handling (\$13) and after-hours service turn-ons (\$10), and file appropriate market rates to recoup costs in the Company's next rate filing.

**Access to Cash Drawers**

The Company currently has an unnecessary third cash drawer in the Business Office. One cash drawer is maintained by the billing clerk and contains a balance of \$75. This drawer is used by other Company employees as the need arises to make change for customers paying bills, or for miscellaneous purchases (postage) or for other similar uses. Another cash drawer is maintained by the final billing clerk and has a \$25 balance. This particular drawer is used only by the final billing clerk for such purposes as making change for customers, postage, and other similar purposes.

A third cash drawer that contains potentially several hundred dollars is maintained by the assistant manager. However, the MSD staff was unsuccessful in determining the purpose for the drawer, or the exact balance of the drawer on three separate occasions during the management audit. In addition, only one set of keys are available to the drawer and they are always in the possession of the assistant manager. The Company contends that the third drawer is used to make change and to buy back customer checks from the bank that were drawn on insufficient funds.

It is the position of MSD staff that no more than two cash drawers are necessary at the Company. The current arrangement of a third cash drawer, unavailable to anyone except the assistant manager is not a sound business practice. If the cash drawer which is used only by the assistant manager is deemed necessary, the Company should implement effective financial control procedures.



**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Review the need for the third cash drawer and if found necessary, implement effective control procedures to ensure the security of these funds.

**Lack of Time Keeping Records**

Business office personnel do not track time spent on major work activities on a timely basis. While the purpose of daily, weekly or monthly time sheets is to serve as a management tool for identifying and planning work load, time sheets, if used correctly, can encourage employee accountability. Weekly activity logs are completed by the president and general manager, but do not record the number of hours spent on a given task.

It is MSD staff's opinion that it would be beneficial for business office employees including management to begin the practice of completing daily time sheets as the field personnel do currently. These time sheets would serve as documentation of employee work activities as a tool for senior management, and for review by the Board of Directors or external auditors. Time sheets should be used by personnel to indicate activities performed for regulated and non-regulated businesses.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Develop and implement a time reporting sheet to be completed by all business office and management personnel.

**Employee Awareness of Position Descriptions**

Most employees were not aware that position descriptions developed in 1992 had been created for their particular positions, nor did they have the opportunity to review them. A good position description serves as a tool for both employer and employee in that it defines job responsibilities and establishes the basis for the employee's accountability for work performance.

Position descriptions should be shared with employees in clarifying position expectations and responsibilities, and be used to develop objectives for employees' performance appraisals. The MSD staff supports senior management's efforts in developing position descriptions for its employees, but encourages the Company to use the position descriptions in the manner described above.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Distribute position descriptions to appropriate Company personnel.

### **Performance Appraisal Process**

The Company does not regularly conduct written employee performance appraisals. While the MSD staff supports senior management's efforts toward developing a form for this purpose, the MSD staff was unable to identify an employee who had ever been given a written performance appraisal.

An effective performance appraisal process can provide significant benefits to both management and its employees. The performance appraisal process is the basis for establishing employee accountability for assigned work responsibilities and management review of past performance. It may also serve as a basis for compensation and promotion, and as an indicator for needed job training.

The first step in developing the program is to identify and document the key work activities for each employee and to establish a quantitative measurement (objective) by which to evaluate future performance. Performance objectives must be reviewed by each employee.

In addition to encouraging the Company to perform regular performance appraisals, the MSD staff encourages senior management to develop performance appraisal forms that reflect the expectations of each position and provide meaningful and realistic objectives. The development of these objectives should include employee involvement and should be derived from work already identified by developed position descriptions.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

**Develop performance appraisal forms that provide realistic performance objectives for each employee and perform annual employee appraisals.**

## **FIELD OPERATIONS**

### **Overview**

Field Operations consist primarily of system maintenance activities such as main and leak repairs, new system construction, line locations (which involve locating water lines and marking them with blue paint), meter pulling, testing, cleaning and resetting, locating, flushing and lubricating fire hydrants, responding to customer comments and complaints, and taking water samples. The Company has a number of projects in which it will become more involved in the future, such as the Valve Location and Operation Program, and the development of a back flow prevention program under the direction of DNR.

The systems and practices that the Company has in place to ensure that it effectively and efficiently utilizes and employs the proper number of staff were reviewed during the management audit. The MSD staff reviewed the existence of work standards, work order control systems, work assignment and follow-up processes, documentation and reporting of completed work and operating problems, performance reports, and senior management's ability to recognize areas requiring improvement and implement corrective action.

The field operations are performed by three full-time hourly employees and the working foreman. The Company's meter reader's responsibilities were discussed in the Business Office Operations section above. Field personnel also report to the same address as do business office employees (9820 East 63rd Street). Normal hours for field personnel are 7 a.m. to 4 p.m. Monday through Friday. Some of the Company's vehicles and most equipment are stored at the new water tower located three blocks west of the business office.

During the management audit, the MSD staff interviewed all field personnel and conducted several hours of work observations. A primary concern expressed in most interviews was the lack of current staffing needed to meet additional regulatory requirements, such as the Valve Location and Operation Program and the Meter Testing Program. The Company was authorized to hire an additional field worker as a result of the last rate case in the fall of 1992. The new field employee was hired in October 1992 and has participated in such activities as the program to pull, test, clean, and reset meters, main and leak repair, hydrant flushing maintenance and flow charting, and other field work. However, field personnel and senior management indicate that the additional person is not enough to meet its current work load.

### **Findings, Conclusions and Recommendations**

The following discussion presents a summary of findings, conclusions, and recommendations pertaining to the field operations of the Company. This review identified nine areas requiring management's attention:

- Development of work standards to assist work planning, scheduling, and controlling
- Collection of payments in the field for discontinued service
- Safety practices
- Timely completion of vehicle and equipment logs
- Vehicle replacement policy

- Installation of two-radio in service vehicles
- Hand tools and small equipment for field personnel
- Inventory and equipment requirements
- PSC Inspection Report deficiencies

#### **Development of Work Standards to assist Work Planning, Scheduling, and Controlling**

During work observations of field personnel, the MSD staff noted a number of areas where the Company could make significant improvement in the management of its existing work volume and work force. One of the most significant areas of improvement lies in the area of work planning and scheduling.

The Company indicated that it is difficult to plan and schedule work due to being unable to predict when a water main will break or when a leak may be reported. The MSD staff agrees that these occurrences are certainly unpredictable. However, it is MSD staff's opinion that the Company can better prepare itself for such occurrences by proper planning of its predictable work, and by developing practices and standards to use in work scheduling and controlling.

The MSD staff noted a number of improvements that could easily be made in assisting the Company's readiness to begin work. During the first morning of observations, the MSD staff noted that the dump truck required for the first job planned was not cleaned from the previous time it was used, nor were all vehicles required for work that morning fueled and ready to be driven to the job site.

Work was not organized in an efficient manner. On two occasions during the morning two men were sitting in trucks waiting at the work sites for up to 45 minutes while two other employees went to get asphalt in the dump truck. Getting asphalt requires no more than driving to the location and parking the truck underneath the asphalt loader. In the opinion of the MSD staff, utilizing two employees for this task appears to be inefficient. One employee had been sent to the first job site prior to the other two employees to sweep the street cut, and to ensure that the barricade was still standing from the night before. In addition, it is questionable to assign four skilled persons to asphalt street cuts that are 15 square feet or smaller.

It is the MSD staff's position that senior management would be better able to plan its work if it would develop work standards for its more routine tasks, and develop work plans based on reasonable manhour requirements. For example, if the Company knows in advance that getting

asphalt will take an employee approximately 30 minutes, it should assign remaining employees other activities to be performed until the asphalt arrives. In addition, if asphalt takes an hour to arrive, senior management will be prompted to question the variance.

Visits to the job site should be planned in advance, with the proper tools organized and ready for work. Equipment should be cleaned after it is used to minimize preparation for the next job. Vehicles should be fueled the night before they are needed.

It is the opinion of the MSD staff that the Company has the ability to develop standards for a number of its routine tasks and can utilize those standards to effectively plan, organize and control its work. A comprehensive work force management system that would possibly require the expense of outside expertise is not proposed, but the MSD staff recommends the internal development of standards that can be effectively used by senior management in the ways described above.

Effective work standards provide management a sound basis for matching its work force to the available work load. In-depth work planning prior to assigning work will minimize the lost time (non-productive) hours caused by problems that interfere with the employees' execution of work assignments. The MSD staff estimates that present work practices cause approximately 25 percent lost time (non-productive) manhours, which can be converted to productive activities by the implementation of effective work standards and work force management practices.

Critical to the success of the implementation and usefulness of work standards is the communication of the standards to the accountable employees. The MSD staff encourages the Company to involve its employees in the development of work standards where possible and inform employees of their use. Effective implementation of these recommendations has high potential to significantly reduce maintenance and construction manhour requirements.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Develop standards for routine tasks and use them to more accurately to plan, organize, direct and control maintenance and construction activities.

Communicate work standards to all field employees and solicit employee input into their development.

**Collection of Payments in the Field for Discontinued Service**

The Company currently does not typically allow field personnel to collect payments from customers at their residence immediately prior to turning water service off. The MSD staff believes

that the Company is missing opportunities for increased efficiency by having field personnel turn service off, and then return to the customer's residence (perhaps even the same day) to turn service on again.

If the customer is at home and willing to make payment when field personnel are present to turn service off, it is only logical that they be allowed to take payment at that time and avoid making another trip to the residence. Field personnel also should be equipped with appropriate receipt documentation to provide the customer and Company with a record of the payments they receive.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Consider authorizing field personnel to take payments from customers in the field when service is about to be turned off.*

### **Safety Practices**

The MSD staff noted a number of practices where it believes the Company should be exercising more attention to issues of safety. The MSD staff supports the Company's attendance at Occupational Safety and Health Administration (OSHA) seminars, but believes the Company should give some safety issues increased attention.

Some of the safety concerns include the irregularity with which employees wear seat belts while driving Company vehicles. The MSD staff noted that in some vehicles the seat belts appeared to be beneath the seat, indicating they were rarely if ever used, or perhaps were not even available to employees.

While digging into large trenches to repair leaks, the MSD staff noted that the Company should use shoring techniques or exercise more caution (such as additional ground removal) before having an employee enter into trenches. Formal training in this area may prevent a possible serious accident.

In addition, the MSD staff notes that some of the Company's equipment appears unsafe. For example, the Company has converted a 3/4 ton pick-up truck into a dump truck. This truck has turned over once because it is not heavy enough to support the bed once it is raised to unload materials. In addition, passengers are instructed not to lean on the door because it does not close properly and they may fall out. The MSD staff rode in this truck with Company personnel and noted that the truck could not be driven at the normal speed limits because the bed swayed significantly.

This vehicle appears highly unsafe, and the MSD staff believes that it is putting the Company at significant risk to operate.

It is the MSD staff's understanding that Central Missouri State University (CMSU) has a program to perform safety audits for organizations at no charge, and make suggestions as to ways they can develop a safer working environment. This would be one low-cost option to get some professional assistance in this area.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Place greater emphasis on safety issues including formalizing safety training for all field personnel.

**Timely Completion of Vehicle and Equipment Logs**

The MSD staff observed that the Company does not regularly complete vehicle and equipment logs as the machinery is used. Such logs can be an important control tool for senior management as they provide usage information regarding each job performed at the Company. They also can serve as indicators to senior management when equipment is being used in manners that are not associated with work of the water company.

The Company has acknowledged that vehicles and equipment are sometimes used for non-utility purposes, and the Company asserts that it is reimbursed for such usage. Such non-utility usage makes completion of vehicle and equipment logs even more critical. The MSD staff was informed by personnel that there have been previous abuses of vehicle use, and it is the MSD staff's opinion that properly maintained and monitored logs would help to minimize such abuse.

The Company notes that it has recently automated its inventory of vehicles and equipment, including maintenance data. This type of information has been entered since the fall of 1992.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Ensure that vehicle and equipment logs are completed on a timely basis all personnel, and that usage is regularly monitored to determine that resources are being appropriately utilized.

**Vehicle Replacement Policy**

The Company could benefit by developing a vehicle replacement policy. The policy should provide guidelines as to when the Company should consider replacing its existing fleet, as well as how senior management should go about purchasing vehicles. For example, the vehicle replacement

policy should include procedures for competitively bidding vehicles and specify the particular features necessary, such as having an automatic transmission in the vehicle driven by the meter reader.

All documentation for vehicle bidding should be maintained by the Company for future reference, and for review and approval by the Board of Directors. This should help the Company negotiate for better prices in the future given the extent of documentation used in the decision-making process.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Develop and implement a formal vehicle replacement policy that includes elements such as vehicle purchasing justification, procedures for competitively bidding vehicles and vehicle specifications.*

#### **Installation of Two-Way Radios in Service Vehicles**

The Company does not have two-way radios installed in most service vehicles. The Company owns a number of vehicles which are used to read meters, to perform service calls, to travel between job sites for leak repairs and new construction and to perform line locations. The Company's fleet consists of three Isuzu pick-up trucks, a Ford van, a 3/4-ton pick-up, a 1-ton pick-up, and a 3/4-ton 4 X 4 truck.

The Company has a two-way radio in one of its vehicles, but employees report that the radio is not reliable. According to senior management, two-way radios were in all trucks and operational in 1982. However, these radios were not repaired and/or replaced in a timely manner due to constraints on Company resources.

Given the lack of radios in the other vehicles, field personnel cannot be readily contacted when they are away from the business office. Field personnel currently return to the business office after each job performed to obtain additional assignments. This process could be improved upon by enhanced work planning and scheduling as discussed earlier, as well as assist by the installation of two-way radios in the trucks that are most frequently used.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

*Evaluate the cost/benefits of installing two-way radios in all service vehicles.*



### **Hand Tools and Small Equipment for Field Personnel**

While conducting interviews of Company employees, MSD staff was made aware that field employees do not always have the necessary hand tools and small equipment items to perform their jobs effectively. The MSD staff is aware that small hand tools are items that can be easily misplaced, lost or even stolen, but encourages the Company to find a method of making the appropriate tools available to employees who need them.

Specifically, the MSD staff was told that hammers and other small hand tools are needed. The MSD staff also observed that one water pump used to pump water from trenches while leaks are being repaired does not work properly, and was of little use while on the job site.

A possible solution for the Company may be to assign a set of tools to each field employee and require the employee to be responsible for them. Another solution may be to assign each vehicle a set of hand tools and have the vehicles periodically checked for their tool inventory. However the Company plans to approach this issue, the MSD staff encourages senior management to address the issue of needed hand tools by its field employees and the possible need for a new water pump. It is the opinion of the MSD staff that efficiency is impaired when employees do not have necessary hand tools readily available, or must sometimes return to the office from the field to look for tools that may or may not be there.

#### ***MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:***

***Provide field personnel with necessary hand tools and equipment to effectively perform their work.***

### **Inventory and Equipment Requirements**

The Company does not have the proper materials and equipment to complete valve exercising and meter testing programs on a timely basis. The valve exercising program consists of raising all mainline valve box lids to grade level, operating the valve, determining whether a valve is opened or closed, and when closed, what geographic area is affected. The meter testing program requires that all residential meters be tested every 10 years. Larger meters are to be tested more frequently.

The Company does not utilize an air-powered valve wrench (about \$7,000) to perform valve exercising. According to senior management, this would reduce valve exercising time by approximately 50%, as well as minimizing liability associated with field personnel workers compensation claims related to back injuries. It is the opinion of the MSD staff that this work should

also be scheduled during warm weather months because valve exercising is easier to perform than in the winter months. The payback on this investment is estimated to be less than one year.

The Company does not utilize a beadblaster (approximately \$1,000 cost) to properly clean and test water meters. According to senior management, this device takes heavy paint off the metal, and would reduce time associated with meter testing by 50% since brushing is no longer required. It would also eliminate the Company's need for handling a 55-gallon barrel of acid typically used in meter cleaning, and the associated hazardous waste disposal requirements. The MSD staff estimates that the Company would also need to have an additional 400 meters in inventory (about \$13,000) in order to change out meters when being tested.

It is the opinion of the MSD staff that this cleaning and testing work should be scheduled during periods of inclement weather, and that the payback on this investment would be less than two years. These expenditures should help the Company respond to two mandated programs in a cost-effective manner. Senior management stated that these equipment purchases may be included as part of a future rate relief filing.

***MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:***

*Purchase the necessary inventory and equipment to complete valve exercising and meter testing programs.*

**PSC Inspection Report Deficiencies**

The PSC Water Department identified several deficiencies associated with its June 4, 1993 inspections of the Gregory Tower and the Chapel Tower. Both towers were cited for not having adequate screen coverage to prevent animals and insects from entering the storage tank overflows. There were also concerns of external paint and unnecessary electrical conduit and wiring at both towers.

The Gregory Tower's external coating of paint is approximately 20 years old and is fading away. If it is not corrected in a timely fashion, it may cost around \$15,000 to paint (and sandblasting may be necessary). There is also some electrical conduit that appears to have been stubbed out of concrete blocks, which needs to be replaced in order to prevent personal injury.

One of the Chapel Tower's legs has isolated sections of external layers of paint that are peeling away. There are also some electrical service wires hanging loosely near the Chapel Tower that should be removed.

The primary benefit would be to correct the physical deficiencies and upgrade the appearance of both towers, and to reduce liability associated with potential personal injury on these properties. It is the opinion of the MSD staff that minimal costs should be incurred to correct the deficiencies cited above.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Correct all deficiencies cited in the 1993 PSC Water Department inspection report.

**CONSTRUCTION AND MAINTENANCE CONTROL PROCESSES**

**Overview**

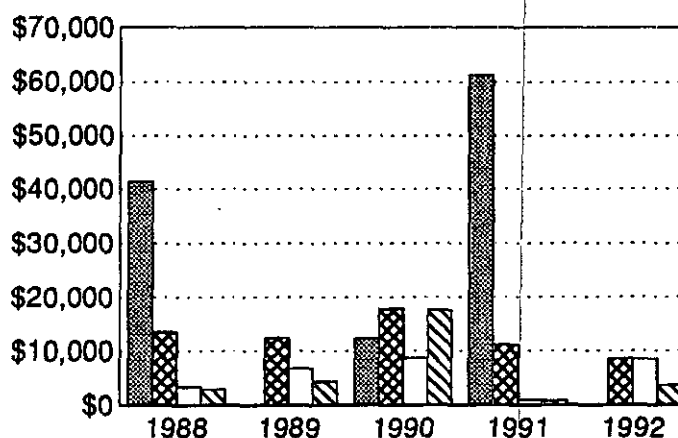
The Company has traditionally performed most of its construction projects in house with little use of contracted labor. During 1992, the Company faced a major construction project that included the building of a two million gallon water tank. The Company used Larkin Engineering to develop specifications for the tower and to conduct the letting of the bids. The Company decided upon Pitt-Des Moines for tower construction, who offered the lowest bid to build the tower at \$1,489,950.

The Company has about 10 projects to be contracted out for completion by the fall of 1993. This is being financed from approximately \$500,000 in excess bond proceeds. These projects include building two meter pits to house the equipment that meters water from the City of Kansas City, as well as replacing a significant amount of 2" galvanized mains.

The Company utilizes a work order system to track its construction and maintenance projects. Amounts are recorded for materials required for each job as well as labor to document those expenditures that should be capitalized and those that should be expensed. The Company maintains approximately \$70,000 in inventory, and the working foreman prepares a Stores Report each month that is currently submitted to and reviewed by the Chairman of the Board.

The Company provided MSD staff a list of capital projects that it had completed from 1988 through 1992. The following table represents the Company's expenditures and type of projects incurred for each year:

### Construction Activity for 1988-1992



|                       |          |          |          |          |         |
|-----------------------|----------|----------|----------|----------|---------|
| Main Extensions       | \$41,391 | \$0      | \$12,301 | \$61,227 | \$0     |
| Fire Hydrant Installn | \$13,514 | \$12,378 | \$17,894 | \$11,123 | \$8,578 |
| Main Relocations*     | \$3,326  | \$6,718  | \$8,715  | \$953    | \$8,443 |
| Valve Installation    | \$2,884  | \$4,367  | \$17,619 | \$760    | \$3,646 |

\*Due to Raytown Sewer Project

Source: Information Request RW-24

### Findings, Conclusions and Recommendations

The following discussion presents a summary of findings, conclusions and recommendations pertaining to the construction and maintenance control processes of the Company. This review identified two areas requiring management's attention:

- Pipe replacement policy versus pipe repair
- Lack of documented contractor inspections

#### Pipe Replacement Policy Versus Pipe Repair

While conducting field observations, the MSD staff observed field personnel repairing a leak in a portion of two-inch galvanized pipe that had been repaired in virtually the same location at least twice before. The MSD staff noted that the new clamp placed on the pipe was only inches away from a clamp placed previously.

The effort and expenses required by the Company to repair this portion of pipe was extensive. The Company's backhoe was utilized to dig into asphalt and down approximately eight feet. The Company's entire field crew worked on this project as water had to be pumped from the trench and in some cases removed by buckets. New gravel had to be placed in the trench and because the leak was underneath a parking lot, the filled trench had to be covered with asphalt.

The MSD staff believes that in this particular case, the Company would have been more prudent by replacing the section of pipe the first time a leak was discovered given the project's difficulty, required expenditure of resources, and the age and deterioration of the pipe. The MSD staff realizes that the Company is currently working toward implementing a galvanized main replacement program. If the Company is unable to implement the program, the MSD staff encourages the Company to consider replacing entire sections of galvanized pipe as it leaks, as opposed to incurring the additional expenditures of equipment, labor and materials to repeatedly repair leaks that are in close proximity.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Determine when pipe replacement is more cost effective than repair and develop a policy to guide field personnel accordingly.

**Lack of Documented Contractor Inspections**

The Company indicated that it has made repeated inspections on contracted work performed on its new water tower, but does not typically document the progress observed. There is no documentation being done with other contractors as well. According to senior management, the current bond indenture agreement requires that any work on the new tower is to be inspected, documented, and reviewed by Mercantile Bank and Larkin.

The MSD staff believes it would be beneficial to the Company to periodically document progress made with regard to its contracted projects. Senior management would then have a record of any variances in contractor performance versus scheduled activity, which could serve as a document to guide in future contractor selection.

**MSD STAFF RECOMMENDS THAT COMPANY MANAGEMENT:**

Document progress observed regarding work performed by outside contractors and utilize documentation for project scheduling and future contractor use.

RW-

Raytown Water Company  
Position Descriptions

Title: Assistant Manager  
Reports to: General Manager  
Supervises: Accounting Supervisor  
Date: December 1992

Overall Function

The assistant manager is responsible for researching and identifying environmental issues that could effect Raytown Water Company and researching and planning for special projects that may have to be undertaken within the office and the field. The assistant manager is responsible for ensuring that the environmental issues and the special projects are correctly addressed or implemented. The assistant manager is also responsible for the management of the IS/computer resources and office personnel resources at Raytown Water Company.

Primary Duties and Responsibilities

**Environmental**

- o Research of potential and existing environmental issues.
- o Identify ways to address environmental issues.
- o Communicate with the foreman and perform field visits to discuss and verify that environmental issues are correctly addressed.

**Special Projects**

- o Research regulations and identify special projects that need to be undertaken.
- o Provide input to the general manager on the priority and cost of implementing special projects.
- o Develop plans for implementing special projects.
- o Review implementation plans with the foreman and the general manager.
- o Work with the foreman and perform field visits to ensure that the special projects are implemented according to plan.
- o Ensure proper documentation is developed to support special project efforts and satisfy regulatory requirements.

**IS/Computer**

- o Selection and implementation of new software programs.
- o Design and implementation of modifications to existing software programs.
- o Identification of policies and procedures for software usage.
- o Assistance with hardware and software problems when the accounting supervisor is unavailable or is unable to answer a question.
- o Primary contact for hardware and software vendor communication.

**Office Supervision**

- o Provide supervision and guidance to the accounting supervisor.
- o Review accounts payable, payroll and general ledger processing.
- o Assist in identifying ways to computerize manual procedures and eliminate duplicative procedures.