THE IMMIGRATION AND NATURALIZATION SERVICE'S
AUTOMATED I-94 SYSTEM

EXECUTIVE SUMMARY

"Overstays" are nonimmigrants who do not depart the United States upon expiration of their authorized stays. According to an Immigration and Naturalization Service (INS) report published in November 2000, overstays represent about 40 percent of the estimated 5 million illegal immigrants currently residing in the United States. The Department of Justice FY 1999 Annual Accountability Report listed the monitoring of alien overstays as a "Management Challenge" and stated that the collection of automated arrival and departure records would help ensure complete and reliable data.

The form used to collect arrival and departure data is the I-94. The INS began developing a system to automate the processing of air passenger I-94 forms in 1995. Both the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 and the Immigration and Naturalization Service Data Management Improvement Act of 2000 require the INS to develop an automated entry/exit system for use at land, air, and sea ports of entry. The laws differ in time frames and definition of "automated entry/exit system." The INS planned to use the Automated I-94 System to help meet the requirements of both laws.

Our audit focused on the design and implementation of the Automated I-94 System. The system currently operates at four air ports of entry; the INS has not implemented the I-94 System at any land or sea ports of entry. We found that the INS has not properly managed the project. As a result, despite having spent $31.2 million on the system from FY 1996 to FY 2000, the INS: (1) does not have clear evidence that the system meets its intended goals; (2) has won the cooperation of only two airlines and is operating the system at only four airports; and (3) is in the process of modifying the system. Recent INS projections estimate that an additional $57 million will be needed for FY 2001 through FY 2005 to complete the system. These projections include development, equipment, and operations and maintenance costs. As a result of these concerns and the amount of money needed to complete the system, we make a number of recommendations aimed at ensuring that the INS rigorously analyzes the costs, benefits, risks, and performance measures of the Automated I-94 System before proceeding with further expenditures or implementation.

Specifically, we found that as the project progressed through its life cycle the INS's efforts to compare interim results against estimates were inadequate. The INS did not: (1) convert the project's intended purpose into measurable goals, (2) collect baseline information, and (3) complete a cost-benefit analysis. We also

found that the INS did not adequately manage the risks associated with the system. One risk, the lack of air carrier participation, has halted the deployment of the system as currently configured. This risk might have been mitigated had the INS developed the risk management plan required by its systems development life cycle model. The INS is currently evaluating ways to modify the system so that air carrier participation is not necessary. However, INS officials provided no details on the nature of these modifications to allow us to determine the feasibility of operating the system without voluntary air carrier participation.

Our audit objective, scope, and methodology appear in Appendix III. The details of our work are contained in the Findings and Recommendations section of the report.

TABLE OF CONTENTS

INTRODUCTION

According to the INS's strategic plan, its mission is "to determine the admissibility of persons seeking entry and to adjust the status of and provide other benefits to legally entitled noncitizens within the country with proper regard for equity and due process. This includes assistance to those who seek permanent resident status and those who wish to become citizens through naturalization."

In 1995, the INS began efforts to identify a process to automate the collection of I-94 arrival and departure data at airports of entry. The manual system in use at the time, which continues to be the primary system today, required most non-U.S. citizen and non-permanent residents entering the United States to complete one of three forms — the regular I-94 form, the I-94W form for those visitors participating in the Visa Waiver Pilot Program[1], or the I-94T for those passengers in transit to a final destination outside of the United States.

The manual form process works as follows. During airline check-in at a foreign port of departure or during the flight, most non-U.S. citizens receive one of the I-94 forms that they are required to fill out during the flight. Upon arrival in the United States, the passenger surrenders the completed form to an INS inspector. After completion of the inspection process, the inspector detaches the "departure record" portion of the form and returns it to the passenger. The inspector retains the "arrival record" portion of the form. The INS sends the arrival records to a contractor who keys in the data and creates an input tape for the Nonimmigrant Information System (NIIS). When passengers depart the United States, the airlines collect the departure records and provide those records to INS inspectors at the port of entry. The INS also sends the departure record to a contractor for data entry and the creation of an input tape. Another contractor uploads the data on the input tapes into NIIS. The data is supposed to be matched within NIIS to identify overstays.

In 1995, personnel at the INS were concerned with the reliability of the I-94 data collected with the manual system; they reported in a Systems Development Life Cycle (SDLC)[2] document the following problems. Arrival data was not entered into NIIS in a timely fashion. Approximately 25 percent of arrival and

---

[1] The Visa Waiver Pilot Program allowed citizens from 29 countries to enter the United States as visitors for business or pleasure without obtaining a visa. Visitors entering the United States under the Visa Waiver Pilot Program are permitted to stay up to 90 days, must possess round trip transportation tickets, and must waive their rights to appeal immigration officers' determination of admissibility or to contest any deportation actions. The Visa Waiver Pilot Program has been made permanent. Passengers participating in the Visa Waiver Pilot Program were also expected to sign and date the I-94 to certify that they had read it, understood it, and answered the questions on it truthfully.

[2] The SDLC is the INS's structured approach to be used when developing information systems.

departure records did not match. Departure records were not always collected. As a result of problems collecting departure records, some nonimmigrants were identified as overstays even after they had left the country. Forms were often incomplete and inspection processing was slow. I-94s were not delivered from the port of entry to the data entry contractor in a timely fashion.

The Automated I-94 System currently in use was introduced by the INS in May 1997. The system captures I-94 arrival and departure data electronically at airports of entry, and it uploads non-U.S. citizen information to the Arrival/Departure Information System (ADIS)[3] which forwards the data to NIIS. A pilot of the system was operated in Philadelphia by US Airways and the INS. Currently, US Airways and TWA are the only two participating airlines and only at four U.S. airports: Charlotte, Philadelphia, Pittsburgh, and St. Louis. For boarding passengers, the airline produces automated I-94 arrival cards using Advance Passenger Information System (APIS)[4] data. The new automated I-94 arrival card, which is similar to a boarding pass, uses magnetic stripe technology to encode the APIS data and takes the place of the three manual versions.

At the port of entry, the passenger presents the I-94 arrival card to the immigration inspector, who uses the Automated I-94 System to interface with APIS and the Interagency Border Information System (IBIS)[5], and electronically confirm the arrival. When the inspection is complete, the inspector creates an arrival record in the local I-94 database by adding the actual arrival information, produces the automated I-94 departure card, and provides it to the passenger. The Automated I-94 System generates an admission number that is printed and encoded on both the arrival and departure cards. The arrival record is stored in a local database until a daily upload to ADIS occurs. The automated I-94 departure card, showing the details of admission, is given to the traveler. The traveler is supposed to surrender it upon departure from the United States. The collection process is unchanged from the manual system. The departure cards are collected by the air carriers and returned to the INS. The departure information is electronically collected and stored in the I-94 database until it is uploaded to ADIS.

---

[3] ADIS is designed to replace NIIS as INS's central database for nonimmigrant data. It currently contains only data gathered by the automated I-94 system.

[4] APIS allows participating airlines to collect biographical information used in the immigration inspection process at the foreign point of departure and electronically transmit it to the United States. Once transmitted, the data is used to query IBIS for "lookouts," and the results of the query are made available to the port of entry in advance of the arrival of the flight.

[5] IBIS is an interagency database system maintained by the U.S. Customs Service that maintains information on all persons of interest to the U.S. Department of State, the INS, Customs, and other federal agencies. The purpose of the system is to control more effectively the entry of persons into the United States. A record in IBIS is termed a "lookout."

Currently, the relevant data from ADIS is transferred to NIIS. Information from NIIS on individuals that should not be admitted to the United States is transferred to the National Automated Immigration Lookout System (NAILS). NAILS data is the INS's contribution to IBIS, the interagency system that contains lookouts from the Departments of State and Agriculture, the Customs Service, and the INS. Finally, the Automated I-94 System queries IBIS to determine if the individual being inspected is the subject of a lookout. The chart below shows the relationship of the Automated I-94 System to other databases on which INS immigration inspectors rely. The flow of information from the I-94 System to the related systems and subsequent data processing should allow immigration inspectors to identify confirmed overstays during the inspection process.

The Automated I-94 System and Related Databases
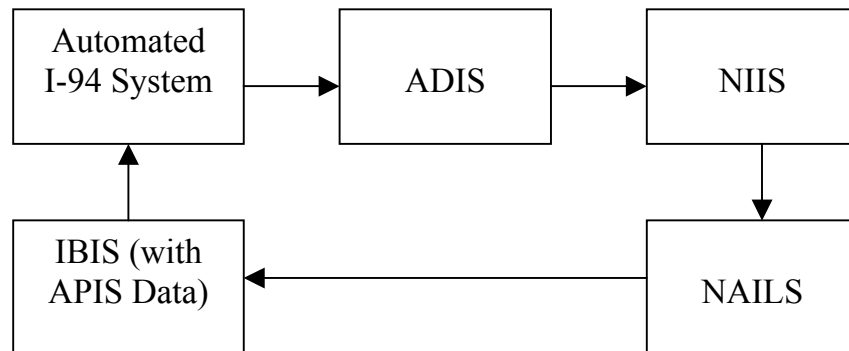
Legislative Mandates

In 1996, the Illegal Immigration Reform and Immigrant Responsibility Act was passed. Section 110 of the Act required the Attorney General to develop an automated entry and exit control system to: (1) collect a record of departure for every alien departing the United States and match the record of departure with the record of the alien's arrival in the United States; and (2) enable the Attorney General to identify, through on-line searching procedures, lawfully admitted nonimmigrants who remain in the United States beyond the period authorized.

In June 2000, concerned that full implementation of Section 110 would cause excessive and costly traffic delays at the land borders, Congress passed the Immigration and Naturalization Service Data Management Improvement Act. The Act amended Section 110 to require the Attorney General to create an Integrated Entry and Exit Data System. This electronic system was to provide access to, and integrate, alien arrival and departure data that are: (1) authorized or required to be created or collected under law; (2) in an electronic format; and (3) in a database of the Department of Justice or the Department of State, including those created or

used at ports of entry and at consular offices. In addition, unlike Section 110, the Act prohibits the INS from imposing any "new documentary or data collection requirements on any person in order to satisfy" the requirement to build an Integrated Entry and Exit Data System.

Prior Audit Work

In September 1997, the OIG reported that the INS could not identify individual overstays and, although the INS had some demographic information on overstays, it could not adequately describe the characteristics of the overstay population in the United States, such as countries of origin, occupations, or worksites where overstays are employed. Such information would assist the INS in developing an enforcement strategy that effectively targets overstays.

In the past five years, both the OIG and the U. S. General Accounting Office (GAO) have reported that the INS does not adequately manage its automation systems. In July 1999, in a follow-up to a 1998 audit, the OIG found that: (1) estimated completion dates for some automation projects were delayed without explanations for the delays, (2) costs continued to spiral upward with no justification for how the funds are spent, and (3) projects were nearing completion with no assurance that they would meet performance and functional requirements.

In August 2000, the GAO reported that the INS does not have an enterprise architecture which is an institutional systems blueprint that defines in both business and technology terms the INS's current and target operating environments and provides a road map for moving between the two. Moreover, the GAO found that the limited steps the INS had taken toward developing such a blueprint had been hampered by a lack of management controls and were therefore unlikely to produce a complete and useful enterprise architecture. In December 2000, the GAO reported that the INS did not have the defined and disciplined investment management processes necessary to effectively manage its information technology investments.

INS Initiatives

In response to the two GAO reports referenced above, the INS has two initiatives under way. According to INS officials, the INS assigned responsibility for enterprise architecture and information technology (IT) investment management to the INS Office of Strategic Information and Technology Development, which has day-to-day responsibility for both the development of an enterprise architecture and the implementation of an improved IT investment management process. The INS officials told us that the INS has obtained the FY 2001 funding, staffing, and contractor support needed to implement both the

enterprise architecture and IT investment management, and that the INS expects to make significant progress toward development of an INS target architecture within 12 months. As recommended by the GAO, the INS plans to submit its IT investment management process to the Department of Justice's Chief Information Officer for approval. The INS expects the new IT investment management process to be implemented by the end of FY 2001.

FINDINGS AND RECOMMENDATIONS

I.   AUTOMATED I-94 SYSTEM PERFORMANCE NOT
      MEASURED

Although the INS has spent $31.2 million to develop and deploy the
Automated I-94 System, it has not developed performance measures
for the system. The INS did not complete many of the steps
necessary to measure the performance of the system, including:
(1) the conversion of the project's intended purpose into measurable
goals, (2) the collection of baseline information, and (3) a cost-
benefit analysis. In addition, the INS's project plan did not include
cost and schedule data. As a result, the INS does not have evidence
that the system meets its intended goals, and INS management does
not have information necessary to determine whether the project is
progressing as expected. In our judgment, these deficiencies are
symptomatic of the broad-based weaknesses previously identified by
the OIG and the GAO.

Performance Measures Not Established

        According to the INS SDLC, performance measurement is an essential
element in developing effective information technology systems. For each goal in
its strategic plan, the INS established a set of performance measures. These
measures enable the INS to assess how effective each of its projects is in
improving operations. For each project plan, as part of the economic analysis, the
INS estimates the performance levels it expects to reach as a result of the planned
improvements. As a project's improvements are implemented, actual results are
compared with the estimated gains to determine the success of the effort. The
project plan is the crucial document of the information system life cycle.
According to the SDLC, the project plan is subject to approval by the INS
program management and should be produced in the planning phase. The plan
should also be updated, expanded, and refined continually throughout the life
cycle.

        The INS Automated I-94 System project plan provided to us did not include
any performance measures. The 1998 plan, which included both the systems for
air and land ports of entry, listed the project's goals as reducing the cost of
collecting I-94 data, expediting the entry of I-94 data to the NIIS database,
improving the quality of the data in the NIIS database, and simplifying the I-94
data collection process for passengers, airlines, and the INS. However, the plan
did not define the basis for determining whether or not the system met the stated
goals. Information on performance is necessary for in-depth reviews of a project

to ensure that the project delivers the intended benefits. If the project does not deliver the intended benefits, performance data allows management to correct problems before significant money has been spent.

The INS commissioned two studies to assess the performance of the Automated I-94 System. The first, conducted in 1997, was to study whether the system met its major objectives to:

- reduce the time to receive, process, and update the INS databases;

- improve data integrity;

- reduce data entry costs; and

- improve data availability.

Based on data collected over six days, the study concluded that it "appeared" that the Automated I-94 System improved the accuracy of data for US Airways flight 0015 from Munich, Germany to Philadelphia. Based on data collected from flight 0015 over 110 days, the study concluded that it "appeared" that the automated system improved the timeliness of arrival and departure data. The study also concluded that the system reduced data entry costs and that there was no "perceptible difference" in the processing times of the manual system and the automated system.

The study noted that US Airways flight 0011 from Madrid, Spain to Philadelphia was very similar to flight 0015 in passenger composition and the level of difficulty. The study called for the Madrid flight to be used as a control flight to compare and quantify the differences between the manual and automated systems. However, we found no evidence that such a follow-up study was conducted.

The second study, conducted in March 2000, collected data on the inspection time for both the automated and manual systems. Data on the automated process was collected for 90 minutes. The average inspection took 100 seconds. Data on the manual system was collected over 67 minutes, taking an average of 60 seconds per inspection.

In our judgment, neither study provides reliable data on the performance of the Automated I-94 System. In the first study, the analysis of data accuracy and timeliness does not include any baseline data. The first study also does not include any cost data on the automated process, noting that cost for processing the automated "Arrival cards is yet to be determined," but concludes that "it should be

equal to or less than the current Departure card cost." The first study did not collect any data on the amount of time required for either the automated or the manual inspection process. The study concluded that the difference between the two processes was imperceptible based solely on observation. After reviewing the study, we cannot make the same conclusions.

We have the following concerns about the second study. The sample size was not the same for the automated and manual inspection processes. The impact of a referral to secondary inspection was not considered. The difference in the number of people inspected during a given inspection was not held constant.

Stated Goals Not Converted to Measurable Objectives

For each project plan, the INS estimates the performance levels it expects to reach as a result of the planned improvements. The project plan is the crucial document of the information system life cycle. It is first produced in the planning phase and should be updated, expanded, and refined continually throughout the life cycle. The project plan should cover project scheduling, staffing, resources, adjustments to the life-cycle structure, selection of tools and methodologies, identification of applicable reviews and approvals, configuration management methods, and other related topics.

The INS did not translate the goals stated in its project plan to measurable objectives. For example, one stated goal was to simplify the data collection process for air passengers. The project plan provides no explanation of how the INS will know whether or not it achieved this goal. Because the INS has not established measurable objectives to determine whether the system is achieving its goals, neither the INS nor we could measure the performance of the system. According to the INS's FY 2000 Annual Performance Plan, evaluating programs is vital to identifying and overcoming weaknesses before the programs are more widely implemented. The plan listed both automated exit/entry control and port-of-entry facilitation as areas where evaluation was critical.

Baseline Information Not Gathered

The project plan did not include baseline information on the then current level of performance in the areas included as goals: cost reduction, data timeliness, data quality, and process simplification. Measuring progress is not possible without baseline information. Establishing a baseline should be one of the initial tasks in managing the performance of an information technology project. Without baseline information, the INS will not be able to determine what progress towards the stated goals of I-94 automation are attributable to the project and what progress is attributable to other factors such as process improvements.

Because the INS did not establish the baseline level of performance, it will be difficult for the INS to measure the performance of the system in meeting its intended goals.

Cost-Benefit Analysis Not Performed

According to the SDLC, cost-benefit analysis is a vital management tool for linking function and budget, and supporting ongoing management oversight. A preliminary assessment of costs and benefits should be made during the strategic planning process and should be refined and updated as appropriate throughout the remainder of the life cycle. At each phase, information should be gathered and decisions should be made that enable the project team to make increasingly accurate projections of the total costs and benefits of the system over its projected life. Subsequently, the cost-benefit analysis should be updated at the end of each phase. Reasons for updating a cost-benefit analysis include such factors as significant changes in projected costs and benefits; major changes in requirements, including legislative or regulatory changes; or empirical data based on performance measurement gained through prototype or pilot experience.

The level of detail in the cost-benefit analysis should be commensurate with the size of the investment.[6] When a system provides services to the public, managers should quantify the performance of the system through systematic measurement of the outputs. Agencies should seek to maximize return on investment over the information system life cycle by establishing and evaluating systematic performance measures. These performance measures should include the following: effectiveness of program delivery, efficiency of program administration, and reduction in burden, including information collection imposed on the public. The revised cost-benefit analysis at each phase of the SDLC provides up-to-date information to ensure the continued viability of an information system before and during implementation.

The INS did not complete a cost-benefit analysis for the Automated I-94 System as developed. According to the project plan, full implementation of the I-94 automation was based on a successful pilot test in Philadelphia. (See previous discussion of our concerns about the data used to determine the success of the Philadelphia pilot.) The INS provided us with a draft cost-benefit analysis for I-94 automation; however, the magnetic stripe technology selected by the INS was not one of the alternatives considered in the cost-benefit analysis. Because the INS has not completed a cost-benefit analysis for the Automated I-94 System

---

[6] According to the INS SDLC Manual, a major project is one that is anticipated to cost more than $10 million.

as developed, it lacks the data to decide whether the system is meeting the INS's needs.

The cost-benefit analysis provided to us was a draft version dated January 1996. The analysis considered three feasible alternatives: (1) continuing the current manual process; (2) optically scanning I-94 arrival and departure records and validating the scanned images at the port of entry; and (3) optically scanning I-94 arrival and departure records at the port of entry and electronically sending the records to an off-site image processing facility. The analysis recommended continuing the manual process.

Cost and Schedule Data Not Available

In January 1998, the INS issued a final project plan for the Automated I-94 System. According to the SDLC, project plans should include cost and schedule information. The final project plan for the system does not include a budget and schedule. The INS project manager did not know why the project plan did not include a budget and schedule because he was not the project manager at the time the project plan was developed. Without a budget and a schedule, the INS could not and cannot properly manage the performance of the Automated I-94 system.

Conclusion

The INS has a substantial history of difficulties in managing its automation initiatives. In a 1999 follow-up on prior audit work, we noted that the INS did not adequately manage its automation programs despite the substantial investment it had made in such programs. We stated that "(1) estimated completion dates for some automation projects have been delayed without explanations for the delays, (2) costs continue to spiral upward with no justification for how the funds are spent, and (3) projects are nearing completion with no assurance that they will meet performance and functional requirements." In December 2000, the GAO noted that the "INS has limited capability to effectively manage its planned and ongoing IT [information technology] investments." In our judgment, the deficiencies noted in the Automated I-94 System are symptomatic of the broad-based weaknesses previously reported in the INS's management of automation projects and may be indicative of the challenges the INS will face when it expands the Automated I-94 System to land and sea ports of entry.

<u>Recommendations</u>

We recommend that the Commissioner of the INS:

1. Prior to making any further expenditures on the Automated I-94 System, conduct a cost-benefit analysis that includes the most recent cost and benefit data, changes in requirements, and any data on performance.

2. Use the results of the cost-benefit analysis to determine whether the project should proceed. If the results of the cost-benefit analysis indicate that the costs outweigh the benefits, notify Congress that the Automated I-94 System cannot function as required and request relief from the relevant portions of the Immigration and Naturalization Service Data Management Improvement Act.

3. Develop and implement performance measures before further implementing the Automated I-94 System.

II.   AUTOMATED I-94 SYSTEM RISKS NOT ADEQUATELY
        MANAGED

The INS did not adequately manage the risks associated with the
Automated I-94 System. The project plan recognized a number of
risks associated with the system; however, the INS did not develop a
risk management plan as required. One risk, the lack of air carrier
participation, has halted the deployment of the system as currently
configured. As a result, the INS plans to modify the system so that
voluntary air carrier participation is not necessary. Recent INS
projections estimate that an additional $57 million will be needed to
fully implement the system.

No Risk Management Plan

According to the INS SDLC, risk management is: (1) the assessment of a
project's potential outcomes, including the likelihood of unsuccessful outcomes;
and (2) the process of accepting, transferring, or mitigating risk. A risk
management plan should document and identify project risks and then analyze,
assess, and prioritize those risks. The plan is a control mechanism to monitor and
direct all risk mitigation activities. The tracking of risks in a risk identification list
is a critical facet of successful system development management. The risk
identification list should be used from the beginning of the project and is a major
source of input for the risk assessment activity. According to the SDLC Manual,
risk categories include:

- "the complexity, difficulty, feasibility, novelty, verifiability, and volatility
  of the system requirements;

- the correctness, integrity, maintainability, performance, reliability, security,
  testability and usability of the SDLC deliverables;

- the formality, manageability, measurability, quality and traceability of the
  process used to satisfy the customer requirements;

- the communication, cooperation, domain knowledge, experience, technical
  knowledge, and training of the people associated with technical and support
  work on the project; and

- the budget, external constraints, politics, resources, and schedule of the
  external system environment."

A risk management plan should score each risk according to the probability and the resulting impact. The impact of a risk may vary from an inconvenience to a failure of the project. Risk items with high rankings should be reviewed and a determination made whether the risks will be accepted, transferred, or mitigated. If a risk is to be accepted, two options are available: contingency planning and no action. A contingency plan is a back-up plan to minimize the effects of a risk. When no action is taken and the risk is accepted, the project team has to accept responsibility if the risk occurs.

Like other project activities, reducing the effects of risk requires effort, resources, and time. Efforts to reduce risk need to be incorporated into the budget, schedule, and other components of the project plan. The project plan should be updated to ensure the planning and execution of efforts to reduce risk. If risks have been accepted, the project plan should refer to the contingency plan.

The INS did not develop a risk management plan as required by the SDLC. However, the project plan for the Automated I-94 System contained a list of some risk areas that could have an adverse impact on the delivery of the system. One risk area identified in the project plan, the lack of air carrier participation, has halted the deployment of the system as currently configured. The lack of air carrier participation and data integrity (a risk not discussed in the project plan) are addressed below.

Low Airline Participation Hampers Implementation

Currently, only US Airways and TWA have agreed to participate with the INS to implement the Automated I-94 System. In its project plan, the INS recognized that airline participation was a risk; however, it is not clear what steps the INS took to mitigate this risk. The Department's FY 1999 Annual Accountability report indicated that the INS would have to rely heavily on the cooperation and participation of airlines. One airline, Northwest Airlines, agreed to test the Automated I-94 System but declined permanent participation. In a memorandum to the International Air Transport Association, Northwest Airlines listed the following concerns.

- The process requires the generation of a paper document. The data that the airlines collect for APIS is the same data that is used to generate the automated I-94 form. The data in the Interagency Border Information System is identical to the data encoded on the automated I-94 form that the passenger presents with his or her passport at primary inspection. Any and all additional information is handwritten by the passenger on the automated I-94 form.

- Canadian and U.S. Alien residents must complete the new automated I-94. With the manual system, Canadians and U.S. Alien residents are not required to complete an I-94.

- Alliances and partnerships mean that full compliance depends upon the systems of too many airlines. Logistics may be difficult because alliance members' and partners' systems may not generate the automated I-94 form. To remain competitive, airlines have made significant investments in partnerships and automation to enable "one-stop" check-in for travel originating all over the world. This often requires an airline to rely upon another airline's system for check in. For example, Northwest's "Global Alliance" with KLM Royal Dutch Airlines generates connecting traffic into the Amsterdam hub that is bound for the United States. On a typical day, Northwest flights departing from Amsterdam can expect connecting passengers from at least 24 cities and 8 airlines. Northwest believed that it was unrealistic to expect its partners to modify their reservation systems to integrate with the Automated I-94 System for the limited number of passengers that are ultimately bound for the United States.

- The Automated I-94 System was not compatible with the way Northwest processes tour groups. At Tokyo and Osaka, Japan, upwards of 60 percent of local origin passengers are part of tour groups, for which most of the check-in and APIS data collection is performed by the tour operator. As a result, most of these passengers do not come in contact with a service agent who can print the proposed automated I-94.

- The purpose of the I-94 process is not clear because APIS data provides sufficient information to produce departure cards. The tracking of the arrival and departure of noncitizens can be accomplished through APIS data. Northwest and almost all airlines serving the United States have gone to great effort and considerable expense to enable transmission of APIS data to IBIS. This IBIS data is shared with the INS, and any additional information is not known until the passenger presents himself or herself to the primary inspector.

Managers from the INS acknowledged Northwest Airlines' concerns with the Automated I-94 System and said that the INS was willing to address the concerns of other non-participating airlines. At the conclusion of our audit, INS officials told us that modifications currently under consideration are intended to eliminate the need for relying entirely upon carrier participation. However, the INS officials provided no details on the nature of these modifications to allow us to determine the feasibility of operating the system without voluntary air carrier

participation. The INS also told us it was concerned about meeting the time frames for implementing an automated system as directed by the Immigration and Naturalization Service Data Management Improvement Act of 2000.

Full implementation of the Automated I-94 System as currently configured has ceased because most carriers have repeatedly resisted participation. Consequently, the INS is currently considering ways to redesign the system so that it does not rely on carrier participation. The INS admits that it did not plan for the possibility of poor carrier participation. Specifically, the INS did not realize the impact that air carrier alliances would have on the willingness of airlines to participate. In our judgment, the INS should address both the concerns of Northwest and other non-participating airlines before proceeding with the modifications to the system.

Departure Data Lacks Integrity

The INS has had a long-standing problem collecting I-94s when nonimmigrants depart the United States. Staff at the INS believe that the unrecorded departures are caused by the failure of airlines to collect the departure records and turn them over to the INS and nonimmigrants departing through land borders. As noted in the introduction, the Immigration and Naturalization Service Data Management Improvement Act requires the INS to develop an Integrated Entry and Exit System at air, land, and sea ports of entry. With regard to air ports of entry, the manual I-94 system cannot be used to determine the number of departure records that should be forwarded to the INS for a given flight because airline manifests are required to separate the passengers into U.S. citizens and non-U.S. citizens; however, two groups of non-U.S. citizens are not required to submit an I-94: Canadians and lawfully admitted permanent residents. As a result, the INS does not know whether the airlines are submitting the correct number of I-94s. According to an INS official, the INS is aware of the weakness and plans to address it by modifying its regulations to: (1) require I-94s from Canadians and lawfully admitted permanent residents, and (2) fine airlines for not submitting the correct number of departure I-94s.

Conclusion

In our judgment, the inadequate risk management we found in the Automated I-94 System is also symptomatic of the broad-based weaknesses previously reported about the INS's management of automation projects.

<u>Recommendations</u>

We recommend that the Commissioner of the INS:

4.   Develop a risk management plan before making further expenditures for the Automated I-94 System.

5.   Address the concerns of non-participating airlines before proceeding with the modifications to the Automated I-94 System.

6.   Develop a method for determining the number of departure I-94s that should be submitted for each flight.

STATEMENT ON COMPLIANCE WITH LAWS AND REGULATIONS

We have audited the INS's management of the Automated I-94 System. In connection with the audit, and as required by the standards, we reviewed program activities and records to obtain reasonable assurance about the INS's compliance with laws and regulations that, if not complied with, we believe could have a material effect on program operations. Compliance with laws and regulations applicable to the INS's management of automation programs is the responsibility of the INS management.

Our audit included examining, on a test basis, evidence about laws and regulations. The specific laws and regulations against which we conducted our test are contained in the relevant portions of the Clinger-Cohen Act of 1996; OMB Circular A-130; the Illegal Immigration Reform and Immigrant Responsibility Act of 1996; and the Immigration and Naturalization Service Data Management Improvement Act of 2000.

Except for those issues cited in the Findings and Recommendations section of the report, our tests indicated that, for those items reviewed, the INS was in compliance with the laws and regulations referred to above. With respect to those transactions not tested, nothing came to our attention that caused us to believe that INS management was not in compliance with the laws and regulations cited above.

STATEMENT ON MANAGEMENT CONTROLS

In planning and performing our audit of the INS's management of the Automated I-94 System, we considered the INS's management controls for the purpose of determining our auditing procedures. This evaluation was not made for the purpose of providing assurance on the management control structure as a whole; however, we noted certain matters that we consider to be reportable conditions under generally accepted government auditing standards.

Reportable conditions involve matters coming to our attention relating to significant deficiencies in the design or operation of the management control structure that, in our judgment, could adversely affect the INS's ability to effectively manage the Automated I-94 System. During our audit, we found the following management control deficiencies.

- The INS could not determine whether the Automated I-94 System would meet its stated goals.

- The INS had not sufficiently managed the risks associated with the project.

Because we are not expressing an opinion on the INS's management control structure as a whole, this statement is intended solely for the information and use of the INS in managing the Automated I-94 System. This restriction is not intended to limit the distribution of this report, which is a matter of public record.

OBJECTIVE, SCOPE, AND METHODOLOGY

Objective

Our objective was to evaluate the design and implementation of the Automated I-94 System.

Scope and Methodology

We performed the audit in accordance with *Government Auditing Standards* and, accordingly, included such tests of records and procedures as we deemed necessary. However, we may not be considered by others to be completely independent of the INS, as required by the standards, because the INS has reimbursed us for work that pertained to the INS fee-supported programs. Nonetheless, we consider ourselves independent and do not believe that our reimbursement arrangement with the INS has had any effect with regard to the conduct of our audit.

Generally, our audit focused on the INS's efforts to automate the collection of I-94 arrival and departure data from June 1995 to January 2001. Our work was performed at the offices of the INS headquarters in Washington, DC, as well as Philadelphia, PA, St. Louis, MO, Minneapolis, MN and Charlotte, NC. As part of our assessment of the Automated I-94 System, the Office of the Inspector General initiated and completed a separate audit of selected computer security controls designed to assure the integrity of the Automated I-94 System data.

To accomplish the audit objective, we:

- reviewed SDLC documentation for the project;

- reviewed INS funded studies of the Automated I-94 System performed by the Rail Corporation and Regal Decision Systems;

- interviewed INS personnel in Inspections and the Office of Information Resources Management in Washington, DC and Inspections personnel in Charlotte, NC, Philadelphia, PA and St. Louis, MO;

- interviewed contractor personnel in Charlotte, NC, and St. Louis, MO;

- observed the automated I-94 process in Charlotte, NC, Philadelphia, PA, and St. Louis, MO; and

- interviewed personnel from Northwest Airlines, US Airways, and TWA who have participated in the automated I-94 process.

U.S. Department of Justice
Immigration and Naturalization Service
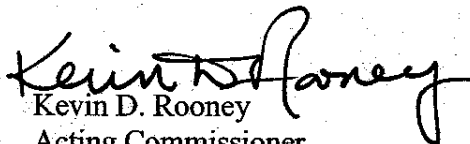
HQOIA 110/8.2-C

Office of the Commissioner

425 I Street NW
Washington, DC 20536

JUN 27 2001

MEMORANDUM FOR GUY K. ZIMMERMAN
                          ASSISTANT INSPECTOR GENERAL FOR AUDIT
                          DEPARTMENT OF JUSTICE

FROM: Kevin D. Rooney
            Acting Commissioner
            Immigration and Naturalization Service

SUBJECT: The Immigration and Naturalization Service's Automated I-94 System

     I appreciate the opportunity to comment on the subject draft report and solicited input from the senior management official who is most significantly impacted -- the Acting Executive Associate Commissioner for Programs. I reviewed the response and concur with the conclusions and observations. The response is attached for your review.

     Completion of the majority of the recommendations is waiting on the cost-benefit analysis, which is scheduled to be available by October 2001.

     If you have any questions, please contact Kathleen Stanley, Audit Liaison, at (202) 514-8800.

Attachment

cc: Vickie L. Sloan, DOJ Audit Liaison

U.S. Department of Justice
Immigration and Naturalization Service

HQINS 70/5

Office of the Executive Associate Commissioner

425 I Street NW
Washington, DC 20536

JUN 15 2001

MEMORANDUM FOR THE ACTING COMMISSIONER

FROM: Michael D. Cronin
             Acting Executive Associate Commissioner
             Office of Programs

SUBJECT: The Immigration and Naturalization Service's Automated I-94 System

In response to the Office of the Inspector General's draft audit report on the Automated I-94 System, the Immigration and Naturalization Service (INS) concurs with all the recommendations and provides the following comments:

RECOMMENDATION 1: Prior to making any further expenditures on the Automated I-94 System, conduct a cost-benefit analysis that includes the most recent cost and benefit data, changes in requirements, and any data on performance.

INS POSITION: Concur. The Office of Inspections is currently working on a cost-benefit analysis that will include the most recent cost and benefit data. The cost-benefit analysis will also include a high-level risk assessment plan that will allow the Office of Inspections to determine the areas of risks and how those risks will be mitigated. The cost-benefit analysis will be completed by September 30.

RECOMMENDATION 2: Use the results of the cost-benefit analysis to determine whether the project should proceed. If the results of the cost-benefit analysis indicate that the costs outweigh the benefits, notify Congress that the Automated I-94 System cannot function as required and request relief from the relevant portions of the Immigration and Naturalization Service Data Management Improvement Act.

- 22 -

INS POSITION: Concur. When the cost-benefit analysis is completed at the end of the fiscal year, the Office of Inspections will determine the future deployment possibilities and further investment options to the system. The INS will also identify any intangible benefits that will enhance the inspection process.

RECOMMENDATON 3: Develop and implement performance measures before further implementing the Automated I-94 System.

INS POSITION: Concur. Currently the Automated I-94 system has one performance measure: the percentage of arrival/departure information on non-immigrant travelers updated within 24 hours of arrival/departure. As previously stated, a cost-benefit analysis and a risk assessment are being conducted. If the outcome of these two reports supports further deployment of the system, the INS will continue to develop and refine performance measures.

RECOMMENDATION 4: Develop a risk management plan before making further expenditures for the Automated I-94 System.

INS POSITION: Concur. Once the cost-benefit analysis and the high-level risk assessment are done, the risks will be prioritized. Both the cost-benefit analysis and the risk assessment will factor into deciding on any further deployment of the program. The Office of Inspections will also consider any intangible benefits that the program provides.

RECOMMENDATION 5: Address the concerns of non-participating airlines proceeding with the modifications to the Automated I-94 System.

INS POSITION: Concur. As previously stated, the Office of Inspections is currently conducting a cost-benefit analysis and a risk assessment. Should the INS decide to proceed with the project, the concerns of the non-participating airlines will be addressed.

RECOMMENDATION 6: Develop a method for determining the number of departure I-94s that should be submitted for each flight.

INS POSITION: Concur with comment. The INS does not believes that a methodology can currently be developed that could determine the number of departure I-94s that should be submitted for each flight. However, the INS will take this recommendation into consideration in the development of the automated entry/exit system.

The point of contact for this response in the Office of Inspections is Assistant Chief Inspector Beverly Matthews, (202) 305-9245.

OIG, AUDIT DIVISION ANALYSES AND SUMMARY
OF ACTIONS NECESSARY TO CLOSE REPORT

Recommendation Number:

1. **Resolved.** This recommendation is resolved based on the INS's agreement to conduct a cost-benefit analysis that will include the most recent cost and benefit data and a high-level risk assessment plan. The INS's comments on the draft report do not explicitly state that the cost-benefit analysis will include changes in requirements and any data on performance. In our judgment, this information should be included. In the corrective action process for this audit we will follow-up with the INS regarding the need to include in the final cost-benefit analysis any changes in requirements and performance data. This recommendation can be closed when we receive a copy of an acceptable cost-benefit analysis.

2. **Resolved.** This recommendation is resolved based on the INS's agreement to prepare a cost-benefit analysis that includes recommendations on whether the project should proceed. This recommendation can be closed when we receive a copy of the cost-benefit analysis recommendations, and if applicable, a copy of any notification to Congress indicating that the Automated I-94 System cannot function as required.

3. **Resolved.** This recommendation is resolved based on the INS's agreement to develop and implement performance measures before further implementing the Automated I-94 System. The INS's comments on the draft report note that one performance measure, the percentage of arrival/departure information on non-immigrant travelers updated within 24 hours of arrival/departure, currently exists. We reiterate that the Automated I-94 System project plan provided to us did not include this or any other performance measure. Some existing performance-related data not directly tied to the project's goals through an evaluation methodology, which should be defined in the project plan, does not constitute a performance measure. This recommendation can be closed when we receive evidence that performance measures have been developed and implemented, as appropriate.

4. **Resolved.** This recommendation is resolved based on the INS's agreement to develop a risk management plan before making further expenditures for the Automated I-94 System. This recommendation can be closed when we receive a copy of the risk management plan.

5. **Resolved.** This recommendation is resolved based on the INS's agreement to address the concerns of non-participating airlines before proceeding with the modifications to the Automated I-94 System. This recommendation can be closed when we receive evidence indicating that the concerns of non-participating airlines have been addressed.

6. **Resolved.** This recommendation is resolved based the INS's concurrence and agreement to take the recommendation into consideration in the development of the automated entry/exit system. Once the cost-benefit analysis is complete, and if a decision is made to further deploy the system, we will request from the INS its assessment of the possible methodologies for determining the number of departure I-94s that should be submitted for each flight.