

December 1989

ADP SYSTEMS

EEOC's Charge Data System Contains Errors but System Satisfies Users



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United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

B-233325

December 12, 1989

The Honorable David Pryor
Chairman, Special Committee
on Aging
United States Senate

Dear Mr. Chairman:

This report is in response to the request of the former Chairman, that we determine whether the Equal Employment Opportunity Commission's (EEOC) Charge Data System (CDS) can provide accurate, complete, and current data to EEOC in its administration and enforcement of the Age Discrimination in Employment Act. The request was prompted by the former Chairman's concern that CDS may have been partly responsible for age discrimination complaints exceeding the statute of limitations before EEOC had completed its investigations.

Appendix I describes our objectives, scope, and methodology. We note that estimates of data errors apply only to the eight offices included in our study. The errors cannot be projected to all EEOC offices.

Results in Brief

Age discrimination cases in the CDS data bases of the eight offices we visited contained some errors, but the users are largely satisfied with the system. These errors occurred because EEOC did not sufficiently verify the accuracy or completeness of mandatory data¹ entered into CDS data bases or update the data bases with new or revised data. Although data base errors diminish the accuracy of CDS reports, they did not adversely affect the investigation of age discrimination complaints since the system was not designed for or used by EEOC investigators, the primary fact finders, to support investigations. None of the cases selected at random for our analyses had exceeded the statute of limitations.

EEOC's Director of Management expressed concerns about the error rates we found because of the potential impact on the accuracy of CDS reports. Although he indicated that EEOC recently initiated actions to reduce the level of error in the data bases, EEOC has not established a standard for an acceptable level of error. Without this standard, a determination of whether the error rates are too high for EEOC's uses of the data bases can

¹Data, such as the complainant's birth date or the respondent's mailing address, that EEOC requires for all cases entered in CDS data bases.

not be made. Establishing a cost effective data accuracy standard and adhering to it is a reasonable and accepted practice among users of management information systems.

Background

CDS is an automated information system used by EEOC to maintain information on discrimination cases, monitor and track its investigating and processing of cases, and prepare management, information, and statistical reports. Composed of computer and telecommunications equipment and data bases, CDS was installed in phases beginning in March 1986 and is operational in all of EEOC's field offices, which include 23 district, 16 area, and 9 local offices.² CDS is also linked with the automated case management and tracking system used at 68 of the 82 state Fair Employment Practice Agencies with whom EEOC maintains work sharing agreements.³

The EEOC and Fair Employment Practice Agencies share responsibility for investigating discrimination charges filed under federal and state discrimination laws. During fiscal year 1988, about 117,936 discrimination charges were filed, including about 22,625 age discrimination cases. The Age Discrimination in Employment Act, 29 U.S.C. 621-634, as amended, protects individuals age 40 and over from employment discrimination on the basis of age. The act also protects capable employees from being forced to retire. Discrimination suits filed with a court under this act are subject to a statute of limitations.⁴ In order to protect the right to sue in court, however, an employee must file a charge with EEOC within 180 days of the alleged discriminatory act. Once a charge is filed with EEOC, in order to preserve the employee's right to sue, EEOC must complete its investigation and take appropriate action, if necessary, within the timeframes specified in the statute of limitations. If EEOC fails to do so, the employee may lose the right to sue in court. Congress also enacted the Age Discrimination Claims Assistance Act of 1988, Public Law No. 100-283, to restore the claims of many employees which were lost because of delays in EEOC investigations.

²Presently EEOC has 10 local offices and the Washington, D.C. Field Office.

³Title VII of the Civil Rights Act of 1964 authorizes EEOC to contract with state Fair Employment Practice Agencies to investigate and process cases. Such contracts are referred to as work sharing agreements.

⁴The period within which a complainant is able to file court action. The complainant must file a lawsuit within 2 years of the alleged discriminatory act (or 3 years in cases of willful violation).

Information contained in CDS is entered and updated at EEOC's field offices and Fair Employment Practice Agencies where individual discrimination complaints are filed and investigated. When these offices enter new and revised data, one copy is stored in their local CDS data bases and another is transmitted to a computer called the collection manager located at EEOC's headquarters. The collection manager consolidates the transmitted data and forwards them for entry into the national data base, where data pertaining to all discrimination charges are maintained. It also routes cases being transferred between offices. Cases are transferred for operational purposes such as balancing caseloads among field offices.

Field offices use CDS for a variety of case management purposes including the identification of age discrimination cases which may be nearing the statute of limitations. EEOC's headquarters uses CDS information to answer questions on particular cases and produce reports for itself, Congress, and others. It also uses this information to support resource planning and monitor field offices' caseloads and analyze their performance.

Eight Data Bases Reviewed Contained Some Errors

EEOC requires that its field offices and Fair Employment Practice Agencies enter information for at least 22 mandatory data fields for each case file in their data bases. These data fields include essential information such as the statute and issue on which the discrimination charge is based, the date the alleged violation occurred, the charging party's date of birth, and the respondent's mailing address. Information, such as the date the alleged discrimination violation occurred, is critical to automated case management because it is essential for monitoring the statute of limitations.

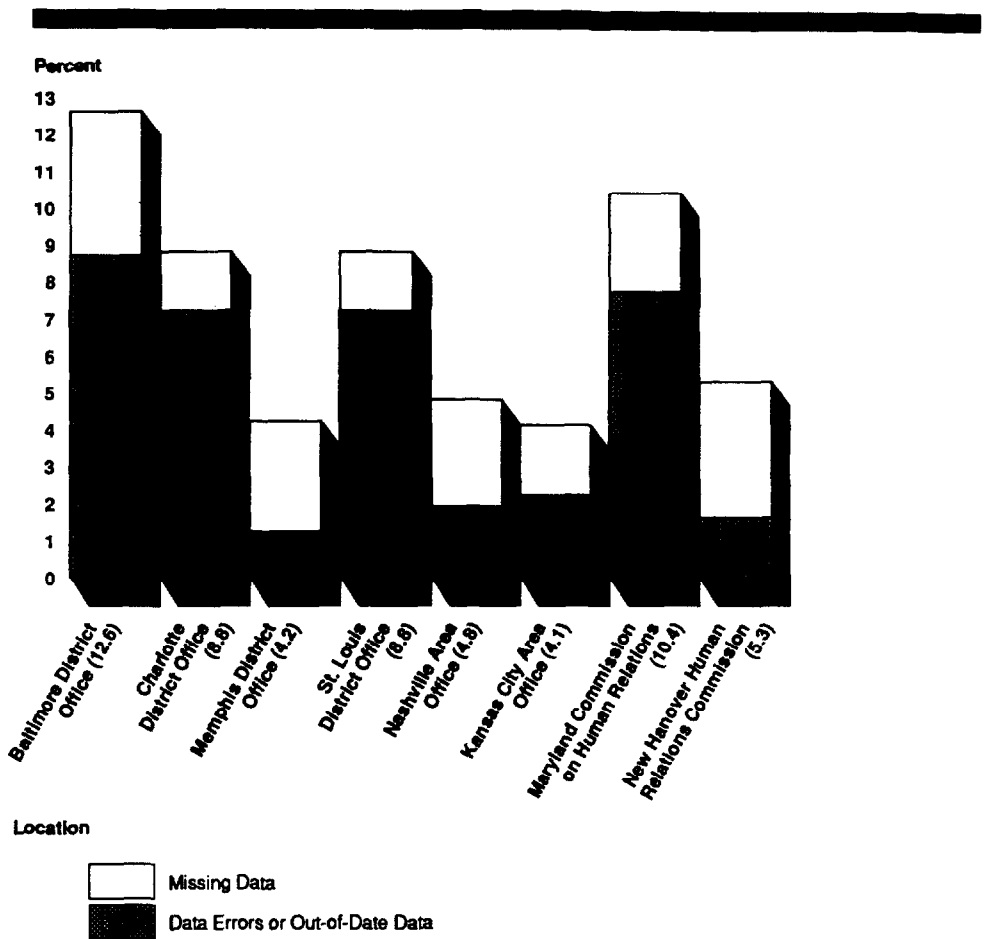
Having compared random samples⁵ of age discrimination data in CDS with the official case files at the eight offices reviewed, we estimate that from 4.1 to 12.6 percent of the CDS mandatory data fields were in error, out-of-date, or missing. These errors did not affect the investigation of individual cases because EEOC investigators do not use CDS to support their investigative work.

Figure 1 shows our estimates of the error rates for the eight offices we reviewed. The figure shows, for example, that for age discrimination cases in the Baltimore District Office, an estimated 8.7 percent of the

⁵None of the cases in our samples had exceeded the statute of limitations.

mandatory data fields had erroneous or out-of-date data, and 3.9 percent of the data were missing. The total estimated error rate was 12.6 percent.

Figure 1: Estimated Error Rates for Mandatory Data Fields



Total error rates for individual mandatory data fields at the eight offices varied widely from less than 1 percent to almost 74 percent. Each of the eight offices had at least one mandatory data field for which we estimate that at least 15 percent of the data were in error, out-of-date, or missing. As shown in appendix III, some offices have several mandatory data fields with error rates of 15 percent or more.

These errors occurred because EEOC did not sufficiently verify the accuracy or completeness of data entered into the CDS data bases or update

the data bases with new or revised data. Most offices monitored the transcription of data from the complaint form to the data input form to reduce the possibility of errors reaching the data entry stage. However, they did not check the data entered into CDS against the input forms to ensure complete and accurate entries. As a result, once entered, the errors were not detected or corrected by EEOC's personnel.

The errors diminish the accuracy of the eight offices' CDS reports, which are produced from the data bases. Because the national data base consists of data from field offices' data bases, these errors also diminish its accuracy and that of the national reports. Although data base errors diminished the accuracy of CDS reports, they did not adversely affect the investigation of discrimination complaints since the system was not designed for or used by EEOC investigators, the primary fact finders, to support investigations.

Seven CDS Inventories Did Not Agree With the Physical Inventories

CDS is expected to provide an accurate account of all open and closed discrimination cases. However, in physically inventorying official open age discrimination case files, we found that in seven of the eight offices, CDS inventories did not match the physical inventories of case files. The differences in the total number of cases accounted for in these inventories ranged from 5 to 41 (2.3 to 14.4 percent). These discrepancies occurred through the misclassification of cases or the erroneous recording of their status, i.e., age cases were classified as other types of employment discrimination cases or vice versa, and closed cases were reported as open.

Case transfers among offices also affected the accuracy of the CDS inventories. EEOC routinely transfers cases between offices to balance caseloads or achieve proper jurisdiction over cases. When cases are in transit, CDS inventories are inaccurate because the system does not include them in either office's inventory. Even though officials told us that automated transfers should take no longer than 2 weeks to complete, our analysis of 133 cases transferred among the eight offices during fiscal year 1988, revealed that 38 percent took 31 days or more to complete. Despite the untimeliness of transferring cases through CDS, our visits to offices determined that investigations were not hindered by this process. Specifically, once investigators obtained the official transferred case files, the fact finding process resumed. Appendix IV shows the number of days taken to complete these automated transfers.

District Office Users Are Satisfied With CDS

Managers, supervisors, and investigators in EEOC's 23 district offices reported that they are largely satisfied with the support provided by CDS. Having interviewed all 23 district office managers and a stratified sample of supervisors and investigators who variously monitor, track, and report discrimination caseloads, we estimate that between 77 and 100 percent consider CDS an important source of information in their work. Between 55 and 94 percent feel they can rely on CDS reports without checking another source of information. We did not inform district office personnel of data errors we found in their data bases during the interviews because, at the time of our interviews, we had not yet compiled the results of our examination of data base errors.

Managers relied more on CDS than did investigators and reported more confidence in the accuracy of the system. In addition, about 99 percent of district office managers and supervisors and 73 percent of district office investigators believe that CDS has at least moderately increased their work efficiency. Some of them suggested changes in CDS that would, in their opinion, further improve their work efficiency. These included automating the recording of the initial interview with complainants and providing more terminals to access CDS.

Although district office personnel were generally satisfied with the system, EEOC's Director of Management expressed concern over the error rates we found. He discussed actions that EEOC has initiated to reduce the level of errors in the data bases. These actions include developing new procedures designed to check data integrity and inventory control; providing training for field office supervisors to help improve inventory control; and developing a report to help identify cases with missing critical data. In addition, EEOC will pilot test a process that is expected to reduce the amount of time needed to electronically transfer cases between offices.

Conclusions

The data errors we found diminish the accuracy, currency, and completeness of information in CDS data bases and the reports the eight offices produce and use to monitor, track, and report on their caseloads. Both the national data base and various reports produced from it are similarly affected since the national data base is derived from the data bases of the field offices.

Although data base errors were as high as 12.6 percent, EEOC has yet to establish a standard for an acceptable level of error. Therefore, EEOC cannot be certain that information taken from the data bases is reliable.

To the extent that it is not, EEOC's ability to, for example, obtain reliable information on particular cases and produce reliable statistical reports to identify trends in regional, occupational, or employer discrimination is impaired.

Recommendation

We recommend that the Chairman of EEOC establish an accuracy standard for CDS data bases and procedures for ensuring compliance with this standard. In doing this, the Chairman should (1) determine the agency requirement for data accuracy, i.e., the level of errors above which EEOC's mission is adversely affected and (2) the costs and benefits of maintaining this standard.

Agency Comments and Our Evaluation

EEOC's comments, together with our evaluation, are contained in appendix V.

In commenting on our report, the Chairman of the EEOC said he believes that error rates reported by us are not representative of the system's present performance. According to the Chairman, unavoidable obstacles during CDS design, development and implementation were overcome with full implementation of CDS. He cited system enhancements and some other actions as evidence of the importance that EEOC is placing on the accuracy of data entering CDS. EEOC believes that these efforts have significantly improved CDS data base accuracy, completeness, and timeliness.


We note that system enhancements and other actions referred to by the Chairman were initiated between June and September 1989. We do not know whether these efforts have significantly improved CDS data bases because EEOC has not conducted any studies which show the cited improvements.

Although the Chairman did not address our recommendation in his comments, EEOC's Director of Management expressed general agreement with it in discussions we held on June 29, 1989. The Director said he believed that EEOC is now in the position to establish a data accuracy standard for CDS.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 5 days from its issue date. At that time, we will send copies to the Chairman of the

Equal Employment Opportunity Commission; the Chairmen of the House Select Committee on Aging, House Committee on Government Operations, and Senate Committee on Governmental Affairs; and other interested parties. This report was prepared under the direction of JayEtta Hecker, Director, Resources, Community, and Development Information Systems, (202) 275-9675. Other major contributors are listed in appendix VI.

Sincerely yours,


Ralph V. Carlone
Assistant Comptroller General

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Abbreviations

CDS	Charge Data System
EEOC	Equal Employment Opportunity Commission
GAO	General Accounting Office
IMTEC	Information Management and Technology Division

Objectives, Scope, and Methodology

The primary objective of our review was to determine whether CDS can provide accurate, complete, and current data to EEOC in its administration and enforcement of the Age Discrimination in Employment Act. To do this, we tested age discrimination information in the CDS data bases at six EEOC field offices—the Baltimore, Charlotte, Memphis, and St. Louis district offices and the Kansas City and Nashville area offices—and two Fair Employment Practice Agencies—the New Hanover Human Relations Commission in Wilmington, NC. and the Maryland Commission on Human Relations in Baltimore, MD. Our selection represents a mix of low to high caseload volume and well and not-so-well managed district offices based on EEOC's views. It also reflects the amount of our current and prior work at the offices, and the Committee's preference. The majority of our work was performed between September 1988 and March 1989 in accordance with generally accepted government auditing standards. Selective audit work was conducted through July 1989.

At each of the eight offices we:

- obtained a copy of the CDS data base that included all age discrimination cases that were open or closed from the time CDS was installed in 1986 through mid-August 1988, except the Maryland Commission on Human Relations data base, which included such cases through mid-December 1989,
- selected a random sample of age discrimination cases from the data base and compared the CDS data for those cases with data in the official age discrimination case files,
- compared the CDS inventory report of open age discrimination cases with the physical inventory of those case files,
- reviewed all discrimination cases transferred in fiscal year 1988 among the eight offices and analyzed procedures and internal controls over the transfer process, and
- reviewed the internal controls and procedures over the CDS data entry and update processes.

We extracted cases from the CDS data base files of the eight offices and determined the sample size needed to statistically represent the age discrimination case universe in each data base with a sampling error no greater than 10 percent at a 95 percent confidence level. We randomly selected sample cases from each office's universe of age discrimination cases. The cases selected and reviewed at each office constitute a valid statistical sample from which results may be generalized to all age discrimination cases at that office. Appendix II shows for each office (1) the number of cases reviewed, (2) our estimates of the percentage of

mandatory data fields that contain erroneous, out-of-date, or missing data, and (3) the sampling error associated with each estimate. We note that our work included both mandatory and optional data fields of age discrimination cases. However, since data was generally not entered into the optional data fields, we did not draw any conclusions.

We interviewed all district directors or acting directors and a stratified sample of 117 compliance managers, unit supervisors and investigators from all of EEOC's 23 district offices to determine whether CDS is an important and reliable source of information in performing certain caseload management and case tracking tasks. We developed a structured interview to assure that we obtained the same information from each person. Our estimates are made at a 95 percent confidence level.

Our work was performed in accordance with generally accepted government auditing standards. The Equal Employment Opportunity Commission provided written comments on a draft of this report. These comments are presented and evaluated on page 7 and are included in appendix V.

Sampling Errors Associated With Estimated Error Rates for Mandatory Data Fields

Location	Number of cases reviewed ^a	Error rate ^b	(+/-) Sampling error ^c
District Offices			
Baltimore	96	12.6	1.6
Charlotte	95	8.8	1.6
Memphis	106	4.2	1.1
St. Louis	82	8.8	1.6
Area Offices			
Nashville	109	4.8	0.8
Kansas	99	4.1	0.8
Fair Employment Practice Agencies			
Maryland Commission on Human Relations	84	10.4	1.6
New Hanover Human Relations Commission	23	5.3	d

^aEach case contains 22 mandatory data fields.

^bThe figures in this column and the sampling error column are percentages.

^cSampling error percentages shown are at the 95 percent confidence level. Thus, there is a 95 percent chance that the true error rates do not differ from our estimate by more than the sampling errors shown.

^dThere is no sampling error associated with this error rate because all age discrimination cases at this location were reviewed.

Mandatory Data Fields With Estimated Error Rates of 15 Percent or More

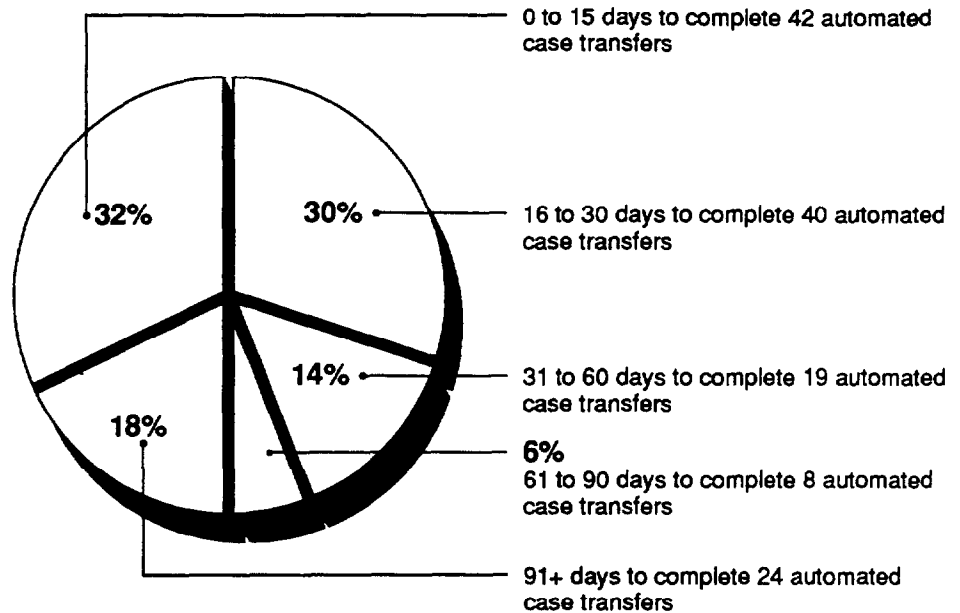
Figures in percentages

Location	Mandatory Data Field	Estimated error rate	(+/-) Sampling error ^a
Baltimore District Office	Standard metropolitan statistical area code	47.9	10.3
	Standard industrial code	36.5	9.1
	Date of birth	33.3	9.7
	Respondent address	19.8	8.3
	Date received in office	18.8	8.1
	County code	15.6	7.6
	Statute	15.6	7.6
Charlotte District Office	Date received in office	21.1	8.4
	Respondent address	21.1	8.4
	Respondent zip code	18.9	8.1
	Date of birth	16.8	7.8
	Standard industrial code	16.8	7.8
Memphis District Office	Date of birth	24.5	7.7
	Date of alleged violation	18.9	7.0
St. Louis District Office	Standard industrial code	51.2	11.3
	Date of birth	41.5	11.2
	Date of alleged violation	17.1	8.7
Kansas City Area Office	Standard industrial code	19.2	6.0
Nashville Area Office	Date of birth	38.5	8.8
Maryland Commission on Human Relations	Statute	25.0	9.1
	Standard industrial code	25.0	9.1
	Date received in office	21.4	8.6
	Date of birth	17.9	8.1
	Respondent name	17.9	8.1
	County code	15.5	7.7
New Hanover Human Relations Commissions	Date of birth	73.9 ^b	

^aSampling error percentages are calculated at the 95 percent level of confidence. Thus, there is a 95 percent chance that the true error rates do not differ from our estimate by more than the sampling error.

^bThis percentage has no sampling error associated with it because all age discrimination cases at this location were reviewed. Rate of error primarily results from data not being entered into this field.

Number of Days Taken in FY 1988 to Transfer Cases in CDS Among the Offices Reviewed



Comments From the Equal Employment Opportunity Commission

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



OFFICE OF THE CHAIRMAN

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION
WASHINGTON, D.C. 20506

October 12, 1989

Mr. Ralph V. Carlone
Assistant Comptroller General
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Carlone:

Thank you for the opportunity to comment on your draft report to the Chairman of the Senate Special Committee on Aging regarding the Equal Employment Opportunity Commission's Charge Data System (CDS).

I am pleased that GAO's study confirmed our assessment that CDS is an important source of information for performing case management tasks, and that data errors and omissions had no adverse impact on investigations of age discrimination complaints. Clearly, CDS has proven to be an invaluable tool for managing EEOC's formidable workload. Through CDS and other initiatives, the agency has transformed scarce resources into record enforcement activity and relief for victims of employment discrimination.

We believe that due to the status of CDS at the time of GAO's study, the reported error rates are not representative of the system's present performance. As you know, severe budgetary constraints mandated that CDS be designed, developed and implemented in several stages without additional appropriations from Congress. This approach presented several unavoidable obstacles, all of which have been overcome with the full implementation of CDS. One problem was that the national data base was not accessible from March 1988 until May 1989, while EEOC transferred the national data base from an external service provider to an in-house maintenance system. CDS, now fully operational, affords more immediate access to a wider array of critical charge data, at significantly lower cost.

Two further enhancements made since GAO's study have been the development of new procedures and user training to improve CDS data accuracy and inventory control. Additionally, we have designed a process which automatically extracts transmission data and loads

See comment 1.

See comment 2.

Appendix V
Comments From the Equal Employment
Opportunity Commission

Ralph V. Carlone
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transferred charges on a daily basis. This new utility has dramatically reduced the turnaround time on inter-office transfers of charge data to an average of two days.

See comment 3.

We have also developed a program which automatically generates the various forms and letters produced during the field intake process, and which reduces the potential for duplicative data entry into CDS. After the data entry has been completed in intake, it is uploaded to the CDS local data base. The new process facilitates extensive edit cross-checks among data fields to ensure data integrity, and requires that all mandatory fields be entered before the data can be uploaded into CDS.

See comment 4.

Similarly, CDS now includes a report program which assists in the timely identification of CDS files containing missing data. Further, in June 1989, CDS internal control procedures were developed to help system users review the integrity of their own data, perform CDS system maintenance checks, and improve charge inventory control. Special procedures have been established by our Office of Program Operations to verify the accuracy of the data uploaded to the national data base. Also, the Office of Program Operations has incorporated standards for the operation and maintenance of CDS into performance plans for all appropriate field office staff.

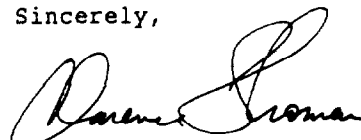
See comment 5.

All these steps evidence the importance the agency has placed on the accuracy of data entering CDS. Our efforts have significantly improved CDS data base accuracy and completeness.

We are proud of the vital role CDS has played in our record enforcement accomplishments, and look forward to future efficiency gains.

Again, thank you for soliciting our comments pertinent to your findings.

Sincerely,



Clarence Thomas
Chairman

The following are GAO's comments on a letter dated October 12, 1989 from the Chairman of the Equal Employment Opportunity Commission.

GAO Comments

1. We are not able to determine whether EEOC's actions have reduced data base errors because EEOC has not conducted any studies that show the effect of its actions.
2. As we discuss on page 6, we found that 38 percent of automated case transfers in fiscal year 1988 took 31 days or more to complete. To date, EEOC has not conducted any studies of CDS to determine how long it takes to complete automated case transfers.
3. According to EEOC's Inspector General, EEOC piloted this program in September 1989 in the Charlotte, Houston and Memphis district offices. We do not know the effect this process has had on data base accuracy since results of this pilot were not available as of October 23, 1989.
4. EEOC has taken actions to improve the data base problems we found. We do not know the results of the actions taken above because EEOC has not formally assessed their impact on data base accuracy, completeness, and timeliness.
5. We agree that the EEOC has initiated actions to improve data base accuracy, completeness, and timeliness as described above. However, we do not know whether these efforts have resulted in the desired improvements because EEOC has not conducted studies to determine the effect of its actions.

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Related GAO Products

Equal Employment Opportunity: EEOC and State Agencies Did Not Fully Investigate Discrimination Charges (GAO/HRD-89-11, Oct. 11, 1988).

Equal Employment Opportunity: EEOC Birmingham Office Closed Discrimination Charges Without Full Investigations (GAO/HRD-87-81, July 15, 1987).

Equal Employment Opportunity: Information on the Atlanta and Seattle EEOC District Offices (GAO/HRD-86-63FS, Feb. 21, 1986).

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