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October 20, 2008

Melissa Muir Corrigan, R.Ph.
Executive Director/CEO
Pharmacy Technician Certification Board
1100 15th Street NW, Suite 730
Washington, DC 20005-1707

Dear Melissa:

The Texas State Board of Pharmacy has scheduled a discussion of pharmacy technician certification examinations during the November 2008 meeting of the Board. This item is scheduled for 1:30 p.m. on Tuesday, November 18, 2008. You will be allowed 15 minutes for a presentation followed by questions from the members and staff of the Board of Pharmacy. Included with this letter is a list of questions that we ask you to cover during this presentation. A laptop computer and projector will be available for your use at the meeting. If you have material that you would like for the Board Members to review prior to the meeting, please provide this information in electronic format (PDF or Microsoft Word) by October 27, 2008. If you plan on handing out additional information at the meeting, please bring 30 copies to the meeting. The meeting will be held at the following location.

William P. Hobby State Office Building,
333 Guadalupe, Suite 2-225
Austin, Texas 78701

For your information, Rebecca M. Rabbitt, M.S., PharmD, CEO of the Institute for the Certification of Pharmacy Technicians has been asked to provide the same information to the Board at the November meeting.

If you have questions or need further information about the meeting, please contact Kay Wilson, Executive Assistant at 512/305-8026 (phone) or by e-mail at kay.wilson@tsbp.state.tx.us.

Sincerely,


Gay Dodson, R.Ph.
Executive Director/Secretary

c: Board Members

**Questions for the Texas State Board of Pharmacy Meeting
November 18, 2008**

Pharmacy Technician Certification Board (PTCB)

1. When was PTCB established?
2. Who are the members of the governing board, if any?
3. What is the mission or purpose of PTCB?

Pharmacy Technician Certification Board Examination

4. What was the first date the exam was administered?
5. How many individuals have taken the exam? **
6. How many individuals have passed the exam? **
7. How many individuals have failed the exam? **
8. Do any states recognize the exam as a pre-requisite for registration/licensure/certification? If so, which states?
9. How often is the exam given?
10. Where is the exam given?
 - a. What security measures are offered at the exam administration sites?
11. What is the cost to take the exam?
12. How many questions are on the exam?
 - a. Are the exam questions pretested?
 - b. What is the exam blueprint, including the subject/practice areas covered and the percentage of questions in each subject/practice area?
 - c. How do you determine the blueprint of the exam?
 - d. Is a practice analysis conducted? If so, when was the practice analysis conducted and how often is the analysis repeated?
 - e. Are exam questions assigned "difficulty levels" and is "difficulty" used as a part of the blueprint or when assigning a pass level?
13. How many questions are in your question pool?
 - a. Who are your item writers and how are they selected and trained?
 - b. How often do the item writers review the questions?
 - c. What measures do you use to assure the security of the question pool?
14. What steps are taken to assure that the PTCB exam is legally defensible?
15. How can states verify certification by your organization?
 - a. Could Texas send you an electronic file of applicants for registration and you return electronically each applicant's certification status?

** For questions 5, 6, and 7, please give statistics by calendar year.



Texas State Board of Pharmacy Board Meeting

Austin, Texas
November 18 to 19, 2008

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PTCB Certification: A Single Standard for Pharmacy Technician Certification

Texas State Board of Pharmacy
Board Meeting
Austin, TX
November 18 to 19, 2008



Melissa Murer Corrigan, R.Ph
Executive Director/CEO
Pharmacy Technician Certification Board

History of PTCB

The Pioneer for Pharmacy Technician Certification

PTCB was established in January, 1995, as a *not-for-profit* organization to create a single consolidated national certification program applicable to pharmacy technicians in all practice settings. Through the PTCB program, pharmacy technicians are able to work more effectively with pharmacists to offer safe and effective patient care and service.

Governing Organizations:

- American Pharmacists Association (APhA)
- American Society of Health-System Pharmacists (ASHP)
- Illinois Council of Health-System Pharmacists (ICHSP)
- Michigan Pharmacists Association (MPA)
- National Association of Boards of Pharmacy (NABP)



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PTCB, the nationally-recognized pioneer of pharmacy technician certification

PTCB pioneered the implementation of uniform formalized standards for pharmacy technicians for the purpose of protecting public health.

Since 1995 the five governing organizations have heavily invested in the development of PTCB and the Pharmacy Technician Certification Examination (PTCE) process.

PTCB certification is a solution which may help resolve or prevent medication errors and enhance patient safety.

PTCB has certified over **322,000** pharmacy technicians.



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Texas Employers Support PTCB Certification

- | | |
|-----------------|-------------------|
| Albertsons | Cardinal Health |
| CVS/Pharmacy | Health-Systems |
| Kmart | U.S. Military |
| Target Pharmacy | Remington College |
| Walgreens | |



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PTCB and Texas



Testing Sites in Texas



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Texas Pharmacy Technicians

Texas Specifications	Texas Statistics
Growth of the PTCB Exam	1995 - 2000 Candidates: 22,038 2001 - Present* Candidates: 67,263 Percent Increase: 205%
CPhTs Currently Active	38,346
Current retention rate	70.1%
Practice Settings-2007 through October 15, 2008	Community Chain: 30% Community Independent: 14% Hospital: 9% Education and Training: 14% Mail Service, Home healthcare, long-term care, and managed healthcare: 7% Military: 25% Other Settings: 1%

* As of 10/15/08

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PTCB Exam Texas Statistics

Exam Date	Total Candidates	Passing Candidates	Passing Rate
1995 Exams	588	467	79%
1996 Exams	745	575	77%
1997 Exams	1,181	952	81%
1998 Exams	2,488	1,965	79%
1999 Exams	4,977	3,986	80%
2000 Exams	12,059	9,103	75%
2001 Exams	7,409	5,119	69%
2002 Exams	7,033	5,042	72%
2003 Exams	7,804	5,634	72%

PTCB Exam Texas Statistics

Exam Date	Total Candidates	Passing Candidates	Passing Rate
2004 Exams	9,250	6,348	69%
2005 Exams	10,124	6,860	68%
2006 Exams	10,140	5,453	54%
2007 Exams	8,564	5,001	58%
2008 Feb 4 to Mar. 14	1,470	828	56%
2008 April 28 to June 20	2,795	1,695	61%
2008 Aug. 18 to Sept. 26	2,674	1,525	57%
Totals	89,301	60,553	68%

PTCB State Associates

**Texas Pharmacy Association
Texas Society of Health-System Pharmacists**

The Texas Pharmacy Association and the Texas Society of Health-System Pharmacists support the Pharmacy Technician Certification Board (PTCB) Examination as the exclusive mechanism to test and certify technicians for the state of Texas.

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PTCB is the nationally recognized pioneer of pharmacy technician certification, ensuring formalized standards in the pharmacy workforce through a nationally accredited certification program.

APHA/ASHP Letter to the Editor

July 29, 2008

To the Editor:

"Establishing a single standard for pharmacy technician certification through PTCB is consistent with the approach used by other health professions, as well as the approach utilized within the profession for the accreditation of educational institutions and the pharmacist licensure process. NABP performed a psychometric audit of the PTCB's PTCE in 2001 and determined that the PTCE is psychometrically sound, defensible, and valid."

This paragraph was excerpted from the letter written by John A. Gans, PharmD., Sc.D. and Henri R. Manasse, Jr., Ph.D., Sc.D.


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Pharmacy Technician Certification Examination



PTCB, Pearson VUE, and PES




Working together proactively to
implement a reliable, psychometrically-
sound, and legally defensible
certification program for pharmacy
technicians.






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Testing Vendors




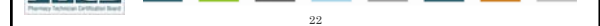
- Pearson VUE
 - Founded in 1994
 - Global leader in electronic testing services for academic, regulatory, certification, and licensure programs
 - Specializes in delivering high-stakes examinations in a secure, first-class testing environment
 - World's largest network of test centers in 162 countries
- Professional Examination Services (PES)
 - Founded in 1941
 - Examination development vendor since 1995
 - Supports professional licensure and certification, training, and continuing professional education
 - Offers a full-range of assessment and testing services

Psychometrically-sound PTCB National Testing




- Based on *national study of pharmacy practice*, including participants from each state across *all* practice settings.
- Breadth and depth of exam, designed and updated by over 60 subject matter experts, *tests a minimum level of competency for pharmacy technician certification.*
 - Item writers represent all areas of pharmacy
 - Item writer workshops enhance writer's ability to generate effective items for the exam

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Psychometrically-sound PTCB National Testing




- Allows for *reciprocity among states.*
- *Nationally-administered exam* for thirteen years: > 400,000 administrations.
- *Meets and exceeds standards* set by the testing industry (AERA/NCME/APA, 1999).
- Average **KR20** Score of **0.90**, indicates high reliability and validity
- PTCB certification program is *accredited by the NCCA.*







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PTCE Content Outline



Test specifications are based on PTCB's recent practice analysis and reflect the revised percentage weights of pharmacy technician functions as follows:

- Assisting the Pharmacist in Serving Patients - 66%
- Medication Distribution and Inventory Control Systems - 22%
- Participating in the Administration and Management of Pharmacy Practice - 12%

PTCBB Testing

- Continuous testing in 2009
- Official Score results in 1-3 weeks
- Professional, state-of-the-art, distraction-free testing centers
- Over 200 Pearson Professional Centers Nationwide
- Over 75 Pearson-approved DANTES Centers

Future Testing Dates
Nov. 10 - Dec. 19, 2008
Jan. 5 - March 31, 2009
April 1, 2009 - Continuous Testing



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The Pearson Testing Experience

A Consistent Testing Experience Across the Pharmacy Profession

- Pearson VUE delivers exams for NABP through its Pearson Professional Centers :
 - North American Pharmacist Licensure Examination® (NAPLEX®)
 - Multistate Pharmacy Jurisprudence Examination® (MPJE®)
- Pearson VUE delivers the PTCB Pharmacy Technician Certification Exam (PTCE) at the same test centers used by NABP.
- Pearson develops the Pharmacy College Admission Test (PCAT), endorsed by the American Association of Colleges of Pharmacy (AACP)



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Test Center Security

Pearson Professional Centers provide the highest degree of consistency, security, and control in the industry

Test Site Security

- Private lockers, server room, testing room
- Uniform test site setup and design

Candidate Identification

- Digital fingerprint, signature, and photograph technology
- Customized check-in procedures

Candidate Monitoring

- Digital audio and visual recording of each exam session
- Patented design provides direct line of sight to all candidates

Site Monitoring



Question and Answer Session



In Tribute to Larry Nesmith, CPhT



(1943 to 2008)

Pharmacy Technician Educator
Academy of Health Sciences
AMEDD Center & School
Ft. Sam Houston, San Antonio, Texas

"...a true friend of pharmacy. Larry made significant contributions to the advancement of pharmacy technicians as an educator and CPhT. He will be missed."

-Melissa Murer Corrigan, RPh, Executive Director/CEO



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Contact Information

Melissa Murer Corrigan, RPh
Executive Director/CEO

Pharmacy Technician Certification Board
1100 Fifteenth Street, NW, Suite 730
Washington, DC 20005
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Email: mmc@ptcb.org
Fax: 202-429-7596



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**Texas PTCB Candidate Demographics
January 1, 2007 through October 10, 2008**

Age

Under 21 years – 39%
 21-30 years – 37%
 31-40 years – 13%
 41-50 years – 7%
 51-60 years – 3%
 Over 60 years 1%
n=8,685

Gender

Female – 70%
 Male – 30%
n=9,739

In total, how long have you worked full and/or part-time as a pharmacy technician?

Less than 6 months	69%
6 months-1 year	17%
2-3 years	7%
4-5 years	3%
6-10 years	3%
11-20 years	1%

n=7,939

What is your highest level of education?

High school diploma/equivalency	26%
Associate's degree	5%
Bachelor's degree	5%
Master's degree	1%
Pharmacy technician certificate/diploma of completion	63%

n=535

Did you complete a pharmacy technician training program?

Yes, it was an accredited program	43%
Yes, but it was not an accredited program	8%
Yes, but I don't know whether the program was accredited or not accredited	15%
No, I did not participate in a pharmacy technician training program	32%
Other	2%

n=8,778

Please select the primary method for your training as a pharmacy technician.

Educational Institution	42%
Formal on-the-job training program developed and provided by employer	14%
Informal on-the-job training provided by employer	16%
Military Training Program	1%
Other	27%

n=9,127

What is your primary area of work?

Assisting in outpatient prescription dispensing	38%
Assisting in inpatient medication dispensing	10%
Preparing IV admixtures	3%
Purchasing/Inventory Control	2%
Billing/Insurance	2%
Prepackaging/Repackaging	2%
Other	43%

n=4,031

What is the name of your employer?

Albertson's	1%
CVS	11%
Eckerd	1%
HEB	2%
Krogers	2%
Safeway	1%
Target	2%
Walgreens	21%
Walmart	1%
Not Listed	57%

n=4,939

Does your employer recognize CPhTs with expanded job duties and/or employment opportunities?

Yes – 25%

No – 8%

I don't know – 67%

n=4,177

Does your employer recognize CPhTs with higher pay rates?

Yes – 42%

No – 8%

I do not know – 50%

n=8,983



July 29, 2008

To the Editor:

Medications continue to be a significant and vital component of medical care. And while the complexity and scope of medication use continues to grow, the role of pharmacists in caring for patients is expanding to help meet patient needs for safe and effective care. In addition to this important role for pharmacists, it is clear that safe medication use systems also require the support of well-qualified and competent pharmacy technicians. Recent reports in the media of tragic errors only serve to reinforce this point. This letter is intended to reinforce the position of both the American Pharmacists Association (APhA) and the American Society of Health-System Pharmacists (ASHP) regarding the role of pharmacy technician certification in assuring that individuals have demonstrated a professionally recognized level of competence in the handling and preparation of medications.

Both APhA and ASHP have established professional policy on the importance of pharmacy technicians supporting the professional imperative of pharmacists in helping people make the best use of medicines. Pharmacists and the public require assurance that pharmacy technicians are qualified to handle the tasks that are delegated to them. We believe it will be difficult for pharmacy to achieve its vision for pharmacist practice unless the profession adopts uniform national standards for pharmacy technician education, training, certification and registration. The pharmacy technician is accountable to the supervising pharmacist who is legally responsible through state licensure for the care and safety of patients served by the pharmacy.

We continue to believe it is important that there be a single national standard for pharmacy technician certification that is recognized and supported by the profession. The Pharmacy Technician Certification Board (PTCB) has served this role since it was established in 1995. To date, more than 300,000 pharmacy technicians have been certified by PTCB. Pharmacy technicians have been certified in virtually all practice settings, including community pharmacy, hospitals and health systems, long-term care, and others.

PTCB is a non-profit organization governed by five pharmacy organizations, including APhA, ASHP, National Association of Boards of Pharmacy, Michigan Pharmacists Association, and Illinois Council of Health-System Pharmacists. These organizations have invested heavily in the development of PTCB and the Pharmacy Technician Certification Examination (PTCE) process. They have commissioned successive analyses of pharmacy technician practices by subject-matter experts from diverse practice settings and geographic locations to ensure the comprehensiveness and currency of the PTCE. PTCB is accredited by the National Commission for Certifying Agencies, which has established rigorous standards for certification programs. PTCB has also had a long-standing relationship with Professional Examination Service to ensure the

Page 2.
Drs. Gans and Manasse
Letter to the Editor

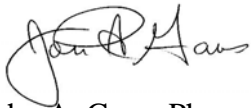
psychometric integrity and validity of the PTCE. Through its strategic partnership with Pearson VUE, PTCB is able to offer highly scalable, computer-based testing through the world's largest network of testing centers. PTCB is highly regarded not only within the profession, but also in the broader certification community, for its high standards in the certification of pharmacy technicians. Its partnerships with state pharmacy associations and major employers of pharmacy technicians are innovative and ground-breaking in the certification field. In short, PTCB's PTCE is the pharmacy profession's program for assuring the qualifications and competence of pharmacy technicians.

Establishing a single standard for pharmacy technician certification through PTCB is consistent with the approach used by other health professions, as well as the approach utilized within the profession for the accreditation of educational institutions and the pharmacist licensure process. NABP performed a psychometric audit of the PTCB's PTCE in 2001 and determined that the PTCE is psychometrically sound, defensible, and valid.

Attached you will find specific APhA and ASHP policies related to pharmacy technicians.

We call on the profession to support this single standard for pharmacy technician certification.

Sincerely,



John A. Gans, Pharm.D., Sc.D.
Executive Vice President and CEO
American Pharmacists Association



Henri R. Manasse, Jr., Ph.D., Sc.D.
Executive Vice President and CEO
American Society of Health-System Pharmacists

APhA Policy on Pharmacy Technicians:

2008 Pharmacy Technician Education and Training

1. APhA reaffirms the 2005/2001/1996 Control of Distribution System policy which states that APhA supports pharmacists' authority to control the distribution process and personnel involved and the responsibility for all completed medication orders, regardless of practice setting.
2. APhA supports nationally recognized standards and guidelines for the accreditation of pharmacy technician education and training programs.
3. APhA supports the continued growth of accredited education and training programs that develop qualified pharmacy technicians who will support pharmacists in ensuring patient safety and enhancing patient care.
4. APhA supports the following minimum requirements for all new pharmacy technicians by the year 2015:
 - a. Successful completion of an accredited education and training program
 - b. Certification by the Pharmacy Technician Certification Board (PTCB).
5. APhA supports state board of pharmacy regulation that requires pharmacy technicians to meet minimum standards of education, training, and certification. APhA also encourages state boards of pharmacy to develop a phase-in process for current pharmacy technicians.

2004 Pharmacy Technicians

1. APhA supports certification of pharmacy technicians by the Pharmacy Technician Certification Board to advance the position as a career within pharmacy practice.
2. APhA urges pharmacists to provide guidance and training to pharmacy technicians. Pharmacists and employers are urged to provide on-going training support opportunities.
3. APhA supports state boards of pharmacy regulating all pharmacy technicians. Such regulations must require pharmacist oversight of personnel involved in pharmacy services.

2004 Technician Licensure and Registration

APhA recognizes, the following definitions with regards to technician licensure and registration;

(a) Licensure: The process by which an agency of government grants permission an individual to engage in a given occupation upon finding that the applicant has attained the minimal degree of competency necessary to ensure that the public health, safety, and welfare will be reasonably well protected. Within pharmacy, a pharmacist is licensed by a State Board of Pharmacy.

(b) Registration: The process of making a list or being enrolled in an existing list.

ASHP Policy on Pharmacy Technicians

Policy 0815 - Uniform State Laws and Regulations Regarding Pharmacy Technicians:

To advocate that pharmacy move toward the following model with respect to technicians as the optimal approach to protecting public health and safety: (1) development and adoption of uniform state laws and regulations regarding pharmacy technicians; (2) mandatory completion of an ASHP-accredited program of education and training as a prerequisite to pharmacy technician certification; and (3) mandatory certification by the Pharmacy Technician Certification Board as a prerequisite to the state board of pharmacy granting the technician permission to engage in the full scope of responsibilities authorized by the state; further,

To advocate registration of pharmacy technicians by state boards of pharmacy; further,

To advocate, with respect to certification, as an interim measure until the optimal model is fully implemented, that individuals be required either (1) to have completed an ASHP-accredited program of education and training or (2) to have at least one year of full-time equivalent experience as pharmacy technicians before they are eligible to become certified; further,

To advocate that licensed pharmacists be held accountable for the quality of pharmacy services provided and the actions of pharmacy technicians under their charge.

(Note: Certification is the process by which a nongovernmental agency or association grants recognition to an individual who has met certain predetermined qualifications specified by that agency or association. Registration is the process of making a list or being enrolled in an existing list; registration should be used to help safeguard the public through interstate and intrastate tracking of the technician work force and preventing individuals with documented problems from serving as pharmacy technicians.)



National Association of Boards of Pharmacy

1600 Feehanville Drive • Mount Prospect, IL 60056
Tel: 847/391-4406 • Fax: 847/391-4502
Web Site: www.nabp.net

nabp

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TO: EXECUTIVE OFFICERS – STATE BOARDS OF PHARMACY

FROM: Carmen A. Catizone, Executive Director/Secretary

DATE: September 9, 2008

RE: Technician Certification Examinations

Recently you received an announcement from the Institute for the Certification of Pharmacy Technicians (ICPT) noting that their Exam for the Certification of Pharmacy Technicians (ExCPT) examination received accreditation from the National Commission for Certifying Agencies (NCCA). That announcement and requests from ICPT to appear before various boards of pharmacy and gain recognition of the ExCPT generated some questions to NABP. The most frequent question posed to NABP concerned NCCA accreditation.

As NABP noted in its April 2008 memorandum to the boards, accreditation by NCCA represents an audit by certification experts commissioned by the National Organization for Competency Assurance (NOCA) and ascertains that an accredited program adheres to accepted standards in the certification industry. States inquired if the NCCA accreditation awarded to ICPT's program was similar to the accreditation conferred on the Pharmacy Technician Certification Examination (PTCE) and certification program developed and administered by the Pharmacy Technician Certification Board (PTCB). The accreditations of both PTCB and ICPT are from NCCA. If states refer to NCCA accreditation as a means of recognizing certification programs for technicians then both programs would satisfy this requirement.

NABP was also asked if it had conducted an independent assessment of either program. NABP conducted an independent assessment of the PTCB certification program, which resulted in NABP's endorsement of the PTCB program. NABP's partnership with PTCB is pursuant to the action directed by the member boards in Resolution No. 96-1-2000. NABP's collaboration with PTCB also adheres to the restrictions placed upon NABP because of its educational and charitable designation (501 C-3) afforded NABP by the Internal Revenue Service. This designation restricts NABP's affiliations with for profit corporations. PTCB is a 501 C-6 organization.

If you have any questions or comments regarding this matter you may contact me via phone at 847/391-4400 or via e-mail at exec-office@nabp.net.

cc: NABP Executive Committee
Melissa Corrigan, PTCB
Rebecca Rabbit, ICPT



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Web Site: www.nabp.net

TO: EXECUTIVE OFFICERS – STATE BOARDS OF PHARMACY

FROM: Carmen A. Catizone, Executive Director/Secretary

DATE: April 24, 2008

RE: Technician Certification Examinations

A number of boards of pharmacy have once again contacted NABP requesting information for evaluating proposals for examinations that assess pharmacy technicians. To date, NABP has not received any information, from any source, concerning the validity or psychometric soundness of any technician examination beyond Pharmacy Technician Certification Board's (PTCB) Pharmacy Technician Certification Examination (PTCE).

NABP adheres to recognized and valid psychometric standards in preparing licensure and certification examinations, NAPLEX, MPJE, FPGEE and the recently introduced, Pharmacy Curriculum Outcomes Assessment (PCOA). NABP examined the PTCB's PTCE through a psychometric audit conducted in the fall of 2001. The audit determined that the PTCE is psychometrically sound, defensible, and valid. The methods used to construct the PTCE follow testing procedures recommended in the Standards for Educational and Psychological Tests (APA, NCME, AERA; 1999), guidelines published by the National Organization for Competency Assurance (NOCA), Council on Licensure, Enforcement, and Regulation (CLEAR). After NABP's independent assessment of the PTCE, NABP became a member of the PTCB Board of Governors pursuant to Resolution 96-1-2000, which directed NABP review existing technician assessment programs and in conjunction therewith, "develop a national competence assessment program to assess the competencies necessary for technicians to safely assist in the practice of pharmacy". NABP's partnership with PTCB generates revenue for the Association which is used to support services and programs for the boards of pharmacy.

EXECUTIVE OFFICERS – STATE BOARDS OF PHARMACY

April 24, 2008

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NCCA Accreditation

NABP fully supported PTCB seeking accreditation by the National Commission for Certification Agencies (NCCA). In 2007, the **PTCB Certification Program was accredited by NCCA which represents an independent audit by certification experts and ensures that PTCB's certification program adheres to current standards of practice in the certification industry.**

The following information details critical standards that must be addressed by any examination program in order for the examination to be valid and defensible.

Practice Analysis

Conducting a Practice Analysis is the first step of the examination validation process. Sometimes referred to as a Job or Task Analysis, the Practice Analysis is a survey, study, and determination to identify the knowledge and skills needed by entry level practitioners. The Practice Analyses conducted by NABP and PTCB for their examination and certification programs are always national studies that delineate the tasks engaged in by pharmacists and technicians and the criticality of those tasks to the protection of the public health. Follow-up questions would concern the time of the most recent Analysis, methodologies utilized, and final determinations. The Board should also request a copy of the most recent Practice/Job Analysis.

Test Blueprint/Specifications

The test blueprint is a detailed, written plan for a test that typically includes descriptions of the test's purpose and target audience; the content or performance areas it will cover; the number and types of questions to be written for each content or performance area, their scoring, and other characteristics; the test administration method; and desired psychometric characteristics of the items and the test. Test blueprints and competency statements should be developed using psychometrically sound procedures based upon the results of the national Practice Analysis. The test blueprint and competency statements should be readily provided and also distributed to the candidates upon request. The Board should be able to discern the relationship between the test blueprint and the Practice Analysis.

Item Writing Procedures

Technically sound and recognized testing standards for writing test questions or items should be employed. Item writers should be experts in the practice areas identified by the test specifications. Each item writer should undergo significant training, by item writing experts, as part of the item writing and validation process. The Board should request information about the item writing process, selection and qualification of items writers, and success of the item writing activities.

Exam Items and Questions

Test questions developed through the item writing process should be validated for use through intense content and practice expert review and field testing processes. Information about the item writers and item writing process should be provided as part of the regular reporting. Multiple-choice questions are recommended for licensure and certification examinations. True and false and fill-in-the blank questions are problematic and generally not recommended for use by test development experts.

A sufficient item bank of questions is necessary in order for the examination to be robust and avoid overexposure of items. The Board should ask questions about all dimensions of the item pool and how items are field tested and selected for inclusion in examinations.

Description of Test Assembly Procedures

Test assembly procedures should follow sound psychometric standards and be regularly reported. An examination cannot be assembled without adhering to psychometric and content parameters. Any certification or licensure examination used by the Board to determine which candidates can practice or not, must demonstrate consistency between administrations, correlate to the passing score and Practice Analysis findings, and discriminate between candidates who perform well and candidates who perform poorly. The Board should ask prospective examination providers about how such objectives are achieved and about the construction of all examinations.

Number of Test Forms Used Per Administration

Some examinations offer a number of test forms at each administration to reduce the exposure of items and deter candidate cheating. Each test form should meet established testing standards and be assembled according to the test specifications. In order to maintain the number of test forms, robust item pools should be assembled, preferably containing many items the number of questions needed to assemble the desired number of test forms. A large item pool is especially necessary with a computer-administered examination because of the frequency of administration and the resulting need to avoid overexposure of items. The overexposure of items may lead to memorization of items by test takers and invalidation of the examination. The Board should inquire about the number of test forms, item exposure, security procedures for maintaining the examination forms, and all other matters related to the administration of the examination.

Description of Type of Scoring Used (ie, Criterion-referenced)

Psychometrically sound procedures should be followed to score and validate the examination. Certification examination scoring should be based upon a valid, established criterion-referenced passing score, which is established using accepted methods, and reviewed with each administration. The passing score is not determined by a percentage of items answered correctly nor does it relate to normative (bell-curve) performance. Carefully calibrated and monitored item and test specification statistics are used to guarantee that each and every examination administered within a program is of the same mean difficulty (within recommended standard errors of measurement). Another scoring process that is sometimes used is a straight percentage of questions answered correctly for every administration, without equating back to a base examination or previous examination. Under this process, test results from administration to administration or candidate to candidate cannot be compared. In addition, the assessment of a candidate's competence or performance could be completely different from one administration to the next. This method of test scoring is not recommended for high stakes licensure and certification examinations. The Board should receive information about the scoring, the rationale for the method used as well as how the pass score has been determined. The information should conform to all testing and psychometric standards and be presented in a clear manner.

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Item Analyses

The performance of test items should be analyzed according to established psychometric methods. Every newly written item should be pretested through administration to actual candidates before being included in the scored item pool. This process provides statistical data to determine if the new item meets the psychometric and content requirements for inclusion as a scored item, which will be used to determine a candidate's score in future administrations. Every item is constantly monitored for performance, using detailed item statistics, to ensure that it is performing as desired. Wide variations in performance will trigger that the item be reviewed and possibly removed from the scored item pool. Information about this process and adherence to all acceptable testing and psychometric standards should be made available to the Boards.

Reports

Passing Score

Reports should be issued to the Boards and to the public on the passing score and process for determining the passing score. The pass/fail statistics should be regularly reported to the Boards.

Technical

Technical reports should be issued periodically, preferably after every administration of the examination. The report should include, at a minimum, operational information about the administration, a description of the test assembly procedures, reliability and validity information, test equating methods, scoring tables and procedures, and statistical summary information.

Score Reports to Examinees and Others

Score reports provided to candidates and the Boards should be developed in conjunction with the boards and meet all testing and psychometric standards. If possible, diagnostic information should be available for failing candidates.

Security Policies and Procedures

Information about the policies and procedures as well as actual copies of the policies and procedures should be provided at various times and available upon request.

Test Provider Bylaws, Organizational Chart, Budget/Revenue Accounting Statements, Annual Reports

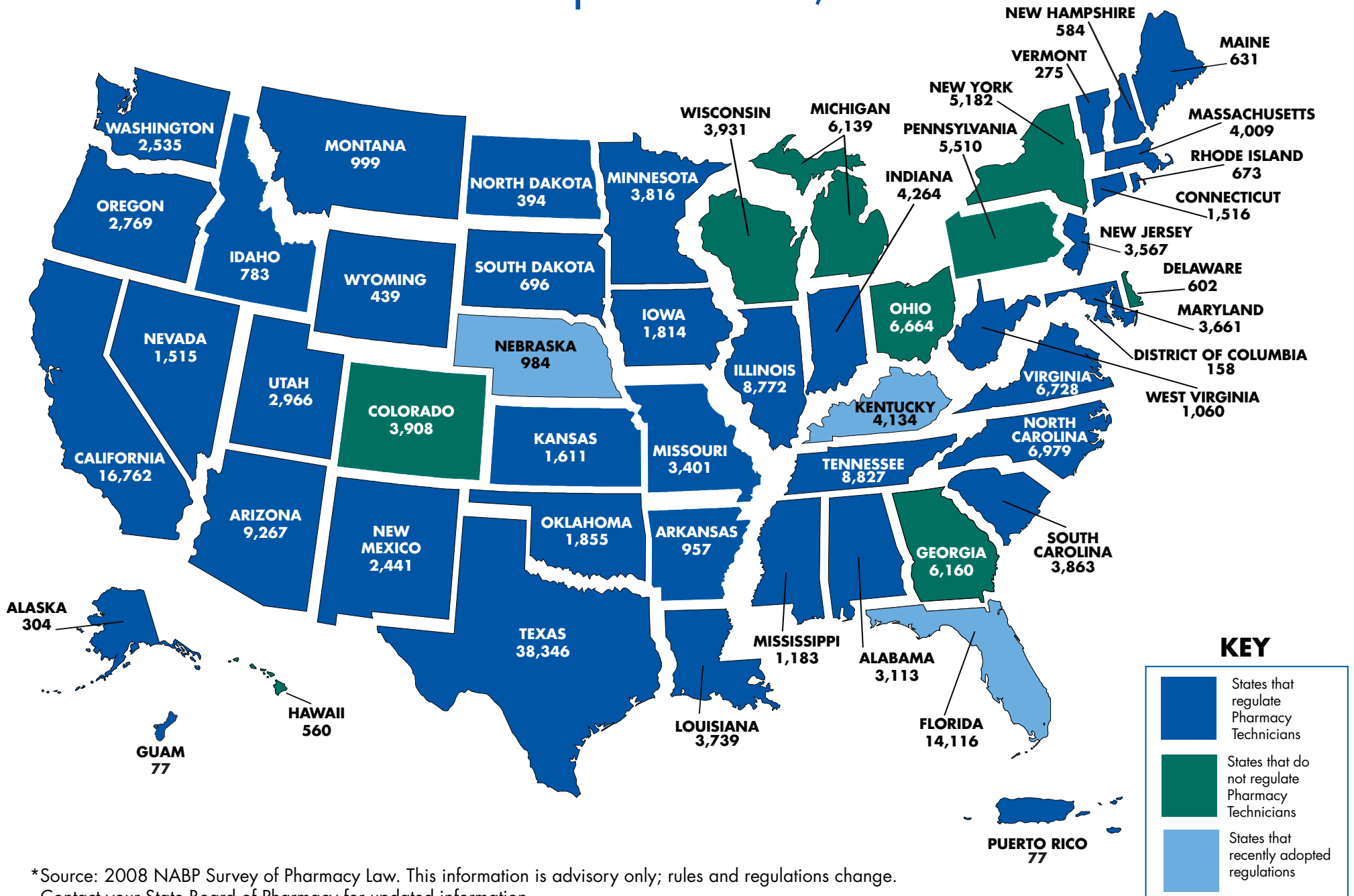
The test provider's Bylaws, organizational chart, budget/revenue accounting statements, and annual reports should be readily available upon request.

To promote and protect the public's health, safety, and welfare through the regulation of the practice of pharmacy is the mission of state boards of pharmacy and NABP. The use of psychometrically sound and valid licensure and certification examinations support this mission.

If you have any questions or comments regarding this matter you may contact me via phone at 847/391-4400 or via email at exec-office@nabp.net.

cc: NABP Executive Committee

Active PTCB CPhTs and State Regulations As of September 30, 2008



*Source: 2008 NABP Survey of Pharmacy Law. This information is advisory only; rules and regulations change. Contact your State Board of Pharmacy for updated information.



**Response Questions for the Texas State Board of Pharmacy Meeting
November 18, 2008**

1. When was PTCB established?

January 31, 1995

2. Who are the members of the governing board, if any?

The Board of Governors consists of six (6) members, five (5) appointed Governors of the following organizations: (1) American Pharmacists Association (APhA); (2) American Society of Health-System Pharmacists (ASHP); (3) Michigan Pharmacists Association (MPA); (4) Illinois Council of Health-System Pharmacists (ICHP); (5) National Association of Boards of Pharmacy (NABP); and the Executive Director/CEO of the PTCB.

At this time, the Governors are: John A. Gans, PharmD, ScD; Henri R. Manasse, Jr., PhD, ScD; Larry Wagenknecht, RPh; Scott Meyers, RPh; Carmen A. Catizone, MS, RPh, DPh; and Melissa Murer Corrigan, RPh

3. What is the mission or purpose of PTCB?

The Pharmacy Technician Certification Board (PTCB) develops, maintains, promotes and administers a nationally accredited certification and recertification program for pharmacy technicians to enable the most effective support of pharmacists to advance patient safety. PTCB is a not-for-profit, 501 (c) 6, corporation.

4. What was the first date the exam was administered?

July 29, 1995

5. How many individuals have taken the exam?

(See Appendix I for PTCE National and Texas Exam Statistics by Year)
416,545 in the United States; 89,301 in Texas

6. How many individuals have passed the exam?

(See Appendix I for PTCE National and Texas Exam Statistics by Year)
315,985 in the United States; 60,553 in Texas

7. How many individuals have failed the exam?

(See Appendix I for PTCE National and Texas Exam Statistics by Year)
100,560 in the United States; 28,748 in Texas

8. Do any states recognize the exam as a pre-requisite for registration/licensure/certification? If so, which states?

The Pharmacy Technician Certification Exam (PTCE) is accepted in 28 states. The PTCE is utilized as the exclusive mechanism for certification, registration, and/or licensure in Arizona, Louisiana, Maryland, South Carolina, Texas, and Wyoming. The PTCE is used as a mechanism to increase pharmacy technician to pharmacist ratios in Alabama (3:1), Connecticut (3:1), Kansas (3:1), Massachusetts (4:1), Minnesota (3:1), New Jersey (3:1),

North Carolina (2:1), and Tennessee (3:1). The exam is also accepted as one of multiple mechanisms for certification, registration and/or licensure in Alabama, California, Georgia, Iowa, Kentucky, Montana, New Mexico, Oregon, Rhode Island, Utah, and Virginia.

9. How often is the exam given?

In 2008 the exam was administered in 4 testing windows, resulting in 130 testing days, plus some weekend days during heavy demand. On April 1, 2009, PTCB will implement continuous testing, allowing candidates to test throughout the entire year like NAPLEX. Beginning January 5, 2009, the PTCE will be available daily.

10. Where is the exam given?

Pearson VUE testing sites across the United States, Pearson VUE sites in US territories, and Pearson VUE military DANTES sites. Currently there are over 200 Pearson Professional Centers and 75 Pearson-approved DANTES sites available, although additional sites can be established at the request of a Board of Pharmacy.

a. What security measures are offered at the exam administration sites?

Pearson Professional Centers are specifically designed and built to meet the requirements demanded by today's high stakes testing and licensing programs. These include:

- **Location:** Population studies were conducted to determine the optimal number and locations for Pearson Professional Centers. These test centers are strategically located in quiet business settings that are convenient to public transportation and major highways.
- **Candidate Comfort:** The physical design of each test center encourages peak performance from exam candidates by providing a quiet, distraction-free professional testing environment. Each location provides accommodations for candidates with special needs.
- **Candidate Identification:** Candidate identification procedures are strictly enforced. PTCB utilizes the digital biometric devices (photograph, signature and fingerprint). These are used together with strict identification requirements to confirm candidate identity and to ensure individuals on the schedule are the same persons taking the test. Signature and photo verification are performed by the test administrator at admission, and fingerprints are compared by the system at admission and upon entering/exiting the testing room.
- **Security:** A dedicated testing room houses the test delivery workstations, placed so that candidates cannot view each other. The testing room is entered through a separate entrance, and all candidates are monitored via audio and video. The proctor monitors the audio and video feeds from the testing room in real time. The feeds are also stored digitally for a minimum of thirty days, so they can be made available to Channel Quality or exam sponsors if needed for incident investigations. The proctor escorts each candidate in and out of the testing room individually, and a sign on the door clearly states that entrance to the room is only permitted when escorted by an administrator. The layout of the test center allows no direct sight lines between the waiting area and the testing area.
- **Professional Staff:** Test administration staff: Generally, a minimum of two Pearson VUE certified test administrators staff each test center whenever an exam is delivered.

- **Server Room:** The file servers that contain the exam item banks and digital video recorder (DVR) system are secured in a separate server room (also known as a data closet) at each Pearson Professional Center. This room is secured by a mechanical combination lock and key. Administrators do not have access to the room and are not provided with the lock combination. The combination is known only to PPC Facilities Support, VSS and the Test Center Manager.

11. What is the cost to take exam?

The cost is \$129 for each candidate registration.

12. How many questions are on the exam?

The PTCE contains 80 multiple-choice operational questions plus an additional 10 pre-test questions that do not count toward the final score.

a. Are the exam questions pretested?

Yes, each question is pretested and must meet rigorous criteria to be included as an operational item.

b. What is the exam blueprint, including the subject/practice areas covered and the percentage of questions in each subject/practice area?

(See Appendix II. Content Outline of the PTCE for detailed outline.)

The exam is made of three basic knowledge functions:

- I. Assisting the Pharmacist in Serving Patients (66% of the exam)
- II. Maintaining Medication and Inventory Control Systems (22% of the exam)
- III. Participating in the Administration and Management of Pharmacy Practice (12% of the exam)

c. How do you determine the blueprint of the exam?

The content of the PTCE is based upon a practice analysis study.

d. Is a practice analysis conducted? If so, when was the practice analysis conducted and how often is the analysis repeated?

It is updated every 5 years with the most recent study conducted by PES in 2005. Interim reviews are conducted on an as-needed basis.

e. Are exam questions assigned “difficulty levels” and is “difficulty” used as part of the blueprint or when assigning a pass level?

Difficulty level of question items is not part of the blueprint although it is taken into account in developing exams. Items selected for examinations typically have a difficulty level or “P Value” of between 30% and 90%. The rationale for this is that items with a P value over 90% are too easy, and do not give us much information concerning a candidate’s ability. Items with a P value below 30% may be too specialized, too difficult, or may be flawed in some other way (guessing, more than one right answer).

As described below, the pass point is set via a criterion-based methodology. Content experts make judgments about the difficulty of each item, and these judgments are used by PTCB in setting a pass point.

In each window, three (3) forms are administered with each form containing 80 scored items and 5 pre-test blocks of 10 items; (3) each of the 25 forms of the

PTCE administered since March 2006 possess reliabilities coefficients in excess of .90, a value considered excellent in credentialing testing; Using the pre-testing process, PTCE is able to calibrate items and ensure that scores on different forms of the examination are equivalent; PTCB has expanded its bank of calibrated items over the past few years in order to build valid and reliable examinations of consistent quality.

13. How many questions are in your question pool?

In order to evaluate the question pool, it is necessary to review various categories of items, including calibrated, in-range items which are operational, and non-calibrated, pretest items.

There are **2217 CALIBRATED IN-RANGE** items in the PTCB bank as of today, including **791 CALCULATION** items. Each calibrated, in-range item is immediately available for use as an operational item on a future test form. This does NOT include the **150 pretest items** used during the 3rd window 2008 exam that are about to be calibrated. Pending statistical analysis and the review of the pre-test results, an additional 100 to 125 questions may be added to the bank of calibrated, in-range questions.

There are **1468 PRETEST** items in the PTCB bank as of October 21, 2008, including **112 CALCULATION** items. This does not include the **300 pretest** items on the exams for the 3rd & 4th windows of 2008. This does include the **150 pretest** items on the exams for the 1st & 2nd windows of 2009 that have already been developed/reviewed. There will be another **300** items calibrated once the exams from the 3rd & 4th windows of 2008 have been administered/calibrated.

Finally, there are **475** new items validated at the May 2008 Item Writing Workshop that are currently being put into the bank for future pre-test purposes.

a. Who are your item writers and how are they selected and trained?

PTCB Item Writers are comprised of Doctors of Pharmacy, Registered Pharmacists, and PTCB Certified Pharmacy Technicians whose practice settings and locations represent a cross section of practice. The Item Writer selection process begins each year in the fall. Interested individuals must submit a standard application for consideration by PTCB to volunteer as a PTCB Item Writer, and in the application, disclose information regarding their years of practice, professional credentials, geographic location, practice setting, education level, and eligibility to write items as it pertains to PTCB's confidentiality requirements. Each applicant, along with the standard application to volunteer, must also submit an accurate and up-to-date resume or curriculum vitae to supplement the application. PTCB reviews each application and resume, and selects qualified volunteers from the pool. Each year, the goal is to accept 100 Item Writers. At the completion of the item writing process, a select number of writers is invited to participate in an Item Writing Workshop to revise and polish the items submitted by their colleagues.

b. How often do the item writers review the questions?

An Item Writing Workshop is held annually to review and revise the items submitted by the general pool of selected item writers. A select group of writers from the cycle is invited to attend the 3 day workshop, where the items are polished and revised for further review by the Certification Council. Twice annually, the PTCB Certification Council takes part in the maintenance and review of the item bank at their Examination Construction Meetings where they construct future forms of the

examination, revising and reviewing the items while they complete the construction process, and also review and revise items in the item bank.

c. What measures do you use to assure the security of the question pool?

PES is the test development vendor, and as such maintains the item pool and transmits tests securely to the CBT vendor. (See the Appendix III describing PES' security policy). The CBT test administration vendor, Pearson VUE, has procedures in place to keep all test items secure, as well as to ensure that only eligible candidates are admitted to testing.

PTCB's contracted testing vendor, Pearson VUE, subcontracts Professional Examination Service to build and maintain the PTCB Item Bank. By contract, Pearson VUE is responsible for maintaining the secure storage and maintenance of test items and records such as tests taken and test results, using industry standard archiving technology. By contract, Pearson VUE is also responsible for taking precautions to prevent the loss or alteration of items, item banks, and tests from the development phase through test administration and reporting. Extraordinary security measures are in place for the moving of the items either electronically or physically, including the policy to not move items electronically over the internet. In the computer-based testing model, Pearson VUE maintains the items and forms which are in testing, again using extreme measures of electronic security. The item bank is kept at a very robust number of items and a limited number of forms of the PTCB examination are administered during any given window to ensure that PTCB candidates are not overexposed to the item pool. If items or items under construction should need to be moved physically, such as may happen when an item writer or Certification Council review of examination items must occur, Pearson VUE is contracted to assure that extreme caution in the storage and movement of the items is taken. Confidentiality agreements and waivers which are legally binding are signed by any individual who is exposed to the item bank, including item writers, Certification Council, Program Staff at Pearson VUE and PES, Program Staff at PTCB, and the PTCB Board of Governors. Additionally, each candidate for the PTCB examination must sign an attestation prior to taking the PTCB examination, which legally binds each individual who takes the examination to not redistribute or memorize examination questions.

14. What steps are taken to assure that the PTCB exam is legally defensible?

The primary goal of the Pharmacy Technician Certification Board (PTCB) examination program is to protect the public by ensuring that candidates demonstrate the knowledge(s) and skill(s) related to minimum competence or competent practice in content areas that are relevant to practice as an entry-level pharmacy technician. (See Appendix IV for Examination Psychometric Data.)

Test validity is a concept that refers to how well a test measures what it is designed to measure. The Pharmacy Technician Certification Examination's (PTCE) validity is content-based. There is a validity "trail," described below, which establishes that the tests administered to candidates are a valid reflection of what is required for actual practice.

The relevance in terms of importance and criticality of the content areas assessed by the PTCE tests to practice as an entry-level pharmacy technician has been supported by the findings of the job analysis study. This extensive study, incorporating a large survey,

was undertaken to define test specifications -- the job-related domains, tasks, knowledge, and skills required of entry-level pharmacy technician candidates. To ensure that the test items reflect the content areas presented in the test specifications, each item is then classified by content experts according to its application to the specific domains, tasks, knowledge, and skills specified in this analysis.

In addition to item classification, items must also meet minimum standards of importance and criticality to entry-level work as a pharmacy technician in order to be included in the item bank. Further, all items are examined for fairness to candidates – specifically for bias and stereotyping. Items that pass through these reviews are added to the item bank.

Test forms for the PTCE examination are constructed from the item bank to reflect the test specifications described above. Each test form contains operational or scored items as well as pretest items. All operational/scored items have been tested before, and have generated statistics that fall within a predetermined acceptable range for this exam.

Certification examinations are typically criterion referenced (i.e., candidates' performance is not compared to the performance of other candidates taking the examination). In order to pass a certification examination, a candidate must obtain a score equal to or higher than the "minimum passing score." The minimum passing score represents an absolute standard and does not depend on the performance of other candidates taking the same examination.

The minimum passing score on a certification examination is initially set for the base form of the exam by content experts using a procedurally-valid standard setting methodology. Subsequent forms of the exam are equated to the base form via Item Response Theory (IRT) equating.

Exams are administered in a secure computer-based testing (CBT) environment. Results undergo multiple quality control checks before final scores are generated and mailed to candidates.

The PTCE examination is **not** intended as a predictor of future success within the profession. Consistent with the objectives of the PTCB examination program, the tests are designed to separate candidates into two distinct groups: candidates whose knowledge and skill levels are deemed acceptable for entry-level certification as a pharmacy technician and candidates whose level of knowledge falls below the minimum required for certification.

15. How can states verify certification by your organization?

- a. Could Texas send you an electronic file of applicants for registration and you return electronically each applicant's certification status?

Yes, this is the current ongoing process between Texas and PTCB.



Appendix I. National & Texas Examination Statistics

PHARMACY TECHNICIAN CERTIFICATION BOARD (PTCB) STATISTICS¹

EXAM DATE	# WHO SAT FOR PTCE	# WHO PASSED PTCE	% PASSED
1995 Exams	7,473	6,187	83
1996 Exams	6,862	5,575	81
1997 Exams	8,297	6,860	83
1998 Exams	15,467	12,617	82
1999 Exams	20,283	16,734	83
2000 Exams	33,359	25,732	77
2001 Exams	31,107	24,269	78
2002 Exams	33,794	26,917	80
2003 Exams	39,710	32,232	81
2004 Exams	41,245	32,114	78
2005 Exams	45,991	35,838	78
2006 Exams	49,689	32,319	65
2007 Exams	45,045	31,490	70
2008 Feb 4 to Mar 14	7,547	5,165	68
2008 April 28 to June 20	14,291	10,155	71
2008 Aug. 18 to Sept. 26	16,385	11,781	72
TOTAL	416,545	315,985	76
TOTAL # WHO PASSED PTCE			315,985
TOTAL # WHO COMPLETED TRANSFER PROCESS			6,670
TOTAL # OF CERTIFIED PHARMACY TECHNICIANS (CPhTs)			322,655

¹ Certified by PTCB (July 31, 1995 through September 26, 2008)



PHARMACY TECHNICIAN CERTIFICATION BOARD TEXAS STATISTICS²

Exam Date	Total Candidates	Passing Candidates	Passing Rate
1995 Exams	588	467	79%
1996 Exams	745	575	77%
1997 Exams	1,181	952	81%
1998 Exams	2,488	1,965	79%
1999 Exams	4,977	3,986	80%
2000 Exams	12,059	9,103	75%
2001 Exams	7,409	5,119	69%
2002 Exams	7,033	5,042	72%
2003 Exams	7,804	5,634	72%
2004 Exams	9,250	6,348	69%
2005 Exams	10,124	6,860	68%
2006 Exams	10,140	5,453	54%
2007 Exams	8,564	5,001	58%
2008 Feb 4 to Mar. 14	1,470	828	56%
2008 April 28 to June 20	2,795	1,695	61%
2008 Aug. 18 to Sept.26	2,674	1,525	57%
Totals	89,301	60,553	68%

² Certified by PTCB (July 31, 1995 through September 26, 2008)



Appendix II. Content Outline of the Pharmacy Technician Certification Exam (PTCE)

The content of the PTCE is characterized under three main function areas:

1. Assisting the pharmacist in serving patients (66% of the exam);
2. Maintaining Medication and Inventory Control Systems (22% of the exam);
3. Participating in the administration and management of pharmacy practice (12% of the exam).

I. Assisting the Pharmacist in Serving Patients (66% of exam)

- A. Receive prescription/medication order(s) from patient/patient's representative, prescriber, or other healthcare provider
 - 1. Accept new prescription/medication order from patient/patient's representative, prescriber, or other healthcare professional
 - 2. Accept new prescription/medication order electronically (for example, by telephone, fax, or electronic transmission)
 - 3. Accept refill request from patient/patient's representative
 - 4. Accept refill authorization from prescriber or other healthcare professional electronically (for example, by telephone, fax, or electronic transmission)
 - 5. Contact prescriber/originator for clarification of prescription/ medication order refill
 - 6. Perform/accept transfer of prescription/medication order(s)
- B. Assist the pharmacist in accordance with federal rules and regulations in obtaining from the patient/patient's representative such information as diagnosis or desired therapeutic outcome, disease state, medication history (including over-the-counter [OTC] medications and dietary supplements), allergies, adverse reactions, medical history and other relevant patient information, physical disability, and payer information (including both self-pay and third party reimbursement)
- C. Assist the pharmacist in accordance with federal rules and regulations in obtaining from prescriber, other healthcare professionals, and/or the medical record such information as diagnosis or desired therapeutic outcome, disease state, medication history (including over-the-counter [OTC] medications and dietary supplements), allergies, adverse reactions, medical history and other relevant patient information, physical disability, and payer information (including both self-pay and third-party reimbursement)
- D. Collect and communicate patient-specific data (for example, blood pressure, glucose, cholesterol levels, therapeutic drug levels, immunizations) to assist the pharmacist in monitoring patient outcomes
- E. Collect and communicate data related to restricted drug distribution programs (for example, thalidomide, isotretinoin, clozapine)
- F. Collect and communicate data related to investigational drugs
- G. Assess prescription or medication order for completeness (for example, patient's name and address), accuracy, authenticity, legality, and reimbursement eligibility
- H. Update the medical record/patient profile with such information as medication history (including [OTC] medications and dietary supplements), disease states, compliance/adherence patterns, allergies, medication duplication, and/or drug-disease, drug-drug, drug-laboratory, drug-dietary supplement and/or OTC, and drug-food interactions
- I. Assist the patient/patient's representative in choosing the best payment assistance plan if multiple plans are available to patient
- J. Process a prescription/medication order
 - 1. Enter prescription/medication order information into patient profile

2. Select the appropriate product(s) for dispensing (for example, brand names, generic substitutes, therapeutic substitutes, formulary restrictions)
 3. Obtain pharmaceuticals, durable and non-durable medical equipment, devices, and supplies (including hazardous substances, controlled substances, and investigational products) from inventory
 4. Calculate quantity and days supply of finished dosage forms for dispensing
 5. Measure or count quantity of finished dosage forms for dispensing
 6. Process and handle radiopharmaceuticals
 7. Perform calculations for radiopharmaceuticals
 8. Process and handle chemotherapeutic medications commercially available in finished dosage forms (for example, Efudex, mercaptopurine)
 9. Perform calculations for oral chemotherapeutic medications
 10. Process and handle investigational products
 11. Package finished dosage forms (for example, blister pack, robotic/ automated dispensing, vial)
 12. Affix label(s) and auxiliary label(s) to container(s)
 13. Assemble patient information materials (for example, drug information sheets, patient package inserts, Health Information Portability and Accountability Act [HIPAA] literature)
 14. Check for accuracy during processing of the prescription/medication order (for example, National Drug Code [NDC] number, bar code, and data entry)
 15. Verify the data entry, measurements, preparation, and/or packaging of medications produced by other technicians as allowed by law (for example, tech check tech)
 16. Prepare prescription or medication order for final check by pharmacist
 17. Prepare prescription or medication order for final check by pharmacy technician as allowed by law (for example, tech check tech)
 18. Perform Nuclear Regulatory Commission (NRC) required checks for radiopharmaceuticals
- K. Compound a prescription/medication order:
1. Assemble equipment and/or supplies necessary for compounding the prescription/medication order
 2. Calibrate equipment (for example, scale or balance, total parenteral nutrition [TPN] compounder) needed to compound the prescription/medication order
 3. Perform calculations required for preparation of compounded IV admixtures
 4. Perform calculations for extemporaneous compounds

5. Compound medications (for example, topical preparations, reconstituted antibiotic suspensions) for dispensing according to prescription and/or compounding guidelines
 6. Compound medications in anticipation of prescriptions/medication orders (for example, compounding for a specific patient)
 7. Prepare sterile products (for example, TPNs, piggybacks, IV solutions, ophthalmic products)
 8. Prepare radiopharmaceuticals
 9. Prepare chemotherapy
 10. Record preparation and/or ingredients of medications (for example, lot number, control number, expiration date, chemotherapy calculations, type of IV solution)
- L. Provide prescription/medication to patient/patient's representative:
1. Store medication prior to distribution
 2. Provide medication and supplemental information (for example, patient package inserts) to patient/patient's representative
 3. Package and ship pharmaceuticals, durable and non-durable medical equipment, devices, and supplies (including hazardous substances and investigational products) to patient/patient's representative
 4. Place medication in dispensing system (for example, unit-dose cart, automated systems)
 5. Deliver medication to patient-care unit
 6. Record distribution of prescription medication
 7. Record distribution of controlled substances
 8. Record distribution of investigational drug
 9. Record distribution of restricted drugs (for example, isotretinoin, clozapine, thalidomide)
 10. Record distribution of prescription/medication to patient's home
- M. Determine charges and obtain reimbursement for products and services
- N. Communicate with third-party payors to determine or verify coverage
- O. Communicate with third-party payors to obtain prior authorizations
- P. Communicate with third-party payors and patients/patients' representatives to rectify rejected third-party claims
- Q. Identify and resolve problems with rejected claims (for example, incorrect days supply, incorrect ID number)
- R. Provide supplemental information (for example, disease state information, CDs) as requested/required
- S. Direct patient/patient's representative to pharmacist for counseling

- T. Perform drug administration functions under appropriate supervision (for example, perform drug/IV rounds, check pumps, anticipate refill of drugs/IVs)
- U. Process and dispense enteral products

II. Maintaining Medication and Inventory Control Systems (22% of exam)

- A. Identify pharmaceuticals, durable and non-durable medical equipment, devices, and supplies (including hazardous substances and investigational products) to be ordered
- B. Place routine orders for pharmaceuticals, durable and nondurable medical equipment, devices, and supplies (including hazardous substances and investigational products) in compliance with legal, regulatory, formulary, budgetary, and contractual requirements
- C. Place emergency orders for pharmaceuticals, durable and non-durable medical equipment, devices, and supplies (including hazardous substances and investigational products) in compliance with legal, regulatory, formulary, budgetary, and contractual requirements
- D. Receive pharmaceuticals, durable and non-durable medical equipment, devices, and supplies (including hazardous substances and investigational products) and verify against specifications on original purchase orders
- E. Place pharmaceuticals, durable and non-durable medical equipment, devices, and supplies (including hazardous substances and investigational products) in inventory under proper storage conditions while incorporating error prevention strategies
- F. Perform non-patient-specific preparation, distribution, and maintenance of pharmaceuticals, durable and non-durable medical equipment, devices, and supplies (including hazardous substances and investigational products) while incorporating error prevention strategies (for example, crash carts, clinic and nursing floor stock, automated dispensing systems)
- G. Remove from inventory expired/discontinued/slow moving/overstocked pharmaceuticals, durable and nondurable medical equipment, devices, and supplies (including hazardous substances and investigational products)
- H. Remove from inventory recalled pharmaceuticals, durable and nondurable medical equipment, devices, and supplies (including hazardous substances and investigational products)
- I. Dispose of or destroy pharmaceuticals or supplies (for example, hazardous substances, investigational products, controlled substances, nondispensable products)
- J. Communicate changes in product availability (for example, formulary changes, recalls, shortages) to pharmacy staff, patient/patient's representative, physicians, and other healthcare professionals
- K. Implement and monitor policies and procedures to deter theft and/or drug diversion
- L. Maintain a record of controlled substances ordered, received, and removed from inventory
- M. Maintain a record of investigational products ordered, received, and removed from inventory
- N. Perform required inventories and maintain associated records
- O. Maintain record-keeping systems for repackaging, non-patient specific compounding, recalls, and returns of pharmaceuticals, durable and nondurable medical equipment, devices, and supplies (including hazardous substances and investigational products)
- P. Compound non-patient specific medications in anticipation of prescription/medication orders
- Q. Perform quality assurance tests on compounded medications (for example, end product testing and validation)

- R. Repackage finished dosage forms for dispensing (for example, unit dose, blister pack, oral syringes)
- S. Participate in quality assurance programs related to pharmaceuticals, durable and non-durable medical equipment, devices, and supplies (including hazardous substances and investigational products)

III. Participating in the Administration and Management of Pharmacy Practice (12% of exam)

- A. Coordinate written, electronic, and oral communications throughout the practice setting (for example, route phone calls, faxes, verbal and written refill authorizations; disseminate policy and procedure changes)
- B. Update and maintain patient information (for example, insurance information, demographics, provider information) in accordance with federal regulations and professional standards (for example, Health Insurance Portability and Accountability Act [HIPAA])
- C. Collect productivity information (for example, the number of prescriptions filled, fill times, payments collected, rejected claim status)
- D. Participate in quality assurance activities (for example, medication error prevention, customer satisfaction surveys, and internal audits of processes)
- E. Generate quality assurance reports (for example, compile or summarize data collected for evaluation or action plan development, root cause analysis)
- F. Implement and monitor the practice setting for compliance with federal regulations and professional standards (for example, Materials Safety Data Sheet [MSDS], Occupational Safety Health Administration [OSHA], Joint Commission on Accreditation of Healthcare Organizations [JCAHO], United States Pharmacopeia [USP])
- G. Implement and monitor policies and procedures for infection control
- H. Implement and monitor policies and procedures for the handling, disposal, and destruction of pharmaceuticals and supplies (for example, hazardous substances, investigational products, controlled substances, nondispensable products, radiopharmaceuticals)
- I. Perform and record routine sanitation, maintenance, and calibration of equipment (for example, automated dispensing equipment, balances, TPN compounders, and refrigerator/freezer temperatures)
- J. Update, maintain, and use manual or electronic information systems (for example, patient profiles, prescription records, inventory logs, reference materials) in order to perform job related activities
- K. Use and maintain automated and point-of-care dispensing technology
- L. Perform billing and accounting functions for products and services (for example, self-pay, third-party adjudication, pharmaceutical discount cards, medication reimbursement)
- M. Communicate with third-party payers to determine or verify coverage for products and services
- N. Coordinate and/or participate in staff training and continuing education
- O. Perform and/or contribute to employee evaluations and competency assessments
- P. Participate in the establishment, implementation, and monitoring of the practice setting's policies and procedures

Appendix III. PES Security Procedures

PES Security Procedures



Prepared by

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Revised October 2007

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INTRODUCTION

The licensing and certification organizations that do business with Professional Examination Service have entrusted our company—and each of our employees—with their most valuable possession: the documents and information related to their credentialing examination programs and to the candidates who seek these credentials. PES thus takes on a significant co-responsibility for the integrity and validity of individual examinations as well as the overall programs. Along with this critical responsibility come risks: not only for significant financial burdens associated with replacement of lost materials, but, perhaps more importantly, the potential for loss of our clients' confidence, and for damage to our reputation as a trustworthy partner in their missions. Since trust and confidence are key elements in a client organization's decision to do business with PES, in a sense our very existence, as well as our ability to grow, is intimately related to our success in maintaining security.

PES also recognizes its responsibility to provide a work environment that is free of any physical or behavioral element that represents a risk to employee safety and well being, and is committed to maintaining appropriate confidentiality and handling of employee-related information and documents.

It is with these important responsibilities in mind that we have prepared this document, which outlines security policies and provides an overview of the procedures undertaken by staff to carry them out. While PES management makes every effort to secure the physical surroundings, computers, and electronic communications used by employees, we recognize that it is each individual's contribution—in the form of everyday work habits and procedures—that ensures the maintenance of a truly secure environment. PES is proud of the staff's ongoing commitment to this mission-critical objective.

The sections of this document address the topic of security both as it applies to specific client services and deliverables, and in a more general system-wide context.

Part I, "Examination Content and Candidate-related Information," takes a function-centered approach, provides an overview of safeguards applied to the two primary types of sensitive information, namely examination content and candidate-related data;

Part II, "Computer Network Security and Electronic Communication," discusses the increasingly challenging area of controlling access to sensitive information, secure storage of data, and providing safe means of transmitting data electronically;

Part III, "Company-wide Security and Confidentiality Policies," outlines physical and electronic security measures, procedures in PES administrative and support function areas, and security-related personnel policies.

Internal control and security in financial technology, with the objective of providing reliable financial information, is a major focus at PES. To evaluate and test our security and internal controls related to technology, PES engages our outside auditors to perform audit procedures in accordance with the AICPA Statement on Auditing Standards No. 94 and 70. Their audit focuses on effectiveness and efficiency of operations, reliability of financial reporting, compliance with applicable laws and regulations and the security of our data environment.

PART I—EXAMINATION CONTENT AND CANDIDATE-RELATED INFORMATION

Production/Client Review of Examination Materials

The security of all materials that form the content of the examinations produced for PES clients is primarily the responsibility of staff in the Program, Research & Development, Production/Editorial, and Distribution areas of the company. In each of these areas, specific procedures are in place for counting, documenting, and storage of documents, as well as for their transmission between departments and to authorized recipients outside the company. Highlights of these procedures implemented with all multiple-choice examinations are summarized below.

PES Staff Procedures

- Incoming “raw” test questions or problems are received by Program department staff, who document their transmission to the Production/Editorial area via a ClockWise¹ task and/or written memo. After completion of the production process, and final client approval the original documents are ultimately destroyed via supervised shredding.
- Access to the computer files where test questions/problems are entered and stored is generally restricted to Production/Editorial staff; limited access on a read-only basis is granted to Program department staff.
- Use of printouts of test questions, whether for completion of the editorial review process or for development of examination drafts, occurs only in secure, attended work areas. Interim or working copies of items or examinations that are not intended for presentation to clients are destroyed regularly via supervised shredding in the secure Distribution department work area.
- Printed “Master Office Copies” of every final examination (both paper-and-pencil and CBT), along with a finalized key, are maintained in a secure environment.

Procedures Pertaining to Authorized Client Representatives

- Printed copies of items, examinations, or answer keys that are intended for review by authorized client representatives are produced only on submission of a printed order from the Program staff. All examination copies are issued tracking numbers that must be reconciled upon return of the materials. Shipping is generally via Federal Express, to enable real-time tracking during transport.
- During the item- and examination-development process, secure materials are most often presented to client representatives under direct supervision of PES personnel. Should item writers and examination reviewers receive/examine materials in an unsupervised setting, all recipients are required to sign a sworn statement regarding maintenance of security and confidentiality, and must follow specific procedures for return or destruction of the secure materials upon completion of the review activity.
- Final printed copies of examinations administered in paper-and-pencil settings are kept at all times in the possession of PES or its authorized representatives, and are generally not available to client representatives. Finalized answer keys never leave the premises of PES, except in response to documented requests that are approved in advance by client organizations.

¹ Clockwise is an on-line computerized system for scheduling tasks, completion dates, and project status throughout PES.

Paper-and-Pencil Examination Administration

Oversight and direction of activities as paper-and-pencil examination sites are provided by PES's Department of Test Administration Services (TAS). Except for sites associated with licensing examination programs, where formal authority over the test site is typically retained by state or provincial boards, and testing associated with the administration of practical examinations, TAS hires the Chief Examiner, arranges for the site, and monitors the Chief Examiner's recruitment, training, and supervision of test-site personnel.

Chief Examiners at all PES-supervised test sites are encouraged to successfully complete a certifying examination covering basic security procedures in effect at PES test sites. They also sign a sworn statement acknowledging possible financial consequences associated with failure to return the complete test-site materials shipment, and may forfeit payment for their services in the event of any such loss.

Prior to the examination day, the Chief Examiner is required to conduct an orientation session to review all security and operational procedures and assign specific proctor duties, as well as inform the staff about reporting time on the examination day. The following general security overview is communicated to test-site personnel.

Test Site Personnel Policies

- Under penalty of law, no individual may retain or duplicate any portion of the examination materials, by any means whatsoever, including memorization or electronic transmission.
- The contents of examination booklets are strictly confidential, and may be viewed only by officially registered candidates. Test site staff may view the contents only in cases where a defect has been reported by a candidate.
- Test site staff is accountable at all times for the whereabouts and counts of used and unused examination booklets and used answer sheets. These materials can **never** be left unattended.
- Only test site staff and officially admitted candidates are allowed in the examination room. Visitors or on-site observers must obtain approval from PES prior to the examination day. Spouses, children, or other companions of candidates should not be allowed to congregate near the examination room.

Candidate Policies

- "Special accommodation" status of candidates with special needs is strictly confidential. To ensure that privacy is respected, do not discuss the nature of the disability that has resulted in provision of a testing accommodation.
- All personal belongings must be stored in the designated area in or near the examination room. Access to personal belonging is prohibited at all times during the examination. Beepers, cell phones, and other electronic devices must be turned off and stored with personal belongings.
- All candidates are required to read the "Statement of Acknowledgment" appearing in the examination booklet, and sign the answer sheet to indicate their acceptance of its terms.
- Only one examination booklet and one answer sheet is allowed in a candidate's possession at any one time during the examination session. All materials must be surrendered during approved departures from the examination room.
- Possession of books, note-taking materials, cellular phones, calculators, or any other devices is strictly prohibited during the examination. Candidates with special approval for use of scratch paper must surrender all materials when being dismissed from the examination room.

Test Site Preparation

Another primary Chief Examiner responsibility is to act as the liaison between TAS and the facilities-management staff at the test-administration site. In this connection, the Chief Examiner performs the following security-related functions:

- Confers with facilities-management staff about planned usage of rooms located adjacent to or above the examinations room(s), ascertains whether special events are scheduled for the grounds or facilities, and verifies weekend accessibility of entrances, roadways, or parking areas.
- During a visit to the test site prior to the examination day, verifies suitability of environmental features (lighting, adequate spacing of desks/tables, chalkboards, drinking fountains, candidate storage areas, etc.), and plans for secure storage of examination materials, supervision of hallways and restrooms, and arrangement of the candidate registration area.

Preparation and Handling of Examination Materials Shipments

Security measures pertaining to the preparation and handling of examination materials during shipment and receipt at paper-and-pencil test sites are as follows:

- All materials are inventoried and packed in a secure area and shipped both to and from test sites via Federal Express or other secure express carrier. PES ensures security and accountability for all materials via the following procedures:
 - Examination booklets are numbered sequentially and the range of numbers allocated to each test site is recorded. Each booklet has a paper seal affixed that remains unbroken until distribution to candidates on the examination day. Booklets are shrink-wrapped in packets of 5 or 10, or as otherwise specified with the client, and the weights of packets are reviewed for accuracy.
 - Answer sheets, comment forms, surveys, rosters, administrative logs, and any other candidate documents—as well as the shrink-wrapped examination booklet packets—are all inventoried prior to shipment and detailed on the packing list for each test site. Actual counts of each material are not revealed in advance to the test-site administrator receiving the shipment, but are verified against an inventory report made by the administrator immediately upon receipt of the shipment (approximately 5 working days before the test date). Count discrepancies or shortages are immediately resolved by the PES department of Test Administration Services.
 - At the end of the examination period, the Chief Examiner performs a final inventory of all materials and then reconciles these counts with those reported to PES during the pre-administration inventory. Counts of used (broken-seal) examination booklets and answer sheets are also reconciled with the roster record of candidates admitted to the examination room. A second inventory is then performed independently by a “verifying proctor,” who does not have access to the originally reported counts or rosters. Both the Chief Examiner and this proctor sign the inventory documents returned to PES.

- Detailed procedures for sites where testing is conducted in multiple rooms are also included in the Manual of Instructions. In general, a proctor is assigned the role of “Room Supervisor,” a function that basically mirrors the Chief Examiner’s responsibilities for accounting for all materials issued to the room at the start of the examination and collected from it at the end of the examination period.

Candidate Registration/Seating

- Typical candidate admission requirements: PES admission card or authorized letter of eligibility; at least one form of personal I.D. with recent photograph and signature; at least one additional form of personal I.D. with signature; arrival at the registration area before the official start of candidate instructions and distribution of materials; and advance approval from the credentialing organization for special testing conditions (if applicable).
- Registration procedure for test-site staff includes: locating candidate name on the test-site roster; verifying candidate identity via the photograph-I.D., requesting that the candidate sign the roster; and finally verifying the signature against the I.D. presented.
- Test site staff are required to obtain approval from TAS staff before admitting any candidate who does not meet the documentation requirements (no admission document and/or insufficient I.D.), displays some other departure from procedure (late arrival, questionable match upon photo/signature verification, name not on roster, request for special testing conditions without prior approval), or presents an unusual situation such as inability to sign the roster due to injury. Admission of such candidates is granted on a case-by-case basis, sometimes in consultation with the client organization.
- Once candidate seating begins, candidates are directed to random seats by the proctor supervising the examination room. Proctors are specifically instructed to separate candidates who arrive together or appear to be acquainted with one another.
- Candidates may only have authorized materials at their assigned seats; they are required to store all other personal belongings in a designated area.

Distribution of Examination Materials/Reading of Candidate Instructions

- Proctors hand examination booklets directly to each candidate, one at a time; candidates are not permitted to pass materials along a table or row of seats.
- The Chief Examiner begins reading the Candidate Instructions (information about the length of the test period and various procedures such as restroom visits and final dismissal upon completion of the examination), while proctors distribute examination booklets, answer sheets, and any other required material. In rooms where multiple examinations are administered simultaneously, candidates are required to raise their hands to indicate which examination they are registered for, and are instructed to verify that the correct booklet is distributed.
- At appropriate points during the Instructions, the proctors circulate to verify that candidates comply with the request to copy their I.D. number onto the front of the examination booklet, sign the front of the booklet, and correctly complete the identifying information on the top portion of the answer sheet.

- Typically candidates will be read a security acknowledgment statement, which has also been distributed in printed form, and must sign the answer sheet to indicate their understanding of the conditions outlined in the statement. The following is an example of a Security Acknowledgment document.

Acknowledgment:

By taking this examination, I hereby acknowledge that I understand the following:

That I have presented valid identification and provided my valid signature on the answer sheet and the sign-in roster for this examination.

That this examination is the exclusive property of <sponsoring organization>. That this examination and the items contained therein are protected by federal copyright law. No part of this examination may be copied, reproduced, transmitted electronically, or shared in any other manner, in part or whole, by any means whatsoever, including memorization.

That theft or attempted theft of an examination booklet, any of its pages, or any test items by any means, is punishable as a felony.

That my participation in any irregularity occurring upon admittance to the examination and/or during the administration of this examination, such as giving or obtaining unauthorized information or aid, as evidenced by observation or subsequent statistical analysis, may be sufficient cause to terminate my participation, invalidate the results of my examination and/or take other appropriate action.

That I have been awarded the appropriate degree/certificate <or other eligibility requirement of the sponsoring organization>, and that I am eligible to take this examination.

That my signature on the answer sheet for this administration of the examination confirms that I have read and understand all of the above statements.

(Pause.) Please sign the back of the answer sheet to indicate that you have read this statement.

Allowing Candidates to Leave the Examination Room

As part of the instructions at the beginning of the examination period, candidates are informed about the policy and procedures governing requests for temporary dismissal from the examination room. Candidates making such a request do so by raising their hand and waiting for the proctor to assist them. The proctor will collect the candidate's examination booklet and answer sheet and retain it until the candidate's return.

The overall security policy governing temporary dismissals is that only one candidate may leave the room at a time. Two candidates may be excused at once if a large number of simultaneous requests are received; in this case they must be accompanied by a proctor at all times while out of the room. Other general proctor policies related to this situation include the following:

- Where applicable, the time of a candidates' departure and return are monitored, and the candidate may be asked to sign-out/sign-in on a log sheet.
- If a request to leave the room received while another candidate is still out, the proctor explains the one-at-a-time policy and indicates that the candidate will be informed when the other individual has returned.
- The Chief Examiner will record as a possible irregularity any single candidate who asks to be excused more than 3 times during the examination period.

Suspicious Candidate Behavior

During the examination period, proctors circulate quietly, checking answer sheets for completeness and correct bubbling in of circles, and responding to candidate requests. Restrooms and hallways are monitored regularly (and may be staffed at all times, in facilities with large, multi-room administrations) for presence of notes, cellular phones, or other electronic communication aids. Proctors are trained to be alert to potentially suspicious behaviors such as:

- attempts to view another's answer sheet;
- writing of notes on desks/tables, or presence of unauthorized scrap paper;
- booklets or answer sheets raised off the desk surface;
- repeated glancing at watches, especially "programmable" calculator variety; and
- patterned finger-tapping, coughing, or hand signals.

When suspicious behavior is detected, the observing proctor immediately informs the Chief Examiner (or Room Supervisor) and begins creating an Irregularity Report entry (procedure in next sub-section). One or more of the following actions may be taken as needed, for as long as the suspicious behavior persists:

- Proctor sits or stands near suspect(s);
- Suspect(s) reseated in another part of the room;
- Chief Examiner calls suspects outside of room to discuss staff observations;
- Chief Examiner calls PES to report situation;
- Candidate participation terminated and materials collected.

Collection of Materials and the End of the Examination

The security policy governing collection of examination booklets and answer sheets is to require candidates to remain in their seats until a proctor completes the process of verifying and check-in of their materials. Preventing candidates from congregating near the storage area for used examination booklets, eliminates a known past cause of security breaches.

- Verification involves final checks to determine accuracy and completeness of informational and signature portions of the answer sheet as well as presence of the candidate I.D. on the front of the examination booklet.
- Candidates who finish before “time” is called are required to follow the same procedure, and then leave the room quietly to avoid disturbance of fellow examinees.

Irregularity Reporting

PES policy is to require test-site staff to fully document any departure (even one that seems insignificant) from the requirements and procedures stated in each section of the Manual of Instructions for the administration. This policy is related both to security and to maintenance of standardized testing conditions across all test sites.

Test-site staff are trained to document irregularities in as much detail as possible, including how the irregularity occurred or came to the attention of test site staff, and (where applicable) what was said by the candidate/staff member, and the actions taken by testing staff to resolve the situation. The report about any incident during the administration must be completed by the individual staff member who directly observed/responded to the irregularity.

Examples of reportable irregularities include:

- Facility-related issues: room condition/feature that is found to be inadequate or different from that observed during the pre-examination day test-site assessment; any change of the room location that was not previously reported to PES; late arrival of Chief Examiner or proctors.
- Candidate registration/admission-related: any candidate who failed to meet all admission requirements but was approved for admission; candidate reports of difficulty locating the test facility/room; candidates arriving after reading of candidate instructions has already begun.
- Examination materials/procedures: departure from PES-approved examination schedule and discovery/replacement of defective examination booklets or answer sheets during/after distribution of materials; adjustments made to room conditions; missing or incomplete administrative logs; discrepancies in counts of examination materials.
- Miscellaneous irregular candidate behaviors: excessive trips to the restroom, use or attempted use of telephones, creating disturbances affecting other candidates, talking in or near the test room, illness or failure to complete the examination, failure to follow procedures for use of examination booklet and answer sheet, failure to stop when “time” is called, or problems with collection of materials.

Receipt and Verification of Returning Shipments

Incoming shipments from paper-and-pencil test sites are received by Distribution personnel. Procedures require staff to account for all sites that received shipments and to verify the contents of each individual shipment against the inventory report provided by the Chief Examiner, and verified against the original shipping orders. Missing shipments are reported immediately to the Vice President of Operations, Program Director, Director of Test Administration Services (TAS), and the Manager of Shipping who follow-up with appropriate individual Chief Examiner and express courier to locate the shipment. Any discrepancies found require the implementation of the quarantine procedure as follows:

1. Stop opening shipments. Do not separate or remove any of the materials, leave the documents and contents as they were, and notify department supervisor immediately of the situation.
2. Begin documentation of the problem, and actions taken.
3. The Manager of Shipping should immediately confirm/deny the existence of the problem.
4. Before moving any of the shipment contents, boxes, etc., The Supervisor should immediately notify the response team, which consists of:
 - a. VP of Operations
 - b. Program Director in charge of the program
 - c. VP of Programs
 - d. Corporate Counsel
5. At this point, it becomes the responsibility of the response team to determine the appropriate course of action, which depends on the specific document(s) missing. The first step would be to confirm/deny that the item is in fact missing.
6. If the item cannot be located immediately, all materials received from the site must be quarantined for reconstruction of the events leading up to the discovery of missing document(s).
7. Once it is determined that quarantine is appropriate, two members of the team or their designees confirm the contents of the shipment before moving the shipment, and again after relocating the shipment to its quarantine location.
8. Contact the Chief Examiner immediately and review and consolidate all correspondence (e-mail, etc.) that occurred with the Chief Examiner of the site. Gather any other information, forms and checklists related to the shipment or site to determine if the location of the missing item can be located.
9. Once the response team has taken the immediate actions required, the Program Director would notify the client of the situation.
10. Investigation will continue and a detailed report will be generated.

Once all materials for a site are accounted for, the special envelopes containing the used answer sheets are checked-in separately and delivered to the Statistics & Scoring Services staff via a signature-verified receipt procedure. The used examination booklets are placed in secure storage, while candidate comment forms, test-site irregularity reports, and all administrative materials used by site personnel are forwarded to TAS for review. Used examination booklets are retained for a period of three months and then destroyed via supervised shredding. Unused examination and administrative materials are retained for one week and then shredded.

CBT Examination Administration

Overview

PES makes available to its clients a fully operational CBT delivery system through subcontracting relationships with vendors who operate multiple networks of testing centers. In selecting these vendors we look for them to provide secure, private environments where examinees are seated in individual carrels in physically isolated labs. Facilities should have on-site, limited-access security to guarantee the integrity and confidentiality of the examinations and examination materials. Entry to testing rooms should be limited to a single door that is monitored by staff at all times, with the interior of the room visible. Candidate privacy is typically achieved through the use of individual workstations that are separated by large partitions that are also sound conditioned.

All testing centers comply with the Americans with Disabilities Act (42 USC 12101 et seq.) and the regulation there under (28 CFR 36.309). They are wheelchair accessible, have adjustable-height desks, and can accommodate requests for signers, amanuenses, etc.

Candidate Sign-in

CBT vendors collaborate with PES to establish and distribute test-center instructions and procedural guidelines for each individual examination program. All programs typically require that candidates reporting for examinations sign in and show two forms of identification, one with a photograph and one with a signature. Additional security measures, such as presentation of additional documentation (such as practice license or other client-issued document), photographing the candidate, and obtaining thumbprints, are employed at the client organization's request.

During the check-in procedure, candidates are required to store personal belongings in an individual locker or other secure area, and are informed that they no papers or other personal possessions of any kind are allowed in the examination room. Candidates are provided with a pencil and issued a predetermined number of sheets of distinctive scratch paper, and, where applicable, are issued client-authorized equipment such as a calculator, illustration book, or other reference material. All materials issued by the administrator are logged and must be returned upon completion of the test session.

A built-in security feature of CBT environment is that the file containing the CBT examinations is prepared for each individual candidate and is made available via a secure central server that is connected by modem to the vendor's headquarter site. The examination assigned to an individual candidate may be "launched" only once, thus preventing any access to the files by test center personnel either before candidate arrival or after completion of a testing session. Upon the candidate's arrival for check-in, the administrator will verify that the file containing the candidate's examination has been correctly prepared and/or downloaded to the site, but the actual launch will occur only after check-in is completed and the candidate has been escorted to the workstation. The first screen that appears after launch of the test will contain the examination title and the candidate's name, which the administrator verifies before allowing the candidate to proceed to the succeeding screens, which will begin with a tutorial outlining the use of the testing software. At this point the administrator provides any final instructions about the tutorial and then allows the candidate to begin.

Procedures During the Examination Period

All CBT examinations include an on-screen display of the testing duration (in hours and minutes) which counts backwards throughout the session to indicate the “time remaining.” Candidates are informed that they may take breaks during the session, but that this “clock:” runs continuously. Candidates asking to leave the immediate testing area must sign a logbook upon departure and return.

The CBT examination technology presents each question individually, usually on a single screen, and allows for movement both forward and backward through the screen sequence. A “marking” procedure allows the candidate to skip a particular question and request that it be automatically re-delivered when the end of the test is reached. After the final question is delivered, the system displays a status report of “marked” or incomplete questions, and the candidate may opt to return automatically to these items and/or to review the entire examination, as time permits.

When the candidate signals to the system that the examination is “completed,” (or when time runs out), the system goes on to deliver a series of questions to obtain feedback about the testing experience at the CBT center. Among other issues, the questionnaire asks the candidate to verify that check-in procedures were followed, and that the center conditions and staff behavior were acceptable. Also delivered at this point may be demographic or other survey questions prepared specifically for the candidate program. Upon completing the survey questionnaire, the candidate is required to remain at the assigned workstation and signal to the administrator by raising his/her hand.

Checkout procedures include verification and collection of scrap paper and any other officially issued materials, and providing the candidate with a score advisory, certificate, or other instructional material, as required for the individual examination program.

Candidate response data is uploaded nightly from the CBT center to PES. The PES Program Director retain oversight responsibilities for ensuring security and quality control at the centers, including compliance with irregularity reporting procedures similar to those in effect for paper-and-pencil administrations (see page 8). Notification by individual candidates of unusual or unacceptable conditions at the center is followed-up by PES staff, and feedback obtained from the candidate surveys is reviewed regularly. Depending on the nature of the irregularity emanating from a CBT administration, further follow-up investigation may be necessary including, but not necessarily limited to, on-site visits, interviews with the test administration personnel employed, or follow-up conference calls. In consultation with the client, PES may deploy an outside security firm to provide further assistance. In certain cases, PES in conjunction with its clients may also monitor profession- or industry-specific websites regarding the potential on-line sharing of test questions.

Examination Scoring/Reporting

Handling of Candidate Response Information

Incoming answer sheets from paper-and-pencil administrations are logged in by test site and the counts provided by test site personnel are verified. Once the verification is complete the answer sheets are scanned and result files generated. A series of quality control and data “cleaning” procedures are then undertaken. For CBT examinations, the result files downloaded from the vendor are scored (or re-scored, if pass/fail status was communicated to the candidate at the CBT site). The directories containing result files are accessible to Statistics & Scoring Services personnel only.

During processing, used answer sheets are held in staff-monitored areas within the Statistics and Scoring area, and then filed in locked file cabinets once score reporting is completed.

Access to Answer Key Files

Access to the directories containing scoring scripts, candidate scores, and answer keys is restricted to Statistics and Scoring Services staff only. Just prior to the examination date, the Statistics & Scoring Services staff downloads answer key files generated by the Production/Editorial group, and receives from the Program Director official Scoring Instructions reflecting client preferences regarding individual and group score reports. Restricted file permissions allow verification of the initial key file against a hard-copy printout

Printed Answer Keys

- Once an examination is finalized, the Production/Editorial group officially issues two copies of the preliminary answer key for an examination. Both copies are hand-delivered by a supervisor from the Production/Editorial area to a supervisor in Statistics & Scoring Services, who signs and dates the copy retained by Production/Editorial. These answer keys are retained by Production/Editorial and Statistics securely
- Once an item analysis and key finalization are completed the final key is stored securely along with client-approved final modifications to the key (if any). Any subsequent review/use of the printed key requires a sign-out/sign-in procedure with the staff member who maintains the locked files.

Score Reports

- The electronic files maintained by the Statistics & Scoring Services department are backed up on the tape archives on a daily and weekly basis.
- Printed copies of score reports are generated for client review and/or forwarding to individual candidates only upon a Program Director approval. A series of quality control and tracking procedures are performed before sending score reports.
- Statistics & Scoring Services staff members are prohibited from discussing candidate score information in any manner, except with Program staff in the course of a specific inquiry, and may not release such information to any party over the telephone.

Cheating Analysis

At the request of the Program Director, Irregularity Reports may be forwarded to Statistics & Scoring Services for performance of a statistical analysis to confirm any suspected incident of cheating.

Application Processing

Overview

- The Application Processing (AP) work area is monitored around-the-clock via closed-circuit video cameras. Videotapes are retained for at least 2 weeks.
- Candidate applications and secure documents are stored in either lockable filing cabinets or in filing cabinets in locked rooms. Fireproof storage is available upon client request.
- Access to the candidate database is controlled by password authentication and then by operating system rights control. Depending upon functional role and client-program assignment, individual staff members in the AP area are restricted as to which programs may be run and which database files may be accessed. Permissions for functions such as read/write, copy, delete, and revision of data are also assigned on an individual basis via collaboration between the Network Administrator and the management of the AP area.

Mail Applications

- Incoming mail containing checks or secure candidate documents is logged in and opened in a supervised receiving area. All materials are hand-delivered to the AP manager or stored in a locked room until processing commences.
- Following verification and entry of payment information into the applications-processing database, checks are stored in a secure cabinet until forwarded to Accounting. Credit card payments received by mail are processed by AP staff and processed to the clearing bank via a secure internet gateway. All information is double-checked and verified before processing to accounting.

Internet-based Applications

- Processing of applications received via the Internet is processed via a secure server equipped with digital certification and located behind a dual firewall/DMZ system. Payment information obtained from the Web site is encrypted and transmitted to PES, while the credit-card information is transmitted to the clearing bank via a secure gateway. Automated E-mail is generated to notify the applicant of the status of the transaction.
- The Web-based application database is protected from outside intrusion by all safeguards and technology described in Part II of this document (see pp. 17 – 20).

PART II—COMPUTER NETWORK SECURITY AND ELECTRONIC COMMUNICATIONS

Systems and Safeguards

Backup Power

- PES has an uninterrupted power supply to keep key computer, phone, and security systems running for a limited period of time in the event of a power outage.

System Back-ups

- PES performs incremental backups daily, and full backups weekly to tape. Once a week, the full backups are stored off site, and retained.

Business Continuity and Disaster Recovery

- Critical systems are replicated in real time to an off site dedicated recovery facility. Access is available only to authorized personnel.

Data Integrity and Electronic Transmission

- A firewall / DMZ setup prevents intrusion and protection from the world outside of PES.
- A secure VPN (“virtual private network”) technology is used.
- Email Encryption provided.
- Secure FTP used for data transmissions.
- Secure Digital Certificates used to protect Web pages and servers.

Virus Detection

- Multiple Hardware/Software/Vendor Antivirus/Spam/Malware Enterprise level systems.

Password Security

- Mandatory password changes are required every 90 days, and may not be reused.
- Mixed case alpha/numeric/special characters at a minimum of 7 digits.

File Server Security

- PES file servers are protected physically via the following measures;
- Biometric Access to first access door.
- Keyed Access to the second door.
- Keyed access to the third door.

- 24 hour Security camera protection.
- Climate Controlled Environment with notification to authorized staff.
- 24 hour Intrusion Detection and Prevention monitoring with notification to authorized staff.
- Logs files of all activity kept and reviewed daily or as needed by authorized staff.
- Access granted to system via directory services allowing rights and permissions on an as needed and authorized on an basis by title and department. Passwords are unique and not sharable.

Laptop Computers

- Laptop Computers are setup with the same safeguards as all other internal PES computers and systems with the addition of Full/Whole Disk Encryption.

PART III—COMPANY-WIDE SECURITY AND CONFIDENTIALITY POLICIES

Document Security

Upon initiation of employment with PES, employees are asked to sign a document stating their agreement to keep confidential all client-related documents. The overriding principle is that all documents or electronic files produced in the course of providing a client service or deliverable are technically the property of that client, and therefore are subject to secure treatment. This means not only securing the physical and electronic copies of these materials, but also refraining from discussing their contents with any person other than authorized representatives of our client organizations.

Features of the company-wide approach to security are as follows:

- Supervisors are responsible for communicating and ensuring compliance with specific departmental procedures related to handling of secure materials.
- Locking file cabinets and locked rooms are provided throughout the company for storage of physical documents. Each operational department establishes policies for retention of documents and periodic review prior to secure shredding or transmission back to the client organization, if requested.
- Secure information should not be displayed or left unattended in any area where it could be observed by a visitor or other unauthorized person. Employees avoid escorting visitors to areas where secure materials are stored or worked on unless approved in advance by a supervisor.
- Discussions about the contents of secure materials occur only with authorized client representatives and/or only as necessary to complete work assignments.
- Staff are required to use a biometric scanning device to gain access to PES offices.
- Employees inform a supervisor immediately if they become aware of a breach of confidentiality, or of an attempt to gain access to secure materials by an unauthorized person.

Financial and Accounting Information

Nearly all information accessed by Accounting personnel is confidential, including pricing, contracts, billing, payroll, and internal financial reports and analyses. Supervisors monitor staff closely for compliance with company-wide security policies and guidelines as well as departmental procedures.

In addition to the audit work performed by our outside auditors for SAS 94, our auditors perform a special engagement in accordance with AICPA Statement on Auditing Standards No. 70 (SAS 70). This special engagement focuses on the financial and candidate information provided to those clients for whom PES collects fees and shares fees, but provides additional testing to all our processes and systems.

Accounting Department Software

The MAS software used by the Accounting staff allows for supervisor-defined levels of staff access. Access to the software is password-controlled, and is limited as to the tasks allowed to be performed by that employee. The CFO assigns the access levels to each employee as required.

Document Security

Unused checks, blank invoices, and check-signing template are all stored in a locked cabinet when not in use.

Payroll and personnel-related documents are never left unattended in a work area, and are stored in locked cabinets when not in use.

Company Credit Cards

PES senior managers and other staff who travel or may incur business-related expenses on a regular basis are issued American Express Cards, provided the issuer's credit status requirements are met. Cards are for business expenses only. All charges must be recorded on an Expense Form.

Each cardholder is responsible for reconciling the monthly account statement and forwarding it, along with appropriate receipts and expense reports, to the Accounting Department. The American Express summary invoice (total for all cards) is verified by the Human Resources Director.

Petty Cash Handling/Disbursement

A petty cash fund totaling \$1200 is maintained in the form of a separate bank account that is accessible via an ATM card issued to the Human Resources Director. The account is reconciled monthly by the HR Director in conjunction with Accounting staff. Employees desiring reimbursement for a petty cash expense must complete a voucher and attach a valid receipt.

Work Site Access/Security

PES occupies space on the 6th and 7th floor of the Interchurch Center (TIC) located at 475 Riverside Drive, New York, NY. All employees are registered into the EzLabor hand scanning device. Hand-scanning devices control employee access to PES. In addition, the TIC issues an I.D. card to every building employee including PES staff. Every employee is responsible for the I.D. card and for maintaining strict confidentiality of passwords or other access information. Cards are always collected upon termination of employment and access is terminated in the EzLabor system.

Electronic Access Control System

Primary physical security is maintained by the EzLabor Gate Access System. Employing a combination of technologies, this system provides access control.

Security Cameras/Alarm Systems

Closed-circuit video cameras provide round-the-clock surveillance of all entrance and exit doors, and internal spaces. Standard perimeter and internal motion detection security, alarm and response services are provided by Honeywell Security Systems.

High-Security Areas

Particularly sensitive or mission-critical operational areas—such as computer-server areas and examination storage rooms — are enhanced with additional levels of security. Apart from the previously mentioned Ezlabor gate access system, video and alarm monitoring systems, these zones have augmented access control using identity card and password access, and have CCT camera monitoring.

Personnel-Related Documentation and Policies

Personnel Record Keeping

PES complies with all legal and regulatory requirements pertaining to retention of employee records. These include the following:

- Federal Insurance Contribution Act (FICA) and other federal tax-withholding regulations, which require retention of records relating to mandatory federal taxes, be retained for at least four years.
- Equal Pay Act and the Fair Labor Standards Act, requiring retention of payroll record information for at least three years.
- The Civil Rights Act of 1964, Title VII, and the Americans with Disabilities Act (ADA), Age Discrimination in Employment Act (ADEA), for retention of records relating to employment applications, hires/rehires, tests used in employment, promotions/transfers/demotions, selection for training, terminations, pay rates, and other employee demographic data.
- The Immigration Reform and Control Act (IRCA), requiring maintenance of Employee Eligibility Verification Form (INS Form I-9) for 3 years after the date of hire or one year after the date of termination, whichever is later.
- The Employee Polygraph Protection Act, which requires polygraph test results and records, must be retained for at least 3 years.
- Executive Order 11246, the Vietnam Era Veterans Readjustment Act, and the Rehabilitation Act of 1973, which require annual updating of affirmative action plans.
- The Employee Retirement Income Security Act (ERISA), which requires maintenance of a Summary Plan Descriptions, Annual Reports and Reports of Plan Termination for a minimum of 6 years.
- The Family and Medical Leave Act (FMLA), which requires retention of records with respect to payroll and demographic information as well as information related to the individual employee's leave for 3 years.
- The Occupational Safety and Health Act, which requires retention of records pertaining to job-related injuries and illnesses for 5 years, as well as filing of an annual summary (OSHA 200-S).
- The Health Insurance Portability and Accountability Act (HIPAA) of 1996, which was enacted to increase access to and the efficiency of the healthcare system in the United States.

Security-Related Personnel Policies

PES is committed to protecting the safety, health, and well being of its employees and all people who come into contact with its workplace and property, and who use our services. Recognizing that certain types of behavior may pose a threat to achieving this goal, as well as its responsibility to safeguard client-owned property in the possession of employees, PES has adopted a number of security-related personnel policies.

Background Checks of Employment Applicants

All potential applicants are required to furnish Human Resources with three professional references from former employers, including the most recent employer. Applicants are asked to sign a permission statement giving PES permission to check the references, and are informed that employment is contingent upon the receipt of satisfactory references. The following information is verified during the reference checking process: dates of employment; last position held; salary; position responsibilities; level of performance; and an estimate of the applicant's ability to perform PES' position responsibilities. Copies of the references become part of the Personnel File.

Specific Behavioral Policies

A variety of specific policies related to monitoring and regulation of employee behavior are outlined in detail in a section of the Professional Examination Service Employee Handbook entitled "Organizational Structure and Expectations." The disciplinary procedures related to violation of each policy are fully documented. In addition to receiving individual orientation upon initiation of employment, all PES employees are required to attend periodic group information sessions conducted by the Director of Human Resources to clarify the Handbook contents and answer questions. The Human Resources department maintains on file signed statements obtained after completion of these sessions indicating employee understanding and acceptance of the policies.

The following presents a brief summary of the types issues covered in the "Fair Treatment Policy" section and the "Organizational Structure and Expectations" section of the Handbook.

- The Anti-Harassment Policy outlines current legal definitions of all forms of harassment, including sexual harassment and affirms PES's commitment to maintaining a workplace free of harassment and/or of speech and behavior that expresses bias related to an individual's age, race, creed, religion or sexual orientation, or other personal characteristics.
- The Substance Abuse Prevention Policy strictly prohibits possession or use of alcohol and chemical substances on company property, and is intended to achieve compliance with federal "drug-free workplace" guidelines. The policy informs employees of their rights as well as those of PES concerning monitoring of behavior that may indicate substance abuse, including compliance of requests for drug testing.
- The Policy Against Workplace Violence provides definitions and examples of acts that constitute verbal or physical threats or intimidation that could compromise the safety and security of fellow employees. A procedure for substantiating and acting upon allegations of threats is fully outlined.
- Policies concerning Company Right of Access are meant to prevent theft and ensure the security of all company and client-owned property and resources, by informing employees that work areas are subject to search if required to ascertain the location of company-owned materials or in response to a report of criminal possession of firearms or illegal substances.

- The Electronic Monitoring Policy outlines the company's legal right to monitor, review, intercept, and/or disclose the contents of electronic communications that are generated or accessed using company computer equipment.
- The Security of Confidential Information Policy outlines PES's guidelines and controls that are required to secure confidential information.



Appendix IV. Examination Psychometric Data

In the table below, the number of candidates tested, percent passing, and reliability statistics during the indicated year are reported.

Candidates Tested in 2007	Number of Candidates Passing in 2007	Reliability Estimate <i>KR20</i> *	Total Number of Items on Exam
45,045	31,490 (70%)	7 administered at 0.90 4 administered > 0.90 1 administered < 0.90	100 (90 Scored)
Candidates Tested in 2008 as of October 2008	Number of Candidates Passing in 2008	Reliability Estimate <i>KR20</i> *	Total Number of Items on Exam
38,223	27,101 (71%)	3 administered at 0.90 3 administered < 0.90	90 (80 Scored)

Certification/Recertification Data

In the table below, the number of candidates certified for the first time, the number recertified, and the percentage of certifications due for renewal that were renewed during the indicated year are listed.

Total Number Certified as of December 2007	Number 1 st Time Certified In 2007	How Often are Certificants Required to Recertify?	Number Due for Recertification in 2007	Percent of those Due to Recertify who did recertify in 2007
295,554	31,490	Every 2 years	86,790	71%
Total Number Certified as of September 2008	Number 1 st Time Certified In 2008	How Often are Certificants Required to Recertify?	Number Due for Recertification in 2008	Percent of those Due to Recertify who did recertify as of this date (window closes November 30)
315,985	31,490	Every 2 years	91,372	47%

* *KR20*, Kuder-Richardson 20, is a measure of internal consistency reliability for measures with dichotomous choices. Values can range from 0.00 to 1.00 with high values indicating that the examination is likely to correlate with alternate forms (which is desirable). The exam is considered more reliable as the *KR20* score approaches 1.00. A score greater than or equal to 0.90 is high.