Department of Veterans Affairs
Office of Inspector General

Healthcare Inspection

Radiology Issues
VA Medical Center
West Palm Beach, Florida

Report No. 05-02939-19

November 3, 2006

VA Office of Inspector General
Washington, DC 20420

To Report Suspected Wrongdoing in VA Programs and Operations
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Executive Summary

The inspection was conducted to determine whether allegations related to radiology workload scheduling and management, misuse of funds, and fraud at the VA Medical Center in West Palm Beach, Florida, had merit.

We determined that staff radiologists met or exceeded workload expectations and that excess workload was appropriately outsourced for completion by consultants or other contractors. While the outsourcing appeared reasonable, the medical center can reduce costs through price restructuring. The medical center properly used the "Pending," "Scheduled," and "Hold" lists for workload tracking purposes; however, some processes to schedule appointments and notify patients needed improvement. We confirmed that some technologists improperly unverified and verified radiology reports. These duties should be separated so that reports cannot be changed without the knowledge of at least two people.

To strengthen operations, we made the following recommendations:

- Monitor the cost efficiency of outsourced services and take steps to reduce costs.
- Evaluate no-show rates and causes in all Imaging modalities to determine how compliance can be improved.
- Assign "unverify" and "verify" security keys according to position requirements, with consideration for appropriate separation of duties.

The Veterans Integrated Service Network and Medical Center Directors agreed with our findings and provided acceptable improvement plans. We will follow up on planned actions until they are complete.

DEPARTMENT OF VETERANS AFFAIRS
Office of Inspector General
Washington, DC 20420

TO: Director, VA Sunshine Healthcare Network (10N8)

SUBJECT: Healthcare Inspection – Radiology Issues, VA Medical Center, West Palm Beach, Florida

Purpose

The VA Office of Inspector General (OIG), Offices of Healthcare Inspections (OHI) and Audit, reviewed allegations related to workload scheduling and management, coding issues, and misuse of funds in Radiology at the VA Medical Center (the medical center) in West Palm Beach, Florida. The purpose of the review was to determine whether the allegations had merit.

Background

The medical center, located in West Palm Beach, Florida, is a tertiary care hospital that provides a broad range of inpatient and outpatient health care services. Outpatient care is also provided at six community based outpatient clinics (CBOCs) located in Boca Raton, Delray Beach, Fort Pierce, Okeechobee, Stuart, and Vero Beach. The medical center is part of Veterans Integrated Service Network (VISN) 8 and serves a veteran population of about 202,000 in a primary service area that includes seven Florida counties.

Imaging Service has two divisions. The Radiology division offers computerized tomography (CT), magnetic resonance imaging (MRI), ultrasound, angiography, interventional procedures, and general x-rays. The Nuclear Medicine division offers general nuclear medicine exams, cardiac stress testing, and positron emission tomography (PET) scanning. In accordance with Veterans Health Administration (VHA) and VISN 8 standards on clinic access, routine requests require examination (exam) within 30 days of the request, and image interpretation and verification within 2 days of exam completion. The Imaging Service completed 89,449 exams in fiscal year (FY) 2005.

When health care providers at the medical center request radiology exams, the computer generates a printout of the request, which is triaged by a radiologist for appropriateness and urgency. When the electronic radiology request is entered into the computerized patient record system (CPRS), the patient is placed on the "Pending" list. While some

patients are able to complete their radiology exams the same day that the exam is ordered, other patients request to be scheduled for future appointments due to personal reasons such as scheduling conflicts, transportation, or the need to prepare for procedures. These requests are managed by staff in the Medical Administration Service (MAS), who contact patients by telephone to schedule the exams. When an examination time and date are agreed upon by the patient and the MAS clerk, the patient is moved to the "Scheduled" list. If the patient cannot be contacted, the MAS clerk sends a "30-day letter" notifying them of the need to schedule their radiology exam, and the patient is moved to the "Hold for Scheduling" list. Exam requests that have not been scheduled and/or completed within 90 days of the request date can be cancelled according to Imaging Service's business rules. In this event, a "View Alert" is sent to the requesting provider via CPRS. The provider can then reorder the exam as needed.

In July 2005, the anonymous complainants initially alleged that:

- Radiology workload was not properly managed, resulting in gross misuse of funds.

- Radiology examination requests were moved from the "Pending" list to the "Scheduled" list, but were not always scheduled. This action reduced the appearance of radiology backlogs.

Immediately prior to our site visit in March 2006, we received additional complaints alleging improper alteration of current procedural technology (CPT) codes, as follows:

- Radiological technologists improperly "unverified" reports to add CPT codes and reference other radiological reports, and then reverified the reports without the radiologists' knowledge.

- Some Radiology staff improperly added or altered CPT codes, which artificially increased the stated workload.

Scope and Methodology

We visited the medical center from March 27–31, 2006. In performing the review, we interviewed managers and other employees knowledgeable about the topics discussed. We reviewed Imaging Service procedures, performance improvement data, and workload; and we examined medical records of select patients. We also reviewed facility contracts with external radiology vendors.

The inspection was performed in accordance with the *Quality Standards for Inspections* published by the President's Council on Integrity and Efficiency.

Inspection Results

Issue 1: Radiology Workload Management and Scheduling

Allegation 1-A: Radiology workload is not properly managed, resulting in gross misuse of funds.

The allegation was not substantiated; however, opportunities to save funds were identified. In FY 2005, the average productivity level of the medical center's staff radiologists exceeded the 5,000 Relative Value Units (RVU)[1] per clinical full-time equivalent (FTE) employee benchmark as defined by VHA's Director of Radiology. We determined clinical time for staff radiologists by deducting time for administrative and research duties, extended leave, and periods of time during FY 2005 when radiologists were not employed by VA. The total FY 2005 RVU production for the 6.18 clinical FTE staff radiologists was 36,145 RVUs, which equated into an average productivity level of 5,849 RVUs per clinical FTE. The Chief of Imaging Service has been recruiting for additional staff radiologists to fill vacancies, but salary limitations have made the recruitment process difficult.

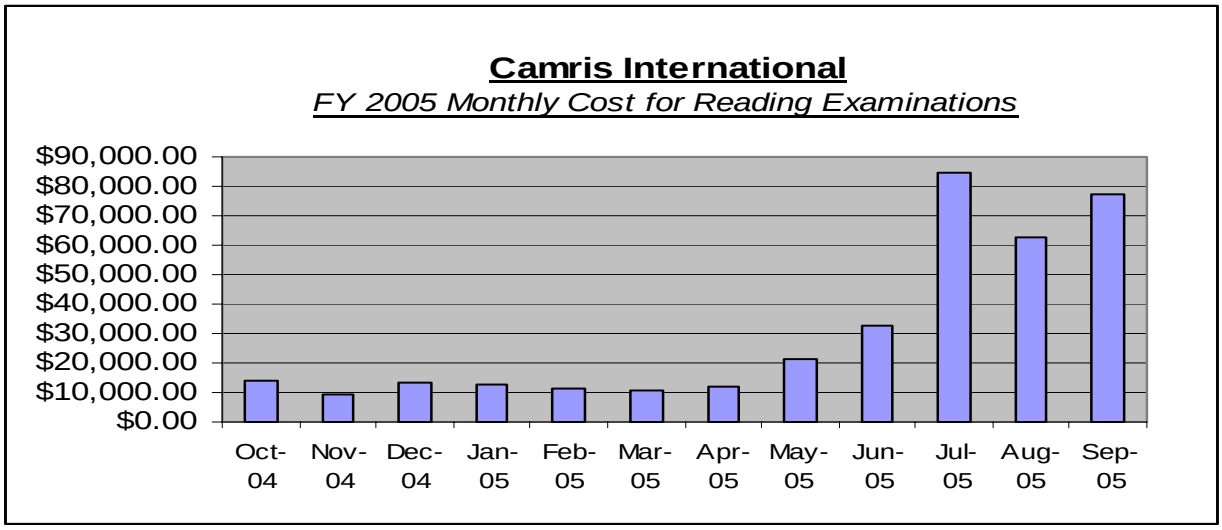
To address excess workload that could not be completed timely by VA staff radiologists, the medical center used consultants, locum tenens[2] (temporary assignment physicians)/consultants,[3] and a contract vendor in FY 2005. We reviewed the cost efficiency of all three providers by dividing the total cost of services by the total amount of RVUs produced. We determined that consultants' costs were about $49 per RVU, which is equal to the academic and private sectors.[4] Locum tenens radiologists' costs were about $75 per RVU, which is $26 above the private and academic sector costs per RVU. The contract vendor, Camris International (also referred to as Nighthawk), costs per RVU were about $74 for off-hour services. Our review showed that a portion of the workload outsourced to Camris could be provided at a lower cost, which could save the medical center as much as $193,824 a year.

The medical center began using the services of Camris in March 2004. The contract was originally established to provide off-hour radiologist coverage, which was defined as weekdays from 5:00 p.m. through 8:00 a.m. and weekends. The average workload for

[1] RVUs are weighted measures assigned to exams and procedures that indicate the professional value of services provided by a radiologist.
[2] Locum Tenens is a Latin term literally meaning "place holder"; it means a person who substitutes temporarily for another member of the same profession.
[3] There were two radiologists who provided services as consultants as well as locum tenens in FY 2005 who are included in the "locum tenens/consultants" category.
[4] January 14, 2005, National Monthly Radiology Conference Call minutes.

Camris from October 2004 through April 2005 was 163 films per month at an average monthly cost of $11,937.

In May 2005, the medical center began using Camris radiologists to read excess routine examinations, via teleradiology, that were not completed during regular weekday hours. The following chart shows the monthly cost associated with reading examinations.



After using Camris to read routine exams, the averages increased to 1,005 films per month, at an average monthly cost of $55,656 from May 2005 through September 2005. The monthly averages increased by 842 exams and $43,719.

Our analysis credits Camris radiologists with 4,912 RVUs in FY 2005. The total cost of Camris radiologists' services was $361,836 and the average cost per RVU was $74 ($361,836 / 4,912 RVUs). During May and June 2005, Camris erroneously billed for the routine portion of the workload using lower prices than those established in the contract for off-hour coverage. The prices were based on specific CPT codes as opposed to prices for the general type of exam that was read (for example, plain film, CT scan). The cost per RVU for the routine workload during May and June was $50. However, from July through September 2005, there was no pricing difference between off-hour and routine workload. The prices established in the original contract for off-hour readings were applied to the excess routine workload, which substantially increased the cost per RVU for this workload.

The medical center was still using Camris to read routine exams at off-hour rates during the time of our review. Camris's invoices showed that 6,164 exams were billed to the medical center in FY 2005. The average exam read by Camris radiologists converts into .8 RVUs (6,164 exams / 4,912 RVUs). We estimate that an average of 673 RVUs per month (842 exams x .8 RVUs) from May 2005 through September 2005 were routine

workload completed by Camris radiologists. This 5-month average of 673 RVUs per month would project into 8,076 RVUs for an entire year at a cost of $597,624 (at $74 per RVU). The same workload would cost $403,800 at $50 per RVU. By basing prices on CPT codes for routine workload outsourced to Camris, the medical center has the opportunity to save $193,824 ($597,624 - $403,800).

Until the medical center can hire additional VA radiologists to read the excess routine exams, they should attempt to use more consultants whose cost per RVU was $49 in FY 2005. The medical center can also use the volume of routine exams, and the pricing structure used by Camris in May and June 2005, as leverage to negotiate radiologist prices that would reduce the cost per RVU for excess workload.

Recommended Improvement Action(s) 1a. We recommend that the VISN Director ensure the Medical Center Director monitors the cost efficiency of outsourced services and takes steps to reduce costs.

Allegation 1-B: Radiology examination requests are moved from the "Pending" list to the "Scheduled" list but are not always scheduled. This action reduces the appearance of radiology backlogs.

The allegation was not substantiated. We found no evidence that staff intentionally moved patients from the "Pending" to the "Scheduled" list to reduce the appearance of backlogs. If used properly, these designations are appropriate workload tracking and management tools. However, it did appear that veterans did not get some radiology exams on the dates they were originally scheduled, suggesting that procedures for scheduling exams needed improvement.

The March 31, 2006, VISN 8 Radiology Report of exams pending greater than 30 days (beyond the desired date) showed that the facility provided CT, MRI, ultrasound, PET, and nuclear medicine exams in a timely manner. Only general radiology reflected a small backlog of pending exams (74 exam requests). We tested whether patients on the "Scheduled" list actually had been scheduled for a meaningful time and date (defined as mutually agreed upon by the patient and the MAS clerk) rather than an arbitrary time and date (as entered by the clerk to simply move the patient off the "Pending" list). Our review of 30 special mode (MRI, CT, and ultrasound) cases scheduled as of March 27, 2006, found that 21 of 24 applicable exams[5] (88 percent) were completed on the date they were scheduled, and another exam was completed within 1 day of the scheduled date. The two remaining patients did not show for their appointments and had to be

[5] Six exams were exempted; four were appropriately cancelled and two were scheduled for future dates as part of serial follow-up.

rescheduled. This high compliance rate suggests that patients were generally scheduled for and informed of their radiology appointments.

However, we determined that routine general radiology exams, such as x-rays, are still not consistently completed when scheduled. For the period January 1–March 31, 2006, the no-show (NS) rate for general radiology was 44 percent. The Chief of MAS could not explain the high NS rate and her Service had not completed a review of the cause(s). The system used to schedule exams, notify patients of their appointments, accommodate patient rescheduling requests, and remind patients of their exam appointments should be evaluated for effectiveness.

Recommended Improvement Action(s) 1b. The VISN Director should ensure that the Medical Center Director evaluates NS rates and causes in general radiology to determine how compliance can be improved.

Issue 2: CPT Code Alteration

Allegation 2-A: Radiology technologists "unverify" dictated radiology reports to add CPT codes and reference other radiological reports, then reverify the reports without the radiologists' knowledge.

The allegation was substantiated. Generally, radiologists are the only individuals who should verify radiology reports. Radiologists view and interpret exam images, dictate their findings, and verify those results via their electronic signature code on the report. Occasionally, reports that have been verified require amendments or revisions, such as when a report is erroneously dictated on the wrong patient. According to Imaging Service managers, in these instances the radiologist requests a technologist, Informatics (computer) employee, or the Administrative Officer (AO) to unverify the report so that revisions can be made. The radiologist should then verify the amended report. According to the Imaging Service AO, this separation of duties is intentional to maintain the integrity of the process.

We determined that on at least 14 occasions from November 2005 to March 2006, a technologist unverified, edited, and verified mammography reports. In most of the cases, the technologists unverified reports to add required BI-RADS (Breast Imaging Reporting and Data System) codes.[6] The addition of these codes did not change the findings of the reports or impact patient care. Nevertheless, one of the radiologists responsible for eight of the reports told us that he was unaware that technologists were making changes to his already verified reports.

We found the following conditions requiring management attention:

[6] Lesion classification categories.

- Eight medical center employees have both the "unverify" and the "verify" computer security keys; six of those key holders are Imaging Service employees and two are Informatics employees.

- The "verify" key is held by 46 individuals; 24 are staff or consulting radiologists (includes 1 staff surgeon), 12 are CBOC employees (non-radiologists), and 6 are medical center radiology technologists, operations, or Informatics staff. We could not determine the employee type for three key holders, and the remaining key, assigned to "Outside, Radiology Provider," was too general to distinguish whether the key holder was a radiologist or other type of employee.

- More than 230 reports were amended from January 1–June 9, 2006. While this number represents less than 1 percent of the overall workload, it does show that amendments occur often enough to necessitate a process that separates the unverify and verify functions.

Recommended Improvement Action(s) 2. The VISN Director should ensure that the Medical Center Director requires Imaging Service to assign "unverify" and "verify" security keys according to position requirements, with consideration for appropriate separation of duties.

Allegation 2-B: Some Imaging Service staff improperly added or altered CPT codes, which artificially increased the stated workload.

The allegation was not substantiated. A complainant reported that the weekend prior to our site visit, Imaging Service staff were working overtime to alter CPT codes to reflect more complex workload and to add CPT codes to show more workload than was actually completed. However, we found no evidence that staff improperly changed or added CPT codes to artificially increase the volume or complexity of the workload.

CPT codes are used to document the array of services delivered to patients and serve as the basis for third party billing. To change or add CPT codes in a verified report, the report would have to be unverified, amended, and reverified. It is an acceptable practice to add CPT codes in certain circumstances; however, according to the Chief of Imaging Service, amended reports should be an infrequent occurrence. For example, a radiology technologist may change a CPT code at the radiologist's instruction because the code entered by the primary care provider was incorrect. Although CPT codes get altered on a regular basis, they should ideally be added or changed prior to report verification. The Chief of MAS told us that the facility conducts a 100 percent review of all billable cases to ensure that CPT codes are correct and to maximize billing opportunities.

The complainant provided us with one example to show alleged improper alteration or addition of CPT codes. The patient was being treated for a perforated appendix which

became infected despite appropriate wound care. The patient became septic and a CT scan revealed an intra-abdominal abscess. Interventional radiology completed several CT scans, drainage tube placements, and drainage of the abscess. We determined that the services provided represented separate procedures with separate CPT codes, and that the coding was reasonable. We did not find any evidence that these codes were manipulated to artificially increase workload.

According to the Chief and AO of Imaging Service, staff had been working the previous weekend on CPT codes; however, they reported that staff were entering new CPT codes into the pick list, an activity they complete every year based on changing codes issued by VHA and the Society of Interventional Radiology. The pick list is the electronic list of procedures available to a provider to document the services provided to a patient. The Chief told us that they changed about 400 CPT codes in the pick list, adding new codes, deleting obsolete codes, modifying code descriptions, and "nesting" CPT codes for procedures that belong together.

Conclusion

We determined that staff radiologists met or exceeded workload expectations, and that excess workload was appropriately outsourced for completion by consultants or other contractors. While the outsourcing appeared reasonable, the medical center can reduce costs through price restructuring. The medical center properly used the "Pending," "Scheduled," and "Hold" lists for workload tracking purposes; however, some processes to schedule appointments and notify patients needed improvement. We confirmed that some technologists improperly unverified and verified radiology reports. These duties should be separated so that reports cannot be changed without the knowledge of at least two people.

We did not substantiate the allegation that CPT codes were altered to artificially increase workload.

VISN and Medical Center Directors' Comments

The VISN and Medical Center Directors agreed with the findings and recommendations, and the VISN Director concurred with the Medical Center Director's corrective action plans. The medical center will continue efforts to hire radiologists and utilize consultants to decrease reliance on Camris. Advanced Clinic Access principles will be applied to reduce the NS rate in General Radiology. In addition, medical center managers are developing a process requiring involvement of two managers when reports are unverified and reverified by the same person; this will enhance controls.

Office of Inspector General Comments

The VISN and Medical Center Directors agreed with the findings and recommendations, and provided acceptable improvement plans. We will follow up on planned actions until they are complete.

(original signed by:)
JOHN D. DAIGH, JR., M.D.
Assistant Inspector General for
Healthcare Inspections

Appendix A

VISN Director Comments

Department of Veterans Affairs **Memorandum**

Date: July 31, 2006

From: Network Director (10N8)

Subject: **Draft Report** – Healthcare Inspection – Radiology Issues, VA Medical Center, West Palm Beach, Florida. Project Number: 2005-02939-HI-0274

To: Director, Management Review Service (10B5)

1. Thank you for the opportunity to review the Draft Report – Healthcare Inspection – Radiology Issues, VA Medical Center, West Palm Beach, Florida (2005-02939-HI-0274)

2. I have reviewed the report and facility's comments. The following VISN Director's comments are submitted in response to the recommendation(s) in the Office of Inspector General's Report.

OIG Recommendation(s)

Recommended Improvement Action(s) 1a. We recommend that the VISN Director ensure the Medical Center Director monitors the cost efficiency of outsourced services and takes steps to reduce costs.

Concur

WPB VAMC will continue efforts to hire additional radiologists and utilize consultants in order to decrease the dependence on Camris for the excess routine workload.

Recommended Improvement Action(s) 1b. The VISN Director should ensure that the Medical Center Director evaluates NS rates and causes in general radiology to determine how compliance can be improved.

Concur **Target Completion Date:** 9/30/06

The patient-driven scheduling processes implemented in the other modalities as a component of ACA will be used to reduce the NS rate in General Radiology to an acceptable level.

Recommended Improvement Action(s) 2. The VISN Director should ensure that the Medical Center Director requires Imaging Service to assign "unverify" and "verify" security keys according to position requirements, with consideration for appropriate separation of duties.

Concur **Target Completion Date:** 9/30/06

West Palm Beach VAMC Radiology leadership has been judicious in the delegations of the "unverify" and "verify" options. As stated in the report, Radiology security keys are only assigned to six (6) managers in Imaging Service. These managers occasionally unverify reports at the request of a Radiologist so that reports can be amended. The Radiolgist then reverifies the report. There are rare instances, however, when it is appropriate for a manager to unverify and reverify the same report. In those cases, we will implement the OIG's recommendation to require the involvement of two (2) managers. We are currently developing the process to document this validation of actions taken.

3. The VISN will ensure that the above actions are completed at the WPB VAMC. If you need additional information, please contact Karen Maudlin (727) 319-1063.

(original signed by:)

George H. Gray, Jr.

Appendix B

Medical Center Director Comments

Department of Veterans Affairs **Memorandum**

Date: July 26, 2006

From: Director, West Palm Beach VA Medical Center (548/00)

Subject: **Draft Report** – Healthcare Inspection – Radiology Issues, VA Medical Center, West Palm Beach, Florida. Project Number: 2005-02939-HI-0274

To: Director, Management Review Service (10B5)

Thru: Network Director (10N8)

1. Attached are my responses to the draft recommendations of the OIG Inspection named above.

2. The anonymous complaint(s) that prompted this inspection apparently alleged that the Radiology Service at the West Palm Beach VAMC was not properly managed, resulting in misuse of fee basis funds. After their audit, the OIG confirmed through the use of their own management tool that West Palm Beach VAMC was very efficient with regard to both the productivity of staff Radiologists and the professional cost to provide services. According to the OIG's findings, West Palm Beach VAMC Radiologists exceeded the VHA benchmark for productivity by 17% and that the use of consultants and dual fee schedules for our Nighthawk contract reduced the cost of professional services. The efficiency with which West Palm Beach VAMC is managed was validated by VHAs latest Financial Management Profile Report which found that the unit cost/patient at WPB is $3057 which is the lowest in VISN 8 and 30% less than the VHA average of $4352.

3. If you need any additional information, please contact me or Francine Giglio, Staff Assistant to the Chief of Staff at (561) 422-8608.

4. Thank you for the opportunity to provide feedback to this draft report.

(original signed by:)

Edward H. Seiler

Appendix B

Medical Center Director Comments

Director's Comments to Office of Inspector General's Report

The following Director's comments are submitted in response to the recommendation(s) in the Office of Inspector General's Report:

OIG Recommendation(s)

Recommended Improvement Action(s) 1a. We recommend that the VISN Director ensure the Medical Center Director monitors the cost efficiency of outsourced services and takes steps to reduce costs.

Non-Concur **Target Completion Date:**

As stated in the body of the report, the OIG has independently determined that West Palm Beach VAMC has efficiently used staff Radiologists and consultants. Contracts have only been used as a last resort in order to provide services. WPB VAMC will continue efforts to hire additional radiologists and utilize consultants in order to decrease the dependence on Camris for the excess routine workload.

Recommended Improvement Action(s) 1b. The VISN Director should ensure that the Medical Center Director evaluates NS rates and causes in general radiology to determine how compliance can be improved.

Concur **Target Completion Date:** 9/30/06

The patient-driven scheduling processes implemented in the other modalities as a component of ACA will be used to reduce the NS rate in General Radiology to an acceptable level.

Recommended Improvement Action(s) 2. The VISN Director should ensure that the Medical Center Director requires Imaging

Service to assign "unverify" and "verify" security keys according to position requirements, with consideration for appropriate separation of duties.

Concur in part **Target Completion Date:** 9/30/06

West Palm Beach VAMC Radiology leadership has been judicious in the delegations of the "unverify" and "verify" options. As stated in the report, Radiology security keys are only assigned to six (6) managers in Imaging Service. These managers occasionally unverify reports at the request of a Radiologist so that reports can be amended. The Radiolgist then reverifies the report. There are rare instances, however, when it is appropriate for a manager to unverify and reverify the same report. In those cases, we will implement the OIG's recommendation to require the involvement of two (2) managers. We are currently developing the process to document this validation of actions taken.

Appendix C

OIG Contact and Staff Acknowledgments

OIG Contact	Victoria H. Coates, Director Atlanta Office of Healthcare Inspections 404 929-5962
Acknowledgments	Maureen Barry, Senior Auditor Bertie Clarke, RN Matthew Kidd, Auditor

Appendix D

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