The Integrated Submission and Remittance Processing System Development Project Has Made Significant Progress, But Operating Risks Remain

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Redaction Legend:

1 = Tax return/Return information

INSPECTOR GENERAL
for TAX
ADMINISTRATION

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

March 30, 2000

MEMORANDUM FOR COMMISSIONER ROSSOTTI

FROM: for Pamela J. Gardiner
Deputy Inspector General for Audit

SUBJECT: Final Audit Report - The Integrated Submission and Remittance Processing System Development Project Has Made Significant Progress, But Operating Risks Remain

This report presents the results of our review of the Integrated Submission and Remittance Processing System (ISRP). During our audit, we evaluated the Internal Revenue Service's (IRS) (1) process for ensuring that problems identified during ISRP's pilot were adequately corrected, (2) preparation for the implementation of the ISRP system, and (3) operation of ISRP during the 1999-filing season.

In summary, we found that the ISRP System project made significant progress; however, risks continue to affect the integration of the system with other IRS operations. We recommended the IRS improve the ISRP system's control and accountability of all documents processed, update submission processing contingency plans, and improve ISRP controls designed to safeguard taxpayer information.

Management agreed with all issues in the report and has implemented corrective actions. Management's comments have been incorporated into the report where appropriate, and the full text of their comments is included as an appendix.

Copies of this report are also being sent to the Internal Revenue Service managers who are affected by the report recommendations. Please contact me at (202) 622-6510 if you have questions, or your staff may call Walter E. Arrison, Associate Inspector General for Audit (Wage and Investment Income Programs), at (770) 455-2475.

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Executive Summary

The Internal Revenue Service (IRS) replaced the computer systems used to annually process approximately 170 million paper tax returns and 50 million payments. The new system, referred to as the Integrated Submission and Remittance Processing (ISRP) System, is necessary because the existing computers cannot process data after December 31, 1999. This is our third audit of the ISRP system. The first two audits evaluated the processes used by the IRS to design and develop the ISRP system.[1] During this audit, we evaluated the IRS' process for ensuring that problems identified during the system's pilot were adequately corrected.

Results

Overall, the IRS' implementation of ISRP was successful. As of May 21, 1999, the IRS had processed over 66 million tax returns and over 11 million payments through the ISRP systems nationwide. Despite these notable accomplishments, the process of integrating ISRP with other IRS operations has resulted in additional risks and challenges affecting the IRS goal of ensuring that taxpayers are provided top quality submission processing services.

During this review, we found that document processing changes increased taxpayer burden, approval of a system enhancement placed the implementation at risk, contingency plans were incomplete and untested, and access to taxpayer information was not properly controlled.

Document Processing Changes Increased Taxpayer Burden

The implementation of ISRP required changes to the IRS' procedures for controlling documents. These changes resulted in additional taxpayer burden and created additional work in order to correct processing errors. For example, we found that:

- ISRP data entry operators occasionally failed to process tax returns (did not enter the tax return data). These unprocessed tax returns resulted because ISRP operators were no longer required to enter the unique serial number of each document processed.

[1] *The Initial System Development Activities of the ISRP System* (Reference Number 082204, dated January 30, 1998) and *The ISRP System Software Development and Pilot Activities* (Reference Number 090903, dated November 6, 1998)

Based upon our review of randomly sampled tax returns, we estimate that approximately 230 tax returns processed through the ISRP systems at 3 sites were sent to warehouses without being processed and an additional 7,800 tax returns contained serial numbering problems.[2]

- The amount of taxpayer contacts required to resolve payment processing mistakes increased. The ISRP system used to create and store computerized pictures (images) of the original payment documents (checks, money orders, payment vouchers, etc.) did not always capture usable information. Based upon our review of randomly sampled payments, we estimate that the ISRP system's computer archives did not capture any images for approximately 2,900 payments and captured incomplete sets of images for approximately 6,000 additional payments.[2]
- Delays in the numbering of tax returns received with payments affected the accuracy of penalty assessments and the IRS' ability to research payment-related processing errors. In the past, the control numbers for tax returns received with payments were assigned when the payments were processed and matched the control number assigned to the payment. Some IRS computer programs assessed penalties based upon dates reflected in the control number assigned to the tax return.

  Since the ISRP system does not assign matching control numbers to tax returns and their accompanying payments, process changes caused delays in the document numbering process and resulted in discrepancies between the actual IRS received dates and the dates reflected in the control number. Had this problem not been corrected, thousands of taxpayers could have been assessed erroneous penalties and issued erroneous balance due notices. In addition, we found that the mismatched control numbers often prevented the IRS from locating the original tax return, making it more difficult for the IRS to correct processing errors related to these payments.

Approval of an Enhancement Increased Implementation Risk

The IRS approved a significant enhancement to the design of the ISRP system despite delays in the project's implementation schedule and unresolved development problems. After formally advising the vendor of concerns regarding the timely delivery of ISRP, the IRS authorized a significant system enhancement. The additional requirement increased

[2] Since these tests were conducted during non-peak processing periods and did not include all service centers, the estimates understate the nationwide size of the problems. See Appendix I, Objectives IV.C and IV.E for details regarding the sampling criteria and precision.

the risk of delays in the vendor's delivery of the system. After we advised them of the potential risks, IRS management decided to delay development of the enhancement.

Contingency Plans Were Incomplete and Untested

On January 29, 1999, we advised the IRS of our concerns with its back-up plans for unexpected tax return and payment processing problems (i.e., contingency plans). We reported a lack of detail in the 1999 contingency plans, budget and staffing reductions that limited contingency alternatives, and the omission of the ISRP system from local recovery plans. In addition, we questioned the reliability of the IRS' payment processing capabilities if problems with ISRP occur after the year 2000. IRS officials agreed with our recommendations and took corrective actions regarding the 1999 contingency plans, but they did not agree with our recommendations regarding contingency plans for problems in the year 2000 and beyond.

We are still concerned with the IRS' year 2000 back-up payment processing capabilities. If detailed contingency plans are not both finalized and tested, unexpected problems with the IRS' payment processing systems may result in untimely deposits, unprocessed payment transactions, and errors in calculating tax due balances. As of October 14, 1999, the IRS had neither completed negotiations with the vendors expected to provide the back-up services nor tested the contingency plans currently in place.

Access to Taxpayer Information Was Not Properly Controlled

Due to the personal and sensitive nature of information on IRS computer systems and the legal requirements to safeguard the privacy of taxpayer information, the IRS established procedures to check the background of all individuals granted access to its computer systems. This includes the employees of vendors contracted to implement and maintain ISRP.

We reviewed the background investigation results for 51 vendor employees at 6 service centers. We found that 59 percent of these employees (30 of 51) did not have completed background investigations. Although we did not identify any misuse of taxpayer data, vendor employees with the computer knowledge and skills necessary to misuse this data were allowed access to ISRP before the completion of their background investigations.

Summary of Recommendations

The report contains specific recommendations for the IRS to improve the ISRP system's control and accountability of all documents processed, to update submission processing contingency plans, and to improve ISRP controls designed to safeguard taxpayer information.

Management's Response: IRS management agreed with the issues addressed in this report and stated that they have implemented corrective actions to improve the ISRP system's control and accountability of documents, strengthen contingency plans, and improve ISRP controls designed to safeguard taxpayer information. IRS management's complete response to the draft report is included as Appendix V.

Objectives and Scope

This is the third in a series of audit reports presenting the results of the Treasury Inspector General for Tax Administration's (TIGTA) review of the development and implementation of the Integrated Submission and Remittance Processing (ISRP) system. We began the initial evaluation shortly after the Internal Revenue Service (IRS) selected Lockheed Martin Federal Systems (LMFS) as the system's developer. On January 30, 1998, the IRS Inspection Service (now TIGTA) issued a report detailing significant risks to the project's ability to meet the year 2000 implementation date, including an aggressive implementation schedule, a lack of back-up plans, and system design problems.[1] On November 6, 1998, the IRS Inspection Service (now TIGTA) issued a second report detailing system design, project scheduling, and resource allocation risks.[2] The IRS implemented corrective actions for each of these reports.

During the review, we kept IRS management advised of significant issues through various discussions, direct electronic mail messages, and the issuance of two audit memoranda.

During this audit, we evaluated the IRS' (1) process for ensuring that problems identified during the system's pilot were adequately corrected, (2) preparation for the implementation of the ISRP system, and (3) operation of ISRP during the 1999-filing season. We kept IRS management advised of significant issues through various discussions, direct electronic mail messages, and the issuance of two audit memoranda (see Appendices VII & IX).

The audit was performed in accordance with *Government Auditing Standards* from September 1998 through May 1999 at the IRS' National Office and the

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[1] *The Initial System Development Activities of the ISRP System* (Reference Number 082204, dated January 30, 1998)

[2] *The ISRP System Software Development and Pilot Activities* (Reference Number 090903, dated November 6, 1998)

10 service centers. Details of our audit objectives, scope, and methodology are presented in Appendix I. Major contributors to this report are listed in Appendix II.

Background

The IRS replaced the computer systems used to process approximately 170 million paper tax returns and 50 million payments each year.

The IRS replaced the computer systems used to process approximately 170 million paper tax returns and 50 million payments received from taxpayers each year. On August 16, 1999, the IRS began processing both paper tax returns and payment documents through ISRP at the last of 10 IRS service centers nationwide.

The ISRP system replaces the existing Distributed Input (DIS) and Remittance Processing (RPS) Systems and is necessary because neither of these systems is capable of processing data after December 31, 1999.

The IRS approved the initial development of ISRP on August 22, 1996, and on December 20, 1996, selected LMFS as the system's developer. The initial design, development, and testing activities occurred in 1997. The Austin Service Center (AUSC) operated ISRP for the first time (piloted the system) during the 1998-filing season.

Despite numerous delays and production problems, the ISRP pilot met the AUSC's initial tax return processing deadlines and most of its payment processing deadlines. Although ISRP met the April peak deposit program completion date (PCD), it was not able to meet the daily and monthly deposit requirements consistently. Based upon these results, the IRS modified plans for the 1999-filing season by limiting the nationwide implementation of ISRP's payment processing components to 6 of 10 submission processing facilities (service centers). The IRS planned to implement ISRP's payment processing component at the other four service centers before the 2000-filing season. Its plans to

implement ISRP's return processing component at all 10 service centers for the 1999-filing season did not change.

Results

Despite notable accomplishments, risks continue to affect the integration of ISRP with other IRS operations.

Despite notable accomplishments, risks continue to affect the integration of ISRP with other IRS operations. Specifically, we identified concerns in the following areas.

- Document processing changes increased taxpayer burden.
- Approval of an enhancement increased implementation risk.
- Contingency plans were incomplete and untested.
- Access to taxpayer information was not properly controlled.

Whenever possible, we provided IRS management with detailed information on each of these findings. We also incorporated their responses and corrective actions into each issue discussed in this report.

Since ISRP operations began, IRS service centers have reported over 2,500 ISRP operating problems as "trouble tickets." As of June 2, 1999, 90 percent of the ISRP trouble tickets had been resolved, including over 98 percent of the highest priority issues. The ISRP Project Office defined high priority issues as problems capable of causing work stoppages.

The IRS' Product Assurance Division conducted Systems Acceptability Tests (SAT)[3] on ISRP software

[3] SAT is the process of testing a system or program to ensure it meets the original objectives outlined by the user in the requirements analysis document.

as it was developed. As of June 2, 1999, the SAT test group had reported over 1,900 problems during 4 phases of testing. Ninety percent of the SAT problems reported had been resolved, including 94 percent of the highest priority issues.

As noted in our prior audit reports, IRS management directed its resources to ensure that the vendor concentrated on the highest priority problems.

As noted in our prior audit reports, IRS management directed its resources to ensure that the vendor concentrated on the highest priority problems. To review, prioritize, and approve proposed system changes, the IRS formed the ISRP Configuration Control Board (CCB) consisting of IRS Executives and ISRP Project Managers. The IRS submits CCB-approved changes to LMFS as contract modifications. As of August 23, 1999, the ISRP CCB had issued over 300 Configuration Control Decisions (CCD) modifying the original system design.

On January 11, 1999, the IRS began operating ISRP's tax return processing component at the last of 10 service centers. By May 21, 1999, the IRS had processed over 66 million timely filed tax returns and met its initial tax return processing goals.

On January 25, 1999, the IRS began operating ISRP's payment processing component at the last of the six service centers implementing the system during the 1999-filing season. By April 30, 1999, these 6 service centers had processed over 11 million payments and met their initial deposit goals.

Document Processing Changes Increased Taxpayer Burden

Document processing changes resulted in unprocessed tax returns, incorrect notices, and untimely refunds.

The implementation of ISRP required changes to the IRS' process for controlling paper tax returns and payments. These changes increased the volumes of tax returns incorrectly sent to storage facilities (warehouses) without being processed. In addition, new research

techniques were not as useful or reliable as previous techniques. As a result, the IRS increased taxpayer burden through the issuance of incorrect notices and untimely refunds.

Before ISRP creates computer records of information from tax returns, control numbers are hand stamped on each document, and the tax returns are grouped into "blocks" of up to 100 documents. The control numbers contain serial numbers unique to each tax return within the block of documents. After the tax returns are processed, the IRS sends the documents to warehouses and stores the tax return information in computerized files.

Process Changes Increased Taxpayer Burden

During the ISRP pilot, the AUSC found that data entry operators occasionally failed to process tax returns (did not enter the tax return data). These unprocessed tax returns occurred because operators were no longer required to manually input the unique serial numbers printed on each return processed.

In order to reduce the number of keystrokes required to process tax returns, ISRP was designed to generate serial numbers automatically. The previous computer system required operators to manually input the serial number of each tax return as it was processed.

On April 30, 1998, the IRS sent LMFS a contract modification to remove the automatic serial numbering feature. However, the IRS later determined that the contract modification was too costly and did not fund the programming change.

In order to determine the significance of ISRP-related numbering problems, we reviewed blocks of tax returns processed through ISRP at three service centers. The documents reviewed were randomly sampled individual income tax returns. These tax returns were processed at the Atlanta Service Center (ATSC), the AUSC, and the

Memphis Service Center (MSC) from March 15 through March 19, 1999.

Test results revealed that 23 percent (240 of 1,047) of the blocks reviewed contained ISRP-related control numbering errors.

Test results revealed that 23 percent (240 of 1,047) of the blocks reviewed contained ISRP-related control numbering errors. IRS employees corrected the majority of the numbering errors by manually writing the correct control numbers on the tax returns. However, seven of the blocks were sent to IRS warehouses with at least one unprocessed tax return.

Once unprocessed documents are sent to warehouses, it is unlikely that the IRS will discover them through normal work procedures. If the unprocessed documents are not found, the related numbering problems may cause untimely refunds, miscalculated tax due notices, and additional taxpayer burden in correcting these situations. During our test, we kept IRS management apprised of our findings and notified local management each time we identified unprocessed tax returns and/or incorrectly numbered documents (i.e., numbering problems).

We estimate that from March 15 through March 19, 1999, approximately 7,800 tax returns handled at the 3 service centers reviewed contained numbering problems, and approximately 230 of these tax returns were sent to warehouses without being processed.

Based on these results, we estimate[4] that approximately 7,800 tax returns handled at the 3 service centers reviewed contained numbering problems, and approximately 230 of these tax returns were sent to warehouses without being processed. Since our tests were limited to 3 of the 10 service centers and were conducted during a 5-day non-peak processing period, these estimates understate the nationwide volume of numbering problems and unprocessed tax returns.

[4] The projected estimates are based upon a total population of approximately 34,211 blocks of tax returns and a 95 percent confidence level. See Appendix I, Objective IV.E for details regarding the sampling criteria and precision.

The volume of unprocessed and unnumbered tax returns increased significantly over the prior year. The MSC records from January 1 through May 31, 1999, show that local operations identified and corrected 747 blocks of tax returns with numbering problems. This represents a 332 percent increase over the 173 blocks identified the prior year. These records also show numbering problems occurred in blocks of both individual and business tax returns. Further analysis of the records revealed that in 1999, 51 percent (378 of 747) of the blocks identified with numbering problems contained at least 1 unnumbered and/or unprocessed tax return.

The MSC records show that numbering problems occurred in blocks of both individual and business tax returns.

Tax returns also went unprocessed during the 1998 ISRP pilot and caused taxpayer burden. From a limited analysis of the AUSC's 1998 April and May duplicate tax return reports, we located 20 blocks of tax returns where numbering problems erroneously created duplicate tax return situations. These reports identify instances where more than one tax return has attempted to post to the same tax period of a taxpayer's account.

We found the numbering problems by reviewing the reports for indications that two duplicate tax returns were processed within the same block of documents. Although taxpayers occasionally file duplicate tax returns, it is rare for the duplicate returns to be processed within the same block of documents.

From a limited analysis, we identified 20 blocks of tax returns processed through the 1998 ISRP pilot system with various numbering problems and 15 unprocessed tax returns.

Further analysis revealed unprocessed tax returns for 15 taxpayers. Four of the 15 taxpayers had requested refunds. At the time of our review, 1----------
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Eleven of the 15 taxpayers sent payments along with the unprocessed tax returns. Six of these taxpayers re-filed copies of their tax returns after receiving notices from the IRS. In addition to burdening the taxpayers to

re-file, it took the IRS up to 14 months to settle the accounts.

Auditors developed a quality review tool. To determine if ISRP-related numbering problems could be readily identified, we developed a computer program to detect duplicate tax return transactions within the same block. We tested the program at the ATSC on 20 different days during the 1999-filing season and identified numbering errors in 16 blocks of documents. In each block, 1----------1---------- Therefore, the IRS' computer records indicated that 1----------1----------

The ATSC adopted a TIGTA audit program as a local quality review report.

The ATSC adopted the program as a local report for quality review. The report has allowed ATSC processing units to identify blocks with unprocessed tax returns and resolve numbering problems before they create taxpayer burden.

Process Changes Created Additional Work

After the 1998 ISRP pilot, the AUSC prepared the "ISRP Roadmap" as a guidance document for processing and procedural changes. In addition, the IRS incorporated this information into ISRP training sessions and provided each service center copies of the roadmap. The roadmap presents a clear and comprehensive assessment of both the positive and negative aspects of ISRP processing, including its effect on other functions required to resolve problems related to the processing of tax returns and payments (downstream functions).

ISRP documents did not provide enough pilot production information to project additional workloads and staffing requirements.

Although we found the roadmap valuable, it did not provide enough pilot production information to project additional workloads and staffing requirements caused by ISRP operations. For example, the roadmap indicated that ISRP operations would significantly affect the workload of the service center's Accounting Function, but it did not provide any information

regarding the volume and staffing costs of the additional workloads.

We also found that, in many instances, the ISRP Project Office had not directed the AUSC to implement any special procedures to measure the downstream effects of ISRP operations. Because downstream functions do not usually track the source of the work, normal production data was insufficient to measure the specific effects of ISRP changes.

In addition to the information in the roadmap, we found other downstream problems and analyzed production data to determine the additional workloads.

The volume of work increased because of ISRP's method of assigning document control numbers. The ISRP system allows the IRS to process multiple payment types (i.e., individual or business) in the same block of documents. The control number generated by ISRP includes a code input by the data entry operator to specify the payment type. The code also defines the type of account to which the payment is applied (i.e., individual or business account).

The IRS designed this feature into ISRP to eliminate the need for some manual sorting of documents in the initial stages of processing. The old system could not process multiple payment types at the same time and required the sorting of payments into blocks of like documents. As long as the operators know and correctly enter specific payment codes for each document processed, the ISRP system does not require the sorting of payments.

ISRP's multiple payment processing feature contributed to a 338 percent increase in the MSC's number of incorrectly coded payment transactions.

We discovered that at the MSC the number of incorrectly coded payment transactions increased 338 percent during a 3-month period after the implementation of ISRP. At the MSC, the Reject Function renumbers incorrectly coded payment documents, and from February through April 1998, it renumbered 443 payment documents. During this same

period in 1999, the function renumbered 1,941 payment documents. Although the volume of renumbered payments is often attributed to the high turnover of data entry operators, we determined that the multiple payment type processing feature of ISRP also contributed to this significant increase.

The type of work required to resolve payment processing problems changed because ISRP research tools were less effective. Unlike the DIS and the RPS, the ISRP system does not assign matching control numbers to tax returns and payment documents received together. In prior years, IRS employees relied upon the similarities of these control numbers to locate the original tax return, verify the existence of payments, and prevent erroneous notices and refunds.

To improve this situation, IRS management changed the document processing procedures. The new procedures require IRS employees to keep tax returns received with payments separated until computer records are created and coded as received with payments. Although the IRS codes the computer records, these codes do not reference the location or amount of the payment, and the service centers are not required to mark the original tax returns as received with payments.

In 60 percent of the AUSC taxpayers' accounts we reviewed (3,182 of 5,285), tax due notices were unnecessarily delayed due to ISRP document control changes.

After the 1998 ISRP pilot operations, the AUSC delayed the billing of 5,285 individual income tax liabilities because of its uncertainty that the payment code had been properly applied. In each case, the computer record of the taxpayer's return had been coded as received with payment, but no payments had been applied to the taxpayer's account. Without matching control numbers, the AUSC was no longer able to locate the original documents, in order to verify the receipt of the payments (as discussed above). Therefore, it delayed the notices until all suspended payment transactions had been researched and processed.

We determined that in 60 percent of the cases (3,182 of 5,285) no additional payments were found, and the tax due notices were subsequently issued because the taxpayers had not satisfied their tax liabilities. In some cases, the notices were delayed for up to four months after the balance due situation was originally identified. The AUSC located payments for the remaining 2,103 taxpayers and either stopped the tax due notice or corrected the balance due before the notice was issued.

To prevent this delay during the 1999-filing season, the AUSC implemented a requirement to stamp the tax returns received with payments. The stamp provided downstream functions an indication that payments were received with the tax returns.

In a similar situation, the Ogden Service Center (OSC) developed computer programs to create files containing taxpayer payments not credited to taxpayer accounts. Before the OSC released balance due notices for tax accounts coded as received with payments, tax examiners reviewed these files to determine if any related tax payments had been suspended.

A new ISRP research tool used to resolve problems with payments was not always reliable. The ISRP system creates and stores (archives) computerized pictures (images) of the original payment documents (checks, money orders, payment vouchers, etc.). A set of images consists of pictures of the front of the payment, the back of the payment, and sometimes the front of the payment voucher.

Our tests showed that ISRP did not capture usable images in approximately 1 percent of the payments reviewed.

Our review of payments processed at 6 service centers showed that in approximately 1 percent of the payments reviewed the archive system did not capture usable images. We reviewed a random sample of payment transactions processed from January 11 through February 19, 1999. During this period, the 6 service centers processed over 900,000 payments through ISRP.

Thirty-one of the 3,167 payments reviewed had either no image (10 cases) or an incomplete set of images (21 cases) on the archive database. Incomplete image sets contained pictures of either the front or the back of the payment, but not both sides. Instead, the set contained an extra copy of either the payment voucher or one side of the payment document. The front of the payment often contains information regarding the taxpayer and the exact amount paid, and the IRS prints processing information on the back of the payment. Therefore, documentation of the payment transaction is incomplete without images of both sides of the payment, and IRS employees may have to contact taxpayers in order to correct processing problems with these payments.

Without images of both sides of the payment, IRS employees may have to contact the taxpayers to correct payment processing problems.

Based on these results, we estimate[5] that during the processing period tested, ISRP's image archive database did not capture any image for approximately 2,900 payments and captured incomplete documentation for approximately 6,000 additional payments. Since we conducted the tests during a non-peak processing period, the test results may understate the total volume of imaging errors created during the 1999-filing season.

We estimate that from January 11 through February 19, 1999, ISRP's image archive database did not capture any image for approximately 2,900 payments and captured incomplete documentation for approximately 6,000 additional payments.

In a prior report,[6] the IRS Inspection Service (now TIGTA) reported that the ISRP image archive system was incomplete and unreliable. When employees cannot locate information to correct problems with payments, taxpayer contact may be necessary. The IRS agreed with the finding and established the reliability of ISRP's image archive

[5] The projected estimates are based upon a total population of 902,849 payments processed through ISRP and a 95 percent confidence level. See Appendix I, Objective IV.C for details regarding the sampling criteria and precision.

[6] *The ISRP System Software Development and Pilot Activities* (Reference Number 090903, dated November 6, 1998)

system as 1 of 10 critical issues requiring resolution before the 1999-filing season.

On March 30, 1999, the IRS closed this critical issue as resolved. We have not tested the system since that date, but documents dated April 2 and May 14, 1999, from two service centers report that images of some payments processed during April were not stored on the archive database.

Thousands of taxpayers could have been assessed erroneous penalties had we not notified the IRS that the ISRP document control changes had made specific received date calculations unreliable.

Computer programs may assess incorrect penalties. Thousands of taxpayers could have been assessed erroneous penalties had we not notified the IRS that the received dates coded into the control numbers were unreliable. In addition to identifying the document, control numbers also contain codes indicating the date the number was assigned. In some circumstances, computer programs use these control numbers to approximate the received date of the tax return when calculating estimated tax (ES) penalties.

For example, IRS regulations provide that taxpayers with income from fishing and/or farming activities are not required to make periodic ES payments if they file their tax returns and pay all taxes due by March 1. The prior system numbered these tax returns when the payments were processed. Since the IRS normally processes payments within 24 hours of the date received, the control number closely approximates the tax return's received date, allowing the computer programs to calculate ES penalties correctly. After the payments have been removed, these tax returns are usually shelved and input after the higher priority refund returns are processed.

However, ISRP does not assign control numbers to the tax returns at the time the payments are processed. In addition, the IRS decided to wait and assign the control numbers to these tax returns when they were removed from the shelves for input. In some instances, this

would have been after March 1, and the computer programs would have incorrectly assessed penalties.

To determine if the IRS had made appropriate changes to prevent erroneous ES penalty notices, we interviewed local management at four of the six service centers processing payments through ISRP. At two of the four service centers, management was not aware of the effect delaying the assignment of the control numbers would have on IRS computer programs.

In reaction to our discussions with local management, the IRS implemented national actions to prevent erroneous penalty notices from generating on taxpayers with fishing and/or farming income by reprogramming the computer's penalty assessment criteria. These actions prevented the IRS from potentially miscalculating ES penalties and issuing erroneous notices to approximately 1.9 million taxpayers per year, nationwide, filing a Profit or Loss From Farming (Schedule F) on their Individual Income Tax Return (Form 1040).

Recommendations

The IRS should improve the ISRP system's control and accountability over documents processed by:

1. Changing the method used to assign serial numbers.
2. Implementing additional quality controls, including a check to detect duplicate tax returns within the same block before the documents are sent to storage facilities.
3. Ensuring that the most significant effects of ISRP operations on downstream functions and computer programs are identified, measured, and properly addressed, including the areas identified in the "ISRP Roadmap" and this report. The measurements should include the volume and

staffing costs of the additional work caused by changes to the existing control numbering processes.

Management's Response: IRS management agreed with our findings and has implemented configuration changes which require ISRP operators to manually enter the serial number for each tax return rather than the computer automatically generating the serial numbers. Each site also received additional staff hours to perform this manual task. The staff hours will be automatically included in subsequent years' resource allotments.

IRS management also implemented a formal quality review process that reviews a random sample of the ISRP operator's work after the tax return numbering and input processes.

IRS management does not plan to take actions to further identify or measure the effects of IRSP implementation on all impacted operational areas and computer programs. Management indicated that this process was completed and issues were addressed during each stage of the nationwide rollout. In addition, resources needed to analyze and assess the impact resulting from a system change that has been in place for a full season would have to be taken from other necessary programs and projects.

Approval of an Enhancement Increased Implementation Risk

After formally advising the vendor of concerns regarding the timely delivery of ISRP, the IRS authorized a significant enhancement to the system's data transfer method.

The IRS approved a significant enhancement to the design of ISRP despite delays in the project's implementation schedule and many unresolved development problems. After formally advising LMFS of concerns regarding the timely delivery of ISRP, the IRS authorized a significant enhancement to the method for transferring data from service centers to data processing centers at remote locations.

In correspondence dated October 29, 1998 (PTD-99-022), the IRS provided LMFS with a statement of work requesting a technical analysis for migrating the current ISRP architecture to an electronic data transfer environment. The letter authorized work to begin immediately and subjected the vendor to a $100,000 price ceiling. The purpose of the request was to thoroughly explore file transfer protocol alternatives to the current magnetic media (magnetic tape) data transfer processes. The ISRP system was originally developed to produce magnetic tapes that could be carried to other computer systems in the same general location. The proposed enhancement would have directly connected ISRP to these computers and allowed the direct transfer of this information.

However, in the same month this task was added to the contract, the IRS formally advised LMFS of concerns about its ability to meet the original contract requirements. To support these concerns, the IRS cited untimely delivery of proposals to previous change requests, unacceptable delays in the delivery of program corrections, and a lack of vendor support staff with in-depth knowledge of the system.

On November 25, 1998, the IRS Inspection Service (now TIGTA) issued a memorandum advising IRS management that a proposed enhancement may increase the risk of delays in the vendor's delivery of the ISRP system.

In an Audit Memorandum dated November 25, 1998 (see Appendix VII), the IRS Inspection Service (now TIGTA) advised the IRS that the development of this enhancement may increase the risk of untimely delays in the vendor's delivery of a fully functional and operationally ready ISRP system.

Recommendation

The IRS should:

4. Rescind the additional contract requirement.

Management's Response: In a response dated December 13, 1998 (see Appendix VIII), IRS management agreed with the findings and recommendations of our Audit Memorandum and outlined their actions to delay development of the ISRP enhancement until after the 1999-filing season. However, after further review of the tasks and risks associated with the development for the enhancement, IRS management decided to terminate the proposed contract modification to develop the enhancement. IRS management sent a Notification of Termination to the contractor on September 22, 1999.

Contingency Plans Were Incomplete and Untested

In preparation for the 1999-filing season, each service center prepared plans estimating the volume of tax returns it expected to receive and the staffing necessary to process those tax returns within certain time frames. They also developed alternative plans (contingency or back-up plans) to be implemented in case of unexpected problems.

On January 29, 1999, we issued a memorandum advising IRS management of our concerns with ISRP contingency plans. IRS officials took corrective actions for all but our year 2000 concerns.

On January 29, 1999, we issued a memorandum to the IRS (see Appendix IX) expressing our concerns with the:

- Lack of detailed contingency plans.
- Limitations budget and staffing reductions may have on contingency alternatives.
- Omission of the ISRP system from local contingency plans.
- Reliability of back-up plans for problems with ISRP that may occur after the year 2000.

Contingency Plans Lacked Detail

In August 1998, the IRS National Office requested that each service center evaluate its ISRP Contingency Plan for the 1999-filing season. Eight of nine service centers responded with contingency plans. One service center had not developed a plan, and the AUSC was not queried since it had already operated ISRP during the 1998-filing season.

The local contingency plans called for re-installing legacy equipment as needed, but none of the plans contained detailed scenarios on how this would be accomplished. Four of the eight centers commented that capabilities to re-install legacy equipment were dependent upon the services of other IRS personnel and/or vendor technicians.

Without the support of detailed scenarios, the contingency plans did not provide assurances that coordination among on-site functions had been accomplished. In addition, the ISRP implementation schedule did not allow time to test the contingency plans. Testing contingency plans for business resumption and disaster recovery evaluates their likelihood for success.

Budget Reductions Limited Contingency Options

Service centers undergo a filing season readiness process to ensure they can meet the program completion dates (PCDs) for processing timely filed individual tax returns. These dates are established as deadlines for processing tax returns. As part of this process, management prepares contingency plans that include the transfer of excess tax returns to other service centers for processing (transshipment) as one of the primary methods of ensuring that all taxpayer submissions are processed before PCDs.

In a prior report,[7] the IRS Inspection Service (now TIGTA) questioned Fiscal Year (FY) 1999 budget savings based upon projected ISRP productivity gains. The operating budgets of each service center were affected by a 10 percent returns processing productivity rate gain established in the original ISRP business case. Their FY 1999 budgets sustained a $9 million reduction, nationwide, because of the projected gain. Consequently, each service center was required to plan 10 percent improvements in the processing of every type of tax return.

During our review, all service centers expressed confidence in the readiness of ISRP. However, all expressed concern about their ability to meet the 10 percent productivity gain. Several service centers expressed concern that if the savings were not realized, local recruiting and training needs may not be fully funded. In general, the service centers were concerned with the lack of validation of the projected ISRP processing cost savings. In particular, the Fresno Service Center (FSC) indicated that these cuts could have a negative effect on its ability to process

[7] *The ISRP System Software Development and Pilot Activities* (Reference Number 090903, dated November 6, 1998)

transshipped tax returns during the April peak processing period.

Local Business Resumption Plans Omitted ISRP

To be prepared for unexpected problems, the service centers are required to prepare local business resumption plans. These plans define back-up systems and establish disaster recovery procedures designed to ensure that IRS operations continue despite unexpected problems.

Under a Memorandum of Understanding among IRS functions, the Service Center Directors share responsibility with the Executive Officer for Service Center Operations (EOSCO) to incorporate ISRP contingency plans into the local business resumption plans.

Our review of ISRP contingency plans prior to the 1999-filing season found that only 2 of the 10 service centers had included ISRP in their local business resumption plans. Although other service centers were aware of the need to include ISRP, they had planned to do so later. At the time of our review, all 10 service centers were operating the ISRP system's tax return processing components and 6 service centers were operating the ISRP system's payment processing component. Until the local contingency plans are updated and properly tested at all 10 service centers, the IRS' risk of processing problems remains high.

Year 2000 Contingency Plans Were Incomplete

None of the local ISRP contingency plans reviewed contained scenarios beyond the 1999-filing season. The General Accounting Office (GAO) noted this condition in its report on the IRS' 1998 Filing Season[8] and recommended that the IRS develop a contingency plan

[8] Tax Administration: IRS' 1998 Tax Filing Season (GAO/GGD-99-21, December 31, 1999)

for ISRP that provides for the possibility of a system-wide failure of the remittance processing function past 1999. The IRS disagreed with this recommendation and responded that (1) normal disaster recovery procedures would be in place in case extended downtime occurred with the remittance processing equipment and (2) it would have a system in place to direct payments to private banks (Lockbox Banks) as needed.

In an Audit Memorandum dated January 29, 1999 (see Appendix IX), we recommended that the IRS maintain an existing piece of equipment (RPS-II) because of its availability at all 10 service centers and the ability to upgrade it for year 2000 processing. Although IRS management disagreed with this recommendation, one service center used this equipment to process payments for a short period of time during the 1999-filing season when the ISRP system was not fully functional.

Recommendation

5. The IRS should improve ISRP 1999 contingency plans to ensure taxpayers are provided quality service in case of unexpected production problems.

6. The IRS should finalize and test contingency plans for year 2000 payment processing.

Management's Response: On March 11, 1999, the IRS provided a detailed response to our January 29, 1999, Audit Memorandum (see Appendix X). In response to our concerns regarding the 1999 contingency plans, the IRS agreed with our findings and took the following actions:

- Developed a blanket ISRP business resumption template.
- Worked with each service center to ensure that the local business resumption plans were properly updated.

- Had each service center develop detailed contingency plans to revert to the old processing systems.
- Tested these plans before the peak processing period of the 1999-filing season.
- Instructed each service center to hire and train sufficient staffing to meet PCDs regardless of the established work plans.

Office of Audit Comment: We are still concerned with the IRS' year 2000 back-up payment processing capabilities. If detailed contingency plans are not both finalized and tested, unexpected problems with the IRS' payment processing systems may result in untimely deposits, unprocessed payment transactions, and errors in calculating tax due balances. As of October 14, 1999, the IRS had neither completed negotiations with the Lockbox Banks nor tested the contingency plans currently in place.

Management's Response: IRS management amended the FY 2000 Memorandum of Understanding between the IRS and the Financial Management Service to reflect that Lockbox banks will serve as backup/alternate for remittance processing and deposit activities in the event that ISRP is not able to process taxpayer payments. Management also indicated that "this arrangement was tested as part of the Y2K contingency plan".

Access to Taxpayer Information Was Not Properly Controlled

Due to the personal and sensitive nature of taxpayer information on IRS computer systems and the legal requirements to safeguard taxpayer privacy, all individuals accessing IRS computers must have successfully completed a personal background investigation. This includes employees of vendors

contracted to implement and maintain ISRP. In addition, IRS computer systems containing taxpayer information are required to maintain audit trails (records) of accesses to the system. The audit trail is used to evaluate the appropriateness of system access and use.

We reviewed the background investigation results for 51 ISRP vendor employees and found 59 percent incomplete.

We reviewed the background investigation results for 51 vendor employees at the Andover, Atlanta, Brookhaven, Memphis, Kansas City and Ogden Service Centers. We found that 59 percent of these employees (30 of 51) did not have completed background investigations.

This problem was compounded by the IRS requirement that the vendor augment on-site support for ISRP during the filing season. Consequently, the vendor hired 40 additional specialists who required background investigations before accessing the system.

According to the ISRP Project Office, the Minimum Background Investigation (MBI) packages were funded and transferred to the National Background Investigations Center (NBIC) as soon as the requests were received from the service centers. However, according to the ISRP Project Office, delays in the IRS accounting process and NBIC procedures prevented NBIC's timely initiation of these requests.

In addition, discussions with local system security officers at two service centers revealed that they had not received instructions or training on how to review the audit trail information. According to the ISRP Project Office, data security responsibilities were assigned to ISRP system security administrators. However, subsequent audit tests designed to review the content of ISRP audit trail information found that the audit trail records at one of these two service centers had not been properly maintained and were unreadable.

Although we did not identify any misuse of taxpayer data, vendor employees with the computer knowledge and skills necessary to misuse this data were allowed

access to ISRP before the completion of their background investigations.

Recommendation

The IRS should improve ISRP controls designed to safeguard taxpayer information by:

7. Completing background investigations on vendor employees before granting them access to ISRP.
8. Reviewing the coordination and assignment of ISRP data security responsibilities.

Management's Response: IRS management agreed that background investigations should be completed on vendor employees before granting them access to ISRP. However, the process of obtaining a MBI is time consuming due to the accounting procedures and processing constraints of the NBIC. Therefore, the Contracting Officer Technical Representative's Acquisition Office, in conjunction with NBIC, established a streamlined policy that allowed a 5-day review to look for adverse findings while awaiting the results of the MBI. In addition, each service center was kept informed of the status of the pending MBI while following local procedures regarding that individual's access to taxpayer data.

IRS management also indicated that they "funded the training for 6 or more local technicians in each submission processing center to be NT 4.0 and NT 3.51 System Administrators. The NT administrative coursework was extensive and included the function specified in this recommendation. The Project Office has recommended that the System and Security logs be checked periodically by a Systems Administrator using Event Viewer, which is a widely recognized tool used for IRS log file review. This procedure is documented in the ISRP Systems Management Guide for Systems Administrators."

Conclusion

The IRS implemented portions of the ISRP system nationwide and completed the 1999-filing season. Despite these accomplishments, significant risks continued to affect the integration of ISRP with other IRS operations. The IRS needs to ensure that ISRP changes do not create taxpayer burden and that additional work requirements are adequately identified and measured. The IRS also needs to ensure that access to the ISRP system is properly controlled and that adequate plans to recover from unexpected processing problems are in place before the 2000-filing season.

Appendix I

Detailed Objectives, Scope, and Methodology

The overall objectives of this audit were to determine whether (1) effective management processes were in place to ensure that problems identified during the Integrated Submission and Remittance Processing (ISRP) System's pilot were adequately corrected, (2) the Internal Revenue Service (IRS) adequately prepared for the implementation of the system, and (3) necessary actions were taken to ensure a successful filing season in 1999. We also followed up on the findings and recommendations of prior audit reports issued in January[1] and November 1998[2]. To accomplish this objective, we:

I. Evaluated information supporting the IRS' critical rollout decision.

   A. Surveyed the Directors and Processing Division Chiefs at each of the 10 service centers [Andover (ANSC), Atlanta (ATSC), Austin (AUSC), Brookhaven (BSC), Cincinnati (CSC), Fresno (FSC), Kansas City (KCSC), Memphis (MSC), Ogden (OSC), and Philadelphia (PSC) Service Centers] to identify their concerns and to determine local involvement with the ISRP implementation.

   B. Attended both local and IRS National Office project meetings to determine if local concerns were addressed at the national level.

   C. Evaluated the impact of critical system development decisions by reviewing the minutes of the ISRP Configuration Control Board (CCB) meetings and evaluating the prioritization and supporting documentation of critical Configuration Change Decisions (CCD).

   D. Determined if all concerns were resolved or if alternative plans were developed by reviewing documentation supporting certification of the ISRP system's operational readiness at all service centers.

II. Evaluated the effectiveness of problem tracking and resolution controls.

   A. Determined whether controls assured the resolution of problems by reviewing management's processes, procedures, and preparations to record, prioritize, and resolve both local and national problems.

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[1] *The Initial System Development Activities of the ISRP System* (Reference Number 082204, dated January 30, 1998)

[2] *The ISRP System Software Development and Pilot Activities* (Reference Number 090903, dated November 6, 1998)

1. Compared problem reporting documentation to criteria established for prioritizing and resolving problems.

2. Reviewed the status of ISRP-related problems reported as of October 30, 1998, during three phases of Systems Acceptability Testing (SAT) activities and one phase of pilot operations at the AUSC.

B. Determined if ISRP's interfaces to other computer systems were adequately tested.

1. Identified major systems and projects interfacing with ISRP (e.g., the Generalized Mainline Framework (GMF) and the Service Center Mainframe Consolidation project) and reviewed documentation to support tests related to these systems.

2. Reviewed documentation regarding system security and capacity tests.

3. Reviewed listings of tax forms certified by SAT as ready for processing through the ISRP system.

III. Assessed the effect of the 1998 AUSC ISRP pilot operations and quantified ISRP's effect on other service center functions required to resolve tax return and payment processing problems (i.e., downstream functions).

A. Identified and reviewed the IRS' efforts to measure the system's effect on downstream functions.

B. Interviewed local managers, technicians, and analysts to determine how the AUSC tracked the downstream impact of ISRP.

C. Quantified the effect pilot operations had on AUSC downstream functions.

1. Reviewed 1997 and 1998 Work Performance and Cost (WP&C) reports for the periods ending June 30 and September 30.

2. Reviewed 1997 and 1998 Program Analysis Reports for the periods ending June 30 and September 30.

3. Reviewed 1997 and 1998 audit trail reports for the 5-month periods ending September 30.

4. Reviewed Unidentified Remittance Reports prepared by an AUSC program analyst.

5. Analyzed the June and December 1998 data on the AUSC Unidentified Remittance File.

6. Reviewed procedures developed to assist employees in resolving and securing source documents for payment tracer cases.

7. Reviewed local reports from AUSC managers in the Automated Underreporter Function to substantiate additional hours incurred due to ISRP changes.

8. Compared volumes of remittances processed at the AUSC during identical periods in 1997 and 1998.

D. Evaluated the effect of the ISRP pilot operations on existing controls designed to ensure the timely processing of records transmitted from ISRP to GMF programs.

1. Identified and discussed work stoppages with the AUSC Submission Processing Division Chief, Information Systems Division Chief, Quality Assurance and Management Support Division Chief, Computer Operations Branch Chief, the Manager of the Revenue Accounting Control System Unit, and the ISRP System Support Staff.

2. Reviewed the Internal Revenue Manual for accounting and balancing control procedures over processed documents.

3. Reviewed AUSC Accounting Branch GMF run-to-run control reports.

4. Discussed balancing control procedures with managers and employees in the AUSC Data Control and Balancing Units.

5. Reviewed the December 1998 and January 1999 deposit tickets and reports.

IV. Assessed the adequacy and accuracy of the ISRP system functionality implemented for the 1999-filing season at each of the 10 service centers.

A. Interviewed various levels of service center management (e.g., Directors, Division Chiefs, Processing Division Branch Chiefs, and various Processing Division Unit Managers) to gather information on concerns or problems related to ISRP operations.

B. Conducted tests at each service center implementing the ISRP Distributed Input System functionality during the 1999-filing season.

1. At each service center, randomly sampled tax returns processed through the ISRP system and determined if they accurately posted to the taxpayers' accounts.

2. At various service centers, evaluated ISRP system downtime, the use of legacy systems to supplement ISRP processing, and their ability to process tax returns transshipped from other service centers.

C. Conducted the following tests at each service center implementing the ISRP Remittance Processing System functionality during the 1999-filing season to determine the integrity of the remittance transaction images stored on the image archive system.

1. Defined the population as 902,849 remittance transactions processed through ISRP from January 11, 1999, through February 19, 1999, at the ANSC, AUSC, BSC, KCSC, MSC, and OSC.

2. Reviewed a sample of ISRP remittance transactions.

   a) Selected a total random sample of 3,167 remittance transactions. The sample selection was distributed as follows:

      (1) Randomly selected and reviewed 527 transactions from a population of 92,305 transactions at the ANSC.

      (2) Randomly selected and reviewed 528 transactions from a population of 170,424 transactions at the AUSC.

      (3) Randomly selected and reviewed 528 transactions from a population of 142,456 transactions at the BSC.

      (4) Randomly selected and reviewed 528 transactions from a population of 170,884 transactions at the KCSC.

      (5) Randomly selected and reviewed 528 transactions from a population of 153,249 transactions at the MSC.

      (6) Randomly selected and reviewed 528 transactions from a population of 173,531 transactions at the OSC.

   b) Reviewed the sample of remittance transactions for any digital pictures of the source documents on the ISRP image archive system. In total, the final test results revealed that 10 (0.32 percent) of the 3,167 transactions reviewed did not contain digital pictures of the source documents on the ISRP image archive system (missing archive images). Based upon these results, we are 95 percent confident that approximately 2,889 (plus or minus less than 0.01 percent) of the 902,849 transactions within the population were missing archive images. The test results were distributed as follows:

      (1) At the ANSC, the final test results revealed that 1 (0.19 percent) of the 527 transactions reviewed were missing archive images.

      (2) At the AUSC, the final test results revealed that 4 (0.76 percent) of the 528 transactions reviewed were missing archive images.

      (3) At the BSC, the final test results revealed that 4 (0.76 percent) of the 528 transactions reviewed were missing archive images.

      (4) At the KCSC, the final test results revealed that none of the 528 transactions reviewed were missing archive images.

(5) At the MSC, the final test results revealed that none of the 528 transactions reviewed were missing archive images.

(6) At the OSC, the final test results revealed that 1 (0.19 percent) of the 528 transactions reviewed were missing archive images.

c) Reviewed the sample of remittance transactions for a complete set of corresponding digital pictures of the source documents (sets of remittance images). In total, the final test results revealed that 21 (0.66 percent) of the 3,167 transactions reviewed contained incomplete sets of remittance images. Based upon these results, we are 95 percent confident that approximately 5,959 (plus or minus less than 0.01 percent) of the 902,849 transactions within the population contain incomplete sets of remittance images. The test results were distributed as follows:

(1) At the ANSC, the final test results revealed that none of the 527 transactions reviewed contained incomplete sets of remittance images.

(2) At the AUSC, the final test results revealed that 9 (1.70 percent) of the 528 transactions reviewed contained incomplete sets of remittance images.

(3) At the BSC, the final test results revealed that 10 (1.89 percent) of the 528 transactions reviewed contained incomplete sets of remittance images.

(4) At the KCSC, the final test results revealed that none of the 528 transactions reviewed contained incomplete sets of remittance images.

(5) At the MSC, the final test results revealed that 2 (0.38 percent) of the 528 transactions reviewed contained incomplete sets of remittance images.

(6) At the OSC, the final test results revealed that none of the 528 transactions reviewed contained incomplete sets of remittance images.

D. Identified and monitored at various service centers specific issues affecting ISRP operations during the 1999-filing season.

1. Compared current volumes of unprocessed and unnumbered tax returns at the MSC to prior year data.

2. Interviewed local management at the AUSC, KCSC, ANSC, and MSC to determine if ISRP processing changes would result in the assessment of erroneous penalties.

3. Reviewed the results of background investigations on ISRP vendor employees at the ANSC, ATSC, BSC, KCSC, MSC, and OSC to determine if access to taxpayer information through ISRP was adequately controlled.

E. Determined if the ISRP automatic serial numbering feature contributed to ISRP-related document control numbering problems and/or unprocessed tax returns sent to storage facilities.

1. Defined the population as 34,211 blocks of paper Individual Income Tax Returns (Forms 1040, 1040A, 1040EZ, and 1040PC) processed through ISRP at the ATSC, AUSC, and MSC, for which from March 15 to March 19, 1999, at least 1 of the tax return transactions within the block attempted to post to the Masterfile.

2. Reviewed a sample of blocks of ISRP tax return transactions.

   a) Selected a total random sample of 1,047 blocks of tax returns. The sample selection was distributed as follows:

      (1) Randomly selected and reviewed 347 blocks of tax returns from an ATSC population of 13,125 blocks.

      (2) Randomly selected and reviewed 350 blocks of tax returns from an AUSC population of 10,226 blocks.

      (3) Randomly selected and reviewed 350 blocks of tax returns from an MSC population of 10,860 blocks.

   b) Reviewed the sample of blocks of ISRP-processed tax returns to determine if all of the tax returns had been processed before the block was sent to storage facilities. In total, the final test results revealed that 7 (0.67 percent) of the 1,047 blocks reviewed were sent to storage facilities with at least 1 unprocessed tax return. Based upon these results, we are 95 percent confident that approximately 229 (plus or minus 0.61 percent) of the 34,211 blocks of tax returns within the population were sent to storage facilities with at least 1 unprocessed tax return. The test results were distributed as follows:

      (1) At the ATSC, the final test results revealed that 4 (1.15 percent) of the 347 blocks reviewed were sent to storage facilities with at least 1 unprocessed tax return.

      (2) At the AUSC, the final test results revealed that 2 (0.57 percent) of the 350 blocks reviewed were sent to storage facilities with at least 1 unprocessed tax return.

(3) At the MSC, the final test results revealed that 1 (0.29 percent) of the 350 blocks reviewed were sent to storage facilities with at least 1 unprocessed tax return.

c) Reviewed the sample of blocks of ISRP-processed tax returns to identify tax returns with ISRP-related numbering problems. In total, the final test results revealed that 240 (22.92 percent) of the 1,047 blocks reviewed contained at least 1 tax return with an ISRP-related numbering problem. Based upon these results, we are 95 percent confident that approximately 7,841 (plus or minus 2.52 percent) of the 34,211 blocks of tax returns within the population contain numbering problems. The test results were distributed as follows:

(1) At the ATSC, the final test results revealed that 96 of the 347 (27.67 percent) blocks reviewed contained at least 1 tax return with an ISRP-related numbering problem.

(2) At the AUSC, the final test results revealed that 49 of the 350 (14.00 percent) blocks reviewed contained at least 1 tax return with an ISRP-related numbering problem.

(3) At the MSC, the final test results revealed that 95 of the 350 (27.14 percent) blocks reviewed contained at least 1 tax return with an ISRP-related numbering problem.

V. Followed up on prior audit findings.

A. Furnished management with data analysis to quantify the cost benefit of corrective actions necessary to improve remittance processing controls.

B. Determined the impact that ISRP productivity gains had on each service center's 1999-filing season budgets and work plans.

C. Evaluated the IRS' readiness to execute ISRP contingency plans.

1. Identified and applied the appropriate criteria for the development and implementation of contingency plans by reviewing the sufficiency and detail of national and local contingency plans.

2. Assessed the coordination of local and national contingency activities.

3. Evaluated recovery procedures for system failures during production.

4. Determined if ISRP contingency plans were incorporated into the service center disaster recovery plans.

Appendix II

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Appendix III

Report Distribution List

Deputy Commissioner Modernization C:DM
Deputy Commissioner Operations C:DO
Chief Information Officer IS
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Chief Operations Officer OP
Chief Financial Officer M:CFO
Deputy Chief Information Officer, Operations IS
Deputy Chief Information Officer for Information Resources Management IS:IR
Assistant Commissioner (Customer Service) OP:C
Assistant Commissioner (Forms and Submission Processing) OP:FS
Assistant Commissioner (Procurement) M:P
Assistant Commissioner (Service Center Operations) IS:SC
Assistant Commissioner (Systems Development) IS:S
Director, Program Evaluation and Risk Analysis M:O
Executive Officer for Service Center Operations OP:SC
Director, Century Date Change Project Office IS:CD
Director, Submission Processing Division IS:S:SP
National Director for Budget M:CFO:B
National Director, Submission Processing OP:FS:S
Director, Andover Service Center D
Director, Atlanta Service Center D
Director, Austin Service Center D
Director, Brookhaven Service Center D
Director, Cincinnati Service Center D
Director, Fresno Service Center D
Director, Kansas City Service Center D
Director, Memphis Service Center D
Director, Ogden Service Center D
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Appendix IV

Outcome Measures

This appendix presents detailed information on the measurable impact that our recommended corrective actions have on tax administration. These benefits will be incorporated into our Semiannual Report to the Congress.

Finding and recommendation:

Document Processing Changes Increased Taxpayer Burden

Process Changes Increased Taxpayer Burden

The implementation of the Integrated Submission and Remittance Processing (ISRP) System required changes to the Internal Revenue Service's (IRS) system of processing tax returns and payments. Tax returns and payments are normally processed in "blocks" of up to 100 documents. Control numbers are assigned to each tax return processed and contain unique serial numbers identifying each document within the block.

During the 1998 ISRP pilot operations, the Austin Service Center (AUSC) found that data entry operators occasionally failed to process tax returns (did not enter the tax return data). These unprocessed tax returns resulted because operators were no longer required to manually input the unique serial number of each return processed. In addition, Memphis Service Center (MSC) records showed that control numbering problems had significantly increased since the implementation of ISRP. Subsequent audit tests confirmed that ISRP process changes did result in control numbering errors and unprocessed tax returns during the 1999-filing season (see page 5).

In this report, we recommend that IRS management change the method used to assign serial numbers and implement additional quality controls. These recommendations would allow service centers to identify and correct numbering problems before taxpayer burden occurs (see page 14).

Type of Outcome Measure:

Reliability of Information (Actual)

Taxpayer Burden/Taxpayer Rights and Entitlements (Actual)

Value of the Benefit:

If these recommendations had been implemented at the 3 service centers during the 1999-filing season, the IRS could have prevented over 230 tax returns from being sent to warehouses without being processed and over 7,800 document control numbering problems resulting in additional work to correctly process the documents.

Since many of the IRS' production reports used to plan and monitor submission processing activities are based upon counts of the control numbers assigned to the transactions processed, document control numbering problems undermine the reliability of this information. If these recommendations are not implemented nationwide, we judgmentally project that in 1 year of nationwide production, the ISRP system could potentially cause approximately 390,000 document control numbering problems and result in the IRS sending approximately 11,000 tax returns to warehouses without being processed.

Methodology Used to Measure the Reported Benefit:

In order to determine the significance of ISRP-related numbering problems, we reviewed blocks of tax returns processed through ISRP at 3 of the 10 service centers during a 5-day non-peak processing period. The documents reviewed were randomly sampled individual income tax returns processed at the Atlanta Service Center (ATSC), AUSC, and MSC from March 15 through March 19, 1999.

Test results revealed that 22.92 percent of the blocks we reviewed (240 of 1,047 blocks) contained tax returns that were incorrectly numbered. Although the IRS detected and corrected the majority of the numbering problems, seven of the blocks were sent to IRS warehouses with at least one unprocessed tax return. During our review, we kept IRS management apprised of our findings and notified local management each time we identified unprocessed tax returns and/or incorrectly numbered documents (i.e., numbering problems).

Based on these results, we estimate[1] that from March 15 through March 19, 1999, approximately 7,800 tax returns handled at the 3 service centers reviewed contained numbering problems, and approximately 230 of these tax returns were sent to warehouses without being processed. Since our tests were limited to 3 of the 10 service centers and conducted during a 5-day non-peak processing period, these estimates understate the nationwide volume of numbering problems and unprocessed tax returns.

By applying the results of our sample to the expected yearly production presented in the ISRP business case, we can judgmentally estimate the potential nationwide volumes of

[1] The projected estimates are based upon a total population of approximately 34,211 blocks of tax returns and a 95 percent confidence level. See Appendix I, Objective IV.E for details regarding the sampling criteria and precision.

numbering problems per year. The ISRP business case expects the system to process approximately 170 million paper tax returns per year. Since the IRS processes tax returns in blocks not to exceed 100 documents, we based our estimate on the minimum amount of blocks (1.7 million) required to process the expected volume of tax returns (170 million documents divided by 100 documents per block).

As a result, we judgmentally estimate that if the occurrence rate of sampled blocks[2] remained consistent for 1 full year of nationwide production, ISRP could potentially cause approximately 390,000 document control numbering problems and result in the IRS sending approximately 11,000 tax returns to warehouses without being processed. Since the sample selection was limited to 3 of the 10 service centers and conducted during a 5-day non-peak processing period, the nationwide annual estimate is purely judgmental because its statistical confidence and precision cannot be determined.

Finding and recommendation:

Document Processing Changes Increased Taxpayer Burden

Process Changes Created Additional Work

IRS regulations provide that taxpayers with income from fishing and/or farming are not required to make periodic estimated tax (ES) payments if they file their tax returns and pay all taxes due by March 1. Since the IRS normally processes payments within 24 hours of the date received, the control number closely approximates the received date, allowing the IRS' computer programs to calculate ES penalties correctly. After the payments have been removed, these returns are usually shelved and input after the highest priority refund returns are processed. However, ISRP does not assign control numbers to the tax returns at the time the payments are processed. In addition, the IRS decided to wait and assign the control numbers to these tax returns when they were removed from the shelves for input. In some instances, this would have been after March 1, and the computer programs would have incorrectly assessed penalties. Taxpayers would have been assessed erroneous penalties had we not notified the IRS that the received dates coded into the control numbers were unreliable (see page 13).

In reaction to our discussions with local service center management, the IRS initiated national actions to prevent erroneous penalty notices from generating on taxpayers with fishing and/or farming income by reprogramming the computer's penalty assessment criteria (see page 14).

Type of Outcome Measure:

Taxpayer Burden (Potential)

[2] See Appendix I, Objective IV.E for details regarding the sampling criteria and resulting error rates.

Value of the Benefit:

Implementation of this recommendation prevented the IRS from potentially miscalculating ES penalties and issuing erroneous notices to approximately 1.9 million taxpayers per year, nationwide, filing a Profit or Loss From Farming (Schedule F) on their Individual Income Tax Return (Form 1040).

Methodology Used to Measure the Reported Benefit:

Since taxpayers with fishing and/or farming income are required to file Forms 1040 Schedule F to report their income or loss, we based the value of the benefit on the annual average number of Forms 1040 Schedules F filed, nationwide, over the past four years. We used the following data from the IRS' 1999 taxpayer usage study in our calculation:

1995 - 1.9 million Schedules F processed

1996 - 1.8 million Schedules F processed

1997 - 2.1 million Schedules F processed

1998 - 1.8 million Schedules F processed

Based upon this data, the IRS has processed an annual average of 1.9 million Forms 1040 Schedule F from 1995 through 1998.

Finding and recommendation:

Approval of an Integrated Submission and Remittance Processing System Enhancement Placed the System's Implementation at Risk

On November 25, 1998, we issued a memorandum to the IRS advising it of the potential risks of implementing a significant enhancement to the design of the ISRP system. The IRS approved the enhancement despite delays in the project's implementation schedule, unresolved development problems, and after formally advising the vendor of concerns regarding the timely delivery of ISRP. The additional requirement increased the risk of delays in the vendor's delivery of the system. In a memorandum dated December 13, 1998, IRS executives advised us they had decided to delay development of the enhancement. However, after further review of the tasks and risks associated with the development for the proposed enhancement, IRS management decided to terminate the contract to develop the enhancement. A Notification of Termination of the proposed contract modification was sent to the contractor on September 22, 1999. (See page 16.)

Type of Outcome Measure:

Cost Savings from Funds Put to Better Use (Actual)

Value of the Benefit:

The IRS avoided the expenditure of $100,000 in costs to modify the ISRP contract (TIRNO-94-D-00028).

Methodology Used to Measure the Reported Benefit:

In correspondence dated October 29, 1998 (PTD-99-022), the IRS provided Lockheed Martin Federal System (LMFS) with a statement of work requesting a technical analysis for migrating the current ISRP architecture to an electronic data transfer environment. The letter authorized work to begin immediately and subjected the vendor to a $100,000 price ceiling. The purpose of the request was to thoroughly explore file transfer protocol alternatives to the current magnetic media (magnetic tape) data transfer processes.

Finding and recommendation:

Contingency Plans Were Incomplete and Untested

On January 29, 1999, we issued a memorandum to the IRS expressing our concerns with the following (see page 17):

- Lack of detailed contingency plans.
- Limitations budget and staffing reductions may have on contingency alternatives.
- Omission of the ISRP system from local contingency plans.
- Reliability of back-up plans for problems with ISRP that may occur after the year 2000.

On March 11, 1999, the IRS provided a detailed response to our January 29, 1999, Audit Memorandum. In response to our concerns regarding the 1999 contingency plans, the IRS agreed with our findings and took the following actions (see page 21):

- Developed a blanket ISRP business resumption template.
- Worked with each service center to ensure that the local business resumption plans were properly updated.
- Had each service center develop detailed contingency plans to revert to the old processing systems.
- Tested these plans before the peak processing period of the 1999-filing season.
- Instructed each service center to hire and train sufficient staffing to meet program completion dates (PCDs) regardless of the established work plans.

Type of Outcome Measure:

Taxpayer Burden/Taxpayer Rights and Entitlements (Potential)

Reliability of Information (Actual)

Value of the Benefit:

If the IRS had not developed and tested ISRP contingency plans, the accurate and timely processing of approximately 170 million paper tax returns and 50 million payments per year, as presented in the ISRP business case, would have been at risk of unexpected processing problems. As a result, the IRS actions affected over 100 million taxpayers expected to file paper tax returns with the IRS.

If the IRS' had not transferred approximately 290 staff years (approximately $9 million) from other programs, its submission processing operations would have been under funded and may not have met critical PCDs. The under funding occurred because unsubstantiated ISRP productivity gains were factored into the IRS' Fiscal Year (FY) 1999 submission processing budgets.

Methodology Used to Measure the Reported Benefit:

Per the ISRP project development business case, the system is replacing computers used to process approximately 170 million paper tax returns and 50 million payments received each year. Our estimate of over 100 million taxpayers affected is based upon the 1998 calendar year volume of paper Forms 1040, 1040A, 1040EZ, and 1040PC tax returns received and processed at the 10 service centers. This estimate assumes a strong correlation between the number of individual taxpayer accounts and the number of current year Form 1040 series tax returns filed per year. In a memorandum dated June 11, 1998, the Commissioner was presented estimated cost savings related to the effects of productivity gains from ISRP on the Submission Processing Division budgets. The estimate, prepared by the Chief Financial Officer's Financial Analysis Division, projected that ISRP productivity gains could reduce FY 1999 Submission Processing Division budgets by as much as $9 million (290 staff years). This estimate was based upon the 10 percent productivity gain documented in the ISRP Project's business case.

Finding and recommendation:

Access to Taxpayer Information Was Not Properly Controlled

Due to the personal and sensitive nature of information on IRS computer systems and legal requirements to safeguard the privacy of taxpayer information, the IRS has established procedures to check the background of all individuals granted access to its computer systems. This includes the employees of vendors contracted to implement and maintain ISRP.

We reviewed the background investigation results for 51 vendor employees at 5 service centers. We found that 59 percent of these employees (30 of 51) did not have completed background investigations. Although we did not identify any misuse of taxpayer data, vendor employees with the computer knowledge and skills necessary to misuse this data

were allowed access to ISRP before the completion of their background investigations (see page 22).

Type of Outcome Measure

Protection of Resources/Taxpayer Privacy and Security (Potential)

Value of the Benefit:

The IRS' actions to ensure proper background investigations will reduce the risk of inappropriate access and potential misuse of taxpayer data for approximately 170 million paper tax returns and 50 million payments processed per year through ISRP. The IRS' actions to improve the privacy and security of taxpayer information processed through the ISRP system will directly affect over 100 million taxpayers expected to file paper tax returns with the IRS.

Methodology Used to Measure the Reported Benefit:

Per the ISRP project development business case, the system is replacing computers used to process approximately 170 million paper tax returns and 50 million payments received each year. Our estimate of over 100 million taxpayers affected is based upon the 1998 calendar year volume of paper Forms 1040, 1040A, 1040EZ, and 1040PC tax returns received and processed at the 10 service centers. This estimate assumes a strong correlation between the number of individual taxpayer accounts and the number of current year Form 1040 series tax returns filed per year.

Appendix V

Management's Response to the Draft Report

COMMISSIONER

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

March 21, 2000

MEMORANDUM FOR TREASURY INSPECTOR GENERAL FOR TAX ADMINISTRATION

FROM: Charles O. Rossotti /FOR/
Commissioner of Internal Revenue

SUBJECT: Treasury Inspector General for Tax Administration (TIGTA) Draft Report – The Integrated Submission Processing and Remittance Processing System Development Project Made Significant Progress, But Operating Risks Remain (Audit No. 19980096)

Thank you for the opportunity to review and comment on your draft report and recommendations regarding the Integrated Submission and Remittance Processing System (ISRP) Development Project.

As you noted in the report, the ISRP implementation has been successful. We have processed millions of returns and payments through ISRP. During the very successful 1999 filing season, we relied solely on ISRP for the transcription of paper returns and for processing the majority of the payments received by the service centers. The work done during this audit and the recommendations in this report have helped us improve the ISRP system's control and accountability of documents, strengthen contingency plans, and improve ISRP controls designed to safeguard taxpayer information.

IDENTITY OF RECOMMENDATION/FINDING #1
The IRS should improve the ISRP system's control and accountability over documents processed by changing the method used to assign serial numbers.

ASSESSMENT OF CAUSE(S)
In order to reduce the number of keystrokes required to process tax returns, ISRP was designed to generate serial numbers automatically. Operators were no longer required to manually input the unique serial numbers printed on each tax return. As a result, data operators occasionally failed to process tax returns (did not enter the tax return data).

CORRECTIVE ACTION(S)
Configuration Control Decision Number 296 (CCD-296), which requires the operator to enter the serial number for each document, was implemented on February 5, 2000.

IMPLEMENTATION DATE
COMPLETED: February 5, 2000

RESPONSIBLE OFFICIAL
Brien T. Downing
Assistant Commissioner, Forms and Submission Processing

IDENTITY OF RECOMMENDATION/FINDING #2
The IRS should improve the ISRP system's control and accountability over documents processed by implementing additional quality controls, including a check to detect duplicate tax returns within the same block before the documents are sent to storage facilities.

ASSESSMENT OF CAUSE(S)
Despite the programming that checks for entries of consecutive duplicate returns occurring in the same block, there were instances when a return was entered twice.

CORRECTIVE ACTION(S)
In order to improve the control over documents processed through ISRP and prevent the duplicate entry of tax returns we have implemented the following changes:

- DIS/Common Services version 5.8, was put in place to require the operator to look at a document to determine what serial number to enter on the return.
- A formal quality review process was put in place to review a random sample of an ISRP operator's work after numbering the returns. This review process is also performed after ISRP operators input return data.

IMPLEMENTATION DATE
COMPLETED: February 5, 2000

RESPONSIBLE OFFICIAL
Brien T. Downing
Assistant Commissioner, Forms and Submission Processing

IDENTITY OF RECOMMENDATION/FINDING #3
The IRS should improve the ISRP system's control and accountability over documents processed by ensuring that the most significant effects of ISRP operations on downstream functions and computer programs are identified, measured, and properly addressed, including the areas identified in the "ISRP Roadmap" and this report. The measurements should include the volume and staffing costs of the additional work caused by changes to the existing control numbering processes.

ASSESSMENT OF CAUSE(S)
An "ISRP Roadmap" was created by the Austin Service Center to help other centers effectively rollout the new system. While the roadmap identified affected areas and encouraged each site to meet with downstream customers, provide briefings on the new system, and solicit feedback; it did not provide detailed information about the effect on every impacted area.

CORRECTIVE ACTION(S)
The effects of the ISRP implementation were identified and addressed during each stage of the nationwide rollout. The further expenditure of resources to analyze and assess impacts resulting from a systems change that has, for the most part, been in place for a full filing season, would draw resources from other necessary programs and projects. We do not plan to take further action on this recommendation.

The change to the existing numbering processes discussed in the recommendation, was an expansion of a change that had already been made to accommodate lockbox payment processing. The need for additional staff hours related to the expansion was identified before and during the pilot and additional staff hours were provided to each site to manually number with-remit tax returns with payments processed through ISRP. The staff hours will be automatically included in subsequent years' resource allotments.

IMPLEMENTATION DATE
N/A

RESPONSIBLE OFFICIAL
Brien T. Downing
Assistant Commissioner (Forms and Submission Processing)

IDENTITY OF RECOMMENDATION/FINDING #4
IRS management should rescind the additional contract requirement.

ASSESSMENT OF CAUSE(S)
The proposed additional contract requirement, which required the contractor to develop a File Transfer Protocol (FTP) enhancement, could have increased the risk of delays in the vendor's delivery of the ISRP system.

CORRECTIVE ACTION(S)
In a response dated December 13, 1998, to TIGTA's Memorandum dated November 25, 1998, IRS management agreed with this finding and recommendation, and agreed to delay development of the ISRP enhancement until after the 1999 filing season. After further review of the tasks and risks associated with the development for the proposed

FTP enhancement, the ISRP Configuration Control Board (CCB), decided to terminate the proposed contract modification CCD-0298. As a result, a Notification of Termination of CCD-0298 was sent to the contractor on September 22, 1999.

IMPLEMENTATION DATE
COMPLETED: September 22, 1999

RESPONSIBLE OFFICIAL
Chief Information Officer IS
Deputy Chief Information Officer (Systems) IS
Director, Systems Development IS:SD

IDENTITY OF RECOMMENDATION/FINDING #5
IRS should improve ISRP 1999 contingency plans to insure taxpayers will be provided quality service in the event of unexpected production problems.

ASSESSMENT OF CAUSE(S)
In response to a January 29, 1999, memorandum from TIGTA, the IRS took actions, including working with the Financial Management Service (FMS) to amend the Memorandum of Understanding (MOU) with the lockbox banks, that strengthened the contingency plans. As noted in the draft audit report, TIGTA was satisfied with the actions taken with regard to the 1999 contingency plan. All of the lockbox banks had signed the amendment to the MOU by mid-November 1999.

CORRECTIVE ACTION(S)
No further action is needed to address this recommendation.

IMPLEMENTATION DATE
COMPLETED: November 15, 1999

RESPONSIBLE OFFICIAL
Brian T. Downing
Assistant Commissioner (Forms and Submission Processing)

IDENTITY OF RECOMMENDATION/FINDING #6
The IRS should finalize and test contingency plans for year 2000 payment processing.

ASSESSMENT OF CAUSE(S)
Contingency plans for payment processing were not updated and properly tested.

CORRECTIVE ACTION
As part of an agreement made with the FMS, the lockbox banks have agreed to serve as a backup/alternate for remittance processing and deposit activities in the event that ISRP is not able to process taxpayer payments. The FY 2000 MOU between the IRS and FMS, was amended to reflect this agreement. This arrangement was tested as part of the Y2K contingency plan.

IMPLEMENTATION DATE
COMPLETED: January 1, 2000

RESPONSIBLE OFFICIAL
Brien T. Downing
Assistant Commissioner (Forms and Submission Processing)

IDENITY OF RECOMMENDATION/FINDING # 7
The IRS should improve ISRP controls designed to safeguard taxpayer information by completing background investigations on vendor's employees before granting them access to ISRP.

ASSESSMENT OF CAUSE(S)
The process of obtaining a Minimum Background Investigation (MBI) can take from 120 days to 2 years to complete. Delays in processing background investigations were also due to accounting procedures and processing constraints of the National Background Investigations Center (NBIC). These timeframes have impacted our ability to complete timely investigations for employees of vendors contracted to implement and maintain ISRP. The ISRP Project Office contracted with Lockheed Martin for the temporary service (about 60 days) of 35 additional personnel at the centers. The personnel were to assist in the operation of ISRP during the peak processing period. This was done to mitigate the risk associated with the sites' initial Filing Season "Peak". Complete MBIs for these vendors could not be obtained prior to placing these employees in the centers.

CORRECTIVE ACTION(S)
In order to fill these positions, the COTR's Acquisition Office, in conjunction with NBIC and TIGTA, established a streamlined 5-day review process that was initiated in conjunction with a full MBI. The accelerated review, which looks for adverse findings and addresses the critical items covered in a full MBI, was coordinated with the contractor through whom we obtained the personnel. The ISRP COTR continually informed each center of the status of the pending MBIs and instructed them to follow local security procedures regarding the potential impact of each individual's access to taxpayer data.

IMPLEMENTATION DATE
COMPLETED: March 31, 1999

6

RESPONSIBLE OFFICIAL
Chief Information Officer IS
Deputy Chief Information Officer (Systems) IS
Director, Systems Development IS:SD

IDENITY OF RECOMMENDATION/FINDING # 8
The IRS should improve ISRP controls designed to safeguard taxpayer information by reviewing the coordination and assignment of ISRP data security responsibilities.

ASSESSMENT OF CAUSE
IRS requires that all computer systems be reviewed and maintained with audit trails (records) to monitor accesses to their system in order to safeguard taxpayer information, which is personal and sensitive in nature. TIGTA found that the local system security officers at two centers had not received instruction or training on how to review audit trail information.

CORRECTIVE ACTION(S)
The ISRP Project Office funded the training for 6 or more local technicians in each submission processing center to be NT 4.0 and NT 3.51 System Administrators. The NT administrative coursework was extensive and included the function specified in this recommendation. The Project Office has recommended that the System and Security logs be checked periodically by a System Administrator using Event Viewer, which is a widely recognized tool used for IRS log file review. This procedure is documented in the ISRP Systems Management Guide for Systems Administrators. The IRS does not plan to take further action on this recommendation.

IMPLEMENTATION DATE
N/A

RESPONSIBLE OFFICIAL
Chief Information Officer IS
Deputy Chief Information Officer (Systems) IS
Director, Systems Development IS:SD

If you have any questions, please call Brien T. Downing, Assistant Commissioner (Forms and Submission Processing), at (202) 622-2875.

Appendix VI

Abbreviations Used in This Report

ANSC	–	Andover Service Center
ATSC	–	Atlanta Service Center
AUSC	–	Austin Service Center
BSC	–	Brookhaven Service Center
CCB	–	Configuration Control Board
CCD	–	Configuration Control Decision
CSC	–	Cincinnati Service Center
DIS	–	Distributed Input System
ERB	–	Executive Review Board
ESC	–	Executive Steering Committee
EOSCO	–	Executive Officer for Service Center Operations
ES	–	Estimated Tax
FSC	–	Fresno Service Center
FY	–	Fiscal Year
GAO	–	General Accounting Office
GMF	–	Generalized Mainline Framework
IRS	–	Internal Revenue Service
ISRP	–	Integrated Submission and Remittance Processing System
KCSC	–	Kansas City Service Center
LMFS	–	Lockheed Martin Federal Systems
MSC	–	Memphis Service Center
NBIC	–	National Background Investigations Center
OSC	–	Ogden Service Center
RPS	–	Remittance Processing System
PCD	–	Program Completion Date
PSC	–	Philadelphia Service Center
SAT	–	System Acceptability Testing
TIGTA	–	Treasury Inspector General for Tax Administration
WP&C	–	Work Performance and Cost

Appendix VII

Memorandum #1: Risks Associated With the Development of the Integrated Submission and Remittance Processing System

REGIONAL INSPECTOR
SOUTHEAST REGION

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
2900 WOODCOCK BLVD.
CHAMBLEE, GA 30341

November 25, 1998

RESPONSE DUE: December 11, 1998

MEMORANDUM FOR THE CHIEF INFORMATION OFFICER

Nancy A. Nakamura
(for)

FROM: Regional Inspector
Southeast Region

SUBJECT: Internal Audit Memorandum #1 – Risks Associated with the Development of the ISRP System

This is the first Internal Audit Memorandum (IAM) issued as part of our review of the Integrated Submission and Remittance Processing (ISRP) System Implementation for the 1999 Processing Year. This IAM identifies issues that increase the risks associated with the system's timely development. It is our opinion that:

Recent modifications to the ISRP contract (TIRNO-94-D-00028), regarding the development of file transfer protocol enhancements, may increase the risk that the vendor will not timely deliver a fully functional and operationally ready ISRP system.

As a result, we recommend that:

The Service not pursue the development of ISRP data transfer enhancements until the vendor is meeting all contractual requirements to develop and implement a fully functional and acceptable production system.

This IAM is being presented for your response. If you agree with the information presented, please provide us your response to the memorandum's conclusions and recommendation in accordance with IRM 1289. If you do not agree with the facts presented in this memorandum, please contact my office within five workdays. If you have any questions or would like to discuss these issues further, please contact me at (770) 986-6900 or your staff may contact Audit Manager Terry Black at (770) 455-2478.

Results:

The ISRP System is being developed to replace the current Distributed Input and Remittance Processing Systems (legacy DIS and RPS) in the ten Service Centers. Replacement of legacy DIS and RPS is critical, because they are the primary data input systems for processing paper

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submissions and neither is capable of processing dates beyond the year 1999. Lockheed Martin Federal Systems (LMFS) was selected as the ISRP contractor with a scheduled nationwide rollout in January 1999.

In correspondence dated October 29, 1998 (PTD-99-022), the Service provided LMFS with a statement of work requesting a technical analysis for migrating the current ISRP architecture to an electronic data transfer environment. The letter authorized work to begin immediately and subjected the vendor to a $100,000 price ceiling. The purpose of the request was to thoroughly explore file transfer protocol (FTP) alternatives to the current magnetic media (magnetic tape) data transfer processes.

However, in a separate correspondence to LMFS dated October 29, 1998 (PTD-99-021), the Service outlined their increasing concerns about LMFS's ability to successfully deliver the ISRP system. The correspondence sites specific concerns with LMFS's ability to satisfactorily meet the requirements of the contract and overall untimely responsiveness. To support these concerns, the correspondence cites:

- Configuration inconsistencies and tight implementation deadlines.
- Untimely delivery of proposals to previous IRS Configuration Change Decisions (CCDs).
- Unacceptable delays in the delivery of ISRP program corrections.
- Failures to utilize established system design and development process controls.
- A lack of contractor support staff with in-depth knowledge of the ISRP system.

The Service is pursuing development of FTP enhancements in order to reduce data transfer time between the ISRP systems and their mainframe systems. The statement of work defined the mainframe environment as UNISYS 2200 and 4800 systems. The need for data transfer improvements was identified during the Service Center Mainframe Consolidation (SCMC) project's initial implementation activities at the Kansas City Service Center (KCSC). The SCMC project office determined that the current means to transfer data from a remote Service Center to its consolidated computing center was not viable because it would prove unsatisfactory during a peak filing season.

The Austin Service Center (AUSC), host site for the ISRP pilot system, has not yet consolidated its mainframe computer operations. During the ISRP pilot, AUSC utilized its local UNISYS 2200 system for mainframe operations and did not report any problems with the data transfer rates of ISRP tapes. In fact, the Service specifically deleted FTP requirements from the ISRP system's initial functional requirements (CCD 4 dated January 29, 1997) because production data could be transferred from the ISRP system to the mainframe via 9-track tapes.

Conclusions and Recommendations:

Although the Service must improve the data transfer rates associated with the SCMC project, it is our opinion that by requesting the ISRP vendor to develop the FTP enhancements, the Service is putting the successful development of a critical processing system in jeopardy. The Service has

existing concerns with the performance of the vendor in developing, deploying and supporting ISRP, and additional requirements may draw from already limited and strained resources.

We therefore recommend that the Service suspend development of ISRP data transfer enhancements until LMFS is satisfactorily meeting its contractual obligations to develop and implement a fully operational ISRP system.

cc: Chief Inspector I
Deputy Chief Information Officer, Systems Development IS:S
Chief Operations Officer OP
Assistant Commissioner (Forms and Submission Processing) OP:FS

Appendix VIII

Management's Response to Memorandum #1

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

DEC 13 1998

MEMORANDUM FOR CHIEF INSPECTOR

FROM: David W. Junkins
Director, Office of Information Resources Management IS:IR

SUBJECT: Internal Audit Memorandum #1 – Risks Associated with the Development of the ISRP System dated November 25, 1998

We have reviewed the subject memorandum and agree with Internal Audit's findings, issues, and recommendation that the Service not pursue the development of Integrated Submission and Remittance Processing (ISRP) data transfer enhancements at this time. On December 4, 1998, the Executive Review Board (ERB) decided to delay the development of File Transfer Protocol (FTP) or data transfer enhancements until the 1999 Filing Season is completed. Only minor file format changes (blocksize) will be made by the vendor for the ISRP files created at the two consolidated service center sites, Kansas City and Brookhaven.

If you have any questions, or need additional information, please feel free to contact me on (202) 283-4060 or have a member of your staff contact Donna Downing on (202) 283-4159.

CONCUR: John Yost
acting
Assistant Commissioner for
Systems Development IS:S

12-13-1998
Date

Appendix IX

Memorandum #2: Risks Associated With the Operation of the Integrated Submission and Remittance Processing System During the 1999 Filing Season

DEPARTMENT OF THE TREASURY
2900 Woodcock Blvd, Chamblee, GA 30341

OFFICE of
INSPECTOR GENERAL
for TAX
ADMINISTRATION

January 29, 1999

RESPONSE DUE: February 19, 1999

MEMORANDUM FOR CHIEF INFORMATION OFFICER
CHIEF OPERATIONS OFFICER

M. Susan Boehmer

FROM: REGIONAL INSPECTOR GENERAL FOR AUDIT
SOUTHEAST REGION

SUBJECT: AUDIT MEMORANDUM #2 – RISKS ASSOCIATED WITH THE OPERATION OF THE ISRP SYSTEM DURING THE 1999 FILING SEASON

This is the second Audit Memorandum (AM) issued as part of our review of the Integrated Submission and Remittance Processing (ISRP) system's implementation for the 1999 Processing Year. Since February 1998, the ISRP pilot system has operated as the Austin Service Center's (AUSC) primary submission and remittance processing system. As of December 5, 1998, AUSC's ISRP Distributed Input System (ISRP-DIS) functionality had processed over 5.1 million documents comprised of 7 different types of tax returns. In addition, AUSC's ISRP Remittance Processing System (ISRP-RPS) had processed over 3.5 million taxpayer remittances for total deposits of over 5.6 billion dollars.

Despite these notable accomplishments, this AM identifies risks to the success of the 1999 processing season associated with the start-up and continued operation of the ISRP system at the nine remaining centers. It is our opinion that:

- High inventories of problems and continued schedule slippage increase operating risks during the 1999 filing season. (see Attachment I)
- Submission processing contingency plans may not assure continuity of operations. (see Attachment II)
- Local ISRP system development contingency plans lack sufficient details to assure that legacy equipment can be re-installed. (see Attachment III)

For your review, we have provided, in separate attachments, additional support and recommendations for each issue. The scope of our findings was limited to those issues which pose a significant risk to the success of the 1999 filing season and require immediate action. They are based upon the interim results of fieldwork performed in accordance with generally accepted government auditing standards.

This AM is being presented for your response and corrective action. If you agree with the information presented, please provide us your response in accordance with IRM 1289. If you do not agree with the facts or conclusions presented in this memorandum, please contact my office within five workdays. If you have any questions or would like to discuss these issues further, please contact me at (770) 986-6913 or your staff may contact Audit Manager Terry Black at (770) 455-2478.

Attachments:

CC: Treasury Inspector General for Tax Administration IG
Assistant Commissioner (Forms and Submission Processing) OP: FS
National Director, Submission Processing OP: FS: S
Executive Officer for Service Center Operations OP: SC
Deputy Chief Information Officer, Systems IS
Assistant Commissioner, Systems Development IS: S
Director, Submission Processing Division IS: S: SP
Assistant Commissioner for Service Center Operations IS: SC
Service Center Directors
ISRP Project Office

AM #2 - RISKS ASSOCIATED WITH THE OPERATION OF THE ISRP SYSTEM DURING THE 1999 FILING SEASON **Attachment I**

HIGH INVENTORIES OF PROBLEMS AND CONTINUED SCHEDULE SLIPPAGE INCREASE OPERATING RISKS DURING THE 1999 FILING SEASON

It is our opinion that the volume of problems identified in testing activities and during pilot operations has contributed to the project's continued schedule slippage and significantly increased operating risks for the 1999 filing season.

During three phases of testing activities, the Service has conducted thousands of tests of the ISRP system's functionality and identified over 3,600 problems. As of January 12, 1999, the ISRP project office reported the resolution of over 79 percent of the problems, including 90 percent of the priority 1 issues; however delays and schedule slippage affecting nationwide rollout continue. One major area of delay concerns the ten critical issues identified by the ISRP project office. Although the Executive Steering Committee (ESC) required resolution of these issues prior to the 1999 filing season, four were still being worked as late as the January 5, 1999 ESC meeting:

- Critical Issue #1 - Archive Issues dealing with the reliability of image data that serves as source documents for remittance transactions.
- Critical Issue #3 - End of Shift Issues concerning downtime between shifts which must be corrected before early refund peak processing.
- Critical Issue #7 - Network Capacity Issues addressing network telecommunication requirements affecting the reliability and productivity of the service center's remote ISRP-DIS facilities.
- Critical Issue #10 - System Security Issues addressing access to the Integrated Data Retrieval System (IDRS).

Specific examples of schedule slippage and system development delays include:

- The ISRP-RPS system at OSC, KCSC, and MSC began operations in 1998 but approximately eight weeks behind their originally scheduled start-up dates.
- The ISRP-RPS system at ANSC began operations on January 11, 1999, approximately eight weeks behind schedule.
- The ISRP-RPS system at BSC began operations on January 25, 1999, approximately ten weeks behind schedule.
- The ISRP system is not certified as compliant with security requirements and its temporary waiver to operate is dated to expire January 31, 1999.

In general, delays in ISRP system software deliveries have forced the SAT team to extend their testing schedules up to production start-up dates. Although the SAT team does verify the correction of specific high priority problems, they may not identify problems these corrections have on previously validated system requirements without conducting extensive regression tests.

For example, the Service experienced numerous problems with version 3.5 of the ISRP-RPS system software. This version was installed at AUSC the weekend of December 19, 1998 for "hub start-up." The version was to contain various corrections to previously reported problems, as well as, image archive balancing functionality necessary to identify remittance vouchers that are not archived (Critical Issue #1 / Configuration Control Decision 161).

Hub start-up is the first live running of the new processing year's software and environment at a single site. The runs result in live production output that is not discarded. In fact, if processing problems occur, they impact upon the center's ability to perform it's mission in a timely manner. The purpose of a hub start-up is to minimize the initial impact of processing problems allowing the Service to concentrate its problem solving resources at one site.

AUSC began production with the ISRP-RPS system software version 3.5 on December 21, 1998, and immediately encountered numerous production problems. Initially, the AUSC Information Systems Division was able to identify some of the problems and apply work-around corrective actions. Until December 29,1998, they did not realize that Entity Index File database changes affected the ISRP-RPS output files, making its transactions unprocessable. Corrective action required a Lockheed Martin Mission Systems (LMMS) emergency software patch (e-fix), which could not be delivered until December 31, 1998, and AUSC was unable to re-install the prior ISRP-RPS system due to a lack of adequate configuration documentation. As a result, AUSC:

- Could not complete service center processing of approximately 44,000 remittance transactions (for over $50 million dollars) that were processed through the ISRP-RPS system from December 21, 1998 through December 29, 1998.
- Required the manual correction of these remittance transactions through the Error Resolution System (ERS).
- Shut down the ISRP remittance processing functionality on December 30, 1998 and did not resume ISRP-RPS operations until January 4, 1999.
- Mailed approximately 2,400 erroneous taxpayer notices and pulled before mailing approximately 1,900 erroneous notices.

In addition to these production problems, the software did not provide the reports required to satisfy the image archive balancing requirements of ESC Critical Issue #1. Manual verification procedures continue to be employed, and AUSC reports confirmed that the images of approximately 4,700 taxpayer remittances processed through the ISRP-RPS system from January 4, 1999 through January 13, 1999 are missing from the archive system.

Finally, with all ten service centers operating the ISRP-DIS system and six service centers operating the ISRP-RPS system, it is reasonable to expect an increase in ISRP trouble tickets as production increases with the volumes of receipts during the 1999 filing season. The addition of ISRP-RPS locations disperses the availability of both vendor and IRS employees experienced in ISRP pilot system operations. Until all problems affecting the overall productivity of the ISRP system are resolved and properly tested, the Service exposes its remittance processing operations to additional risk each time a service center attempts the initial start-up of the ISRP-RPS functionality.

AM #2 - RISKS ASSOCIATED WITH THE OPERATION OF THE ISRP SYSTEM DURING THE 1999 FILING SEASON **Attachment I**

Recommendations:

1. Assign an independent third party the responsibility to certify the appropriate resolution of all ISRP problem reports and trouble tickets (including security and capacity test results).
2. Continue the "hub start-up" process for each incremental version of the ISRP system. In addition, if a new version contains significant problem report / trouble ticket corrections, the "hubbing" Service Center should process test data through the system before the "hub start-up," and trace the test output to ensure that it properly posts to the Master File.

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AM #2 - RISKS ASSOCIATED WITH THE OPERATION OF THE ISRP SYSTEM DURING THE 1999 FILING SEASON **Attachment II**

SUBMISSION PROCESSING CONTINGENCY PLANS MAY NOT ASSURE CONTINUITY OF OPERATIONS

Each year, the service centers undergo a filing season readiness process in order to ensure that they can meet the program completion dates (PCDs) for processing timely filed individual tax returns. As part of this readiness process, management prepares contingency plans that include the transshipment of tax returns as one of the primary methods of ensuring that all taxpayer submissions are processed before PCD.

Our review of these contingency plans identified the following significant risks.

- The distribution of ISRP-DIS terminals and staffing reductions eliminate excess returns processing capacity necessary to accomplish transshipment contingency plans.
- Local ISRP system development contingency plans lack sufficient details to assure that legacy equipment can be re-installed. (see Attachment III)
- The Service needs to act upon ISRP contingency plans to prepare backup return and remittance processing systems for the year 2000 filing season. (see Attachment III)

Also, until the Service fully develops comprehensive contingency plans, the risk of not being able to continue operations after an interruption is increased.

The distribution of ISRP-DIS terminals and staffing reductions eliminate excess returns processing capacity necessary to accomplish transshipment contingency plans

In an audit report dated January 30, 1998, Review of the Initial System Development Activities of the ISRP System (Reference No. 082204), we recommended that the Service re-assess the allocation of ISRP-DIS workstations per service center. Management responded to our recommendation by developing a terminal distribution methodology that was based upon the historical peak period volumes and production rates of each service center -- ignoring the number of existing Legacy-DIS terminals. By excluding the existing terminal allocation, management's formula does not account for the excess processing capacity currently available during the peak filing season. In fact, before factoring in additional productivity gains, the analysis justified an overall reduction of 300 terminals by installing 59 additional terminals at four service centers and not installing 359 "excess" terminals at the remaining six service centers. (see Table 1)

The two Service Centers which processed transshipped work during the 1998 filing season sustained two of the three largest overall terminal reductions. Although not desirable, the transshipment of tax returns is not uncommon. In order to meet the 1998 Other than full Paid PCD, the Cincinnati Service Center (CSC) transshipped over 96,000 Forms 1040 to the Andover Service Center (ANSC), while the Memphis Service Center (MSC) transshipped over 100,000 Forms 1040 to the Fresno Service Center (FSC). As a result of the distribution of the ISRP-DIS terminals for the 1999 filing season, both ANSC (113 terminals / 24.8 percent reduction) and FSC (64 terminals / 13.3 percent reduction) suffered significant reductions in their allocated terminals. Only KCSC (132 terminals / 25.8 percent reduction) sustained a larger DIS terminal reduction. (see Table 1)

AM #2 - RISKS ASSOCIATED WITH THE OPERATION OF THE ISRP SYSTEM DURING THE 1999 FILING SEASON **Attachment II**

The 1999 Readiness Steering Committee's finding that problems recruiting data entry operators will affect the 1999 processing season increase the risk that transshipment contingency plans will be ineffective. When the need to transship work is based upon staffing shortfalls and not system capacity or productivity, the ISRP system's overall terminal distribution reductions may have a greater impact on return transshipment contingency plans. The Service's decision to limit the ISRP terminal distribution to estimated peak processing volumes forces the system to operate at 100% capacity during the most critical peak production period. Therefore, the Service can not rely upon the availability of excess processing capacity to accommodate transshipped workloads during the peak production periods.

Table 1: ISRP vs. Legacy DIS Terminal Allocation for the 1999 Filing Season.

Location:	Current Legacy-DIS Terminals:	Less: 10% Gain	Less: Allocation Method	Plus: Misc. Adjust.	Final ISRP-DIS Terminals	Net Change vs. Legacy-DIS	Percentage Reduction vs. Legacy-DIS
ANSC	467	(47)	(113)	44	351	(116)	24.8%
ATSC	371	(37)	(20)	20	334	(37)	10.0%
AUSC	462	(46)	(36)	37	417	(45)	9.7%
BSC	329	(33)	7	5	308	(21)	6.4%
CSC	459	(46)	(21)	23	415	(44)	9.6%
FSC	483	(48)	(54)	38	419	(64)	13.3%
KCSC	512	(51)	(116)	35	380	(132)	25.8%
MSC	373	(37)	5	11	352	(21)	5.6%
OSC	452	(45)	43	(15)	435	(17)	3.8%
PSC	432	(43)	4	17	410	(22)	5.1%
TOTAL	4,340	(434)	(300)	215	3,821	(519)	12.0%

Note: Current Legacy-DIS, Final ISRP-DIS, and Miscellaneous Adjustments were obtained from the EOSCO's Terminal Allocation Comparison dated July 28, 1998. The Miscellaneous Adjustments were calculated as the sum of Legislative, Excess Terminal, and 1998 Adjustment columns. The terminal reductions due to the productivity gain were calculated as ten percent of the Current Legacy-DIS. Terminal reductions due to the Allocation Method were also calculated (i.e., Legacy-DIS less 10% Gain plus Misc. Adjust. less ISRP-DIS).

In addition, the Service's acceptance of unrealized ISRP-DIS productivity gains has also affected excess returns processing capacity. In an Internal Audit Memorandum dated July 2, 1998, we recommended the Service not include estimated ISRP productivity savings in the fiscal year (FY) 1999 budget projections because the AUSC pilot's productivity information was incomplete and actual savings could not be determined. Management agreed with our finding, but elected to maintain the 10 percent productivity gain for the ISRP-DIS functionality as the best information available for budget projections.

As a result, the ISRP-DIS terminal allocations and operating budgets of each service center were affected by the unrealized productivity gains. The final distribution of ISRP terminals factored in the estimated 10 percent productivity gain. This resulted in a further reduction of terminals ranging from 33 to 51 terminals per service center. The combined reductions from both the terminal allocation methodology and the 10 percent productivity gain resulted in a net nationwide reduction of 519 DIS terminals (approximately 12 percent). As noted earlier, three of the ten service centers sustained reductions greater than 10 percent.

Based on our survey of the readiness of the new ISRP system for 1999 processing, seven of the service centers expressed concerns with the budgeting of unrealized productivity and the associated reductions in the allocation of ISRP-DIS terminals. In particular, the Fresno Service Center (FSC) indicated that these cuts could have a negative effect on their ability to process transshipped tax returns during the April peak processing period.

Finally, all ten service centers expressed concerns with the validity of anticipated ISRP-DIS productivity gains. During our survey, all service centers expressed confidence in the readiness of the ISRP-DIS functionality. However, during a combined Processing Division Chiefs / ISRP site coordinator conference call in December 1998 each center expressed concern about their ability to meet the ten percent productivity gain required by National Office. The FY 1999 Submission Processing budget sustained a 294 staff year reduction as a result of the estimated 10 percent productivity gain of the ISRP system. As a result, each service center was required to budget a 10 percent improvement in every DIS program.

In general, the service centers were concerned with the lack of validation of cost savings by ISRP processing. For example:

- The service centers were told that they can purchase additional terminals but the funds would come from the 10 percent productivity savings.
- During pilot operations, AUSC's numbering function realized a 13 percent workload increase and a six percent staffing increase, but these increases were not factored into the 1999 January-through-June work schedules of the other service centers.
- Although work process studies have not been completed to quantify and validate the ISRP system's overall productivity savings, these savings are expected to cover the additional staffing requirements of downstream functions.

During our survey, several service centers expressed the concern that if the productivity gains are not realized, the filing season may be understaffed because work schedules would not accurately reflect local recruiting and subsequent training needs. In addition, the complexity of adding shifts will increase if the need occurs during peak filing season, adding to the Service's reliance on transshipment as a viable contingency plan.

Recommendations:

3. Authorize the service centers to recalculate their work schedules without the 10 percent productivity gains for DIS function and implement recruitment and training plans to ensure appropriate staffing levels for the April peak processing period.

4. Reassess the allocation of workstations per service center, and prepare contract modifications to install additional workstations for the April peak processing period if necessary to meet the PCD for timely filed tax returns.

AM #2 - RISKS ASSOCIATED WITH THE OPERATION OF THE ISRP SYSTEM DURING THE 1999 FILING SEASON **Attachment III**

LOCAL ISRP SYSTEM DEVELOPMENT CONTINGENCY PLANS LACK SUFFICIENT DETAILS TO ASSURE THAT LEGACY EQUIPMENT CAN BE RE-INSTALLED

In August 1998, the National Office requested that each service center evaluate their ISRP Project System Development Contingency Plan for the 1999 processing season. Eight of nine service centers responded with their contingency plans -- FSC did not develop a 1999 contingency plan. The Austin Service Center (AUSC) was not queried since it was the pilot site.

Local ISRP system development contingency plans lack sufficient details to assure that legacy equipment can be re-installed.

None of the local contingency plans contained detailed scenarios on how they would achieve the re-installation of legacy equipment if needed. Basically, the local contingency plans called for re-installing legacy equipment as needed, but none of the plans contained detailed scenarios on how they would achieve the re-installation of legacy equipment if needed. Four of the eight centers commented that their capabilities to re-install legacy equipment was dependent upon the services of other Service personnel and/or vendor technicians.

Without the support of detailed scenarios, the contingency plans do not provide assurances that coordination among on-site functions has been accomplished. In addition, the ISRP implementation schedule does not allow time to test the contingency plans. Testing contingency plans for business resumption and disaster recovery evaluates their likelihood for success.

Most local business recovery plans have not been updated to include ISRP. For contingency operations, National Office requested that the service centers prepare business resumption plans. This effort primarily occurred prior to the implementation of the ISRP systems, and currently only two of the ten service centers have included the ISRP DIS system into their business recovery plans. Other centers were aware of the need to include the ISRP system in their business recovery plans and planned to do so at a future date.

Under a Memorandum of Understanding between National Office functions, the centers share responsibility with the Executive Officer for Service Center Operation (EOSCO) to incorporate ISRP contingency plans into their local business resumption and disaster recovery plans once the ISRP system becomes fully implemented. However, all ten service centers are currently operating the ISRP-DIS functionality and six centers are operating the ISRP-RPS functionality. Until the business recovery plans have been updated and properly tested at all ten service centers, the Service's risk exposure to emergency situations remains high.

The Service needs to act upon ISRP contingency plans to prepare backup return and remittance processing systems for the year 2000 filing season.

None of the eight local ISRP contingency plans contained scenarios beyond the 1999 filing season. The General Accounting Office noted this condition in its recent report on the Service's 1998 Filing Season (GAO/GGD-99-21) and recommended that the Service develop a contingency plan for ISRP that provides for the possibility of a system wide failure of the

remittance processing function past 1999. The Service disagreed with this recommendation and responded that (1) normal disaster recovery procedures would be in place in case of an extended downtime of remittance processing equipment and (2) the Service will have in place a system to direct payments received to lockbox facilities as needed.

As noted above most of the local disaster recovery and business resumption plans have not yet been updated to include the ISRP systems. Current ISRP contingency plans rely upon the Service's ability to process remittances on legacy equipment and/or transship work from one service center to another. In addition, the Service's capability to use legacy equipment beyond the 1999 filing season depends upon obtaining "Y2K" compatibility for the legacy units. Although most of the legacy-DIS and RPS equipment can no longer be upgraded, the March 25, 1998 version of the Business Addendum to the ISRP Project Development Contingency Plan proposed the upgrade and/or purchase of upgraded RPS-II equipment.

RPS-II is a stand alone system which operates independently of the other legacy systems. Although its main purpose is to process remittances with scanable vouchers, it is capable of processing any type of remittance transaction. As a result, the upgrade of the RPS-II system would not only provide a contingency option for the year 2000 filing season, it could also supplement the scanable voucher workload of the ISRP system during the 1999 filing season.

Recommendations:

5. Add details to the service centers contingency plans for re-installation of legacy terminals to include, but not limited to, installation schedules, system update plans, staffing plans, and workload coordination plans.
6. Update and test recovery procedures for the ISRP system into the Business Resumption Plans at each service center before the February 1999 mini-peak processing period.
7. Implement risk mitigation scenarios to re-install, upgrade and maintain RPS-II equipment as a backup system for processing during the year 2000 filing season.

Appendix X

Management's Response to Memorandum #2

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

CHIEF OPERATIONS OFFICER

March 11, 1999

MEMORANDUM FOR REGIONAL INSPECTOR GENERAL FOR AUDIT
SOUTHEAST REGION

FROM: John M. Dalrymple
Chief Operations Officer

SUBJECT: Internal Audit (IA) Memorandum #2 - Risks Associated with the Operation of the Integrated Submission and Remittance Processing (ISRP) System During the 1999 Filing Season

Thank you for the opportunity to respond to the subject memorandum, dated January 29, 1999. We have provided a response to each recommendation as follows:

IDENTITY OF RECOMMENDATION/FINDING #1
Assign an independent third party the responsibility to certify the appropriate resolution of all ISRP problem reports and trouble tickets (including security and capacity test results).

ASSESSMENT OF CAUSE(S)
All 10 service centers are operating the ISRP-Distributed Input System (DIS), and 6 service centers are operating ISRP-Remittance Processing System (RPS). There has been a natural increase in ISRP trouble tickets as the new sites have gone into production.

CORRECTIVE ACTION(S)
We do not agree with this recommendation. The ISRP Project Office has a process in place for managing trouble tickets and, using a variety of reporting vehicles, keeps executives informed of the progress being made by the contractor to resolve the deficiencies and mitigate any adverse impact. Daily updates are provided to the Deputy Chief Information Officer for Systems, as well as periodic updates to the ISRP Executive Steering Committee (ESC), Combined Management Program for Y2K, and Filing Season ESC. As an example, we have attached a chart showing the progress on the number of problems closed during a 30-day period. We believe that we have a comprehensive process in place to track and monitor trouble tickets that will be continually reviewed to identify opportunities for improvement. Therefore, we are not proposing any additional corrective actions to monitor the trouble tickets or problem reports.

IMPLEMENTATION DATE:
The process is in place and will be continuous throughout the systems' life cycle.

RESPONSIBLE OFFICIAL(S)
Chief Information Officer IS
Deputy Chief Information Officer (Systems) IS
Assistant Commissioner (Systems Development) IS:S

CORRECTIVE ACTION(S) MONITORING PLAN
The ISRP Project Office currently has a process in place for tracking and monitoring problem reporting and trouble tickets. This process will be monitored, reviewed, and improved over the life cycle of the project.

IDENTITY OF RECOMMENDATION/FINDING #2
Continue the "hub start-up" process for each incremental version of the ISRP System. In addition, if a new version contains significant problem report/trouble ticket corrections, the "hubbing" service center should process test data through the system before the "hub start-up" and trace the test output to ensure that it properly posts to the master file.

ASSESSMENT OF CAUSE(S)
With 10 service centers operating the ISRP-DIS and 6 service centers operating the ISRP-RPS, it is reasonable to expect an increase in ISRP trouble tickets as production increases with the volume of receipts during the 1999 filing season. The addition of ISRP-RPS locations limits the availability of both vendor and Internal Revenue Service (IRS) employees experienced in ISRP pilot operations. Until all problems affecting the overall productivity of ISRP are resolved and properly tested, the IRS exposes its remittance processing operations to additional risk each time a service center attempts the initial startup of the ISRP-RPS functionality.

CORRECTIVE ACTION(S)
We agree with the recommendation to continue the "hub start-up" processing for each incremental version of the ISRP System. In addition, if a new version contains significant problem report/trouble ticket corrections, the "hubbing" service center will process test data on the system before the "hub start-up" and trace the test output to ensure that it properly posts to the master file.

IMPLEMENTATION DATE:
This process will be ongoing with each incremental version of ISRP.

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RESPONSIBLE OFFICIAL(S)
Chief Information Officer IS
Deputy Chief Information Officer (Systems) IS
Assistant Commissioner (Systems Development) IS:S

CORRECTIVE ACTION(S) MONITORING PLAN
We will monitor the effectiveness of this action by having the "hubbing" service center certify that the incremental version is ready for production only after we are sure information has passed through Generalized Mainline Framework and posted to the master file.

IDENTITY OF RECOMMENDATION/FINDING #3
Authorize the service centers to recalculate their work schedules without the 10 percent productivity gains for the DIS function and implement recruitment and training plans to ensure appropriate staffing levels for the April peak processing period.

ASSESSMENT OF CAUSE(S)
A 10 percent productivity was built into the work schedules in support of the ISRP Business Case. Most service centers have expressed concern regarding their ability to achieve a 10 percent productivity improvement using the ISRP-DIS functionality.

CORRECTIVE ACTION(S)
We agree that it is critical to have sufficient staffing to support the filing season. The 10 percent productivity was based on a review of the statistics resulting from the pilot. As each center works through the learning curve, we believe the 10 percent productivity is achievable. Each center has been instructed to hire and train sufficient staffing in order to meet program completion date (PCD) regardless of the established work schedule.

IMPLEMENTATION DATE:
COMPLETED: February 19, 1999

RESPONSIBLE OFFICIAL
Executive Officer for Service Center Operations (EOSCO) OP:SC

CORRECTIVE ACTION(S) MONITORING PLAN
Service center productivity on ISRP-DIS will be monitored throughout the filing season by utilizing the many links available on the EOSCO web site (e.g., Work Planning and Control System, Electronic Output Network System, etc.). Necessary adjustments, such as transshipping returns or providing additional funding, will be initiated in order for the service centers to make PCD for Other Than Full Payment returns.

IDENTITY OF RECOMMENDATION/FINDING #4
Reassess the allocation of workstations per service center, and prepare contract modifications to install additional workstations for the April peak processing period, if necessary to meet the PCD for timely filed tax returns.

ASSESSMENT OF CAUSE(S)
The IA Report, Review of the Initial System Development Activities the ISRP System, dated January 30, 1998, recommended that the IRS reassess the allocation of ISRP-DIS workstations per service center. Management responded to the recommendation by developing a terminal distribution methodology that was based upon the historical peak period volumes and production rates of each service center, ignoring the number of existing Legacy-DIS terminals. By excluding the existing terminal allocation, management's formula does not account for the excess processing capacity currently available during the peak-filing season.

CORRECTIVE ACTION(S)
Terminal requirements are based on peak volume receipts, production rates and two shifts, 5 days per week work schedule. Using this, each center has a 40 percent cushion to address an increase to their workload through transshipment or unscheduled spikes in peak receipts; staffing for this is supported through overtime. If transshipment is required after May 1, ISRP-RPS terminals may be used as DIS terminals.

IMPLEMENTATION DATE:
COMPLETED: February 18, 1999

RESPONSIBLE OFFICIAL(S)
Assistant Commissioner (Forms and Submission Processing) OP:FS
National Director, Submission Processing OP:FS:S
Chief, ISRP Project Office OP:FS:S:I

CORRECTIVE ACTION(S) MONITORING PLAN
Submission Processing Division has a process in place to determine terminal requirements and adjust volumes accordingly to meet PCD for timely filed returns. This process will be monitored, reviewed, and improved over the life cycle of the project.

IDENTITY OF RECOMMENDATION/FINDING #5
Add details to the service centers contingency plans for reinstallation of legacy terminals to include, but not limited to, installation schedules system update plans, staffing plans, and workload coordination plans.

ASSESSMENT OF CAUSE(S)
The local contingency plans call for reinstalling legacy equipment as needed, but none

of the plans contain detailed scenarios on how they would achieve the reinstallation of legacy equipment when needed.

CORRECTIVE ACTION(S)
We agree with this recommendation. Each service center has developed a detailed contingency plan for FY 1999 to revert back to legacy processing. The plans include the use of installed equipment and procedures for reinstalling the "soft deinstalled" equipment (includes but is not limited to installation schedules, system update plans, staffing plans, and workload coordination plans).

IMPLEMENTATION DATE:
COMPLETED: February 16, 1999

RESPONSIBLE OFFICIAL(S)
Assistant Commissioner (Forms and Submission Processing) OP:FS
National Director, Submission Processing OP:FS:S
Chief, ISRP Project Office OP:FS:S:I

CORRECTIVE ACTION(S) MONITORING PLAN
Each service center will revert back to the legacy system to test their contingency plan and assess the impact by March 15, 1999. Two centers so far have completed their test with no adverse impact to deposit or posting of taxpayer information to the master file. Ogden Service Center reverted back to legacy processing for RRPS on February 18 and 19 and Austin Service Center on February 16 and 17.

IDENTITY OF RECOMMENDATION/FINDING #6
Update and test recovery procedures for the ISRP System into the business resumption plans of each service center before the February 1999 mini-peak processing period.

ASSESSMENT OF CAUSE(S)
Most local business resumption plans have not been updated to include ISRP. For contingency operations, National Office requested that the service centers prepare business resumption plans. This effort occurred prior to the implementation of the ISRP System; however, currently only two of the ten service centers have updated their plans to include the ISRP-DIS System into their plans. The remaining centers need to include the ISRP system in their business resumption plans and plan to do so in the future.

CORRECTIVE ACTION(S)
We agree with the recommendation to update the individual business resumption plans. A task force consisting of National Office and field personnel developed an ISRP business resumption blanket plan. The Office of the EOSCO is working with each center to ensure that the ISRP plan is included in their individual business resumption plan.

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We do not agree with the recommendation to test this plan before February 1999 mini-peak or at any other time. The business resumption plan for ISRP includes transshipment of paper tax returns to other service centers and remittances to the Lockbox Banks. In times of emergency, we have used these processes and know that they both work well; therefore, we do not believe that these processes need to be tested.

IMPLEMENTATION DATE:
PROPOSED: April 1, 1999

RESPONSIBLE OFFICIAL(S)
Executive Officer for Service Center Operations OP:SC
Assistant Commissioner (Forms and Submission Processing) OP:FS
National Director, Submission Processing OP:FS:S
Chief, ISRP Project Office OP:FS:S:I

CORRECTIVE ACTION(S) MONITORING PLAN
Each center will provide copies of their completed plan to EOSCO for review and comment.

IDENTITY OF RECOMMENDATION/FINDING #7
Implement risk mitigation scenarios to reinstall, upgrade, and maintain RPS-II equipment as a backup system for processing during the year 2000 filing season.

ASSESSMENT OF CAUSE(S)
Local disaster recovery and business resumption plans have not yet been updated to include the ISRP systems. Current ISRP contingency plans rely on the IRS' ability to process remittances on legacy equipment and/or transship work from one service center to another. In addition, the capability to use legacy equipment beyond the 1999 filing season depends upon obtaining "Y2K" compatibility for the legacy units.

CORRECTIVE ACTION(S)
On June 25, 1998, the Executive Review Board recommended and approved that additional funds would not be spent on the current RPS equipment beyond December 31, 1999. A remittance processing contingency plan is being developed in the event of a remittance processing equipment or software failure during FY 2000 and beyond. The preliminary plan includes both non-peak and peak processing. If there is a system failure during non-peak processing, we will either use the Integrated Data Retrieval System and exception processing, or transship the remittances to a lockbox site; during peak processing, remittances will be transshipped to a lockbox site for processing. Negotiations are being held with Financial Management Services and the Lockbox Banks to amend the current Memorandum of Understanding to incorporate our contingency requirements.

IMPLEMENTATION DATE:
PROPOSED: July 1, 1999

RESPONSIBLE OFFICIAL(S)
Assistant Commissioner (Forms and Submission Processing) OP:FS
National Director, Submission Processing OP:FS:S
Chief, Accounting Branch OP:FS:S:A

CORRECTIVE ACTION(S) MONITORING PLAN
N/A

If you have any questions or require additional information, please call Barbara Jenkins, National Director, Submission Processing, at (202) 283-1000 or have your staff contact Walt McCrary, Chief, ISRP Project Office, at (202) 283-0091.

Attachment

cc: Executive Officer for Service Center Operations OP:SC
Assistant Commissioner (Systems Development) IS:S

ATTACHMENT

Integrated Submissionb/Remittance Processing (ISRP)
Priority 1 and 2 Open/Closed Trouble Tickets

	OPEN		CLOSED	
Date	Priority 1	Priority 2	Priority 1	Priority 2
1/12/99	3	7	2	6
1/13/99	2	2	0	8
1/14/99	0	0	0	5
1/19/99	1	3	0	3
1/20/99	0	3	1	7
1/21/99	1	6	1	8
1/22/99	2	5	7	6
1/25/99	0	3	3	5
1/26/99	3	2	0	7
1/27/99	14	3	2	13
1/28/99	1	8	3	1
1/29/99	3	9	3	6
2/1/99	1	0	3	2
2/2/99	2	3	2	4
2/3/99	0	3	0	3
2/4/99	0	11	1	7
2/5/99	2	4	1	3
2/8/99	0	9	5	3
2/9/99	0	6	2	4
2/10/99	1	4	1	0
TOTALS	36	91	37	101