



Health, Safety and Environment Standards and Procedures

*Eastman Kodak Company
Health, Safety and Environment*

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Quality Plan

Kodak Greenhouse Gas Emissions Inventory Management Plan

Plan No. HSE Corp QP-0001
Revision: 3

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Department:
World-Wide

*Approved & Released
Quality Plan*

Implementation Date: 04/25/2005

Area:
Greenhouse Gases

Document Type:
Environmental

Review Period - 365 Days

Product Information:

Product Name:

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Product Number:

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Description:

Engineer:

1.0 Responsible Parties:

The global GHG data manager is responsible for managing this process. Responsibilities for those involved are identified in section 24, Roles and Responsibilities.

2.0 Special Definitions:

GHG- greenhouse gas

IMP- Inventory Management Plan

CARROT- California's Climate Action Registry Reporting On-line Tool

CEMS- Continuous Emissions Monitoring System

3.0 Plan Steps:

Eastman Kodak Company Greenhouse Gas Inventory Management Plan

EPA Climate Leaders Partner Information

1. Company name: Eastman Kodak Company (Kodak)

Eastman Kodak Company is the world leader in helping people take, share, enhance, preserve, print and enjoy pictures - for memories, for information, for entertainment. With worldwide sales of \$13.3 billion in 2003, the company is organized into these key businesses: Digital & Film Imaging Systems—providing consumers, professional photographers and the motion picture industry with digital and traditional products and services; Health Imaging—supplying the healthcare industry with traditional and digital image capture, output and information management products and services; Graphic Communications—printing products, systems, networks and services for the printing and publishing industry, including commercial print shops and high-end on-demand color printing; Commercial Imaging—offering image capture, output and storage products and services to business and government; and Display & Components—delivering image display and capture devices for products such as digital cameras and scanners.

For more information see <http://www.kodak.com/eknec>. For more information on Kodak, it's business, products, and operating locations, see [This_is_Kodak_June, 2004.ppt](#). For more information on Kodak Park, the largest manufacturing site, which is in Rochester, NY and emits about three quarters of the greenhouse gas emissions, see [KP Overview_072304.ppt](#).

2. Company address: 343 State Street, Rochester, New York 14650

- 3, 4. Contact for plan- Roy Wood, Global Greenhouse Gas Data Manager, B-320, Kodak Park Site, Rochester, NY 14652-6263, 585-588-7538, fax- 585-722-3695, roy.wood@kodak.com

Kodak Global Commitment - As part of a comprehensive series of 5-year health, safety, and environmental goals, Kodak has committed to reducing worldwide greenhouse gases by 10% from 2002 to 2008, using 2002 data as the baseline year. Kodak will use this greenhouse gas (GHG) inventory management plan (IMP) for the duration of this commitment. Kodak's 2002 baseline emissions profile is contained in Table 1. More detail on the 2002 emissions profile is contained in "2002 Greenhouse Gas Baseline Report."

Methodology - This Inventory Management Plan has been created according to the requirements in the World Resources Institute and the World Business Council for Sustainable Development Greenhouse Gas Protocol, 2004 revised edition, and formatted according to the US EPA Climate Leaders 2004 draft checklist of Inventory Management Plan components.

This IMP is used to create an inventory that is reported to both the California Climate Action Registry and the Climate Leaders program. The California Climate Action Registry (CCAR) has a de minimis threshold of 5%. CCAR states that companies should estimate all emissions but may choose to omit up to 5% of emissions as de minimis for reporting to the Registry. Climate Leaders has no specific de minimis threshold. Kodak has made an estimate of all emissions including small sources for reporting both to CCAR and EPA under Climate Leaders.

Boundaries

5. Reporting Control Basis - Kodak has elected to report its emissions on an operational control basis. Operational control is defined as having the management authority to implement these IMP requirements. Only those companies for which Kodak has operational control are included in the inventory. The Facilities List notes whether Kodak has operational control of the site in which it has an ownership stake. Facilities that have 50% or less Kodak ownership and no agreement providing Kodak operational control are not under Kodak's operational control, since Kodak can not require these facilities to take specific action, and therefore they are not included in the inventory.

6. Facilities List - The majority of Kodak's emissions are from manufacturing facilities as documented in "2002 Greenhouse Gas Baseline Report." Therefore only the manufacturing sites are tracked in a formal way. A worldwide database of facilities, including information on site ownership is maintained by Kodak's Corporate Real Estate Services. A data query producing a facility list that includes all sites that are primarily manufacturing sites is provided to the global GHG data manager when requested. The global GHG data manager will obtain this query for each year after it has been updated through December 31 and use this listing to determine which facilities are required in the inventory. "GHG Site Listings" contains the current list of manufacturing sites showing which are included and which are excluded, with an explanation of why each excluded site is excluded.

Manufacturing facilities that have emissions estimated to be less than 0.2% of the total inventory can be considered de minimis unless they are anticipated to change dramatically and grow above the 0.2% threshold. Emissions from facilities that are de minimis are estimated and included in the inventory and CARROT as a single aggregate group. These same data are used for future years unless one of the site's emissions changes significantly.

Emissions from worldwide offices at which are not located at manufacturing sites are estimated by using emission factors based emissions per employee at the corporate headquarters, Kodak Office, in Rochester, NY. Data on the number of global non-manufacturing employees is multiplied by the Kodak office emissions per employee to determine office emissions. Photoprocessing emissions are estimated from the number of rolls of film processed and energy required to process a roll of film at

a large site. Emissions from photoprocessing and office sites are less than 5% of the 2002 baseline inventory.

7. List of GHGs - Kodak tracks the Kyoto Protocol greenhouse gases (GHGs) in this inventory:

- Carbon dioxide- CO₂
- methane- CH₄
- nitrous oxide- N₂O
- sulfur hexafluoride
- Perfluorocarbons (PFCs) - speciated
- Hydrofluorocarbons (HFCs)- speciated

8. Process for Identifying Emissions Sources - Each manufacturing site that is included in the inventory has a process for identifying their significant emission sources based on the document, “Development of the Site List of Sources of Greenhouse Gases”. Energy use at each manufacturing site is reported directly to the Climate Action Registry Reporting On-Line Tool (CARROT), which calculates CO₂ emissions. CO₂ generated from the oxidation of waste from processes owned or controlled by Kodak is also tracked and the CO₂ emissions are put directly into CARROT. Process emissions of all GHGs are calculated using material balances and other appropriate engineering estimating methods and are put directly into CARROT.

Photoprocessing energy and energy used at non-manufacturing sites are tracked on a global basis instead of a site basis, so process for determining GHG emissions from these sources is different from the manufacturing sites. For photoprocessors, emissions are estimated based on the energy use per roll of film processed at a representative large facility (Allentown, PA in 2004) and scaled up based on the total rolls of film processed. Energy used by retail photoprocessing labs that operate in facilities owned by others is not included in the inventory, since the energy use is not under Kodak’s operational control.

For non-manufacturing sites, CO₂ emissions are estimated and entered into CARROT as an aggregate based on the number of employees. The non-manufacturing site energy use is based on the energy use per employee at the Kodak Office headquarters in Rochester, NY and multiplied by the total number of employees at non-manufacturing sites. Non-energy emissions are not estimated from office sites because there are no significant sources. The “2002 Greenhouse Gas Baseline Report” summarizes baseline emissions information and shows that non-manufacturing energy use is small compared to manufacturing energy use, so this estimation method provides adequate accuracy.

Sources that contribute less than 3% to the site’s inventory and contribute less than 2,000 metric tons may be considered de minimis and entered in CARROT as de minimis sources as long as the cumulative de minimis sources do not add up to more than 5% of the site’s inventory. Various means of aggregating de minimis sources can be used to create single CARROT entries that cover multiple sources. Emissions from de minimis sources may be based on previous years data as long as emissions have not change significantly from the base year used for estimate and the sources continue to be de minimis.

9. **Direct Sources** - Each manufacturing site maintains its own list of significant sources of GHG emissions and associated records. Kodak includes stationary combustion, mobile emissions, and process emissions. An evaluation of the potential sources that were determined to be de minimis is contained in the report, “2002 Greenhouse Gas Baseline Report.” “Development of the Site List of Sources of Greenhouse Gases” explains how to determine which direct sources to include. Data for all significant sources are contained in CARROT.

10. **Indirect Sources- Energy Import/Export** - All purchased electricity and steam is included in the sites’ inventories. No other sources of indirect energy are included.

11. **Indirect Sources, Other** - There are no non-energy indirect sources in Kodak’s inventory. Business travel and product distribution were estimated and determined to be small sources and since they are optional under the WRI protocol, they are not included in the inventory. An evaluation of emissions from business travel and product shipment using non-Kodak vehicles is contained in “2002 Greenhouse Gas Baseline Report.”

Emissions Quantification

12. **Quantification Method** - Energy data are collected in the California’s Climate Action Registry Reporting On-Line Tool (CARROT) and converted to CO2 emissions by the emission factors contained in CARROT, which are consistent with the WRI protocol. Where a value other than the CARROT default emissions factor is used in CARROT, it is noted in CARROT and primary documentation is maintained with site records. Calculations of process emissions are contained in the site records. Continuous emissions monitoring system (CEMS), material balances, and other methods generally accepted for emissions calculations are used. Potential sources of errors in the calculations should be noted with the primary records and quantified as much as possible.

13. **Emissions factors** - Default emissions factors are contained in CARROT. These factors are from US EPA AP-42 and US DOE. The factors and their sources can be found in the General Protocol, Appendix C at <http://www.climateregistry.org/PROTOCOLS/GRP/>. Where Kodak uses values other than the CARROT default emissions factors, documentation is maintained with the site primary data. The source of each site-specific emission factor and the reason for using it is in CARROT. The document “Emissions Factors Documentation” provides more details on how emissions factors are selected and documented. The global GHG data manager reviews all site-specific emissions factors to ensure that they are consistent with the IMP.

Data Management

14. **Activity Data** - The most accurate and reliable data that are readily available are used to calculate Kodak’s GHG emissions. Primary data that may be used to calculate energy use are electricity bills, fuel purchase bills or purchase agreements, fuel flow meter records, and CO2 or other greenhouse gas CEMS records. The site GHG data manager determines what data are available and documents why these data are being used. The site’s GHG data manager should determine

possible sources of error in the data and document any quality control procedures that are used to minimize these errors. Consistent with each site's environmental management system (registered under ISO 14001), each site maintains the site's list of primary records that are used to determine their emissions and energy data. The types of records that were used in the "2002 Greenhouse Gas Baseline Report" for the each site are summarized in Verification Summary.xls.

De minimis sources may be estimated based on data from other locations or other reasonable estimation techniques.

15. Data Management - Kodak uses California's Climate Action Registry Reporting On-line Tool (CARROT) to track worldwide GHG emissions. This web-based system is located at <http://www.climateregistry.org/CARROT/>. Each site has their own process for collecting the primary data, performing calculations, and storing the information that is required to create the data that are submitted to CARROT. The records storage process is implemented through "GHG_Tracking_Document_Control." Each site's GHG data manager is responsible to create this process for their site, ensure it is followed, and input the data into CARROT on an annual basis. The global GHG data manager is responsible to set up their facility in CARROT. The QA team reviews the quality of the data collected at each site and suggests changes that are necessary to ensure quality data that is consistent with the Kodak IMP. CARROT converts energy data into greenhouse emissions, converts GHG emissions into CO2 equivalent emissions and reports these data in various ways.

16, 17. Key Performance Indicator Selection and data collection - Kodak's goal is to reduce GHG emissions by 10% on an absolute basis. The goal does not use emissions intensity. Therefore, Key Performance Indicator Selection and Data Collection are not required components of the IMP.

18. Data Collection Process- Quality Assurance - The GHG Inventory Quality Assurance (QA) team is responsible to evaluate the quality of the GHG IMP, training, and related programs. It also evaluates the suitability of the elements of the IMP for the individual global sites.

As part of the process each site's GHG data manager uses for collecting GHG data, they define and document any areas of possible error and the QA/QC actions they use to maintain accuracy. Possible errors in emissions factors and calculations are also documented with the emissions factors and calculations records. When collecting data, the site GHG data manager must ensure that these QA/QC procedures are followed and the sources of possible error are minimized. Before entering the data into CARROT, each site's GHG data manager is responsible for reviewing the data for inconsistencies and large unexpected changes from previous years. They also review all calculations that are required to convert the data into the form that is required for CARROT to ensure that the calculations are correct. Following data entry into CARROT, the site GHG data manager reviews data for any transcription errors and reviews site totals for consistency with past years' data and changes to the site.

Before the worldwide data are accepted, the global GHG data manager is responsible to review all the data in CARROT for consistency with past years and known changes at each site. They evaluate

the appropriate magnitude of each site's emissions for the size and output of each site. Any discrepancies are discussed with the individual sites and properly explained or changed if the values are incorrect. Periodic audits of these records will be conducted to evaluate their accuracy.

A list of required quality assurance checks that are required by the site GHG data managers and the global GHG data manager is contained in the GHG QA-QC Checklist.

19. Data Collection System Security - Each site is responsible for maintaining their site's records that back up the official data in the CARROT system. CARROT has a 128 encryption security system and subscribes to Verisign to ensure that only authorized individuals enter data and make changes to the data. The global GHG data manager controls access to Kodak data input into CARROT. Site GHG data managers are provided access to input data to their site only. The global GHG data manager can also add and change data for any site and for corporate-wide categories of emissions. To find out more about CARROT security, go to <https://www.climateregistry.org/CARROT/login.aspx> and click on the Verisign logo.

All changes to the CARROT data are backed up daily. The entire database is backed up weekly.

20. Integrated Tools - Kodak's GHG IMP is part of the ISO 14001-registered corporate Health Safety and Environment Management System, the System 9000 database. Auditing to ensure continual improvement is integrated into Kodak's corporate Health Safety and Environment Management System auditing. Individual manufacturing sites' covered by this IMP each have Health Safety and Environment Management Systems registered under ISO 14001.

21. Frequency - Data will be reported to CARROT on an annual basis only. Individual sites may maintain their data on-site more frequently as needed to meet their local energy and emissions reporting needs. Below is the preferred schedule for the annual data collection. This schedule is a guideline to coordinate data collection and reporting to meet company needs, but completion of all items by the suggested dates is not required by Kodak's IMP.

By December 5 of each year, the global GHG data manager will send a request to Kodak Corporate Real Estate Services (CRES) requesting an updated facility list and to all site GHG data managers to update their site's data management responsibilities information and the list of emissions sources at their site. By January 15 of each year, the global GHG data manager will update the training materials for the GHG site data managers and send them a note asking them to update their training or complete the entire training if they have not been previously trained, then input their site's data by February 15. The global GHG data manager will perform the QA/QC, make any corrections, and review the data with the GHG management team by March 15.

The global GHG data manager will obtain contacts for any new sites included in the inventory and help any new sites to complete their training, develop their data and calculations and enter their data as soon as practical.

Base Year

22. **Adjustment: Structural Changes** - The base year (2002 for the 2004-2008 goals) will be adjusted for mergers, acquisitions, and divestitures that occur during the reporting time frame for the goals. Actual yearly emissions from each acquisition will be added to the base year and each year that follows. Emissions from divestitures will be removed from the base year and every year that follows. Any merger will be planned in the same manner as the acquisitions to the degree that it is practical. There are no planned adjustments for outsourcing. Mergers, acquisition, and divestitures will be identified by the site-listing maintained by Kodak's Corporate Real Estate Services (CRES). The 2004 list of sources is contained in Greenhouse Gas Site Listing, which is based on the data supplied by CRES.

23. **Adjustment: Methodology Changes** - Changes will be made to calculations and emissions factors only if justified by regulatory changes, scientific/engineering judgment, or if the US EPA Climate Leaders specifications require it. The GHG Inventory QA Team will make this decision. In cases where changes are made, the changes will be made to all years in the database, including the base year, so that all emissions are reported using the same basis for all years. Any significant changes will be reviewed with US EPA Climate Leaders staff before making the changes.

Management Tools

24. **Roles and Responsibilities-** There are two key types of teams involved in GHG inventory management, the GHG Inventory QA team and the site GHG teams. Kodak's Corporate Real Estate Services is also responsible for tracking Kodak sites and their ownership status. Kodak's HSE Management Council reviews and approves the summary of each years data.

The GHG Inventory QA team consists of the Director, Worldwide HSE Manufacturing, the designated global GHG data manager, the Kodak Rochester energy manager, and other people who have necessary expertise or who represent worldwide site interests. The GHG Inventory QA team is responsible to evaluate the quality of the GHG IMP and related programs and to conduct the QA/QC on the data entered into CARROT. It provides input to Kodak management through the global HSE Coordinating Committee and the HSE Management Council on global and site GHG program results.

The global GHG data manager reviews changes to the programs that Kodak participates in and updates the guidance and training as needed. The global GHG data manager sends an annual request to the sites' data managers asking them to enter data and update their training and procedures. These responsibilities are defined in more detail in specific sections of this IMP. The global GHG data manager reviews each site's CARROT data for completeness and accuracy before they are reviewed by the entire GHG Inventory QA team. The global GHG data manager produces and distributes needed reports summarizing the emissions.

Kodak Corporate Real Estate Services is responsible for maintaining Kodak's site listing. The global GHG data manager is responsible for procedures used to determine if individual sites are

significant enough to be included in the inventory as separate site entries. The global GHG data manager is also responsible for estimating emissions for sites or groups of sites that are de minimis and incorporating these emissions in an aggregate entry. The global GHG data manager provides guidance and feedback to the sites on what sources to include in the inventory, what data to use, and what emissions factors are most appropriate.

For each manufacturing site that is determined to be a significant emitter of GHGs and is included in the inventory, the site's HSE manager is responsible for identifying the site's GHG data manager. The site GHG data manager is responsible for calculations and data management for that site. The site GHG data manager is responsible for developing the list of emission sources and the annual energy and emissions data. Each site's GHG data manager is responsible to enter their data into CARROT. They are also responsible for maintaining all the primary records and calculations necessary to verify the data entered into CARROT. The site's GHG data manager assembles his site's GHG team and includes those individuals needed to manage their GHG data. The site's GHG data manager completes the GHG site data management training before entering data into the system. The global GHG data manager keeps the current list of all the sites' GHG data managers.

25. Training - The global GHG data manager is required to read all training materials, the GHG IMP, the WRI GHG protocol, Climate Leaders Reporting Requirements, and the CARROT description. The global GHG data manager is required to review any changes to these documents before determining what if any changes are needed to the training materials.

The global GHG data manager is responsible for the development of training materials for the site GHG data managers. These training materials cover all aspects of the GHG IMP, including how to select emissions sources, how to select calculation methodologies and emissions factors, what records are valid primary sources, what records to retain, what QA/QC is required, and how to use CARROT. The global GHG data manager must update the training materials annually so the site GHG data managers can update their training before inputting their site's data into CARROT. The global GHG data manager provides both complete revised training materials and a summary of changes to the IMP and the site GHG manager training that have occurred since the previous year's materials were produced.

Each site's GHG data manager is responsible for reading the training materials summarized in "Procedures and Training for Site GHG Data Managers" and working with the global GHG data manager to resolve any questions about their site's inventory. Detailed procedures for site GHG data managers to use to input data into CARROT is contained in "CARROT Site Data-entry Instructions." Once a site GHG data manager is trained they are only required to read the summary of changes that have occurred since they completed their initial training.

26. Document Retention and Control Policy - For documents required by this GHG IMP, Kodak has set a record retention policy of 20 years or until further notice from the GHG Inventory QA Team. The record retention policy is contained in "Retention of Primary Records Associated with Energy Usage and Greenhouse Gas (GHG) Emissions." Primary records and site procedures are stored at each site. In the event of site closure, the records would be transferred to North Pastoria

Environmental Corporation (NPEC) and stored by NPEC with the closed site's other HSE records. The IMP and associated documents are part of Kodak's system 9000. Each version of the IMP and associated documents are updated by the global GHG manager and approved by the HSE worldwide manufacturing director. Following approval, only the current approved version of the documents are available to Kodak personnel. The obsolete version is archived with the dates when it was in effect. Archived versions can be retrieved by the global GHG data manager if needed.

Auditing and Verification

27. **Internal Auditing** - Internal surveillance auditing will be conducted as part of site Health Safety and Environmental Management System audits. Findings will be provided to the individual sites for corrective action. The site GHG manager will determine the responsible individual for each finding's corrective action. Internal surveillance audits conducted by the corporate Health Safety and Environmental Management System will include the GHG IMP. GHG IMP corrective actions will be assigned to the global GHG data manager. Each site will be audited at least once during 2004-2008.

28. **External Validation and/or Verification** - Kodak has committed to an external third-party audit of the GHG baseline data, calculations, and records. All global data will be certified for the baseline year and the final year of the goal. All US data will be certified annually for the duration of the goal. The data for the final year of any external goal, such as US EPA's Climate Leaders, will also be validated by an external auditor that meets the requirements of that program.

29. **Management Review** - The GHG emissions summary data will be reviewed and approved annually by the corporate HSE Management Council. Goal setting, progress toward meeting goals, and any additional action or options necessary to meet the goals will be covered in this management review.

4.0 Equipment Required and Inspection Techniques:

NA

5.0 Nonconformance Plan:

30. **Corrective Action**- Any findings identified through QA/QC and internal and external audits related to the GHG IMP are assigned to the global GHG data manager and entered into the gap management system. The GHG Inventory QA team maintains a list of identified gaps related to the IMP, the person that is responsible for closing the gap, and the required timing for gap closure.

Any findings identified through QA/QC and internal and external audits related to the site GHG emissions, calculations, or reporting are assigned to the site GHG data manager and entered into the GHG gap management system.

6.0 Safety & Environmental Information:

NA

7.0 Associated Documents:

Worldwide Corporate HSEMS- HSE Key Thrust Program

8.0 Document Revision History:

Revision: 3

Date Created: 08/26/2004

Last Approval Date: 04/25/2005

Date of Last Revision:

04/25/2005

Document Author:

Roy W. Wood

Document Manager:

Kenneth J. Carl

9.0 Reason for Change:

| Revision: | Sec/Para Changed | Change Made: | Date |
|-----------|---------------------------|--|------------|
| 1 | N/A | Initial Issue of Document | 08/26/2004 |
| 2 | Title, 3 | Added clarifications as a result of CH2MHill paper audit including inclusion of de minimis sources in the inventory, a new definition of de minimis, required management approval, link to new QA checklist. | 04/25/2005 |
| 3 | 3.4, 3.6, 3.8, 3.14, 3.24 | Clarified the discussion of de minimis to state that all de minimis sources are included in the inventory, but de minimis sources may be aggregated and estimated. | 04/25/2005 |

11.0 Approvals: