

Eastman Kodak Case

Implementation of TQEM at Kodak Park's Utilities Division

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"Our vision is to be a world class company and the leading imaging company in protecting the quality of the environment and the health and safety of our employees, customers, and communities in which we operate."

R. Hays Bell, Vice President and Director
Eastman Kodak Corporate Health, Safety and Environment
HS&E Annual Report, 1994.

In mid-1993, the Utilities Division at Kodak Park in Rochester, New York, volunteered to implement a long-term prevention-based environmental management strategy (EMS). The division provides steam, electricity, refrigeration, compressed air, incineration, supply water, and wastewater treatment and disposal services for Eastman Kodak Companies largest U.S. manufacturing site. "If the Utilities Division had to cease operations because of compliance or regulatory problems, operations throughout the industrial facility would stop," according to Jeffrey Matthews, Environmental Program Manager at Kodak Park Site Services.

After reviewing a number of environmental management systems, the Total Quality Environmental Management (TQEM) matrix system of the Council of Great Lakes Industries was selected. "The TQEM matrix appeared to provide a method for focusing, documenting, and disciplining our environmental management process," noted Peter Loberg, manager of the Utilities Division. Robert Gomperts, Manager of Health, Safety and Environment (HS&E) for the Utilities Division was asked to spearhead the implementation process.

By late 1995, the TQEM system had been implemented in the Utilities Division for almost two years. Implementation had involved approximately 12% of the available HS&E personnel time during each of the two years. Although cost savings had not yet been realized, the shift toward proactive and prevention-based activities was projected to reduce HS&E annual management personnel costs 25% by 1998, and 40% by the year 2000 a significant return on personnel investment. As Loberg and Gomperts prepared for a meeting with Mathes to discuss future environmental management efforts for Kodak Park in light of ISO 14000 certification requirements, they thought about the potential for implementing TQBM in other divisions. Had TQBM lived up to expectations in the Utilities Division? Was the system appropriate for other divisions at Kodak Park? Would the system satisfy ISO 14000 criteria?

Eastman Kodak Company

Background

Eastman Kodak Company is one of the world leaders in the development, manufacture, and marketing of both conventional and electronic imaging technology. The business was founded in 1882 by George Eastman who is credited with commercializing photography. Today, the Kodak colors and name are among the most recognized brand images in the world, Kodak is the fifth most popular consumer brand in the U.S.

In response to reduced revenues, the company hired George M. C. Fisher, from Motorola Inc., as new CEO in 1993. Fisher's tenure began a series of changes at Kodak: cost-cutting measures were introduced, faster decisions were encouraged and there was a move towards proactive business strategies. An informal manager, Fisher replaced the rigid hierarchical organization at Kodak and delegated decisions to line managers. The change in also resulted in a refocus of activities which resulted in reductions of 9,000 jobs worldwide during 1994 and 1995 - almost 10% of the workforce. The company posted a net income of \$1,252 million in 1995 (Exhibit 1).

Corporate Environmental Efforts

Kodak has a history of health, safety, and environment (HS&E) awareness. The company's formal commitment to HS&E began in 1936 with the creation of the Laboratory of Industrial Medicine. By the late 1980s the company had instituted HS&E policies and performance standards, and a corporate HS&E assessment program. Additionally, the corporate strategic planning processes included HS&E priorities. A corporate-level HS&E Management Council was created at Kodak in 1989. The Council brings senior company officers together to provide direction and establish policies affecting performance. By the 1990s, HS&E criteria were beginning to be included in performance tracking, and prevention-based HS&B programs were encouraged.

Kodak's vision statement now includes HS&E performance, and Fisher has also adopted an HS&E Strategic Framework and Global HS&E Performance Expectations.

Kodak has been recognized for its HS&E efforts throughout the past 50 years. For example, in the 1940s the company received an award from the Academy of Motion Picture Arts for producing less flammable motion picture film. The company frequently receives environmental awareness awards (such as the CLIO award in 1994). Kodak pioneered a system to collect its "single use" cameras. Kodak films are packaged in recycled paperboard and film cartridges are also recycled. Kodak eliminated the use of ozone-depleting chlorofluorocarbons (CFCs) ahead of a worldwide ban, and Kodak was recognized by the U.S. Environmental Protection Agency

(EPA) for meeting its voluntary commitments to the 33/50 emission reduction program.¹

Kodak Park - Environmental Issues and Responses

Environmental Issues

In the U.S., Kodak's industrial operations are predominantly located at Kodak Park in Rochester, New York. The facility accounts for approximately 50% of the company's annual worldwide production. It employs 18,000 people and is the largest U.S. manufacturing site east of the Mississippi.

The major environmental concerns and drivers at the Kodak Park site include:

- 1. The escalating complexity of compliance with regulations and permits:* Kodak Park is subject to a myriad of environmental laws and regulations, such as the Toxic Substances Control Act (TSCA), the Resource Conservation and Recovery Act (RCRA), the Clean Air Act, and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA the Superfund law), to name just a few. The New York State Department of Environmental Conservation (DEC) is the primary agency dealing with Kodak Park, with authority delegated through federal environmental statutes. It periodically conducts inspections at the site.
- 2. The level of Toxics Release Inventory² (TRI or SARA 313) emissions:* The 200 major buildings operating at the Kodak Park manufacturing facility produced nearly all of Eastman Kodak's emissions of TRI chemicals (Exhibit 2).
- 3. Concerns about compliance, and government and neighborhood responses:* Following a highly publicized groundwater contamination evaluation, a pipeline broke in 1988 spilling 25,000 gallons of an organic solvent. This, combined with other environmental incidents, resulted in the local community gaining a much heightened awareness of Kodak Park's Environmental Practices. Under a 1994 agreement with the EPA, Eastman Kodak agreed to pay a \$5 million fine and to undertake several environmental projects and a major upgrade of the Industrial sewer system at Kodak Park in settlement of pre-1990 violations.
- 4. Significant environmental expenditures for the facility:* In 1995, Kodak's U.S. expenditures for pollution prevention, environmental management, and waste management amounted to \$106 million, much of which was merited at the Kodak Park facility (Exhibit 3). Approximately 40-50% of Kodak Park's environmental dollars are spent in the Utilities Division.

Kodak Park Environmental Responses

Public awareness and corporate concern about emissions and waste production require that environmental efforts at the Kodak Park site go beyond compliance assistance. Kodak Park is surrounded by a largely residential area. As a result, the facility stresses local community involvement. For example, regular Health, Safety, and Environment updates are sent to 13,000 homes and businesses in the immediate area of the site (about 20% of the immediate neighbors are Kodak employees). Since 1990, activities have included monthly meetings with a citizen's advisory council, publications outlining Kodak's waste management and water quality management practices, and setting up a neighborhood environmental communications center.

¹ The 33/50 program was EPA's voluntary pollution prevention initiative with a goal to reduce the environmental releases and transfers of 17 targeted toxic chemicals 33% by 1992 and 50% by 1995.

² Mandated by Section 313 of the Superfund Amendments and Reauthorization Act of 1986, certain U.S. manufacturing plants are required to report their annual environmental emissions of some 370 chemicals and chemical compounds to the EPA.

By late 1995, 100 people were involved in providing environmental management services in Kodak Park divisions including regulatory and engineering support groups. In general, HS&E responsibilities are between operations and HS&E support staff. Line level involvement in environmental issues had increased dramatically since 1990.

Recent HS&E efforts at Kodak Park involved significant emissions reduction efforts, a commitment to upgrade the Industrial sewer system and other environmental improvement projects, documentation of environmental management control systems, and an increased focus on both compliance and preventive approaches to management.

In 1995, Kodak Park received the New York State Governor's Award for pollution prevention for its waste reduction achievements. The site has also received awards for its community-focused environmental communications program.

Environmental Management Systems

Throughout the early 1990s, a number of HS&E programs were implemented at Kodak Park, many of which were corporate-driven such as the development of resource manuals that provide guidance in interpreting HS&E regulations, and an environmental audit program. An independent evaluation of the audit program showed that it went beyond the external auditor's expectations in several areas. Kodak Park implemented a detailed energy management program in 1977, with a regionalized effort starting in 1993. Additional HS&E programs implemented during the 1990s included a pollution prevention and waste minimization program. It involved a series of waste and pollution reduction goals and strategies for prioritized waste and emissions. A multimedia approach is used in developing waste reduction programs. Other corporate and site-specific programs that were applied to HS&E at Kodak Park included the KP4 program (Perfect Product, Perfect Process), and a CycleTime Reduction program. In addition, HS&E planning has been integrated into Kodak Park's overall priorities, using a five-year strategic planning process.

The facility's large HS&E expenditures, as well as the need for regulatory compliance and implementation of proactive programs, suggested that implementation of a rigorous environmental management system (EMS) was crucial for operations and long-term profitability. In 1993, Kodak Park evaluated the potential use of two management systems: The Global Management Initiative Self-Assessment Program (GEMI) and The Council of Great Lakes Industries Total Quality Environmental Management Matrix (TQEM). Both systems are modeled on the concepts of Total Quality Management (TQM). The major criterion used in the selection process was the ability of the system to support the site's compliance efforts. The costs of the program and less tangible benefits (e.g., more satisfied customers and stakeholders, reduced environmental liabilities) were secondary considerations.

The TQEM system was chosen to assess the management systems in place within each division at the site. The Utilities Division at Kodak Park went a step further and volunteered to implement the TQEM matrix in its six departments.

The Utilities Division

At Kodak Park, the majority of wastes are managed on-site by the Utilities Division. This minimizes the amount that must be transported off-site for treatment and disposal and allows for

centralized control of waste management efforts. The division is managed by Peter Loberg and its supply as well as waste treatment operations are crucial to operations at Kodak Park.

The Utilities Division consists of six operating departments (steam/electric, refrigeration/water, chemical waste, water quality, sewers, and groundwater quality) and employs approximately 420 people. Until the late 1950s the primary focus of the division was on actual operations, such as maintenance and technical issues. HS&E functions were centralized within Kodak Park. By the early 1990s, each division had HS&E staff. The utilities HS&E program was managed by Bob Gomperts. In addition to the HS&E department, which has responsibility for the entire division, each department has an environmental or HS&E coordinator with staff as appropriate.

Waste received by utilities is coded according to the originating manufacturing plant or unit. Waste water volumes are also tracked for the various originating sources. The Utilities Division charges manufacturing units based on the amount of waste treated and the charges are traced back to products or specific processes. Waste reduction efforts by manufacturing divisions will result in reduced waste handling costs. However, the effect is not linear as fixed costs need to be covered and are charged to the manufacturing units. An increase in compliance costs for the Utilities Division translates into increased charges to customer divisions; reduced environmental costs in the Utilities Division translates into reduced charges. Other than offering potential cost reductions, the Utilities Division has little control over the amount of waste received for treatment.

As a community service, the Utilities Division also incinerates some low volume, very specialized waste. For example, it incinerates illegal weapons and drugs seized by the Rochester Police Department.

Environmental Management Systems

General

An EMS system should ensure that environmental issues are recognized throughout the company's operations and practices and allow a company to monitor and measure environmental activities. Successful implementation should result in prevention of environmental incidents and risks and, in turn, reduce future liabilities and costs and result in improved regulatory compliance.

By 1993, when Kodak Park managers were evaluating existing EMS systems, a range of environmental management guidelines and systems were beginning to be used by U.S. and European companies (Exhibit 4). Furthermore, the International Organization for Standardization (ISO) was developing a series of international environmental management standards (ISO 14000) for corporations which includes the use of EMS systems (Exhibit 4). Thus, it was important that the EMS chosen could also be used to satisfy ISO 14001 certification criteria.

The TQEM matrix selected for testing at Kodak Park is based on the Principles of Total Quality Management (TQM). TQM principles were first espoused by W. Edwards Deming and Joseph Duran in the early 1950s³. TQM was first applied to environmental management efforts by Japanese industry in the late 1970s. However, implementation of Total Quality Environmental Management (TQEM) is a recent phenomenon in the United States. TQEM implementation was

³ These management principles were the basis for the revolution in the quality and competitiveness of Japanese products after World War II.

a natural extension of existing aggressive TQM efforts at Kodak. As with TQM, the basic elements of TQEM are:

- high levels of management commitment
- strong customer/stakeholder focus/teamwork
- empowerment
- continuous improvement
- data driven decisions
- prevention approach

Council of Great Lakes Industries TQEM Matrix

The Council of Great Lakes Industries developed the TQEM matrix with the aim of building a quantitative tool for TQEM evaluation which could be used as the evaluation metric for regional TQEM award programs. The matrix is modeled on the Malcolm Baldrige Awards categories and criteria used in evaluating TQM programs, and is designed to be a tool for self-evaluation. Companies use the matrix to determine gaps in environmental management practices, develop a quantitative score that can be tracked over time, and perform benchmarking against other units or companies.

The generic TQEM matrix is shown in Exhibit 4b and includes seven categories:

- Leadership: Commitment of senior management
- Information and Analysis: Effectiveness of information gathering and analysis in guiding and driving environmental efforts
- Strategic Planning: Integration of customer/stakeholder environmental requirements into business strategy plans
- Human Resources: Success in effectively using work force in TQEM efforts
- Quality Assurance of Environmental Performance: Effectiveness of units' TQEM quality assurance efforts, including continuous improvement and prevention
- Environmental Results: Estimation of improvement in TQEM and demonstration of TQEM excellence
- Customer/Stakeholder Satisfaction: Effectiveness of determining and meeting customer/stakeholder requirements.

The matrix system is set up with specific weights assigned to each category, and a hierarchy of achievements. As a company implements a TQEM system, they move “up” the TQEM matrix, increasing their score. Companies may modify the matrix categories and weighting scheme and assign numerical values to the levels to aid in tracking improvements. In a nutshell, the TQEM matrix assesses progress toward implementing a “Best-in-Class” EMS.

The Council for Great Lakes Industries summarizes the value of the Matrix:

- Provides a building-block system for TQEM implementation.
- Fosters a preventive approach and continuous improvement of performance.
- Sets standards for excellence.
- Provides a tool for economic and environmental improvement by encouraging integration of environmental goals into business plans.
- Reinforces partnerships and encourages sharing information.
- Fosters a consensus approach by business, government, and the public to environmental priority and goal setting, planning, and commitment to resources, based on sound information.

- Promotes environmental stewardship among all sectors of society.

Environmental Costs

Unexpected environmental costs can be significant. For example, an audit of the environmental management practices at Kodak Park by the National Environmental Investigation Center (NEIC) in 1988 resulted in a \$5 million fine. \$12 million will be spent over the next decade for special environmental projects including source reduction and emission reduction projects. In 1992, an internal audit of HS&E practices produced about 200 findings which took over three years to correct. Gomperts surmised that if TQEM had been in place, the NEIC investigation might not have taken place and reactive dollars might not have been spent. “Everyone in the division is hoping that having an environmental management system in place will reduce overall costs.” Other recent examples of significant expenditures included pipeline and storage tank upgrades at a cost greater than \$100 million, and groundwater monitoring efforts costing between \$5 million and \$10 million annually.

Environmental compliance is a must for the Utilities Division and the costs of maintaining compliance are high. These costs can be categorized as either preventive, reactive, or compliance-related, and are either fixed or variable. Costs include capital equipment, personnel, training administration and logistics, and HS&E procedures in addition to the less obvious costs of future liability, remediation efforts, and maintenance of good community relations. A proactive EMS system can significantly reduce environmental costs while improving environmental performance over time.

Bob Gomperts expected to see 25% reduction in overall HS&E management costs over the first five or so years of TQEM implementation, excluding inflation. This figure did not include intangibles such as reduced public scrutiny as a result of reduced incidents and exceedances, satisfied and motivated employees, higher quality operations, and less waste.

The cost of compliance is high: a significant portion of Kodak Park’s capital budget is spent on environmental costs, 50% of which are incurred at the Utilities Division. Cost savings realized by the Utilities Division would ultimately impact the entire Kodak Park facility through lower rates. This had the potential to lower product costs.

The Implementation Effort in the Utilities Division: “We Want No More Environmental Surprises”

Peter Loberg, the division manager for the Utilities Division felt that the use of the TQEM matrix would provide discipline and focus to EMS efforts and allow for quantitative measures of progress. Prior to implementing the TQEM system in the Utilities Division, each division at Kodak Park carried out a baseline TQEM “assessment” of its current environmental management processes. The matrix was used as-is; interpretation of the categories was left to each division. The matrix scores varied among the divisions from the 100s (lowest score) to the 900s (best in class) indicating the importance of developing consensus on the scoring criteria.

The effort received the full support of senior management at Kodak Park. Day-to-day TQEM efforts were handled by Bob Gomperts, Utilities HS&E manager. Gomperts was enthusiastic about the program. “TQEM provided a challenging long-term road map where we could define current efforts and develop a much clearer vision of the future.” Gomperts expected that implementation of a good EMS system would result in an initial increase in preventive environmental costs followed by a much larger reduction in reactive environmental costs.

Implementation of TQEM was taken very seriously -- the TQEM matrix and environmental strategy was included in the division's business plan, including the Annual Operating Plan (AOP), and the five-year Strategic Quantification (SQ) plan. Performance planning matrices also included TQEM scores. The timetable for implementation is presented in Exhibit 5.

TQEM expectations and objectives in the division were:

- Improve environmental performance, not only compliance
- Result in reasonable internal/external audits
- Allow the division to be good, not just look good
- Improve coat management for environmental issues
- Achieve corporate and site environmental goals
- Satisfy customers
- Provide ongoing quality check
- Provide documentation
- Provide accountability
- Allow a shift of responsibility from staff groups to line management
- Provide better focus
- Provide a lasting program and culture for environmental management

TQEM planning training and implementation were carried out by the environmental coordinators of the six participating departments. The overall tasks of TQEM implementation were subdivided as follows:

- 1) Understand each of the 70 cells. Interpret in light of division/site activities and develop consensus on scoring criteria
- 2) Determine cell requirements, the action items needed for "full deployment"
- 3) Carry out baseline analysis
- 4) Set annual goals
- 5) Perform gap analysis
- 6) Develop department program
- 7) Ensure shared learning
- 8) Identify roles and responsibilities for meeting goals/closing gaps
- 9) Perform periodic scoring

Use of a matrix system and development of the sub-matrix system was understood and accepted in the participating departments. Matrix evaluation efforts were a commonly used tool throughout Kodak Park for personnel and department performance goal setting and evaluation. The first TQEM task involved tailoring the cells of the original TQEM matrix categories to reflect the characteristics of the division and agreeing on the interpretation of the scoring criteria. This was the most time-consuming and challenging activity, according to the team members. For each of the 70 matrix cells, an action plan matrix was developed that detailed expected performance and action. Exhibit 6 shows the matrix action plans.

Once the Utilities Division-specific matrices had been developed and approved, each of the six participating departments analyzed their baseline TQEM score. The environmental coordinators and Gomperts then set goals for each department and each unit ran a series of TQEM training programs for employees. TQEM matrix results were also tied into employee and division performance measures at many levels:

- general TQEM goals were set by the division manager (divisional matrix)

- specific team/individual TQEM goals were set by the department manager (departmental matrix)
- matrix criteria were tied into the division's performance planning process to measure individual performance

Implementation of the TQEM program was time-consuming and both implementation (development, training, documentation etc.) and maintenance of the system was projected to involve a significant time commitment over the next few years.⁴ The total person-hours involved in the program were estimated by Gomperts to be about 50,000 hours over the six-year projected implementation period, with the hours subdivided as follows:

| | |
|------|------------|
| 1993 | 2,000 hrs |
| 1994 | 8,000 hrs |
| 1995 | 14,000 hrs |
| 1996 | 15,000 hrs |
| 1997 | 8,000 hrs |
| 1998 | 3,000 hrs |

Thereafter ~2,000 hrs for maintenance annually.

This time commitment averaged an annual commitment of 12% of the available HS&E personnel. However, the preventive nature of the EMS activities was expected to reduce the need for personnel to spend time reacting to problems and ensuring compliance.

The TQEM matrix was extended in 1994 to include all HS&E functions. By 1996, a combined TQHSEM (Total Quality Health, Safety and Environment Matrix) had been developed for the Utilities Division. TQEM implementation was not the only environmental management effort in the division, although it was expected to be the actual process used for setting critical pathways, evaluating progress, and guiding improvement. Other ongoing programs included:

1. Environmental Management Control Systems - a series of manuals for the different units covering compliance issues and specifying responsibilities for functions.
2. The P3 program - Performance, Planning Process a personnel performance measurement system which in the Utilities Division included HS&E criteria.
3. Kodak Park's Waste Minimization/Pollution Prevention program - a Kodak Park-wide effort to reduce waste at the source.

Results of Implementation

General HS&E activities

The initial reaction toward the implementation of TQEM at the Utilities Division was confusion and resistance. This gradually changed to commitment and understanding as employees in all departments participated in training programs describing the effort and explaining the purpose and expected results. By the end of 1995, the TQEM/TQHSEM documentation was largely in place and behaviors were improving although training, communication, and program execution had been slowed somewhat by the greater-than-anticipated documentation requirements. Communications efforts had succeeded at higher levels, although shop floor employees needed to be better engaged in the program. Although HS&E personnel were still reacting to a few "incidents" (Exhibit 7a), more time was being spent executing preventive efforts.

In the eyes of the environmental coordinators in the Utilities Division, the TQBM process had

⁴ Kodak Park's Internal Rate of Return is 12% and the average hourly rate for employees is \$45.
Eastman Kodak

provided “the correct requirements and a doable stepwise approach to improve environmental results,” said Bob Gomperts. The division was to be audited internally in 1996. As a result of TQEM efforts, the Utilities Division was optimistic about the outcome of the audit. It hoped that uneventful audits would result in reduced scrutiny by regulatory agencies and thus in savings to the division in the longer term.

TQEM Scores

TQEM scores for each category of the matrix over time for each department are charted in Exhibit 7b. TQEM scores increased dramatically over time. In 1995, the goal of a TQEM level of at least 400 in each matrix category for each of the six departments was met or exceeded by each department. Experts in the implementation of EMS indicate that a level of 400 in each matrix category would satisfy ISO 14000 requirements.

Environmental Performance

Environmental performance at the division appeared to have improved; the number of high- and medium-rated severity environmental incidents had reached an all-time low (Exhibit 7a).

Kodak Park underwent an audit of environmental practices and performance in June 1996. The results in the Utilities Division exceeded those of most other divisions. The Utilities Division was the only division to have no repeat findings from previous audits. The number of new findings did not increase despite an increase in the number of auditors (10 auditors found 200 issues in 1992; 27 auditors found 200 in 1996). Moreover, the new findings were less significant and were estimated to take significantly less time to rectify. Gomperts estimated that the work resulting from the 1992 audit required approximately 50,000 hours to rectify, while the work resulting from the 1996 audit would require only 2,500 hours. The auditor of the Utilities Division stated “I really had to dig deep to find something wrong.”

The performance at the Utilities Division prompted several company officers to ask Pete Loberg about the “secret to their success.” According to Gomperts “all in all, this was the best test we could have had to evaluate the potential of TQEM. It really worked.”

Cost Savings

By late 1995, cost savings were creeping in although they were difficult to quantify. The bulk of the environmental expenses of the Utilities Division were capital costs driven primarily by regulatory and continuous improvement efforts and thus difficult to reduce. Gomperts felt that the main potential for cost reduction through better environmental management in the division was through reductions in internal HS&E labor costs (currently approximately \$1-2M/year). Once the program was in place, Gomperts predicted a 25% reduction in labor costs by 1998, and a 40% reduction (relative to 1995 numbers) by 2000. This would amount to significant annual savings. He anticipated that these labor savings would be augmented by reductions in future audits, liability costs, fines, etc. Savings also included the reduced man-hours required to deal with audit findings.

By mid-1996, Loberg and Gomperts would present the results of the TQEM implementation to Mathes and Kodak Park’s Environmental Leadership Team. Specifically, Matthews wanted to know: Had TQEM lived up to expectations in the Utilities Division? What had they learned from the experience at the Utilities Division? Was the system appropriate for other divisions at Kodak Park? What were the costs and benefits of implementing an EMS?

Exhibit 1
1995 Consolidated Statement of Earnings and Consolidated Statement of Financial Position

CONSOLIDATED STATEMENT OF EARNINGS

Eastman Kodak Company and Subsidiary Companies

(IN MILLIONS)

| | FOR THE YEAR ENDED DECEMBER 31, | | |
|-------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------|-------------------|
| | 1995 | 1994 | 1993 |
| Revenues | | | |
| Sales | \$14,980 | \$ 13,557 | \$ 12,670 |
| Earnings from equity interests and other revenues | 289 | 130 | 203 |
| TOTAL REVENUES | <u>15,269</u> | <u>13,687</u> | <u>12,873</u> |
| Costs | | | |
| Cost of goods sold | 7,962 | 7,325 | 6,654 |
| Selling, general and administrative expenses | 4,158 | 3,711 | 3,420 |
| Research and development costs | 935 | 859 | 864 |
| Interest expense | 78 | 142 | 175 |
| Restructuring costs | - | 340 | 495 |
| Other costs | 210 | 308 | 188 |
| TOTAL COSTS | <u>13,343</u> | <u>12,685</u> | <u>11,796</u> |
| Earnings from continuing operations before income taxes | 1,926 | 1,002 | 1,077 |
| Provision for income taxes from continuing operations | 674 | 448 | 433 |
| Earnings from continuing operations before extraordinary items and cumulative effect of changes in accounting principle | 1,252 | 554 | 644 |
| Earnings (loss) from discontinued operations before cumulative effect of changes in accounting principle | - | (81) | 23 |
| Gain on sale of discontinued operations | - | 350 | - |
| Earnings before extraordinary items and cumulative effect of changes in accounting principle | 1,252 | 823 | 667 |
| Extraordinary items | - | (266) | (14) |
| Earnings before cumulative effect of changes in accounting principle | 1,252 | 557 | 653 |
| Cumulative effect of changes in accounting principle: | | | |
| Continuing operations | - | - | (1,649) |
| Discontinued operations | - | - | (519) |
| Total cumulative effect of changes in accounting principle | - | - | (2,168) |
| NET EARNINGS (LOSS) | <u>\$ 1,252</u> | <u>\$ 557</u> | <u>\$ (1,515)</u> |

Exhibit 1
1995 Consolidated Statement of Earnings and Consolidated Statement of Financial Position (cont.)

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

Eastman Kodak Company and Subsidiary Companies

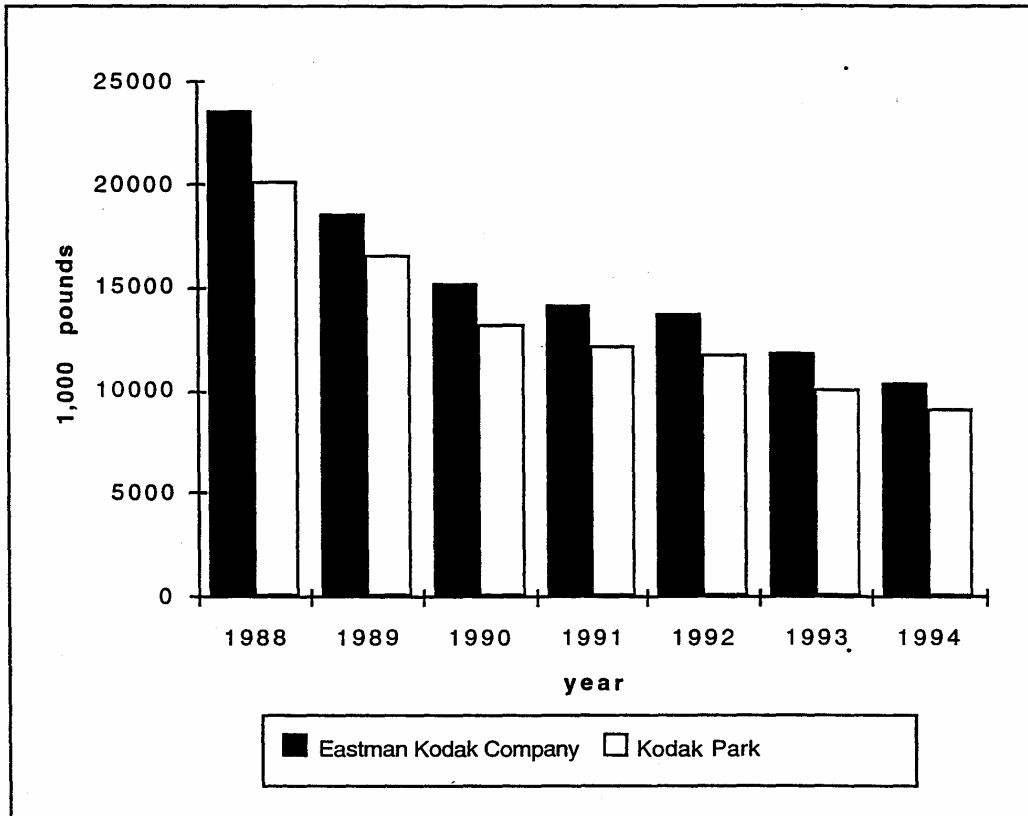
(IN MILLIONS)

AT DECEMBER 31,

| ASSETS | 1995 | 1994 |
|--------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| Current Assets | | |
| Cash and cash equivalents | \$ 1,764 | \$ 2,020 |
| Marketable securities | 47 | 48 |
| Receivables | 3,145 | 3,064 |
| Inventories | 1,660 | 1,480 |
| Deferred income tax charges | 520 | 711 |
| Other | 173 | 360 |
| Total current assets | <u>7,309</u> | <u>7,683</u> |
| Properties | | |
| Land, buildings and equipment | 12,652 | 12,299 |
| Accumulated depreciation | 7,275 | 7,007 |
| Net properties | <u>5,377</u> | <u>5,292</u> |
| Other Assets | | |
| Goodwill (net of accumulated amortization of \$346 and \$246) | 536 | 616 |
| Long-term receivables and other noncurrent assets | 911 | 872 |
| Deferred income tax charges | 344 | 505 |
| TOTAL ASSETS | <u>\$14,477</u> | <u>\$14,968</u> |
| <hr/> | | |
| LIABILITIES AND SHAREOWNERS' EQUITY | | |
| Current Liabilities | | |
| Payables | \$ 3,327 | \$ 3,398 |
| Short-term borrowings | 586 | 371 |
| Taxes—income and other | 567 | 1,701 |
| Dividends payable | 137 | 136 |
| Deferred income tax credits | 26 | 129 |
| Total current liabilities | <u>4,643</u> | <u>5,735</u> |
| Other Liabilities | | |
| Long-term borrowings | 665 | 660 |
| Postemployment liabilities | 3,247 | 3,671 |
| Other long-term liabilities | 704 | 790 |
| Deferred income tax credits | 97 | 95 |
| Total liabilities | <u>9,356</u> | <u>10,951</u> |
| Shareowners' Equity | | |
| Common stock, par value \$2.50 per share, 950,000,000 shares authorized; issued 389,574,619 in 1995 and 386,343,903 in 1994 | 974 | 966 |
| Additional capital paid in or transferred from retained earnings | 803 | 515 |
| Retained earnings | 5,184 | 4,485 |
| Accumulated translation adjustment | 93 | 8 |
| Treasury stock, at cost | <u>7,054</u> | <u>5,974</u> |
| 43,685,196 shares in 1995 and 46,587,211 shares in 1994 | 1,933 | 1,957 |
| Total shareowners' equity | <u>5,121</u> | <u>4,017</u> |
| TOTAL LIABILITIES AND SHAREOWNERS' EQUITY | <u>\$14,477</u> | <u>\$14,968</u> |

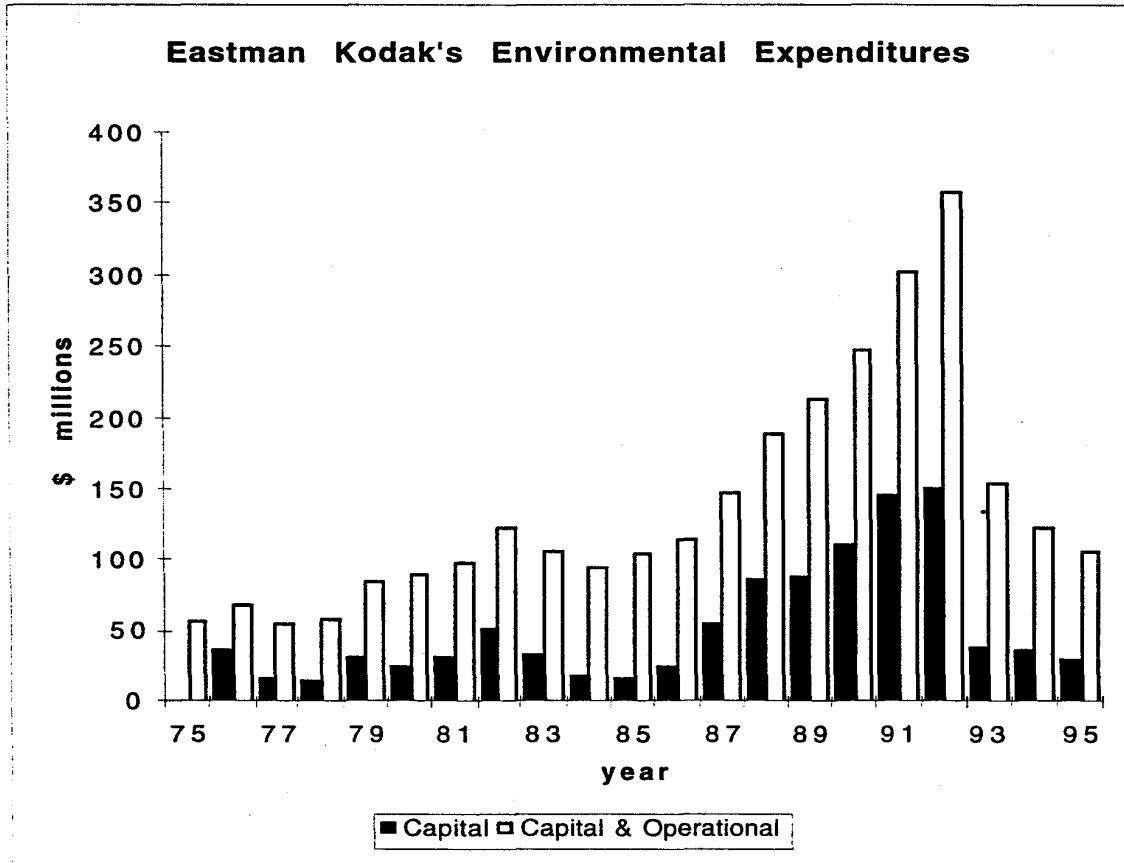
The notes on pages 37 through 47 are an integral part of these financial statements.

Exhibit 2
U.S. EPA Toxics Release Inventory data for Eastman Kodak and Kodak Park, total releases and transfers, 1988-1994



Source: Kodak Park Site Services

Exhibit 3
Annual Eastman Kodak environmental expenditures (USA only)



Source: Eastman Kodak 10K report. Note costs up to 1992 included Eastman Chemicals and Sterling.

Exhibit 4

Major components of EMS systems used in the U.S.

- **Global Environmental Management Initiative (GEMI) Self-Assessment Program:**
Corporate Priority, Integrated Management, Process of Improvement, Employee Education, Prior Assessment, Products and Services, Customer Advice, Facilities and Operations, Research, Precautionary Approach, Contractors and Suppliers, Emergency Preparedness, Transfer of Technology, Contributing to the Common Effort, Openness of Concerns, Compliance and Reporting
- **International Chamber of Commerce Business Charter for Sustainable Development: Principles for Environmental Management:**
Same as above
- **ISO 14000 voluntary compliance standards (1996)**
See Exhibit 4A
- **Council of Great Lakes Industries (CGLI) Environmental Self-Assessment Matrix:**
See Exhibit 4B

Exhibit 4A
Description of ISO 14000

ISO 14000 is a series of **voluntary** environmental management standards being developed by the International Organization for Standardization (ISO). The series includes EMS standards, auditing standards, environmental performance evaluation (EPE) standards, environmental labeling standards, and life cycle assessment standards. The standards aim to be flexible and practical and suitable for implementation worldwide and thus stress process rather than results.

ISO 14001 is the EMS standard included as part of the series. ISO 14001 is expected to be approved during 1996. As with any EMS, conforming to ISO 14001 should result in improvements in compliance and conformance. The components of the ISO 14000 EMS system are summarized below: (courtesy of Joseph Cascio, IBM)

EMS SYSTEM

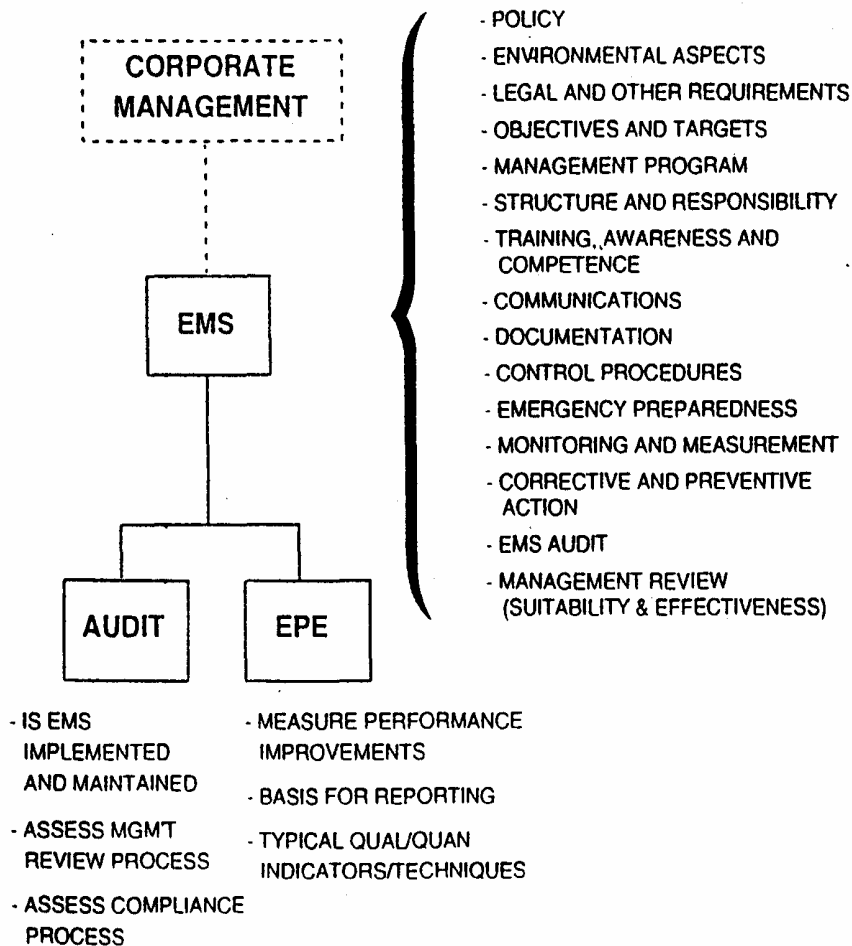


Exhibit 4 B Generic TQEM Matrix

Total Quality Environmental Management Implementation Guide and Assessment Matrix

| Level | Rank | Information & Analysis | | | | Strategic Planning | | Human Resource Development | | QA of Environmental Performance | | Environmental Results | | Stakeholder Satisfaction | |
|---------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------------|--------|-----------------------|--|--------------------------|--|
| | | Weighting | 15.0 % | 7.5 % | 7.5 % | 7.5 % | 10.0 % | 15.0 % | 30.0 % | 15.0 % | 15.0 % | | | | |
| Growing | 10 | Benchmarking indicates unit is "Best-in-Class" in leadership area. | Benchmarking indicates unit is "Best-in-Class" in area of information and analysis. | Benchmarking indicates unit is "Best-in-Class" in area of strategic planning. | Benchmarking indicates unit is "Best-in-Class" in levels of employee morale and attitudes toward environmental management. | Benchmarking indicates unit is "Best-in-Class" in level of QA of environmental performance. | Benchmarking indicates unit is "Best-in-Class" in environmental results. | Benchmarking indicates unit is "Best-in-Class" in customer/stakeholder satisfaction with respect to environmental quality. | | | | | | | |
| | 9 | Top management proactively participates in public policy decision-making processes in environmental area. | Environ. data/analysis directly affect behavior and lead to improved environmental performance of products, operations, services (results). | Environ. improvement plans for processes, products & services are totally integrated into long-term and short-term business plans. | Career development and education opportunities in environmental management are widely available. | Processes in place in all areas to continuously improve environmental performance of products, processes and services. | Sustained improvement in environmental performance of processes, products and services is evident in all areas. | Active customer/stakeholder involvement contributes to sustained improvement in environmental performance of processes, products, services. | | | | | | | |
| | 8 | Top management's external actions reflect commitment to unit's environmental principles; management encourages employees to do the same. | Environmental data/analysis used in strategic decision-making. | Improvement plans in place at all organization levels support unit's key environmental objectives. | Education and career development plans exist and are linked to environmental management goals, tactics and strategies. | Formal process used to consider all stakeholder input to environmental performance improvement. | Benchmarking measures identified; benchmarking initiated. | Customers/stakeholders are actively involved in environmental problem-solving. | | | | | | | |
| | 7 | Top management has completed at least one full continuous improvement cycle; management performance measures based on meeting key environmental objectives; decisions based on vision. | Process in place to use environmental data to plan/design for new products/operations/services. | Strategic planning process is supported by a system of rewards and consequences based on both behavior and results. | Environmental management is an essential element of reward and consequences systems. | Environmental expertise included in cross-functional teams involved in development cycle for new and existing products, processes and services. | Rewards/consequences are used to reinforce environmental performance improvement. | Customer/stakeholder satisfaction data is integrated into the continuous improvement cycle for all aspects of the unit's functions. | | | | | | | |
| | 6 | Management uses reward/consequence system in all areas to reinforce commitment to environmental management. | Process in place to continuously improve environmental data collection/analysis/dissemination. | Process in place to include stakeholder contributions to strategic planning. | Environmental management training is evaluated for improvement. | Process in place to obtain/use stakeholder input to develop environmental objectives for products, processes, services. | Measures are reviewed and updated at least annually to reflect all stakeholder input. | Customer/stakeholder satisfaction data is integrated into the continuous improvement cycle for some aspects of the unit's functions. | | | | | | | |
| | 5 | At least half of top management are using environmental considerations as part of decision-making process. | Environmental data routinely used to improve current products, operations, services, focused on prevention. | Long and short-term plans that include environmental management are reviewed and improved at least annually. | Measures and trends of employee attitudes toward environmental performance exist. | Evidence exists that quantitative measures of environmental performance extend fully into all aspects of unit's operations. | Improving trends of environmental performance in major areas. | Customer/stakeholder satisfaction measures indicate positive trends. | | | | | | | |
| | 4 | Dialog occurs between top management and customers/stakeholders regarding your environmental principles. | Environmental data analyzed for trends. | Resource allocation is consistent with environmental plan implementation needs. | All employees have completed appropriate environmental training. Employees are empowered. System in place for periodic retraining. | Evidence exists for prevention focus, rather than reaction (e.g. pollution prevention), root-cause analysis used for problem-solving. Audit systems used to assure continuous improvement. | Improving trends of environmental performance in some areas. | Measures of customer/stakeholder satisfaction exist with respect to environmental considerations. | | | | | | | |
| | 3 | Unit-wide plan in place to implement environmental programs including necessary resources. | Environmental data inventory and management process established; some external environmental data collected. | Consistency exists at all levels for environmental management planning and implementation. | Appropriate environmental awareness and training/education programs developed and scheduled for all employees. | Process in place to assure goals/objectives followed for modification/production of current products, processes, services. Document control process in place and used. | Management system in place for improving environmental performance; major areas for environmental improvement identified. | Proactive process exists to identify customers/stakeholders and environmental considerations beyond measurement of questions, complaints. | | | | | | | |
| | 2 | Management directly involved in environmental quality mgmt. processes as leader/role model. Employee empowerment framework established. | Processes in place to assure validity (Quality Assurance/Quality Control) of basic environmental data. | Quality management process links existing and anticipated environmental regulatory requirements with the planning process. | Resources are allocated for developing/implementing environmental training and education. | Process in place to assure environmental principles translated into policies, practices; environmental objectives followed to develop new products, processes, services. | Baselines for environmental performance established. | Process exists to respond to customer/stakeholder environmental questions/concerns. | | | | | | | |
| | 1 | Beginning | Environmental mission, vision, principles defined, published and understood internally. | Basic internal environmental data identified and gathered. | A long-term (2-5 yrs.) & short-term (1-2 yrs.) planning process used that addresses environmental needs; annual operating plan includes environmental management needs. | Clear assignment of environmental responsibility exists. | Measures of environmental performance are identified. | Process exists to meet existing environmental regulatory requirements for customer/stakeholder information about products, services and operations | | | | | | | |

Note: Ratings should be verifiable through a available data.

Exhibit 5
Timetable of TQEM implementation in the Utilities Division

| | |
|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| 2Q 1993 | Select long-term environmental programs |
| 3Q 1993 | Review TQEM/Revision Plan. Initiate revision. |
| 4Q 1993 | Complete revision of expected performance, pinpoints, action plans, 5-year pace, baseline score/annual goal setting. |
| 1Q 1994 | Department gap analysis and 1994 department program. |
| 2Q 1994 | Quarterly review of gap analysis. |
| 3Q 1994 | Quarterly review of TQEM progress. Develop TQHSM. |
| 4Q 1994 | 1995 goal setting/TQEM scoring for 1994. |
| 1Q 1995 | Department gap analysis and 1995 program. Finalize TQHSM |
| 2Q 1995 | Quarterly review of TQEM progress. |
| 3Q 1995 | Revise pinpoints/combine TQEM/TQHSM |
| 4Q 1995 | 1996 goal setting/TQEM scoring for 1995 |
| 1Q 1996 | Department gap analysis |
| Etc. | |

Exhibit 6

Utilities Division – Customized Matrices
 TQHSEM Matrix Measure – Leadership

Intent of Leadership Metric:

Measures senior management’s success in creating TQHSEM values and in building these values into the way the company operates. The score on the metric will document how well the unit is performing while providing a “road map” that leads to excellence.

| Rank | Expected Performance | Pinpoints (Can be demonstrated under audits) |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Enterprise is clearly “Best-in-Class” based on accepted benchmarks. | TQM discipline is evident throughout U.E. (No fear of audits.) Accountability is evident at all levels. |
| 9 | Top management proactively participates in public policy decision-making process in HSE area. | Unit sponsors advocacy efforts as a means of participating in public policy decision-making. Strategic issues involve appropriate levels of management. |
| 8 | Top management external actions reflect commitment to the unit’s HSE principles. Management encourages employees to do the same. | Management discusses HSE principles, goals, and vision with customers/stakeholders. Performance measures, assessment findings, and agency issues are routinely discussed with management and associates. |
| 7 | Top management utilizes QL Process to implement continuous improvement. Management performance measures are based on meeting key HSE objectives. Their decisions are based on vision. | Division/department performance measures are used to drive goals/objectives. Management considers HSE excellence issues (Strategic Framework, HSE Management Control Manual and TQM) in decision-making. |
| 6 | Management uses reward/consequences system in all areas to reinforce commitment to HSE management. Employee performance expectations are documented. | Job Components (leadership) and Behaviors include HSE components. Employee HSE expectations are communicated and properly evaluated. HSE issues may be included in Performance Commitments. |
| 5 | Management is using HSE considerations as part of their decision-making process. | HSE programs, procedure/process reviews, training, information/analysis, change management systems are incorporated into decision-making. Compliance requirements are understood and included. |
| 4 | Dialog occurs between top management and customers/stakeholders regarding HSE principles. | U.E. HSE communications network is utilized for handling all HSE matters and Ad Hoc and standing meetings include appropriate documentation (substance of meetings). (HSE principles are routinely referred to.) EOS reflects HSE issues. |
| 3 | Unit wide plan is in place to implement Health, Safety, and Environmental programs. | (See Level 3, Strategic Planning) Business Plan includes HSE Strategy. Annual goals reflected in unit matrix; gap analysis has produced a implementation plan. |
| 2 | Management directly involved in HSE quality management process as a leader/role model. | Roles and responsibilities are documented in the HSE Manual. |
| 1 | Health/Safety/Environmental (HSE) mission, vision, principles, and expectations are defined, published and understood internally. | Unit mission, vision, principles, and expectations are documented, annually reviewed, and visible with a documented communication process. |

Date: Revised: 12/05/95 RComperis:skn

TQHSEM Matrix Measure - Information and Analysis

Intent of Information and Analysis Metric

Measures the effectiveness of the unit's collection, analysis and use of information for H.S. environmental planning and improvement. The score on the metric will document how well the unit is performing while providing a 'road map' that leads to excellence.

| Rank | Expected Performance | Pinpoints (Can be demonstrated under audits) |
|------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Unit is "Best in Class" in the collection, analysis and use of HSE data to guide performance improvement. | Unit has conducted internal and external comparisons of data collection, analysis and use. |
| 9 | The analysis of HSE data has resulted in programs that have a positive effect on behaviors. | Examples of programs implemented as a result of prioritized HSE data have had demonstrated positive effect on behavior, i.e.: positive trends in "repeat" findings, internal assessment findings, etc. |
| 8 | HSE data is used during business planning. | Unit has documented process to include short and long term HSE considerations into business plan (related to Strategic Planning cell #5). Examples demonstrate that HSE data is used during business planning. |
| 7 | HSE data is used when planning new operations and/or capital projects. | Documented process review and change management procedures include the use of HSE data. |
| 6 | A process exists to assess and optimize how and what HSE data is collected, analyzed, and communicated in the unit. | Unit has documented process to periodically evaluate data collection to ensure it is collecting appropriate data. |
| 5 | HSE data is used to prioritize improvement efforts. | Unit has examples of projects/programs implemented as a result of prioritized HSE data, i.e.: corrective actions, 10X projects. |
| 4 | A process exists to evaluate HSE data for trends. | Unit has documented a process it uses to identify HSE data for trends, as required. |
| 3 | A document review process is in place to assure the validity of HSE data. | Unit has documentation that describes how it ensures data collected in cell #1 is accurate. |
| 2 | The data collected in cell #1 is managed in a database or inventory. | Unit has system(s) that allow HSE data collected to be manipulated and analyzed, where required, i.e.: spreadsheet, CAIRS, files. |
| 1 | HSE data is identified and gathered to support the unit. | Unit has documented process for the collection of HSE required data. Unit is able to display the HSE data it collects, i.e.: assessment findings, HSE incidents, behaviors, etc. Identified HSE data must include that required by regulations, permits and corporate standards, and may also include data and information required by the business unit. |

Date: Revised: 12/05/95 RComperts:skn

TQHSEM Matrix Measure - Strategic Planning

Intent of Strategic Planning

Measures the effectiveness of the unit's integration of its customer/stakeholder environmental requirements into its business plans. The score on the metric will document how well the unit is performing while providing a 'road map' that leads to excellence.

| Rank | Expected Performance | Pinpoints (Can be demonstrated under audits) |
|------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Benchmarking indicates the unit is "Best in Class" with respect to HSE strategic planning. | Benchmarking process meets corporate standards and clearly indicates "Best in Class" status using objective measures. |
| 9 | HSE improvement plans are totally integrated into long and short-term business plans. | Internal assessments verify that the strategic planning procedures defined below are used consistently and completely. |
| 8 | Improvement plans in place at all organizational levels support each unit's key HSE objectives. | Unit goal-setting process includes HSE input from approved business plan. U.E./Department/Work Center performance matrices include properly aligned HSE KRA activities and goals. |
| 7 | The strategic planning process is supported by a system of rewards and consequences based on both behaviors and results. | Unit performance commitments include HSE KRA goals. PPP process includes HSE assessment. |
| 6 | A process is in place to include customer/stakeholder contributions to HSE strategic planning. | Unit procedures exist that require that formal customer input (e.g., documented customer interface agreements, formal customer survey results) and employee VIEW information related to HSE be included in business planning process. |
| 5 | Long and short term plans for improving HSE performance are reviewed and improved at least annually. | Unit procedures exist that require specific HSE improvement plans be included in business plans. Business Plans to include: key result areas, desired HSE future state, gap analysis, improvement strategies, improvement goals, resource forecasts (UE, KPHSE, CHSE, contract) and costs for all major activities. |
| 4 | A process exists which ensures that resource allocation is consistent with HSE implementation plan needs. | Unit procedures exist that require that a detailed resource forecast/plan for HSE needs to be included in department business plan and AOP. Business plans to include: key result areas, improvement strategies, improvement goals, resource forecasts (UE, KPHSE, CHSE, contract) and costs for all major activities. |
| 3 | Consistency exists at all levels for HSE management planning and implementation. | Unit procedures exist that define roles and responsibilities and specific quality expectations for HSE input to Business Plan and AOP. Business Plans to include: key result areas, improvement strategies, improvement goals, significant HSE risks, resource forecasts (UE, KPHSE, CHSE, contract) and costs for all major activities. |
| 2 | A quality management process exists linking current and anticipated HSE regulatory and EK requirements with the planning process. | Published unit roles and responsibilities for identifying HSE regulatory and EK requirements to be addressed in business plan and AOP. Use unit HSE communication network and UE HSE process hierarchy model to describe process in unit HSE/Quality Manuals (use diagram as appropriate). |
| 1 | A short-term (1-2 years) and long-term (2-5 years) planning process is used that addresses HSE needs. | Published unit expectations requiring that HSE issues be addressed in business plans. Expectations to be included in unit HSE/Quality Manuals |

Date: Revised: 12/05/95 RGomperpts:skn

TQHSEM Matrix Measure - Human Resource Development

Intent of Human Resource Development Metric:

Measures the success of the unit's efforts to realize the full potential of its work force in implementing TQHSM. The score on the metric will document how well the unit is performing while providing a 'road map' that leads to excellence.

| Rank | Expected Performance | Pinpoints (Can be demonstrated under audits) |
|------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Benchmarking | Not addressed at this time. |
| 9 | Career development and education opportunities in HSE management are widely available. | Succession Plans for HSE positions are in place. |
| 8 | Education and individual development plans exist and are linked to HSE management goals, tactics and strategies. | EDP plans exist for all employees and are demonstrably linked to the HSE goals. |
| 7 | Health, Safety, and Environmental performance is as essential element of a reward and consequence system. | Rewards and consequences are documented in the unit's R+ and PPP policies. |
| 6 | HSE training is up to date and effective. | Written procedure describes how to determine if training is up-to-date for new employees, transferred employees, and for retraining requirements. Written procedures specifically identify how to determine if the training has been effective. |
| 5 | Measures and trends of employee attitudes toward HSE performance exist. | Measures exist from the VIEW and EOS surveys. Results are reviewed for trends and opportunities. |
| 4 | All employees have completed appropriate HSE training. A system is in place for periodic retraining. | PRIDE documentation exists for trained employees. Written procedure includes retraining requirements. |
| 3 | Appropriate HSE training developed and scheduled for all employees. | Training process and training schedule are documented. Training requirements are documented in the HSE Manual. |
| 2 | Resources are allocated for developing/implementing HSE training and education. | Resources are allotted through the documented business planning process. |
| 1 | Clear assignment of Health, Safety and Environmental Responsibility exists for all levels of the organization. | Written HSE responsibilities exist at each level and are documented in PPP, specific job tasks, or training exercises. |

Date: Revised: 12/05/95 RGomperts:skn

TQHSEM Matrix Measure - Quality Assurance of Health, Safety, and Environmental Performance

Intent of Quality Assurance of Health, Safety, and Environmental Performance Metric:

Measures the effectiveness of the unit's systems for assuring TQHSEM with emphasis on continuous improvement and prevention. The score on the metric will document how well the unit is performing while providing a 'road map' that leads to excellence.

| Rank | Expected Performance | Pinpoints (Can be demonstrated under audits) |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Benchmarking indicates unit is "Best-in-Class" in level of QA of environmental performance. | |
| 9 | Processes in place in all areas to continuously improve environmental performance of products, processes and services. | |
| 8 | Ensure that a formal process is being used to consider all stakeholder inputs to HSE performance. | Written process for formal goal-setting that includes all the required stakeholder input - surveys, HSE Teams, and site requirements. |
| 7 | HSE expertise is included in cross-functional teams involved in the development cycle for new and existing products, processes, and services. | HSE personnel are included in MESH Teams, Core Teams, HAZOP Reviews, Incident Reviews/JHA's, Change Management Process. |
| 6 | A process is in place to obtain stakeholder input to develop HSE objectives for products, processes and services. | There is a written procedure that identifies how associates have input into the process - MESH Teams, Employee Review of SOP's, HSE Core Teams, Department/Division/Site Leadership Teams with HSE representation. |
| 5 | Evidence exists that quantitative measures of HSE performance extend fully into all aspects of the departmental/division operations. | Process in place to annually develop HSE goals. These include: TQM Department, and Division KRA's. |
| 4 | Evidence exists that a preventive focus, rather than reactive is the business "status quo". Root cause analysis is used to assist in problem-solving situations. Audit/assessment processes assure continuous improvement. | Written processes for: <ul style="list-style-type: none"> · HSE Assessments · Goal setting · Change Management/Process Reviews/JHA's · Incident Review - with root cause analysis |
| 3 | HSE objectives are followed when modifying current products, processes and/or services. A document control process is in place and being used. | A written process exists for change management and document control. |
| 2 | A process is in place to assure HSE principles are translated into policies and practices. HSE objectives are followed when developing new products, processes, and/or services. | A written goal setting process is in place that identifies how the HSE practices will be identified in every day policies and practices. A written process review is in place. |
| 1 | A process is in place for ensuring precision and accuracy of measurement systems. | A written process exists to identify and use recognized statistical and non-statistical techniques where applicable to assure the accuracy and precision of HSE performance and compliance information. Ex.: (monthly assessments, certified labs, management review, SOP's for equipment). |

Date: Revised: 12/05/95 RGoimperts:skn

TQHSEM Matrix Measure - Health, Safety, and Environmental Results

Intent of HSE Results Metric:

Measures the effectiveness of the unit's improvements in TQHSEM and demonstration of TQHSEM excellence based on quantitative measures. The score on the metric will document how well the unit is performing while providing a "roadmap" that leads to excellence.

| Rank | Expected Performance | Pinpoints |
|------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Benchmarking indicates unit is "Best-in-Class" in HSE results. | External Best-in-Class benchmarks completed. U.E. is acknowledged leader in HSE management. |
| 9 | Sustained improvement in HSE measures is evident in all areas. | Continued tracking of "lagging" HSE measures indicate improvement over a 3 year period. |
| 8 | Benchmarking measures identified: Benchmarking initiated. | Corporate benchmark and "Best-in-Class" are identified, HSE benchmarking measures are agreed to, and some benchmarking initiated. |
| 7 | Rewards/consequences are used to reinforce HSE performance improvement. | Division/department matrices include an HSE piece which impacts individual/team performance. Special Recognition opportunities include HSE efforts. HSE progress is partly driven by performance commitments. |
| 6 | Measures are reviewed and updated at least annually to reflect all stakeholders input. | Input from stakeholders (associates surveys/management (site measures) is included in the annual goalsetting process. Goals/measures established are deemed correct or modified. |
| 5 | Improving trends of HSE performance in major areas are evident. | Tracking of performance measures (major lagging indicators) indicates annual improvement. |
| 4 | Improving trends of HSE performance in some areas are evident. | Tracking of low weight performance measures indicates some improvement over baseline. |
| 3 | Major area for HSE improvements are identified through the use of HSE Management Systems. | HSE improvement opportunities are data driven through use of information and analysis, preventive/reactive findings, applicability checks, and assessments. Opportunities are prioritized, strategies and plans developed and appropriately resourced. |
| 2 | Baselines for HSE performance established. | Performance measures identified in #1 have appropriate data for establishing baseline and goals. |
| 1 | Measures of HSE performance are identified. | Proper unit HSE performance measures (lagging or leading indicators) identified, annually reviewed and documented in unit performance matrix. |

Date: Revised: 12/05/95 Rgomperts:skn

TQHSEM Matrix Measure - Customer/Stakeholder Satisfaction

Intent of Customer/Stakeholder Satisfaction Metric:

Measures the effectiveness of the unit's systems in determining customer/stakeholder health, safety, and environmental requirements and its demonstrated success in meeting them. The score on the metric will document how well the unit is performing while providing a 'road map' that leads to excellence.

| Rank | Expected Performance | Pinpoints (Can be demonstrated under audits) |
|------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Benchmarking indicates the unit is "Best in Class" with respect to customer/stakeholder satisfaction on HSE issues. | Benchmarking process meets corporate standards and clearly indicates "Best in Class" status using objective measures. |
| 9 | Active customer/stakeholder involvement contributes to sustained improvement of HSE performance of processes/services. | Based on deployment of cell #8, improvement measures show sustainable positive trends. (Greater than 3 years.) |
| 8 | Customers/stakeholders are actively involved in HSE problem solving. | Documented process is in place to gather customer/stakeholder input for use in the unit's HSE improvement activities. Process includes: method for identifying WHEN C/S input is needed, HOW it is obtained and integrated, (e.g., customer steering teams, department HSE teams, management reviews, etc.). See Cells #7 and #8 of Strategic Planning. |
| 7 | Customer/stakeholder satisfaction data is integrated into continuous improvement cycle for all aspects of the unit's functions. | See Cell #6 of Strategic Planning. |
| 6 | Customer/stakeholder satisfaction data is integrated into continuous improvement cycle for some aspects of the unit's functions. | Unit documents the process for analyzing C/S HSE satisfaction data in HSE Management Control or Quality Manual and demonstrates improvement trend. |
| 5 | Customer/stakeholder satisfaction measures indicate positive trends. | CUSTOMER: Unit documents a process measuring customer HSE satisfaction in HSE Management Control or Quality Manual. Include formal method for measuring customer HSE satisfaction (e.g., surveys). ASSOCIATES: HSE portion of surveys. |
| 4 | Measures of customer/stakeholder satisfaction exist with respect to the unit's HSE considerations. | MANAGEMENT: Review with management during business planning reviews, or as appropriate. CUSTOMER: Unit documents a process that identifies customer HSE issues in HSE/Quality Manuals. Include: formal method for getting and responding to input (e.g. Interface Agreements, regular meetings with customers). ASSOCIATES: HSE portion of surveys, including follow-up action plans. Other methods, such as HSE bulletin boards, etc. MANAGEMENT: Discuss at business plan review with management. |
| 3 | A proactive process exists that identifies current customer/stakeholder considerations. | Unit documents the process for responding to C/S HSE questions and concerns in HSE Management Manual or Department Quality Manual. Include in procedure: specific roles and responsibilities, documentation and feedback methods. |
| 2 | A process exists that responds to customer/stakeholder HSE questions and concerns. | Unit documents the process for identifying and communicating HSE regulatory requirements to C/S (e.g., Site Regulatory Guidance Manuals, Environmental Thrusts, EC Training, KP HSE Stds.) in HSE Management Control or Quality Manual. Include in procedure: specific roles and responsibilities, communication methods, timing/frequency of communication, etc. |
| 1 | A process exists to meet the existing HSE regulatory requirements for customer/stakeholder information about the unit's services/operations. | |

Date: Revised: 12/05/95 RComperts:skn

Selected Results

a) Kodak Park Site and Utilities Division environmental incident summary*:

| | Kodak Park | | Utilities Division | |
|-------------|-------------------|---------------|---------------------------|---------------|
| | High | Medium | High | Medium |
| 1990 | 5 | 33 | 4 | 14 |
| 1991 | 7 | 18 | 3 | 6 |
| 1992 | 6 | 10 | 4 | 4 |
| 1993 | 7 | 5 | 2 | 2 |
| 1994 | 1 | 7 | 1 | 4 |
| 1995 | 5 | 1 | 1 | 0 |

* “High” and “Medium” are Kodak Park terms used to describe environmental incidents, spills, odors, or releases of particulate material.

High = The incident presents or may present a potential impact to Kodak Park personnel, facility operations, or ground/groundwater/water, or results in serious property damage.

Medium = The incident presents or may present an impact to ground/groundwater/water requiring regulatory report, and/or the incident requires evacuation or a significant remediation effort or results in two or three neighborhood complaints, or results in minor property damage.

b) TQEM Score Results from 1993 to 1995.

| Department | 1993 (baseline) | 1994 | 1995 |
|----------------------------|------------------------|-------------|-------------|
| Steam/Electric | -80 | 300 | 420 |
| Refrigeration/Water | -80 | 265 | 420 |
| Chemical Waste | -100 | 500 | 590 |
| Water Quality | -130 | 450 | 550 |
| Sewers | - | 420 | 550 |
| Groundwater Quality | - | 250 | 400 |