BEFORE THE STATE CORPORATION COMMISSION

OF THE STATE OF KANSAS

DIRECT TESTIMONY

OF

DOUGLAS J. HENRY

WESTAR ENERGY

DOCKET NO. ______________

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Douglas J. Henry, 777 West Central, Wichita, Kansas 67202.

Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

A. Westar Energy, Inc., Vice President, Power Delivery.

Q. WHAT ARE YOUR RESPONSIBILITIES?

A. I direct Westar's power delivery functions, commonly referred to as the "wires business." Power delivery encompasses electric transmission and distribution throughout Westar's service territory and involves transmission and distribution engineering, planning, dispatch, construction and maintenance. I am also responsible for technical services and administrative functions that support power delivery.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I have been in the utility business 30 years, since graduating from the University of Missouri-Rolla in 1975 with a BS in Electrical Engineering. After serving approximately two years as a staff engineer with Oklahoma Gas and Electric Company in Oklahoma City, I began work with Kansas Gas and Electric Company (KG&E) in January 1977 as a staff engineer. I have held numerous management jobs since 1979 in both transmission and distribution operations and engineering including serving as KG&E's Chief Engineer (1986-1992) and Director-Wichita Operations (1992-1996), Westar's Executive Director-Transmission & Distribution Engineering and Operations (1996-98), and VP-Power Delivery (1998-2001; 2003 to present). I resigned from Westar on November 1, 2001 and returned on May 1, 2003 at the request of Messrs. Haines and Moore.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony identifies and discusses our efforts to improve the reliability of Westar's transmission and distribution system. As part of that discussion, I provide historical information on reliability-related expenditures and reliability performance. Specifically, my testimony tracks reliability-related expenditures since 1998 and includes figures showing reliability performance results for the period 2000 through 2004. Looking to the future, I discuss our 2004-2008 five-year reliability goals, our major reliability initiatives, and the associated cost estimates to implement those initiatives. I also support the inclusion of certain service quality measures in our Reliability-Based Sharing Proposal.

II. RELIABILITY

Q. PLEASE IDENTIFY THE MAJOR INITIATIVES UNDERTAKEN BY WESTAR ENERGY IN RECENT YEARS TO IMPROVE RELIABILITY OF THE TRANSMISSION AND DISTRIBUTION SYSTEM.

A. In 1997, subsequent to the merger and integration of The Kansas Power and Light Company and KG&E, Westar, under my direction, commenced a program to place increased emphasis on improving the reliability of our transmission system. We initially focused on transmission reliability because both failures and improvements in our transmission system can be expected to have the greatest impact on the largest number of our customers. Components of this program included expanded right of way clearance efforts, 230 kV AAAC (all aluminum alloy conductor) mitigation, EHV (extra high voltage) line terminal relay replacement and replacement of older substation equipment.

In 1998, the Power Delivery business unit was formed. This enhanced our ability to better plan and manage our reliability programs more efficiently and cohesively on a total transmission and distribution system-wide basis. For example, Power Delivery has been responsible for overseeing a large expansion in Westar's vegetation management/distribution line clearance program that began in 1999. The improvements are dramatic. From 1999 through 2004, the annual line clearance miles for under 25 kV lines increased from 570 miles to 1,855 miles while the number of clearance miles for 34 kV lines increased from 0 to 381 miles. Our 34 kV line clearance is currently on a four-year cycle.

Combining distribution operations into one group has also allowed us to be more efficient with our programs. For example, during this same period (1999-2004), Westar's average cost per mile for distribution line clearance dropped from approximately $14,000 to $6,000 due to the centralization of line clearance management that occurred in 1999 and other process improvements we implemented. An independent assessment of our vegetation management program noted that between 1998 and 2003 Westar had increased the number of miles of circuits that have been completely cleared by nearly 400 percent, with a 96 percent increase in expenditures. There are additional opportunities to improve the efficiency of our vegetation management/line clearance program.

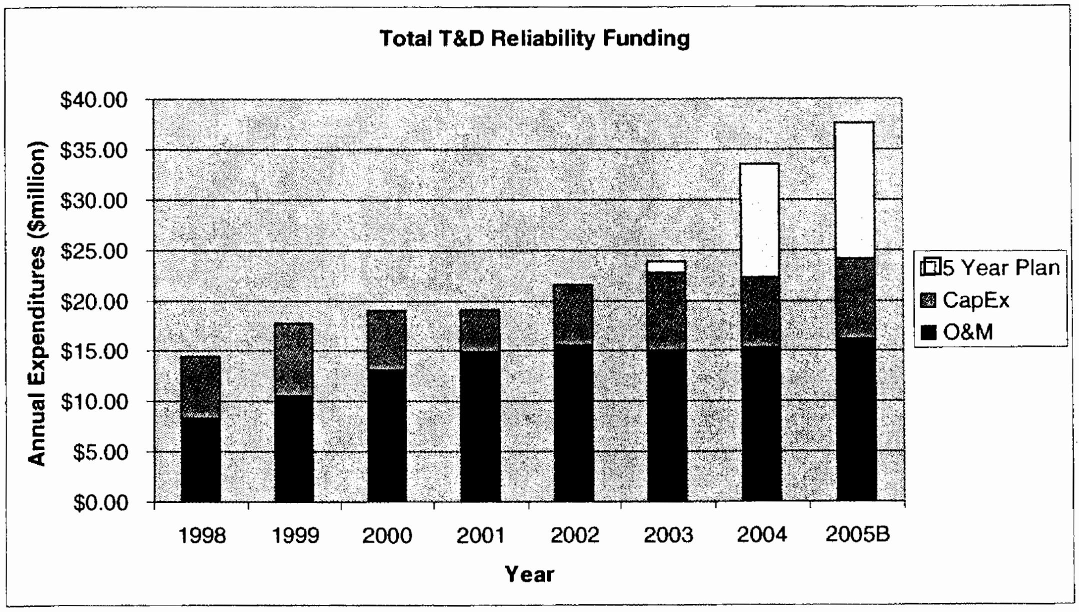
In 1998, we initiated enhanced equipment replacement and substation refurbishment programs, while continuing to expand our line clearance efforts. Items included expansion of our SCADA system, 12 kV breaker replacements, and 34 kV circuit refurbishment.

In 2003, we developed a comprehensive five-year strategic reliability plan. Outputs of the plan include performance targets for the period 2004-2008 and the identification and prioritization of reliability initiatives.

Q. HAS WESTAR INCREASED FUNDING FOR SYSTEM RELIABILITY?

A. Yes. Figure 1 below shows Westar's Capital and O&M expenditures for system reliability for the period 1998 through 2004 as well as for the 2005 budget. The annual combined Capital and O & M reliability expenditures increased from $14.4 million in 1998 to $33.5 million in 2004. The 2005 budget for these expenditures is $37.6 million. Underscoring Westar's commitment to improve system reliability, a major increment of the increase in expenditures occurred during a time when, as the Commission knows, Westar was in the process of paying down substantial debt. The expenditures identified on Figure 1 as "Five Year Plan" for 2003-2004 and the 2005 budget include both Capital and O & M expenditures related specifically to implementation of our five-year plan.

FIGURE 1



Q. WAS FUNDING FOR VEGETATION MANAGEMENT/LINE CLEARANCE INCREASED IN THE 1998 THROUGH 2004 TIME FRAME?

A. Yes. Trees growing in and near our lines are among the leading causes of service interruptions. Therefore, a substantial portion of the reliability-related funding increase was directed toward an enhanced vegetation management/line clearance program. Reflective of this increase, in 1998 our transmission and distribution O & M line clearance expenditures were $7.89 million. By 2004, our O & M expenditures for line clearance had increased to $18.77 million. Over the last seven years, we have expended approximately $93.8 million for line clearance O & M costs alone.

The magnitude and importance of this program is driven by the size of our transmission and distribution system. It includes 4,400 transmission structure miles and nearly 22,053 distribution overhead pole miles.

Q. UPON WHAT PRIMARY INDICATORS DOES WESTAR RELY TO MEASURE RELIABILITY PERFORMANCE?

A. We believe that three primary reliability indicators are important and they are included in our 2004-2008 five-year plan goals. They are the System Average Interruption Frequency Index (SAIFI), the System Average Interruption Duration Index (SAIDI), and Customers Experiencing Multiple Interruptions (CEMI).

Q. WHAT IS SAIFI?

A. SAIFI reflects the annual average frequency of sustained interruptions per customer. SAIFI is calculated by dividing the total number of sustained customer interruptions (greater than five minutes) by the total number of customers served. Our first and most important reliability objective is to prevent interruptions. Accordingly, reducing SAIFI has a high priority as we develop our reliability plans and determine where funding should be directed.

Q. WHAT IS SAIDI?

A. SAIDI reflects the annual average time customers are interrupted. It is calculated by dividing the sum of customer interruption durations by the total number of customers served.

Q. WHAT IS CEMI?

A. CEMI represents the total number of customers that experience a certain number of sustained interruptions in a given year. Since 2002, we have measured CEMI-11 premises, which is the number of customers experiencing 12 or more sustained interruptions annually.

Q. DO THESE INDICES INCLUDE ALL EVENTS OR ARE MAJOR STORM EVENTS EXCLUDED?

A. Although each of these indices can be calculated to include all events, it is common practice to segment separately the minutes and interruptions that result from major system events. We designate as a major event one that exceeds reasonable design and/or operational limits of the electric power system and is out of our control. A recent example of such an event was the January 4, 2005 ice storm. The indices calculated with major system events removed are considered "normalized." Westar utilizes normalized indicators for trending, goal setting, and programming functions as well as benchmarking results between utilities.

Q. CAN MORE THAN ONE METHOD BE USED FOR NORMALIZATION?

A. Yes. In Westar's case, there are three methods that need to be discussed. First, prior to 2005, we historically used a methodology that required: (a) restoration time from a storm event to be at least

24 hours, (b) the assistance of crews outside the affected serving office to restore service; and (c) the Customer Average Interruption Duration Index (CAIDI) for the storm event to be at least 2.5 times the normal monthly CAIDI for the affected servicing office.

Second, in 2005, we adopted the normalization standard method developed by The Institute of Electrical and Electronic Engineers (IEEE), commonly referred to as IEEE-1366 2003. Under IEEE-1366 2003, a major event day is defined as a day in which the daily SAIDI exceeds a threshold derived statistically from the company's historical daily SAIDI results for the prior five years.

Third, in its Service Quality Docket, the Commission adopted what is commonly referred to as "the 10% rule." This rule defines a major event to be "a catastrophic event caused by forces exceeding the design limits required by codes and regulations, and characterized by extensive damage to the electric power system and sustained interruptions to more than 10% of a utility's customers within a 24 hour period." Docket No. 02-GIME-365-GIE, Electric Reliability Requirements, par. 3(n). Even though the Commission adopted this methodology in the Service Quality Docket, it also invited the utilities to report results using IEEE-1366 2003, and indicated a willingness to reconsider IEEE-1366 2003 at a later time after more statistical history has been accumulated.

Q. WHAT NORMALIZATION METHODOLOGY DID YOU USE TO DETERMINE YOUR FIVE-YEAR GOALS?

A. Our 2004-2008 five-year plan annual goals were originally determined using Westar's historic methodology described above. As I testified earlier, the five-year plan was developed in 2003 and we relied on the historic methodology until 2005. The statistical results from this methodology were sufficiently close to those obtained from applying the IEEE-1336 2003 methodology to allow us to retain the original plan goals even though we have made the internal shift to IEEE-1366 2003.

Q. WHAT NORMALIZATION METHODOLOGY HAVE YOU USED IN THIS PROCEEDING?

A. We used the IEEE-1366 2003 normalization methodology to develop the SAIFI and SAIDI data utilized by Mr. Fitzpatrick in determining the performance targets to be used for those two measures in our Reliability-Based Sharing Proposal. We did so because, as I noted above, the IEEE-1366 2003 methodology is now used for managing our reliability program. We believe it provides a sound basis for measuring performance and reviewing effectiveness. On a going forward basis, it will also furnish a more accurate and consistent method for benchmarking our reliability performance to that of other utilities.

Q. DOES THE NORMALIZATION METHODOLOGY HAVE AN IMPACT ON THE RELIABILITY-BASED SHARING PROPOSAL?

A. Yes. The average performance indicators and deadbands described in Mr. Fitzpatrick's testimony would vary depending upon the methodology used. I believe that using IEEE-1366 2003 provides a tighter, more focused approach than the 10% rule. Regardless of the methodology employed, however, it must be used consistently throughout the evaluation process, i.e., the same normalization methodology must be used to establish the annual targets and bandwidths and to measure actual results.

Q. PLEASE DESCRIBE WESTAR'S HISTORICAL PERFORMANCE UNDER THE SAIFI, SAIDI AND CEMI INDICATORS.

A. I have prepared Figures that display results for each of the three indicators as well as our 2004-2008 five-year goals. Figure 2 shows normalized data for SAIFI for the period 2000-2004 and our five-year goals. Figure 3 reflects normalized SAIDI data for the same period. Figure 4 displays normalized CEMI-11 premise count results for the same period. Again, I would note that the SAIFI and SAIDI indicators shown in these tables have been normalized using the IEEE-1366 2003 method.

FIGURE 2 – SAIFI

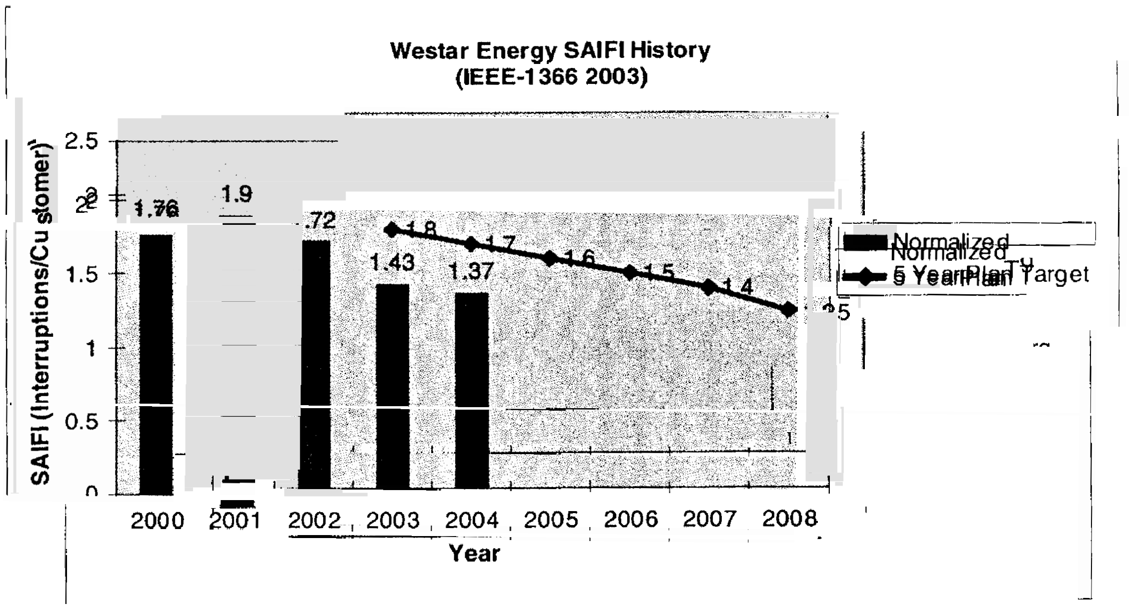


FIGURE 3 – SAIDI

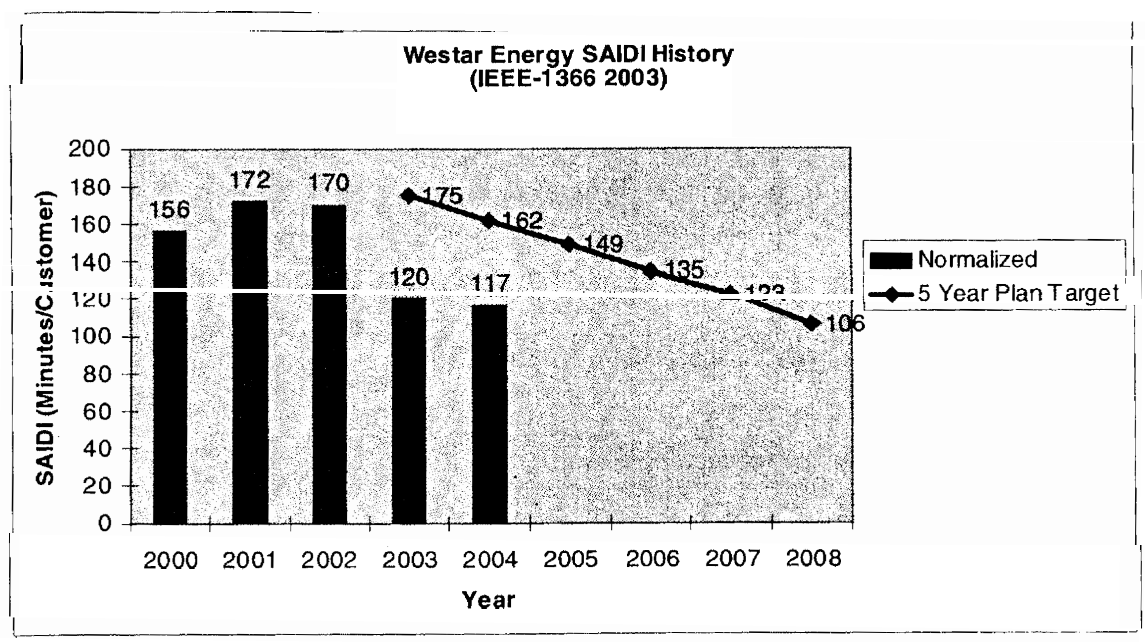
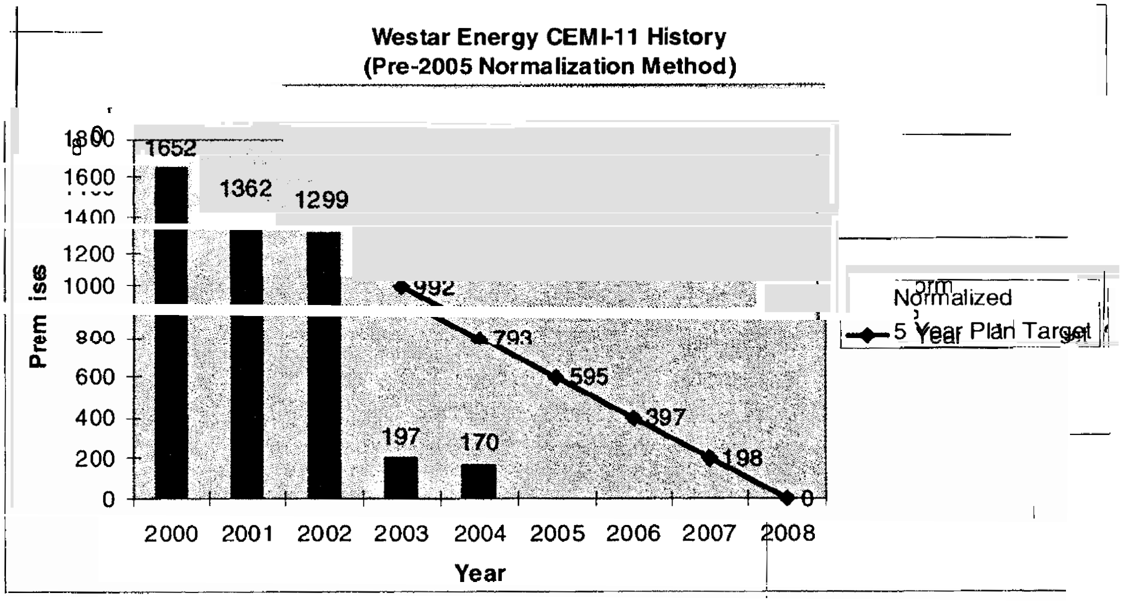


FIGURE 4 – CEMI-11



Q. DO THE FIGURES SHOW ANY TRENDS IN WESTAR'S RELIABILITY PERFORMANCE?

A. Recognizing that the results in any one year are likely to be affected by weather events that are not so severe as to be normalized, but still have significant impact on our system, I think it is clear that the trend for the years 2000 through 2004 reflects improvement. This is particularly true for the CEMI-11 premise count where the number of premises experiencing 12 or more sustained interruptions in a year declined precipitously from 1,652 in 2000 to 170 in 2004.

Q. WHAT ARE WESTAR'S SAIFI, SAIDI, AND CEMI 2008 PERFORMANCE GOALS?

A. As shown in Figures 2 through 4, our 2008 goals for these indicators are:

- Reduce SAIFI by approximately 30 percent from the 2002 result to a normalized level of 1.25 interruptions per customer per year. In 2002, our SAIFI index was 1.72. In 2004, the index was down to 1.37.
- Reduce SAIDI by approximately 40 percent from the 2002 result to a normalized interruption duration period of 106 minutes. In 2002, our SAIDI index was 170 minutes. In 2004, the index was down to 117 minutes.
- Reduce CEMI-11, the number of premises experiencing 12 or more sustained interruptions per year, to zero.

Q. WHAT HAS PROMPTED WESTAR'S EFFORTS TO FURTHER IMPROVE SERVICE RELIABILITY?

A. We take seriously our mission to provide safe, reliable, high quality electric energy service at a reasonable cost to our customers. The customer satisfaction surveys we have conducted over the last two years (2003-2004) give us generally high marks for reliability and service quality. Nevertheless, we recognize that there are significant opportunities for improvement to reduce both the frequency and duration of service interruptions.

There are also good reasons to believe that customers will be expecting more reliable power supplies in the future than in the past. As the electric industry has improved over the years, customers' expectations for higher levels of reliability in electric service have increased. Our customers, like those throughout the United States, are more dependent than ever on reliable supplies of electricity for business and household needs. The growing and pervasive use of computers in homes and businesses is one important factor contributing to the need for increased reliability. Power interruptions can lead to a loss of computer output and productivity with attendant costs and frustrations for customers.

Q. ON WHAT BASIS DID WESTAR DETERMINE THE FIVE-YEAR PERFORMANCE GOALS THAT YOU HAVE IDENTIFIED?

A. With respect to CEMI-11, we believe it is appropriate to eliminate excessive service interruptions as part of our mission to be a reliable electric energy supplier. We have already made significant progress toward this goal and we are determined to meet the goal. In fact, in 2005, we have started tracking CEMI-9, in addition to CEMI-11. Meeting the SAIFI and SAIDI goals will result in performance levels that are better than average for electric utilities in the United States for these performance indicators, notwithstanding the large size and rural nature of much of our service territory.

Q. WHAT FACTORS WILL INFLUENCE YOUR EFFORTS TO REACH YOUR PERFORMANCE GOALS?

A. I have already identified the occurrence of localized weather events that are not normalized as an important factor that can influence our performance. Another important factor will be our ability to direct sufficient funding to reliability-related projects between now and 2008. As I have discussed, we have already increased reliability funding significantly since 1998 with a major increase occurring in 2004. The 2004 combined Capital and O & M reliability-related funding was $33.5 million. As I previously noted, our budget for 2005 is $37.6 million. However, current projections indicate that an additional $12.75 million in combined Capital and O & M funding is needed annually to achieve our 2008 goals. I recognize that these are aggressive goals and we will be challenged to meet and sustain them.

The outcome of this rate review will impact our ability to fund our reliability-related projects. Whatever funding ultimately is available, we have made and demonstrated a strong commitment to our reliability programs. It is our intent to implement program efficiencies and to prioritize expenditures in ways that will maximize our reliability performance.

Q. IN ADDITION TO WEATHER AND FUNDING, ARE YOU AWARE OF OTHER FACTORS THAT MAY AFFECT WESTAR'S RELIABILITY PERFORMANCE?

A. Yes. Our infrastructure is aging. Thirty-one percent (31%) of our poles have been in service for over 40 years. Forty-five percent (45%) of our distribution substation transformers are also over 40 years old. The age of these plant components will increasingly affect reliability and most likely result in higher annual costs for plant repair and replacement than we have historically experienced.

An analogy comes to mind. My wife and I once owned a house that was nearly 40 years old. In addition to replacing shorter-lived things like water heaters and the like, we were also faced with larger issues such as re-building the front porch and driveway, completely refurbishing the HVAC system, and jacking up the foundation to eliminate the effects of years of settling. These expenditures were required to continue to maintain and use the asset we owned. We are concerned about the onset of similar needs with our T&D system as it continues to grow older. At some point in time, it is likely that much greater funding will be required to maintain the level of service required by our customers and the Commission, which we want to provide. We want to be in a financial position that allows us to make necessary expenditures to meet and maintain our 2008 reliability goals.

Q. PLEASE DESCRIBE THE MAJOR RELIABILITY INITIATIVES PLANNED BY WESTAR.

A. In 2003, under my direction, Westar initiated a strategic planning process to identify, prioritize, and estimate costs of programs that could improve the reliability of our systems over a five-year period. The original plan was reviewed in late 2004 by two independent consultants, Environmental Consultants, Inc. and Davies Consulting, Inc. Both found the 2003 plan to be sound and based on good utility practices. However, working with our employees, several recommendations for program improvements are under review. Major efforts that we are now implementing include:

- continued centralized focus on and enhancement of our vegetation management program (including distribution tree trimming, transmission rights-of-way clearance, herbicide treatments, etc.);
- conducting visual and infrared inspections on worst-performing equipment failed circuits (infrared senses heat emanating from damaged electric equipment and hence signals needed repair work before failure occurs);
- a multi-year plan to improve and update fuse coordination for distribution circuits (fuse coordination

minimizes the impact of an interruption by confining the area affected to as small an area as possible);

- refurbishment of distribution substations and feeders; and
- reducing the number of customers experiencing a high number of sustained interruptions.

We have also undertaken other less costly, but, nonetheless, important initiatives. They include such things as improving the quality of field incident coding, developing standards for best practices to improve lightning protection, and upgrading the standards for installing animal protection.

Q. WESTAR HAS OFFERED A RELIABILITY-BASED SHARING PROPOSAL THAT INCORPORATES SERVICE QUALITY INDICATORS. IS IT REASONABLE TO INCLUDE SUCH INDICATORS IN A PERFORMANCE BASED PLAN?

A. Yes. As I have discussed, our customers are increasingly dependent on receiving reliable electricity service and we are committed to meeting that need. I know that the Commission is also concerned that Kansas retail electric customers are provided reliable service. Including service quality indicators in the Reliability-Based Sharing Proposal is one reasonable way to underscore the importance that the Commission and we place on ensuring and improving service quality and reliability.

Q. THE WESTAR RELIABILITY-BASED SHARING PROPOSAL UTILIZES SAIFI AND SAIDI AS TWO OF THE FIVE SERVICE QUALITY PERFORMANCE INDICATORS. IS IT REASONABLE TO INCLUDE SUCH INDICATORS IN A PERFORMANCE-BASED PLAN?

A. Yes. SAIFI is a good reliability measure because it measures how often customers on our system experience supply interruptions. The incidence of a power interruption can immediately impose inconveniences on our customers. As I have previously testified, we endeavor to minimize the number of interruptions that our customers experience. Including a SAIFI measure in our Reliability-Based Sharing Proposal promotes this important goal.

SAIDI is a particularly important reliability indicator because it combines the effects of both the number of customers interrupted and the duration of sustained interruptions. Customer welfare depends not only on whether an interruption occurs, but how long it lasts. Customer well being clearly diminishes as the duration of power interruptions increases. We must attempt to restore power supplies quickly once an interruption occurs.

SAIFI and SAIDI are the comprehensive industry-accepted indicators of service reliability. Since these indicators are measured system-wide, they reflect all sustained interruptions experienced by customers on our transmission and distribution systems. I believe that a service quality performance plan should be applicable to all customer classes. The use of SAIFI and SAIDI is consistent with that objective because they take into account the reliability of service to all customers.

Q. WHY IS IT APPROPRIATE THAT PERFORMANCE MEASURES BE NORMALIZED RATHER THAN USING ACTUAL PERFORMANCE DATA?

A. As I discussed previously, we have normalized these measures for certain external influences, such as periods of severe weather that are beyond our control. In any incentive plan, it is important for rewards and penalties to reflect a company's real performance rather than factors beyond its control.

Q. IS WESTAR'S RELIABILITY DATA AFFECTED BY OTHER FACTORS THAT ARE NOT ACCOUNTED FOR IN THE NORMALIZATION PROCESS?

A. Yes. As I have previously noted, even after our SAIFI and SAIDI data are normalized to separately account for the effects of severe weather and related events that lead to widespread interruptions in our service territory, these indicators typically vary from year to year because of factors beyond our control. The most important of these factors is weather. Lightning, high winds and storms that are not severe enough to meet the normalization criteria are major causes of supply interruptions. Our SAIDI and SAIFI data would vary, for example, if in one year we had a dozen non-normalized storms and in the next we experienced half a dozen. Mr. Fitzpatrick has evaluated these natural phenomena and has estimated that these variables have a short-term impact of at least 50% of the normally occurring yearly variance. Of course, these weather factors fluctuate from year to year and cannot be predicted with confidence in advance. Therefore, even the normalized SAIFI and SAIDI data can be affected, to a significant extent, by circumstances that are beyond our control. This is one reason why it is appropriate to use bandwidths and ranges of performance instead of point estimates.

Q. ARE THERE DIFFERENCES IN OBSERVED SAIFI AND SAIDI BETWEEN ELECTRIC COMPANIES?

A. Yes.

Q. WHAT FACTORS MAY CAUSE SUCH DIFFERENCES?

A. Differences in these indices between utilities can result from factors specific to each electric utility's service territory. Such differences may not reflect real, underlying differences in the reliability of the electric companies'= services. For instance, it is common for rural territories to register higher values for SAIDI than urban areas. This occurs because customers are served with longer feeders that are more exposed to the elements and it normally takes more time for crews to respond to interruptions in rural areas because customers are in more remote locations. This tends to increase the duration of interruptions.

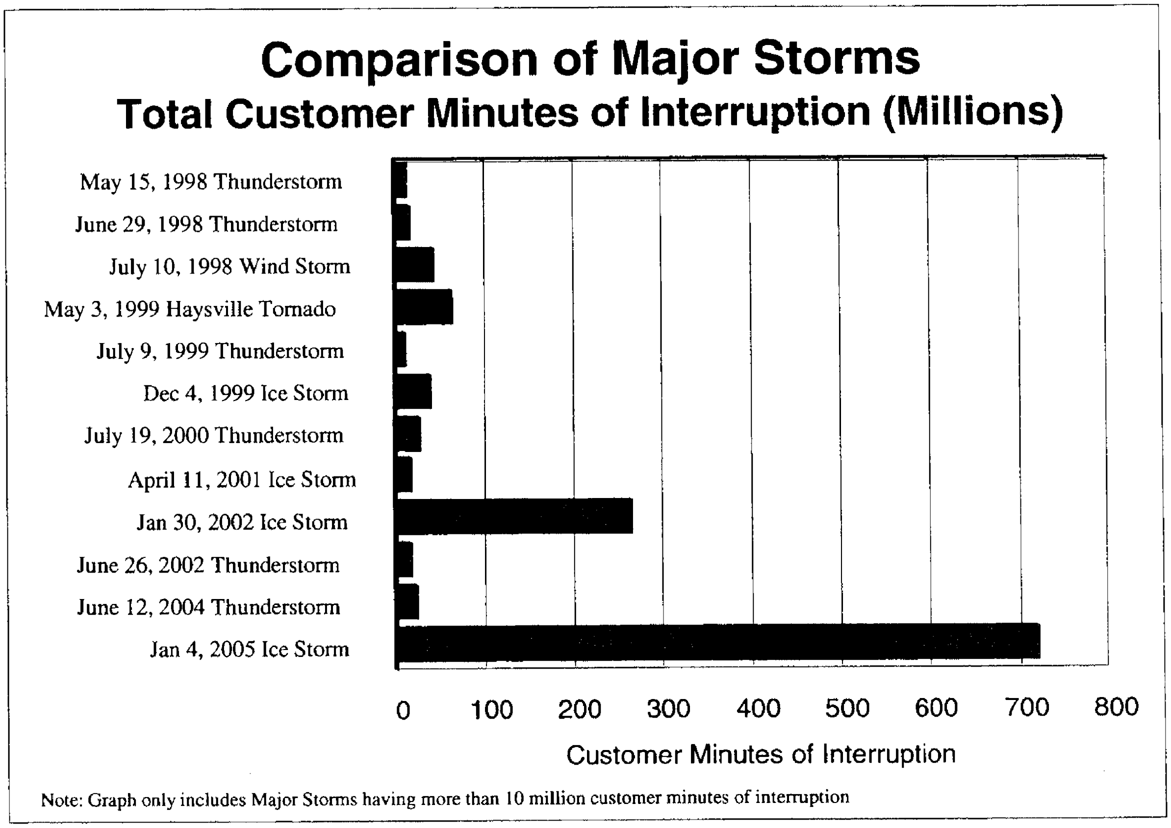
Q. SHOULD SEPARATE SAIFI AND SAIDI RELIABILITY MEASURES BE APPLIED TO THE WESTAR ENERGY NORTH AND SOUTH SERVICE TERRITORIES?

A. No. While there are differences in the make-up of the two service territories, the differences are not so great as to require separate reliability measures. Moreover, we have centralized reliability planning and management, applied our reliability goals across our transmission and distribution systems, and directed the development and execution of our reliability programs toward achieving uniformity and consistency across our service territories. We believe that one SAIFI indicator and one SAIDI indicator should be applied across our system.

III. 2002 AND 2005 ICE STORMS

Q. MR. KONGS IS SPONSORING AN ADJUSTMENT TO RECOVER THE COSTS ASSOCIATED WITH THE DAMAGE CAUSED BY TWO ICE STORMS. CAN YOU PLEASE DESCRIBE THE OPERATIONAL AND FINANCIAL BASIS FOR THIS ADJUSTMENT?

A. Our operations suffered severe damage from two extraordinary storms. The first occurred in January 2002 and the second in January 2005. What makes this circumstance particularly unusual is our having experienced two similar storms of such magnitude within a few years of one another. Figure 5, which shows a comparison of customer outage minutes caused by major storms in our service territory, graphically demonstrates the impact and



severity of the ice storms.

FIGURE 4

Q. WHEN WAS THE LAST TIME WESTAR EXPERIENCED DAMAGE OF THE MAGNITUDE CAUSED BY THE 2005 STORM?

A. Never. The 2005 ice storm is the most damaging storm in the history of Westar North and South. There are other instances of extraordinary storm damage, however, for which similar treatment has been deemed appropriate. For example, KPL sought and the Commission granted an accounting order to preserve for recovery costs from an extraordinarily severe ice storm that occurred in March 1984 – 21 years ago.

Q. HOW HAVE YOU TREATED THESE STORMS FROM A BOOKKEEPING PERSPECTIVE?

A. The portion of the restoration that qualified as capital expenditures were booked to plant in the ordinary course. For the portion of the restoration expenditures that qualify as maintenance expense, we applied a two-step process. First, for Westar South, in accordance with Commission order, we charged $4.1 million of this expense against the existing storm reserve. For the expenses beyond this level we sought and received the Commission's authority to defer these expenditures as a regulatory asset for future recovery. This rate review provides the first opportunity for Westar to begin recovering these costs.

Q. STORMS ARE PART OF KANSAS. HOW DO YOU BUDGET FOR THE COSTS OF STORM DAMAGE?

A. We include funding for some degree of storm damage in our routine maintenance budgets. In addition, and as I've already alluded to, we maintain a storm reserve account where we accrue expenses in expectation of having future storm damage of a magnitude we would consider to be greater than routine. We have a clear, established protocol as to when storm damage is severe enough where it warrants charging the related expenses to that reserve. The annual amounts for both of these are part of our cost of service. Neither of these provisions, however, is sufficient or was intended to address the cost of storm damage of the magnitude associated with either of the subject ice storms.

Q. WHY CAN'T YOU ESTABLISH A RESERVE FOR THIS LEVEL OF CONTEMPLATED DAMAGE?

A. We could, but I believe we would be doing our customers a disservice. To do so would run the risk of asking customers to pay for an accrual in their rates that would build up reserves we may never need in their lifetimes. At the very least, an annual storm accrual of such magnitude would run a high risk of being unfair to present customers.

Q. CAN YOU PURCHASE COST-EFFECTIVE INSURANCE FOR THIS KIND OF DAMAGE?

A. No. We have studied that possibility. We found that there were very few potential providers. Further, the coverage would require such high deductibles and high annual premiums that it would be an unwise expenditure.

Q. DOES THE FEDERAL EMERGENCY MANAGEMENT AUTHORITY PROVIDE FINANCIAL ASSISTANCE TO UTILITIES

LIKE WESTAR FOLLOWING STORM DAMAGE OF THIS MAGNITUDE?

A. No. FEMA provides financial assistance of various types to smaller, usually cooperatively or publicly owned utilities, but not to larger investor-owned utilities like Westar.

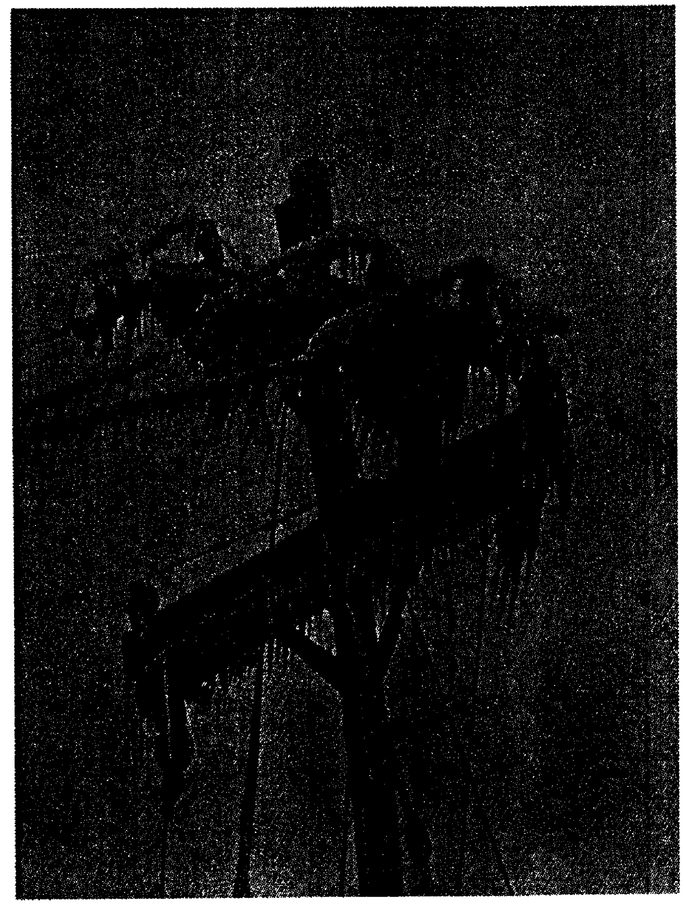
Q. **HAVE YOU ALREADY BRIEFED THE COMMISSION STAFF ON THE NATURE OF THE DAMAGE AND WESTAR'S STORM RESTORATION EFFORTS?**

A. Yes. On February 11 of this year we met with Staff and others to brief them on the nature of the storm and the massive restoration effort it required. Attached to my testimony as Exhibit ____(DH-1) is a copy of that briefing document. Exhibit ___(DH-2) is a copy of the presentation we made to the Commission regarding the 2002 ice storm.

Q. **THANK YOU.**

Westar Energy Ice Storm Report

January 4-5, 2005



Presented
February 11, 2005

Westar Energy

January '05 Ice Storm

Westar Energy.

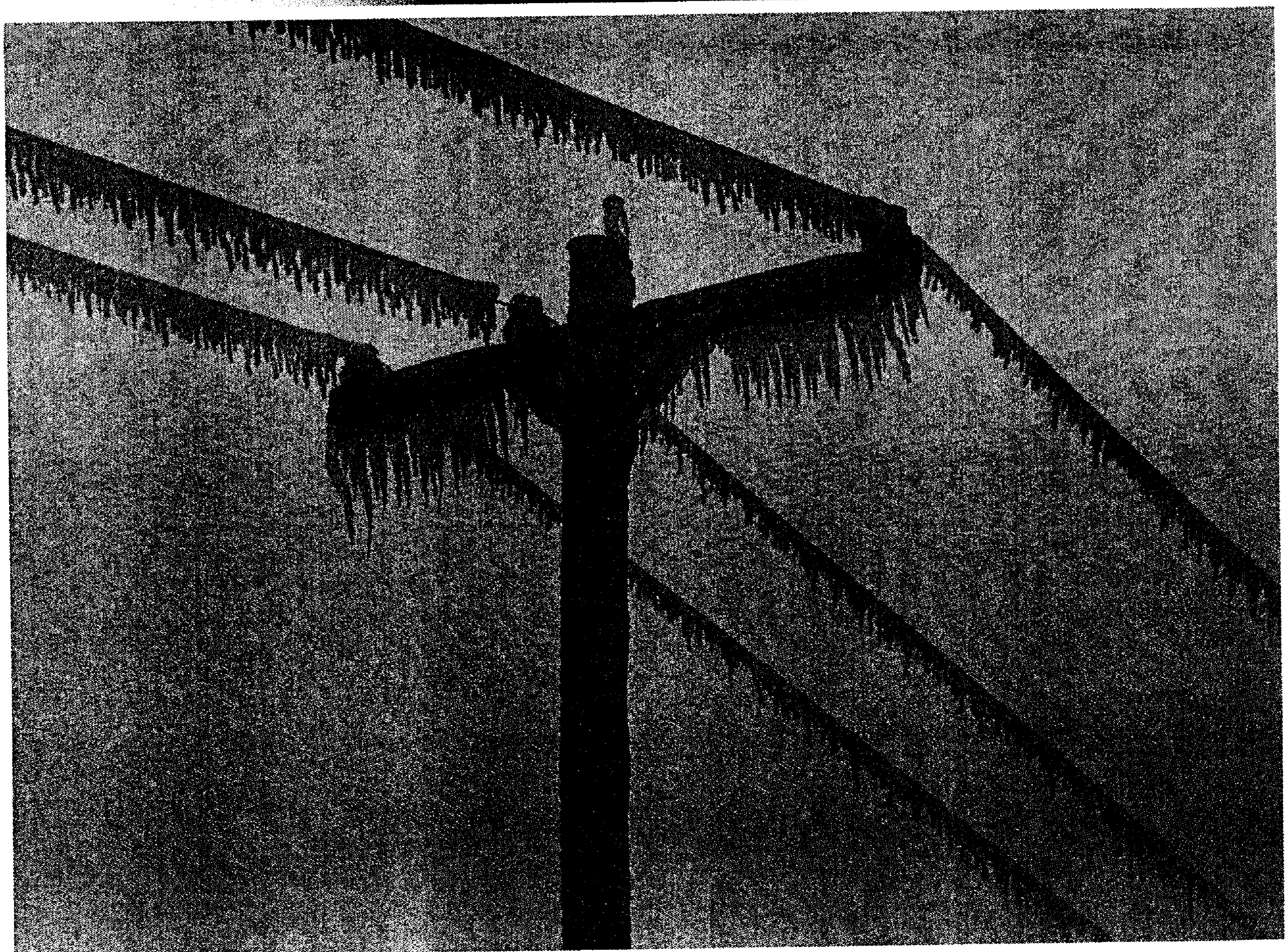
January '05 Ice Storm

Westar Energy.

January '05 Ice Storm

Westar Energy.

January '05 Ice Storm



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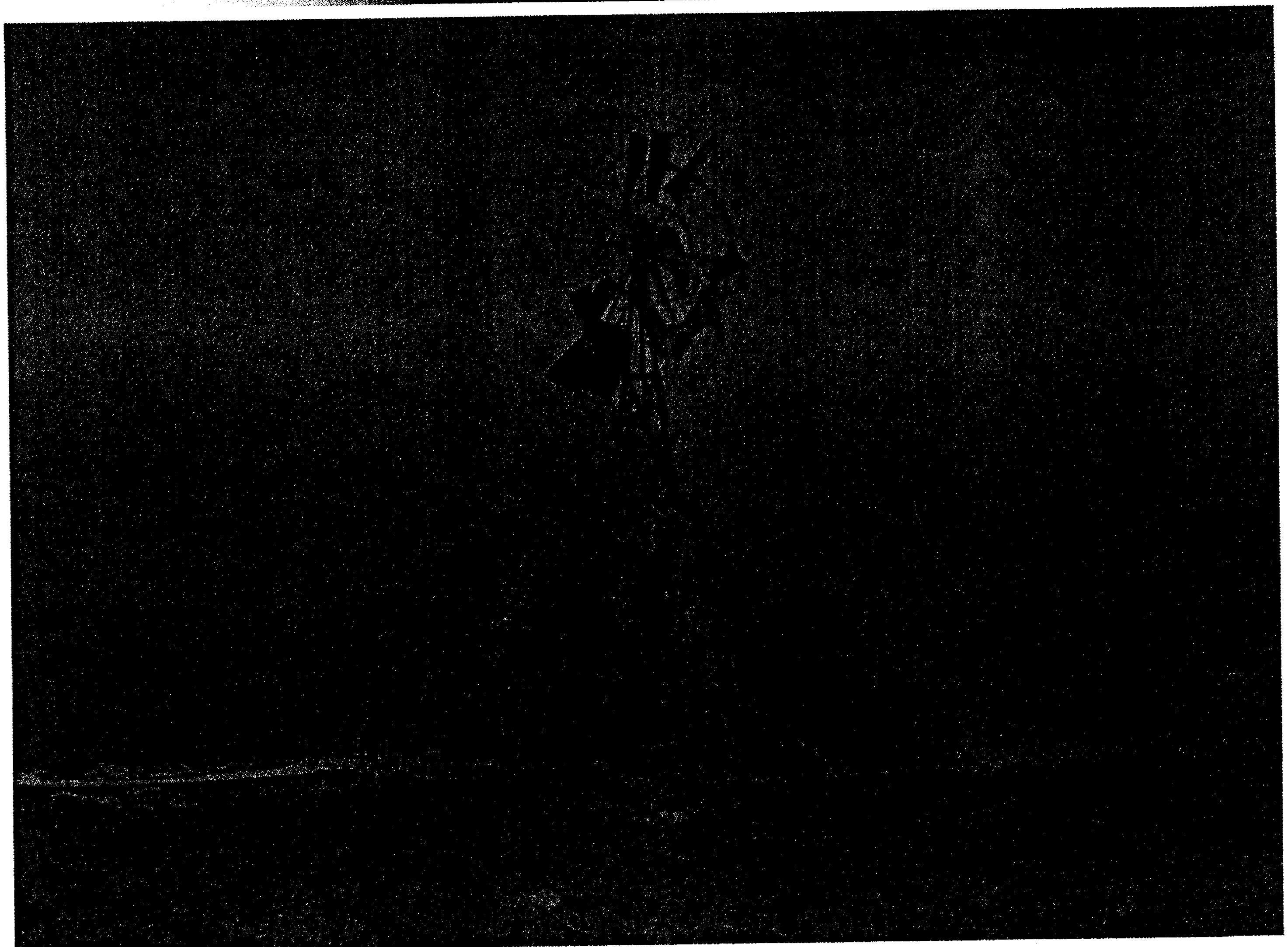
January '05 Ice Storm



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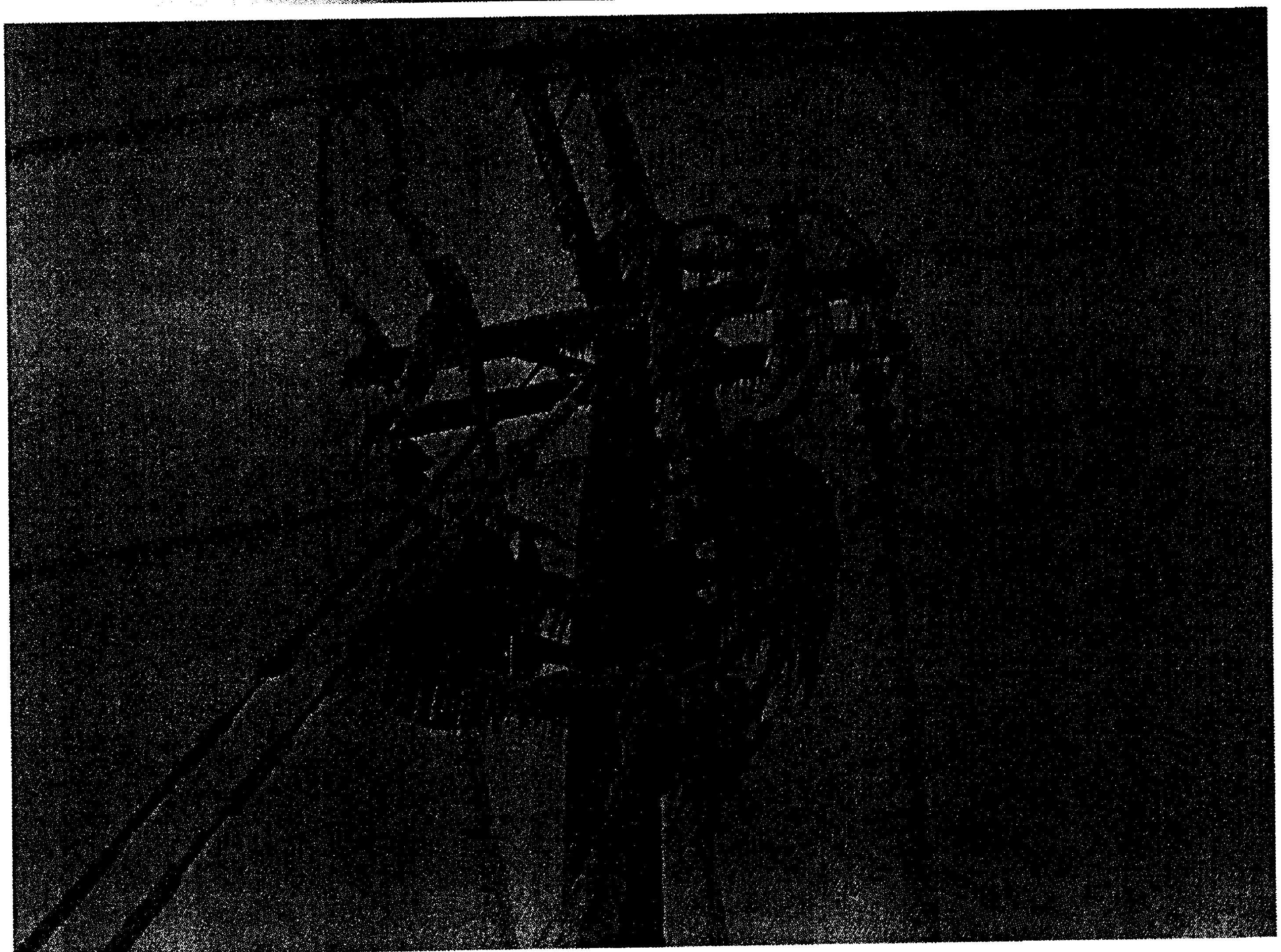
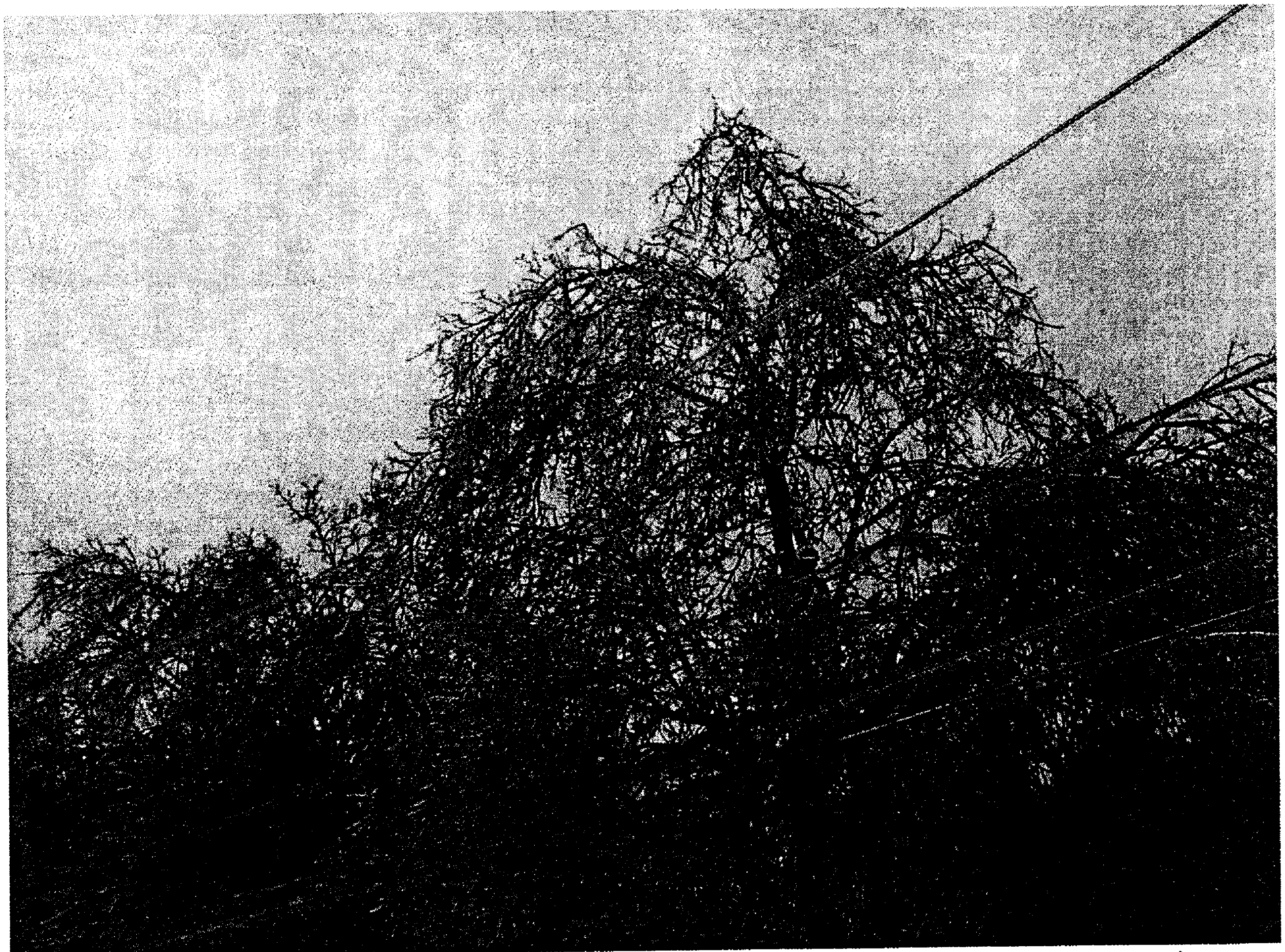


Westar Energy.

January '05 Ice Storm



Westar Energy.

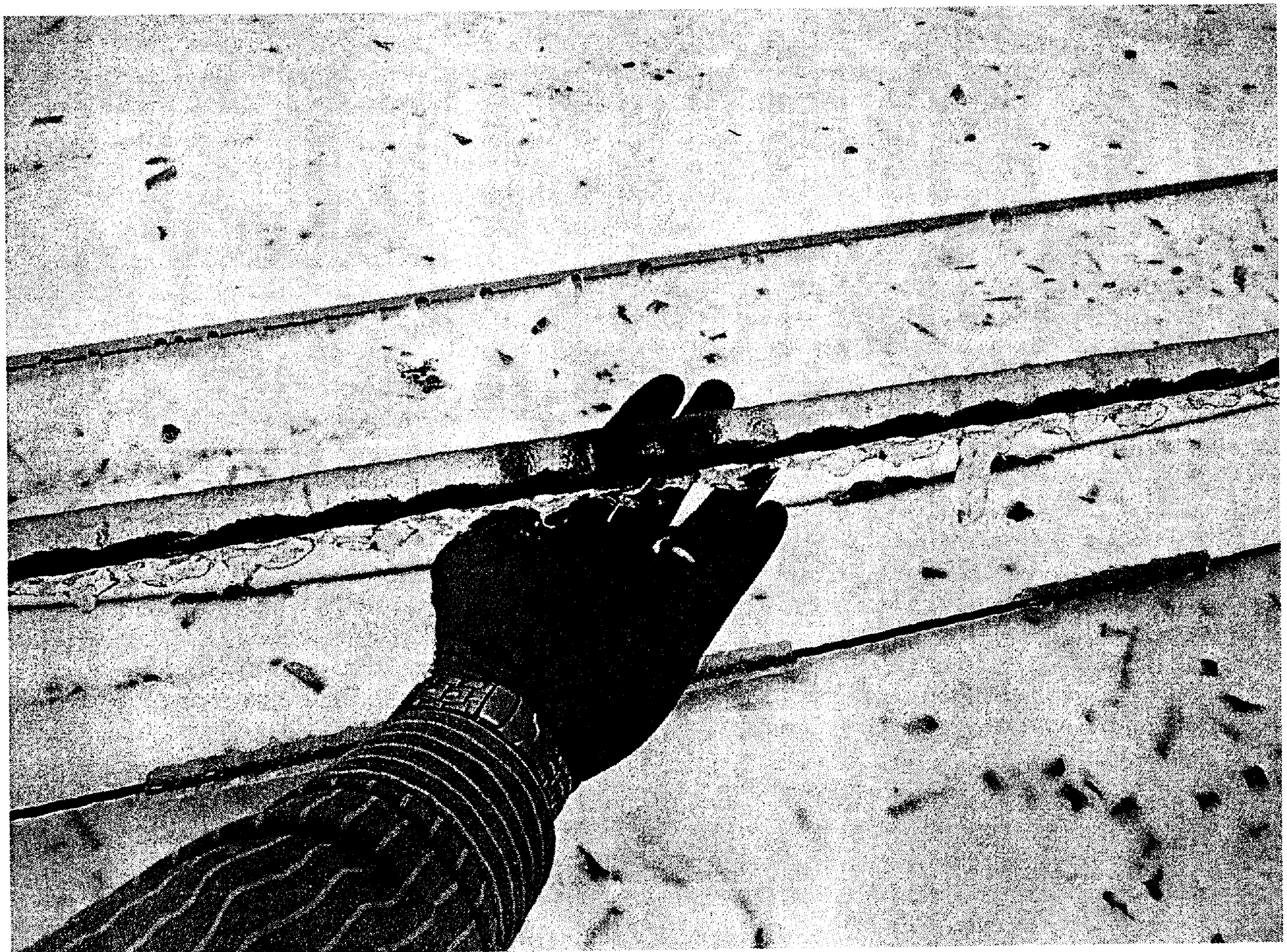
January '05 Ice Storm

Westar Energy.

January '05 Ice Storm

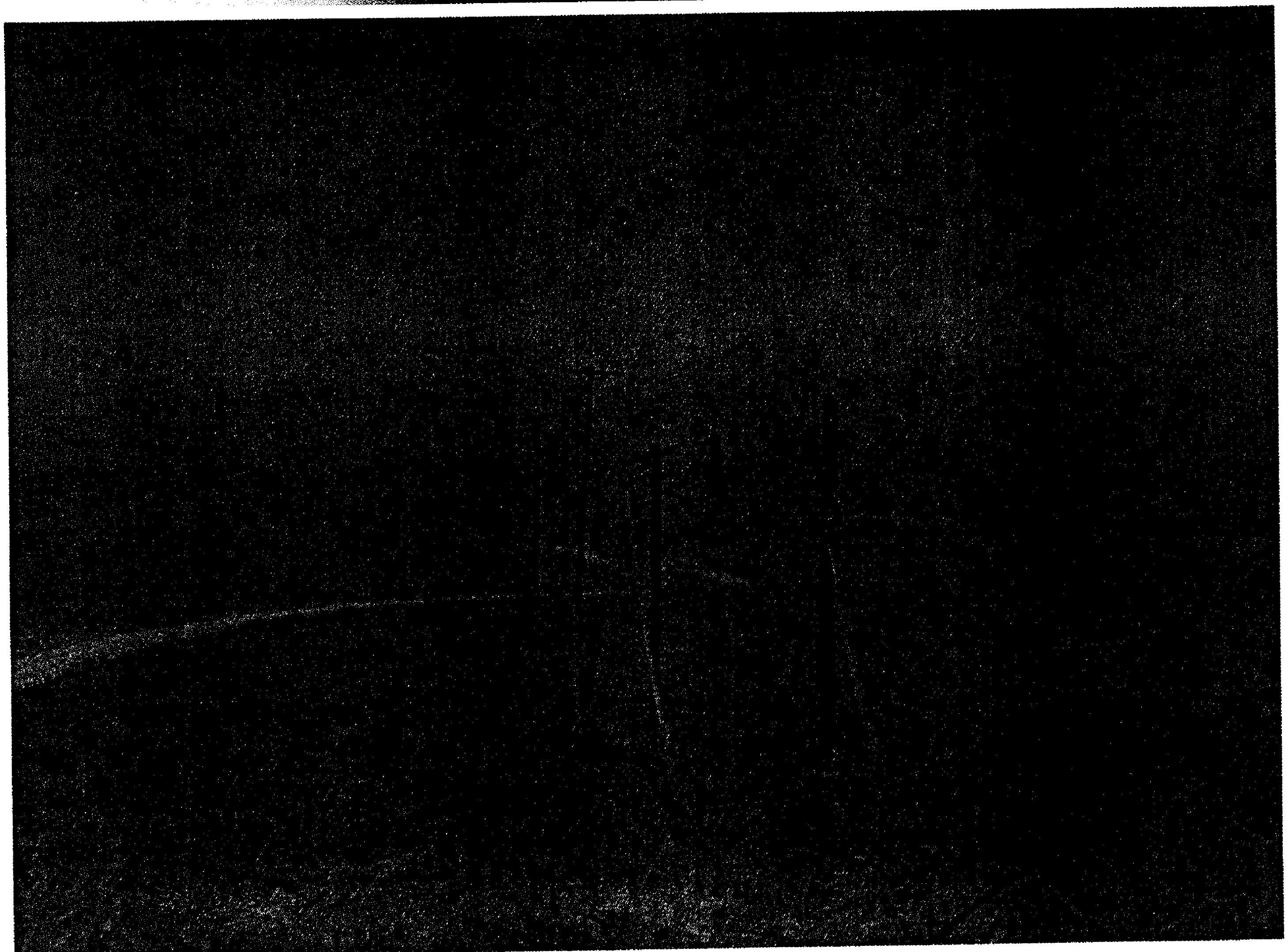
Westar Energy.

January '05 Ice Storm



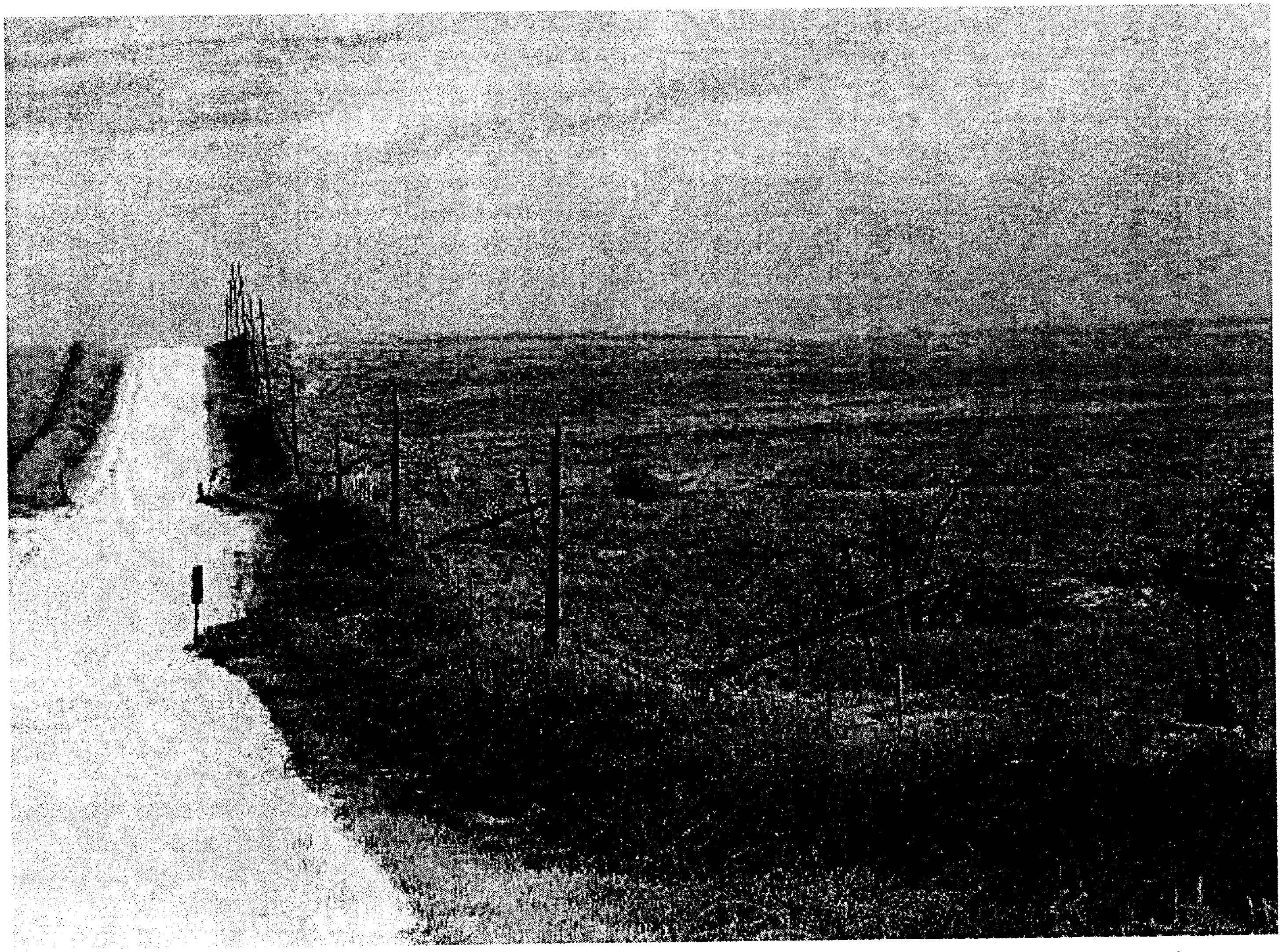
Westar Energy.

January '05 Ice Storm



Westar Energy

January '05 Ice Storm

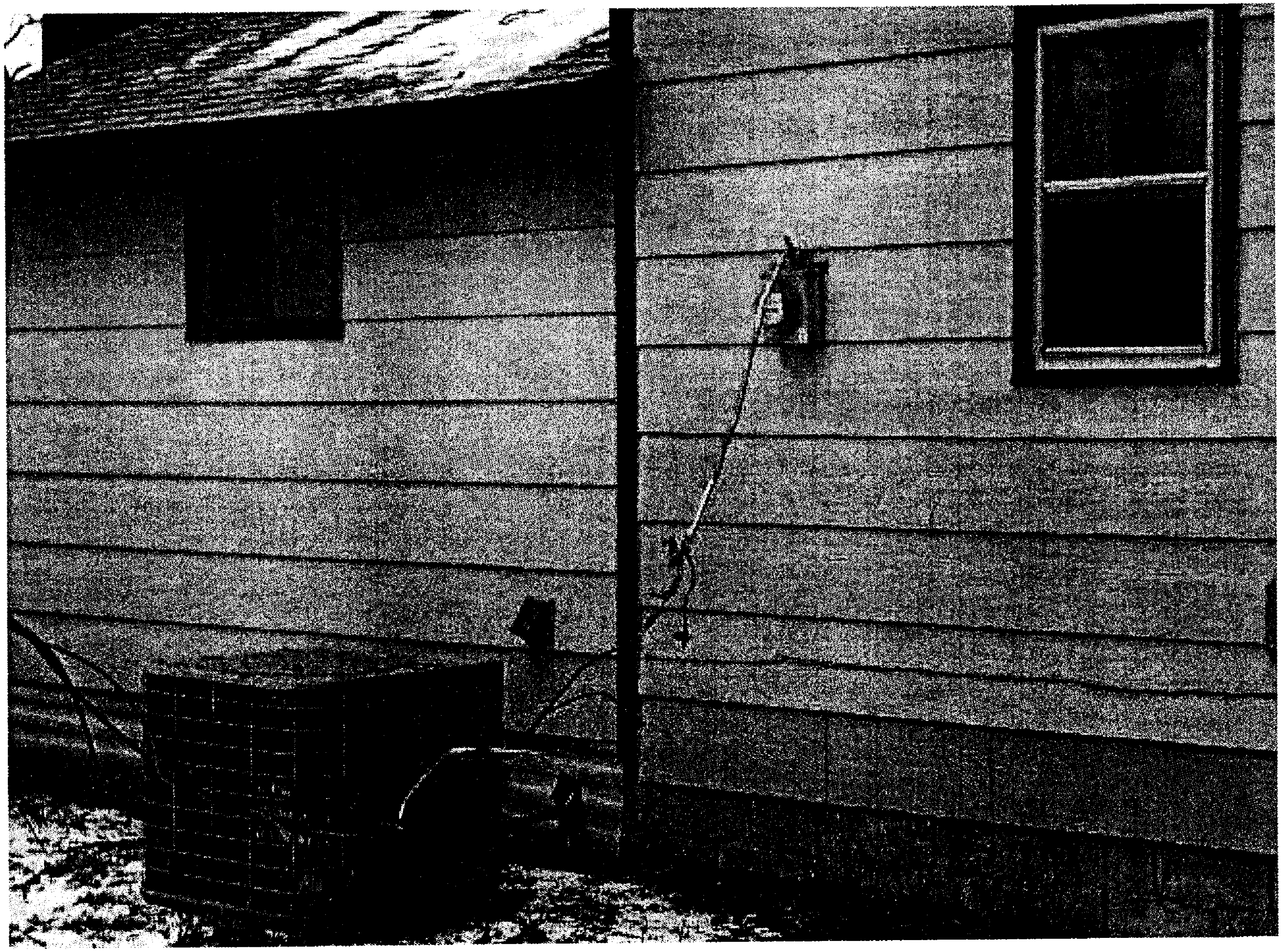


Westar Energy.

January '05 Ice Storm

Westar Energy.

January '05 Ice Storm



Westar Energy.

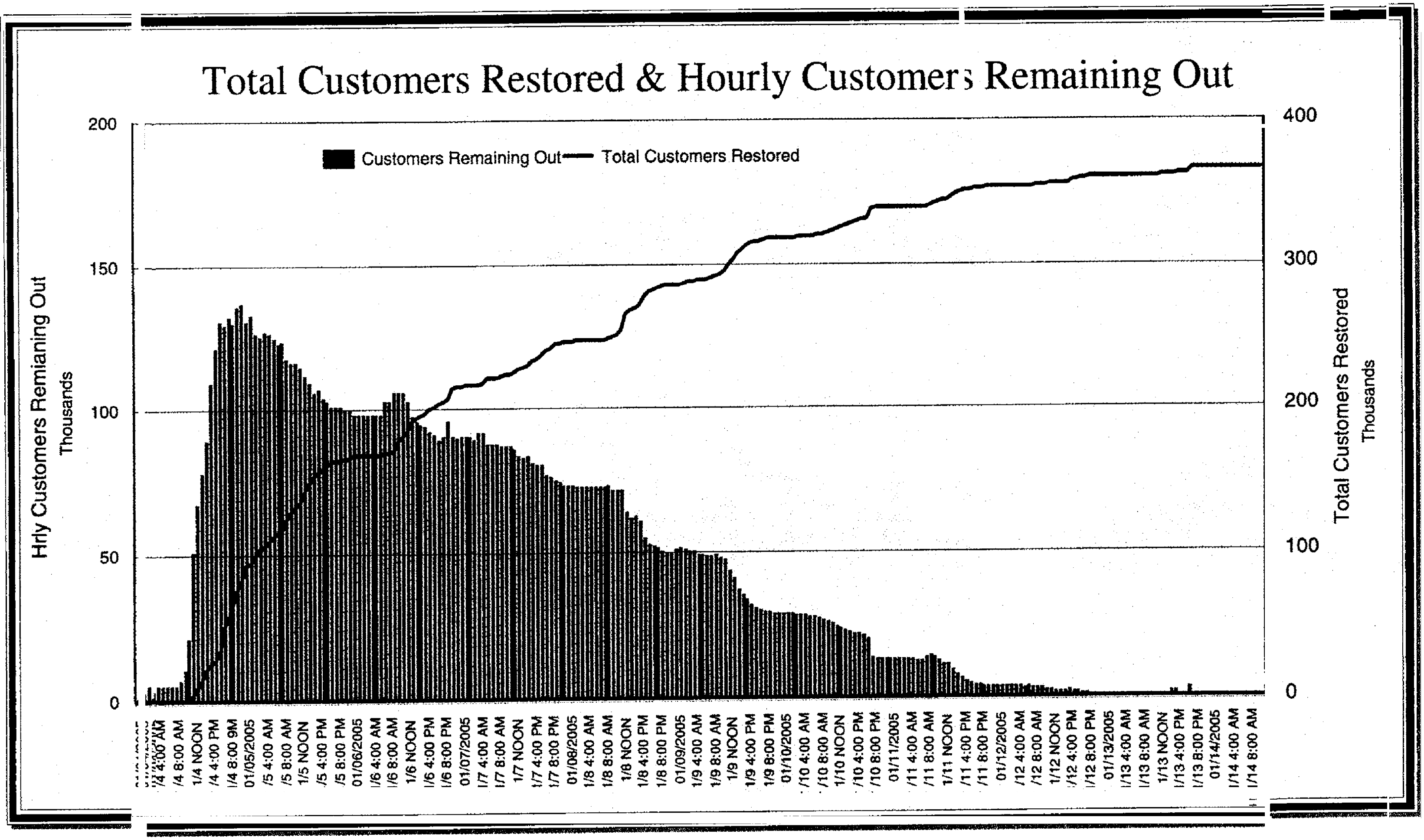
January '05 Ice Storm

- January 3 - the first wave of ice affects 6,500 customers - all restored by 11:00 pm
- January 4/5 - 18 hours of freezing rain over most of south central Kansas, Emporia, and the Topeka-to-Olathe areas
  - Ice accumulation ranged from 0.25-1.0 inch (radial)
- Weather facilitated repairs on some days but hampered repairs on most
- January 12 – service restored to 99% of affected customers
- January 14 - service completely restored after working approximately 372,000 man-hours
- Worst storm in Westar's history

January '05 Ice Storm

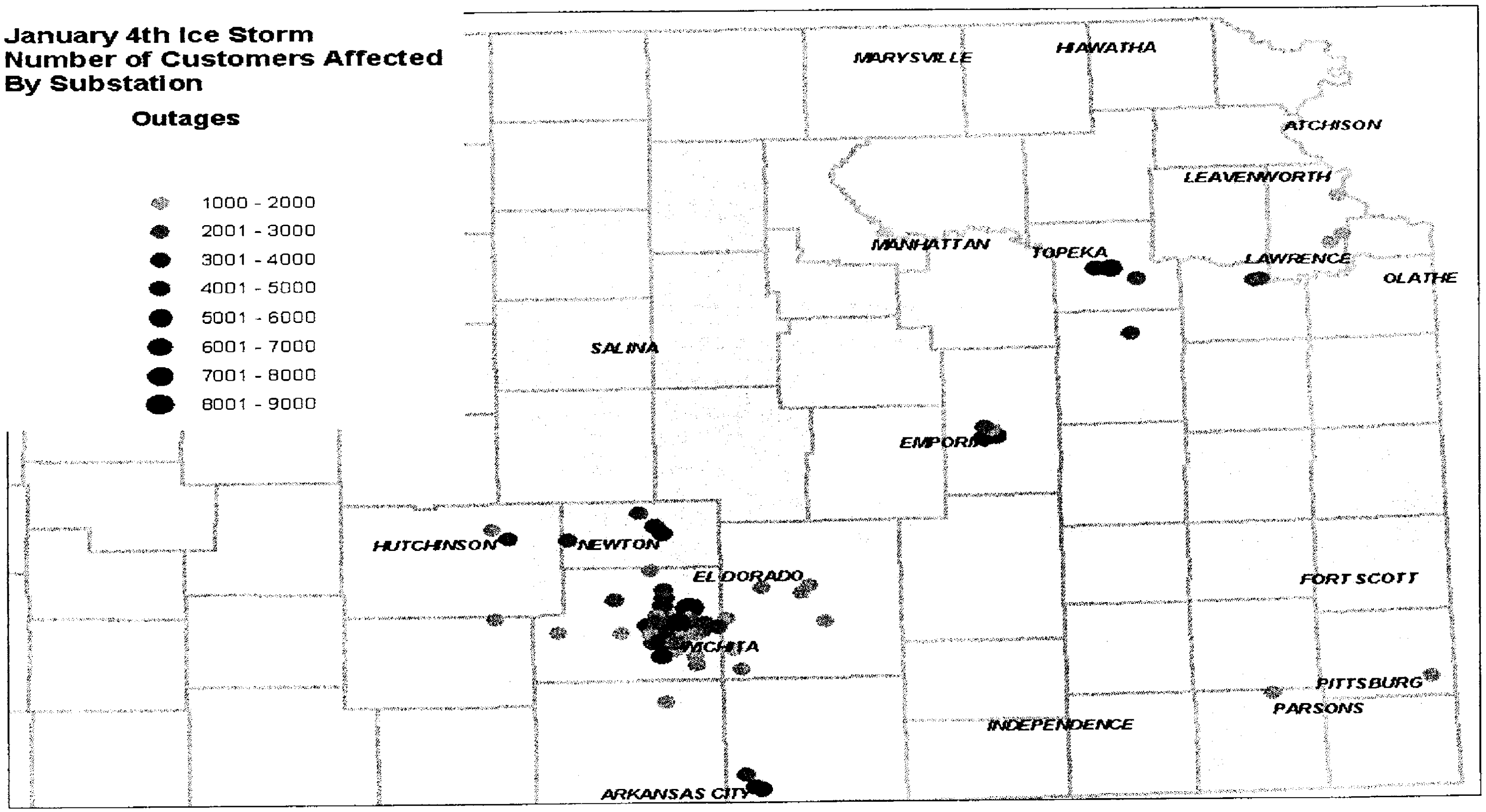
- 720 million customer minutes of interruption
- 369,000 total outages restored, with many customers experiencing numerous outages due to multiple system failures as the ice continued to accumulate
- 261,000 customers affected (40% of company total)
  - Significant damage in Wichita, Newton, El Dorado and Emporia Divisions
  - 60% or 156,000 Wichita customers affected
  - Nearly all of Newton Division off at least once
- Highest number of customers affected at any one time – 146,000
- Customer contact center handled 368,000 calls
  - 104,000 on the first day - normally 5,000 to 10,000 daily
- $38 to $42 million price tag

January '05 Ice Storm



Westar Energy.

January '05 Ice Storm Summary



Westar Energy.

January '05 Ice Storm

- Communities affected by distribution and/or transmission circuit lockouts:
  - **Arkansas City Division**: Arkansas City, Atlanta, Burden, Cambridge, Dexter, Douglass, Geuda Springs, New Salem and Parkerfield
  - **El Dorado Division**: Benton, Burns, El Dorado, Elbing, Latham, Leon, Potwin, Towanda and Whitewater
  - **Emporia Division**: Admire, Allen, Benedict, Bushong, Cassoday, Coyville, Elmdale, Emporia, Eureka, Fall River, Olpe and Toronto
  - **Hutchinson Division**: Buhler, Nickerson, Pretty Prairie and Hutchinson
  - **Lawrence Division**: Lawrence, Lecompton and Linwood
  - **Leavenworth Region**: Atchison, Lancaster, McLouth, Oskaloosa, Valley Falls, Bonner Springs, Everest, Hiawatha, Lansing, Basehor and Leavenworth

January '05 Ice Storm

- Communities affected continued:
  - **Newton Division**: Burrton, Walton, Goessel, Halstead, Hesston, Haven, Mt Hope, Sedgwick, Cedar Point, Florence, North Newton, Peabody and Newton
  - **Southeast Kansas Region**: Elk Falls, Grenola, Howard, Longton and Moline
  - **Salina Region**: Durham, Lincolnville, Lost Springs, Parkerville, Ramona, Tampa, Galva, Canton and Lehigh
  - **Topeka Division**: Berryton, Carbondale, Eskridge, Harveyville, Meriden, Overbrook and Topeka
  - **Wichita Division**: Andale, Andover, Derby, Haysville, Bel Aire, Belle Plaine, Cheney, Colwich, Garden Plain, Goddard, Rose Hill, Udall and Wichita

Westar Energy.

January '05 Ice Storm

- Affected system elements:
  - Transmission circuits – 20
  - Substation equipment failures - 5
  - Distribution circuits – 231
  - Primary/secondary spans down - 5,000
  - Services repaired – 27,429
  - Poles replaced – 982
  - Laterals refused – 3,000
  - Transformers refused –5,600
  - Transformers replaced - 499

Westar Energy.

January '05 Ice Storm

- Largest storm repair workforce ever assembled at Westar
- Involved 3,513 workers
  - 976 Westar employees
    - Line Personnel - 324
    - Contact Center - 112
    - Dispatch - 39
    - Support - 380
    - Management - 108
    - Retirees and former employees - 13
  - 1361 line personnel from other utilities and contractors
  - 1176 line clearance personnel
- Aid came from Nebraska, Texas, Missouri, Oklahoma, Colorado, Kentucky, Tennessee, West Virginia, New Mexico, Wyoming, Illinois, Iowa, Indiana, South Dakota, Minnesota, Michigan and Louisiana

Westar Energy.

January '05 Ice Storm

- Estimating a total cost of $38 to $42 million
  - Maintenance = $31 to $34 million
  - Construction = $7 to $8 million

- Last major event, '02 ice storm, had a price tag of $20 million
  - Maintenance = $13 million
  - Construction = $7 million

Westar Energy.

January '05 Ice Storm

- Fully utilized Westar Energy's storm procedures

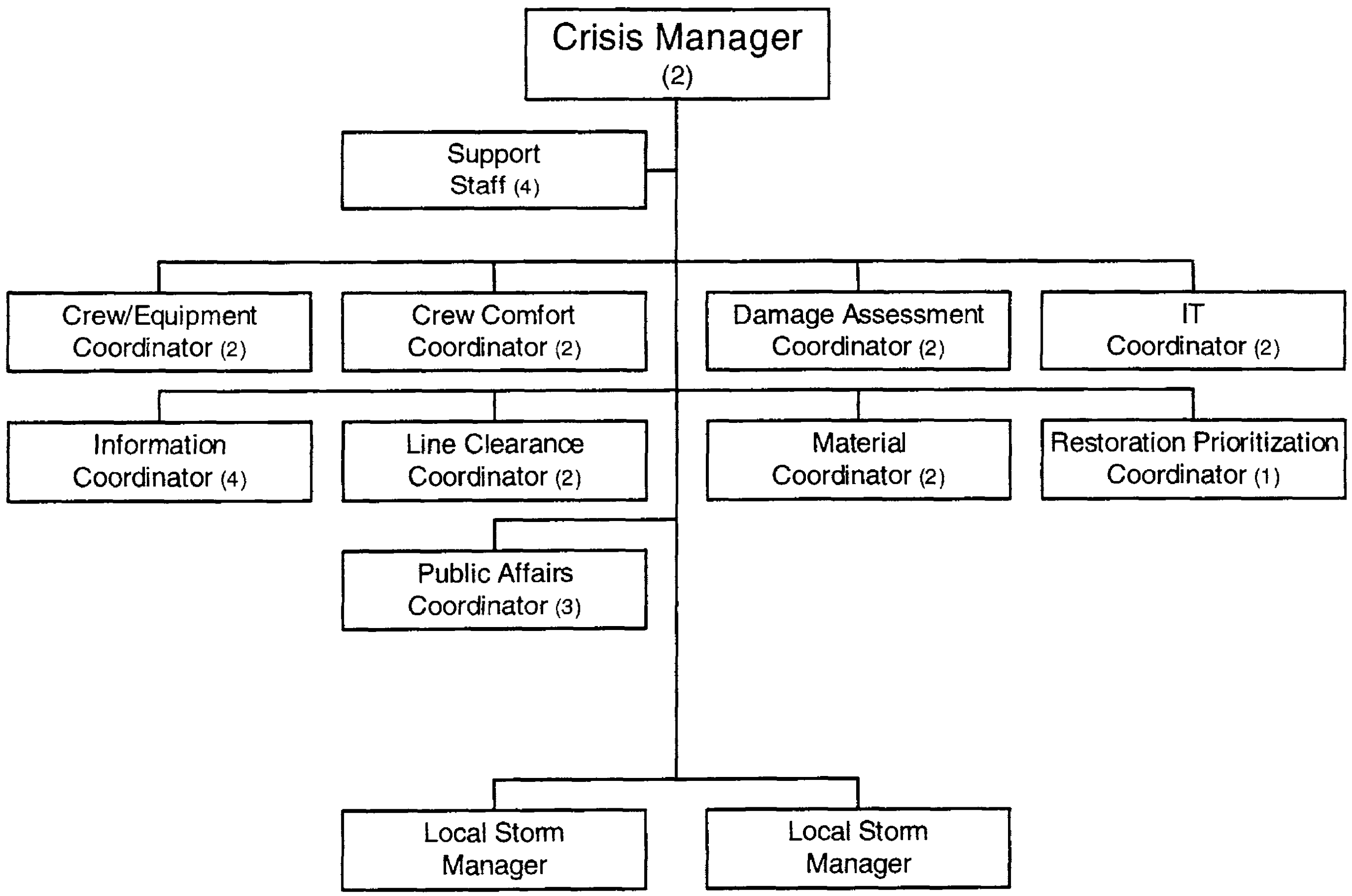
- Corporate Crisis Center opened at noon on Tuesday, January 4, and immediately began to coordinate resources and information
  - Operational until Thursday, January 13

- Crisis Center's primary role:
  - Secure additional manpower and material
  - Coordinate crew comfort issues
  - Assemble and distribute information
  - Prioritize work between affected areas
  - Remove as many obstacles as possible for local storm managers

Westar Energy.

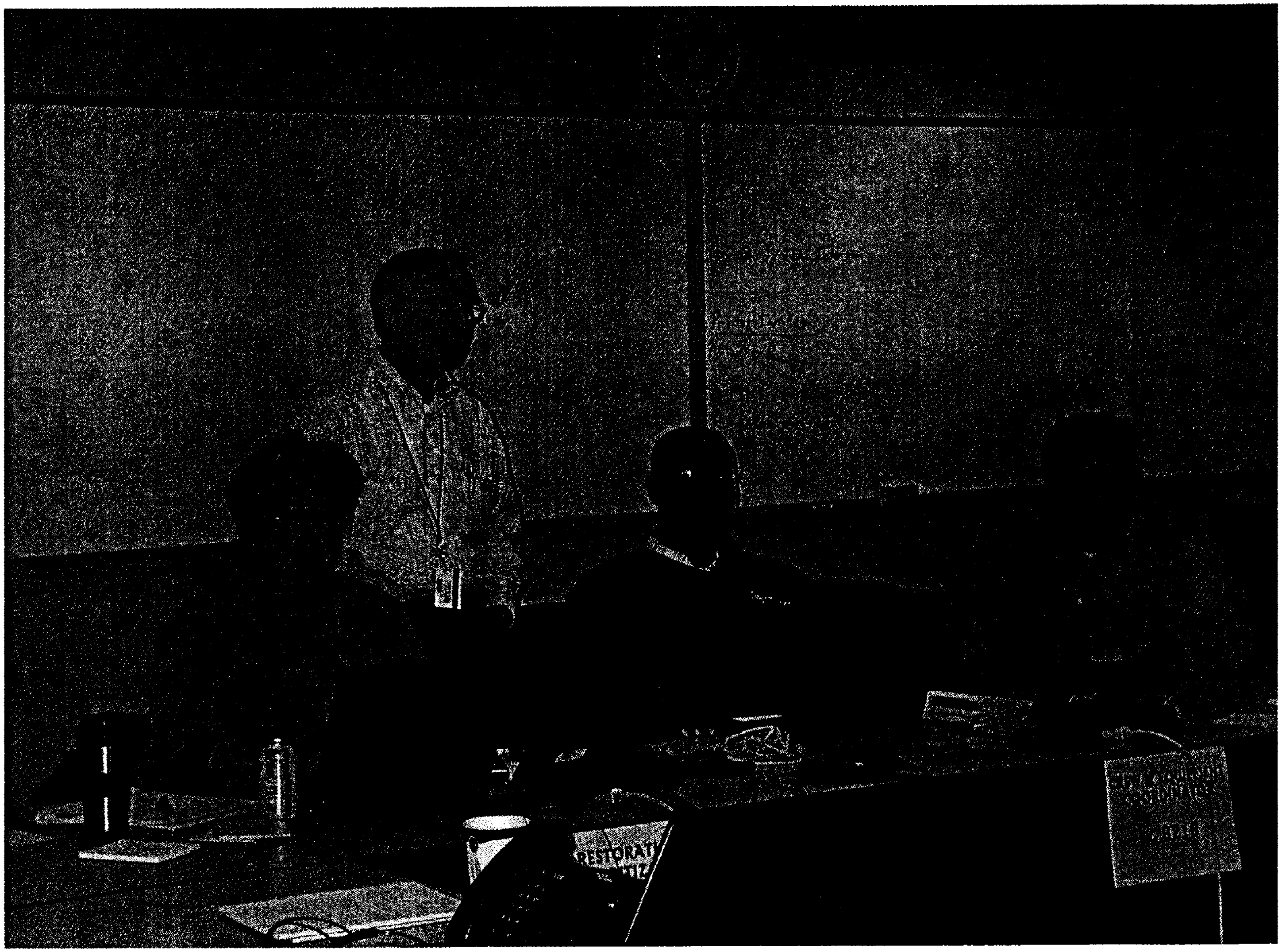
January '05 Ice Storm

Storm Crisis Center



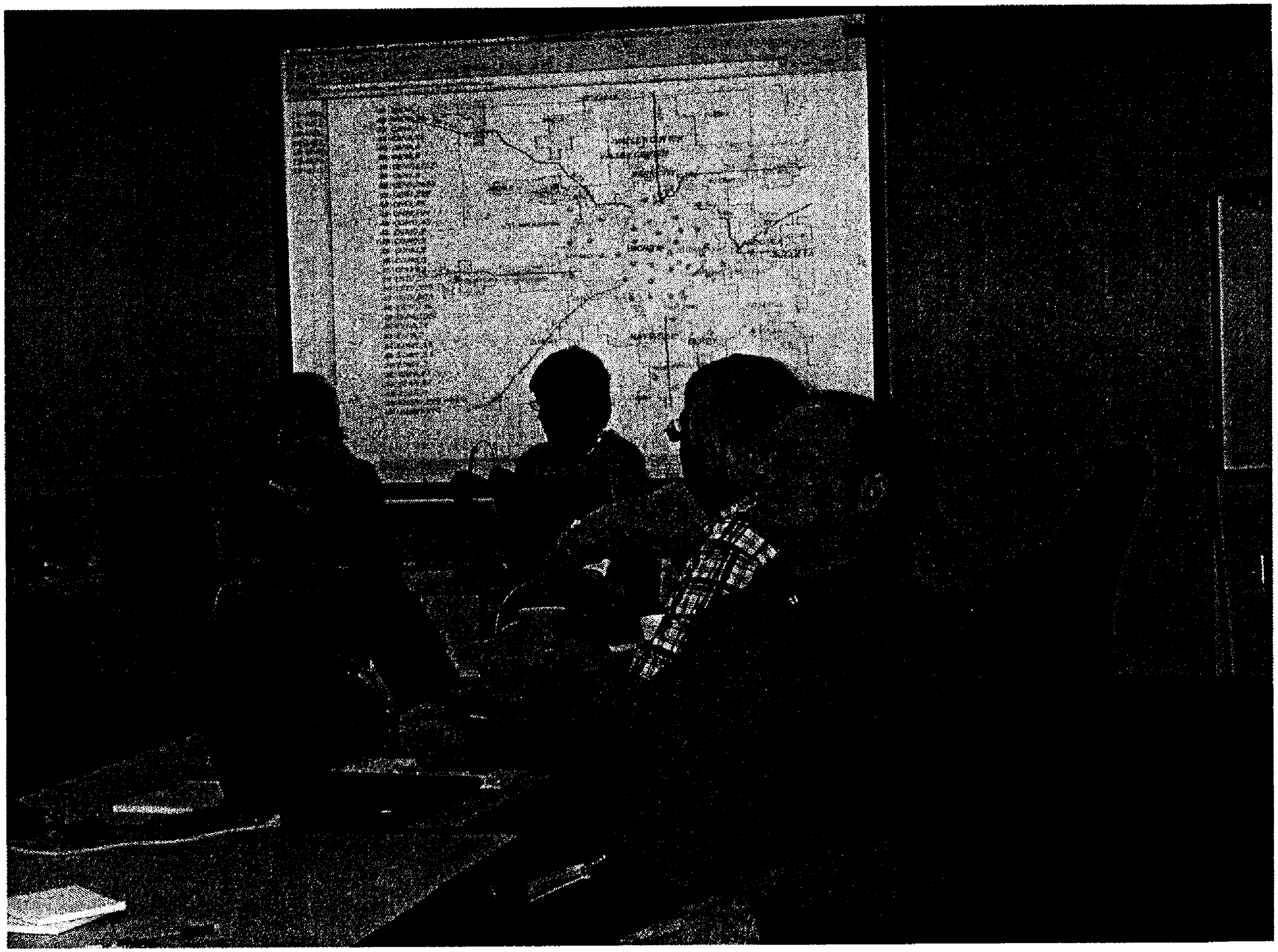
Westar Energy.

January '05 Ice Storm



Westar Energy.

January '05 Ice Storm



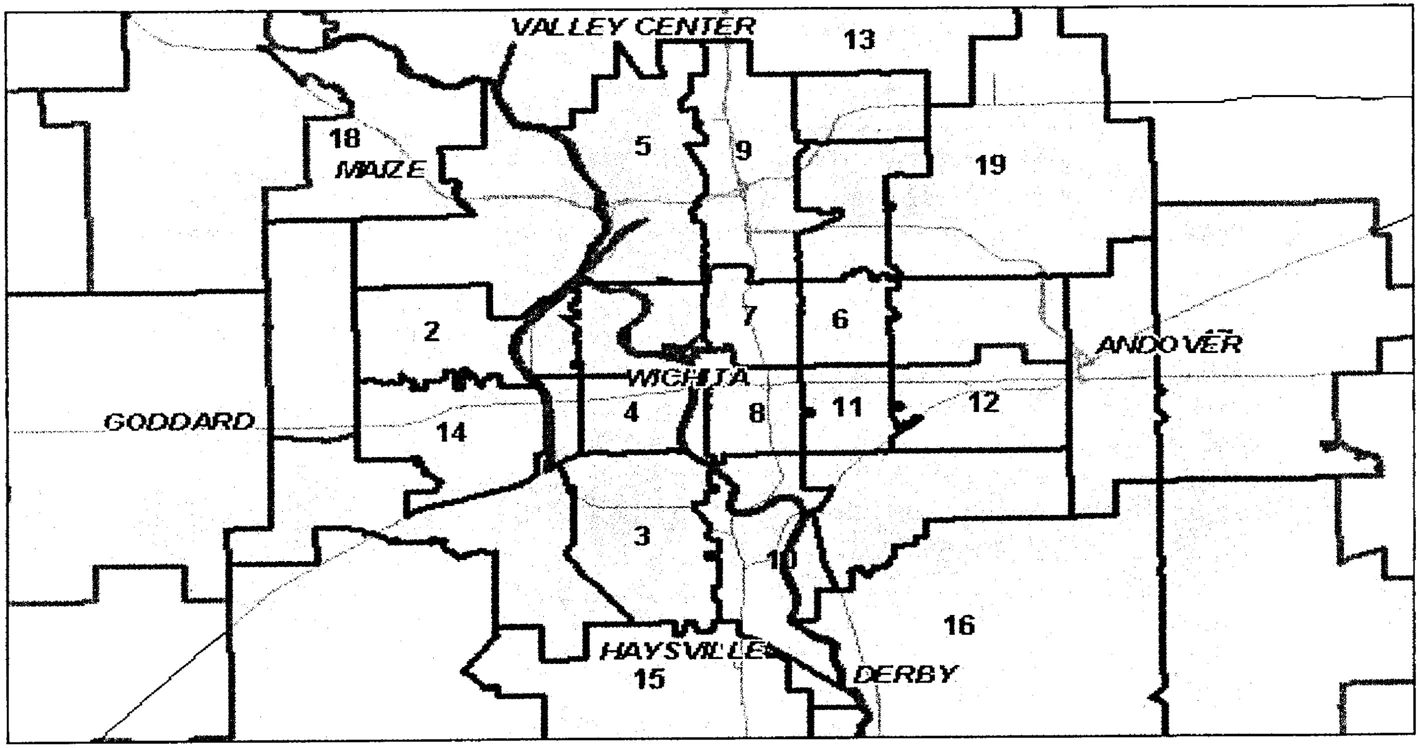
Westar Energy.

January '05 Ice Storm

- Zone concept utilized in Wichita and Newton
- Wichita zones were established based on zip codes
- Each zone manager responsible for:
  - Safety and system operating procedures
  - Damage assessment
  - Material needs
  - Repair crew assignments
- Started in zones with most customers off and moved to new zones as manpower became available

Westar Energy.

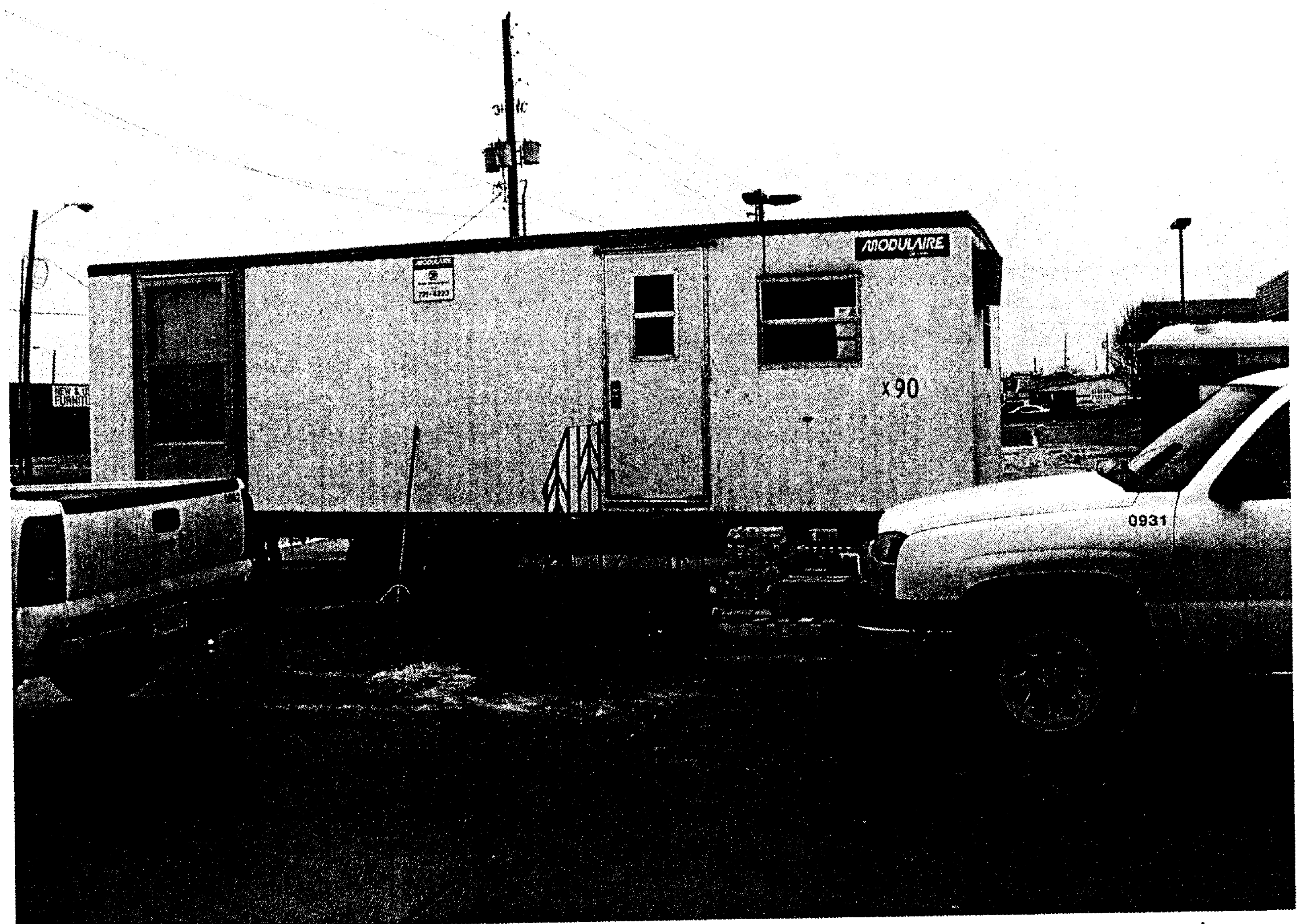
January '05 Ice Storm



• 50,000 of the customers affected in Wichita were in zones 1-5.

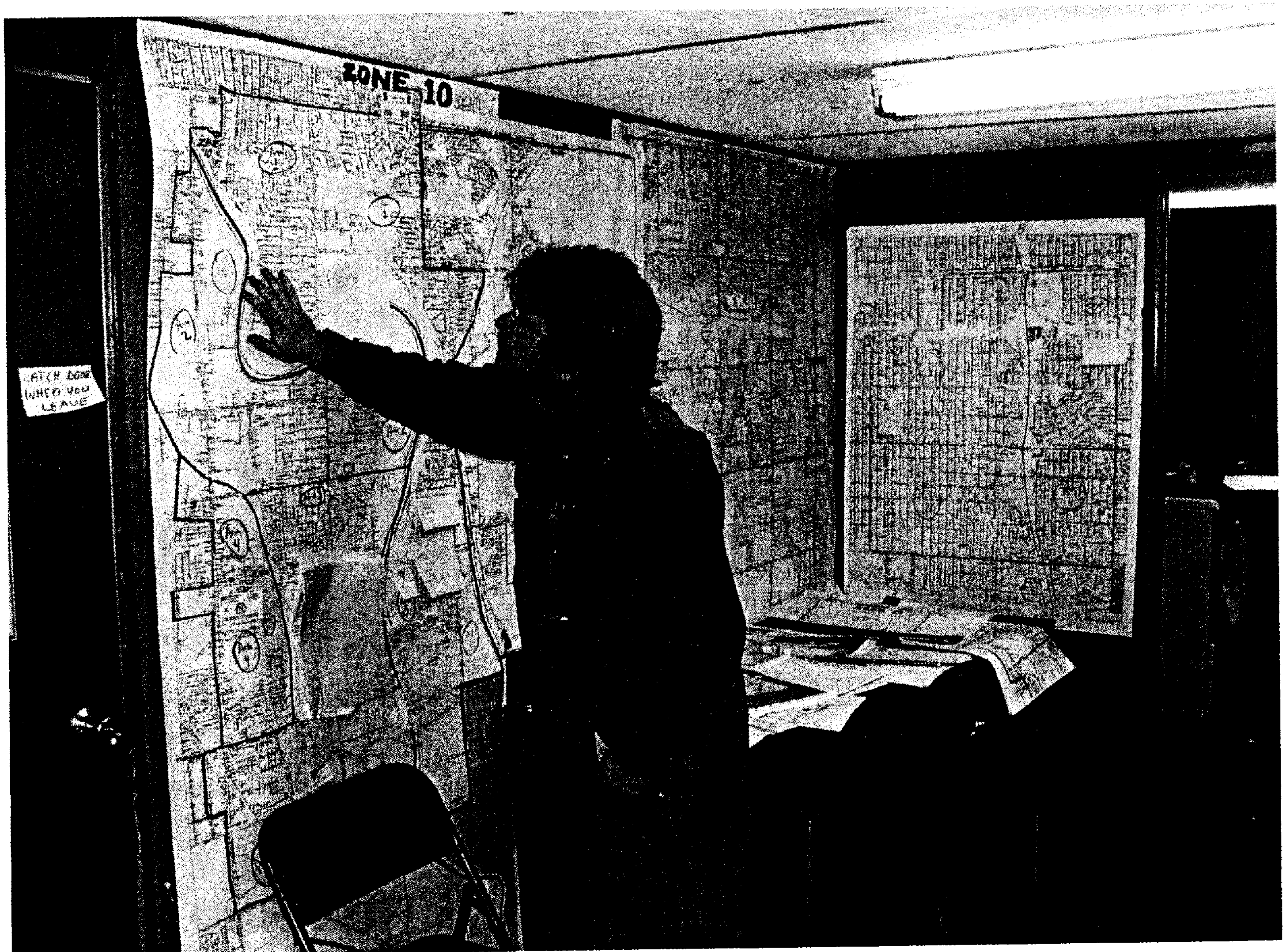
Westar Energy.

January '05 Ice Storm



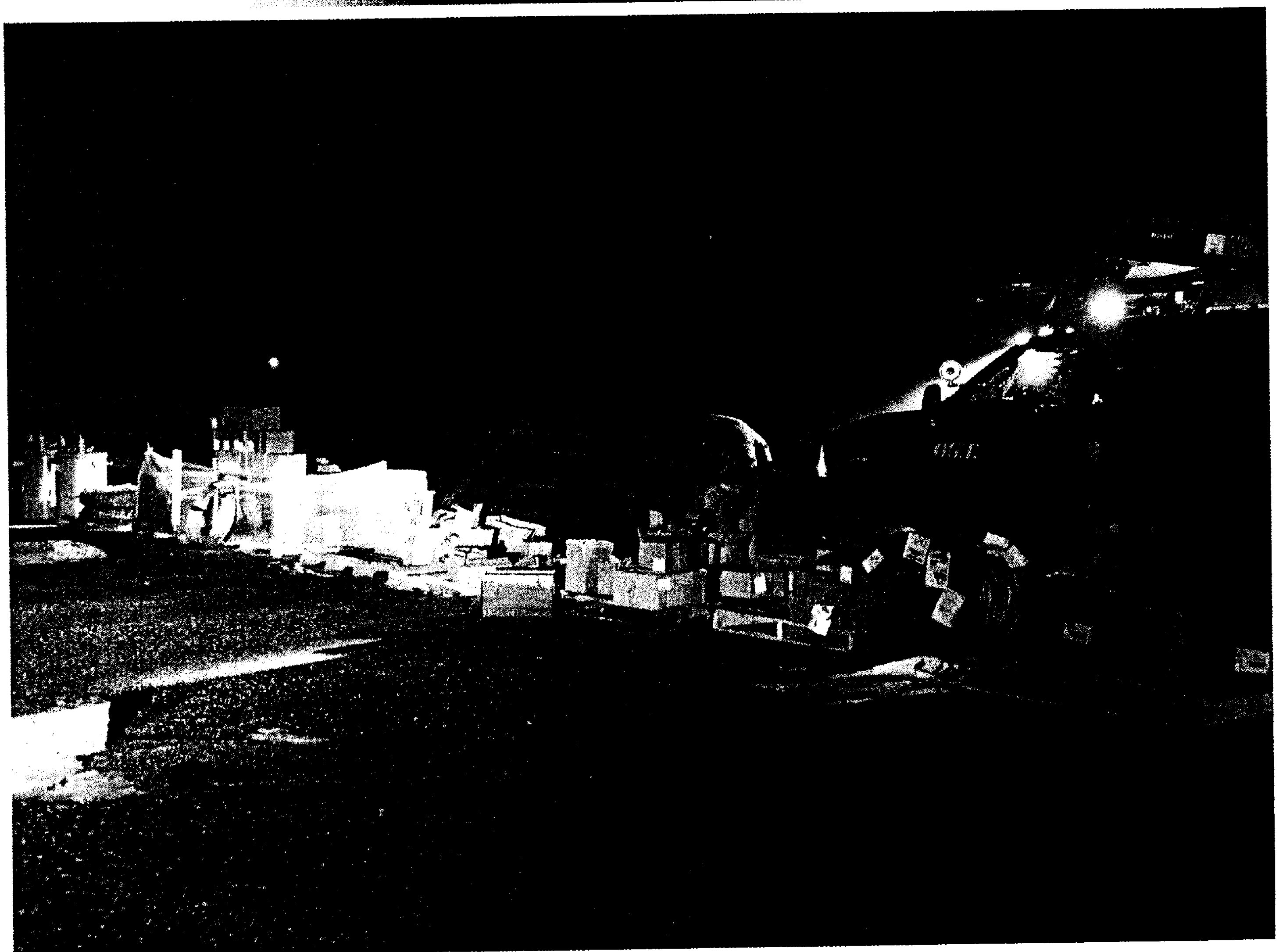
Westar Energy.

January '05 Ice Storm



Westar Energy.

January '05 Ice Storm



Westar Energy.

January '05 Ice Storm

January '05 Ice Storm

- Crew comfort and community support
  - Hyatt prepared 800 breakfasts, box lunches and dinners each day
  - Refreshments and meals were constantly delivered to the field
  - Workers filled every available hotel room in Wichita, Newton and El Dorado
  - Some workers were transported by bus from hotels in outlying areas
  - Customers fed personnel on many occasions

- Great support from vendors providing material
  - Neighboring utilities provided needed materials
  - One material order flown in from Mexico/Texas

Westar Energy.

January '05 Ice Storm

Westar Energy.

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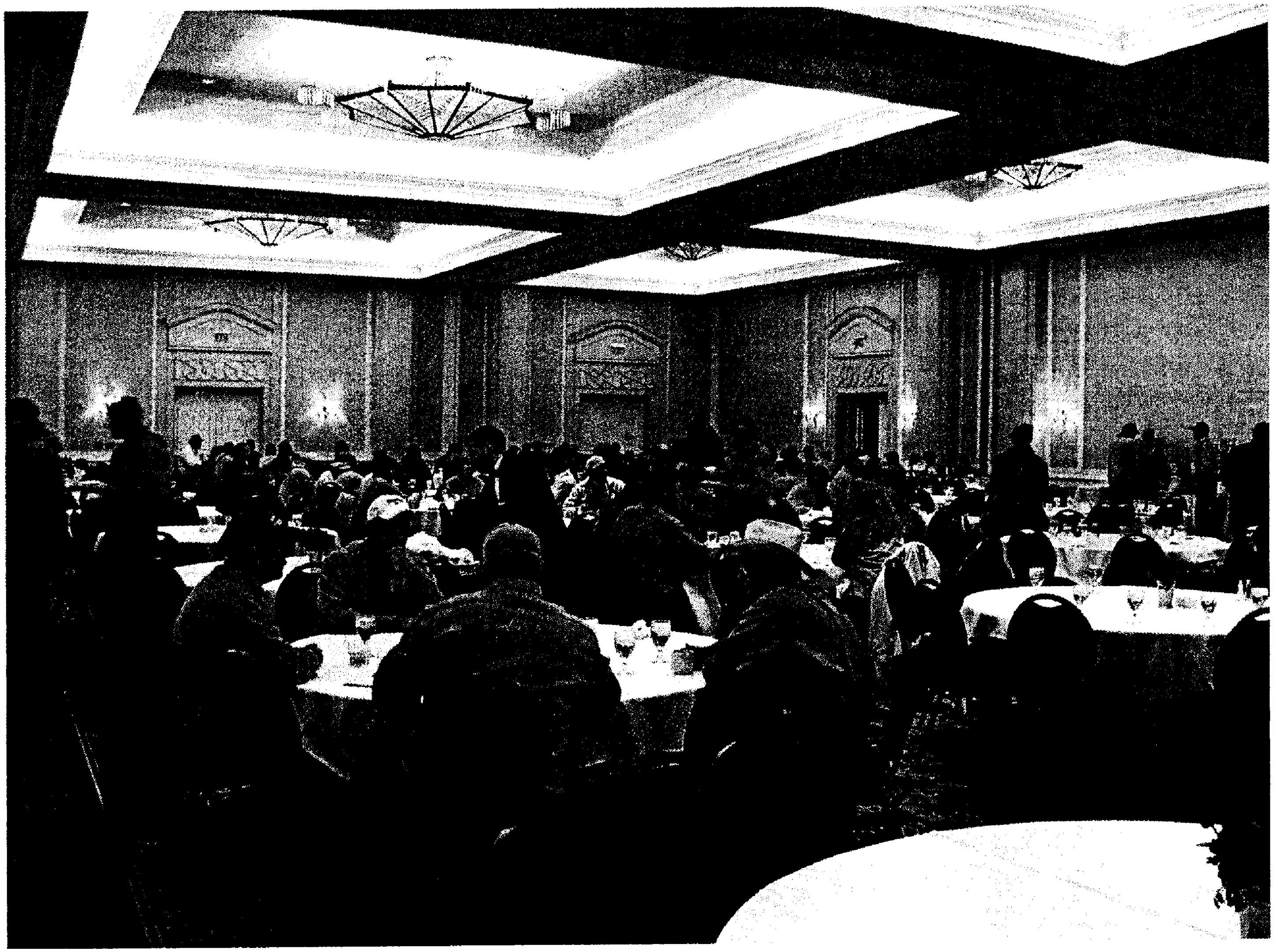
Westar Energy.

January '05 Ice Storm



Westar Energy.

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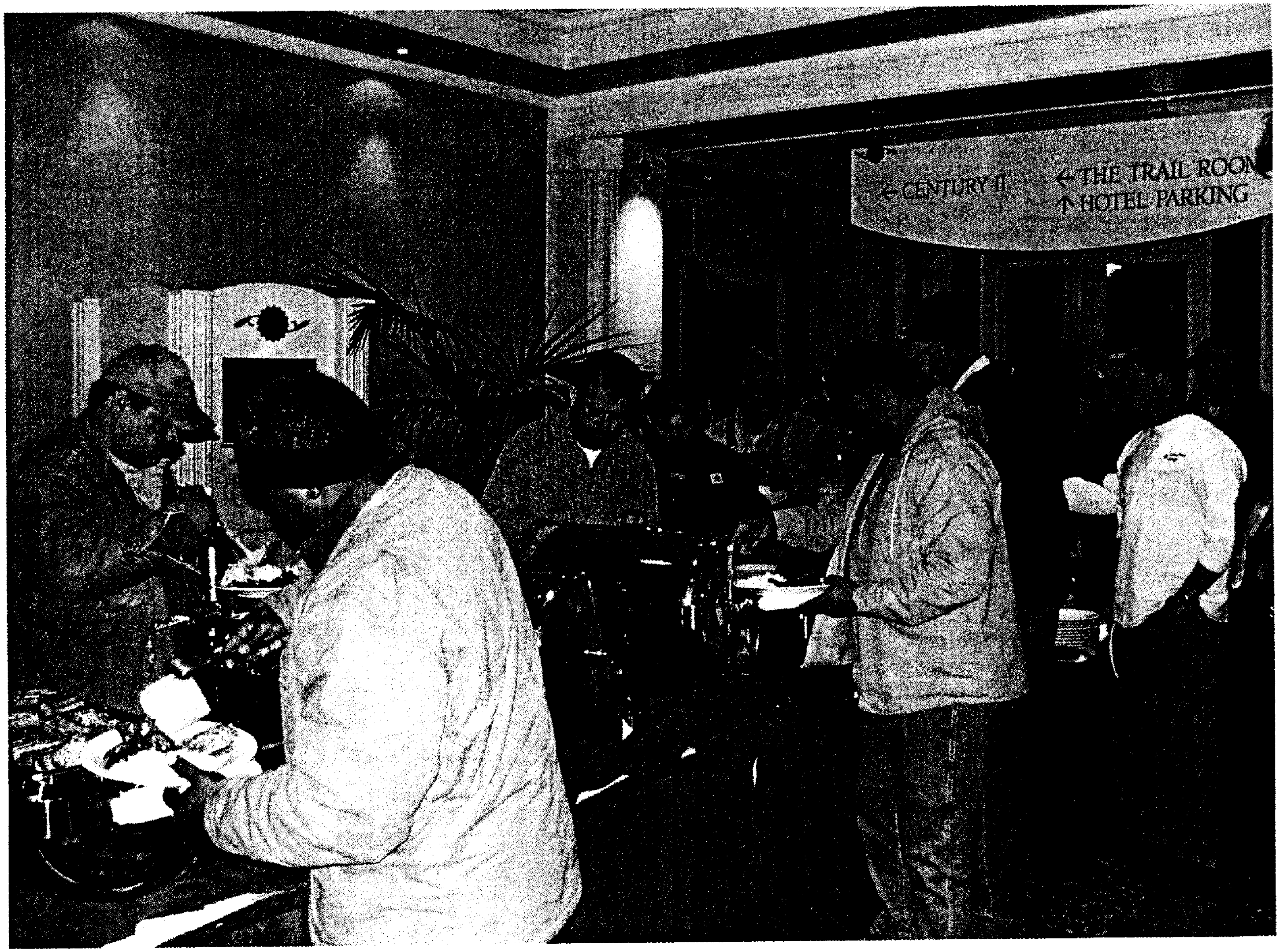

Westar Energy.

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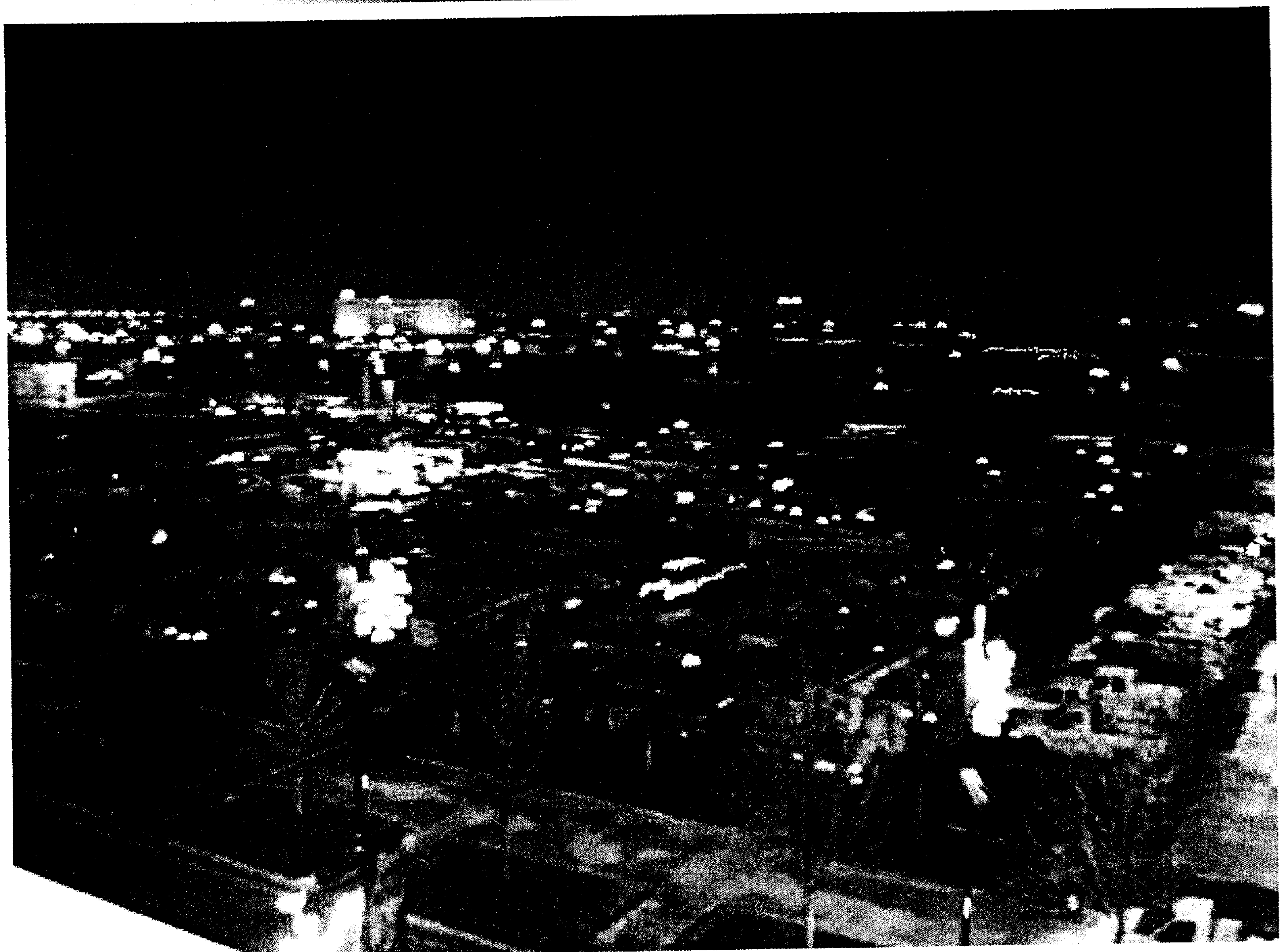


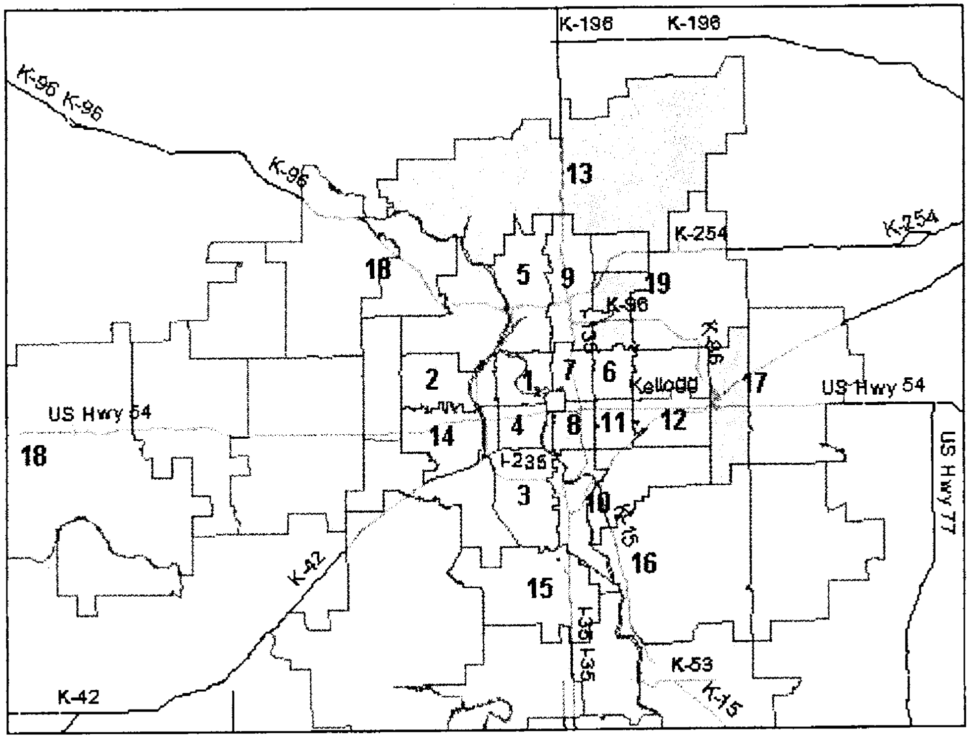
Westar Energy.

January '05 Ice Storm

- Automated outage reporting system received widespread use
- Communications to customers and media were effective
- Provided customers with estimated restoration times
- Affected life support customers were contacted at least twice
- Visits to corporate web site were almost 3 times normal
- Kept media apprised of challenges and progress - held 2 news conferences (January 7 and 11)

Westar Energy.

January '05 Ice Storm



Number still without power continues to fall as Westar Energy, partnering crews complete work in many areas

Updated 4 p.m. Wednesday, Jan. 12, 2005

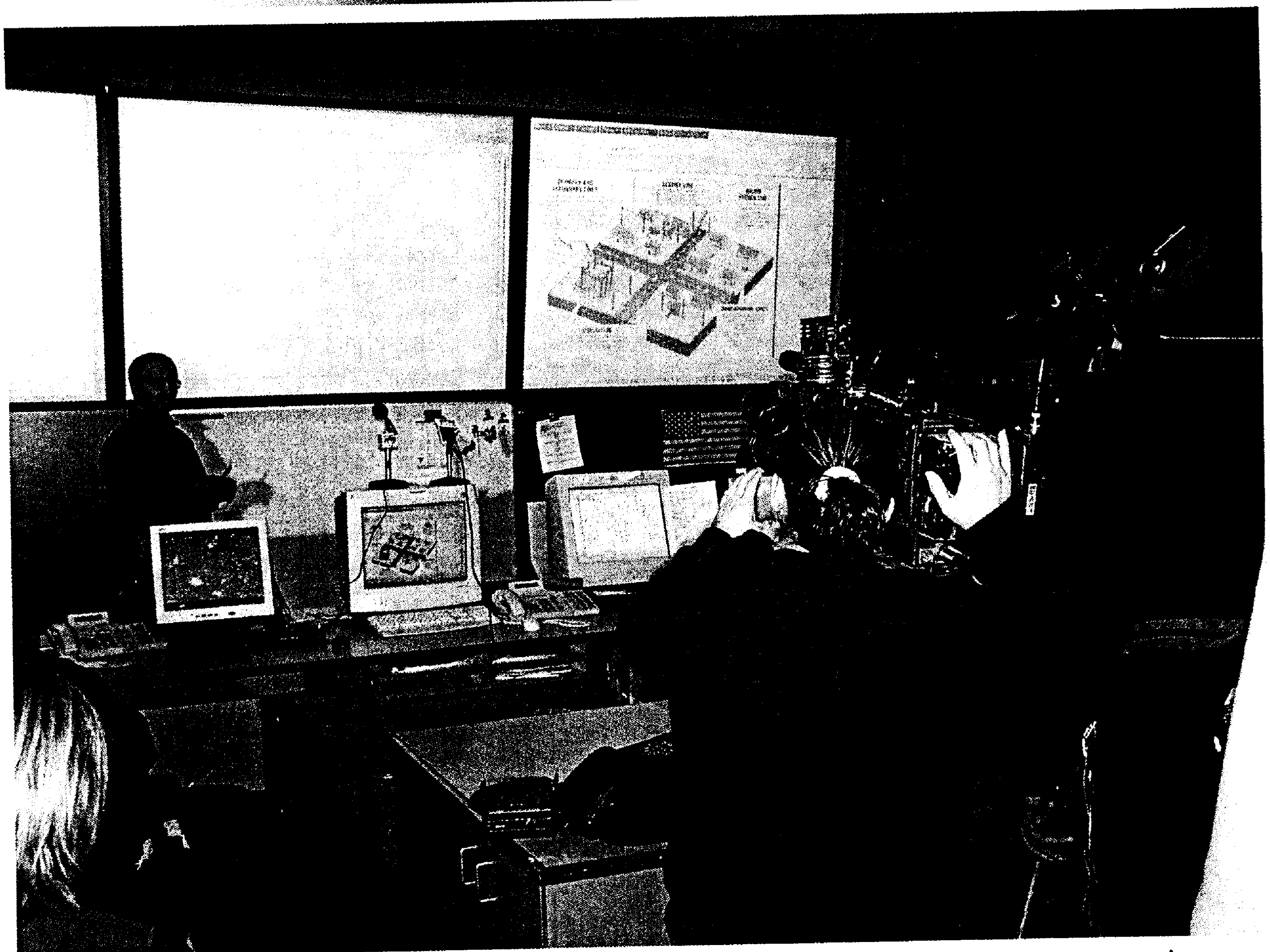
As of 4 p.m., about 1,550 customers remained without power. Below is a list of Westar Energy divisions and the outages in those areas. (numbers are rounded)

Wichita, 970
Newton, 520
El Dorado, 65

Electric crews have completed outage restoration work in the zones shown in green. In zones shown in red, work on primary lines is complete, and crews have turned their attention to the service lines that serve individual homes and businesses. Work on primary lines remains under way in the zones shown in blue.

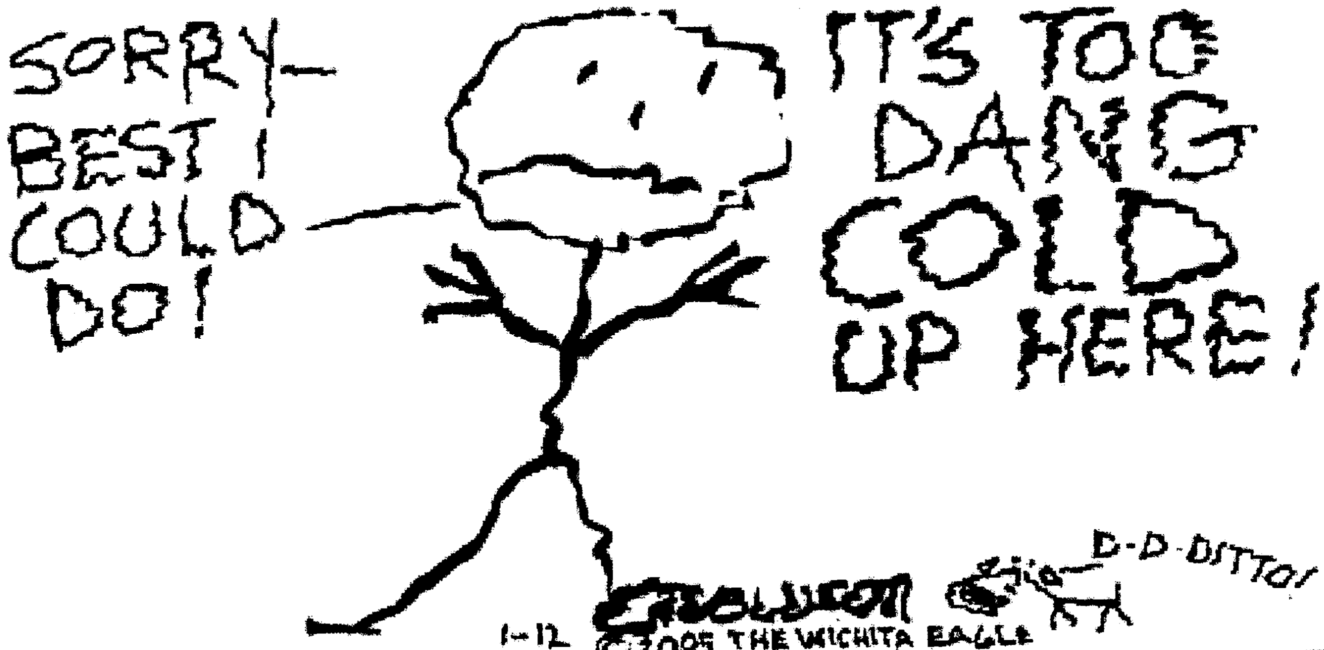
Westar Energy

January '05 Ice Storm



Westar Energy.

January '05 Ice Storm



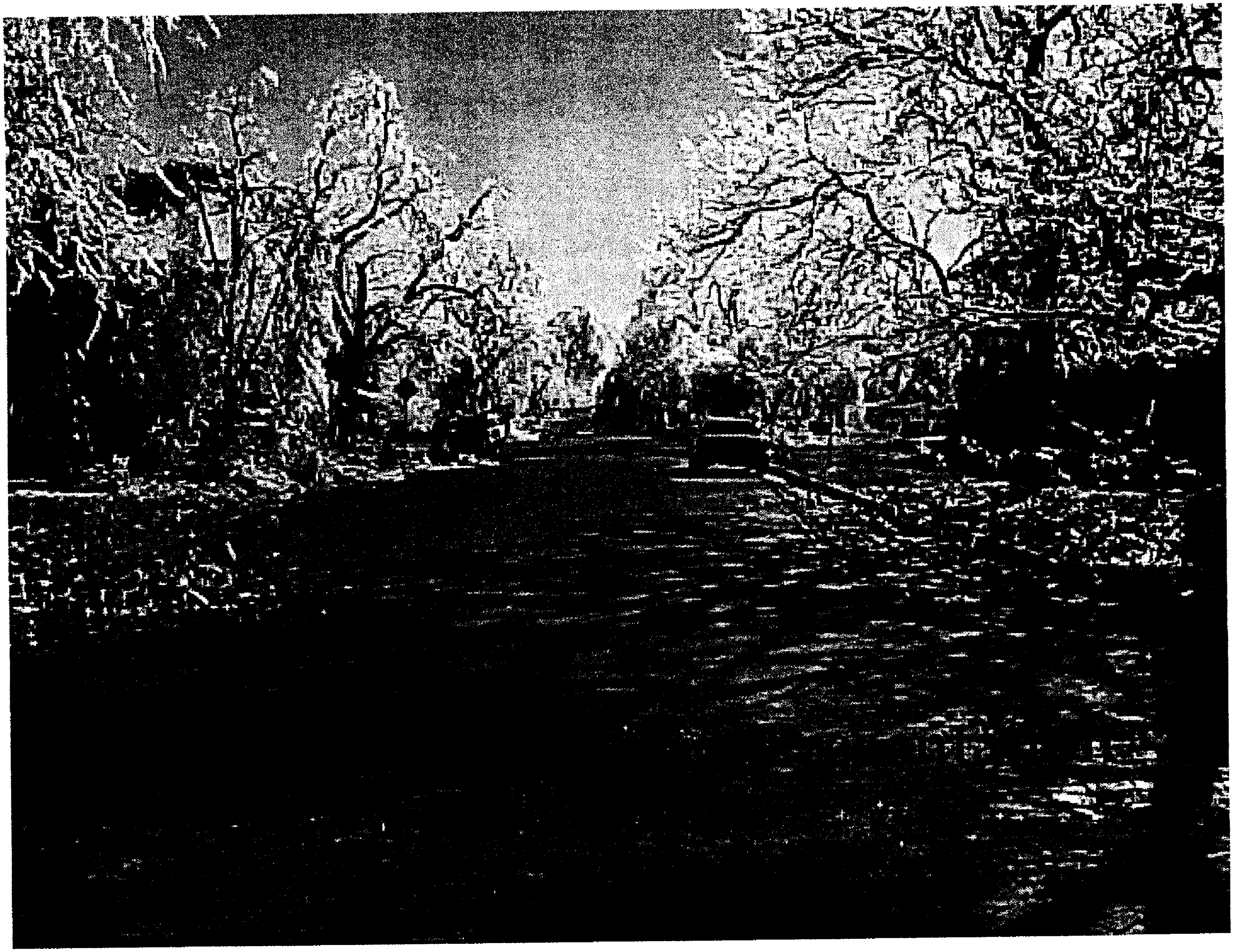
IF CARTOONISTS HAD TO WORK, STRAPPED TO A UTILITY POLE IN SUBFREEZING WEATHER LIKE A WESTAR LINEMAN...

Westar Energy.

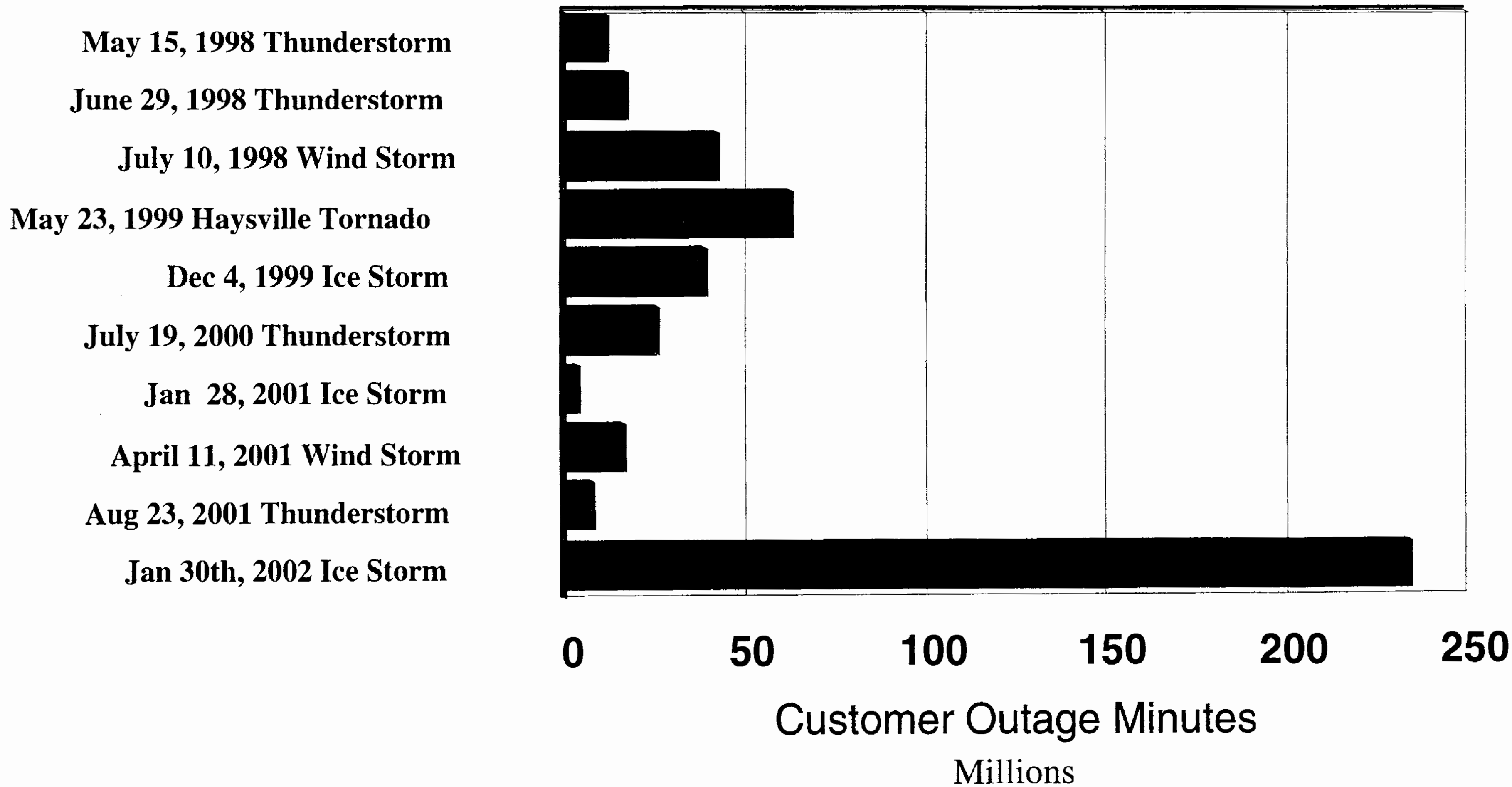
January '05 Ice Storm

- Power was restored in 10 days, but much work remained
  - 99% complete in 8 days
- Many customers were waiting for electricians to make repairs
  - 544 permanent repairs completed since January 14
- Facilities fixed by temporary means, to quickly restore service to customers, still needed a permanent fix
  - Wichita personnel back to normal hours February 7
- Extra contract line and tree crews remained in Wichita assisting with clean up and the backlog of normal work
  - All released by January 31 to normal duty

Westar Energy.



Comparison of Storms Total Customer Outage Minutes



Cost Estimate

- Total Estimated Cost: $20,459,953
  - O&M Cost: $13,206,544
  - Construction Cost: $ 7,253,409

Summary

- Category

– Pole Miles Outaged	5020
– Dist. Circuit Lockouts	240
– #Poles Down (Dist.)	1,022
– #Structures Down (Trans)	57
– #Spans Primary Down	1,650
– #Services Down	3,200
– Total Customers Affected	104,393
– Transmission Lines Affected	14
– 21st Century Calls	86,781
– Restoration Personnel	1,370

Transmission Damage

- 69kV Lines
  - 11 poles, Numerous Crossarms
  - 2 switches
- 115kV Lines
  - 1 Line down, no failed structures
- 138kV
  - 15 Steel Lattice Structures
- 345kV Lines
  - 31 Structures
- Fiber Optic Communication System
  - 3 Breaks due to Transmission structure damage

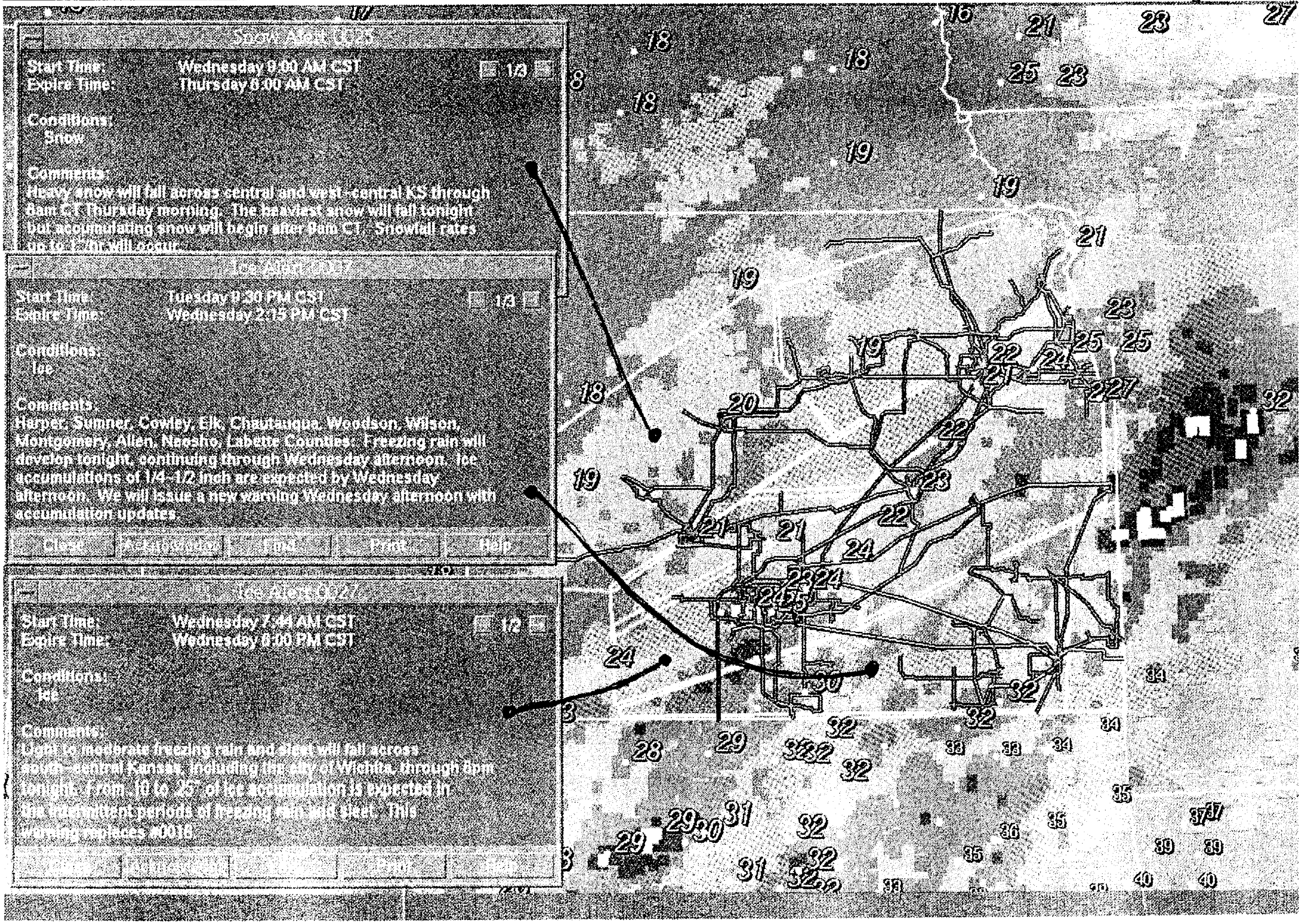
Crew/Equipment Summary

- **Manpower**
  - #Tree Crews/People 153/400
  - #Line Crews/People 214/690 (Crews: Westar 105,Utility 65,Contractor 44)
  - #Phone Center 80
  - #Misc. Support 200 (Crisis Center, Assessment & Support Teams)
- **Equipment**
  - 138 Service Trucks
  - 119 Bucket Trucks
  - 121 Diggers
  - 10 Pressure Diggers
  - 12 Caterpillars/Dozers
  - 2 Helicopters
  - 1 Airplane

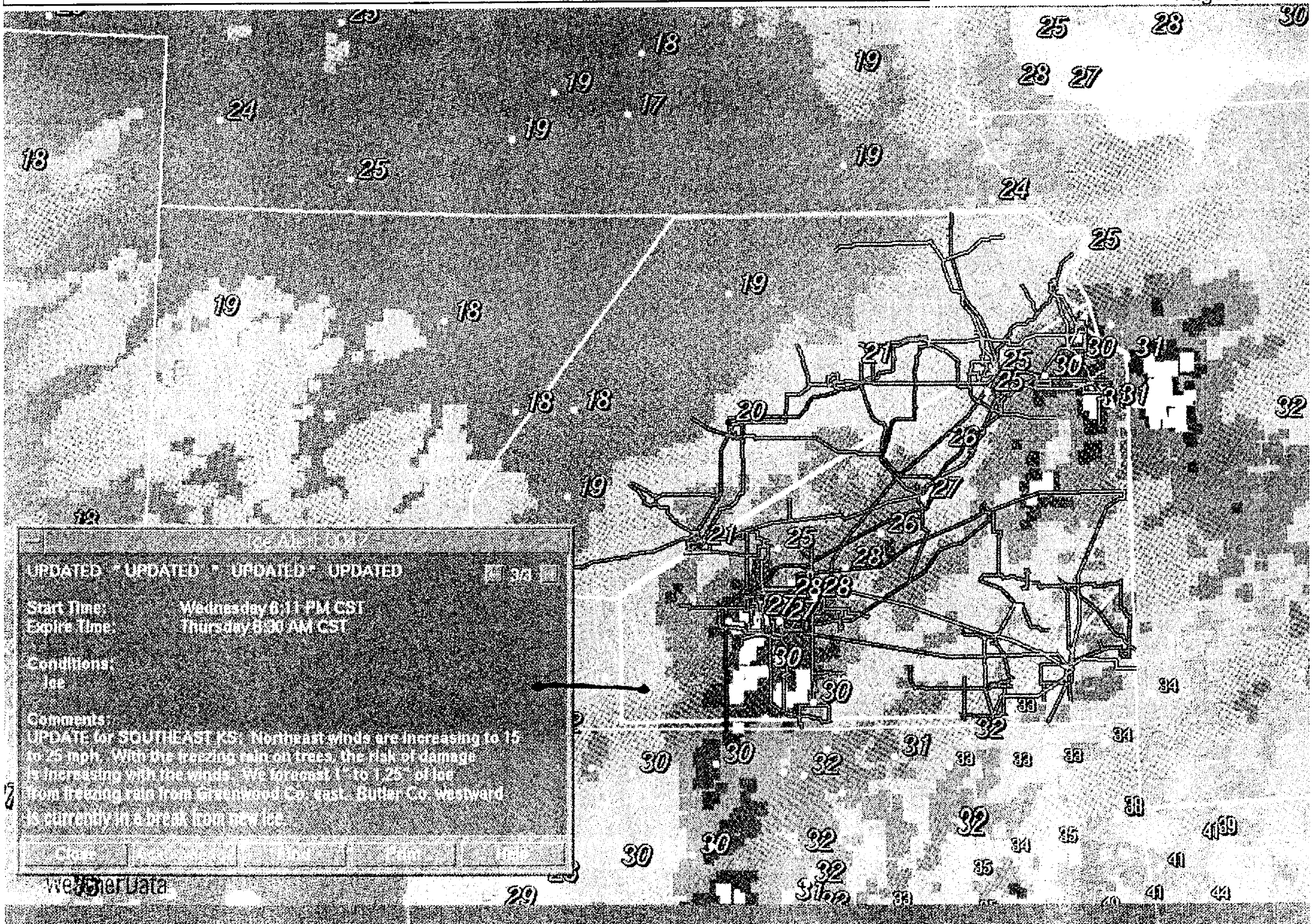
Outside Crews from Kansas, Indiana, Colorado, Iowa, Nebraska, Arkansas, Illinois, Oklahoma, Missouri & South Dakota

Weather Maps - 1/30/02 10:25AM

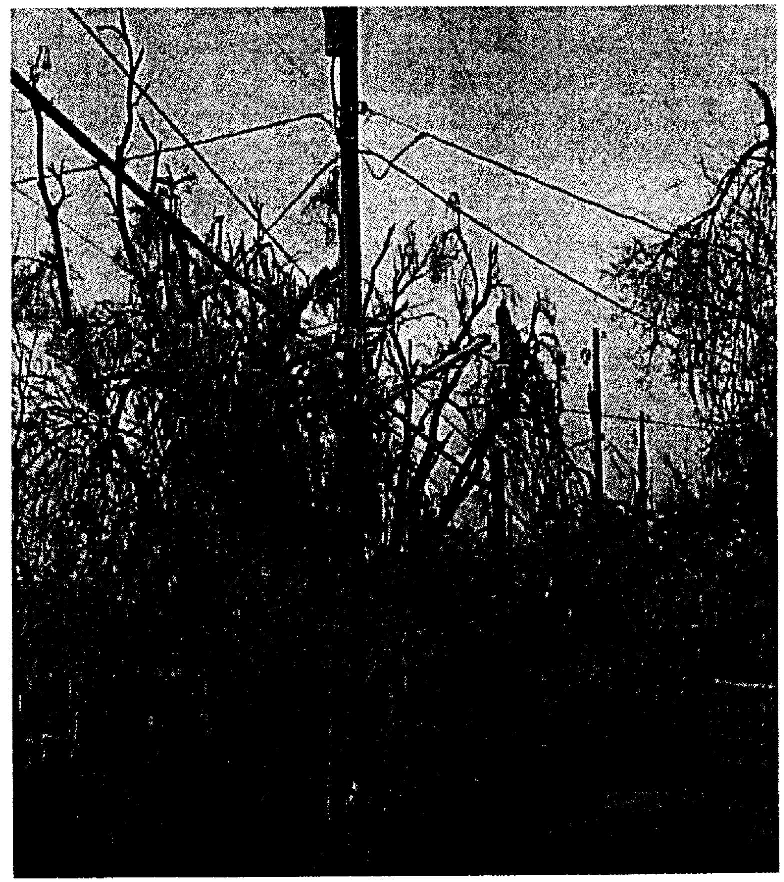
Exhibit ___ (DH-2)



Weather Maps - 1/30/02 7:04PM



Pictures



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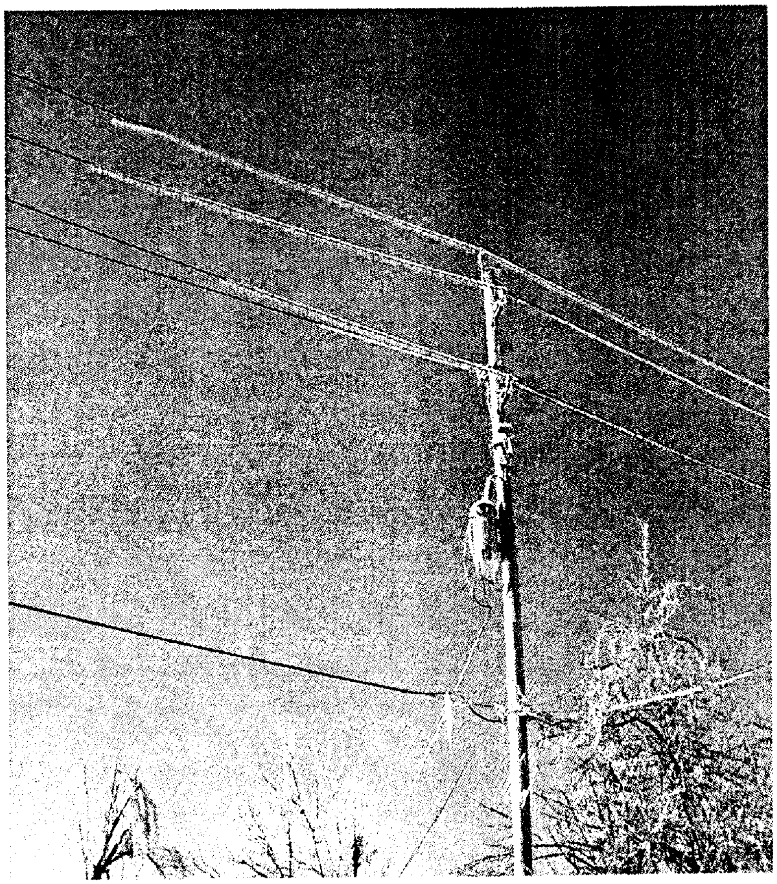

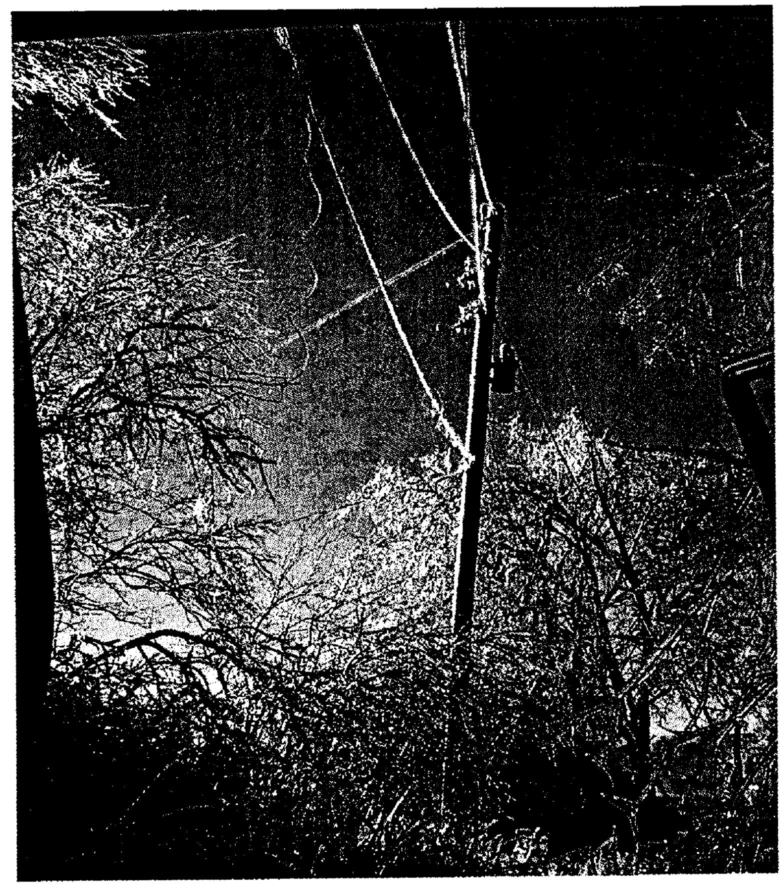

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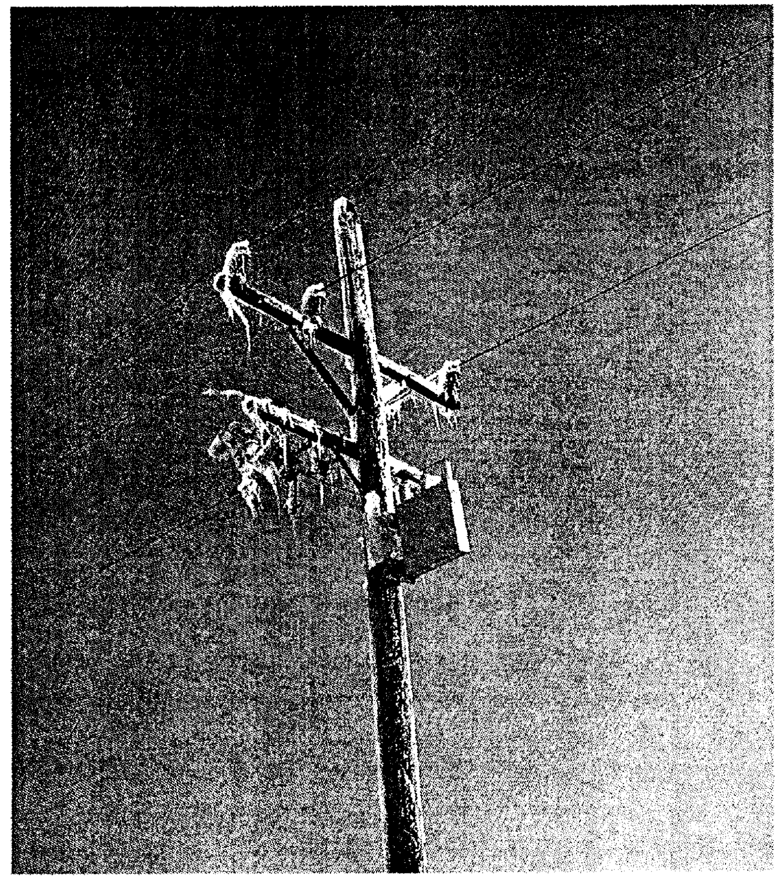

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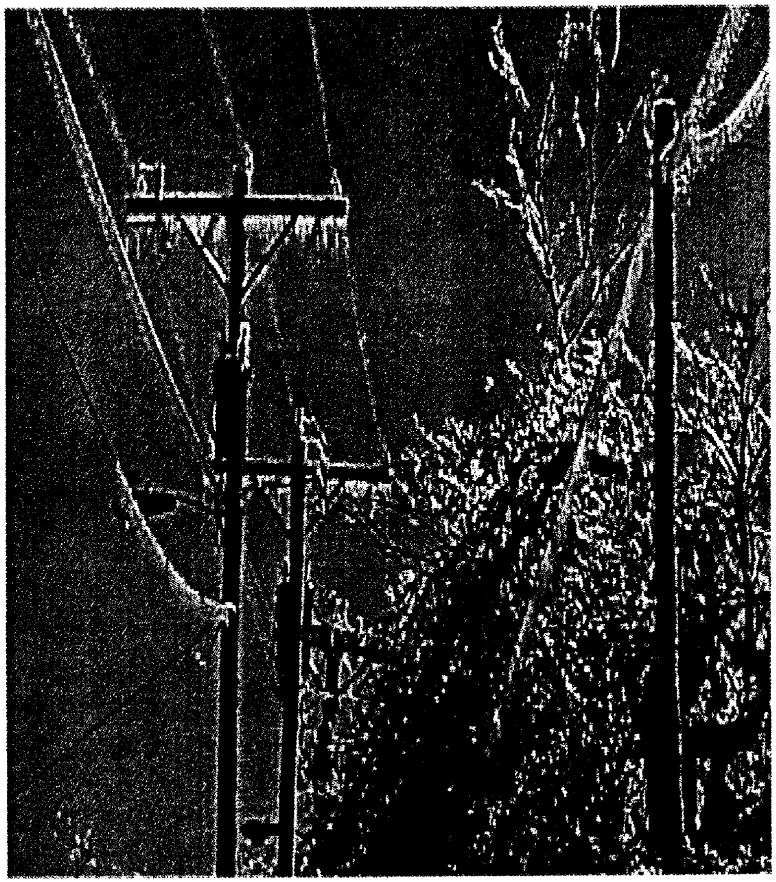

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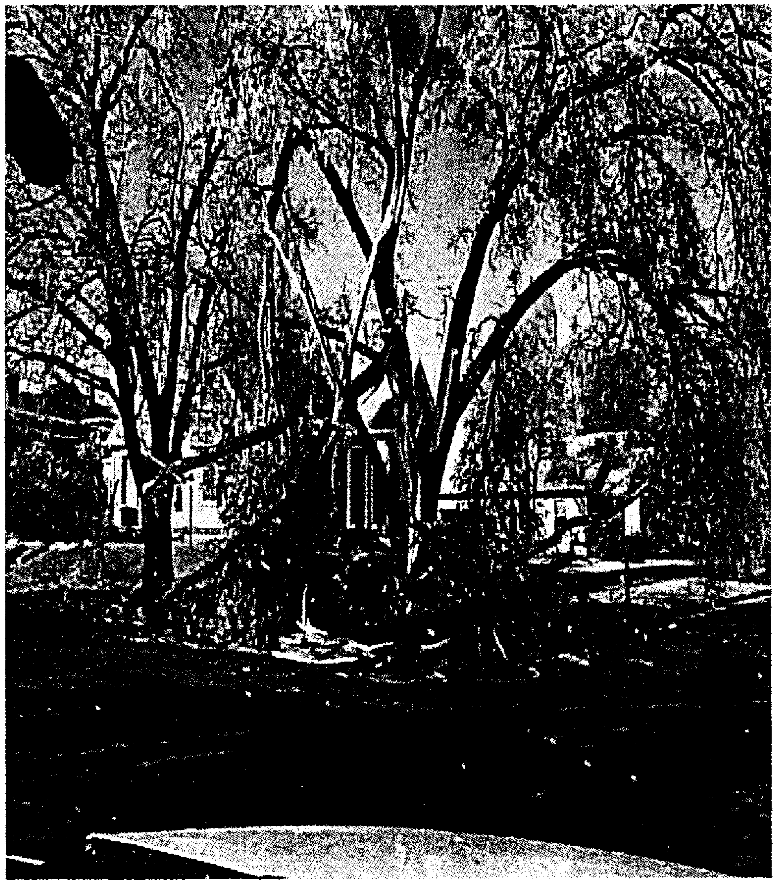

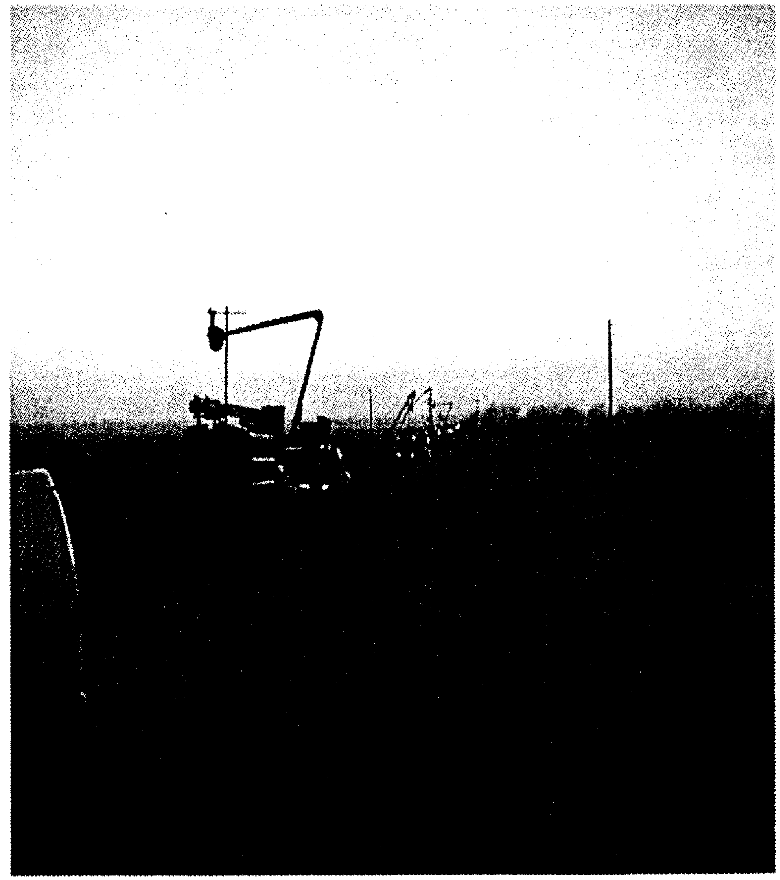

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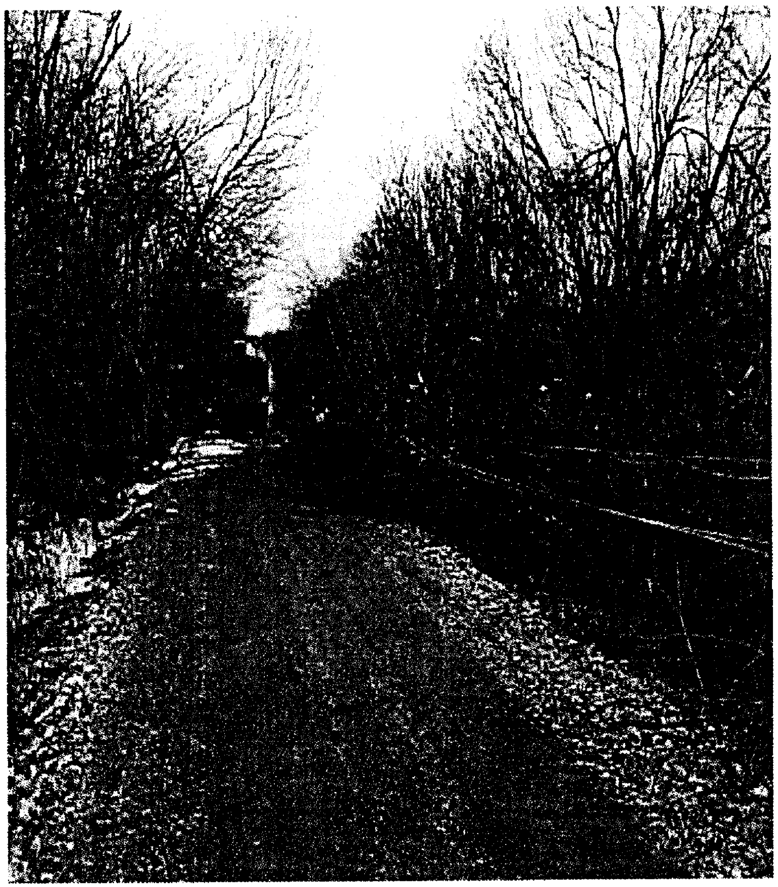

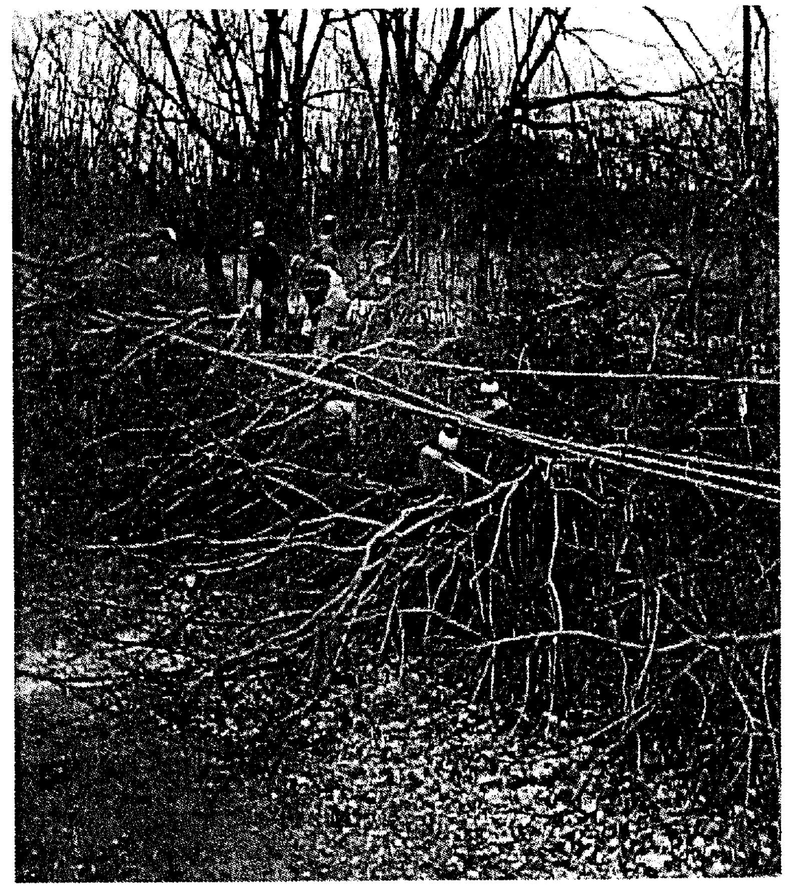

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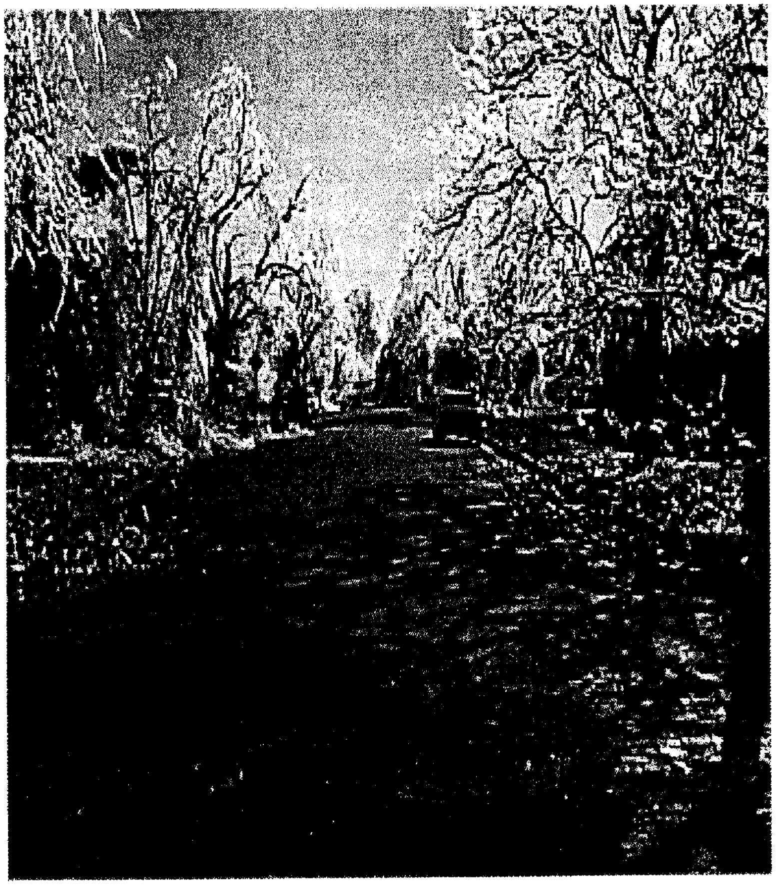

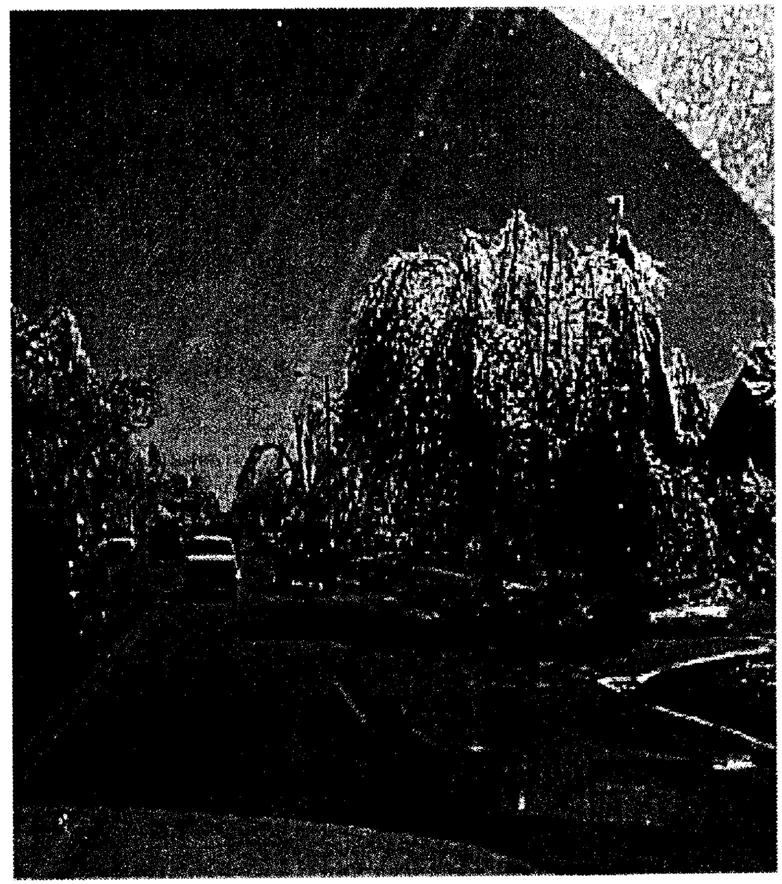

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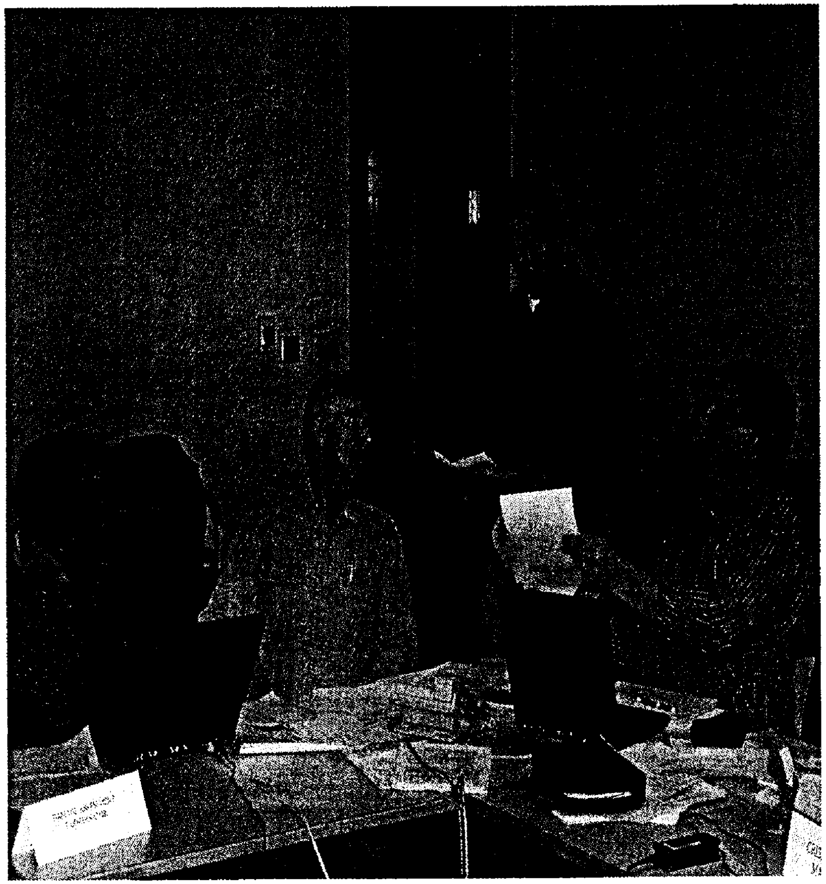

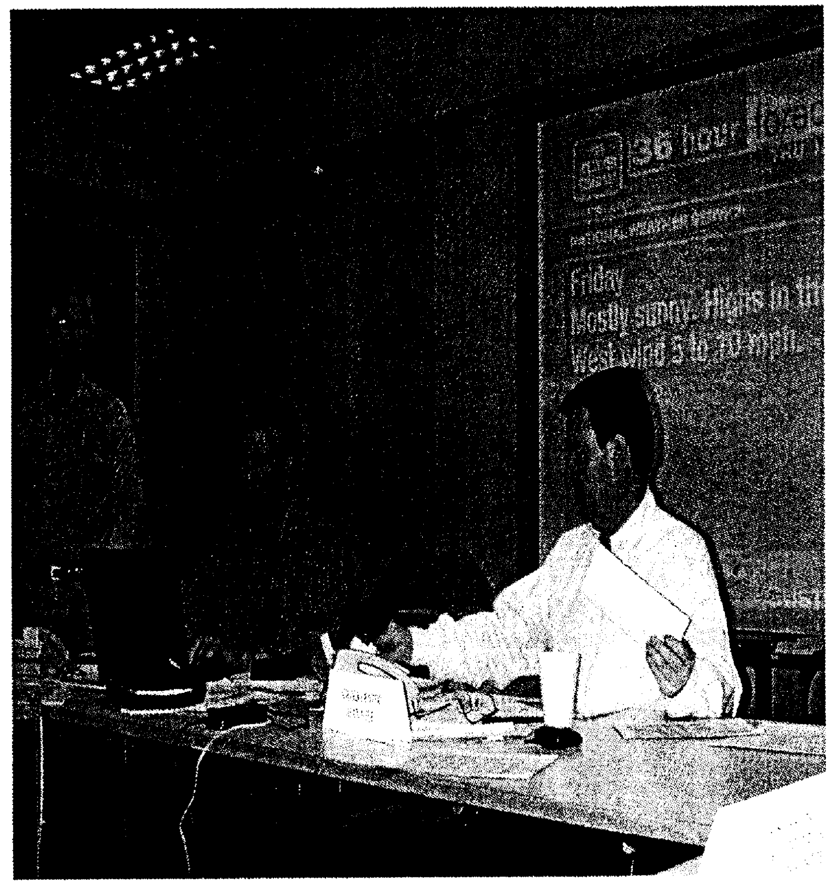

January 30th to February 6th Ice Storm

Trouble Order Storm Summary - Total Customers REMAINING Out