

PAPERWORK REDUCTION ACT SUBMISSION

Please read the instructions before completing this form. For additional forms or assistance in completing this form, contact your agency's Paperwork Clearance Officer. Send two copies of this form the collection instrument to be reviewed, the Supporting Statement, and any additional documentation to: Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 101022, 725 17th Street, NW, Washington, DC 20503.

<p>1. Agency/Subagency originating request</p> <p style="text-align: center;">Department of Labor , Occupational Safety and Health Administration, OSHA</p>	<p>2. OMB control number</p> <p>a. 1218-0180 b. <input type="checkbox"/> None _ _ _ _ (new)</p>																																		
<p>3. Type of information collection (<i>check one</i>)</p> <p>a. <input type="checkbox"/> New Collection</p> <p>b. <input type="checkbox"/> Revision of a currently approved collection</p> <p>c. <input checked="" type="checkbox"/> Extension of a currently approved collection</p> <p>d. <input type="checkbox"/> Reinstatement, without change, of a previously approved collection for which approval has expired</p> <p>e. <input type="checkbox"/> Reinstatement, with change, of a previously approved collection for which approval has expired</p> <p>f. <input type="checkbox"/> Existing collection in use without an OMB control number</p> <p><i>For b-f, note item A2 of Supporting Statement instructions</i></p>	<p>4. Type of review requested (check one)</p> <p>a. <input checked="" type="checkbox"/> Regular submission</p> <p>b. <input type="checkbox"/> Emergency - Approval requested by: <u> </u>/<u> </u>/<u> </u></p> <p>c. <input type="checkbox"/> Delegated</p> <p>5. Small entities Will this information collection have a significant economic impact on a substantial number of small entities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <hr/> <p>6. Requested expiration date</p> <p>a. <input checked="" type="checkbox"/> Three years from approval date?</p> <p>b. <input type="checkbox"/> Other Specify: <u> </u> / <u> </u> (month/ year)</p>																																		
<p>7. Bloodborne Pathogens Standard (29 CFR 1910.1030)</p>																																			
<p>8. Agency form number(s) (if applicable) None</p>																																			
<p>9. Keywords: Occupational health standard, health hazard, bloodborne pathogens</p>																																			
<p>10. Abstract</p> <p>The Bloodborne Pathogen Standard is an occupational safety and health standard that will prevent occupational exposure to bloodborne pathogens. This standard's information-collection requirements are essential components that will protect employees from occupational exposure. The information will be used by employers and employees to implement the protection required byt the Standard. OSHA compliance officers will use some of the information.in their enforcement of the Standard.</p>																																			
<p>11. Affected public (<i>Mark primary with "P" and all others that apply with "X"</i>)</p> <p>a. <u> </u> Individuals or households d. <u> </u> Farms</p> <p>b. P Business or other for-profit e. X Federal Government</p> <p>c. <u> </u> Not-for-profit institutions f. X State, Local or Tribal Government</p>	<p>12. Obligation to respond (Mark primary with "P" and all others that apply with "X")</p> <p>a. <u> </u> Voluntary</p> <p>b. <u> </u> Required to obtain or retain benefits</p> <p>c. P Mandatory</p>																																		
<p>13. Annual reporting and recordkeeping hour burden</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">a. Number of respondents</td> <td style="text-align: right; border-bottom: 1px solid black;">23,586,234</td> </tr> <tr> <td>b. Total annual responses</td> <td style="text-align: right; border-bottom: 1px solid black;">630.021</td> </tr> <tr> <td> 1. Percentages of these responses collected electronically</td> <td style="text-align: right; border-bottom: 1px solid black;">%</td> </tr> <tr> <td>c. Total annual hours requested</td> <td style="text-align: right; border-bottom: 1px solid black;">14,060,528</td> </tr> <tr> <td>d. Current OMB inventory</td> <td style="text-align: right; border-bottom: 1px solid black;">14,060,764</td> </tr> <tr> <td>e. Difference</td> <td style="text-align: right; border-bottom: 1px solid black;">-236</td> </tr> <tr> <td>f. Explanation of difference</td> <td style="border-bottom: 1px solid black;"> </td> </tr> <tr> <td> 1. Program change</td> <td style="border-bottom: 1px solid black;"> </td> </tr> <tr> <td> 2. Adjustments</td> <td style="text-align: right; border-bottom: 1px solid black;">-236</td> </tr> </table>	a. Number of respondents	23,586,234	b. Total annual responses	630.021	1. Percentages of these responses collected electronically	%	c. Total annual hours requested	14,060,528	d. Current OMB inventory	14,060,764	e. Difference	-236	f. Explanation of difference		1. Program change		2. Adjustments	-236	<p>14. Annual reporting and recordkeeping cost burden (in thousands of dollars)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">a. Total annualized capital/startup costs</td> <td style="text-align: right; border-bottom: 1px solid black;">24,508</td> </tr> <tr> <td>b. Total annual costs (O&M)</td> <td style="border-bottom: 1px solid black;"> </td> </tr> <tr> <td>c. Total annualized cost requested</td> <td style="border-bottom: 1px solid black;"> </td> </tr> <tr> <td>d. Current OMB inventory</td> <td style="text-align: right; border-bottom: 1px solid black;">24,508</td> </tr> <tr> <td>e. Difference</td> <td style="text-align: right; border-bottom: 1px solid black;">0</td> </tr> <tr> <td>f. Explanation of difference</td> <td style="border-bottom: 1px solid black;"> </td> </tr> <tr> <td> 1. Program change</td> <td style="text-align: right; border-bottom: 1px solid black;">0</td> </tr> <tr> <td> 2. Adjustment</td> <td style="text-align: right; border-bottom: 1px solid black;">0</td> </tr> </table>	a. Total annualized capital/startup costs	24,508	b. Total annual costs (O&M)		c. Total annualized cost requested		d. Current OMB inventory	24,508	e. Difference	0	f. Explanation of difference		1. Program change	0	2. Adjustment	0
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<p>15. Purpose of information collection (<i>Mark primary with "P" and all others that apply with "X"</i>)</p> <p>a. <u> </u> Application for benefits e. <u> </u> Program planning or management</p> <p>b. <u> </u> Program evaluation f. X Research</p> <p>c. <u> </u> General purpose statistics g. P Regulatory or compliance</p> <p>d. X Audit</p>	<p>16. Frequency of recordkeeping or reporting (check all that apply)</p> <p>a. <input checked="" type="checkbox"/> Recordkeeping b. <input checked="" type="checkbox"/> Third party disclosure</p> <p>c. <input checked="" type="checkbox"/> Reporting</p> <table style="width: 100%;"> <tr> <td>1. <input checked="" type="checkbox"/> On occasion</td> <td>2. <input type="checkbox"/> Weekly</td> <td>3. <input type="checkbox"/> Monthly</td> </tr> <tr> <td>4. <input type="checkbox"/> Quarterly</td> <td>5. <input type="checkbox"/> Semi-annually</td> <td>6. <input checked="" type="checkbox"/> Annually</td> </tr> <tr> <td>7. <input type="checkbox"/> Biennially</td> <td>8. <input type="checkbox"/> Other (describe) <u> </u></td> <td></td> </tr> </table>	1. <input checked="" type="checkbox"/> On occasion	2. <input type="checkbox"/> Weekly	3. <input type="checkbox"/> Monthly	4. <input type="checkbox"/> Quarterly	5. <input type="checkbox"/> Semi-annually	6. <input checked="" type="checkbox"/> Annually	7. <input type="checkbox"/> Biennially	8. <input type="checkbox"/> Other (describe) <u> </u>																										
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<p>17. Statistical methods</p> <p>Does this information collection employ statistical methods?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>18. Agency contact (person who can best answer questions regarding the content of this submission)</p> <p>Name: Todd Owen</p> <p>Phone: (202) 693-2222</p>																																		

19. Certification for Paperwork Reduction Act Submissions

On behalf of this Federal agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9.

NOTE: The text of 5 CFR 1320.9, and the related provisions of 5 CFR 1320.8 (b)(3), appear at the end of the instructions. *The certification is to be made with reference to those regulatory provisions as set forth in the instructions.*

The following is a summary of the topics, regarding the proposed collections of information, that the certification covers:

- (a) Is necessary for proper performance of the agency's functions and has practical utility;
- (b) It avoids unnecessary duplication;
- (c) It reduces burden on small entities;
- (d) It uses plain, coherent and unambiguous terminology that is understandable to respondents;
- (e) Its implementation will be consistent and compatible with current reporting and recordkeeping practices;
- (f) It indicates the retention periods for recordkeeping requirements;
- (g) It informs respondents of the information called for under 5 CFR 1320.8 (b)(3)
 - (h) Why the information is being collected;
 - (ii) Use of information;
 - (iii) Burden estimate;
 - (iv) Nature of response (voluntary, required for a benefit, or mandatory);
 - (v) Nature and extent of confidentiality; and
 - (vi) Need to display currently valid OMB control number;
 - (h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of the Instructions);
- (i) It uses effective and efficient statistical survey methodology; and,
- (j) It makes appropriate use of information technology.

If you are unable to certify compliance with any of these provisions, identify the item below and explain the reason in Item 18 of the Supporting Statement.

Agency Clearance Officer	Date
Todd R. Owen, OSHA Clearance Officer	
Signature of Senior Departmental Official or Designee	Date
Ira L. Mills, Departmental Clearance Officer	

**SUPPORTING STATEMENT FOR THE INFORMATION
COLLECTION REQUIREMENTS OF THE
BLOODBORNE PATHOGENS STANDARD (29 CFR 1910.1030)¹
(Office of Management and Budget (OMB) Control No. 1218-0180(2007))**

JUSTIFICATION

- 1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.**

The main objective of the Occupational Safety and Health Act (OSH Act) is to “assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources” (29 U.S.C. 651). To achieve this objective, the OSH Act specifically authorizes “the development and promulgation of occupational safety and health regulations” (29 U.S.C. 651).

To protect employee health, the OSH Act authorizes the Occupational Safety and Health Administration (OSHA) to develop standards that provide for “monitoring or measuring employee exposure” to occupational hazards and “prescribe the type and frequency of medical examinations and other tests which shall be made available [by the employer] to employees exposed to such hazards in order to most effectively determine whether the health of such employees is adversely affected by such exposure” (29 U.S.C. 655). In addition, the OSH Act mandates that “[e]ach employer shall make, keep and preserve, and make available to the Secretary [of Labor] . . . such records regarding [his/her] activities relating to this Act as the Secretary . . . may prescribe by regulation as necessary or appropriate for the enforcement of this Act or for developing information regarding the causes and prevention of occupational accidents and illnesses” (29 U.S.C. 657). In addition, the OSH Act directs OSHA to “issue regulations requiring employers to maintain accurate records of employee exposure to potentially toxic materials or other harmful physical agents which are required to be monitored and measured,” and further specifies that such regulations provide “for each employee or former employee to have access to such records as will indicate [their] own exposure to toxic materials or harmful physical agents” (29 U.S.C. 657). The OSH Act states further that “[t]he Secretary . . . shall . . . prescribe such rules and regulations as [he/she] may deem necessary to carry out [his/her] responsibilities under this Act, including rules and regulations dealing with the inspection of an employer’s establishment” (29 U.S.C. 651).

Under the authority granted by the OSH Act, the Occupational Safety and Health Act (“OSHA” or “Agency”) published a health standard governing employee exposure to Bloodborne Pathogens at 29 CFR 1910.1030, 1915.1030 (the “Standard”). The basis for this standard is a determination by the Assistant Secretary for OSHA that occupational exposure to bloodborne pathogens can result in infections. These pathogens include, but are not limited to, the hepatitis B virus or the

¹ The purpose of this supporting statement is to analyze and describe the burden hours and costs associated with provisions of the Standard that contain paperwork requirements; this supporting statement does not provide information or guidance on how to comply with, or how to enforce the Standard.

human immunodeficiency virus. These infections can lead to serious clinical illness which may result in death. Additionally, on November 6, 2000, the Needlestick Safety and Prevention Act (NSPA), was signed into law (Pub. L. 106-430), as a result of the growing concern over bloodborne pathogens exposures resulting from sharps injuries and in response to technological developments that increase employee protections. On January 18, 2001, OSHA published a Direct Final Rule to conform to the requirements of NSPA. The paperwork requirements resulting from the NSPA include: modifying the existing requirements for revising and updating the exposure control plan; soliciting of employee input for selecting safer medical devices; and recordkeeping. The information collection requirements contained in the Bloodborne Pathogens, including the NSPA requirements, are fully discussed under items 2 and 12.

2. **Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.**

Collections of information contained in this Standard include a written exposure control plan, documentation of employees' hepatitis B vaccinations and post exposure evaluations and follow-up medical visits, training, related recordkeeping and a sharps injury log. Information generated in accordance with these provisions, provides the employer and the employee with means to provide protection from the adverse health effects associated with occupational exposure to bloodborne pathogens.

A. Exposure control plan (§1910.1030(c)(1))

§1910.1030(c)(1)(i) - Each employer having an employee(s) with occupational exposure² as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

§1910.1030(c)(1)(ii) - The Exposure Control Plan shall contain at least the following elements:

§1910.1030(c)(1)(ii)(A) - The exposure determination required by paragraph (c)(2),

§1910.1030(c)(1)(ii)(B) - The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

§1910.1030(c)(1)(ii)(C) - The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.

§1910.1030(c)(1)(iii) - Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.1020(e).

² "Occupational exposure" means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

§1910.1030(c)(1)(iv) - The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans shall also:

§1910.1030(c)(1)(iv)(A) - Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and

§1910.1030(c)(1)(iv)(B) - Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

§1910.1030(c)(1)(v) - An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

Purpose: The purpose of this requirement is to assure that all new tasks and procedures are evaluated in order to determine whether they will result in occupational exposure. Additionally, the exposure control plan identifies those tasks and procedures where occupational exposures may occur and to identify the positions whose duties include those tasks and procedures identified with occupational exposure. The review also assures evaluation and implementation of safer medical devices. Employee input into this process can serve to assist the employer in overcoming obstacles to the successful implementation of control measures.

Exposure determination (§1910.1030(c)(2)) - Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:

§1910.1030(c)(2)(i)(A) - A list of all job classifications in which all employees in those job classifications have occupational exposure;

§1910.1030(c)(2)(i)(B) - A list of job classifications in which some employees have occupational exposure, and

§1910.1030(c)(2)(i)(C) - A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.

Purpose: To assure that the employees who hold these job classifications are included in the training program, are provided with personal protective equipment are provided with post-

exposure follow-up where appropriate, are included in the HBV vaccination program, and receive

all other protection afforded by this standard.

B. Housekeeping (§1910.1030(d)(4))

General (§1910.1030(d)(4)(i)) - Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

Purpose: Assist in ensuring that routine cleaning, as recommended by CDC, is performed and that the method of decontamination deemed appropriate by the employer is followed. Additionally, the employee's can utilize the schedule to determine when such cleaning should be done and what method they should use to properly accomplish the task.

C. Laundry (§1910.1030(d)(4)(iv))

§1910.1030(d)(4)(iv)(A) - Contaminated laundry shall be handled as little as possible with a minimum of agitation.

§1910.1030(d)(4)(iv)(A)(1) - Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

§1910.1030(d)(4)(iv)(A)(2) - Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

§1910.1030(d)(4)(iv)(A)(3) - Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

§1910.1030(d)(4)(iv)(B) - The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

§1910.1030(d)(4)(iv)(C) - When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the

facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

Purpose: Placing and transporting contaminated laundry in labeled or color-coded bags or containers prevents inadvertent exposure by warning employees of the bag/container's contaminated contents.

D. HIV and HBV research laboratories and production facilities (§1910.1030(e))

§1910.1030(e)(2)(ii)(b) - Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

§1910.1030(e)(2)(ii)(M) - A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

Purpose: Placing and transporting contaminated materials in labeled or color-coded container prevents inadvertent exposure by warning employees of the container's contaminated contents. The biosafety manual serves as a reference and assists in preventing exposure by identifying hazards and practices and procedures to be followed. Periodic review and update assures that the manual reflects the work setting's current hazards, practices, and procedures.

E. Hepatitis B vaccination and post-exposure evaluation and follow-up (§1910.1030(f))

§1910.1030(f)(1)(i) - The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

§1910.1030(f)(1)(ii) - The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

§1910.1030(f)(1)(ii)(A) - Made available at no cost to the employee;

§1910.1030(f)(1)(ii)(B) - Made available to the employee at a reasonable time and place;

§1910.1030(f)(1)(ii)(C) - Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and

§1910.1030(f)(1)(ii)(D) - Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).

Hepatitis B vaccination (§1910.1030(f)(2))

§1910.1030(f)(2)(i) - Hepatitis B vaccination shall be made available after the employee has

received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

§1910.1030(f)(2)(ii) - The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

§1910.1030(f)(2)(iii) - If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time.

§1910.1030(f)(2)(iv) - The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in Appendix A.

§1910.1030(f)(2)(v) - If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

Purpose: To eliminate or minimize risk of contracting hepatitis B through exposure, particularly when other controls inadequately protect or the employee is inadvertently or unknowingly exposed. Additionally, assures that employees who are initially reluctant to accept vaccination but who later change their minds as the result of information or experiences are accorded the opportunity to receive vaccination. The declination form encourages greater participation in the vaccination program by reiterating that an employee declining the hepatitis B vaccination remains at risk of acquiring hepatitis B. Also allows employers to easily determine who is not vaccinated so that resources can be directed toward improving the acceptance rate of the vaccination program, and assists compliance officers in enforcing training and vaccination requirements.

Post-exposure evaluation and follow-up (§1910.1030(f)(3)) - Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

§1910.1030(f)(3)(i) - Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

§1910.1030(f)(3)(ii) - Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

§1910.1030(f)(3)(ii)(A) - The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

§1910.1030(f)(3)(ii)(B) - When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

§1910.1030(f)(3)(ii)(C) - Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

§1910.1030(f)(3)(iii) - Collection and testing of blood for HBV and HIV serological status;

§1910.1030(f)(3)(iii)(A) - The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

§1910.1030(f)(3)(iii)(B) - If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

§1910.1030(f)(3)(iv) - Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;

§1910.1030(f)(3)(v) - Counseling; and

§1910.1030(f)(3)(vi) - Evaluation of reported illnesses.

Purpose: This documentation allows the employer to receive feedback regarding the circumstances of employee exposures, and the information collected can then be used to focus efforts on decreasing or elimination specific circumstances or routes of exposure. Testing for the source individual's infectious status provides exposed employees with information that will assist them in decisions regarding testing of their own blood, complying with other elements of post-exposure management, and using precautions to prevent transmission to their sexual partners or, in the case of pregnancy, to their fetuses. Such testing also assists the healthcare professional in deciding on appropriate follow-up. Counseling of exposed employees is a vital component of post-exposure follow up procedures and that counseling concerning infection status, including results of and interpretation of all tests, will assist in the employee in understanding the potential risk of infection and in making decisions regarding the protection personal contacts.

Information provided to the healthcare professional (§1910.1030(f)(4))

§1910.1030(f)(4)(i) - The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

§1910.1030(f)(4)(ii) - The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

§1910.1030(f)(4)(ii)(A) - A copy of this regulation;

§1910.1030(f)(4)(ii)(B) - A description of the exposed employee's duties as they relate to the exposure incident;

§1910.1030(f)(4)(ii)(C) - Documentation of the route(s) of exposure and circumstances under which exposure occurred;

§1910.1030(f)(4)(ii)(D) - Results of the source individual's blood testing, if available; and

§1910.1030(f)(4)(ii)(E) - All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

Purpose: The purpose of providing this information is to inform the Healthcare Professional of the requirements of the standard. This information, which represents the minimum necessary for proper follow-up care, enables the Healthcare Professional to understand the employees duties, the circumstances of the exposure incident, the source individuals infections status, the employees Hepatitis B vaccination status and other employee medical information. This information is essential to follow-up evaluation, so that a determination can be made regarding whether prophylaxis or medical treatment is indicated.

Healthcare professional's written opinion (§1910.1030(f)(5)) - The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

§1910.1030(f)(5)(i) - The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

§1910.1030(f)(5)(ii) - The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

§1910.1030(f)(5)(ii)(A) - That the employee has been informed of the results of the evaluation; and

§1910.1030(f)(5)(ii)(B) - That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

§1910.1030(f)(5)(iii) - All other findings or diagnoses shall remain confidential and shall not be included in the written report.

Purpose: To ensure that the employer is provided with documentation that a medical assessment of the employees ability and indication to receive Hepatitis B vaccination was completed and to inform the employee regarding the employees Hepatitis B vaccination. The purpose of requiring a written opinion is to ensure that the employer is provided with documentation that a post-exposure evaluation has been performed, and that the exposed employee has been informed of the results and any medical conditions from exposure that require further evaluation or treatment.

F. Communication of hazards to employees (§1910.1030(g))

Labels and signs (§1910.1030(g)(1))³

§1910.1030(g)(1)(i)(A) - Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

§1910.1030(g)(1)(i)(B) - Labels required by this section shall include the following legend:



§1910.1030(g)(1)(i)(C) - These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

§1910.1030(g)(1)(i)(E) - Red bags or red containers may be substituted for labels.

Signs (§1910.1030(g)(1)(ii))

§1910.1030(g)(1)(ii)(A) - The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:

³ Paragraphs (d)(2)(xiii)(A), *Containers for storage, transportation and shipping*; and (d)(2)(ix)(A), *Contaminated equipment* require labels in accordance with (g)(1)(i) and (g)(1)(i)(H) respectively. Also paragraph (d)(4)(iii), *Regulated Waste*, contains several labeling requirements to be in accordance with (g)(1)(i) of the standard.



(Name of the Infectious Agent)

(Special requirements for entering the area)

(Name, telephone number of the laboratory director or other responsible person.)

§1910.1030(g)(1)(ii)(B) - These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

Purpose: The purpose of this requirement is to alert employees to possible exposure since the nature of the material or contents will not always be readily identified as blood or other potentially infectious materials under these circumstances. Warning labels also would inform employees that appropriate barrier precautions would need to be used if occupational exposure occurs. Posting warning signs serves as a warning to employees who may otherwise not know they are entering a restricted area. Signs would also warn employees not to enter the area unless there is a need, unless the employee have been properly trained, and unless the employee also meets all other appropriate entrance requirements listed on the sign. The signs assure employees are aware of the specific biohazard involved and of any special measures that need to be taken before entering the restricted area.

Information and training (§1910.1030(g)(2))

§1910.1030(g)(2)(i) - Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.

§1910.1030(g)(2)(ii) - Training shall be provided as follows:

§1910.1030(g)(2)(ii)(A) - At the time of initial assignment to tasks where occupational exposure may take place;

§1910.1030(g)(2)(ii)(B) - At least annually thereafter.

§1910.1030(g)(2)(iv) - Annual training for all employees shall be provided within one year of their previous training.

§1910.1030(g)(2)(v) - Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

§1910.1030(g)(2)(vii) - The training program shall contain at a minimum the following elements:

§1910.1030(g)(2)(vii)(A) - An accessible copy of the regulatory text of this standard and an explanation of its contents;

§1910.1030(g)(2)(vii)(B) - A general explanation of the epidemiology and symptoms of bloodborne diseases;

§1910.1030(g)(2)(vii)(C) - An explanation of the modes of transmission of bloodborne pathogens;

§1910.1030(g)(2)(vii)(D) - An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;

§1910.1030(g)(2)(vii)(E) - An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;

§1910.1030(g)(2)(vii)(F) - An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;

§1910.1030(g)(2)(vii)(G) - Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

§1910.1030(g)(2)(vii)(H) - An explanation of the basis for selection of personal protective equipment;

§1910.1030(g)(2)(vii)(I) - Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

§1910.1030(g)(2)(vii)(J) - Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;

§1910.1030(g)(2)(vii)(K) - An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

§1910.1030(g)(2)(vii)(L) - Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;

§1910.1030(g)(2)(vii)(M) - An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and

§1910.1030(g)(2)(vii)(N) - An opportunity for interactive questions and answers with the person conducting the training session.

Purpose: Effective training is a critical element of an overall exposure control program. It will ensure that employees understand hazards associated with bloodborne pathogens, the modes of transmission, the exposure control plan, and the use of engineering controls, work practices, and personal protective clothing. The training also informs employees of the appropriate actions to take in an emergency involving exposure to blood or other potentially infectious materials, and the reasons why they should participate in hepatitis B vaccination and post-exposure evaluation and follow-up. Additionally, because of the severity of the diseases and the potential to contract them from a single event, it is also important to retrain occupationally exposed employees on an annual basis. Annual retraining reinforces initial training and provides an opportunity to present new information that was not available at the time of initial training.

G. Recordkeeping (§1910.1030(h))

Medical records (§1910.1030(h)(1))

§1910.1030(h)(1)(i) - The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020.

§1910.1030(h)(1)(ii) - This record shall include:

§1910.1030(h)(1)(ii)(A) - The name and social security number of the employee;

§1910.1030(h)(1)(ii)(B) - A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

§1910.1030(h)(1)(ii)(C) - A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

§1910.1030(h)(1)(ii)(D) - The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

§1910.1030(h)(1)(ii)(E) - A copy of the information provided to the healthcare professional as required by paragraphs (f)(4)(ii)(B)(C) and (D).

§1910.1030(h)(1)(iv) - The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020.

Training records (§1910.1030(h)(2))

§1910.1030(h)(2)(i) - Training records shall include the following information:

§1910.1030(h)(2)(i)(A) - The dates of the training sessions;

§1910.1030(h)(2)(i)(B) - The contents or a summary of the training sessions;

§1910.1030(h)(2)(i)(C) - The names and qualifications of persons conducting the training;
and

§1910.1030(h)(2)(i)(D) - The names and job titles of all persons attending the training sessions.

§1910.1030(h)(2)(ii) - Training records shall be maintained for 3 years from the date on which the training occurred.

Purpose: Medical and training records are necessary to assure that employees receive appropriate information on the hazards and effective prevention and treatment measures, as well as to aid in the general development of information on the causes of occupational illnesses and injuries involving bloodborne pathogens. Maintenance of medical records is essential because documentation is necessary to ensure proper evaluation of the employees immune status and for proper healthcare management following an exposure incident. Training records assure that training has taken place and can be used in determining the need to perform training in the future. They also enable the employer to assess the content and completeness of the training program in order to ensure that his or her employees have received the required training.

Availability (§1910.1030(h)(3))

§1910.1030(h)(3)(i) - The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

§1910.1030(h)(3)(ii) - Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.

§1910.1030(h)(3)(iii) - Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.1020.

Purpose: Access by employees, their representatives, and the Assistant Secretary is necessary to yield both direct and indirect improvements in the detection, treatment, and prevention of occupational disease.

Transfer of records (§1910.1030(h)(4))

§1910.1030(h)(4)(i) - The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

§1910.1030(h)(4)(ii) - If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

Purpose: To assure an employee retains access to his or her historical records, particularly since a diseases like liver cancer, which can result from hepatitis B infection, can take 20 to 30 years to develop.

Sharps injury log (§1910.1030(i)(5))

§1910.1030(h)(5)(i) - The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

§1910.1030(h)(5)(i)(A) - The type and brand of device involved in the incident,

§1910.1030(h)(5)(i)(B) - The department or work area where the exposure incident occurred, and

§1910.1030(h)(5)(i)(C) - An explanation of how the incident occurred.

§1910.1030(h)(5)(ii) - The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904.

§1910.1030(h)(5)(iii) - The sharps injury log shall be maintained for the period required by 29 CFR 1904.6.

Purpose: The sharps injury log serves as a tool for identifying tasks, areas, and devices that have a high risk for sharps injuries. The information allows the employer to focus efforts toward eliminating these high risks and in device evaluation.

3. **Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

Employers may use improved information technology whenever appropriate when establishing and maintaining the required records. OSHA wrote the paperwork requirements of the Standard in performance-oriented language (i.e., in terms of what data to maintain, not how to maintain the data). The employer may also contract the services of a healthcare professional located offsite to maintain and retain medical records.

4. **Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.**

The information required to be collected and maintained is specific to each employer and employee involved and is not available or duplicated by another source. The information required by this Standard is available only from employers. At this time, there is no indication that any alternative source is available.

5. **If the collection of information impacts small businesses or other small entities (Item 5 of OMB Form 83-I), describe any methods used to minimize burden.**

The information collection requirements of the Standard do not have a significant impact on a substantial number of small entities.

6. **Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

The information collection frequencies specified by this Standard are the minimum that OSHA believes are necessary to ensure that the employer and OSHA can effectively monitor the exposure and health status of employees exposed to bloodborne pathogens.

7. **Explain any special circumstances that would cause an information collection to be conducted in a manner:**
- **requiring respondents to report information to the agency more often than quarterly;**
 - **requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;**
 - **requiring respondents to submit more than an original and two copies of any document;**
 - **requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records for more than three years;**
 - **in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;**
 - **requiring the use of a statistical data classification that has not been reviewed and approved by OMB;**
 - **that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or**
 - **requiring respondents to submit proprietary trade secret, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

The Standard requires that employers must obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation (§1910.1030(f)(5)). The 15 day provision assures that the employee is informed in a

timely manner regarding information received by the employer and is consistent with other OSHA health standards.

8. **If applicable, provide a copy and identify the data and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting comments on the information collection prior to submission to OMB. Summarize public comments received in response to that notice and describe actions taken by the agency in response to these comments. Specifically address comments received on cost and hour burden.**

Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Consultation with representatives of those from whom information is to be obtained or those who must compile records should occur at least once every 3 years -- even if the collection of information activity is the same as in prior periods. There may be circumstances that may preclude consultation in a specific situation. These circumstances should be explained.

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3506(c)(2)(A)), OSHA will publish a *Federal Register* notice soliciting comments from the public and other interested parties on the information collection requirements contained in the Bloodborne Pathogen Standard. The notice is part of a pre-clearance consultation program intended to provide interested parties the opportunity to comment on OSHA's request for an extension by OMB of a previous approval of the information collection requirements found in the above Bloodborne Pathogen Standard.

9. **Explain any decision to provide any payment or gift to respondents, other than reenumeration of contractors or grantees.**

No payments or gifts will be provided to the respondents.

10. **Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation, or agency policy.**

To ensure that the personal information contained in medical records remains confidential, OSHA developed 29 CFR 1913.10 to regulate access to these records.

11. **Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private. This justification should include the reasons why the agency considers the questions necessary, the specific uses to be made of the information, the explanation to be given to persons from whom the information is requested, and any steps to be taken to obtain their consent.**

None of the provisions in the Standard require the collection of sensitive information.

12. **Provide estimates of the hour burden of the collection of information. The statement should:**

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates.**

Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices.

- If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens in Item 13 of OMB Form 83-I.
- Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories.

Table A
Number of Establishments

<u>Establishment Type</u>	<u>Total Affected</u>
*Office of Physicians	199,100 ⁴
*Office of Dentists	114,908 ⁵
*Nursing Homes	15,980 ⁶

⁴ Source; U.S. Bureau of the Census (1997) County Business Patterns, Offices of Osteopathic (SIC Code 8030) has been added.

⁵ Ibid

*Hospitals	6,985 ⁷
*Medical and Dental Labs	17,548
*Home Health	6,437
*Hospices	651
*Hemodialysis	782
*Drug Rehabilitation	744
*Government Clinics	10,893
*Blood/Plasma/Tissue Centers	730
*Residential Care	11,220 ⁸
Personnel Services	1,348
Funeral Services	19,890
Health Units in Industry	202,540
Research Labs	1,453
Linen Services	1,250
Medical Equipment Repair	1,076
Law Enforcement	4,946
Fire and Rescue	3,174
Correctional Facilities	1,895
Lifesaving	100
Schools	6,321
Waste Removal	50
	630,021

Source: Occupational Safety and Health Administration, Office of Regulatory Analysis

*Industries that are included in SIC 80 Health care.

Classification of Employees

In order to prepare its regulatory impact analysis, OSHA chose to group employees into four groups depending upon their duties. Group A employees are those who have direct patient health care responsibilities, such as physicians and nurses. Group B employees are those employed in laboratories or who have emergency response duties, such as emergency medical technicians, fire fighters, and law enforcement officers. Group C employees are housekeepers and janitors. Group D employees are other workers, such as drivers, service workers, and social workers.

Many of the Tables in Appendix A, “Bloodborne Pathogens Standard Burden Hour Calculation Tables” use these Groups to calculate burden hours and costs.

TABLE B

⁶ Source; American Health Care Association Comment (Docket Number, ICR 1218-0180 (2002)). OSHA assumed 6% of the 17,000 nursing homes do not have employees exposed to blood or other potentially infectious materials

⁷ Source; U.S. Bureau of the Census (1997) County Business Patterns

⁸ Source; American Health Care Association Comment (Docket Number ICR 1218-0180(2002)).

Number of Affected Employees, Job Turnover Rates, and Occupational Turnover Rates by Industry and Job Classification

	Number of Affected Employees	Job Turnover Rate	Occupational Turnover Rate
Offices of Physicians			
Category A	967,626	22.8	6.9%
C	6,969	31.6	9.8%
D	69,685	21.8	12.9%
Office of Dentists			
Category A	359,662	26.8	1.6%
C	3,447	31.6	9.8%
Nursing Homes			
Category A	594,456	49.9	24.8%
C	38,352	31.6	9.8%
D	6,392	31.6	9.8%
Hospitals			
Category A	2,207,260	27.2	14.7%
B	188,595	21.8	12.9%
C	293,370	31.6	9.8%
Medical and Dental Labs			
Category A	227,773	21.7	12.9%
C	1,754	31.6	9.8%
D	197,766	31.6	9.8%
Home Health			
Category A	202,946	36.3	22.3%
C	3,000	31.6	9.8%
D	6,300	36.3	22.5%
Hospices			
Category A	10,565	36.3	22.5%
C	154	31.6	9.8%
D	27	36.3	22.5%
Hemodialysis			
Category A	11,926	25.5	15.4%
C	209	31.6	22.5%
D	553	21.8	12.9%
Drug Rehabilitation			
Category A	6,067	25.5	15.4%
C	149	31.6	22.5%
D	506	21.8	12.9%
Government Clinics			
Category A	52,156	22.8	13.5%
C	381	31.6	9.8%
D	3,808	21.8	12.9%
Blood/Plasma/Tissue Cntrs.			
Category A	18,198	21.8	12.9%
C	200	31.6	9.8%
D	390	36.3	22.5%
Residential Care			
Category A	41,211	49.6	24.3%
C	1,138	31.6	9.8%
D	6,753	36.3	9.8%
Personnel Services			
Category A	61,387	100.0	8.7%
D	102,090	31.6	9.8%

Funeral Services			
Category A	51,054	21.8	12.9%
C	2,721	31.6	9.8%
D	3,238	31.6	9.8%
Health Units in Industry			
Category A	34,184	31.7	19.5%
B	141,051	21.8	9.8%
D	3,497	31.6	12.9%
Research Labs			
Category A	87,484	21.8	12.9%
C	1,315	31.6	9.8%
D	352	21.8	12.9%
Linen Services			
Category D	50,000	54.0	9.8%
Medical Equipment Repair			
Category A	473	38.3	22.5%
B	200	38.3	12.9%
C	5,152	21.8	12.9%
D	360	21.8	22.5%
Law Enforcement			
Category A	306,769	10.1	7.8%
B	1,137	21.8	9.8%
C	2,617	31.6	7.8%
D	31,022	10.1	12.9%
Fire and Rescue			
Category A	113,866	21.8	12.9%
B	136,412	8.5	22.5%
D	1,770	38.3	7.8%
Correctional Facilities			
Category A	8,381	31.7	19.5%
B	82,883	41.0	12.9%
C	7,273	31.6	17.7%
D	21,687	29.1	7.8%
Lifesaving			
Category A	5,000	21.8	12.9%
Schools			
Category A	23,514	25.0	15.0%
D	17,848	36.3	22.5%
Waste Removal			
Category A	13,300	36.3	22.5%

To update the number of affected employees, the Agency, using the original RIA estimates, determined the number of employees per category, per establishment. The number of employees per category, per establishment, was multiplied by the number of establishments as listed in Table A to determine the total number of affected employees in the various job categories.

I. Explanation of Method of Estimating Annual Burden Hours

The Agency determined average wage rates using hourly earnings, including benefits, to represent the cost of employee time. For the relevant occupational categories, mean hourly earnings from June 2005 National Compensation Survey by the Bureau of Labor Statistics have been adjusted to reflect the fact that fringe benefits comprise about 29.5% of total compensation in the private sector. Since wages are the remaining 70.5% of employee compensation wages are

multiplied by 1.42 (1/0.705) to estimate full employee hourly compensation. The costs of labor used in this analysis are therefore estimates of total hourly compensation. These hourly wages are:

Manager/Supervisor	\$50.78
Employee	\$30.00
Clerical employee	\$24.32
Personnel Training and Labor Relations Specialist	\$36.82

Table C

Summary of Burden Hours, Costs and Responses

Collection of Information	Existing Burden Hours	Requested Burden Hours	Reasons for Change	Cost Item #12
(A) Exposure control plan				
(1) Written Plan (<i>Table 1</i>)	1,350,824	1,350,824		\$68,594,843
(2) Additional Documentation required by Needlestick Prevention Act	96,495	96,495	.	\$4,900,016
(3) <u>Employee Solicitation</u>	96,495	96,495		\$4,900,016
(4) <u>Employee Response</u>	902,747	902,747		\$27,082,410
(B) Housekeeping	0	0		0
(C) Laundry	0	0		0
(D) HIV/HBV research laboratories and production	0	0		0

facilities.				
(E) Hepatitis B Vaccination and post-exposure evaluation and follow-up				
<u>(1) Hepatitis B Vaccination</u> <i>Table 2 (Employee time)</i>	206,812	206,812		\$3,367,341
<i>Table 3 (Health Care Professional Time)</i>	6,610,935	6,610,935		\$3,740,440
<u>(2) Antibody Testing Source Individuals</u> <i>Table 4 HIV Source Testing Health Care Time</i>	39,650	39,650		\$1,387,755
<i>Table 4 Cont'd HBV Source Testing</i>	5,267	5,267		\$123,837
<u>(3) HBV Antibody Testing for workers</u> <i>Table 5 HBV Antibody Testing for Vaccinated Worker (Employee Time)</i>	11,402	11,402		\$213,180
<i>Table 6 HBV Testing for Vaccinated Workers (Health Care Professional Time)</i>	3,390	3,390		\$117,647
<i>Table 7 HBV Antibody Testing for Non-Vaccinated Workers (Employee Time)</i>	1,622	1,622		\$26,254
<i>Table 8 HBV Antibody Testing for Non-vaccinated Workers (Health Care Professional Time)</i>	282	282		\$9,792
<i>Table 9 Hepatitis B Immune Globulin (HBIG) Vaccinated Workers (Employee Time)</i>	103	12	Due to an administration error in calculating the hours for this provision the Agency is requesting a total decrease of -91 hours .	\$347
<i>Table 10 HBIG: Vaccinated Workers (Health Professional Time)</i>	34	34		\$761
<i>Table 11 HBIG Non Vaccinated Workers (Employee Time)</i>	336	336		\$26,254
<i>Table 12: HBIG Non-vaccinated Workers (Health Care Professional Time)</i>	59	59		\$1,159
<i>Table 13 HIV Antibody Tests (Employee Time)</i>	280,366	280,370	Due to an administration error in calculating the hours for this provision the Agency is requesting a total increase +4 hours .	\$7,997,988
<i>Table 14 (HIV Antibody Tests Health Care Professional Time)</i>	82,118	82,118		\$2,874,140
<u>(4) HIV serologic testing and Post-exposure prophylaxis (PEP) exposed workers</u>	17,704	17,704		
<u>(5) Counseling for exposed</u>	551,584	551,729	Due to an administration	\$15,984,943

Workers (Table 15)			error in calculating the hours for this provision the Agency is requesting a total decrease of -145 hours.	
(6) Information provided to the healthcare professional				
(7) Healthcare professionals written opinion	118,968	118,968		\$2,893,302
(F) Communication of hazards to employees				
(1) Labels and signs	0	0		0
(2) Information and Training	2,520,454	2,520,452	Due to an administration error in calculating the hours for this provision the Agency is requesting a total decrease -2 hours.	\$90,635,863
<i>Table 16</i> (Training new hires)	1,316,785	1,316,785		\$48,507,445
<i>Table 17</i> Retraining in –service employees	1,203,669	1,203,667	Due to an administration error in calculating the hours for this provision the Agency is requesting a total decrease -2 hours.	\$42,128,418
(G) Recordkeeping				
(1) Medical records (Table 18: Medical records)	870,452	870,452		\$16,312,775
(2) Training Records (Table 19: Updating or creating training records)	124,329	124,329		\$2,359,758
(3) Availability	1,903	1,903		\$46,281
(4) Federal access	252	252		\$12,797
(5) Transfer of records	0	0		0
(6) Sharps injury log	47,213	47,213		\$1,738,383
TOTALS	14,060,764	14,060,528	-236	\$345,984,145

A. Exposure control plan

(1) Exposure control plan (§1910.1030(c)(1)-(2))

There are four key elements that constitute the exposure control plan: the exposure determination, the schedule and method of implementation of the provisions of the Standard, employee solicitation and the procedure for evaluating exposure incidents.

The exposure determination is the identification and documentation of those tasks and procedures where occupational exposures may take place and the employees who perform those tasks and procedures. This includes a list of all job classifications where all employees have occupational exposure and a list of job classifications in which some but

not all employees have occupational exposure and the tasks and procedures that they perform that place them at risk for occupational exposure. The employer must provide a schedule and method of implementation of the provisions of the Standard.

Paragraph (c)(1)(iv) requires the employer to annually review and update their exposure control plan. When employers review and update their exposure control plans, employers must ensure that the plan: (A) reflects changes in technology that eliminate or reduce exposure to bloodborne pathogens; and (B) includes documentation of consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

The burden hours associated with the development of the exposure control plan are for new employers to develop their exposure control plan and existing employers to update their exposure control plan. To develop plans, hospitals take 16 hours; medical and dental labs take 8 hours; and, physicians, dentists and residential care 4 hours. OSHA estimates that hospitals will require 8 hours annually to review and update their plans. All other sectors take 2 hours to review and update their exposure control plans. The total burden hours for the exposure control plan are 1,350,824. The assumptions made and the breakdown by type of facility are found in Table 1 in the appendix to this document.

(2) Exposure control plan – Documentation of employee solicitation

Employers must document consideration and implementation of appropriate commercially available and effective safer medical devices designated to eliminate or minimize occupational exposure and employee solicitation in the exposure plan. These employers are likely to be in SIC Code 80, as noted in Table A. The effort for this documentation is 15 minutes (.25 hour) of managerial time earning \$50.78 an hour.

Burden hours: 385,978 establishments x .25 hour = 96,495 hours

Cost: 96,495 hours x \$50.78 = \$4,900,016

(3) Employee Solicitation (c)(1)(v)

Employers who are required to establish an exposure control plan must solicit input from non-managerial employees responsible for **direct patient care who are potentially exposed to injuries from contaminated sharps** in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the “Exposure control plan.”

The overwhelming majority of establishments that have employees who are responsible for direct patient care and who are potentially exposed to injuries from contaminated sharps are in SIC code 80⁹, Health Services (*1997 County Business Patterns (SIC), U.S.*

⁹ The Offices of Other Practitioners was not included in SIC 80.

Census Bureau). The 1997 data is the most recent data available using the SIC reporting system. The Agency estimates there are 385,978 establishments that must solicit input from non-managerial employees.

OSHA estimates that the initial solicitation requires 15 minutes (.25 hour) of managerial time.

Burden hours: 385,978 establishments x .25 hour = 96,495

Costs: 96,495 hours x \$50.78 = \$4,900,016

(4) Employee Response (c)(1)(v)

The burden hours and costs associated with the employee response will vary with the number of employees and the response rate to the initial solicitation. According to the *County Business Patterns*, there were 10,942,382 individuals employed in SIC 80 in 1997

OSHA estimates that it takes 15 minutes (.25 hour) of employee time to respond to the solicitation and that approximately 33% or 3,610,986 individuals will respond. OSHA uses a wage rate of \$30.00.

Burden hours: 3,610,986 individuals x .25 hour = 902,747 hours

Costs: 902,747 hours x \$30.00 = \$27,082,410

B. Housekeeping (§1910.1030(d)(4)(i))

Burden hours: 0

The employer must determine and implement an appropriate written schedule for cleaning and method of disinfection based on the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed. Since it is customary for facilities to have a written housekeeping plan, the Bloodborne Pathogens Standard would not impose a significant paperwork burden.

C. Laundry (§1910.1030(d)(4)(iv)(A)(2))

Burden hours: 0

Labeling requirements required by this paragraph are currently in place and are being followed by the facilities covered by Bloodborne Pathogens Standard; therefore, there is no additional burden from the labeling procedures.

D. HIV/HBV research laboratories and production facilities (§1910.1030(e)(2)(ii)(M))

Burden hours: 0

The employer must adopt or prepare a biosafety manual. The biosafety manual is a usual and customary part of any viral research program where harmful microorganisms are used on a routine basis or in any production facility where large quantities of these microorganisms are being cultured (grown), for example, in the production of viral vaccines. Therefore, there are no additional burden hours.

E. Hepatitis B Vaccine; Post exposure follow-up (§1910.1030(f))

(1) Hepatitis B Vaccination

Burden hours: 6,785,346

The Standard requires employers to make available the hepatitis B vaccine to all employees who have occupational exposure unless: the employee has previously received the complete hepatitis B vaccination series, antibody testing reveals that the employee is immune, or the vaccine is contraindicated for medical reasons. Since the Standard has been in effect since December, 1991, most employees with occupational exposure have already been offered the vaccine. The Agency expects that most vaccinations would be offered to employees who are newly entering the field. All newly hired employees who have contact with patients or blood and are at an ongoing risk for injuries with sharp instruments or needle sticks must be tested for the antibody to hepatitis B surface antigen, one to two months after completion of the 3-dose vaccination series. Since this procedure would require employee time to be vaccinated and health care professional time to administer the vaccine, we have prepared two tables. The assumptions made and the breakdown by type of facility are found in Table 2, for employee's time and Table 3 for the healthcare worker time. Table 2 estimates the total burden for all employees to receive HBV vaccinations and to be tested for hepatitis B surface antigen is 206,812. The

total burden hours for health care professional, in Table 3, is 6,610,935.

(2) Antibody testing of source individuals **Burden hours: 44,917**

The Standard requires that if an exposure incident occurs then the employer is to contact the individual whose blood is the source of the exposure (source individual) and, after legal consent is obtained, test the source individual to determine HIV and HBV infectivity. The assumptions for determining the burden hours for the health care professional to provide source testing for both HIV and HBV are in Table 4. Burden hours for the healthcare professional to provide HIV source testing is estimated to be 39,650 hours, while source testing for HBV is estimated to be 5,267 hours (Table 4, Cont'd).

(3) HBV antibody testing for workers **Burden hours: 17,137**

The Standard requires that the employer provide post exposure evaluation and follow up according to the recommendations of the US Public Health Service current at the time the evaluation and follow up takes place. The employer must obtain consent of the exposed employee to collect and test the exposed employee's blood to establish a baseline sample (HBV). The current CDC guideline states that within 24 hours, post exposure prophylaxis with hepatitis B immune globulin (HBIG) and/or vaccine should be administered when indicated (e.g., after percutaneous or mucous membrane exposure to blood known or suspected to be HbsAg (hepatitis B surface antigen) positive). The assumptions made and the breakdown by type of facility are found in Tables 5 - 12 in the appendix to this document.

Tables 5 and 7 estimate that it will take 11,402 hours for vaccinated workers, and 1,622 hours for non-vaccinated workers, respectively, to receive HBV post exposure blood tests. Table 6 estimates that it takes health care professionals 3,390 hours to administer the HBV post exposure blood tests to vaccinated workers and Table 8 estimates that health care workers will take 282 hours to administer the HBV post exposure blood tests to non-vaccinated workers.

Tables 9 through 12 determine burden hours and costs for administering the Hepatitis B Immune Globulin (HBIG). Table 9 estimates a total of 12 hours for vaccinated workers to receive HBIG and Table 10 estimates it takes health care professionals a total of 34 hours to administer HBIG to vaccinated workers. Table 11 estimates a total of 336 hours for non-vaccinated workers to receive HBIG and Table 12 estimates it takes health care professionals a total of 59 hours to administer HBIG to non-vaccinated workers.

(4) HIV serologic testing and Postexposure prophylaxis (PEP) for exposed workers

Burden hours: 380,192

The Standard requires that the employer provide post exposure evaluation and follow up according to the current recommendations of the US Public Health Service at the time the evaluation and follow up takes place. The employer must obtain the exposed employee's consent to collect and test the exposed employee's blood to establish a baseline sample. The current Center for Disease Control (CDC) recommendation for healthcare workers¹⁰ (HCW) who have occupational exposure to blood or other body fluids that may contain HIV virus includes postexposure prophylaxis (PEP) that includes a basic regimen of two drugs for four weeks and in most cases an "expanded" regimen that includes a third drug.

Tables 13 and 14 calculate the burden hours for workers and healthcare professionals respectively. The hours for administration of HIV antibody test for workers is 280,370 hours and for the health care professionals is 82,118 hours.

To estimate the burden hours and costs for PEP, OSHA estimated 8,852 healthcare workers¹¹ would be eligible for the PEP, and it will take one hour initially and at least one hour for follow-up visits. This includes travel time. The total burden hours for health care worker's PEP is 17,704 hours. OSHA estimates that HCP earns \$35.00 an hour, resulting in a wage hour cost of \$619,640.

(5) Counseling for exposed workers

Burden hours: 551,729

The Standard requires that post exposure counseling be provided to employees who have had an exposure incident. This information is presented in a single table that accounts for both employee and counselor time. The assumptions made and the breakdown by type of facility are found in Table 15 in the appendix of this document.

F. Communication of hazards to employees

Burden hours: 118,968

Information concerning the nature of the exposure incident must be provided to the physician so that the health care professional will know what actions to take in the follow up care. We have determined the hours by multiplying the number of exposure incidents (1,189,681) by 6 minutes.

OSHA assumes a clerk earning \$24.32 will provide the information to the physician; therefore the total cost is \$2,893,302.

¹⁰HCW is defined by CDC as any person (e.g., an employee, student, contractor, attending clinician, public safety worker, or volunteer) whose activities involve contact with patients or with blood or other body fluids from patients in a health-care or laboratory setting.

¹¹ OSHA has adopted the International Health Care Worker Safety Center (IHCSWS) estimate of 590,164 needlestick and sharp injuries occur annually. Of these about 1-2% of these involve source patients who are HIV positive. For purposes of calculating burden hours and costs OSHA has assumed 1.5%.

Healthcare professionals written opinion

Burden hours: 118,968

The standard requires the employer to obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation. We have determined the hours by multiplying the number of exposure incidents (1,189,681) by 6 minutes. OSHA assumes a clerk earning \$24.32 will provide the information to the physician; therefore the total cost is \$ 2,893,302.

Labels and signs (§1910.1030 (e)(2)(ii) and (g)(1)(i) and (g)(1)(ii))

Burden hours: 0

Paragraph (e)(2)(ii), requires that HIV and HBV research laboratories and production facilities that send contaminated materials to a site away from the work area, place the materials in a durable, leakproof container that is labeled or color coded. When infectious materials or infected animals are in the work area, a hazard warning sign, with the universal biohazard symbol, must be posted on all access doors. Paragraph (g)(1)(ii) requires the sign contain the biohazard symbol, the word "biohazard", the name of the infectious agent, special requirements for entering the area, and the name and telephone number of the laboratory director or other responsible person. They must be fluorescent orange-red or predominantly so, with lettering and symbol in a contrasting color. Since these signs have been permanently mounted there is no additional burden.

Paragraph (g)(1)(i) requires that employers place warning labels on containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G). The requirements for the color of the labels are identical for those for the signs except that red bags or red containers may be substituted for labeled containers for regulated wastes. There are no burden hours unique for labeling since containers used to transport or store blood or regulated wastes are now manufactured and widely available with labels and symbols already affixed to them.

Training (§1910.1030(g)(2))

Burden hours: 2,520,454

The Standard requires that all employees with occupational exposure participate in an initial training program. The training program must explain: the contents of this Standard and appendices; the epidemiology and symptoms of bloodborne diseases; the modes of transmission of bloodborne pathogens; the provisions of the exposure control plan; ways to recognize tasks that may involve exposure to blood and other potentially infectious material; the use (and limitations) of engineering controls, work practices, and personal protective clothing/equipment in preventing exposure; information on the types, proper use, location, removal, handling, decontamination of protective clothing and equipment; and explanation of the basis for selection of protective clothing and equipment; signs and labels and color coding; and the procedure to follow if an occupational exposure occurs; information on the hepatitis B vaccine, including the efficacy and safety of the vaccine; information on the appropriate actions to take in case of an

emergency, information post exposure evaluation and follow-up; an explanation of signs and labels.

Since the Standard has been in effect since March 6, 1992, the only initial training that would be required would be for new hires. The total burden for initial training of new hires is 1,316,785 hours. The assumptions made and the breakdown by facility are found in Table 16 of the appendix to this document. The Standard requires that employees receive training at least annually and whenever there are changes that affect the employee's occupational exposure. The total burden for retraining is 1,203,667. The assumptions made and the breakdown by facility are found in Table 17 of the appendix to this document.

G. Recordkeeping (§1910.1030 (h) (1) - (4))

Total hours: 923,794

(1) Medical Records

Burden hours: 870,452

The Standard requires the employer to maintain medical surveillance records for each employee in accordance with 29 CFR 1910.1020. These confidential records must contain the employee's name and social security number, a copy of each employee's hepatitis B vaccination record, the circumstances of any occupational exposure incident, results of medical testing as they relate to the employee's ability to receive vaccination or postexposure evaluation following an exposure incident; a copy of the physician's written opinion; and a copy of the information provided to the physician. The records must be maintained for at least the duration of each employee's period of employment plus 30 years. The time required for medical recordkeeping is based on the need to establish medical records for new hires and to update existing medical records for current employees. The assumptions and breakdown by facility type are found in Table 18 in the appendix to this document.

(2) Training Records

Burden hours: 124,329

The Standard requires the employer to maintain training records. These records must contain the following information: the dates of the training sessions; the contents or a summary of the contents of the training sessions; the names and qualifications of persons conducting the training; and the names and job titles of all persons attending the training. These records do not have to be individual records kept in each employee's personnel folder but can be created and maintained for each training session that may provide training for many employees. These records must be maintained for 3 years. The assumptions and breakdown by facility type are found in Table 19 in the appendix to this document.

(3) Employee Access

Burden hours: 1,903

The Standard requires that employee medical records also be made available to anyone

having the written consent of the employee. OSHA assumes that the records that will be requested by 2% of employees who have had an exposure incident, and that it would take a clerical, earning \$24.32 per hour 5 minutes (.08 hour) to provide access. The calculation of burden hours is based on number of exposures per year (1,189,681) x 2% x 0.08 hours.

Costs then equals 1,903 hours x \$24.32 = \$ 46,281

(4) Federal Access

Burden hours: 252

The Standard states that the exposure control plan must be made available to the Assistant Secretary and the Director for examination and copying §1910.1030(c)(1)(v). Similarly, section (h)(3)(i) states "the employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying." Also, medical records (§1910.1030(h)(3)(iii)), and training records (§1910.1030 (h)(3)(ii)), shall be made available to the Assistant Secretary and the Director for examination and copying in accordance with 29 CFR 1910.1020.

Most often OSHA will request access to records during compliance inspections. Based on previous estimates, OSHA may inspect 3,151 establishments. The Agency estimates a health care professional, earning \$50.78 per hour, will expend 5 minutes (.08 hour) to show OSHA the location of their records.

3,151 inspections x .08 hours = 252 hours
252 hours x \$50.78 = \$ 12,797

(5) Transfer of Records

Burden hours: 0

OSHA does not anticipate that any employers will either cease business operations without a successor or be required to transfer records to NIOSH during the period covered by the clearance; therefore, there is no additional burden from the transfer of record requirement of this Standard.

(6) Sharps Injury Log

Burden hours: 47,213

Employers, who are required to maintain an occupational injuries and illness log under 29 CFR 1904, must establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log must be recorded and maintained in a manner as to protect the confidentiality of the injured employee. The sharps injury log must contain the following: (A) the type and brand of device involved in the incident, (B) the department or work area where the exposure incident occurred, and (C) an explanation of how the incident occurred.

The burden hours and costs attributable to the log are based on the number of needlestick

and sharp injuries and the time to record the required information. OSHA estimates there are 590,164 needlestick and sharps injuries annually¹², and it takes a staff member with a skill level of a Personnel Training and Labor Specialist, with an hourly wage rate of \$36.82, five minutes (.08 hour) to collect the data and enter it onto a separate log.

The format of the sharps injury log is not specified. The employer is permitted to determine the format in which the log is maintained (e.g. paper or electronic), and may include information in addition to that required by the standard, so long as the privacy of the injured workers is protected. Many employers already compile reports of percutaneous exposure incidents in a variety of ways. Existing mechanisms for collecting this information will be considered sufficient to meet the requirements of the standard for maintaining a sharps injury log, provided that the information gathered meets the minimum requirements specified in the standard, and the confidentiality of the injured employee is protected.

Burden hours: 590,164 cases x .08 hour = 47,213 hours

Cost: 47,213 hours x \$36.82 = \$ 1,738,383

13. Provide an estimate of the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in Items 12 and 14).

- **The cost estimate should be split into two components: (a) a total capital and start-up cost component (annualized over its expected useful life); and (b) a total operation and maintenance and purchase of services component. The estimates should take into account costs associated with generating, maintaining, and disclosing or providing the information. Include descriptions of methods used to estimate major cost factors including system and technology acquisition, expected useful life of capital equipment, the discount rate(s), and the time period over which costs will be incurred. Capital and start-up costs include, among other items, preparations for collecting information such as purchasing computers and software; monitoring, sampling, drilling and testing equipment; and record storage facilities.**
- **If cost estimates are expected to vary widely, agencies should present ranges of cost burdens and explain the reasons for the variance. The cost of purchasing or contracting out information collection services should be a part of this cost burden estimate. In developing cost burden estimates, agencies may consult with a sample of respondents (fewer than 10), utilize the 60-day pre-OMB submission public comment process and use existing economic or regulatory impact analysis associated with the rulemaking containing the information collection, as appropriate.**
- **Generally, estimates should not include purchases of equipment or services, or portions thereof, made: (1) prior to October 1, 1995, (2) to achieve regulatory compliance with requirements not associated with the information collection, (3) for reasons other than to provide information or keep records for the government, or (4) as part of customary and usual business or private practices.**

Certain employers will incur costs for the various medical requirements contained in the Standard. The costs to respondents are reflected in Tables 3, 4, 6, 8, 10, 12, and 14. The table

¹² OSHA uses The International Health Care Worker Safety Center estimate of 590,164 annual needlestick and sharps injuries.

below summarizes the costs.

In addition, employers will incur the cost of providing post exposure prophylaxis (PEP) to employees who have had occupational exposure to blood, and other body fluids, that may contain HIV.

There are a host of drugs that can be prescribed by the doctors depending on the employee's personal health and drug tolerance. Since the costs of these drugs can vary significantly, the Agency based the cost estimate on the most frequently used drugs.¹³

OSHA estimates it cost \$662 per employee to provide the 4-week PEP. For purposes of estimating costs, OSHA assumes each employee will receive an expanded regiment which consists of Combivier and a protease inhibitor. OSHA estimates one tablet of Combivier costs \$2.15, which must be taken twice a day for 28 days resulting in a cost of \$120. One tablet protease inhibitor costs \$2.15. Three tablets must be taken three times a day for 28 days, costing \$542. OSHA estimated that 8,852 employees may be provided PEP at a cost of \$662 per employee, totaling \$5,860,024.

CHANGES IN COSTS

Medical Provision	Existing Costs	Proposed Costs
Hepatitis B Vaccination ¹⁴ (Table 3)	\$8,125,235	\$8,125,235
HIV Testing - (Table 4)	\$2,603,427	\$2,603,427
HBV Source Testing - (Table 4 (Cont'd))	\$1,201,382	\$1,201,382
HBV Antibody Testing for Vaccinated Workers (Table 6)	\$370,913	\$370,913
HBV Antibody Testing for Non Vaccinated Workers (Table 8)	\$65,210	\$65,210
Hepatitis B Immune Globulin Vaccinated Workers (Table 10)	\$21,338	\$21,338
Hepatitis B Immune Globulin Non Vaccinated Workers (Table 12)	\$99,024	\$99,024
HIV Antibody Tests (Table 14)	\$6,161,339	\$6,161,339

¹³ National Clinician's Postexposure Hotline, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC).

¹⁴ The cost for antibody to hepatitis B surface antigen is estimated to be \$80.00 to \$100.00 per person. For purposes of estimating burden hours and costs, OSHA estimated the cost to be \$90.00.

PEP to Employees	\$5,860,024	\$5,860,024
TOTAL COST	\$24,507,892	\$24,507,892

14. Provide estimates of annualized cost to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information. Agencies also may aggregate cost estimates from Items 12, 13, and 14 in a single table.

Transfer of Records to NIOSH

Cost: \$15

The Bloodborne Pathogens Standard requires that if an employer ceases to do business and there is no successor to preserve and maintain employee records for the required periods of time, the records must be transmitted to NIOSH. Also, at the expiration of the retention period for the records required to be maintained, employers must notify NIOSH at least three months prior to the disposal of such records and transmit those records to NIOSH if requested within the period. The cost to the Federal government consists of the costs associated with NIOSH processing records from employers who cease to do business and have no successor to preserve and maintain employee records, or when the retention period for those records has expired and NIOSH has requested the records be transmitted to them. OSHA is contacting NIOSH to learn how many records NIOSH has received from employers in the past year. OSHA will then use this figure to estimate the number of records NIOSH will receive in the future.

Previously, no records were transmitted to NIOSH. To account for any future costs for transferring records to NIOSH during the period covered by this clearance, we have allocated a burden of 1 hour for the request. NIOSH estimated that 15 records can be processed in one hour at a cost \$15.00 per hour. Therefore, the Federal cost for records transfer is estimated to be \$15.00 per year.

Programmed Inspections

Cost: \$17,640

During an inspection an OSHA representative may request to see medical records required by the Bloodborne Pathogen Standard. It is estimated that an OSHA inspector earning approximately \$36.26 per hour will expend approximately 10 minutes (.17 hour) reviewing such records during an inspection.

Cost: OSHA Inspector Salary: \$36.26 x 10 minutes (.17 hour) x 3,151 inspections = \$19,423

15. Explain the reasons for any program changes or adjustments reporting in Items 13 or 14 of the OMB Form 83-I.

See Table C “Summary of Burden Hours, Costs and Responses” under Item 12 for changes to burden hours.

- 16. For collections of information whose results will be published, outline plans for tabulation, and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.**

This collection of information will not have results that will be published for statistical use.

- 17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

The Collection of Information will display a currently valid OMB control number.

- 18. Explain each exception to the certification statement identified in Item 19, "Certification for Paperwork Reduction Act Submission," of OMB 83-I.**

The Collection of Information does not request any exemptions from the certification statement identified in Item 19 "Certification for Paperwork Reduction Act Submissions," OMB Form 83-I.

Attachments:

Attachment 1: OSH Act (29 USC 651, 655 and 657)

Attachment 2: Bloodborne Pathogen Standards
29 CFR 1910.1030 (General Industry)
29 CFR 1915.1030 (Shipyards)

Attachment 3: Needlestick Safety and Prevention Act

Attachment 4: Access to employee exposure and medical records

Attachment 5: Retention and updating. (Recordkeeping)

Attachment 6: Part 1913 – Rules of Agency Practice and Procedure Concerning OSHA
Access to Employee Medical Records

Attachment 7: Preclearance Federal Register notice

Attachment 8: Public Comments

APPENDIX A: Bloodborne Pathogens Standard Burden Hour Calculation Tables

Attachment 1

OSH Act

29 U.S.C. 651

29 U.S.C. 655

29 U.S.C. 657

Attachment 2

29 CFR 1910.1030 (General Industry)

29 CFR 1915.1030 (Shipyard)

Bloodborne Pathogen Standard

Attachment 3

Needlestick Safety and Prevention Act

Attachment 4

29 CFR 1910.1020

Access to employee exposure and medical records

Attachment 5

Retention and updating (Recordkeeping)

Attachment 6

Part 1913 – Rules of Agency Practice and Procedure Concerning OSHA Access to Employee Medical Records

Attachment 7

Preclearance Federal Register Notice

Attachment 8
Public Comments

APPENDIX A

Bloodborne Pathogens Standard

Burden Hour Calculation Tables

SEC. 2. Congressional Findings and Purpose

29 USC 651

(a) The Congress finds that personal injuries and illnesses arising out of work situations impose a substantial burden upon, and are a hindrance to, interstate commerce in terms of lost production, wage loss, medical expenses, and disability compensation payments.

(b) The Congress declares it to be its purpose and policy, through the exercise of its powers to regulate commerce among the several States and with foreign nations and to provide for the general welfare, to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources --

(1) by encouraging employers and employees in their efforts to reduce the number of occupational safety and health hazards at their places of employment, and to stimulate employers and employees to institute new and to perfect existing programs for providing safe and healthful working conditions; (2) by providing that employers and employees have separate but dependent responsibilities and rights with respect to achieving safe and healthful working conditions;

(3) by authorizing the Secretary of Labor to set mandatory occupational safety and health standards applicable to businesses affecting interstate commerce, and by creating an Occupational Safety and Health Review Commission for carrying out adjudicatory functions under the Act;

(4) by building upon advances already made through employer and employee initiative for providing safe and healthful working conditions;

(5) by providing for research in the field of occupational safety and health, including the psychological factors involved, and by developing innovative methods, techniques, and approaches for dealing with occupational safety and health problems;

(6) by exploring ways to discover latent diseases, establishing causal connections between diseases and work in environmental conditions, and conducting other research relating to health problems, in recognition of the fact that occupational health standards present problems often different from those involved in occupational safety;

(7) by providing medical criteria which will assure insofar as practicable that no employee will suffer diminished health, functional capacity, or life expectancy as a result of his work experience;

(8) by providing for training programs to increase the number and competence of personnel engaged in the field of occupational safety and health; affecting the OSH Act since its passage in 1970 through January 1, 2004.

(9) by providing for the development and promulgation of occupational safety and health standards;

(10) by providing an effective enforcement program which shall include a prohibition against giving advance notice of any inspection and sanctions for any individual violating this prohibition;

(11) by encouraging the States to assume the fullest responsibility for the administration and enforcement of their occupational safety and health laws by providing grants to the States to assist in identifying their needs and responsibilities in the area of occupational safety and health, to develop plans in accordance with the provisions of this Act, to improve the administration and enforcement of State occupational safety and health laws, and to conduct experimental and demonstration projects in connection therewith;

(12) by providing for appropriate reporting procedures with respect to occupational safety and health which procedures will help achieve the objectives of this Act and accurately describe the nature of the occupational safety and health problem;

(13) by encouraging joint labor-management efforts to reduce injuries and disease arising out of employment.

6. Occupational Safety and Health Standards

29 USC 655:

(a) Without regard to chapter 5 of title 5, United States Code, or to the other subsections of this section, the Secretary shall, as soon as practicable during the period beginning with the effective date of this Act and ending two years after such date, by rule promulgate as an occupational safety or health standard any national consensus standard, and any established Federal standard, unless he determines that the promulgation of such a standard would not result in improved safety or health for specifically designated employees. In the event of conflict among any such standards, the Secretary shall promulgate the standard which assures the greatest protection of the safety or health of the affected employees.

(b) The Secretary may by rule promulgate, modify, or revoke any occupational safety or health standard in the following manner:

(1) Whenever the Secretary, upon the basis of information submitted to him in writing by an interested person, a representative of any organization of employers or employees, a nationally recognized standards-producing organization, the Secretary of Health and Human Services, the National Institute for Occupational Safety and Health, or a State or political subdivision, or on the basis of information developed by the Secretary or otherwise available to him, determines that a rule should be promulgated in order to serve the objectives of this Act, the Secretary may request the recommendations of an advisory committee appointed under section 7 of this Act. The Secretary shall provide such an advisory committee with any proposals of his own or of the Secretary of Health and Human Services, together with all pertinent factual information developed by the Secretary or the Secretary of Health and Human Services, or otherwise available, including the results of research, demonstrations, and experiments. An advisory committee shall submit to the Secretary its recommendations regarding the rule to be promulgated within ninety days from the date of its appointment or within such longer or shorter period as may be prescribed by the Secretary, but in no event for a period which is longer than two hundred and seventy days.

(2) The Secretary shall publish a proposed rule promulgating, modifying, or revoking an occupational safety or health standard in the Federal Register and shall afford interested persons a period of thirty days after publication to submit written data or comments. Where an advisory committee is appointed and the Secretary determines that a rule should be issued, he shall publish the proposed rule within sixty days after the submission of the advisory committee's recommendations or the expiration of the period prescribed by the Secretary for such submission.

(3) On or before the last day of the period provided for the submission of written data or comments under paragraph (2), any interested person may file with the Secretary written objections to the proposed rule, stating the grounds therefore and requesting a public hearing on such objections. Within thirty days after the last day for filing such objections, the Secretary shall publish in the Federal Register a notice specifying the occupational safety or health standard to which objections have been filed and a hearing requested, and specifying a time and place for such hearing.

(4) Within sixty days after the expiration of the period provided for the submission of written data or comments under paragraph (2), or within sixty days after the completion of any hearing held under paragraph (3), the Secretary shall issue a rule promulgating, modifying, or revoking an occupational safety or health standard or make a determination that a rule should not be issued. Such a rule may contain a provision delaying its effective date for such period (not in excess of ninety days) as the Secretary determines may be necessary to insure that affected employers and employees will be informed of the existence of the standard and of its terms and that employers affected are given an opportunity to familiarize themselves and their employees with the existence of the requirements of the standard.

(5) The Secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate. In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired.

(6) (A) Any employer may apply to the Secretary for a temporary order granting a variance from a standard or any provision thereof promulgated under this section. Such temporary order shall be granted only if the employer files an application which meets the requirements of clause (B) and establishes

that --

(i) he is unable to comply with a standard by its effective date because of unavailability of professional or technical personnel or of materials and equipment needed to come into compliance with the standard or because necessary construction or alteration of facilities cannot be completed by the effective date,

(ii) he is taking all available steps to safeguard his employees against the hazards covered by the standard, and

(iii) he has an effective program for coming into compliance with the standard as quickly as practicable.

Any temporary order issued under this paragraph shall prescribe the practices, means, methods, operations, and processes which the employer must adopt and use while the order is in effect and state in detail his program for coming into compliance with the standard. Such a temporary order may be granted only after notice to employees and an opportunity for a hearing: *Provided*, That the Secretary may issue one interim order to be effective until a decision is made on the basis of the hearing. No temporary order may be in effect for longer than the period needed by the employer to achieve

compliance with the standard or one year, whichever is shorter, except that such an order may be renewed not more than twice (I) so long as the requirements of this paragraph are met and (II) if an application for renewal is filed at least 90 days prior to the expiration date of the order. No interim renewal of an order may remain in effect for longer than 180 days.

(B) An application for temporary order under this paragraph (6) shall contain:

(i) a specification of the standard or portion thereof from which the employer seeks a variance,

(ii) a representation by the employer, supported by representations from qualified persons having firsthand knowledge of the facts represented, that he is unable to comply with the standard or portion thereof and a detailed statement of the reasons therefor,

(iii) a statement of the steps he has taken and will take (with specific dates) to protect employees against the hazard covered by the standard,

(iv) a statement of when he expects to be able to comply with the standard and what steps he has taken and what steps he will take (with dates specified) to come into compliance with the standard, and

(v) a certification that he has informed his employees of the application by giving a copy thereof to their authorized representative, posting a statement giving a summary of the application and specifying where a copy may be examined at the place or places where notices to employees are normally posted, and by other appropriate means.

A description of how employees have been informed shall be contained in the certification. The information to employees shall also inform them of their right to petition the Secretary for a hearing.

(C) The Secretary is authorized to grant a variance from any standard or portion thereof whenever he determines, or the Secretary of Health and Human Services certifies, that such variance is necessary to permit an employer to participate in an experiment approved by him or the Secretary of Health and Human Services designed to demonstrate or validate new and improved techniques to safeguard the health or safety of workers.

(7) Any standard promulgated under this subsection shall prescribe the use of labels or other appropriate forms of warning as are necessary to insure that employees are apprised of all hazards to which they are exposed, relevant symptoms and appropriate emergency treatment, and proper conditions and precautions of safe use or exposure. Where appropriate, such standard shall also prescribe suitable protective equipment and control or technological procedures to be used in connection with such hazards and shall provide for monitoring or measuring employee exposure at such locations and intervals, and in such manner as may be necessary for the protection of employees. In addition, where appropriate, any such standard shall prescribe the type and frequency of medical examinations or other tests which shall be made available, by the employer or at his cost, to employees exposed to such hazards in order to most effectively determine whether the health of such employees is adversely affected by such exposure. In the event such medical examinations are in the nature of research, as determined by the Secretary of

Health and Human Services, such examinations may be furnished at the expense of the Secretary of Health and Human Services. The results of such examinations or tests shall be furnished only to the Secretary or the Secretary of Health and Human Services, and, at the request of the employee, to his physician. The Secretary, in consultation with the Secretary of Health and Human Services, may by rule promulgated pursuant to section 553 of title 5, United States Code, make appropriate modifications in the foregoing requirements relating to the use of labels or other forms of warning, monitoring or measuring, and medical examinations, as may be warranted by experience, information, or medical or technological developments acquired subsequent to the promulgation of the relevant standard.

(8) Whenever a rule promulgated by the Secretary differs substantially from an existing national consensus standard, the Secretary shall, at the same time, publish in the Federal Register a statement of the reasons why the rule as adopted will better effectuate the purposes of this Act than the national consensus standard.

(c) (1) The Secretary shall provide, without regard to the requirements of chapter 5, title 5, United States Code, for an emergency temporary standard to take immediate effect upon publication in the Federal Register if he determines

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(A) that employees are exposed to grave danger from exposure to substances or agents determined to be toxic or physically harmful or from new hazards, and

(B) that such emergency standard is necessary to protect employees from such danger.

(2) Such standard shall be effective until superseded by a standard promulgated in accordance with the procedures prescribed in paragraph (3) of this subsection.

(3) Upon publication of such standard in the Federal Register the Secretary shall commence a proceeding in accordance with section 6 (b) of this Act, and the standard as published shall also serve as a proposed rule for the proceeding. The Secretary shall promulgate a standard under this paragraph no later than six months after publication of the emergency standard as provided in paragraph (2) of this subsection.

(d) Any affected employer may apply to the Secretary for a rule or order for a variance from a standard promulgated under this section. Affected employees shall be given notice of each such application and an opportunity to participate in a hearing. The Secretary shall issue such rule or order if he determines on the record, after opportunity for an inspection where appropriate and a hearing, that the proponent of the variance has demonstrated by a preponderance of the evidence that the conditions, practices, means, methods, operations, or processes used or proposed to be used by an employer will provide employment and places of employment to his employees which are as safe and healthful as those which would prevail if he complied with the standard. The rule or order so issued shall prescribe the conditions the employer must maintain, and the practices, means, methods, operations, and

processes which he must adopt and utilize to the extent they differ from the standard in question. Such a rule or order may be modified or revoked upon application by an employer, employees, or by the Secretary on his own motion, in the manner prescribed for its issuance under this subsection at any time after six months from its issuance.

(e) Whenever the Secretary promulgates any standard, makes any rule, order, or decision, grants any exemption or extension of time, or compromises, mitigates, or settles any penalty assessed under this Act, he shall include a statement of the reasons for such action, which shall be published in the Federal Register.

(f) Any person who may be adversely affected by a standard issued under this section may at any time prior to the sixtieth day after such standard is promulgated file a petition challenging the validity of such standard with the United States court of appeals for the circuit wherein such person resides or has his principal place of business, for a judicial review of such standard. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Secretary. The filing of such petition shall not, unless otherwise ordered by the court, operate as a stay of the standard. The determinations of the Secretary shall be conclusive if supported by substantial evidence in the record considered as a whole.

(g) In determining the priority for establishing standards under this section, the Secretary shall give due regard to the urgency of the need for mandatory safety and health standards for particular industries, trades, crafts, occupations, businesses, workplaces or work environments. The Secretary shall also give due regard to the recommendations of the Secretary of Health and Human Services regarding the need for mandatory standards in determining the priority for establishing such standards.

SEC. 8. Inspections, Investigations, and Recordkeeping

(a) In order to carry out the purposes of this Act, the Secretary, upon presenting appropriate credentials to the owner, operator, or agent in charge, is authorized -- 29 USC 657

(1) to enter without delay and at reasonable times any factory, plant, establishment, construction site, or other area, workplace or environment where work is performed by an employee of an employer; and

(2) to inspect and investigate during regular working hours and at other reasonable times, and within reasonable limits and in a reasonable manner, any such place of employment and all pertinent conditions, structures, machines, apparatus, devices, equipment, and materials therein, and to question privately any such employer, owner, operator, agent or employee.

(b) In making his inspections and investigations under this Act the Secretary may require the attendance and testimony of witnesses and the production of evidence under oath. Witnesses shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of a contumacy, failure, or refusal of any person to obey such an order, any district court of the United States or the United States courts of any territory or possession, within the jurisdiction of which such person is found, or resides or transacts business, upon the application by the Secretary, shall have jurisdiction to issue to such person an order requiring such person to appear to produce evidence if, as, and when so ordered, and to give testimony relating to the matter under investigation or in question, and any failure to obey such order of the court may be punished by said court as a contempt thereof.

(c) (1) Each employer shall make, keep and preserve, and make available to the Secretary or the Secretary of Health and Human Services, such records regarding his activities relating to this Act as the Secretary, in cooperation with the Secretary of Health and Human Services, may prescribe by regulation as necessary or appropriate for the enforcement of this Act or for developing information regarding the causes and prevention of occupational accidents and illnesses. In order to carry out the provisions of this paragraph such regulations may include provisions requiring employers to conduct periodic inspections. The Secretary shall also issue regulations requiring that employers, through posting of notices or other appropriate means, keep their employees informed of their protections and obligations under this Act, including the provisions of applicable standards.

(2) The Secretary, in cooperation with the Secretary of Health and Human Services, shall prescribe regulations requiring employers to maintain accurate records of, and to make periodic reports on, work-related deaths, injuries and illnesses other than minor injuries requiring only first aid treatment and which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job.

(3) The Secretary, in cooperation with the Secretary of Health and Human Services, shall issue regulations requiring employers to maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under section 6. Such regulations shall provide employees or their representatives with an opportunity to observe such monitoring or measuring, and to have access to the records thereof. Such regulations shall also make appropriate provision for each employee or former employee to have access to such records as will indicate his own exposure to toxic materials or harmful physical agents. Each employer shall promptly notify any employee who has been or is being exposed to toxic materials or harmful physical agents in concentrations or at levels which exceed those prescribed by an applicable occupational safety and health standard promulgated under section 6, and shall inform any employee who is being thus exposed of the corrective action being taken.

(d) Any information obtained by the Secretary, the Secretary of Health and Human Services, or a State agency under this Act shall be obtained with a minimum burden upon employers, especially those operating small businesses. Unnecessary duplication of efforts in obtaining information shall be reduced to the maximum extent feasible.

(e) Subject to regulations issued by the Secretary, a representative of the employer and a representative authorized by his employees shall be given an opportunity to accompany the Secretary or his authorized representative during the physical inspection of any workplace under subsection (a) for the purpose of aiding such inspection. Where there is no authorized employee representative, the Secretary or his authorized representative shall consult with a reasonable number of employees concerning matters of health and safety in the workplace.

(f) (1) Any employees or representative of employees who believe that a violation of a safety or health standard exists that threatens physical harm, or that an imminent danger exists, may request an inspection by giving notice to the Secretary or his authorized representative of such violation or danger. Any such notice shall be reduced to writing, shall set forth with reasonable particularity the grounds for the notice, and shall be signed by the employees or representative of employees, and a copy shall be provided the employer or his agent no later than at the time of inspection, except that, upon the request of the person giving such notice, his name and the names of individual employees referred to therein shall not appear in such copy or on any record published, released, or made available pursuant to subsection (g) of this section. If upon receipt of such notification the Secretary determines there are reasonable grounds to believe that such violation or danger exists, he shall make a special inspection in accordance with the provisions of this section as soon as practicable, to determine if such violation or danger exists. If the Secretary determines there are no reasonable grounds to believe that a violation or danger exists he shall notify the employees or representative of the employees in writing of such determination.

(2) Prior to or during any inspection of a workplace, any employees

or representative of employees employed in such workplace may notify the Secretary or any representative of the Secretary responsible for conducting the inspection, in writing, of any violation of this Act which they have reason to believe exists in such workplace. The Secretary shall, by regulation, establish procedures for informal review of any refusal by a representative of the Secretary to issue a citation with respect to any such alleged violation and shall furnish the employees or representative of employees requesting such review a written statement of the reasons for the Secretary's final disposition of the case.

(g) (1) The Secretary and Secretary of Health and Human Services are authorized to compile, analyze, and publish, either in summary or detailed form, all reports or information obtained under this section.

(2) The Secretary and the Secretary of Health and Human Services shall each prescribe such rules and regulations as he may deem necessary to carry out their responsibilities under this Act, including rules and regulations dealing with the inspection of an employer's establishment.

(h) The Secretary shall not use the results of enforcement activities, such as the number of citations issued or penalties assessed, to evaluate employees directly involved in enforcement activities under this Act or to impose quotas or goals with regard to the results of such activities.

Pub. L. 105-198 added subsection (h).

rays will continue to be given at least annually. The examination contents are minimum requirements; additional tests such as lateral and oblique x-rays or additional pulmonary function tests may be performed if deemed necessary.

B. Pulmonary function tests.

Pulmonary function tests should be performed in a manner which minimizes subject and operator bias. There has been shown to be learning effects with regard to the results obtained from certain tests, such as FEV 1.0. Best results can be obtained by multiple trials for each subject. The best of three trials or the average of the last three of five trials may be used in obtaining reliable results. The type of equipment used (manufacturer, model, etc.) should be recorded with the results as reliability and accuracy varies and such information may be important in the evaluation of test results. Care should be exercised to obtain the best possible testing equipment.

[39 FR 23502, June 27, 1974, 41 FR 46784, Oct. 22, 1976, as amended at 42 FR 3304, Jan. 18, 1977; 45 FR 35283, May 23, 1980; 50 FR 37353, 37354, Sept. 13, 1985; 54 FR 24334, June 7, 1989; 61 FR 5508, Feb. 13, 1996; 63 FR 1290, Jan. 8, 1998; 63 FR 33468, June 18, 1998; 70 FR 1142, Jan. 5, 2005; 71 FR 16672, 16673, Apr. 3, 2006]

§ 1910.1030 Bloodborne pathogens.

(a) *Scope and Application.* This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.

(b) *Definitions.* For purposes of this section, the following shall apply:

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

Blood means human blood, human blood components, and products made from human blood.

Bloodborne Pathogens means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical Laboratory means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

Contaminated means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

Engineering controls means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Handwashing Facilities means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

Licensed Healthcare Professional is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

HBV means hepatitis B virus.

HIV means human immunodeficiency virus.

Needleless systems means a device that does not use needles for:

- (1) The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established;
- (2) The administration of medication or fluids; or

(3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials means

(1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

(2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and

(3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Parenteral means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

Personal Protective Equipment is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Production Facility means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

Regulated Waste means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and patho-

logical and microbiological wastes containing blood or other potentially infectious materials.

Research Laboratory means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

Sharps with engineered sharps injury protections means a nonneedle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident.

Source Individual means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Sterilize means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Work Practice Controls means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

(c) *Exposure control*—(1) *Exposure Control Plan*. (i) Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

(ii) The Exposure Control Plan shall contain at least the following elements:

(A) The exposure determination required by paragraph(c)(2),

(B) The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

(C) The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.

(iii) Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.20(e).

(iv) The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The review and update of such plans shall also:

(A) Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens; and

(B) Document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.

(v) An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.

(vi) The Exposure Control Plan shall be made available to the Assistant Secretary and the Director upon request for examination and copying.

(2) *Exposure determination.* (i) Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:

(A) A list of all job classifications in which all employees in those job classifications have occupational exposure;

(B) A list of job classifications in which some employees have occupational exposure, and

(C) A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.

(ii) This exposure determination shall be made without regard to the use of personal protective equipment.

(d) *Methods of compliance—(1) General.* Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

(2) *Engineering and work practice controls.* (i) Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.

(ii) Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

(iii) Employers shall provide handwashing facilities which are readily accessible to employees.

(iv) When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.

(v) Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

(vi) Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of

such body areas with blood or other potentially infectious materials.

(vii) Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.

(A) Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure.

(B) Such bending, recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

(viii) Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

(A) Puncture resistant;

(B) Labeled or color-coded in accordance with this standard;

(C) Leakproof on the sides and bottom; and

(D) In accordance with the requirements set forth in paragraph (d)(4)(ii)(E) for reusable sharps.

(ix) Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

(x) Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or other potentially infectious materials are present.

(xi) All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

(xii) Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

(xiii) Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

(A) The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

(B) If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

(C) If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.

(xiv) Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

(A) A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.

(B) The employer shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

(3) *Personal protective equipment*—(i) *Provision.* When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces,

resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

(ii) *Use.* The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

(iii) *Accessibility.* The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the work-site or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

(iv) *Cleaning, Laundering, and Disposal.* The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

(v) *Repair and Replacement.* The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

(vi) If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

(vii) All personal protective equipment shall be removed prior to leaving the work area.

(viii) When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

(ix) *Gloves.* Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

(A) Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

(B) Disposable (single use) gloves shall not be washed or decontaminated for re-use.

(C) Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

(D) If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:

(1) Periodically reevaluate this policy;

(2) Make gloves available to all employees who wish to use them for phlebotomy;

(3) Not discourage the use of gloves for phlebotomy; and

(4) Require that gloves be used for phlebotomy in the following circumstances:

(i) When the employee has cuts, scratches, or other breaks in his or her skin;

(ii) When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and

(iii) When the employee is receiving training in phlebotomy.

(x) *Masks, Eye Protection, and Face Shields.* Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

(xi) *Gowns, Aprons, and Other Protective Body Clothing.* Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

(xii) Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopaedic surgery).

(4) *Housekeeping*—(i) *General.* Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

(ii) All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

(A) Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

(B) Protective coverings, such as plastic wrap, aluminum foil, or impermeably-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of

the workshift if they may have become contaminated during the shift.

(C) All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

(D) Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means, such as a brush and dust pan, tongs, or forceps.

(E) Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

(iii) *Regulated Waste*—(A) *Contaminated Sharps Discarding and Containment.* (1) Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

(i) Closable;

(ii) Puncture resistant;

(iii) Leakproof on sides and bottom; and

(iv) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

(2) During use, containers for contaminated sharps shall be:

(i) Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);

(ii) Maintained upright throughout use; and

(iii) Replaced routinely and not be allowed to overfill.

(3) When moving containers of contaminated sharps from the area of use, the containers shall be:

(i) Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;

(ii) Placed in a secondary container if leakage is possible. The second container shall be:

(A) Closable;

(B) Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and

(C) Labeled or color-coded according to paragraph (g)(1)(i) of this standard.

(4) Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.

(B) *Other Regulated Waste Containment—(1)* Regulated waste shall be placed in containers which are:

(i) Closable;

(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and

(iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(2) If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:

(i) Closable;

(ii) Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

(iii) Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and

(iv) Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(C) Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.

(iv) *Laundry.* (A) Contaminated laundry shall be handled as little as possible with a minimum of agitation. (1) Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

(2) Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of

this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

(3) Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

(B) The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

(C) When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

(e) *HIV and HBV Research Laboratories and Production Facilities.* (1) This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

(2) Research laboratories and production facilities shall meet the following criteria:

(i) *Standard microbiological practices.* All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(ii) *Special practices.* (A) Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.

(B) Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

(C) Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

(D) When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this standard.

(E) All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.

(F) Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

(G) Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

(H) Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(I) Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

(J) Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or

disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

(K) All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

(L) A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

(M) A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

(iii) *Containment equipment.* (A) Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

(B) Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

(3) HIV and HBV research laboratories shall meet the following criteria:

(i) Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.

(ii) An autoclave for decontamination of regulated waste shall be available.

(4) HIV and HBV production facilities shall meet the following criteria:

(i) The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

(ii) The surfaces of doors, walls, floors and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.

(iii) Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

(iv) Access doors to the work area or containment module shall be self-closing.

(v) An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

(vi) A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

(5) *Training Requirements.* Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(ix).

(f) *Hepatitis B vaccination and post-exposure evaluation and follow-up—(1) General.* (i) The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and

post-exposure evaluation and follow-up to all employees who have had an exposure incident.

(ii) The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

(A) Made available at no cost to the employee;

(B) Made available to the employee at a reasonable time and place;

(C) Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and

(D) Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).

(iii) The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

(2) *Hepatitis B Vaccination.* (i) Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

(ii) The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

(iii) If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time.

(iv) The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in appendix A.

(v) If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future

date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

(3) *Post-exposure Evaluation and Follow-up.* Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

(i) Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

(ii) Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

(A) The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

(B) When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

(C) Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

(iii) Collection and testing of blood for HBV and HIV serological status;

(A) The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

(B) If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

(iv) Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;

(v) Counseling; and

(vi) Evaluation of reported illnesses.

(4) *Information Provided to the Healthcare Professional.* (i) The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

(ii) The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

(A) A copy of this regulation;

(B) A description of the exposed employee's duties as they relate to the exposure incident;

(C) Documentation of the route(s) of exposure and circumstances under which exposure occurred;

(D) Results of the source individual's blood testing, if available; and

(E) All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

(5) *Healthcare Professional's Written Opinion.* The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

(i) The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

(ii) The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be limited to the following information:

(A) That the employee has been informed of the results of the evaluation; and

(B) That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

(iii) All other findings or diagnoses shall remain confidential and shall not be included in the written report.

(6) *Medical recordkeeping.* Medical records required by this standard shall be maintained in accordance with paragraph (h)(1) of this section.

(g) *Communication of hazards to employees—(1) Labels and signs—(i) Labels.*

(A) Warning labels shall be affixed to

containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

(B) Labels required by this section shall include the following legend:



BIOHAZARD

(C) These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

(D) Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

(E) Red bags or red containers may be substituted for labels.

(F) Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements of paragraph (g).

(G) Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

(H) Labels required for contaminated equipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

(I) Regulated waste that has been decontaminated need not be labeled or color-coded.

(ii) *Signs.* (A) The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and

HBV Research Laboratory and Production Facilities, which shall bear the following legend:



(Name of the Infectious Agent)
(Special requirements for entering the area)
(Name, telephone number of the laboratory director or other responsible person.)

(B) These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

(2) *Information and Training.* (i) Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.

(ii) Training shall be provided as follows:

(A) At the time of initial assignment to tasks where occupational exposure may take place;

(B) At least annually thereafter.

(iii) [Reserved]

(iv) Annual training for all employees shall be provided within one year of their previous training.

(v) Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

(vi) Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

(vii) The training program shall contain at a minimum the following elements:

(A) An accessible copy of the regulatory text of this standard and an explanation of its contents;

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(B) A general explanation of the epidemiology and symptoms of bloodborne diseases;

(C) An explanation of the modes of transmission of bloodborne pathogens;

(D) An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;

(E) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;

(F) An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;

(G) Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

(H) An explanation of the basis for selection of personal protective equipment;

(I) Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

(J) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;

(K) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

(L) Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;

(M) An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and

(N) An opportunity for interactive questions and answers with the person conducting the training session.

(viii) The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

(ix) Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

(A) The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

(B) The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

(C) The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

(h) *Recordkeeping—(1) Medical Records.* (i) The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020.

(ii) This record shall include:

(A) The name and social security number of the employee;

(B) A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

(C) A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

(D) The employer's copy of the healthcare professional's written opinion as required by paragraph (f)(5); and

(E) A copy of the information provided to the healthcare professional as

required by paragraphs (f)(4)(ii)(B)(C) and (D).

(iii) Confidentiality. The employer shall ensure that employee medical records required by paragraph (h)(1) are:

(A) Kept confidential; and

(B) Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.

(iv) The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020.

(2) *Training Records.* (i) Training records shall include the following information:

(A) The dates of the training sessions;

(B) The contents or a summary of the training sessions;

(C) The names and qualifications of persons conducting the training; and

(D) The names and job titles of all persons attending the training sessions.

(ii) Training records shall be maintained for 3 years from the date on which the training occurred.

(3) *Availability.* (i) The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

(ii) Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.

(iii) Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.1020.

(4) *Transfer of Records.* (i) The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

(ii) If the employer ceases to do business and there is no successor employer to receive and retain the records for

the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

(i) *Dates—(1) Effective Date.* The standard shall become effective on March 6, 1992.

(2) The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.

(3) Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on or before June 4, 1992.

(4) Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) House-keeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g) (1) Labels and Signs, shall take effect July 6, 1992.

(5) *Sharps injury log.* (i) The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

(A) The type and brand of device involved in the incident,

(B) The department or work area where the exposure incident occurred, and

(C) An explanation of how the incident occurred.

(ii) The requirement to establish and maintain a sharps injury log shall apply to any employer who is required to maintain a log of occupational injuries and illnesses under 29 CFR 1904.

(iii) The sharps injury log shall be maintained for the period required by 29 CFR 1904.6.

APPENDIX A TO SECTION 1910.1030—HEPATITIS B VACCINE DECLINATION (MANDATORY)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated

with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

[56 FR 64175, Dec. 6, 1991, as amended at 57 FR 12717, Apr. 13, 1992; 57 FR 29206, July 1, 1992; 61 FR 5508, Feb. 13, 1996; 66 FR 5325, Jan. 18, 2001; 71 FR 16672, 16673, Apr. 3, 2006]

§ 1910.1043 Cotton dust.

(a) *Scope and application.* (1) This section, in its entirety, applies to the control of employee exposure to cotton dust in all workplaces where employees engage in yarn manufacturing, engage in slashing and weaving operations, or work in waste houses for textile operations.

(2) This section does not apply to the handling or processing of woven or knitted materials; to maritime operations covered by 29 CFR Parts 1915 and 1918; to harvesting or ginning of cotton; or to the construction industry.

(3) Only paragraphs (h) Medical surveillance, (k)(2) through (4) Record-keeping—Medical Records, and Appendices B, C and D of this section apply in all work places where employees exposed to cotton dust engage in cottonseed processing or waste processing operations.

(4) This section applies to yarn manufacturing and slashing and weaving operations exclusively using washed cotton (as defined by paragraph (n) of this section) only to the extent specified by paragraph (n) of this section.

(5) This section, in its entirety, applies to the control of all employees exposure to the cotton dust generated in the preparation of washed cotton from opening until the cotton is thoroughly wetted.

(6) This section does not apply to knitting, classing or warehousing operations except that employers with these operations, if requested by NIOSH, shall grant NIOSH access to their employees and workplaces for exposure monitoring and medical examinations for purposes of a health study to be performed by NIOSH on a sampling basis.

(b) *Definitions.* For the purpose of this section:

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee;

Blow down means the general cleaning of a room or a part of a room by the use of compressed air.

Blow off means the use of compressed air for cleaning of short duration and usually for a specific machine or any portion of a machine.

Cotton dust means dust present in the air during the handling or processing of cotton, which may contain a mixture of many substances including ground up plant matter, fiber, bacteria, fungi, soil, pesticides, non-cotton plant matter and other contaminants which may have accumulated with the cotton during the growing, harvesting and subsequent processing or storage periods. Any dust present during the handling and processing of cotton through the weaving or knitting of fabrics, and dust present in other operations or manufacturing processes using raw or waste cotton fibers or cotton fiber byproducts from textile mills are considered cotton dust within this definition. Lubricating oil mist associated with weaving operations is not considered cotton dust.

Director means the Director of the National Institute for Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, or designee.

Equivalent Instrument means a cotton dust sampling device that meets the vertical elutriator equivalency requirements as described in paragraph (d)(1)(iii) of this section.

Lint-free respirable cotton dust means particles of cotton dust of approximately 15 micrometers or less aerodynamic equivalent diameter;

Vertical elutriator cotton dust sampler or *vertical elutriator* means a dust sampler which has a particle size cut-off at approximately 15 micrometers aerodynamic equivalent diameter when operating at the flow rate of 7.4 ± 0.2 liters of air per minute;

Waste processing means waste recycling (sorting, blending, cleaning and willowing) and garnetting.

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identical to those set forth at §1910.1003 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1010 Benzidine.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1003 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1011 4-Aminodiphenyl.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1003 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1012 Ethyleneimine.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1003 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1013 beta-Propiolactone.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1003 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1014 2-Acetylaminofluorene.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1003 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1015 4-Dimethylaminoazobenzene.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1003 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1016 N-Nitrosodimethylamine.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1003 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1017 Vinyl chloride.

NOTE: The requirements applicable to shipyard employment under this section are

identical to those set forth at §1910.1017 of this chapter.

[61 FR 31430, June 20, 1996]

§ 1915.1018 Inorganic arsenic.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1018 of this chapter.

[61 FR 31431, June 20, 1996]

§ 1915.1020 Access to employee exposure and medical records.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1020 of this chapter.

[61 FR 31431, June 20, 1996]

§ 1915.1025 Lead.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1025 of this chapter.

[61 FR 31431, June 20, 1996]

§ 1915.1027 Cadmium.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1027 of this chapter.

[61 FR 31431, June 20, 1996]

§ 1915.1028 Benzene.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1028 of this chapter.

[61 FR 31431, June 20, 1996]

§ 1915.1030 Bloodborne pathogens.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1030 of this chapter.

[61 FR 31431, June 20, 1996]

§ 1915.1044 1,2-dibromo-3-chloropropane.

NOTE: The requirements applicable to shipyard employment under this section are identical to those set forth at §1910.1044 of this chapter.

[61 FR 31431, June 20, 1996]

§ 1915.1045 Acrylonitrile.

NOTE: The requirements applicable to shipyard employment under this section are

Public Law 106–430
106th Congress

An Act

To require changes in the bloodborne pathogens standard in effect under the Occupational Safety and Health Act of 1970.

Nov. 6, 2000
[H.R. 5178]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Needlestick Safety and Prevention Act”.

Needlestick
Safety and
Prevention Act.

SEC. 2. FINDINGS.

The Congress finds the following:

(1) Numerous workers who are occupationally exposed to bloodborne pathogens have contracted fatal and other serious viruses and diseases, including the human immunodeficiency virus (HIV), hepatitis B, and hepatitis C from exposure to blood and other potentially infectious materials in their workplace.

(2) In 1991 the Occupational Safety and Health Administration issued a standard regulating occupational exposure to bloodborne pathogens, including the human immunodeficiency virus, (HIV), the hepatitis B virus (HBV), and the hepatitis C virus (HCV).

(3) Compliance with the bloodborne pathogens standard has significantly reduced the risk that workers will contract a bloodborne disease in the course of their work.

(4) Nevertheless, occupational exposure to bloodborne pathogens from accidental sharps injuries in health care settings continues to be a serious problem. In March 2000, the Centers for Disease Control and Prevention estimated that more than 380,000 percutaneous injuries from contaminated sharps occur annually among health care workers in United States hospital settings. Estimates for all health care settings are that 600,000 to 800,000 needlestick and other percutaneous injuries occur among health care workers annually. Such injuries can involve needles or other sharps contaminated with bloodborne pathogens, such as HIV, HBV, or HCV.

(5) Since publication of the bloodborne pathogens standard in 1991 there has been a substantial increase in the number and assortment of effective engineering controls available to employers. There is now a large body of research and data concerning the effectiveness of newer engineering controls, including safer medical devices.

(6) 396 interested parties responded to a Request for Information (in this section referred to as the “RFI”) conducted

by the Occupational Safety and Health Administration in 1998 on engineering and work practice controls used to eliminate or minimize the risk of occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps. Comments were provided by health care facilities, groups representing healthcare workers, researchers, educational institutions, professional and industry associations, and manufacturers of medical devices.

(7) Numerous studies have demonstrated that the use of safer medical devices, such as needleless systems and sharps with engineered sharps injury protections, when they are part of an overall bloodborne pathogens risk-reduction program, can be extremely effective in reducing accidental sharps injuries.

(8) In March 2000, the Centers for Disease Control and Prevention estimated that, depending on the type of device used and the procedure involved, 62 to 88 percent of sharps injuries can potentially be prevented by the use of safer medical devices.

(9) The OSHA 200 Log, as it is currently maintained, does not sufficiently reflect injuries that may involve exposure to bloodborne pathogens in healthcare facilities. More than 98 percent of healthcare facilities responding to the RFI have adopted surveillance systems in addition to the OSHA 200 Log. Information gathered through these surveillance systems is commonly used for hazard identification and evaluation of program and device effectiveness.

(10) Training and education in the use of safer medical devices and safer work practices are significant elements in the prevention of percutaneous exposure incidents. Staff involvement in the device selection and evaluation process is also an important element to achieving a reduction in sharps injuries, particularly as new safer devices are introduced into the work setting.

(11) Modification of the bloodborne pathogens standard is appropriate to set forth in greater detail its requirement that employers identify, evaluate, and make use of effective safer medical devices.

SEC. 3. BLOODBORNE PATHOGENS STANDARD.

The bloodborne pathogens standard published at 29 CFR 1910.1030 shall be revised as follows:

(1) The definition of “Engineering Controls” (at 29 CFR 1910.1030(b)) shall include as additional examples of controls the following: “safer medical devices, such as sharps with engineered sharps injury protections and needleless systems”.

(2) The term “Sharps with Engineered Sharps Injury Protections” shall be added to the definitions (at 29 CFR 1910.1030(b)) and defined as “a nonneedle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident”.

(3) The term “Needleless Systems” shall be added to the definitions (at 29 CFR 1910.1030(b)) and defined as “a device that does not use needles for: (A) the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (B) the administration of medication or

fluids; or (C) any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps”.

(4) In addition to the existing requirements concerning exposure control plans (29 CFR 1910.1030(c)(1)(iv)), the review and update of such plans shall be required to also—

(A) “reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens”; and

(B) “document annually consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure”.

(5) The following additional recordkeeping requirement shall be added to the bloodborne pathogens standard at 29 CFR 1910.1030(h): “The employer shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum—

Records.

“(A) the type and brand of device involved in the incident,

“(B) the department or work area where the exposure incident occurred, and

“(C) an explanation of how the incident occurred.”.

The requirement for such sharps injury log shall not apply to any employer who is not required to maintain a log of occupational injuries and illnesses under 29 CFR 1904 and the sharps injury log shall be maintained for the period required by 29 CFR 1904.6.

(6) The following new section shall be added to the bloodborne pathogens standard: “An employer, who is required to establish an Exposure Control Plan shall solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the Exposure Control Plan.”.

SEC. 4. EFFECT OF MODIFICATIONS.

The modifications under section 3 shall be in force until superseded in whole or in part by regulations promulgated by the Secretary of Labor under section 6(b) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655(b)) and shall be enforced in the same manner and to the same extent as any rule or regulation promulgated under section 6(b).

SEC. 5. PROCEDURE AND EFFECTIVE DATE.

(a) PROCEDURE.—The modifications of the bloodborne pathogens standard prescribed by section 3 shall take effect without regard to the procedural requirements applicable to regulations promulgated under section 6(b) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655(b)) or the procedural requirements of chapter 5 of title 5, United States Code.

(b) EFFECTIVE DATE.—The modifications to the bloodborne pathogens standard required by section 3 shall—

(1) within 6 months of the date of the enactment of this Act, be made and published in the Federal Register by the

Deadline.
Federal Register,
publication.

114 STAT. 1904

PUBLIC LAW 106-430—NOV. 6, 2000

Secretary of Labor acting through the Occupational Safety and Health Administration; and

(2) at the end of 90 days after such publication, take effect.

Approved November 6, 2000.

LEGISLATIVE HISTORY—H.R. 5178:

CONGRESSIONAL RECORD, Vol. 146 (2000):

Oct. 3, considered and passed House.

Oct. 26, considered and passed Senate.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 36 (2000):

Nov. 6, Presidential statement.



Regulations (Standards - 29 CFR)

Access to employee exposure and medical records. - 1910.1020

 [Regulations \(Standards - 29 CFR\) - Table of Contents](#)

- **Part Number:** 1910
 - **Part Title:** Occupational Safety and Health Standards
 - **Subpart:** Z
 - **Subpart Title:** Toxic and Hazardous Substances
 - **Standard Number:** [1910.1020](#)
 - **Title:** Access to employee exposure and medical records.
-
- **Appendix:** [A](#) , [B](#)
-

[1910.1020\(a\)](#)

"Purpose." The purpose of this section is to provide employees and their designated representatives a right of access to relevant exposure and medical records; and to provide representatives of the Assistant Secretary a right of access to these records in order to fulfill responsibilities under the Occupational Safety and Health Act. Access by employees, their representatives, and the Assistant Secretary is necessary to yield both direct and indirect improvements in the detection, treatment, and prevention of occupational disease. Each employer is responsible for assuring compliance with this section, but the activities involved in complying with the access to medical records provisions can be carried out, on behalf of the employer, by the physician or other health care personnel in charge of employee medical records. Except as expressly provided, nothing in this section is intended to affect existing legal and ethical obligations concerning the maintenance and confidentiality of employee medical information, the duty to disclose information to a patient/employee or any other aspect of the medical-care relationship, or affect existing legal obligations concerning the protection of trade secret information.

[1910.1020\(b\)](#)

"Scope and application."

[1910.1020\(b\)\(1\)](#)

This section applies to each general industry, maritime, and construction employer who makes, maintains, contracts for, or has access to employee exposure or medical records, or analyses thereof, pertaining to employees exposed to toxic substances or harmful physical agents.

[1910.1020\(b\)\(2\)](#)

This section applies to all employee exposure and medical records, and analyses thereof, of such employees, whether or not the records are mandated by specific occupational safety and health standards.

[1910.1020\(b\)\(3\)](#)

This section applies to all employee exposure and medical records, and analyses thereof, made or maintained in any manner, including on an in-house or contractual (e.g., fee-for-service) basis. Each employer shall assure that the preservation and access requirements of this section are complied with regardless of the manner in which records are made or maintained.

[1910.1020\(c\)](#)

"Definitions."

[1910.1020\(c\)\(1\)](#)

"Access" means the right and opportunity to examine and copy.

[1910.1020\(c\)\(2\)](#)

"Analysis using exposure or medical records" means any compilation of data or any statistical study based at least in part on information collected from individual employee exposure or

medical records or information collected from health insurance claims records, provided that either the analysis has been reported to the employer or no further work is currently being done by the person responsible for preparing the analysis.

1910.1020(c)(3)

"Designated representative" means any individual or organization to whom an employee gives written authorization to exercise a right of access. For the purposes of access to employee exposure records and analyses using exposure or medical records, a recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

1910.1020(c)(4)

"Employee" means a current employee, a former employee, or an employee being assigned or transferred to work where there will be exposure to toxic substances or harmful physical agents. In the case of a deceased or legally incapacitated employee, the employee's legal representative may directly exercise all the employee's rights under this section.

1910.1020(c)(5)

"Employee exposure record" means a record containing any of the following kinds of information:

1910.1020(c)(5)(i)

Environmental (workplace) monitoring or measuring of a toxic substance or harmful physical agent, including personal, area, grab, wipe, or other form of sampling, as well as related collection and analytical methodologies, calculations, and other background data relevant to interpretation of the results obtained;

1910.1020(c)(5)(ii)

Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (e.g., the level of a chemical in the blood, urine, breath, hair, fingernails, etc.) but not including results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs;

1910.1020(c)(5)(iii)

Material safety data sheets indicating that the material may pose a hazard to human health; or

1910.1020(c)(5)(iv)

In the absence of the above, a chemical inventory or any other record which reveals where and when used and the identity (e.g., chemical, common, or trade name) of a toxic substance or harmful physical agent.

1910.1020(c)(6) 1910.1020(c)(6)(i)

"Employee medical record" means a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel, or technician, including:

1910.1020(c)(6)(i)(A)

Medical and employment questionnaires or histories (including job description and occupational exposures),

1910.1020(c)(6)(i)(B)

The results of medical examinations (pre-employment, pre-assignment, periodic, or episodic) and laboratory tests (including chest and other X-ray examinations taken for the purpose of establishing a base-line or detecting occupational illnesses and all biological monitoring not defined as an "employee exposure record"),

1910.1020(c)(6)(i)(C)

Medical opinions, diagnoses, progress notes, and recommendations,

1910.1020(c)(6)(i)(D)

First aid records,

1910.1020(c)(6)(i)(E)

Descriptions of treatments and prescriptions, and

1910.1020(c)(6)(i)(F)

Employee medical complaints.

1910.1020(c)(6)(ii)

"Employee medical record" does not include medical information in the form of:

1910.1020(c)(6)(ii)(A)

Physical specimens (e.g., blood or urine samples) which are routinely discarded as a part of normal medical practice, or

1910.1020(c)(6)(ii)(B)

Records concerning health insurance claims if maintained separately from the employer's medical program and its records, and not accessible to the employer by employee name or other direct personal identifier (e.g., social security number, payroll number, etc.), or [1910.1020\(c\)\(6\)\(ii\)\(C\)](#)

Records created solely in preparation for litigation which are privileged from discovery under the applicable rules of procedure or evidence; or

[1910.1020\(c\)\(6\)\(ii\)\(D\)](#)

Records concerning voluntary employee assistance programs (alcohol, drug abuse, or personal counseling programs) if maintained separately from the employer's medical program and its records.

[1910.1020\(c\)\(7\)](#)

"Employer" means a current employer, a former employer, or a successor employer.

[1910.1020\(c\)\(8\)](#)

"Exposure" or "exposed" means that an employee is subjected to a toxic substance or harmful physical agent in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes past exposure and potential (e.g., accidental or possible) exposure, but does not include situations where the employer can demonstrate that the toxic substance or harmful physical agent is not used, handled, stored, generated, or present in the workplace in any manner different from typical non-occupational situations.

[1910.1020\(c\)\(9\)](#)

"Health Professional" means a physician, occupational health nurse, industrial hygienist, toxicologist, or epidemiologist, providing medical or other occupational health services to exposed employees.

[1910.1020\(c\)\(10\)](#)

"Record" means any item, collection, or grouping of information regardless of the form or process by which it is maintained (e.g., paper document, microfiche, microfilm, X-ray film, or automated data processing).

[1910.1020\(c\)\(11\)](#)

"Specific chemical identity" means a chemical name, Chemical Abstracts Service (CAS) Registry Number, or any other information that reveals the precise chemical designation of the substance.

[1910.1020\(c\)\(12\)](#) [1910.1020\(c\)\(12\)\(i\)](#)

"Specific written consent" means a written authorization containing the following:

[1910.1020\(c\)\(12\)\(i\)\(A\)](#)

The name and signature of the employee authorizing the release of medical information,

[1910.1020\(c\)\(12\)\(i\)\(B\)](#)

The date of the written authorization,

[1910.1020\(c\)\(12\)\(i\)\(C\)](#)

The name of the individual or organization that is authorized to release the medical information,

[1910.1020\(c\)\(12\)\(i\)\(D\)](#)

The name of the designated representative (individual or organization) that is authorized to receive the released information,

[1910.1020\(c\)\(12\)\(i\)\(E\)](#)

A general description of the medical information that is authorized to be released,

[1910.1020\(c\)\(12\)\(i\)\(F\)](#)

A general description of the purpose for the release of the medical information, and

[1910.1020\(c\)\(12\)\(i\)\(G\)](#)

A date or condition upon which the written authorization will expire (if less than one year).

[1910.1020\(c\)\(12\)\(ii\)](#)

A written authorization does not operate to authorize the release of medical information not in existence on the date of written authorization, unless the release of future information is expressly authorized, and does not operate for more than one year from the date of written authorization.

[1910.1020\(c\)\(12\)\(iii\)](#)

A written authorization may be revoked in writing prospectively at any time.

[1910.1020\(c\)\(13\)](#)

"Toxic substance or harmful physical agent" means any chemical substance, biological agent (bacteria, virus, fungus, etc.), or physical stress (noise, heat, cold, vibration, repetitive

motion, ionizing and non-ionizing radiation, hypo - or hyperbaric pressure, etc.) which:

1910.1020(c)(13)(i)

Is listed in the latest printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS) which is incorporated by reference as specified in Sec. 1910.6; or

1910.1020(c)(13)(ii)

Has yielded positive evidence of an acute or chronic health hazard in testing conducted by, or known to, the employer; or

1910.1020(c)(13)(iii)

Is the subject of a material safety data sheet kept by or known to the employer indicating that the material may pose a hazard to human health.

1910.1020(c)(14)

"Trade secret" means any confidential formula, pattern, process, device, or information or compilation of information that is used in an employer's business and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

1910.1020(d)

"Preservation of records."

1910.1020(d)(1)

Unless a specific occupational safety and health standard provides a different period of time, each employer shall assure the preservation and retention of records as follows:

1910.1020(d)(1)(i)

"Employee medical records." The medical record for each employee shall be preserved and maintained for at least the duration of employment plus thirty (30) years, except that the following types of records need not be retained for any specified period:

1910.1020(d)(1)(i)(A)

Health insurance claims records maintained separately from the employer's medical program and its records,

1910.1020(d)(1)(i)(B)

First aid records (not including medical histories) of one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and the like which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job, if made on-site by a non-physician and if maintained separately from the employer's medical program and its records, and

1910.1020(d)(1)(i)(C)

The medical records of employees who have worked for less than (1) year for the employer need not be retained beyond the term of employment if they are provided to the employee upon the termination of employment.

1910.1020(d)(1)(ii)

"Employee exposure records." Each employee exposure record shall be preserved and maintained for at least thirty (30) years, except that:

1910.1020(d)(1)(ii)(A)

Background data to environmental (workplace) monitoring or measuring, such as laboratory reports and worksheets, need only be retained for one (1) year so long as the sampling results, the collection methodology (sampling plan), a description of the analytical and mathematical methods used, and a summary of other background data relevant to interpretation of the results obtained, are retained for at least thirty (30) years; and

1910.1020(d)(1)(ii)(B)

Material safety data sheets and paragraph (c)(5)(iv) records concerning the identity of a substance or agent need not be retained for any specified period as long as some record of the identity (chemical name if known) of the substance or agent, where it was used, and when it was used is retained for at least thirty (30) years(1); and

Footnote(1) Material safety data sheets must be kept for those chemicals currently in use that are effected by the Hazard Communication Standard in accordance with 29 CFR 1910.1200(g).

1910.1020(d)(1)(ii)(C)

Biological monitoring results designated as exposure records by specific occupational safety and health standards shall be preserved and maintained as required by the specific standard.

1910.1020(d)(1)(iii)

"Analyses using exposure or medical records." Each analysis using exposure or medical records shall be preserved and maintained for at least thirty (30) years.

1910.1020(d)(2)

Nothing in this section is intended to mandate the form, manner, or process by which an employer preserves a record so long as the information contained in the record is preserved and retrievable, except that chest X-ray films shall be preserved in their original state.

1910.1020(e)

"Access to records" -

1910.1020(e)(1)

"General."

1910.1020(e)(1)(i)

Whenever an employee or designated representative requests access to a record, the employer shall assure that access is provided in a reasonable time, place, and manner. If the employer cannot reasonably provide access to the record within fifteen (15) working days, the employer shall within the fifteen (15) working days apprise the employee or designated representative requesting the record of the reason for the delay and the earliest date when the record can be made available.

1910.1020(e)(1)(ii)

The employer may require of the requester only such information as should be readily known to the requester and which may be necessary to locate or identify the records being requested (e.g. dates and locations where the employee worked during the time period in question).

1910.1020(e)(1)(iii)

Whenever an employee or designated representative requests a copy of a record, the employer shall assure that either:

1910.1020(e)(1)(iii)(A)

A copy of the record is provided without cost to the employee or representative,

1910.1020(e)(1)(iii)(B)

The necessary mechanical copying facilities (e.g., photocopying) are made available without cost to the employee or representative for copying the record, or

1910.1020(e)(1)(iii)(C)

The record is loaned to the employee or representative for a reasonable time to enable a copy to be made.

1910.1020(e)(1)(iv)

In the case of an original X-ray, the employer may restrict access to on-site examination or make other suitable arrangements for the temporary loan of the X-ray.

1910.1020(e)(1)(v)

Whenever a record has been previously provided without cost to an employee or designated representative, the employer may charge reasonable, non-discriminatory administrative costs (i.e., search and copying expenses but not including overhead expenses) for a request by the employee or designated representative for additional copies of the record, except that

1910.1020(e)(1)(v)(A)

An employer shall not charge for an initial request for a copy of new information that has been added to a record which was previously provided; and

1910.1020(e)(1)(v)(B)

An employer shall not charge for an initial request by a recognized or certified collective bargaining agent for a copy of an employee exposure record or an analysis using exposure or medical records.

1910.1020(e)(1)(vi)

Nothing in this section is intended to preclude employees and collective bargaining agents from collectively bargaining to obtain access to information in addition to that available under this section.

1910.1020(e)(2)

"Employee and designated representative access" -

1910.1020(e)(2)(i)

"Employee exposure records."

1910.1020(e)(2)(i)(A)

Except as limited by paragraph (f) of this section, each employer shall, upon request, assure the access to each employee and designated representative to employee exposure records relevant to the employee. For the purpose of this section, an exposure record relevant to the

employee consists of:

1910.1020(e)(2)(i)(A)(1)

A record which measures or monitors the amount of a toxic substance or harmful physical agent to which the employee is or has been exposed;

1910.1020(e)(2)(i)(A)(2)

In the absence of such directly relevant records, such records of other employees with past or present job duties or working conditions related to or similar to those of the employee to the extent necessary to reasonably indicate the amount and nature of the toxic substances or harmful physical agents to which the employee is or has been subjected, and

1910.1020(e)(2)(i)(A)(3)

Exposure records to the extent necessary to reasonably indicate the amount and nature of the toxic substances or harmful physical agents at workplaces or under working conditions to which the employee is being assigned or transferred.

1910.1020(e)(2)(i)(B)

Requests by designated representatives for unconsented access to employee exposure records shall be in writing and shall specify with reasonable particularity:

1910.1020(e)(2)(i)(B)(1)

The record requested to be disclosed; and

1910.1020(e)(2)(i)(B)(2)

The occupational health need for gaining access to these records.

1910.1020(e)(2)(ii)

"Employee medical records."

1910.1020(e)(2)(ii)(A)

Each employer shall, upon request, assure the access of each employee to employee medical records of which the employee is the subject, except as provided in paragraph (e)(2)(ii)(D) of this section.

1910.1020(e)(2)(ii)(B)

Each employer shall, upon request, assure the access of each designated representative to the employee medical records of any employee who has given the designated representative specific written consent. Appendix A to this section contains a sample form which may be used to establish specific written consent for access to employee medical records.

1910.1020(e)(2)(ii)(C)

Whenever access to employee medical records is requested, a physician representing the employer may recommend that the employee or designated representative:

1910.1020(e)(2)(ii)(C)(1)

Consult with the physician for the purposes of reviewing and discussing the records requested,

1910.1020(e)(2)(ii)(C)(2)

Accept a summary of material facts and opinions in lieu of the records requested, or

1910.1020(e)(2)(ii)(C)(3)

Accept release of the requested records only to a physician or other designated representative.

1910.1020(e)(2)(ii)(D)

Whenever an employee requests access to his or her employee medical records, and a physician representing the employer believes that direct employee access to information contained in the records regarding a specific diagnosis of a terminal illness or a psychiatric condition could be detrimental to the employee's health, the employer may inform the employee that access will only be provided to a designated representative of the employee having specific written consent, and deny the employee's request for direct access to this information only. Where a designated representative with specific written consent requests access to information so withheld, the employer shall assure the access of the designated representative to this information, even when it is known that the designated representative will give the information to the employee.

1910.1020(e)(2)(ii)(E)

A physician, nurse, or other responsible health care personnel maintaining employee medical records may delete from requested medical records the identity of a family member, personal friend, or fellow employee who has provided confidential information concerning an employee's health status.

1910.1020(e)(2)(iii)

Analyses using exposure or medical records.

1910.1020(e)(2)(iii)(A)

Each employer shall, upon request, assure the access of each employee and designated representative to each analysis using exposure or medical records concerning the employee's working conditions or workplace.

1910.1020(e)(2)(iii)(B)

Whenever access is requested to an analysis which reports the contents of employee medical records by either direct identifier (name, address, social security number, payroll number, etc.) or by information which could reasonably be used under the circumstances indirectly to identify specific employees (exact age, height, weight, race, sex, date of initial employment, job title, etc.), the employer shall assure that personal identifiers are removed before access is provided. If the employer can demonstrate that removal of personal identifiers from an analysis is not feasible, access to the personally identifiable portions of the analysis need not be provided.

1910.1020(e)(3)

"OSHA access."

1910.1020(e)(3)(i)

Each employer shall, upon request, and without derogation of any rights under the Constitution or the Occupational Safety and Health Act of 1970, 29 U.S.C. 651 "et seq.," that the employer chooses to exercise, assure the prompt access of representatives of the Assistant Secretary of Labor for Occupational Safety and Health to employee exposure and medical records and to analyses using exposure or medical records. Rules of agency practice and procedure governing OSHA access to employee medical records are contained in 29 CFR 1913.10.

1910.1020(e)(3)(ii)

Whenever OSHA seeks access to personally identifiable employee medical information by presenting to the employer a written access order pursuant to 29 CFR 1913.10(d), the employer shall prominently post a copy of the written access order and its accompanying cover letter for at least fifteen (15) working days.

1910.1020(f)

"Trade secrets."

1910.1020(f)(1)

Except as provided in paragraph (f)(2) of this section, nothing in this section precludes an employer from deleting from records requested by a health professional, employee, or designated representative any trade secret data which discloses manufacturing processes, or discloses the percentage of a chemical substance in mixture, as long as the health professional, employee, or designated representative is notified that information has been deleted. Whenever deletion of trade secret information substantially impairs evaluation of the place where or the time when exposure to a toxic substance or harmful physical agent occurred, the employer shall provide alternative information which is sufficient to permit the requesting party to identify where and when exposure occurred.

1910.1020(f)(2)

The employer may withhold the specific chemical identity, including the chemical name and other specific identification of a toxic substance from a disclosable record provided that:

1910.1020(f)(2)(i)

The claim that the information withheld is a trade secret can be supported;

1910.1020(f)(2)(ii)

All other available information on the properties and effects of the toxic substance is disclosed;

1910.1020(f)(2)(iii)

The employer informs the requesting party that the specific chemical identity is being withheld as a trade secret; and

1910.1020(f)(2)(iv)

The specific chemical identity is made available to health professionals, employees and designated representatives in accordance with the specific applicable provisions of this paragraph.

1910.1020(f)(3)

Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity of a toxic substance is necessary for emergency or first-aid treatment, the employer shall immediately disclose the specific chemical identity of a trade

secret chemical to the treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. The employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of paragraphs (f)(4) and (f)(5), as soon as circumstances permit.

1910.1020(f)(4)

In non-emergency situations, an employer shall, upon request, disclose a specific chemical identity, otherwise permitted to be withheld under paragraph (f)(2) of this section, to a health professional, employee, or designated representative if:

1910.1020(f)(4)(i)

The request is in writing;

1910.1020(f)(4)(ii)

The request describes with reasonable detail one or more of the following occupational health needs for the information:

1910.1020(f)(4)(ii)(A)

To assess the hazards of the chemicals to which employees will be exposed;

1910.1020(f)(4)(ii)(B)

To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;

1910.1020(f)(4)(ii)(C)

To conduct pre-assignment or periodic medical surveillance of exposed employees;

1910.1020(f)(4)(ii)(D)

To provide medical treatment to exposed employees;

1910.1020(f)(4)(ii)(E)

To select or assess appropriate personal protective equipment for exposed employees;

1910.1020(f)(4)(ii)(F)

To design or assess engineering controls or other protective measures for exposed employees; and

1910.1020(f)(4)(ii)(G)

To conduct studies to determine the health effects of exposure.

1910.1020(f)(4)(iii)

The request explains in detail why the disclosure of the specific chemical identity is essential and that, in lieu thereof, the disclosure of the following information would not enable the health professional, employee or designated representative to provide the occupational health services described in paragraph (f)(4)(ii) of this section;

1910.1020(f)(4)(iii)(A)

The properties and effects of the chemical;

1910.1020(f)(4)(iii)(B)

Measures for controlling workers' exposure to the chemical;

1910.1020(f)(4)(iii)(C)

Methods of monitoring and analyzing worker exposure to the chemical; and

1910.1020(f)(4)(iii)(D)

Methods of diagnosing and treating harmful exposures to the chemical;

1910.1020(f)(4)(iv)

The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and

1910.1020(f)(4)(v)

The health professional, employee, or designated representative and the employer or contractor of the services of the health professional or designated representative agree in a written confidentiality agreement that the health professional, employee or designated representative will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to OSHA, as provided in paragraph (f)(7) of this section, except as authorized by the terms of the agreement or by the employer.

1910.1020(f)(5)

The confidentiality agreement authorized by paragraph (f)(4)(iv) of this section:

1910.1020(f)(5)(i)

May restrict the use of the information to the health purposes indicated in the written statement of need;

1910.1020(f)(5)(ii)

May provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages; and,

1910.1020(f)(5)(iii)

May not include requirements for the posting of a penalty bond.

1910.1020(f)(6)

Nothing in this section is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law.

1910.1020(f)(7)

If the health professional, employee or designated representative receiving the trade secret information decides that there is a need to disclose it to OSHA, the employer who provided the information shall be informed by the health professional prior to, or at the same time as, such disclosure.

1910.1020(f)(8)

If the employer denies a written request for disclosure of a specific chemical identity, the denial must:

1910.1020(f)(8)(i)

Be provided to the health professional, employee or designated representative within thirty days of the request;

1910.1020(f)(8)(ii)

Be in writing;

1910.1020(f)(8)(iii)

Include evidence to support the claim that the specific chemical identity is a trade secret;

1910.1020(f)(8)(iv)

State the specific reasons why the request is being denied; and,

1910.1020(f)(8)(v)

Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the specific chemical identity.

1910.1020(f)(9)

The health professional, employee, or designated representative whose request for information is denied under paragraph (f)(4) of this section may refer the request and the written denial of the request to OSHA for consideration.

1910.1020(f)(10)

When a health professional, employee, or designated representative refers a denial to OSHA under paragraph (f)(9) of this section, OSHA shall consider the evidence to determine if:

1910.1020(f)(10)(i)

The employer has supported the claim that the specific chemical identity is a trade secret;

1910.1020(f)(10)(ii)

The health professional employee, or designated representative has supported the claim that there is a medical or occupational health need for the information; and

1910.1020(f)(10)(iii)

The health professional, employee or designated representative has demonstrated adequate means to protect the confidentiality.

1910.1020(f)(11) 1910.1020(f)(11)(i)

If OSHA determines that the specific chemical identity requested under paragraph (f)(4) of this section is not a "bona fide" trade secret, or that it is a trade secret but the requesting health professional, employee or designated representatives has a legitimate medical or occupational health need for the information, has executed a written confidentiality agreement, and has shown adequate means for complying with the terms of such agreement, the employer will be subject to citation by OSHA.

1910.1020(f)(11)(ii)

If an employer demonstrates to OSHA that the execution of a confidentiality agreement would not provide sufficient protection against the potential harm from the unauthorized disclosure of a trade secret specific chemical identity, the Assistant Secretary may issue such orders or impose such additional limitations or conditions upon the disclosure of the requested chemical information as may be appropriate to assure that the occupational health needs are met without an undue risk of harm to the employer.

1910.1020(f)(12)

Notwithstanding the existence of a trade secret claim, an employer shall, upon request, disclose to the Assistant Secretary any information which this section requires the employer to make available. Where there is a trade secret claim, such claim shall be made no later than at the time the information is provided to the Assistant Secretary so that suitable determinations of trade secret status can be made and the necessary protections can be

implemented.

1910.1020(f)(13)

Nothing in this paragraph shall be construed as requiring the disclosure under any circumstances of process or percentage of mixture information which is a trade secret.

1910.1020(g)

"Employee information."

1910.1020(g)(1)

Upon an employee's first entering into employment, and at least annually thereafter, each employer shall inform current employees covered by this section of the following:

1910.1020(g)(1)(i)

The existence, location, and availability of any records covered by this section;

1910.1020(g)(1)(ii)

The person responsible for maintaining and providing access to records; and

1910.1020(g)(1)(iii)

Each employee's rights of access to these records.

1910.1020(g)(2)

Each employer shall keep a copy of this section and its appendices, and make copies readily available, upon request, to employees. The employer shall also distribute to current employees any informational materials concerning this section which are made available to the employer by the Assistant Secretary of Labor for Occupational Safety and Health.

1910.1020(h)

"Transfer of records."

1910.1020(h)(1)

Whenever an employer is ceasing to do business, the employer shall transfer all records subject to this section to the successor employer. The successor employer shall receive and maintain these records.

1910.1020(h)(2)

Whenever an employer is ceasing to do business and there is no successor employer to receive and maintain the records subject to this standard, the employer shall notify affected current employees of their rights of access to records at least three (3) months prior to the cessation of the employer's business.

1910.1020(h)(3)

Whenever an employer either is ceasing to do business and there is no successor employer to receive and maintain the records, or intends to dispose of any records required to be preserved for at least thirty (30) years, the employer shall:

1910.1020(h)(3)(i)

Transfer the records to the Director of the National Institute for Occupational Safety and Health (NIOSH) if so required by a specific occupational safety and health standard; or

1910.1020(h)(3)(ii)

Notify the Director of NIOSH in writing of the impending disposal of records at least three (3) months prior to the disposal of the records.

1910.1020(h)(4)

Where an employer regularly disposes of records required to be preserved for at least thirty (30) years, the employer may, with at least (3) months notice, notify the Director of NIOSH on an annual basis of the records intended to be disposed of in the coming year.

1910.1020(i)

"Appendices." The information contained in appendices A and B to this section is not intended, by itself, to create any additional obligations not otherwise imposed by this section nor detract from any existing obligation.

[61 FR 5507, Feb. 13, 1996; 61 FR 9227, March 7, 1996; 61 FR 31427, June 20, 1996; 71 FR 16673, April 3, 2006]

Regulations (Standards - 29 CFR) Retention and updating. - 1904.33

 [Regulations \(Standards - 29 CFR\) - Table of Contents](#)

- **Part Number:** 1904
 - **Part Title:** Recording and Reporting Occupational Injuries and Illness
 - **Subpart:** D
 - **Subpart Title:** Other OSHA injury and Illness Recordkeeping Requirements
 - **Standard Number:** 1904.33
 - **Title:** Retention and updating.
-

1904.33(a)

Basic requirement. You must save the OSHA 300 Log, the privacy case list (if one exists), the annual summary, and the OSHA 301 Incident Report forms for five (5) years following the end of the calendar year that these records cover.

1904.33(b)

Implementation.

[1904.33\(b\)\(1\)](#)

Do I have to update the OSHA 300 Log during the five-year storage period? Yes, during the storage period, you must update your stored OSHA 300 Logs to include newly discovered recordable injuries or illnesses and to show any changes that have occurred in the classification of previously recorded injuries and illnesses. If the description or outcome of a case changes, you must remove or line out the original entry and enter the new information.

1904.33(b)(2)

Do I have to update the annual summary? No, you are not required to update the annual summary, but you may do so if you wish.

1904.33(b)(3)

Do I have to update the OSHA 301 Incident Reports? No, you are not required to update the OSHA 301 Incident Reports, but you may do so if you wish.

[66 FR 6131, Jan. 19, 2001]

 [Next Standard \(1904.34\)](#)

 [Regulations \(Standards - 29 CFR\) - Table of Contents](#)

Regulations (Standards - 29 CFR)

Rules of agency practice and procedure concerning OSHA access to employee medical records. - 1913.10

 [Regulations \(Standards - 29 CFR\) - Table of Contents](#)

- **Part Number:** 1913
- **Part Title:** Rules Concerning OSHA Access to Employee Medical Records

- **Standard Number:** 1913.10
 - **Title:** Rules of agency practice and procedure concerning OSHA access to employee medical records.
-

1913.10(a)

General policy. OSHA access to employee medical records will in certain circumstances be important to the agency's performance of its statutory functions. Medical records, however, contain personal details concerning the lives of employees. Due to the substantial personal privacy interests involved, OSHA authority to gain access to personally identifiable employee medical information will be exercised only after the agency has made a careful determination of its need for this information, and only with appropriate safeguards to protect individual privacy. Once this information is obtained, OSHA examination and use of it will be limited to only that information needed to accomplish the purpose for access, will be kept secure while being used, and will not be disclosed to other agencies or members of the public except in narrowly defined circumstances. This section establishes procedures to implement these policies.

1913.10(b)

Scope and application.

1913.10(b)(1)

Except as provided in paragraphs (b)(3) through (6) below, this section applies to all requests by OSHA personnel to obtain access to records in order to examine or copy personally identifiable employee medical information, whether or not pursuant to the access provisions of 29 CFR 1910.1020(e).

1913.10(b)(2)

For the purposes of this section, "personally identifiable employee medical information" means employee medical information accompanied by either direct identifiers (name, address, social security number, payroll number, etc.) or by information which could reasonably be used in the particular circumstances indirectly to identify specific employees (e.g., exact age, height, weight, race, sex, date of initial employment, job title, etc.).

1913.10(b)(3)

This section does not apply to OSHA access to, or the use of, aggregate employee medical information or medical records on individual employees which is not in a personally identifiable form. This section does not apply to records required by 29 CFR Part 1904, to death certificates, or to employee exposure records, including biological monitoring records treated by 29 CFR 1910.1020(c)(5) or by specific occupational safety and health standards as exposure records.

1913.10(b)(4)

This section does not apply where OSHA compliance personnel conduct an examination of employee medical records solely to verify employer compliance with the medical surveillance recordkeeping requirements of an occupational safety and health standard, or with 29 CFR 1910.1020. An examination of this nature shall be conducted on-site and, if requested, shall

be conducted under the observation of the recordholder. The OSHA compliance personnel shall not record and take off-site any information from medical records other than documentation of the fact of compliance or non-compliance.

1913.10(b)(5)

This section does not apply to agency access to, or the use of, personally identifiable employee medical information obtained in the course of litigation.

1913.10(b)(6)

This section does not apply where a written directive by the Assistant Secretary authorizes appropriately qualified personnel to conduct limited reviews of specific medical information mandated by an occupational safety and health standard, or of specific biological monitoring test results.

1913.10(b)(7)

Even if not covered by the terms of this section, all medically related information reported in a personally identifiable form shall be handled with appropriate discretion and care befitting all information concerning specific employees. There may, for example, be personal privacy interests involved which militate against disclosure of this kind of information to the public (See, 29 CFR 70.26 and 70a.3).

1913.10(c)

Responsible persons -

1913.10(c)(1)

Assistant Secretary. The Assistant Secretary of Labor for Occupational Safety and Health (Assistant Secretary) shall be responsible for the overall administration and implementation of the procedures contained in this section, including making final OSHA determinations concerning:

1913.10(c)(1)(i)

Access to personally identifiable employee medical information (paragraph (d)), and

1913.10(c)(1)(ii)

Inter-agency transfer or public disclosure of personally identifiable employee medical information (paragraph (m)).

1913.10(c)(2)

OSHA Medical Records Officer. The Assistant Secretary shall designate an OSHA official with experience or training in the evaluation, use, and privacy protection of medical records to be the OSHA Medical Records Officer. The OSHA Medical Records Officer shall report directly to the Assistant Secretary on matters concerning this section and shall be responsible for:

1913.10(c)(2)(i)

Making recommendations to the Assistant Secretary as to the approval or denial of written access orders (paragraph (d)),

1913.10(c)(2)(ii)

Assuring that written access orders meet the requirements of paragraphs (d)(2) and (3) of this section,

1913.10(c)(2)(iii)

Responding to employee, collective bargaining agent, and employer objections concerning written access orders (paragraph (f)),

1913.10(c)(2)(iv)

Regulating the use of direct personal identifiers (paragraph (g)),

1913.10(c)(2)(v)

Regulating internal agency use and security of personally identifiable employee medical information (paragraphs (h) through (j)),

1913.10(c)(2)(vi)

Assuring that the results of agency analyses of personally identifiable medical information are, where appropriate, communicated to employees (paragraph (k)),

1913.10(c)(2)(vii)

Preparing an annual report of OSHA's experience under this section (paragraph (l)), and

1913.10(c)(2)(viii)

Assuring that advance notice is given of intended inter-agency transfers or public disclosures (paragraph (m)).

1913.10(c)(3)

Principal OSHA Investigator. The Principal OSHA Investigator shall be the OSHA employee in each instance of access to personally identifiable employee medical information who is made primarily responsible for assuring that the examination and use of this information is

performed in the manner prescribed by a written access order and the requirements of this section (paragraphs (d) through (m)). When access is pursuant to a written access order, the Principal OSHA Investigator shall be professionally trained in medicine, public health, or allied fields (epidemiology, toxicology, industrial hygiene, biostatistics, environmental health, etc.).

1913.10(d)

Written access orders -

1913.10(d)(1)

Requirement for written access order. Except as provided in paragraph (d)(4) below, each request by an OSHA representative to examine or copy personally identifiable employee medical information contained in a record held by an employer or other recordholder shall be made pursuant to a written access order which has been approved by the Assistant Secretary upon the recommendation of the OSHA Medical Records Officer. If deemed appropriate, a written access order may constitute, or be accompanied by an administrative subpoena.

1913.10(d)(2)

Approval criteria for written access order. Before approving a written access order, the Assistant Secretary and the OSHA Medical Records Officer shall determine that:

1913.10(d)(2)(i)

The medical information to be examined or copied is relevant to a statutory purpose and there is a need to gain access to this personally identifiable information,

1913.10(d)(2)(ii)

The personally identifiable medical information to be examined or copied is limited to only that information needed to accomplish the purpose for access, and

1913.10(d)(2)(iii)

The personnel authorized to review and analyze the personally identifiable medical information are limited to those who have a need for access and have appropriate professional qualifications.

1913.10(d)(3)

Content of written access order. Each written access order shall state with reasonable particularity:

1913.10(d)(3)(i)

The statutory purposes for which access is sought,

1913.10(d)(3)(ii)

A general description of the kind of employee medical information that will be examined and why there is a need to examine personally identifiable information,

1913.10(d)(3)(iii)

Whether medical information will be examined on-site, and what type of information will be copied and removed off-site,

1913.10(d)(3)(iv)

The name, address, and phone number of the Principal OSHA Investigator and the names of any other authorized persons who are expected to review and analyze the medical information.

1913.10(d)(3)(v)

The name, address, and phone number of the OSHA Medical Records Officer, and

1913.10(d)(3)(vi)

The anticipated period of time during which OSHA expects to retain the employee medical information, in a personally identifiable form.

1913.10(d)(4)

Special situations. Written access orders need not be obtained to examine or copy personally identifiable employee medical information under the following circumstances:

1913.10(d)(4)(i)

Specific written consent. If the specific written consent of an employee is obtained pursuant to 29 CFR 1910.1020(e)(2)(ii), and the agency or an agency employee is listed on the authorization as the designated representative to receive the medical information, then a written access order need not be obtained. Whenever personally identifiable employee medical information is obtained through specific written consent and taken off-site, a Principal OSHA Investigator shall be promptly named to assure protection of the information, and the OSHA Medical Records Officer shall be notified of this person's identity. The personally identifiable medical information obtained shall thereafter be subject to the use and security requirements of paragraphs (h) through (m) of this section.

1913.10(d)(4)(ii)

Physician consultations. A written access order need not be obtained where an OSHA staff or contract physician consults with an employer's physician concerning an occupational safety or health issue. In a situation of this nature, the OSHA physician may conduct on-site evaluation of employee medical records in consultation with the employer's physician, and may make necessary personal notes of his or her findings. No employee medical records, however, shall be taken off-site in the absence of a written access order or the specific written consent of an employee, and no notes of personally identifiable employee medical information made by the OSHA physician shall leave his or her control without the permission of the OSHA Medical Records Officer.

1913.10(e)

Presentation of written access order and notice to employees.

1913.10(e)(1)

The Principal OSHA Investigator, or someone under his or her supervision, shall present at least two (2) copies each of the written access order and an accompanying cover letter to the employer prior to examining or obtaining medical information subject to a written access order. At least one copy of the written access order shall not identify specific employees by direct personal identifier. The accompanying cover letter shall summarize the requirements of this section and indicate that questions or objections concerning the written access order may be directed to the Principal OSHA Investigator or to the OSHA Medical Records Officer.

1913.10(e)(2)

The Principal OSHA investigator shall promptly present a copy of the written access order (which does not identify specific employees by direct personal identifier) and its accompanying cover letter to each collective bargaining agent representing employees whose medical records are subject to the written access order.

1913.10(e)(3)

The Principal OSHA Investigator shall indicate that the employer must promptly post a copy of the written access order which does not identify specific employees by direct personal identifier, as well as post its accompanying cover letter (See, 29 CFR 1910.1020(e)(3)(ii)).

1913.10(e)(4)

The Principal OSHA investigator shall discuss with any collective bargaining agent and with the employer the appropriateness of individual notice to employees affected by the written access order. Where it is agreed that individual notice is appropriate, the principal OSHA Investigator shall promptly provide to the employer an adequate number of copies of the written access order (which does not identify specific employees by direct personal identifier) and its accompanying cover letter to enable the employer either to individually notify each employee or to place a copy in each employee's medical file.

1913.10(f)

Objections concerning a written access order. All employee, collective bargaining agent, and employer written objections concerning access to records pursuant to a written access order shall be transmitted to the OSHA Medical Records Officer. Unless the agency decides otherwise, access to the records shall proceed without delay notwithstanding the lodging of an objection. The OSHA Medical Records Officer shall respond in writing to each employee's and collective bargaining agent's written objection to OSHA access. Where appropriate, the OSHA Medical Records Officer may revoke a written access order and direct that any medical information obtained by it be returned to the original recordholder or destroyed. The principal OSHA investigator shall assure that such instructions by the OSHA Medical Records Officer are promptly implemented.

1913.10(g)

Removal of direct personal identifiers. Whenever employee medical information obtained pursuant to a written access order is taken off-site with direct personal identifiers included, the principal OSHA Investigator shall, unless otherwise authorized by the OSHA Medical Records Officer, promptly separate all direct personal identifiers from the medical information, and code the medical information and the list of direct identifiers with a unique identifying number for each employee. The medical information with its numerical code shall thereafter be used and kept secured as though still in a directly identifiable form. The principal OSHA Investigator shall also hand deliver or mail the list of direct personal identifiers with their corresponding numerical codes to the OSHA Medical Records Officer. The

OSHA Medical Records Officer shall thereafter limit the use and distribution of the list of coded identifiers to those with a need to know its contents.

1913.10(h)

Internal agency use of personally identifiable employee medical information.

1913.10(h)(1)

The Principal OSHA Investigator shall in each instance of access be primarily responsible for assuring that personally identifiable employee medical information is used and kept secured in accordance with this section.

1913.10(h)(2)

The Principal OSHA Investigator, the OSHA Medical Records Officer, the Assistant Secretary, and any other authorized person listed on a written access order may permit the examination or use of personally identifiable employee medical information by agency employees and contractors who have a need for access, and appropriate qualifications for the purpose for which they are using the information. No OSHA employee or contractor is authorized to examine or otherwise use personally identifiable employee medical information unless so permitted.

1913.10(h)(3)

Where a need exists, access to personally identifiable employee medical information may be provided to attorneys in the Office of the Solicitor of Labor, and to agency contractors who are physicians or who have contractually agreed to abide by the requirements of this section and implementing agency directives and instructions.

1913.10(h)(4)

OSHA employees and contractors are only authorized to use personally identifiable employee medical information for the purposes for which it was obtained, unless the specific written consent of an employee is obtained as to a secondary purpose, or the procedures of paragraphs (d) through (g) of this section are repeated with respect to the secondary purpose.

1913.10(h)(5)

Whenever practicable, the examination of personally identifiable employee medical information shall be performed on-site with a minimum of medical information taken off-site in a personally identifiable form.

1913.10(i)

Security procedures.

1913.10(i)(1)

Agency files containing personally identifiable employee medical information shall be segregated from other agency files. When not in active use, files containing this information shall be kept secured in a locked cabinet or vault.

1913.10(i)(2)

The OSHA Medical Records Officer and the Principal OSHA Investigator shall each maintain a log of uses and transfers of personally identifiable employee medical information and lists of coded direct personal identifiers, except as to necessary uses by staff under their direct personal supervision.

1913.10(i)(3)

The photocopying or other duplication of personally identifiable employee medical information shall be kept to the minimum necessary to accomplish the purposes for which the information was obtained.

1913.10(i)(4)

The protective measures established by this section apply to all worksheets, duplicate copies, or other agency documents containing personally identifiable employee medical information.

1913.10(i)(5)

Intra-agency transfers of personally identifiable employee medical information shall be by hand delivery, United States mail, or equally protective means. Inter-office mailing channels shall not be used.

1913.10(j)

Retention and destruction of records.

1913.10(j)(1)

Consistent with OSHA records disposition programs, personally identifiable employee medical information and lists of coded direct personal identifiers shall be destroyed or returned to the original recordholder when no longer needed for the purposes for which they were obtained.

1913.10(j)(2)

Personally identifiable employee medical information which is currently not being used actively but may be needed for future use shall be transferred to the OSHA Medical Records Officer. The OSHA Medical Records Officer shall conduct an annual review of all centrally-held information to determine which information is no longer needed for the purposes for which it was obtained.

1913.10(k)

Results of an agency analysis using personally identifiable employee medical information. The OSHA Medical Records Officer shall, as appropriate, assure that the results of an agency analysis using personally identifiable employee medical information are communicated to the employees whose personal medical information was used as a part of the analysis.

1913.10(l)

Annual report The OSHA Medical Records Officer shall on an annual basis review OSHA's experience under this section during the previous year, and prepare a report to the Assistant Secretary which shall be made available to the public. This report shall discuss:

1913.10(l)(1)

the number of written access orders approved and a summary of the purposes for access,

1913.10(l)(2)

the nature and disposition of employee, collective bargaining agent, and employer written objections concerning OSHA access to personally identifiable employee medical information, and

1913.10(l)(3)

the nature and disposition of requests for inter-agency transfer or public disclosure of personally identifiable employee medical information.

1913.10(m)

Inter-agency transfer and public disclosure.

1913.10(m)(1)

Personally identifiable employee medical information shall not be transferred to another agency or office outside of OSHA (other than to the Office of the Solicitor of Labor) or disclosed to the public (other than to the affected employee or the original recordholder) except when required by law or when approved by the Assistant Secretary.

1913.10(m)(2)

Except as provided in paragraph (m)(3) of this section, the Assistant Secretary shall not approve a request for an inter-agency transfer of personally identifiable employee medical information, which has not been consented to by the affected employees, unless the request is by a public health agency which:

1913.10(m)(2)(i)

needs the requested information in a personally identifiable form for a substantial public health purpose,

1913.10(m)(2)(ii)

will not use the requested information to make individual determinations concerning affected employees which could be to their detriment,

1913.10(m)(2)(iii)

has regulations or established written procedures providing protection for personally identifiable medical information substantially equivalent to that of this section, and

1913.10(m)(2)(iv)

satisfies an exemption to the Privacy Act to the extent that the Privacy Act applies to the requested information (See, 5 U.S.C. 552a(b); 29 CFR 70a.3).

1913.10(m)(3)

Upon the approval of the Assistant Secretary, personally identifiable employee medical information may be transferred to:

1913.10(m)(3)(i)

the National Institute for Occupational Safety and Health (NIOSH) and

1913.10(m)(3)(ii)

the Department of Justice when necessary with respect to a specific action under the Occupational Safety and Health Act.

1913.10(m)(4)

The Assistant Secretary shall not approve a request for public disclosure of employee medical information containing direct personal identifiers unless there are compelling circumstances affecting the health or safety of an individual.

1913.10(m)(5)

The Assistant Secretary shall not approve a request for public disclosure of employee medical information which contains information which could reasonably be used indirectly to identify specific employees when the disclosure would constitute a clearly unwarranted invasion of personal privacy (See, 5 U.S.C. 552(b)(6); 29 CFR 70.26).

1913.10(m)(6)

Except as to inter-agency transfers to NIOSH or the Department of Justice, the OSHA Medical Records Officer shall assure that advance notice is provided to any collective bargaining agent representing affected employees and to the employer on each occasion that OSHA intends to either transfer personally identifiable employee medical information to another agency or disclose it to a member of the public other than to an affected employee. When feasible, the OSHA Medical Records Officer shall take reasonable steps to assure that advance notice is provided to affected employees when the employee medical information to be transferred or disclosed contains direct personal identifiers.

[45 FR 35294, May 23, 1980; 45 FR 54334, Aug. 15, 1980; 71 FR 16674, April 3, 2006]

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

[Docket No. OSHA-2007-0063]

Bloodborne Pathogens Standard; Extension of the Office of Management and Budget's (OMB) Approval of Information Collection (Paperwork) Requirements

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Request for public comment.

SUMMARY: OSHA solicits public comment concerning its proposal to extend OMB approval of the information collection requirements specified in the Bloodborne Pathogens Standard (29 CFR 1910.1030). The information collection requirements specified in the Bloodborne Pathogens Standard provides employers and employees with means to provide protection from adverse health effects associated with occupational exposure to bloodborne pathogens.

DATES: Comments must be submitted (postmarked, sent, or received) by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

Electronically: You may submit comments and attachments electronically at <http://www.regulations.gov>, which is the Federal eRulemaking Portal. Follow the instructions online for submitting comments.

Facsimile: If your comments, including attachments, are not longer than 10 pages, you may fax them to the OSHA Docket Office at (202) 693-1648.

Mail, hand delivery, express mail, messenger, or courier service: When using this method, you must submit three copies of your comments and attachments to the OSHA Docket Office, Docket No. OSHA-2007-0063, U.S. Department of Labor, Occupational Safety and Health Administration, Room N-2625, 200 Constitution Avenue, NW., Washington, DC 20210. Deliveries (hand, express mail, messenger, and courier service) are accepted during the Department of Labor's and Docket Office's normal business hours, 8:15 a.m. to 4:45 p.m., EST.

Instructions: All submissions must include the Agency name and OSHA docket number for the ICR (OSHA-2007-0063). All comments, including any personal information you provide, are placed in the public docket without change, and may be made available online at <http://www.regulations.gov>. For further information on submitting comments see the "Public Participation" heading in the section of this notice titled "Supplementary Information."

Docket: To read or download comments or other material in the docket, go to <http://www.regulations.gov> or the OSHA Docket Office at the address above. All documents in the docket (including this Federal Register notice) are listed in the <http://www.regulations.gov> index; however, some information (e.g., copyrighted material) is not publicly available to read or download through the website. All submissions, including copyrighted material, are available for inspection and copying at the OSHA Docket Office. You also may contact Jamaa N. Hill at the address below to obtain a copy of the ICR.

FOR FURTHER INFORMATION CONTACT: Jamaa N. Hill or Todd Owen,
Directorate of Standards and Guidance, OSHA, U.S. Department of Labor, Room N-
3609, 200 Constitution Avenue, NW., Washington, DC 20210; telephone (202) 693-
2222.

SUPPLEMENTARY INFORMATION:

I. Background

The Department of Labor, as part of its continuing effort to reduce paperwork and respondent (i.e., employer) burden, conducts a preclearance consultation program to provide the public with an opportunity to comment on proposed and continuing information collection requirements in accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3506(c)(2)(A)). This program ensures that information is in the desired format, reporting burden (time and costs) is minimal, collection instruments are clearly understood, and OSHA's estimate of the information collection burden is accurate. The Occupational Safety and Health Act of 1970 (the OSH Act) (29 U.S.C. 651 *et seq.*) authorizes information collection by employers as necessary or appropriate for enforcement of the OSH Act or for developing information regarding the causes and prevention of occupational injuries, illnesses, and accidents (29 U.S.C. 657). The OSH Act also requires that OSHA obtain such information with minimum burden upon employers, especially those operating small businesses, and to reduce to the maximum extent feasible unnecessary duplication of efforts in obtaining information (29 U.S.C. 657).

The information collection requirements specified in the Bloodborne Pathogens Standard require employers to: Develop and maintain exposure control plans; develop a housekeeping schedule; provide employees with hepatitis B virus (HBV) vaccinations, as well as post-exposure medical evaluations and follow-ups; provide employees with information and training; maintain medical and training records for specified periods; and provide OSHA, the National Institute for Occupational Safety and Health, employees and their authorized representatives with access to these records; HIV and HBV research laboratories and production facilities must also adopt or develop, and review at least once a year, a biosafety manual; and establish and maintain a sharps injury log for the recording of percutaneous (through the skin) injuries from contaminated sharps.

II. Special Issues for Comment

OSHA has a particular interest in comments on the following issues:

- Whether the proposed information collection requirements are necessary for the proper performance of the Agency's functions to protect employees, including whether the information is useful;
- The accuracy of OSHA's estimate of the burden (time and costs) of the information collection requirements, including the validity of the methodology and assumptions used;
- The quality, utility, and clarity of the information collected; and
- Ways to minimize the burden on employers who must comply; for example, by using automated or other technological information collection and transmission techniques.

III. Proposed Actions

OSHA is requesting that OMB extend its approval of the information collection requirements contained in the Bloodborne Pathogens Standard (29 CFR 1910.1030). The Agency will summarize the comments submitted in response to this notice and will include this summary in the request to OMB.

Type of Review:	Extension of a currently approved collection.
Title:	Bloodborne Pathogens Standard (29 CFR 1910.1030).
OMB Number:	1218-0180.
Affected Public:	Business or other for-profit organizations; Not-for-profit institutions; Federal, State, Local, or Tribal Governments.
Number of Respondents:	630,021.
Frequency:	On occasion.
Total Responses:	23,586,234.
Average Time per Response:	Time per response varies from 5 minutes (.08 hour) to maintain records to 1.5 hours for employees to receive training or medical evaluations.
Estimated Total Burden Hours:	14,060,528 hours.

**Estimated Cost
(Operation and
Maintenance):** \$24,507,892.

IV. Public Participation – Submission of Comments on this Notice and Internet

Access to Comments and Submissions

You may submit comments in response to this document as follows: (1) electronically at <http://www.regulations.gov>, which is the Federal eRulemaking Portal; (2) by facsimile; or (3) by hard copy. All comments, attachments, and other material must identify the Agency name and the OSHA docket number for the ICR (Docket No. OSHA-2007-0063). You may supplement electronic submissions by uploading document files electronically. If you wish to mail additional materials in reference to an electronic or a facsimile submission, you must submit them to the OSHA Docket Office (see the section of this notice titled “Addresses”). The additional materials must clearly identify your electronic comments by your name, date, and docket number so the Agency can attach them to your comments.

Because of security procedures, the use of regular mail may cause a significant delay in the receipt of comments. For information about security procedures concerning the delivery of materials by hand, express delivery, messenger or courier service, please contact the OSHA Docket Office at (202) 693-2350 (TTY (877) 889-5627).

Comments and submissions are posted without change at <http://www.regulations.gov>. Therefore, OSHA cautions commenters about submitting personal information such as social security numbers and date of birth. Although all submissions are listed in the <http://www.regulations.gov> index, some information (e.g.,

copyrighted material) is not publicly available to read or download through this website. All submissions, including copyrighted material, are available for inspection and copying at the OSHA Docket Office. Information on using the <http://www.regulations.gov> website to submit comments and access the docket is available at the website's "User Tips" link. Contact the OSHA Docket Office for information about materials not available through the website, and for assistance in using the Internet to locate docket submissions.

V. Authority and Signature

Edwin G. Foulke, Jr., Assistant Secretary of Labor for Occupational Safety and Health, directed the preparation of this notice. The authority for this notice is the Paperwork Reduction Act of 1995 (44 U.S.C. 3506 *et seq.*) and Secretary of Labor's Order No. 5-2002 (67 FR 65008).

Signed at Washington, DC, on July _____, 2007.

Edwin G. Foulke, Jr.

*Assistant Secretary of Labor
for Occupational Safety and Health.*

4510-26M

Regulations (Standards - 29 CFR)

Hepatitis B Vaccine Declination (Mandatory) - 1910.1030 App A

 [Regulations \(Standards - 29 CFR\) - Table of Contents](#)

- **Part Number:** 1910
 - **Part Title:** Occupational Safety and Health Standards
 - **Subpart:** Z
 - **Subpart Title:** Toxic and Hazardous Substances
 - **Standard Number:** 1910.1030 App A
 - **Title:** Hepatitis B Vaccine Declination (Mandatory)
-

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

[56 FR 64004, Dec. 06, 1991, as amended at 57 FR 12717, April 13, 1992; 57 FR 29206, July 1, 1992; 61 FR 5507, Feb. 13, 1996]

 [Next Standard \(1910.1043\)](#)

 [Regulations \(Standards - 29 CFR\) - Table of Contents](#)

Exposure Control Plan

TABLE 1

Hours = # of Establishments x Time

Cost = # Burden Hours x \$35.00 (wage rate of an infection control practitioner)

Assumptions:

* Develop New Plans: Hospitals and Nursing Homes take 16 hours; Medical and dental labs take 8 hours; Physicians, dentists, and residential care take 4 hours

* Review existing plans: Hospitals take 8 hours to review, all other sectors take 2 hours

	No. of Est.			Burden Hours	No. 12
Offices of Physicians	186,994	Offices of Physicians	x 2	373,988	\$13,089,580
<i>New Physicians</i>	12,106	<i>New Physicians</i>	x 4	48,424	\$1,694,840
Office of Dentists	113,054	Office of Dentists	x 2	226,108	\$7,913,780
<i>New Dentists</i>	1,854	<i>New Dentists</i>	x 4	7,416	\$259,560
Nursing Homes	15,980	Nursing Homes	x 2	31,960	\$1,118,600
Hospitals	6,985	Hospitals	x 8	55,880	\$1,955,800
Medical and Dental Labs	17,548	Medical and Dental Labs	x 2	35,096	\$1,228,360
<i>New Medical and Dental Labs</i>	2,305	<i>New Medical and Dental Labs</i>	x 8	18,440	\$645,400
Home Health Care	6,437	Home Health Care	x 2	12,874	\$450,590
Hospices	651	Hospices	x 2	1,302	\$45,570
Hemodialysis	782	Hemodialysis	x 2	1,564	\$54,740
Drug Rehabilitation	744	Drug Rehabilitation	x 2	1,488	\$52,080
Government Clinics	10,893	Government Clinics	x 2	21,786	\$762,510
Blood/Plasma/Tissue Centers	730	Blood/Plasma/Tissue Centers	x 2	1,460	\$51,100
Residential Care	9,964	Residential Care	x 2	19,928	\$697,480
New Residential Care	1,256	New Residential Care	x 4	5,024	\$175,840
Personnel Services	1,348	Personnel Services	x 2	2,696	\$94,360
Funeral Services	19,890	Funeral Services	x 2	39,780	\$1,392,300
Health Units in Industry	202,540	Health Units in Industry	x 2	405,080	\$14,177,800
Research Labs	1,453	Research Labs	x 2	2,906	\$101,710
Linen Services	1,250	Linen Services	x 2	2,500	\$87,500
Medical Equipment Repair	1,076	Medical Equipment Repair	x 2	2,152	\$75,320
Law Enforcement	4,946	Law Enforcement	x 2	9,892	\$346,220
Fire and Rescue	3,174	Fire and Rescue	x 2	6,348	\$222,180
Correctional Facilities	1,895	Correctional Facilities	x 2	3,790	\$132,650
Lifesaving	100	Lifesaving	x 2	200	\$7,000
Schools	6,321	Schools	x 2	12,642	\$442,470
Waste Removal	50	Waste Removal	x 2	100	\$3,500
Totals		Totals		1,350,824	\$47,278,840

Responses 632,326

Hepatitis B Vaccination (Employee Time)

TABLE 2

Hours = # of workers x (% non-vaccinated) x employee participation rate x employee time x occupational turnover rate

Assumptions

to receive the vaccination and post vaccination is 38 minutes (.63 hour) for categories A and B; 23 minutes (.38 hour) for Categories C and D; only health care workers receive post vaccinations.

For Sectors where a physician, dentist or licensed nurses is not normally on the premises, employee time to receive the vaccination and post vaccination is 115 minutes (1.92 hour) for categories A and B; 100 minutes (1.67 hours) for Categories C and D.

Wage Rates are from the Regulatory Impact Analysis, Technical appendix C.

									Hours	Wage Rates	#12	
Office of the Physicians												
Category A	967,626	x	57%	x	52%	x	0.63	x	6.9% =	12,467	\$30.01	\$374,146
C	6,969	x	67%	x	33%	x	0.38	x	9.8% =	57	\$9.65	\$554
D	69,685	x	37%	x	65%	x	0.38	x	12.9% =	822	\$17.46	\$14,344
Office of Dentists												
Category A	359,662	x	33%	x	75%	x	0.63	x	1.6% =	897	\$23.12	\$20,745
C	3,447	x	80%	x	30%	x	0.38	x	9.8% =	31	\$9.65	\$297
Nursing Homes (75% employees on- site)												
Category A	445,842	x	57%	x	50%	x	0.63	x	24.8% =	19,853	\$12.28	\$243,790
C	28,764	x	67%	x	50%	x	0.38	x	9.8% =	359	\$9.65	\$3,463
D	4,794	x	37%	x	50%	x	0.38	x	9.8% =	33	\$9.65	\$319
Nursing Homes (25% employees off-site)												
Category A	148,614	x	57%	x	50%	x	1.92	x	6.9% =	5,611	\$12.28	\$68,905
C	9,588	x	67%	x	50%	x	1.67	x	9.8% =	526	\$9.65	\$5,073
D	1,598	x	37%	x	50%	x	1.67	x	12.9% =	64	\$9.65	\$615
Hospitals												
Category A	2,207,260	x	54%	x	57%	x	0.63	x	14.7% =	62,919	\$17.08	\$1,074,652
B	188,595	x	54%	x	57%	x	0.63	x	12.9% =	4,718	\$17.51	\$82,607
C	293,370	x	69%	x	44%	x	0.38	x	9.8% =	3,317	\$9.68	\$32,107
Medical and Dental Labs												
Category A	227,773	x	58%	x	64%	x	0.63	x	12.9% =	6,871	\$21.66	\$148,833
C	1,754	x	88%	x	30%	x	0.38	x	9.8% =	17	\$9.65	\$166
D	197,766	x	100%	x	30%	x	0.38	x	9.8% =	2,209	\$9.65	\$21,321
Home Health												
Category A	202,946	x	77%	x	38%	x	0.63	x	22.3% =	8,343	\$11.81	\$98,526
C	3,000	x	100%	x	30%	x	0.38	x	9.8% =	34	\$9.65	\$323
D	6,300	x	88%	x	82%	x	0.38	x	22.5% =	389	\$11.81	\$4,590
Hospices												
Category A	10,565	x	77%	x	46%	x	0.63	x	22.5% =	530	\$11.81	\$6,265
C	154	x	37%	x	50%	x	0.38	x	9.8% =	1	\$9.65	\$10
D	27	x	100%	x	30%	x	0.38	x	22.5% =	1	\$11.81	\$8
Hemodialysis												
Category A	11,926	x	33%	x	77%	x	0.63	x	15.4% =	294	\$20.56	\$6,045
C	209	x	69%	x	54%	x	0.38	x	22.5% =	7	\$9.65	\$64
D	553	x	48%	x	60%	x	0.38	x	12.9% =	8	\$17.46	\$136

TABLE 2

Drug Rehabilitation												
Category A	6,067	x	49%	x	56%	x	0.63	x	15.4% =	162	\$20.56	\$3,331
C	149	x	35%	x	100%	x	0.38	x	22.5% =	4	\$9.65	\$43
D	506	x	100%	x	30%	x	0.38	x	12.9% =	7	\$17.46	\$130
Government Clinics												
Category A	52,156	x	57%	x	52%	x	0.63	x	13.5% =	1,315	\$29.50	\$38,786
C	381	x	67%	x	33%	x	0.38	x	9.8% =	3	\$9.49	\$30
D	3,808	x	37%	x	65%	x	0.38	x	12.9% =	45	\$17.16	\$797
Blood/Plasma/Tissue Centers												
Category A	18,198	x	60%	x	42%	x	0.63	x	12.9% =	373	\$17.46	\$6,507
C	200	x	80%	x	30%	x	0.38	x	9.8% =	2	\$9.65	\$17
D	390	x	51%	x	44%	x	0.38	x	22.5% =	7	\$11.81	\$88
Residential Care (75% employees on-site)												
Category A	30,908	x	73%	x	50%	x	0.63	x	24.3% =	1,727	\$12.92	\$22,314
C	854	x	100%	x	50%	x	0.38	x	9.8% =	16	\$9.65	\$153
D	5,065	x	42%	x	50%	x	0.38	x	9.8% =	40	\$11.81	\$468
Residential Care (25% employees off-site)												
Category A	10,303	x	73%	x	50%	x	1.92	x	24.3% =	1,755	\$12.92	\$22,669
C	285	x	100%	x	50%	x	1.67	x	9.8% =	23	\$9.65	\$225
D	1,688	x	42%	x	50%	x	1.67	x	9.8% =	58	\$11.81	\$685
Personnel Services												
Category A	61,387	x	88%	x	30%	x	1.92	x	8.7% =	2,707	\$14.86	\$40,227
D	102,090	x	100%	x	30%	x	1.67	x	9.8% =	5,012	\$9.65	\$48,370
Funeral Services												
Category A	51,054	x	65%	x	49%	x	1.92	x	12.9% =	4,027	\$17.43	\$70,198
C	2,721	x	100%	x	50%	x	1.67	x	9.8% =	223	\$9.64	\$2,146
D	3,238	x	100%	x	30%	x	1.67	x	12.9% =	209	\$9.64	\$2,017
Health Units in Industry												
Category A	34,184	x	70%	x	43%	x	1.92	x	19.5% =	3,852	\$15.09	\$58,132
B	141,051	x	83%	x	30%	x	1.92	x	9.8% =	6,608	\$17.10	\$113,005
D	3,497	x	30%	x	30%	x	1.67	x	12.9% =	68	\$9.45	\$641
Research Labs												
Category A	87,484	x	54%	x	65%	x	1.92	x	12.9% =	7,605	\$17.16	\$130,510
C	1,315	x	79%	x	31%	x	1.67	x	9.8% =	53	\$9.49	\$500
D	352	x	54%	x	65%	x	1.67	x	12.9% =	27	\$17.16	\$457
Linen Service												
D	50,000	x	100%	x	30%	x	1.67	x	9.8% =	2,455	\$9.75	\$23,935
Medical Equipment Repair												
Category A	473	x	84%	x	30%	x	1.92	x	22.5% =	51	\$11.56	\$595
B	200	x	90%	x	30%	x	1.92	x	12.9% =	13	\$11.56	\$155
C	5,152	x	92%	x	30%	x	1.67	x	12.9% =	306	\$17.10	\$5,238
D	360	x	100%	x	30%	x	1.67	x	22.5% =	41	\$17.10	\$694
Law Enforcement												
Category A	306,769	x	83%	x	30%	x	0.63	x	7.8% =	3,754	\$14.93	\$56,041
B	1,137	x	47%	x	83%	x	0.63	x	9.8% =	27	\$17.16	\$470
C	2,617	x	98%	x	30%	x	0.38	x	7.8% =	23	\$9.49	\$216
D	31,022	x	77%	x	30%	x	0.38	x	12.9% =	351	\$14.93	\$5,245
Fire and Rescue												
Category A	113,866	x	34%	x	68%	x	1.92	x	12.9% =	6,520	\$17.16	\$111,890

B	136,412	x	44%	x	69%	x	1.92	x	22.5% =	17,891	TABLE 525	\$276,418
D	1,770	x	31%	x	73%	x	1.67	x	7.8% =	52	\$11.61	\$606
Correctional Facilities												
Category A	8,381	x	79%	x	42%	x	0.63	x	19.5% =	342	\$15.15	\$5,176
B	82,883	x	97%	x	30%	x	0.63	x	12.9% =	1,960	\$11.99	\$23,502
C	7,273	x	90%	x	30%	x	0.38	x	17.7% =	132	\$9.49	\$1,253
D	21,687	x	98%	x	30%	x	0.38	x	7.8% =	189	\$14.39	\$2,719
Lifesaving												
Category A	5,000	x	75%	x	68%	x	1.92	x	12.9% =	632	\$17.16	\$10,838
Schools												
Category A	23,514	x	100%	x	30%	x	1.92	x	15.0% =	2,032	\$14.09	\$28,625
D	17,848	x	100%	x	30%	x	1.67	x	22.5% =	2,012	\$11.61	\$23,358
Waste Removal												
Category A	13,300	x	100%	x	30%	x	1.92	x	22.5% =	<u>1,724</u>	<u>\$11.61</u>	<u>\$20,012</u>
										206,812		\$3,367,341

Dollar costs maynot reflect the total of cost x hours as a result of rounding.

Table 3

Hepatitis B Vaccination (Health Care Professional Time)

Hours = # of workers x (non-vaccination rate) x employee participation rate x health care professional time x occupational turnover rate

Cost = # of workers x (Non-vaccination rate) x employee participation rate x cost of vaccination x occupational turnover

Assumptions:

15 minutes (.25) hour for licensed health care professional to provide hepatitis b vaccination and (.50 for vaccine and post vaccination screening

30 minutes (.50 hour for licensed health care professional to provide vaccination and post-vaccination screening)

Cost of Hepatitis B vaccine is 128, and the cost of the tither is \$90; for vaccination and post-vaccination total is \$218

Wage Rate for Health Care Professional is \$35.00

								Burden Hours	No. 13	No. 12	
Office of the Physicians											
Category A	967,626	x	57%	x	52%	x	0.5	x	6.9%	9,895	\$346,316
C	6,969	x	67%	x	33%	x	0.25	x	9.8%	38	\$1,321
D	69,685	x	37%	x	65%	x	0.25	x	12.9%	540	\$18,917
Office of Dentists											
Category A	359,662	x	33%	x	75%	x	0.5	x	1.6%	712	\$24,925
C	3,447	x	80%	x	30%	x	0.25	x	9.8%	20	\$709
Nursing Homes (75% employees on- site)											
Category A	445,842	x	57%	x	50%	x	0.5	x	24.8%	15,756	\$551,462
C	28,764	x	67%	x	50%	x	0.25	x	9.8%	236	\$8,263
D	4,794	x	37%	x	50%	x	0.25	x	9.8%	22	\$761
Nursing Homes (25% employees off-site)											
Category A	148,614	x	57%	x	50%	x	\$218	x	6.9%		\$637,104
C	9,588	x	67%	x	50%	x	\$128	x	9.8%		\$40,291
D	1,598	x	37%	x	50%	x	\$128	x	12.9%		\$4,881
Hospitals											
Category A	2,207,260	x	54%	x	57%	x	0.5	x	14.7%	49,936	\$1,747,743
B	188,595	x	54%	x	57%	x	0.5	x	12.9%	3,744	\$131,047
C	293,370	x	69%	x	44%	x	0.25	x	9.8%	2,182	\$76,375
Medical and Dental Labs											
Category A	227,773	x	58%	x	64%	x	0.5	x	12.9%	5,453	\$190,870
C	1,754	x	88%	x	30%	x	0.25	x	9.8%	11	\$397
D	197,766	x	100%	x	30%	x	0.25	x	9.8%	1,454	\$50,875
Home Health											
Category A	202,946	x	77%	x	38%	x	0.5	x	22.3%	6,621	\$231,738
C	3,000	x	100%	x	30%	x	0.25	x	9.8%	22	\$772
D	6,300	x	88%	x	82%	x	0.25	x	22.5%	256	\$8,950
Hospices											
Category A	10,565	x	77%	x	46%	x	0.5	x	22.5%	421	\$14,735
C	154	x	37%	x	50%	x	0.25	x	9.8%	1	\$24
D	27	x	100%	x	30%	x	0.25	x	22.5%	0	\$16
Hemodialysis											

Category A	11,926	x	33%	x	77%	x	0.5	x	15.4%	233	\$8,167
C	209	x	69%	x	54%	x	0.25	x	22.5%	4	\$153
D	553	x	48%	x	60%	x	0.25	x	12.9%	5	\$180

Drug Rehabilitation											
Category A	6,067	x	49%	x	56%	x	0.5	x	15.4%	128	\$4,487
C	149	x	35%	x	100%	x	0.25	x	22.5%	3	\$103
D	506	x	100%	x	30%	x	0.25	x	12.9%	5	\$171
Government Clinics											
Category A	52,156	x	57%	x	52%	x	0.5	x	13.5%	1,043	\$36,522
C	381	x	67%	x	33%	x	0.25	x	9.8%	2	\$72
D	3,808	x	37%	x	65%	x	0.25	x	12.9%	30	\$1,034
Blood/Plasma/Tissue Centers											
Category A	18,198	x	60%	x	42%	x	0.5	x	12.9%	296	\$10,353
C	200	x	80%	x	30%	x	0.25	x	9.8%	1	\$41
D	390	x	51%	x	44%	x	0.25	x	22.5%	5	\$172
Residential Care (75% employees on- site)											
Category A	141,372	x	73%	x	50%	x	0.25	x	24.3%	3,135	\$109,716
C	3,366	x	100%	x	50%	x	0.25	x	9.8%	41	\$1,443
D	23,562	x	42%	x	50%	x	0.25	x	9.8%	121	\$4,243
Residential Care (25% employees off-site)											
Category A	47,124	x	73%	x	50%	x	\$218	x	24.3%		\$911,167
C	1,122	x	100%	x	50%	x	\$128	x	9.8%		\$7,037
D	7,854	x	42%	x	50%	x	\$128	x	9.8%		\$20,689
Personnel Services											
Category A	61,387	x	88%	x	30%	x	\$218	x	8.7%	307,366	\$307,366
D	102,090	x	100%	x	30%	x	\$128	x	9.8%	384,185	\$384,185
Funeral Services											
										0	
Category A	51,054	x	65%	x	49%	x	\$218	x	12.9%	457,283	\$457,283
C	2,721	x	100%	x	50%	x	\$128	x	9.8%	17,066	\$17,066
D	3,238	x	100%	x	30%	x	\$128	x	12.9%	16,040	\$16,040
Health Units in Industry											
Category A	34,184	x	70%	x	43%	x	\$218	x	19.5%	437,402	\$437,402
B	141,051	x	83%	x	30%	x	\$128	x	9.8%	440,567	\$440,567
D	3,497	x	30%	x	30%	x	\$128	x	12.9%	5,197	\$5,197
Research Labs											
Category A	87,484	x	54%	x	65%	x	\$218	x	12.9%	863,539	\$863,539
C	1,315	x	79%	x	31%	x	\$128	x	9.8%	4,040	\$4,040
D	352	x	54%	x	65%	x	\$128	x	12.9%	2,040	\$2,040
Linen Service											
D	50,000	x	100%	x	30%	x	\$128	x	9.8%	188,160	\$188,160
Medical Equipment Repair											
Category A	473	x	84%	x	30%	x	\$218	x	22.5%	5,847	\$5,847
B	200	x	90%	x	30%	x	\$218	x	12.9%	1,519	\$1,519
C	5,152	x	92%	x	30%	x	\$128	x	12.9%	23,479	\$23,479
D	360	x	100%	x	30%	x	\$128	x	22.5%	3,110	\$3,110
Law Enforcement											
Category A	306,769	x	83%	x	30%	x	0.5	x	7.8%	2,979	\$104,266
B	1,137	x	47%	x	83%	x	0.25	x	9.8%	11	\$380
C	2,617	x	98%	x	30%	x	0.25	x	7.8%	15	\$525
D	31,022		77%		30%		0.25		12.9%	231	\$8,089

Fire and Rescue												
Category A	113,866	x	34%	x	68%	x	\$218	x	12.9%	740,335	\$740,335	
B	136,412	x	44%	x	69%	x	\$218	x	22.5%	2,031,390	\$2,031,390	
D	1,770	x	31%	x	73%	x	\$128	x	7.8%	3,999	\$3,999	
Correctional Facilities												
Category A	8,381	x	79%	x	42%	x	0.5	x	19.5%	271		\$9,490
B	82,883	x	97%	x	30%	x	0.25	x	12.9%	778		\$27,224
C	7,273	x	90%	x	30%	x	0.25	x	17.7%	87		\$3,041
D	21,687	x	98%	x	30%	x	0.25	x	7.8%	124		\$4,352
Lifesaving												
Category A	5,000	x	75%	x	68%	x	\$218	x	12.9%	71,711	\$71,711	
Schools												
Category A	23,514	x	100%	x	30%	x	\$218	x	15.0%	230,672	\$230,672	
D	17,848	x	100%	x	30%	x	\$128	x	22.5%	154,207	\$154,207	
Waste Removal												
Category A	13,300	x	100%	x	30%	x	\$128	x	22.5%	<u>114,912</u>	<u>\$114,912</u>	
Totals										6,610,935	\$8,125,235	\$3,740,440

Table 4

Hours = # of exposures x source participation rate x health care professional time

Cost = # of exposures x source participation rate x ((cost of HIV antibody test) + (RSS x (cost of confirmatory test)))

Assumptions:

50% of sources will agree to be tested; 50% will refuse to be tested

5 minutes (.08 hour) will be required to administer the tests.

RSS is .05% for blood/plasma/tissue centers; 17% for law enforcement; 17% for corrections

and 0.8% for all other sectors

Unit cost of HIV antibody test = \$20

Unit cost of confirmatory test = \$30

					Hours	#13	#12
Offices of Physicians	179,493	x	50%	x	0.083	= 7,449	\$260,714
Office of Dentists	322,560	x	50%	x	0.083	= 13,386	\$468,518
Nursing Homes	45,384	x	50%	x	0.083	= 1,883	\$65,920
Hospitals	319,827	x	50%	x	0.083	= 13,273	\$464,549
Medical and Dental Labs	5,664	x	50%	x	0.083	= 235	\$8,227
Home Health Care	8,819	x	50%	x	0.083	= 366	\$12,810
Hospices	898	x	50%	x	0.083	= 37	\$1,304
Hemodialysis	5,302	x	50%	x	0.083	= 220	\$7,701
Drug Rehabilitation	283	x	50%	x	0.083	= 12	\$411
Government Clinics	16,013	x	50%	x	0.083	= 665	\$23,259
Blood/Plasma/Tissue Centers	6,789	x	50%	x	0.083	= 282	\$9,861
Residential Care	7,809	x	50%	x	0.083	= 324	\$11,343
Personnel Services	2,993	x	50%	[	\$20 + (0.08 x \$30) =		29,930
Funeral Services	11,735	x	50%	[	\$20 + (0.08 x \$30) =		131,432
Health Units in Industry	186,835	x	50%	[	\$20 + (0.08 x \$30) =		2,092,552
Research Labs	494	x	50%	[	\$20 + (0.08 x \$30) =		5,533
Linen Services	3,000	x	50%	[	\$20 + (0.08 x \$30) =		33,600
Medical Equipment Repair	2,625	x	50%	[	\$20 + (0.08 x \$30) =		29,400
Law Enforcement	27,411	x	50%	x	0.083	= 1,138	\$39,814
Fire and Rescue	13,426	x	50%	[	\$20 + (0.08 x \$30) =		134,260
Correctional Facilities	9,173	x	50%	x	0.083	= 381	\$13,324
Lifesaving	457	x	50%	[	\$20 + (0.08 x \$30) =		4,570
Schools	12,642	x	50%	[	\$20 + (0.08 x \$30) =		141,590
Waste Removal	50	x	50%	[	\$20 + (0.08 x \$30) =		560
						39,650	\$1,387,755

Hospices																																				
	Category A	684	x	[	(	58%	x	10%	x	4%	x	50%	)	+	(	(	1	-	58%	)	x	50%	)	]	x	0.083	x	(	1	-	42%	)	=	7		\$82
	C	0	x	[	(	82%	x	10%	x	4%	x	50%	)	+	(	(	1	-	82%	)	x	50%	)	]	x	0.083	x	(	1	-	42%	)	=	0		\$0
	D	215	x	[	(	30%	x	10%	x	4%	x	50%	)	+	(	(	1	-	30%	)	x	50%	)	]	x	0.083	x	(	1	-	42%	)	=	4		\$43
Hemodialysis																																				
	A	4,684		[	(	92%	x	10%	x	4%	x	50%	)	+	(	(	1	-	92%	)	x	50%	)	]	x	0.083	x	(	1	-	96%	)	=	1		\$13
	C	477	x	[	(	68%	x	10%	x	4%	x	50%	)	+	(	(	1	-	68%	)	x	50%	)	]	x	0.083	x	(	1	-	96%	)	=	0		\$0
	D	141	x	[	(	81%	x	10%	x	4%	x	50%	)	+	(	(	1	-	81%	)	x	50%	)	]	x	0.083	x	(	1	-	96%	)	=	0		\$0
Drug Rehabilitation																																				
	Category A	283	x	[	(	78%	x	10%	x	4%	x	50%	)	+	(	(	1	-	78%	)	x	50%	)	]	x	0.083	x	(	1	-	82%	)	=	0		\$0
	C	0	x	[	(	100%	x	10%	x	4%	x	50%	)	+	(	(	1	-	100%	)	x	50%	)	]	x	0.083	x	(	1	-	82%	)	=	0		\$0
	D	0	x	[	(	30%	x	10%	x	4%	x	50%	)	+	(	(	1	-	30%	)	x	50%	)	]	x	0.083	x	(	1	-	82%	)	=	0		\$0
Government Clinics																																				
	Category A	15,013	x	[	(	73%	x	10%	x	4%	x	50%	)	+	(	(	1	-	73%	)	x	50%	)	]	x	0.083	x	(	1	-	22%	)	=	133		\$3,913
	C	0	x	[	(	55%	x	10%	x	4%	x	50%	)	+	(	(	1	-	55%	)	x	50%	)	]	x	0.083	x	(	1	-	22%	)	=	0		\$0
	D	0	x	[	(	87%	x	10%	x	4%	x	50%	)	+	(	(	1	-	87%	)	x	50%	)	]	x	0.083	x	(	1	-	22%	)	=	0		\$0
Blood/Plasma/Tissue Centers																																				
	Category A	6,453	x	[	(	65%	x	10%	x	4%	x	50%	)	+	(	(	1	-	65%	)	x	50%	)	]	x	0.083	x	(	1	-	100%	)	=	0		\$0
	C	139	x	[	(	44%	x	10%	x	4%	x	50%	)	+	(	(	1	-	44%	)	x	50%	)	]	x	0.083	x	(	1	-	100%	)	=	0		\$0
	D	497	x	[	(	71%	x	10%	x	4%	x	50%	)	+	(	(	1	-	71%	)	x	50%	)	]	x	0.083	x	(	1	-	100%	)	=	0		\$0
Residential Care																																				
	Category A	4,850	x	[	(	64%	x	10%	x	4%	x	50%	)	+	(	(	1	-	64%	)	x	50%	)	]	x	0.083	x	(	1	-	85%	)	=	11		\$141
	C	388	x	[	(	30%	x	10%	x	4%	x	50%	)	+	(	(	1	-	30%	)	x	50%	)	]	x	0.083	x	(	1	-	85%	)	=	2		\$16
	D	2,571	x	[	(	73%	x	10%	x	4%	x	50%	)	+	(	(	1	-	73%	)	x	50%	)	]	x	0.083	x	(	1	-	85%	)	=	4		\$52
Personnel Services																																				
	Category A	2,993	x	[	(	38%	x	10%	x	4%	x	50%	)	+	(	(	1	-	38%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	61%	)	=			\$10,882
	D	0	x	[	(	30%	x	10%	x	4%	x	50%	)	+	(	(	1	-	30%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	0%	)	=			\$0
Funeral Services																																				
	Category A	11,735	x	[	(	67%	x	10%	x	4%	x	50%	)	+	(	(	1	-	67%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	13%	)	=			\$50,947
	C	0	x	[	(	30%	x	10%	x	4%	x	50%	)	+	(	(	1	-	30%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	13%	)	=			\$0
	D	0	x	[	(	64%	x	10%	x	4%	x	50%	)	+	(	(	1	-	64%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	13%	)	=			\$0
Health Units in Industry																																				
	Category A	186,835	x	[	(	60%	x	10%	x	4%	x	50%	)	+	(	(	1	-	60%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	14%	)	=			\$969,853
	B	0	x	[	(	42%	x	10%	x	4%	x	50%	)	+	(	(	1	-	42%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	14%	)	=			\$0
	C	0	x	[	(	30%	x	10%	x	4%	x	50%	)	+	(	(	1	-	30%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	14%	)	=			\$0
Research Labs																																				
	Category A	494	x	[	(	81%	x	10%	x	4%	x	50%	)	+	(	(	1	-	81%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	30%	)	=			\$1,002
	C	0	x	[	(	42%	x	10%	x	4%	x	50%	)	+	(	(	1	-	45%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	30%	)	=			\$0
	D	0	x	[	(	81%	x	10%	x	4%	x	50%	)	+	(	(	1	-	81%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	30%	)	=			\$0
Linen Service																																				
	Category D	3,000	x	[	(	30%	x	10%	x	4%	x	50%	)	+	(	(	1	-	30%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	90%	)	=			\$3,155
Medical Equipment Repair																																				
	Category A	0	x	[	(	41%	x	10%	x	4%	x	50%	)	+	(	(	1	-	41%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	0%	)	=			\$0
	B	0	x	[	(	37%	x	10%	x	4%	x	50%	)	+	(	(	1	-	37%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	0%	)	=			\$0
	C	161	x	[	(	36%	x	10%	x	4%	x	50%	)	+	(	(	1	-	36%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	0%	)	=			\$1,549
	D	2,464	x	[	(	30%	x	10%	x	4%	x	50%	)	+	(	(	1	-	30%	)	x	50%	)	]	x	\$ 30.00	x	(	1	-	0%	)	=			\$25,916
Law Enforcement																																				
	Category A	18,933	x	[	(	42%	x	10%	x	4%	x	50%	)	+	(	(	1	-	42%	)	x	50%	)	]	x	0.083	x	(	1	-	91%	)	=	41		\$610
	B	2,770	x	[	(	92%	x	10%	x	4%	x	50%	)	+	(	(	1	-	92%	)	x	50%	)	]	x	0.083	x	(	1	-	91%	)	=	1		\$15

	C	1,444	x [(31% x 10% x 4% x 50%) + ((1 - 31%) x 50%)] x 0.083 x (1 - 91%) =	4	\$35	
Fire and Rescue	D	4,204	x [(46% x 10% x 4% x 50%) + ((1 - 46%) x 50%)] x 0.083 x (1 - 91%) =	9	\$127	
	Category A	10,411	x [(89% x 10% x 4% x 50%) + ((1 - 89%) x 50%)] x \$ 30.00 x (1 - 82%) =		\$3,192	
	B	857	x [(86% x 10% x 4% x 50%) + ((1 - 86%) x 50%)] x \$ 30.00 x (1 - 82%) =		\$332	
Correctional Facilities	D	2,158	x [(92% x 10% x 4% x 50%) + ((1 - 92%) x 50%)] x \$ 30.00 x (1 - 82%) =		\$488	
	Category A	3,034	x [(54% x 10% x 4% x 50%) + ((1 - 54%) x 50%)] x 0.083 x (1 - 38%) =	36	\$547	
	B	1,887	x [(32% x 10% x 4% x 50%) + ((1 - 32%) x 50%)] x 0.083 x (1 - 38%) =	33	\$397	
	C	459	x [(30% x 10% x 4% x 50%) + ((1 - 30%) x 50%)] x 0.083 x (1 - 38%) =	8	\$79	
Lifesaving	D	3,793	x [(31% x 10% x 4% x 50%) + ((1 - 30%) x 50%)] x 0.083 x (1 - 38%) =	68	\$985	
Schools	Category A	457	x [(76% x 10% x 4% x 50%) + ((1 - 76%) x 50%)] x \$ 30.00 x (1 - 50%) =		\$833	\$14,586
	Category A	6,321	x [(30% x 10% x 4% x 50%) + ((1 - 30%) x 50%)] x \$ 30.00 x (1 - 0%) =		\$66,484	
	D	6,321	x [(30% x 10% x 4% x 50%) + ((1 - 30%) x 50%)] x \$ 30.00 x (1 - 0%) =		\$66,484	
Waste Removal	Category A	50	x [(30% x 10% x 4% x 50%) + ((1 - 30%) x 50%)] x \$ 30.00 x (1 - 50%) =		\$263	\$4,604
	TOTAL			5,267	\$1,201,382	\$123,837

Table 5

HBV Antibody Testing for Vaccinated Workers (Employee Time)

Hours = Number of exposures x % vaccinated x employee time x 10% x (1 - compliance rate)

Assumptions:

percent vaccinated = prior vaccination rate + employee participation reate x (1 - prior vaccination rate).

This assumes that no previously non-vaccinated worker has offered and declined the free vaccination.

Employee time is equivalent to 1/3 time required for HBV vaccination.

10% of vaccinated employees will receive tests.

									Burden Hours	Wage Rates	Number 12	Responses	
Office of the Physicians													
Category A	179,493	x	73%	x	0.128	x	0.1	x	(1 - 27%) =	1,224	\$30.01	\$36,742.54	9565.18197
C	0	x	55%	x	0.128	x	0.1	x	(1 - 27%) =	0	\$9.65	\$0.00	0
D	0	x	87%	x	0.128	x	0.1	x	(1 - 27%) =	0	\$17.46	\$0.00	0
Office of Dentists													
Category A	279,485	x	92%	x	0.128	x	0.1	x	(1 - 19%) =	2,666	\$23.12	\$61,635.25	20827.2222
C	43,075	x	44%	x	0.128	x	0.1	x	(1 - 19%) =	197	\$9.65	\$1,896.27	1535.193
Nursing Homes													
Category A	35,746	x	38%	x	0.128	x	0.1	x	(1 - 31%) =	120	\$12.28	\$1,473.22	937.26012
C	5,002	x	31%	x	0.128	x	0.1	x	(1 - 31%) =	14	\$9.65	\$132.16	106.99278
D	4,636	x	30%	x	0.128	x	0.1	x	(1 - 31%) =	12	\$9.65	\$118.54	95.9652
Hospitals													
Category A	254,449	x	77%	x	0.128	x	0.1	x	(1 - 76%) =	602	\$17.08	\$10,280.18	4702.21752
B	34,579	x	77%	x	0.128	x	0.1	x	(1 - 76%) =	82	\$17.51	\$1,432.22	639.01992
C	30,799	x	62%	x	0.128	x	0.1	x	(1 - 76%) =	59	\$9.68	\$567.84	458.28912
Medical and Dental Labs													
Category A	5,177	x	79%	x	0.128	x	0.1	x	(1 - 86%) =	7	\$21.66	\$158.75	57.25762
C	0	x	38%	x	0.128	x	0.1	x	(1 - 86%) =	0	\$9.65	\$0.00	0
D	487	x	30%	x	0.128	x	0.1	x	(1 - 86%) =	0	\$9.65	\$2.53	2.0454
Home Health													
Category A	6,244	x	52%	x	0.128	x	0.1	x	(1 - 67%) =	14	\$11.81	\$161.97	107.14704
C	0	x	30%	x	0.128	x	0.1	x	(1 - 67%) =	0	\$9.65	\$0.00	0
D	2,575	x	84%	x	0.128	x	0.1	x	(1 - 67%) =	9	\$11.81	\$107.90	71.379
Hospices													
Category A	684	x	58%	x	0.128	x	0.1	x	(1 - 60%) =	2	\$11.81	\$23.99	15.8688
C	0	x	82%	x	0.128	x	0.1	x	(1 - 60%) =	0	\$9.65	\$0.00	0
D	215	x	30%	x	0.128	x	0.1	x	(1 - 60%) =	0	\$11.81	\$3.90	2.58
Hemodialysis													
Category A	4,684	x	92%	x	0.128	x	0.1	x	(1 - 93%) =	4	\$20.56	\$79.38	30.16496
C	477	x	68%	x	0.128	x	0.1	x	(1 - 93%) =	0	\$9.65	\$2.80	2.27052
D	141	x	81%	x	0.128	x	0.1	x	(1 - 93%) =	0	\$17.46	\$1.79	0.79947
Drug Rehabilitation													
Category A	283	x	78%	x	0.128	x	0.1	x	(1 - 77%) =	1	\$20.56	\$13.36	5.07702
C	0	x	100%	x	0.128	x	0.1	x	(1 - 77%) =	0	\$9.65	\$0.00	0
D	0	x	30%	x	0.128	x	0.1	x	(1 - 77%) =	0	\$17.46	\$0.00	0
Government Clinics													
Category A	16,013	x	73%	x	0.128	x	0.1	x	(1 - 27%) =	109	\$29.50	\$3,222.18	853.33277
C	0	x	55%	x	0.128	x	0.1	x	(1 - 27%) =	0	\$9.49	\$0.00	0
D	0	x	87%	x	0.128	x	0.1	x	(1 - 27%) =	0	\$17.16	\$0.00	0
Blood/Plasma/Tissue Centers													
Category A	6,453	x	65%	x	0.128	x	0.1	x	(1 - 66%) =	18	\$17.46	\$318.72	142.6113

Table 5

C	139	x	44%	x	0.128	x	0.1	x	(1 - 66%) =	0	\$9.65	\$2.57	2.07944
D	197	x	71%	x	0.128	x	0.1	x	(1 - 66%) =	1	\$11.81	\$7.19	4.75558
Residential Care													
Category A	4,850	x	64%	x	0.128	x	0.1	x	(1 - 39%) =	24	\$12.92	\$313.13	189.344
C	388	x	30%	x	0.128	x	0.1	x	(1 - 39%) =	1	\$9.65	\$8.77	7.1004
D	2,571	x	73%	x	0.128	x	0.1	x	(1 - 39%) =	15	\$11.81	\$173.07	114.48663
Personnel Services													
Category A	2,993	x	38%	x	0.5	x	0.1	x	(1 - 83%) =	10	\$14.86	\$143.66	19.33478
D	0	x	30%	x	0.5	x	0.1	x	(1 - 0%) =	0	\$9.65	\$0.00	0
Funeral Services													
Category A	11,735	x	67%	x	0.5	x	0.1	x	(1 - 31%) =	271	\$17.43	\$4,727.97	0
C	0	x	30%	x	0.5	x	0.1	x	(1 - 31%) =	0	\$9.64	\$0.00	0
D	0	x	64%	x	0.5	x	0.1	x	(1 - 31%) =	0	\$9.64	\$0.00	0
Health Units in Industry													
Category A	186,835	x	60%	x	0.5	x	0.1	x	(1 - 2%) =	5,493	\$15.09	\$82,888.60	0
B	0	x	42%	x	0.5	x	0.1	x	(1 - 2%) =	0	\$17.10	\$0.00	0
D	0	x	30%	x	0.5	x	0.1	x	(1 - 2%) =	0	\$9.45	\$0.00	0
Research Labs													
Category A	494	x	81%	x	0.5	x	0.1	x	(1 - 70%) =	6	\$17.16	\$103.00	0
C	0	x	45%	x	0.5	x	0.1	x	(1 - 70%) =	0	\$9.49	\$0.00	0
D	0	x	81%	x	0.5	x	0.1	x	(1 - 70%) =	0	\$17.16	\$0.00	0
Linen Service													
D	3,000	x	30%	x	0.5	x	0.1	x	(1 - 90%) =	5	\$9.75	\$43.88	9
Medical Equipment Repair													
Category A	0	x	41%	x	0.5	x	0.1	x	(1 - 26%) =	0	\$11.56	\$0.00	0
B	0	x	37%	x	0.5	x	0.1	x	(1 - 26%) =	0	\$11.56	\$0.00	0
C	161	x	36%	x	0.5	x	0.1	x	(1 - 26%) =	2	\$17.10	\$36.67	4.28904
D	2,464	x	30%	x	0.5	x	0.1	x	(1 - 26%) =	27	\$17.10	\$467.69	54.7008
Law Enforcement													
Category A	18,993	x	42%	x	0.128	x	0.1	x	(1 - 96%) =	4	\$14.93	\$60.98	0
B	2,770	x	92%	x	0.128	x	0.1	x	(1 - 96%) =	1	\$17.16	\$22.39	10.1936
C	1,444	x	31%	x	0.128	x	0.1	x	(1 - 96%) =	0	\$9.49	\$2.18	1.79056
D	4,204	x	46%	x	0.128	x	0.1	x	(1 - 96%) =	1	\$14.93	\$14.78	7.73536
Fire and Rescue													
Category A	10,411	x	89%	x	0.5	x	0.1	x	(1 - 71%) =	134	\$17.16	\$2,305.51	268.70791
B	857	x	86%	x	0.5	x	0.1	x	(1 - 71%) =	11	\$15.45	\$165.11	21.37358
D	2,158	x	92%	x	0.5	x	0.1	x	(1 - 71%) =	29	\$11.61	\$334.23	57.57544
Correctional Facilities													
Category A	3,034	x	54%	x	0.128	x	0.1	x	(1 - 39%) =	13	\$15.15	\$193.80	0
B	1,887	x	32%	x	0.128	x	0.1	x	(1 - 39%) =	5	\$11.99	\$56.53	36.83424
C	459	x	30%	x	0.128	x	0.1	x	(1 - 39%) =	1	\$9.49	\$10.20	8.3997
D	3,793	x	31%	x	0.128	x	0.1	x	(1 - 39%) =	9	\$14.39	\$132.11	71.72563
Lifesaving													
Category A	457	x	76%	x	0.5	x	0.1	x	(1 - 50%) =	9	\$17.16	\$149.00	17.366
Schools													
Category A	6,321	x	30%	x	0.5	x	0.1	x	(1 - 0%) =	95	\$14.09	\$1,335.94	189.63
D	6,321	x	30%	x	0.5	x	0.1	x	(1 - 0%) =	95	\$11.61	\$1,100.80	189.63
Waste Removal													
Category A	50	x	30%	x	0.5	x	0.1	x	(1 - 50%) =	0	<u>\$11.61</u>	\$4.35	0.75
										11,402		\$213,179.60	41,445

Table 6

HBV Antibody Testing for Vaccinated Workers (Health Care Professional Time):

Hours = 3,390
 # 12 = \$117,647

Hours = # exposures x % vaccinated x health care professional time x 10% x (1- compliance rate)

Cost = # exposures x % vaccinated x cost of HBV antibody test x 10% x (1-compliance rate)

Assumptions:

- * percent of vaccinated = prior vaccination rate + employee participation rate x (1 - prior vaccination rate). This assumes that no previously non-vaccinated worker was offered and declined free vaccination.
- * Health care professional time is equivalent to 1/3 time required to administer the HBV vaccine.
- * Cost of HBV antibody test = \$30
- * Employee participation rate is estimated to be 10%

								Hours	Item 12 Cost	#13 Cost	
Office of Physicians											
Category A	179,493	x	73%	x	0.083	x	0.1	x	(1 - 27%) = 73%	794	\$27,787
C	0	x	55%	x	0.083	x	0.1	x	(1 - 27%) = 73%	-	\$0
D	0	x	87%	x	0.083	x	0.1	x	(1 - 27%) = 73%	-	\$0
Office Of Dentists											
A	279,485	x	92%	x	0.083	x	0.1	x	(1 - 19%) = 81%	1,729	\$60,503
C	43,075	x	44%	x	0.083	x	0.1	x	(1 - 19%) = 81%	127	\$4,460
Nursing Homes											
Category A	35,746	x	38%	x	0.083	x	0.1	x	(1 - 31%) = 69%	78	\$2,723
C	5,002	x	31%	x	0.083	x	0.1	x	(1 - 31%) = 69%	9	\$311
D	4,636	x	30%	x	0.083	x	0.1	x	(1 - 31%) = 69%	8	\$279
Hospitals											
Category A	254,449	x	77%	x	0.083	x	0.1	x	(1 - 76%) = 24%	390	\$13,660
B	34,579	x	77%	x	0.083	x	0.1	x	(1 - 76%) = 24%	53	\$1,856
C	30,799	x	62%	x	0.083	x	0.1	x	(1 - 76%) = 24%	38	\$1,331
Medical and Dental Labs											
Category A	5,177	x	79%	x	0.083	x	0.1	x	(1 - 86%) = 14%	5	\$166
B	0	x	38%	x	0.083	x	0.1	x	(1 - 86%) = 14%	-	
C	487	x	30%	x	0.083	x	0.1	x	(1 - 86%) = 14%	0	\$6
Home Health											
Category A	6,244	x	52%	x	0.083	x	0.1	x	(1 - 67%) = 33%	9	\$311
C	0	x	30%	x	0.083	x	0.1	x	(1 - 67%) = 33%	-	
D	2,575	x	84%	x	0.083	x	0.1	x	(1 - 67%) = 33%	6	\$207
Hospices											
Category A	684	x	58%	x	0.083	x	0.1	x	(1 - 60%) = 40%	1	\$46
C	0	x	82%	x	0.083	x	0.1	x	(1 - 60%) = 40%	-	
D	215	x	30%	x	0.083	x	0.1	x	(1 - 60%) = 40%	0	\$7
Hemodialysis											
Category A	4,684	x	92%	x	0.083	x	0.1	x	(1 - 93%) = 7%	3	\$88
C	477	x	58%	x	0.083	x	0.1	x	(1 - 93%) = 7%	0	\$6
D	141	x	81%	x	0.083	x	0.1	x	(1 - 93%) = 7%	0	\$2
Drug Rehabilitation											
Category A	283	x	78%	x	0.083	x	0.1	x	(1 - 77%) = 23%	0	\$15
C	0	x	100%	x	0.083	x	0.1	x	(1 - 77%) = 23%	-	
D	0	x	30%	x	0.083	x	0.1	x	(1 - 77%) = 23%	-	

Table 6

Government Clinics											
Category A	16,013	x	73%	x	0.083	x	0.1	x	(1 - 27%) = 73%	71	\$2,479
C	0	x	55%	x	0.083	x	0.1	x	(1 - 27%) = 73%	-	
D	0	x	87%	x	0.083	x	0.1	x	(1 - 27%) = 73%	-	
Blood/Plasma/Tissue Centers											
Category A	5,453	x	65%	x	0.083	x	0.1	x	(1 - 66%) = 44%	13	\$453
C	139	x	44%	x	0.083	x	0.1	x	(1 - 66%) = 54%	0	\$10
D	197	x	51%	x	0.083	x	0.1	x	(1 - 66%) = 54%	0	\$16
Residential Care											
Category A	4,850	x	64%	x	0.083	x	0.1	x	(1 - 39%) = 61%	16	\$550
C	388	x	30%	x	0.083	x	0.1	x	(1 - 39%) = 61%	1	\$21
D	2,571	x	73%	x	0.083	x	0.1	x	(1 - 39%) = 61%	10	\$333
Personnel Services											
Category A	2,993	x	38%	x	\$30.00	x	0.1	x	(1 - 83%) = 17%		\$580
D	0	x	30%	x	\$30.00	x	0.1	x	(1 - 0%) = 100%		\$0
Funeral Services											
Category A	11,735	x	67%	x	\$30.00	x	0.1	x	(1 - 31%) = 69%		\$16,275
C	0	x	30%	x	\$30.00	x	0.1	x	(1 - 31%) = 69%		\$0
D	0	x	64%	x	\$30.00	x	0.1	x	(1 - 31%) = 69%		\$0
Health Units in Industry											
Category A	186,835	x	60%	x	\$30.00	x	0.1	x	(1 - 2%) = 98%		\$329,577
B	0	x	42%	x	\$30.00	x	0.1	x	(1 - 2%) = 98%		\$0
C	0	x	30%	x	\$30.00	x	0.1	x	(1 - 2%) = 98%		\$0
Research Labs											
Category A	494	x	81%	x	\$30.00	x	0.1	x	(1 - 70%) = 30%		\$360
C	0	x	45%	x	\$30.00	x	0.1	x	(1 - 70%) = 30%		\$0
D	0	x	81%	x	\$30.00	x	0.1	x	(1 - 70%) = 30%		\$0
Linen Services											
Category D	3	x	30%	x	\$30.00	x	0.1	x	(1 - 90%) = 10%		\$0
Medical Equipment Repair											
Category A	0	x	41%	x	\$30.00	x	0.1	x	(1 - 26%) = 74%		\$0
B	0	x	37%	x	\$30.00	x	0.1	x	(1 - 26%) = 74%		\$0
C	161	x	36%	x	\$30.00	x	0.1	x	(1 - 26%) = 74%		\$129
D	2,464	x	30%	x	\$30.00	x	0.1	x	(1 - 26%) = 74%		\$1,641
Law Enforcement											
Category A	18,993	x	42%	x	0.083	x	0.1	x	(1 - 96%) = 4%		\$3
B	2,770	x	92%	x	0.083	x	0.1	x	(1 - 96%) = 4%		\$1
C	1,444	x	31%	x	0.083	x	0.1	x	(1 - 96%) = 4%		\$0
D	4,204	x	46%	x	0.083	x	0.1	x	(1 - 96%) = 4%		\$1
Fire and Rescure											
Category A	10,411	x	89%	x	\$30.00	x	0.1	x	(1 - 71%) = 29%		\$8,061
B	857	x	86%	x	\$30.00	x	0.1	x	(1 - 71%) = 29%		\$641
D	2,158	x	92%	x	\$30.00	x	0.1	x	(1 - 71%) = 29%		\$1,727
Correctional Facilities											
Category A	3,034	x	54%	x	0.083	x	0.1	x	(1 - 30%) = 61%	14	\$8
B	1,887	x	32%	x	0.083	x	0.1	x	(1 - 30%) = 61%	5	\$3
C	459	x	30%	x	0.083	x	0.1	x	(1 - 30%) = 61%	1	\$1
D	3,793	x	31%	x	0.083	x	0.1	x	(1 - 30%) = 61%	10	\$6

Table 6

Lifesaving										
Category A	457	x	76%	x	\$30.00	x	0.1	x	(1 - 50%) = 50%	\$521
Schools										
Category A	6,321	x	30%	x	\$30.00	x	0.1	x	(1 - 0%) = 100%	\$5,689
D	6,321	x	30%	x	\$30.00	x	0.1	x	(1 - 0%) = 100%	\$5,689
Waste Removal										
Category D	50	x	30%	x	\$30.00	x	0.1	x	(1 - 50%) = 50%	\$23
Total										3,390 \$117,647 \$370,913

HBV Antibody Testing for Non-Vaccinated Workers (Employee Time)

Table 7

Hours = 1,618

#12 = \$30,326

HOURS = # exposures x (1-% vaccinated) x employee time x (source participation rate x sources refusing test x % exposures attributable to high risk group) x (1-compliance rate)

ASSUMPTIONS:

- * Percent vaccinated * prior vaccination rate + employee participation rate x (1 - prior vaccination rate). This assumes that no previously non-vaccinated worker was offered and declined free vaccination.
- * Employee time is equivalent to 1/3 of the time required to receive the HBV vaccination.
- * 50% of sources will agree to be tested: 50% of sources will refuse to be tested.
- * For exposures where the source agree to be tested, the estimated percent of exposures in which the non-vaccinated employee would agree to be tested is equivalent to the RSS, since employees would most likely only be tested if the source was found to be positive.
- * 5% of exposures are attributable to a matter of a high risk group.
- * For classes where the sources refuse to be tested, non-vaccinated workers will agree to be tested for the 5% of the exposures that are attributable to a member of a high risk group.

						<u>HOURS</u>	<u>#12</u>
Office of the Physicians							
Category A	179,493	* (1 - 73%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 27%)	= 123	\$ 3,683
C	-	* (1 - 55%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 27%)	= 0	\$ -
D	-	* (1 - 87%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 27%)	= 0	\$ -
Office of Dentists							
Category A	279,485	* (1 - 92%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 19%)	= 63	\$ 1,452
C	43,075	* (1 - 44%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 19%)	= 67.8	\$ 654
Nursing Homes							
Category A	35,746	* (1 - 38%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 31%)	= 53.00	\$ 651
C	5,002	* (1 - 31%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 31%)	= 8.26	\$ 80
D	4,636	* (1 - 30%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 31%)	= 7.77	\$ 75
Hospitals							
Category A	254,449	* (1 - 77%)	* 0.128	* (50% * 1.25% + 50% x 5%)	x (1 - 76%)	= 56.18	\$ 960
B	34,579	* (1 - 77%)	* 0.128	* (50% * 1.25% + 50% x 5%)	x (1 - 76%)	= 7.64	\$ 134
C	30,799	* (1 - 62%)	* 0.128	* (50% * 1.25% + 50% x 5%)	x (1 - 76%)	= 11.24	\$ 109
Medical and Dental Labs							
Category A	5,177	* (1 - 79%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 86%)	= 0.53	\$ 11
C	-	* (1 - 38%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 86%)	= 0.00	\$ -
D	487	* (1 - 30%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 86%)	= 0.17	\$ 2
Home Health Care							
Category A	6,244	* (1 - 52%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 67%)	= 3.43	\$ 41
C	-	* (1 - 30%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 67%)	= 0.00	\$ -
D	2,575	* (1 - 84%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 67%)	= 0.47	\$ 6
Hospices							
Category A	684	* (1 - 58%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 60%)	= 0.40	\$ 5
C	-	* (1 - 82%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 60%)	= 0.00	\$ -
D	215	* (1 - 30%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 60%)	= 0.21	\$ 2
Hemodialysis							
Category A	4,684	* (1 - 92%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 93%)	= 0.1	\$ 2
C	477	* (1 - 68%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 93%)	= 0.0	\$ 0
D	141	* (1 - 81%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 93%)	= 0.0	\$ 0
Drug Rehabilitation							
Category A	283	* (1 - 78%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 77%)	= 0.0	\$ 1
C	-	* (1 - 100%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 77%)	= 0.0	\$ -
D	-	* (1 - 30%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 77%)	= 0.0	\$ -
Government Clinics							
Category A	16,013	* (1 - 73%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 27%)	= 10.95	\$ 323
C	0.00	* (1 - 55%)	* 0.128	* (50% * 0.42% + 50% x 5%)	x (1 - 27%)	= 0.0	\$ -

HBV Antibody Testing for Non-Vaccinated Workers (Employee Time)

Table 7

Hours = 1,618

#12 = \$30,326

D	0.00 * (1 - 87%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 27%) =	0.0	\$	-
Blood/Plasma/Tissue Centers				
Category A	6,453 * (1 - 65%) * 0.128 * (50% * 10.00% + 50% x 5%) x (1 - 66%) =	7.37	\$	129
C	139 * (1 - 44%) * 0.128 * (50% * 10.00% + 50% x 5%) x (1 - 66%) =	0.25	\$	2
D	197 * (1 - 71%) * 0.128 * (50% * 10.00% + 50% x 5%) x (1 - 66%) =	0.19	\$	2
Residential Care				
Category A	4,850 * (1 - 64%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 39%) =	3.7	\$	48
C	388 * (1 - 30%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 39%) =	0.6	\$	6
D	2,571 * (1 - 73%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 39%) =	1.5	\$	17
Personnel Services				
Category A	2,993 * (1 - 38%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 83%) =	4.27	\$	64
D	0.00 * (1 - 30%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 0%) =	0.00		0.00
Funeral Services				
Category A	11,735 * (1 - 67%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 31%) =	36.21	\$	631
C	0.00 * (1 - 30%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 31%) =	0.00		0.00
D	0.00 * (1 - 64%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 31%) =	0.00		0.00
Health Units in Industry				
Category A	186,835 * (1 - 60%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 2%) =	992.39	\$	14,975
B	0.00 * (1 - 42%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 2%) =	0.00		0.00
D	0.00 * (1 - 30%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 2%) =	0.00		0.00
Research Labs				
Category A	494 * (1 - 81%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 70%) =	0.4	\$	7
C	0.00 * (1 - 45%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 70%) =	0	\$	-
D	0.00 * (1 - 81%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 70%) =	0	\$	-
Linen Service				
D	3,000 * (1 - 30%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 90%) =	2.8	\$	28
Medical Equipment Repair				
Category A	0.00 * (1 - 41%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 26%) =	0	\$	-
B	0.00 * (1 - 37%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 26%) =	0	\$	-
C	161 * (1 - 36%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 26%) =	1.0	\$	18
D	2,464 * (1 - 30%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 26%) =	17.3	\$	296
Law Enforcement				
Category A	18,993 * (1 - 42%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 96%) =	1.5	\$	23
B	2,770 * (1 - 92%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 96%) =	0.0	\$	1
C	1,444 * (1 - 31%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 96%) =	0.1	\$	1
D	4,204 * (1 - 46%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 96%) =	0.3	\$	5
Fire and Rescue				
Category A	10,411 * (1 - 89%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 71%) =	4.5	\$	77
B	857 * (1 - 86%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 71%) =	0.5	\$	7
D	2,158 * (1 - 92%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 71%) =	0.7	\$	8
Correctional Facilities				
Category A	3,034 * (1 - 54%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 39%) =	2.95	\$	45
B	1,887 * (1 - 32%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 39%) =	2.7	\$	33
C	459 * (1 - 30%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 39%) =	0.7	\$	6
D	3,793 * (1 - 31%) * 0.128 * (50% * 0.42% + 50% x 5%) x (1 - 39%) =	5.5	\$	83
Lifesaving				
Category A	457 * (1 - 78%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 50%) =	0.7	\$	12
Schools				
Category A	6,321 * (1 - 30%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 0%) =	60	\$	845
D	6,321 * (1 - 30%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 0%) =	60	\$	696
Waste Removal				
Category A	50 * (1 - 30%) * 0.500 * (50% * 0.42% + 50% x 5%) x (1 - 50%) =	0.2	\$	3

HBV Antibody Testing for Non-Vaccinated Workers (Employee Time)

Hours = 1,618
#12 = \$30,326

Table 7

1,622 \$ 26,254

Table 8

HBV Antibody Testing for Non-Vaccinated Workers (Health Care Professional Time

Hours = # exposures x (1 - % vaccinated) x health care professional time x (source acceptance rate x RRS + % sources refusing test x % exposures attributable to high risk group) x (1 - compliance rate)

Cost = # exposures x (1 - % vaccinated) x cost of HBV antibody test x (source acceptance rate x RRS + % sources refusing test x % exposures attributable to high risk group) x (1 - compliance rate)

Assumptions

- * percent vaccinated = prior vaccination rate + employee participation rate x (1 - prior vaccination rate. This assumes that no previously non-vaccinated worker was offered and declined free vaccination
- * Health care professional time is equivalent to 1/3 of the time required to administer the HBV vaccination
- * 50% of sources will agree to be tested, 50% of sources will refuse to be tested
- * For exposures where the source agrees to be tested, the estimated percent of exposures in which the non-vaccinated employee would agree to be tested, is equivalent to the RSS, since employees would most likely only be tested if the source was found to be positive.
- * 5% of exposures are attributable to a member of a high risk group.
- * Cost of HBV antibody test = \$30.
- * For cases where the source refuses to be tested, non-vaccinated workers will agree to be tested for the 5% of the exposures that are attributable to a member of a high risk group.

											Hours	Cost 12	Cost Item 13					
Office of Physicians																		
Category A	179,493	x (1 - 73%)	27%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 27%)	73%	=	80	\$2,785
C	0	x (1 - 55%)	45%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 27%)	73%	=	0	
D	0	x (1 - 87%)	13%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 27%)	73%	=	0	
Office of Dentists																		
A	279,485	x (1 - 92%)	8%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 19%)	81%	=	41	\$1,426
C	43,075	x (1 - 44%)	56%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 19%)	81%	=	44	\$1,538
Nursing Homes																		
Category A	35,746	x (1 - 38%)	62%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 31%)	69%	=	34	\$1,204
C	5,002	x (1 - 31%)	69%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 31%)	69%	=	5	\$187
D	4,636	x (1 - 30%)	70%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 31%)	69%	=	5	\$176
Hospitals																		
Category A	254,449	x (1 - 77%)	23%	x	0.083	x (	50%	x	1.25%	+	50%	x	5%)	x (1 - 76%)	24%	=	36	\$1,275
B	34,579	x (1 - 77%)	23%	x	0.083	x (	50%	x	1.25%	+	50%	x	5%)	x (1 - 76%)	24%	=	5	\$173
C	30,799	x (1 - 62%)	38%	x	0.083	x (	50%	x	1.25%	+	50%	x	5%)	x (1 - 76%)	24%	=	7	\$255
Medical and Dental Labs																		
Category A	5,177	x (1 - 79%)	21%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 86%)	14%	=	0	
B	0	x (1 - 38%)	62%	x	0.083	x (	50%	x	0.42%	+	50%	x	6%)	x (1 - 86%)	14%	=	0	
C	487	x (1 - 30%)	70%	x	0.083	x (	50%	x	0.42%	+	50%	x	6%)	x (1 - 86%)	14%	=	0	
Home Health																		
Category A	6,244	x (1 - 52%)	48%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 67%)	33%	=	2	\$78
C	0	x (1 - 30%)	70%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 67%)	33%	=	0	
D	2,575	x (1 - 84%)	16%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 67%)	33%	=	0	
Hospices																		
Category A	684	x (1 - 58%)	42%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 60%)	40%	=	0	
C	0	x (1 - 82%)	18%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 60%)	40%	=	0	
D	215	x (1 - 30%)	70%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 60%)	40%	=	0	
Hemodialysis																		
Category A	4,684	x (1 - 92%)	8%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 93%)	7%	=	0	
C	477	x (1 - 58%)	42%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 93%)	7%	=	0	
D	141	x (1 - 81%)	19%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 93%)	7%	=	0	
Drug Rehabilitation																		
Category A	283	x (1 - 78%)	22%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 77%)	23%	=	0	
C	0	x (1 - 100%)	100%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 77%)	23%	=	0	
D	0	x (1 - 30%)	70%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 77%)	23%	=	0	
Government Clinics																		
Category A	16,013	x (1 - 73%)	27%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 27%)	73%	=	7	\$229
C	0	x (1 - 55%)	45%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 27%)	73%	=	0	
D	0	x (1 - 87%)	13%	x	0.083	x (	50%	x	0.42%	+	50%	x	5%)	x (1 - 27%)	73%	=	0	
Blood/Plasma/Tissue Centers																		

Table 8

Category A	6,453	x (1 - 65%)	35%	x	0.083	x (50% x 0.10% + 50% x 5%)	x (1 - 66%)	34%	=	2	\$56	
Category C	139	x (1 - 44%)	56%	x	0.083	x (50% x 0.10% + 50% x 5%)	x (1 - 66%)	34%	=	0		
Category D	197	x (1 - 51%)	49%	x	0.083	x (50% x 0.10% + 50% x 5%)	x (1 - 66%)	34%	=	0		
Residential Care												
Category A	4,850	x (1 - 64%)	36%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 39%)	61%	=	2	\$77	
Category C	388	x (1 - 30%)	70%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 39%)	61%	=	0		
Category D	2,571	x (1 - 73%)	27%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 39%)	61%	=	1	\$31	
Personnel Services												
Category A	2,993	x (1 - 38%)	62%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 83%)	17%	=		\$ 237	
Category D	0	x (1 - 30%)	70%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 0%)	100%	=		\$ -	
Funeral Services												
Category A	11,735	x (1 - 67%)	33%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 31%)	69%	=		\$ 2,004	
Category C	0	x (1 - 30%)	70%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 31%)	69%	=		\$ -	
Category D	0	x (1 - 64%)	36%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 31%)	69%	=		\$ -	
Health Units in Industry												
Category A	186,835	x (1 - 60%)	40%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 2%)	98%	=		\$ 54,929	
Category B	0	x (1 - 42%)	58%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 2%)	98%	=		\$ -	
Category C	0	x (1 - 30%)	70%	x	\$ 30.00	x (50% x 0.42% + 50% x 6%)	x (1 - 2%)	98%	=		\$ -	
Research Labs												
Category A	494	x (1 - 81%)	19%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 70%)	30%	=		\$ 21	
Category C	0	x (1 - 45%)	55%	x	\$ 30.00	x (50% x 0.42% + 50% x 6%)	x (1 - 70%)	30%	=		\$ -	
Category D	0	x (1 - 81%)	19%	x	\$ 30.00	x (50% x 0.42% + 50% x 6%)	x (1 - 70%)	30%	=		\$ -	
Linen Services												
Category C	3	x (1 - 30%)	70%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 90%)	10%	=		\$ 0	
Medical Equipment Repair												
Category A	0	x (1 - 41%)	59%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 26%)	74%	=		\$ -	
Category B	0	x (1 - 37%)	63%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 26%)	74%	=		\$ -	
Category C	161	x (1 - 36%)	64%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 26%)	74%	=		\$ 57	
Category D	2,464	x (1 - 30%)	70%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 26%)	74%	=		\$ 957	
Law Enforcement												
Category A	18,993	x (1 - 42%)	58%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 96%)	4%	=	1	\$32	
Category B	2,770	x (1 - 92%)	8%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 96%)	4%	=	0		
Category C	1,444	x (1 - 31%)	69%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 96%)	4%	=	0		
Category D	4,204	x (1 - 46%)	54%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 96%)	4%	=	0		
Fire and Rescue												
Category A	10,411	x (1 - 89%)	11%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 71%)	29%	=		\$ 249	
Category B	857	x (1 - 86%)	14%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 71%)	29%	=		\$ 26	
Category D	2,158	x (1 - 92%)	8%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 71%)	29%	=		\$ 38	
Correctional Facilities												
Category A	3,034	x (1 - 54%)	46%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 30%)	70%	=	2	\$71	
Category B	1,887	x (1 - 32%)	68%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 30%)	70%	=	2	\$65	
Category C	459	x (1 - 30%)	70%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 30%)	70%	=	0		
Category D	3,793	x (1 - 31%)	69%	x	0.083	x (50% x 0.42% + 50% x 5%)	x (1 - 30%)	70%	=	4	\$133	
Lifesaving												
Category A	457	x (1 - 76%)	24%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 50%)	50%	=		\$ 41	
Schools												
Category A	6,321	x (1 - 30%)	70%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 0%)	100%	=		\$ 3,319	
Category D	6,321	x (1 - 30%)	70%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 0%)	100%	=		\$ 3,319	
Waste Removal												
Category D	50	x (1 - 30%)	70%	x	\$ 30.00	x (50% x 0.42% + 50% x 5%)	x (1 - 50%)	50%	=		\$ 13	
TOTALS										282	\$9,792 \$	65,210

Table #9

Hepatitis B Immune Globulin (HBIG): Vaccinated Employees (Employee Time)

Hours = # exposures x % vaccinated x 10% x 4% % employee time x (source participation rate x (RSS)
 + (% of source refusing test * 5%) x (1-compliance rate)

Assumptions:

*HBIG will be considered whenever a source is tested and found to be positive
 and whenever a high risk source refuses to be tested.

*HBIG will be offered only to those vaccinated employees who are found to be non-responders.

*4% of employees will be non-responders and 10% of these workers will request tests.

*Employee time is equivalent to 1/3 time required to receive the HBV vaccination.

*Source will agree to be tested in 50% of exposure incidents.

										Hours	Costs	
Office of Physicians												
Category A	179,493	x	73%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-25%)	75% = 1.36355 \$ 40.93
C	0	x	55%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-25%)	75% = 0.00000 \$ -
D	0	x	87%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-25%)	75% = 0.00000 \$ -
Office of Dentists												
Category A	279,485	x	92%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-11%)	89% = 3.17523 \$ 95.32
C	43,075	x	44%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-11%)	89% = 0.23405 \$ 7.03
Nursing Homes												
Category A	35,746	x	38%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-35%)	65% = 0.12251 \$ 3.68
C	5,002	x	31%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-35%)	65% = 0.01398 \$ 0.42
D	4,636	x	30%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-35%)	65% = 0.01254 \$ 0.38
Hospitals												
Category A	254,449	x	77%	x	10%	x	4%	x	0.128	x	(50% x 1.25% + 50% x 5%) x (1-74%)	16% = 0.50157 \$ 15.06
B	34,579	x	77%	x	10%	x	4%	x	0.128	x	(50% x 1.25% + 50% x 5%) x (1-74%)	16% = 0.06816 \$ 2.05
C	30,799	x	62%	x	10%	x	4%	x	0.128	x	(50% x 1.25% + 50% x 5%) x (1-74%)	16% = 0.04888 \$ 1.47
Medical and Dental Labs												
Category A	5,177	x	79%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-38%)	62% = 0.03518 \$ 1.06
C	0	x	38%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-38%)	62% = 0.00000 \$ -
D	487	x	30%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-38%)	62% = 0.00126 \$ 0.04
Home Health												
Category A	6,244	x	52%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-61%)	39% = 0.01757 \$ 0.53
C	0	x	30%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-61%)	39% = 0.00000 \$ -
D	2,575	x	84%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-61%)	39% = 0.01170 \$ 0.35
Hospices												
Category A	684	x	58%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-39%)	61% = 0.00336 \$ 0.10
C	0	x	82%	x	10%	x	4%	x	0.128	x	(50% x 0.42% + 50% x 5%) x (1-39%)	61% = 0.00000 \$ -

Table #9

D	215	x	30%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-39%)	61%	=	0.00055	\$	0.02
Hemodialysis																										
Category A	4684	x	92%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-72%)	28%	=	0.01674	\$	0.50
C	477	x	68%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-72%)	28%	=	0.001	\$	0.04
D	141	x	81%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-72%)	28%	=	0.0004	\$	0.01
Drug Rehabilitation																										
Category A	283	x	78%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-30%)	70%	=	0.0021	\$	0.06
C	0	x	100%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-30%)	70%	=	0.0000	\$	-
D	0	x	30%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-30%)	70%	=	0.0000	\$	-
Government Clinics																										
Category A	15013	x	73%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-25%)	75%	=	0.1140	\$	3.42
C	0	x	55%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-25%)	75%	=	0.0000	\$	-
D	0	x	87%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-25%)	75%	=	0.0000	\$	-
Food/Plasma/Tissue Centers																										
Category A	6453	x	65%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-58%)	42%	=	0.0244	\$	0.73
C	139	x	44%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-58%)	42%	=	0.0004	\$	0.01
D	497	x	71%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-58%)	42%	=	0.0021	\$	0.06
Residential Care																										
Category A	4850	x	64%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-34%)	66%	=	0.0284	\$	0.85
C	388	x	30%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-34%)	66%	=	0.0011	\$	0.03
D	2571	x	73%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-34%)	66%	=	0.0172	\$	0.52
Personnel Services																										
Category A	2993	x	38%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-80%)	20%	=	0.0123	\$	0.37
D	0	x	30%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-0%)	100%	=	0.0000	\$	-
Funeral Services																										
Category A	11735	x	67%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-20%)	80%	=	0.3409	\$	10.23
C	0	x	30%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-20%)	80%	=	0.0000	\$	-
D	0	x	64%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-20%)	80%	=	0.0000	\$	-
Health Units in Industry																										
Category A	186,835	x	60%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-14%)	86%	=	5.2253	\$	156.86
B	0	x	42%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-14%)	86%	=	0.0000	\$	-
C	0	x	30%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-14%)	86%	=	0.0000	\$	-
Research Labs																										
Category A	494	x	81%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-20%)	80%	=	0.0174	\$	0.52

Table #9

C	0	x	42%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-20%)	80%	=	0.0000	\$	-																		
D	0	x	81%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-20%)	80%	=	0.0000	\$	-																		
Linen Service																																														
D	3000	x	30%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-90%)	10%	=	0.0049	\$	0.15																		
Medical Equipment Repair																																														
Category A	0	x	41%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-26%)	74%	=	0.0000	\$	-																		
B	0	x	37%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-26%)	74%	=	0.0000	\$	-																		
C	161	x	36%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-26%)	74%	=	0.0023	\$	0.07																		
D	2464	x	30%	x	10%	x	4%	x	0.500	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-26%)	74%	=	0.0296	\$	0.89																		
Law Enforcement																																														
Category A	18933	x	42%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-96%)	4%	=	0.0044	\$	0.13																		
B	2770	x	92%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-96%)	4%	=	0.0014	\$	0.04																		
C	1444	x	31%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-96%)	4%	=	0.0002	\$	0.01																		
D	4204	x	46%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-96%)	4%	=	0.0011	\$	0.03																		
Fire and Rescue																																														
Category A	10411	x	89%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-71%)	29%	=	0.0373	\$	1.12																		
B	857	x	86%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-71%)	29%	=	0.0030	\$	0.09																		
D	2158	x	92%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-71%)	29%	=	0.0080	\$	0.24																		
Correctional Facilities																																														
Category A	3034	x	54%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-39%)	61%	=	0.0139	\$	0.42																		
B	1887	x	32%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-39%)	61%	=	0.0051	\$	0.15																		
C	459	x	30%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-39%)	61%	=	0.0012	\$	0.03																		
D	3793	x	31%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-39%)	61%	=	0.0100	\$	0.30																		
Lifesaving																																														
Category A	457	x	76%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-50%)	50%	=	0.0024	\$	0.07																		
Schools																																														
Category A	6321	x	30%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-0%)	100%	=	0.0263	\$	0.79																		
D	6321	x	30%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-0%)	100%	=	0.0263	\$	0.79																		
Waste Removal																																														
Category A	50	x	30%	x	10%	x	4%	x	0.128	x	(	50%	x	0.42%	+	50%	x	5%	)	x	(1-50%)	50%	=	0.0001	\$	0.00																		
TOTAL HOURS																																												12	\$	347.25
TOTAL COSTS																																														

Table #9

TABLE 10

Hepatitis B Immune Globulin (HBIG): Vaccinated Workers (Health Professional Time)

Hour = # exposures x % vaccinated x 10% x 4% x health professional time x [(source particip

Costs = # of exposures x % vaccinated x 10% x 4% x cost of HBIG x [(source participation rate x RSS) + (% of sources refusing test x 5%)] x (1 - compliance rate)

ASSUMPTIONS:

* HBIG will be considered whenever a source is tested and found to be positive and whenever a high risk source refuses to be tested.

* HBIG will be offered only to those vaccinated workers who are found to be non-responders.

* 4% of employees will be non-vaccinated workers who are found to be non-responders.

* Required health care professional time is equivalent to 1/3 the time required to administer the HBV vaccination.

*Source will agree to be tested in 50% of exposure incidents.

%Cost of HBIG = \$211

											Hours	#12	#13	Responses	
Office of Physicians															
Category A	179,493	x	73%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 25%) =	7.67 \$ 230 18
C	0	x	55%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 25%) =	0.00 \$ - 0
D	0	x	87%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 25%) =	0.00 \$ - 0
Office of Dentists															
Category A	279,485	x	92%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 11%) =	17.85 \$ 413 42
C	43,075	x	44%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 11%) =	1.32 \$ 13 3
Nursing Homes															
Category A	35,746	x	38%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 35%) =	0.69 \$ 8 2
C	5,002	x	31%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 35%) =	0.08 \$ 1 0
D	4,636	x	30%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 35%) =	0.07 \$ 1 0
Hospitals															
Category A	254,449	x	54%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 74%) =	3.97 \$ 68 7
B	34,579	x	54%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 74%) =	0.54 \$ 9 1
C	30,799	x	69%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 74%) =	0.39 \$ 4 1
Medical and Dental Labs															
Category A	5,117	x	58%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 38%) =	0.14 \$ 4 0
C	0	x	88%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 38%) =	0.00 \$ - 0
D	487	x	100%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 38%) =	0.00 \$ 0 0
Home Health															
Category A	6,244	x	77%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 61%) =	0.15 \$ 1 0
C	0	x	100%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 61%) =	0.00 \$ - 0
D	2,575	x	88%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 61%) =	0.07 \$ 1 0
Hospices															
Category A	684	x	77%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 39%) =	0.02 \$ 0 0
C	0	x	37%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 39%) =	0.00 \$ - 0
D	215	x	100%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 39%) =	0.00 \$ 0 0
Hemodialysis															
Category A	4,684	x	33%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 72%) =	0.09 \$ 2 0

TABLE 10

Hepatitis B Immune Globulin (HBIG): Vaccinated Workers (Health Professional Time)

C	477	x	69%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 72%) =	0.01	\$	0	0	
D	141	x	48%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 72%) =	0.00	\$	0	0	
Drug Rehabilitation																			
Category A	283	x	49%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 30%) =	0.01	\$	0	0	
C	0	x	35%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 30%) =	0.00	\$	-	0	
D	0	x	100%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 30%) =	0.00	\$	-	0	
Government Clinics																			
Category A	16,013	x	57%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 25%) =	0.68	\$	20	1	
C	0	x	67%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 25%) =	0.00	\$	-	0	
D	0	x	37%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 25%) =	0.00	\$	-	0	
Blood/Plasma/Tissue Centers																			
Category A	6,453	x	60%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 58%) =	0.01	\$	0	0	
C	139	x	80%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	(	1 - 58%) =	0.00	\$	0	0
(cont'd)																			
D	197	x	51%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 58%) =	0.00	\$	0	0	
Residential Care																			
Category A	4,850	x	73%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 34%) =	0.16	\$	5	0	
C	388	x	100%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 34%) =	0.01	\$	0	0	
D	2,571	x	42%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 34%) =	0.01	\$	0	0	
Personnel Services																			
Category A	2,993	x	88%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 80%) =		\$	104	245	
D	0	x	100%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 0%) =		\$	-	0	
Funeral Services																			
Category A	11,735	x	65%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 20%) =		\$	1,210	2843	
C	0	x	100%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 20%) =		\$	-	0	
D	0	x	63%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 20%) =		\$	-	0	
Health Units in Industry																			
Category A	186,835	x	70%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 14%) =		\$	22,308	52410	
B	0	x	83%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 14%) =		\$	-	0	
C	0	x	100%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 14%) =		\$	-	0	
Research Labs																			
Category A	494	x	54%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 20%) =		\$	42	99	
C	0	x	79%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 20%) =		\$	-	0	
D	0	x	54%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 20%) =		\$	-	0	
Linen Services																			
Category D	3,000	x	100%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 90%) =		\$	60	140	
Medical Equipment Repair																			
Category A	0	x	84%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 26%) =	0.00	\$	-	0	
B	0	x	90%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 26%) =	0.00	\$	-	0	
C	161	x	92%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 26%) =		\$	22	51	
D	2,464	x	100%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 26%) =		\$	362	850	
Law Enforcement																			
Category A	18,993	x	83%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 96%) =	0.02	\$	1	0	
B	2,770	x	47%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 96%) =	0.01	\$	0	0	

TABLE 10

Hepatitis B Immune Globulin (HBIG): Vaccinated Workers (Health Professional Time)

C	1,444	x	98%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 96%) =	0.00	\$	0	0	
D	4,204	x	77%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 96%) =	0.01	\$	0	0	
Fire and Rescue																			
Category A	10,411	x	34%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 71%) =		\$	204	478	
B	857	x	44%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 71%) =		\$	22	51	
D	2,158	x	31%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 71%) =		\$	38	90	
Correctional Facilities																			
Category A	3,034	x	79%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 39%) =	0.08	\$	2	0	
B	1,887	x	97%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 39%) =	0.03	\$	1	0	
C	459	x	90%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 39%) =	0.01	\$	0	0	
D	3,793	x	98%	x	10%	x	4%	x	0.083	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 39%) =	0.0000	\$	-	0	
Livesaving																			
Category A	457	x	75%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 50%) =		\$	-	\$ 34 80	
Schools																			
Category A	6,321	x	100%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 0%) =		\$	-	\$ 1,254 2945	
D	6,321	x	100%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 0%) =		\$	-	\$ 1,254 2945	
Waste Removal																			
Category D	50	x	100%	x	10%	x	4%	x	\$211	x	[(50% x 0.42%) + (50% x 5%)]	0.235	x	(1 - 50%) =		\$	-	\$ 5 12	
TOTAL															34.10	\$	761	\$ 21,338	63319
															HOURS		#12	#13	Responses

TABLE 11

Hours = # exposures x (1-% vaccinated x 22% x employee time x [(source participation rate x RSS)
+ (% of source refusing test x 5%)] x (1-compliance)

ASSUMPTIONS

- * HBIG will be offered only yo those non-vaccinated workers who are found not to have natural immunity
- * 22% of non-vaccinated workers do not have natural immunity
- * HBIG will be considered whenever a source is tested and found to be positive and whenever a high risk source refuses to be tested
- * 5% of exposures are attributable to a high risk source
- * Time required equivalent to 1/3 time required to receive HBV vaccination
- * Source participation rate is 50%

									<u>HOURS</u>	<u>#12</u>	
Office of the Physicians											
Category A	179,493	*	(1 - 73%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 25%) =	27.7 \$	832
C	-	*	(1 - 55%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 25%) =	0.0 \$	-
D	-	*	(1 - 87%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 25%) =	0.0 \$	-
Office of Dentists											
Category A	279,485	*	(1 - 92%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 11%) =	15.2 \$	351
C	43,075	*	(1 - 44%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 11%) =	16.4 \$	158
Nursing Homes											
Category A	35,746	*	(1 - 38%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 35%) =	11.0 \$	135
C	5,002	*	(1 - 31%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 35%) =	1.7 \$	17
D	4,636	*	(1 - 30%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 35%) =	1.6 \$	16
Hospitals											
Category A	254,449	*	(1 - 77%)	*	22%	*	0.128	* [(50% * 1.25%) + (50% x 5%)]	x (1 - 74%) =	13.4 \$	229
B	34,579	*	(1 - 77%)	*	22%	*	0.128	* [(50% * 1.25%) + (50% x 5%)]	x (1 - 74%) =	1.8 \$	32
C	30,799	*	(1 - 62%)	*	22%	*	0.128	* [(50% * 1.25%) + (50% x 5%)]	x (1 - 74%) =	2.7 \$	26
Medical and Dental Labs											
Category A	5,177	*	(1 - 79%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 38%) =	0.5 \$	11
C	-	*	(1 - 38%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 38%) =	0.0 \$	-
D	487	*	(1 - 30%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 38%) =	0.2 \$	2
Home Health Care											
Category A	6,244	*	(1 - 52%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 61%) =	0.9 \$	11
C	-	*	(1 - 30%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 61%) =	0.0 \$	-
D	2,575	*	(1 - 84%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 61%) =	0.1 \$	1
Hospices											
Category A	684	*	(1 - 58%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 39%) =	0.1 \$	2
C	-	*	(1 - 82%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 39%) =	0.0 \$	-
D	215	*	(1 - 30%)	*	22%	*	0.128	* [(50% * 0.42%) + (50% x 5%)]	x (1 - 39%) =	0.1 \$	1
Hemodialysis											

TABLE 11

Category A	4,684	*	(1 - 92%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 72%) =	0.1 \$	2
C	477	*	(1 - 68%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 72%) =	0.0 \$	0
D	141	*	(1 - 81%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 72%) =	0.0 \$	0
Drug Rehabilitation										
Category A	283	*	(1 - 78%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 30%) =	0.0 \$	1
C	-	*	(1 - 100%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 30%) =	0.0 \$	-
D	-	*	(1 - 30%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 30%) =	0.0 \$	-
Government Clinics										
Category A	16,013	*	(1 - 73%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 25%) =	2.5 \$	73
C	0.00	*	(1 - 55%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 25%) =	0.0 \$	-
D	0.00	*	(1 - 87%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 25%) =	0.0 \$	-
Blood/Plasma/Tissue Centers										
Category A	6,453	*	(1 - 65%)	*	22% *	0.128 *	[(50% * 10.00%) + (50% x 5%)]	x (1 - 58%) =	2.0 \$	35
C	139	*	(1 - 44%)	*	22% *	0.128 *	[(50% * 10.00%) + (50% x 5%)]	x (1 - 58%) =	0.1 \$	1
D	197	*	(1 - 71%)	*	22% *	0.128 *	[(50% * 10.00%) + (50% x 5%)]	x (1 - 58%) =	0.1 \$	1
Residential Care										
Category A	4,850	*	(1 - 64%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 34%) =	0.9 \$	11
C	388	*	(1 - 30%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 34%) =	0.1 \$	1
D	2,571	*	(1 - 73%)	*	22% *	0.128 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 34%) =	0.3 \$	4
Personnel Services										
Category A	2,993	*	(1 - 38%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 80%) =	1.1 \$	16
D	0.00	*	(1 - 30%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 0%) =	0.0	0.00
Funeral Services										
Category A	11,735	*	(1 - 67%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 20%) =	9.2 \$	161
C	0.00	*	(1 - 30%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 20%) =	0.0	0.00
D	0.00	*	(1 - 64%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 20%) =	0.0	0.00
Health Units in Industry										
Category A	186,835	*	(1 - 60%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 14%) =	191.6 \$	2,891
B	0.00	*	(1 - 42%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 14%) =	0.0	0.00
D	0.00	*	(1 - 30%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 14%) =	0.0	0.00
Research Labs										
Category A	494	*	(1 - 81%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 20%) =	0.2 \$	4
C	0.00	*	(1 - 45%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 20%) =	0.0 \$	-
D	0.00	*	(1 - 81%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 20%) =	0.0 \$	-
Linen Service										
D	3,000	*	(1 - 30%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 90%) =	0.6 \$	6
Medical Equipment Repair										
Category A	0.00	*	(1 - 41%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 26%) =	0.0 \$	-
B	0.00	*	(1 - 37%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 26%) =	0.0 \$	-
C	161	*	(1 - 36%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 26%) =	0.2 \$	4
D	2,464	*	(1 - 30%)	*	22% *	0.500 *	[(50% * 0.42%) + (50% x 5%)]	x (1 - 26%) =	3.8 \$	65
Law Enforcement										

TABLE 11

Category A	18,993	*	(	1	-	42%	)	*	22%	*	0.128	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	96%	)	=	0.3	\$	5
B	2,770	*	(	1	-	92%	)	*	22%	*	0.128	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	96%	)	=	0.0	\$	0
C	1,444	*	(	1	-	31%	)	*	22%	*	0.128	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	96%	)	=	0.0	\$	0
D	4,204	*	(	1	-	46%	)	*	22%	*	0.128	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	96%	)	=	0.1	\$	1
Fire and Rescue																																			
Category A	10,411	*	(	1	-	89%	)	*	22%	*	0.500	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	71%	)	=	1.0	\$	17
B	857	*	(	1	-	86%	)	*	22%	*	0.500	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	71%	)	=	0.1	\$	2
D	2,158	*	(	1	-	92%	)	*	22%	*	0.500	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	71%	)	=	0.1	\$	2
Correctional Facilities																																			
Category A	3,034	*	(	1	-	54%	)	*	22%	*	0.128	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	39%	)	=	0.6	\$	10
B	1,887	*	(	1	-	32%	)	*	22%	*	0.128	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	39%	)	=	0.6	\$	7
C	459	*	(	1	-	30%	)	*	22%	*	0.128	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	39%	)	=	0.1	\$	1
D	3,793	*	(	1	-	31%	)	*	22%	*	0.128	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	39%	)	=	1.2	\$	18
Lifesaving																																			
Category A	457	*	(	1	-	78%	)	*	22%	*	0.500	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	50%	)	=	0.1	\$	3
Schools																																			
Category A	6,321	*	(	1	-	30%	)	*	22%	*	0.500	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	0%	)	=	13.2	\$	186
D	6,321	*	(	1	-	30%	)	*	22%	*	0.500	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	0%	)	=	13.2	\$	153
Waste Removal																																			
Category A	50	*	(	1	-	30%	)	*	22%	*	0.500	*	[	(	50%	*	0.42%	)	+	(	50%	x	5%	)	]	x	(	1	-	50%	)	=	0.1	\$	1
																											336.0	\$	26,254						

Table #12

HBIG: Non Vaccinated Workers (Health Care Professional)

Hours = # exposures x (1-% vaccinated) x 22% x health care professional time x [(source participation rate x RSS) + (% of sources refusing test * 5%)] x (1-compliance rate)

Costs = # exposures x (1-% vaccinated) x 22% x cost of HBIG c [(source participation rate x RSS) + (% of sources refusing test x 5%)] x (1-compliance rate)

ASSUMPTIONS:

*HBIB will be offered only to those non-vaccinated workers who are found not to have natural immunity.

*22% of non-vaccinated workers do not have natural immunity.

*HBIG will be considered whenever a source is tested and found to be positive and whenever a high risk source refuses to be tested.

*5% of exposures are attributable to a high risk source.

*Time required equivalent to 1/3 time required to administer HBV vaccination.

*Source will agree to be tested in 50% of exposure incidents.

*COST of HBIG = \$211.

							<u>HOURS</u>	<u>#12</u>	<u>13#</u>				
Office of the Physicians													
Category A	179,493	*	(1 - 73%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 25%) =	18	\$	540
C	-	*	(1 - 55%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 25%) =	0	\$	-
D	-	*	(1 - 87%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 25%) =	0	\$	-
Office of Dentists													
Category A	279,485	*	(1 - 92%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 11%) =	10	\$	228
C	43,075	*	(1 - 44%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 11%) =	11	\$	103
Nursing Homes													
Category A	35,746	*	(1 - 38%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 35%) =	7	\$	88
C	5,002	*	(1 - 31%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 35%) =	1	\$	11
D	4,636	*	(1 - 30%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 35%) =	1	\$	10
Hospitals													
Category A	254,449	*	(1 - 77%)	*	22%	*	0.083	* [(50% * 1.25%) + (50% * 5%)]	*	(1 - 74%) =	3	\$	59
B	34,579	*	(1 - 77%)	*	22%	*	0.083	* [(50% * 1.25%) + (50% * 5%)]	*	(1 - 74%) =	0	\$	8
C	30,799	*	(1 - 62%)	*	22%	*	0.083	* [(50% * 1.25%) + (50% * 5%)]	*	(1 - 74%) =	1	\$	7
Medical and Dental Labs													
Category A	5,177	*	(1 - 79%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 38%) =	0	\$	7
C	-	*	(1 - 38%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 38%) =	0	\$	-
D	487	*	(1 - 30%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 38%) =	0	\$	1
Home Health Care													
Category A	6,244	*	(1 - 52%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 61%) =	1	\$	7
C	-	*	(1 - 30%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 61%) =	0	\$	-
D	2,575	*	(1 - 84%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 61%) =	0	\$	1
Hospices													
Category A	684	*	(1 - 58%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 39%) =	0	\$	1
C	-	*	(1 - 82%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 39%) =	0	\$	-
D	215	*	(1 - 30%)	*	22%	*	0.083	* [(50% * 0.42%) + (50% * 5%)]	*	(1 - 39%) =	0	\$	1

Table #12

HBIG: Non Vaccinated Workers (Health Care Professional)

Hemodialysis								
Category A	4,684	*	(1 - 92%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 72%) =	0 \$	1
C	477	*	(1 - 68%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 72%) =	0 \$	0
D	141	*	(1 - 81%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 72%) =	0 \$	0
Drug Rehabilitation								
Category A	283	*	(1 - 78%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 30%) =	0 \$	0
C	-	*	(1 - 100%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 30%) =	0 \$	-
D	-	*	(1 - 30%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 30%) =	0 \$	-
Government Clinics								
Category A	16,013	*	(1 - 73%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 25%) =	2 \$	47
C	0.00	*	(1 - 55%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 25%) =	0 \$	-
D	0.00	*	(1 - 87%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 25%) =	0 \$	-
Blood/Plasma/Tissue Centers								
Category A	6,453	*	(1 - 65%)	*	22% * 0.083	* [(50% * 0.10%) + (50% * 5%)] * (1 - 58%) =	0 \$	13
C	139	*	(1 - 44%)	*	22% * 0.083	* [(50% * 0.10%) + (50% * 5%)] * (1 - 58%) =	0 \$	0
D	197	*	(1 - 71%)	*	22% * 0.083	* [(50% * 0.10%) + (50% * 5%)] * (1 - 58%) =	0 \$	0
Residential Care								
Category A	4,850	*	(1 - 64%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 34%) =	1 \$	17
C	388	*	(1 - 30%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 34%) =	0 \$	3
D	2,571	*	(1 - 73%)	*	22% * 0.083	* [(50% * 0.42%) + (50% * 5%)] * (1 - 34%) =	0 \$	7
Personnel Services								
Category A	2,993	*	(1 - 38%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 80%) =		\$ 467
D	0.00	*	(1 - 30%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 0%) =		
Funeral Services								
Category A	11,735	*	(1 - 67%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 20%) =		\$ 3,897
C	0.00	*	(1 - 30%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 20%) =		
D	0.00	*	(1 - 64%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 20%) =		
Health Units in Industry								
Category A	186,835	*	(1 - 60%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 14%) =		\$ 80,852
B	0.00	*	(1 - 42%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 14%) =		
D	0.00	*	(1 - 30%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 14%) =		
Research Labs								
Category A	494	*	(1 - 81%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 20%) =		\$ 94
C	0.00	*	(1 - 45%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 20%) =		
D	0.00	*	(1 - 81%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 20%) =		
Linen Service								
D	3,000	*	(1 - 30%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 90%) =		\$ 264
Medical Equipment Repair								
Category A	0.00	*	(1 - 41%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 26%) =		
B	0.00	*	(1 - 37%)	*	22% * \$211	* [(50% * 0.42%) + (50% * 5%)] * (1 - 26%) =		

Table #12

HBIG: Non Vaccinated Workers (Health Care Professionals)	C	161	*	(1 - 36%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 26%)	=	\$	96	
	D	2,464	*	(1 - 30%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 26%)	=	\$	1,606	
Law Enforcement																
Category A		18,993	*	(1 - 42%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 96%)	=	0 \$	1	
	B	2,770	*	(1 - 92%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 96%)	=	0 \$	2	
	C	1,444	*	(1 - 31%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 96%)	=	0 \$	-	
	D	4,204	*	(1 - 46%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 96%)	=	0 \$	-	
Fire and Rescue																
Category A		10,411	*	(1 - 89%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 71%)	=	\$	418	
	B	857	*	(1 - 86%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 71%)	=	\$	44	
	D	2,158	*	(1 - 92%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 71%)	=	\$	63	
Correctional Facilities																
Category A		3,034	*	(1 - 54%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 39%)	=	0 \$	1	
	B	1,887	*	(1 - 32%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 39%)	=	0 \$	2	
	C	459	*	(1 - 30%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 39%)	=	0 \$	-	
	D	3,793	*	(1 - 31%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 39%)	=	1 \$	-	
Lifesaving																
Category A		457	*	(1 - 78%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 50%)	=	\$	63	
Schools																
Category A		6,321	*	(1 - 30%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 0%)	=	\$	5,566	
	D	6,321	*	(1 - 30%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 0%)	=	\$	5,566	
Waste Removal																
Category A		50	*	(1 - 30%)	*	22%	*	\$211	*	[(50% * 0.42%) + (50% * 5%)]	*	(1 - 50%)	=	\$	22	
														Total =	59 \$ 1,159	\$ 99,024

TABLE 13

HIV Antibody Tests (Employee Time)

Hours = # exposures x employer participation rate x (% of sources refusing test + (source participation rate x RSS) x # of tests x employee time x (1- compliance

Assumptions:

*Employee participation rate for HIV antibody test is 0.8.%

*50% of sources will agree to be tested, 50% will refuse to be tested.

*RSS is 0.05% for blood/plasma/tissue centers. 17% for law enforcement. 17% for corrections and 0.8% for all other sectors.

*A sequence of 4 HIV antibody tests will be performed for employees tested.

*Employee time is equivalent to 1/3 time required for HBV vaccination.

							<u>HOURS</u>	<u>#12</u>						
Offices of Physicians	179,493	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 24%) =	28,161	\$	845,118
Office of Dentists	322,560	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 10%) =	59,930	\$	1,385,579
Nursing Homes	45,384	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 23%) =	7,214	\$	216,496
Hospitals	319,827	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 65%) =	23,109	\$	693,489
Medical and Dental Labs	5,664	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 89%) =	129	\$	3,860
Home Health Care	8,819	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 58%) =	765	\$	22,947
Hospices	898	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 47%) =	98	\$	2,949
Hemodialysis	5,302	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 69%) =	339	\$	10,183
Drug Rehabilitation	283	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 60%) =	23	\$	701
Government Clinics	16,013	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 24%) =	2,512	\$	75,395
Blood/Plasma/Tissue Centers	6,789	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 57%) =	603	\$	18,086
Residential Care	7,809	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 7%) =	1,499	\$	44,992
Personnel Services	2,993	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.500	x	(1 - 77%) =	555	\$	16,659
Funeral Services	11,735	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.500	x	(1 - 22%) =	7,381	\$	221,510
Health Units in Industry	186,835	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.500	x	(1 - 14%) =	129,571	\$	3,888,420
Research Labs	494	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.500	x	(1 - 60%) =	159	\$	4,782
Linen Services	3,000	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.500	x	(1 - 90%) =	242	\$	7,260
Medical Equipment Repair	2,625	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.500	x	(1 - 0%) =	2,117	\$	63,525
Law Enforcement	27,411	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 91%) =	509	\$	15,284
Fire and Rescue	13,426	x	80%	x	(50% + (50% x 17.0%))	x	4	x	0.500	x	(1 - 68%) =	4,021	\$	120,681
Correctional Facilities	9,173	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.128	x	(1 - 47%) =	1,004	\$	30,119
Lifesaving	457	x	80%	x	(50% + (50% x 17.0%))	x	4	x	0.500	x	(1 - 50%) =	214	\$	3,670
Schools	12,642	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.500	x	(1 - 0%) =	10,195	\$	305,937
Waste Removal	50	x	80%	x	(50% + (50% x 0.80%))	x	4	x	0.500	x	(1 - 50%) =	20	\$	346
Totals											TOTAL =	280,370	\$	7,997,988

TABLE 13

HIV Antibody Tests (Employee Time)
rate)

TABLE 14

HOURS = 82,118

#12= \$2,874,140

#13 = \$6,161,339

Hours = # exposures x employer participation rate x (% of sources refusing test + (source participation rate x RSS) x # of tests x health care professional time x (1- compliance rate)

Assumptions:

*Employee participation rate for HIV antibody tests is 80%.

*50% of sources will agree to be tested, 50% will refuse to be tested.

*RSS is 0.05% for blood/plasma/tissue centers. 17% for law enforcement. 17% for corrections and 0.8% for all other sectors.

*A sequence of 4 HIV antibody tests will be performed for employees tested.

*Health care professional time is equivalent to 1/3 time required to administer HBV vaccination

						<u>HOURS</u>	<u>#12</u>	<u>#13</u>	
Offices of Physicians	179,493	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 24%) =	18261	641694	
Office of Dentists	322,560	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 10%) =	38861	1365591	
Nursing Homes	45,384	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 23%) =	4678	164384	
Hospitals	319,827	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 65%) =	14984	526563	
Medical and Dental Labs	5,664	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 89%) =	83	2931	
Home Health Care	8,819	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 58%) =	496	17423	
Hospices	898	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 47%) =	64	17423	
Hemodialysis	5,302	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 69%) =	220	2240	
Drug Rehabilitation	283	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 60%) =	15	7732	
Government Clinics	16,013	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 24%) =	1629	532	
Blood/Plasma/Tissue	6,789	x 80%	x (50% + (50% x 0.10%))	x 4	x 0.083	x (1 - 57%) =	388	57246	
Residential Care	7,809	x 80%	x (50% + (50% x 0.80%))	x 4	x 0.083	x (1 - 7%) =	972	13630	
Personnel Services	2,993	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 77%) =		34160	
Funeral Services	11,735	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 22%) =		295,249	
Health Units in Industry	186,835	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 14%) =		5,182,833	
Research Labs	494	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 60%) =		6,374	
Linen Services	3,000	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 90%) =		9,677	
Medical Equipment Repair	2,625	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 0%) =		84,672	
Law Enforcement	27,411	x 80%	x (50% + (50% x 17.0%))	x 4	x 0.083	x (1 - 91%) =	383	13470	
Fire and Rescue	13,426	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 68%) =		138,582	
Correctional Facilities	9,173	x 80%	x (50% + (50% x 17.0%))	x 4	x 0.083	x (1 - 47%) =	755	26544	
Lifesaving	457	x 80%	x (50% + (50% x 80.0%))	x 4	x \$20.00	x (1 - 50%) =		13,162	
Schools	12,642	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 0%) =		407,780	
Waste Removal	50	x 80%	x (50% + (50% x 0.80%))	x 4	x \$20.00	x (1 - 50%) =		806	
Totals						TOTAL =	82,118	\$ 2,874,140	6,161,339

TABLE 15

Counseling for Workers Who May Have HIV Exposure (Employee and Counselor Time)

HOURS = 551,729
 #12= \$15,984,943

Hours = # exposures x employer participation rate x (% of sources refusing test + (source participation rate x RSS) x # of sessions x (employee time + counselor time) x (1- compliance rate)

Assumptions:

- *Employee participation rate is 80%.
- *50% of sources will agree to be tested, 50% will refuse to be tested.
- *RSS is 0.05% for blood/plasma/tissue centers. 17% for law enforcement. 17% for corrections and 0.8% for all other sectors.
- *2 counseling sessions will be given to employees accepting testing.
- *Counseling sessions will require 30 minutes.

							<u>HOURS</u>	<u>#12</u>	<u>RESPONSES</u>	
Offices of Physicians	179,493	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 34%) =	95,530	\$ 3,677,921	120136.8	
Office of Dentists	322,560	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 15%) =	221,096	\$ 6,345,447	240604	
Nursing Homes	45,384	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 24%) =	27,814	\$ 661,978	32205.94	
Hospitals	5,664	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 73%) =	1,233	\$ 35,393	2900.33	
Medical and Dental Labs	5,664	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 70%) =	1,370	\$ 39,086	2968.842	
Home Health Care	8,819	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 24%) =	5,405	\$ 122,956	6258.245	
Hospices	898	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 31%) =	500	\$ 13,122	611.9044	
Hemodialysis	5,302	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 61%) =	1,667	\$ 42,378	2971.495	
Drug Rehabilitation	283	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 63%) =	84	\$ 1,949	156.3247	
Government Clinics	16,013	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 16%) =	10,847	\$ 275,667	11879.85	
Blood/Plasma/Tissue Centers	6,789	x 80%	x (50% + (50% x 0.10%))	x 2	x 0.5 + 0.5	x (1 - 99%) =	54	\$ 1,381	2745.499	
Residential Care	7,809	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 11%) =	5,604	\$ 142,429	5950.833	
Personnel Services	2,993	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 67%) =	796	\$ 22,855	1605.014	
Funeral Services	11,735	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 6%) =	8,895	\$ 255,298	9179.211	
Health Units in Industry	186,835	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 1%) =	149,157	\$ 3,790,818	149910.4	
Research Labs	494	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 30%) =	279	\$ 7,955	338.6074	
Linen Services	3,000	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 90%) =	242	\$ 6,148	1330.56	
Medical Equipment Repair	2,625	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 0%) =	2,117	\$ 55,936	2116.8	
Law Enforcement	27,411	x 80%	x (50% + (50% x 17.0%))	x 2	x 0.5 + 0.5	x (1 - 89%) =	2,822	\$ 74,084	14239.47	
Fire and Rescue	13,426	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 73%) =	2,923	\$ 75,711	6874.971	
Correctional Facilities	9,173	x 80%	x (50% + (50% x 17.0%))	x 2	x 0.5 + 0.5	x (1 - 68%) =	2,747	\$ 72,120	5666.712	
Lifesaving	457	x 80%	x (50% + (50% x 80.0%))	x 2	x 0.5 + 0.5	x (1 - 50%) =	329	\$ 4,685	493.56	
Schools	12,642	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 0%) =	10,195	\$ 259,093	10194.51	
Waste Removal	50	x 80%	x (50% + (50% x 0.80%))	x 2	x 0.5 + 0.5	x (1 - 50%) =	20	\$ 533	30.24	
Totals							TOTAL =	= 551,729	\$ 15,984,943	631370.1

Table 16

Annual Burden Hours for Initial Training of New Hires

Hours = number of facilities x job turnover rate x (1- compliance rate) x time

Assumptions:

- Recurring training hours will be for training new hires
- # of turnover session for hospitals, nursing homes, personnel services fire and rescue, corrections and law enforcement = # of workers x first year job turnover rate/5
- # of turnover sessions for all other sectors = # of workers x job turnover rate.
- Training of new hires requires 2 hours

				Burden Hours	No.12
Office of the Physicians					
Category A	967,626 x	22.80% x (1 - 29%) x 2		313,279	\$10,298,056
C	6,969 x	31.60% x (1 - 82%) x 2		793	\$26,060
D	69,685 x	21.80% x (1 - 0%) x 2		30,383	\$998,736
Office of Dentists					
Category A	359,662 x	26.80% x (1 - 33%) x 2		129,162	\$4,447,725
C	3,447 x	31.60% x (1 - 15%) x 2		1,852	\$63,776
Nursing Homes					
Category A	594,456 x	49.90% x (1 - 38%) x 2 / 5		73,565	\$2,574,792
C	38,352 x	31.60% x (1 - 44%) x 2 / 5		2,715	\$95,015
D	6,392 x	31.60% x (1 - 21%) x 2 / 5		638	\$22,340
Hospitals					
Category A	2,207,260 x	27.20% x (1 - 42%) x 2 / 5		139,287	\$5,082,328
B	188,595 x	21.80% x (1 - 39%) x 2 / 5		10,032	\$366,040
C	293,370 x	31.60% x (1 - 37%) x 2 / 5		23,362	\$852,424
Medical and Dental Labs					
Category A	227,773 x	21.70% x (1 - 23%) x 2		76,117	\$2,314,160
C	1,754 x	31.60% x (1 - 5%) x 2		1,053	\$32,025
D	197,766 x	31.60% x (1 - 5%) x 2		118,739	\$3,597,366
Home Health					
Category A	202,946 x	36.30% x (1 - 30%) x 2		103,137	\$3,609,801
C	3,000 x	31.60% x (1 - 32%) x 2		1,289	\$45,125
D	6,300 x	36.30% x (1 - 29%) x 2		3,247	\$113,659
Hospices					
Category A	10,565 x	36.30% x (1 - 46%) x 2		4,142	\$144,967
C	154 x	31.60% x (1 - 1%) x 2		96	\$3,372
D	27 x	36.30% x (1 - 1%) x 2		19	\$679
Hemodialysis					
Category A	11,926 x	25.20% x (1 - 40%) x 2		3,606	\$126,225
C	209 x	31.60% x (1 - 37%) x 2		83	\$2,913
D	553 x	21.80% x (1 - 40%) x 2		145	\$5,063
Drug Rehabilitation					
Category A	6,067 x	25.50% x (1 - 33%) x 2		2,073	\$72,558
C	149 x	31.60% x (1 - 44%) x 2		53	\$1,846
D	506 x	21.80% x (1 - 14%) x 2		190	\$6,641
Government Clinics					
Category A	52,156 x	22.80% x (1 - 29%) x 2		16,886	\$591,011
C	381 x	31.60% x (1 - 82%) x 2		43	\$1,517
D	3,808 x	21.80% x (1 - 0%) x 2		1,660	\$58,110
Blood/Plasma/Tissue Centers					
Category A	18,198 x	21.80% x (1 - 56%) x 2		3,491	\$122,189
C	200 x	31.60% x (1 - 34%) x 2		83	\$2,920
D	390 x	36.30% x (1 - 66%) x 2		96	\$3,369

Residential Care						
Category A	41,211 x	49.60% x	(1 - 34%) x	2	26,982	\$4,319,424
C	1,138 x	31.60% x	(1 - 22%) x	2	561	\$77,434
D	6,753 x	36.30% x	(1 - 24%) x	2	3,726	\$606,693
Personnel Services						
Category A	61,387 x	100.00% x	(1 - 33%) x	2 / 5	16,452	\$575,810
D	102,090 x	31.60% x	(1 - 0%) x	2 / 5	12,904	\$451,646
Funeral Services						
Category A	51,054 x	21.80% x	(1 - 21%) x	2	17,585	\$615,476
C	2,721 x	31.60% x	(1 - 20%) x	2	1,376	\$19,855
D	3,288 x	31.60% x	(1 - 48%) x	2	1,081	\$40,224
Health Units in Industry						
Category A	34,184 x	31.70% x	(1 - 9%) x	2	19,722	\$690,274
B	141,051 x	21.80% x	(1 - 2%) x	2	60,268	\$2,109,389
D	3,497 x	31.60% x	(1 - 4%) x	2	2,122	\$74,259
Research Labs						
Category A	87,484 x	21.80% x	(1 - 53%) x	2	17,927	\$627,453
C	1,315 x	31.60% x	(1 - 26%) x	2	615	\$21,525
D	352 x	21.80% x	(1 - 0%) x	2	153	\$5,372
Linen Service						
D	50,000 x	54.00% x	(1 - 90%) x	2	5,400	\$189,000
Medical Equipment Repair						
Category A	473 x	38.30% x	(1 - 53%) x	2	170	\$5,960
B	200 x	38.30% x	(1 - 35%) x	2	100	\$3,485
C	5,152 x	21.80% x	(1 - 5%) x	2	2,134	\$74,689
D	360 x	21.80% x	(1 - 11%) x	2	140	\$4,889
Law Enforcement						
Category A	306,769 x	10.10% x	(1 - 16%) x	2 / 5	10,411	\$364,368
B	1,137 x	21.80% x	(1 - 15%) x	2 / 5	84	\$2,950
C	2,617 x	31.60% x	(1 - 3%) x	2 / 5	321	\$11,230
D	31,022 x	10.10% x	(1 - 39%) x	2 / 5	765	\$26,758
Fire and Rescue						
Category A	113,866 x	21.80% x	(1 - 44%) x	2 / 5	5,560	\$194,611
B	136,412 x	8.50% x	(1 - 23%) x	2 / 5	3,571	\$124,994
D	1,770 x	38.30% x	(1 - 38%) x	2 / 5	168	\$5,884
Correctional Facilities						
Category A	8,381 x	31.70% x	(1 - 22%) x	2 / 5	829	\$29,012
B	82,883 x	41.00% x	(1 - 22%) x	2 / 5	10,602	\$371,084
C	7,273 x	31.60% x	(1 - 19%) x	2 / 5	745	\$26,062
D	21,687 x	29.10% x	(1 - 28%) x	2 / 5	1,818	\$63,614
Lifesaving						
Category A	5,000 x	21.80% x	(1 - 25%) x	2	1,635	\$57,225
Schools						
Category A	23,514 x	25.00% x	(1 - 0%) x	2	11,757	\$411,495
D	17,848 x	36.30% x	(1 - 0%) x	2	12,958	\$453,518
Waste Removal						
Category A	13,300 x	36.30% x	(1 - 50%) x	2	4,828	\$168,977
Total					1,316,785	\$48,507,445

Table 17

Retraining of In-Service Employees

Hours = 1,203,667
 #12 = \$ 42,128,418

Hours = ((incremental recurring training time x in-service sessions x compliance rate) + (total recurring training time x # in-service sessions x (1-compliance rate)))

Assumptions

- * Incremental training time required for establishments already providing some training is 1/2 hour.
- * Total training time required for establishments not already providing some training is 1 hour.
- * Number of in-service sessions for hospitals, nursing homes, personnel services, fire and rescue, corrections, and law enforcement is (# trainees/30).
- * Number of in-service sessions for other sectors is (# establishments x # affected occupational categories).

					<u>Hours</u>	<u>#12</u>
Office of the Physicians						
Category A (	50% *	122,104 *	34%) + (1 *	122,104 *	(1 - 34%)) =	101,346 \$ 3,547,121
C (	50% *	122,104 *	55%) + (1 *	122,104 *	(1 - 55%)) =	88,525 \$ 3,098,289
D (	50% *	122,104 *	0%) + (1 *	122,104 *	(1 - 0%)) =	122,104 \$ 4,273,640
Office of Dentists						
Category A (	50% *	100,174 *	58%) + (1 *	100,174 *	(1 - 58%)) =	71,124 \$ 2,489,324
C (	50% *	100,174 *	14%) + (1 *	100,174 *	(1 - 14%)) =	93,162 \$ 3,260,664
Nursing Homes						
Category A (	50% *	15,019 *	80%) + (1 *	15,019 *	(1 - 80%)) =	9,011 \$ 315,397
C (	50% *	907 *	69%) + (1 *	907 *	(1 - 69%)) =	594 \$ 20,801
D (	50% *	251 *	66%) + (1 *	251 *	(1 - 66%)) =	168 \$ 5,874
Hospitals						
Category A (	50% *	65,355 *	77%) + (1 *	65,355 *	(1 - 77%)) =	40,193 \$ 1,406,758
B (	50% *	5,487 *	74%) + (1 *	5,487 *	(1 - 74%)) =	3,457 \$ 120,984
C (	50% *	8,697 *	79%) + (1 *	8,697 *	(1 - 79%)) =	5,262 \$ 184,167
Medical and Dental Labs						
Category A (	50% *	4,425 *	69%) + (1 *	4,425 *	(1 - 69%)) =	2,896 \$ 101,443
C (	50% *	4,425 *	61%) + (1 *	4,425 *	(1 - 61%)) =	3,075 \$ 107,638
D (	50% *	4,425 *	13%) + (1 *	4,425 *	(1 - 13%)) =	4,137 \$ 144,808
Home Health Care						
Category A (	50% *	6,437 *	85%) + (1 *	6,437 *	(1 - 85%)) =	3,701 \$ 129,545
C (	50% *	6,437 *	16%) + (1 *	6,437 *	(1 - 16%)) =	5,922 \$ 207,271
D (	50% *	6,437 *	68%) + (1 *	6,437 *	(1 - 68%)) =	4,248 \$ 148,695
Hospices						
Category A (	50% *	651 *	85%) + (1 *	651 *	(1 - 85%)) =	374 \$ 13,101
C (	50% *	651 *	93%) + (1 *	651 *	(1 - 93%)) =	348 \$ 12,190
D (	50% *	651 *	96%) + (1 *	651 *	(1 - 96%)) =	339 \$ 11,848

Table 17

Retraining of In-Service Employees

Hemodialysis									
Category A (	50% *	782 *	68%)	+	(1 *	782 *	(1 - 68%)) =	516 \$	18,064
C (	50% *	782 *	51%)	+	(1 *	782 *	(1 - 51%)) =	583 \$	20,391
D (	50% *	782 *	70%)	+	(1 *	782 *	(1 - 70%)) =	508 \$	17,791
Drug Rehabilitation									
Category A (	50% *	744 *	70%)	+	(1 *	744 *	(1 - 70%)) =	484 \$	16,926
C (	50% *	744 *	82%)	+	(1 *	744 *	(1 - 82%)) =	439 \$	15,384
D (	50% *	744 *	5%)	+	(1 *	744 *	(1 - 5%)) =	725 \$	25,389
Government Clinics									
Category A (	50% *	10,893 *	34%)	+	(1 *	10,893 *	(1 - 34%)) =	9,041 \$	316,442
C (	50% *	10,893 *	55%)	+	(1 *	10,893 *	(1 - 55%)) =	7,897 \$	276,410
D (	50% *	10,893 *	0%)	+	(1 *	10,893 *	(1 - 0%)) =	10,893 \$	381,255
Blood/Plasma/Tissue Centers									
Category A (	50% *	730 *	62%)	+	(1 *	730 *	(1 - 62%)) =	504 \$	17,630
C (	50% *	730 *	40%)	+	(1 *	730 *	(1 - 40%)) =	584 \$	20,440
D (	50% *	730 *	58%)	+	(1 *	730 *	(1 - 58%)) =	518 \$	18
Residential Care									
Category A (	50% *	2,425 *	77%)	+	(1 *	2,425 *	(1 - 77%)) =	1,491 \$	52,198
C (	50% *	2,425 *	61%)	+	(1 *	2,425 *	(1 - 61%)) =	1,685 \$	58,988
D (	50% *	2,425 *	89%)	+	(1 *	2,425 *	(1 - 89%)) =	1,346	47,106.00
Personnel Services									
Category A (	50% *	2,046 *	65%)	+	(1 *	2,046 *	(1 - 65%)) =	1,381 \$	48,242
D (	50% *	3,403 *	10%)	+	(1 *	3,403 *	(1 - 10%)) =	3,403	119,105.00
Funeral Services									
Category A (	50% *	19,890 *	41%)	+	(1 *	19,890 *	(1 - 41%)) =	15,813 \$	553,439
C (	50% *	19,890 *	8%)	+	(1 *	19,890 *	(1 - 8%)) =	19,094 \$	668,304
D (	50% *	19,890 *	51%)	+	(1 *	19,890 *	(1 - 51%)) =	14,818	518632.00
Health Units in Industry									
Category A (	50% *	202,540 *	56%)	+	(1 *	202,540 *	(1 - 56%)) =	145,829 \$	5,104,008
B (	50% *	202,540 *	8%)	+	(1 *	202,540 *	(1 - 8%)) =	194,438 \$	6,805,344
D (	50% *	202,540 *	29%)	+	(1 *	202,540 *	(1 - 29%)) =	173,172 \$	6,061,010
Research Labs									
Category A (	50% *	1,453 *	38%)	+	(1 *	1,453 *	(1 - 38%)) =	1,177 \$	41,193
C (	50% *	1,453 *	42%)	+	(1 *	1,453 *	(1 - 42%)) =	1,148 \$	40,175
D (	50% *	1,453 *	0%)	+	(1 *	1,453 *	(1 - 0%)) =	1,453 \$	50,855
Linen Service									
D (	50% *	1,250 *	90%)	+	(1 *	1,250 *	(1 - 90%)) =	688 \$	24,063
Medical Equipment Repair									
Category A (	50% *	1,076 *	61%)	+	(1 *	1,076 *	(1 - 61%)) =	748 \$	26,174
B (	50% *	1,076 *	93%)	+	(1 *	1,076 *	(1 - 93%)) =	581 \$	20,336
C (	50% *	1,076 *	44%)	+	(1 *	1,076 *	(1 - 44%)) =	839 \$	29,375

Table 17

Retraining of In-Service Employees							
D (50% * 1,076 * 29%) + (1 * 1,076 * (1 - 29%)) =					920	\$	32,199
Law Enforcement							
Category A (50% * 10,226 * 46%) + (1 * 10,226 * (1 - 46%)) =					7,874	\$	275,581
B (50% * 38 * 10%) + (1 * 38 * (1 - 10%)) =					36	\$	1,260
C (50% * 87 * 85%) + (1 * 87 * (1 - 85%)) =					50	\$	1,756
D (50% * 1,034 * 65%) + (1 * 1,034 * (1 - 65%)) =					698	\$	24,430
Fire and Rescue							
Category A (50% * 3,796 * 77%) + (1 * 3,796 * (1 - 77%)) =					2,334	\$	81,699
B (50% * 4,547 * 23%) + (1 * 4,547 * (1 - 23%)) =					4,024	\$	140,845
D (50% * 59 * 66%) + (1 * 59 * (1 - 66%)) =					40	\$	1,384
Correctional Facilities							
Category A (50% * 279 * 36%) + (1 * 279 * (1 - 36%)) =					229	\$	8,018
B (50% * 2,763 * 31%) + (1 * 2,763 * (1 - 31%)) =					2,335	\$	81,709
C (50% * 242 * 77%) + (1 * 242 * (1 - 77%)) =					149	\$	5,218
D (50% * 723 * 82%) + (1 * 723 * (1 - 82%)) =					427	\$	14,928
Lifesaving							
Category A (50% * 100 * 25%) + (1 * 100 * (1 - 25%)) =					88	\$	3,063
Schools							
Category A (50% * 6,321 * 0%) + (1 * 6,321 * (1 - 0%)) =					6,321	\$	221,235
D (50% * 6,321 * 0%) + (1 * 6,321 * (1 - 0%)) =					6,321		221,235
Waste Removal							
Category A (50% * 50 * 50%) + (1 * 50 * (1 - 50%)) =					38	\$	1,313
Total =					1,203,667	\$	42,128,418

Table 18

Recordkeeping: Medical Records

Hours = [((# workers x 10 minutes (.08 hour) + (3 potentially vaccinated x .15 minutes (.25 hour) x job turnover rate) + [# of exposures x (5 minutes + 15 minutes)]

Assumptions:

Cost of creating records for new hires: [((# of workers x .08 hour) + (# of potentially vaccinated x .2 hour)) x Job turnover]

- 10 minutes is required to establish a file for a new worker

- # potentially vaccinated = (# workers - (# workers x prior vaccination rate)) x participation rate.

- 15 minutes of HCP is need to prepare a written opinion with regard to the ability of each employee to accept the hepatitis B vaccine

Time required to update records and have a health care professional I prepare a written opinion workers reporting exposures exposure is [# of exposures x (5 minutes + 15 minutes)]

- 5 minutes to update existing files

- 15 minutes is required for a HCP to prepare a written opinion regarding an exposure incident

					Hours	No .12 Costs
Office of the Physicians						
Category A	(((967,629 x 0.17) + (269,366 x 0.25))	22.80%] + [179,493 x (0.083 + 0.25)] =			112,630	\$2,137,724
C	(((6,969 x 0.17) + (1,447 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =			489	\$9,275
D	(((69,685 x 0.17) + (15,740 x 0.25))	21.80%] + [0 x (0.083 + 0.25)] =			3,440	\$65,298
Office of Dentists						
Category A	(((359,662 x 0.17) + (87,580 x 0.25))	26.80%] + [279,485 x (0.083 + 0.25)] =			115,323	\$2,188,822
C	(((3,447 x 0.17) + (814 x 0.25))	31.60%] + [43,075 x (0.083 + 0.25)] =			14,593	\$276,984
Nursing Homes						
Category A	(((594,456 x 0.17) + (169,421 x 0.25))	49.90%] + [35,746 x (0.083 + 0.25)] =			83,466	\$1,584,192
C	(((38,352 x 0.17) + (12,848 x 0.25))	31.60%] + [5,002 x (0.083 + 0.25)] =			4,741	\$89,983
D	(((6,392 x 0.17) + (1,183 x 0.25))	31.60%] + [4,636 x (0.083 + 0.25)] =			1,981	\$37,592
Hospitals						
Category A	(((2,207,260 x 0.17) + (655,817 x 0.25))	27.20%] + [254,449 x (0.083 + 0.25)] =			231,391	\$4,391,797
B	(((188,595 x 0.17) + (65,866 x 0.25))	21.80%] + [34,579 x (0.083 + 0.25)] =			22,094	\$419,341
C	(((293,270 x 0.17) + (56,581 x 0.25))	31.60%] + [30,799 x (0.083 + 0.25)] =			30,480	\$578,519
Medical and Dental Labs						
Category A	(((227,773 x 0.17) + (60,899 x 0.25))	21.70%] + [5,177 x (0.083 + 0.25)] =			13,430	\$254,906
C	(((1,754 x 0.17) + (469 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =			131	\$2,492
D	(((197,766 x 0.17) + (52,155 x 0.25))	31.60%] + [487 x (0.083 + 0.25)] =			14,906	\$282,924
Home Health						

Category A	(((202,946 x 0.17) + (75,334 x 0.25))	36.30%] + [6,244 x (0.083 + 0.25)] =	21,440	\$406,924
C	(((3,000 x 0.17) + (792 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =	224	\$4,246
D	(((6,300 x 0.17) + (1,890 x 0.25))	36.30%] + [2,575 x (0.083 + 0.25)] =	1,418	\$26,909
Hospices				
Category A	(((10,565 x 0.17) + (3,091 x 0.25))	36.30%] + [684 x (0.083 + 0.25)] =	1,160	\$22,021
C	(((154 x 0.17) + (46 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =	12	\$226
D	(((27 x 0.17) + (19 x 0.25))	36.30%] + [215 x (0.083 + 0.25)] =	75	\$1,415
Hemodialysis				
Category A	(((11,926 x 0.17) + (4,224 x 0.25))	25.50%] + [4,684 x (0.083 + 0.25)] =	2,346	\$44,528
C	(((209 x 0.17) + (39 x 0.25))	31.60%] + [477 x (0.083 + 0.25)] =	173	\$3,286
D	(((553 x 0.17) + (166 x 0.25))	21.80%] + [141 x (0.083 + 0.25)] =	76	\$1,452
Drug Rehabilitation				
Category A	(((6,067 x 0.17) + (1,542 x 0.25))	25.50%] + [283 x (0.083 + 0.25)] =	456	\$8,646
C	(((149 x 0.17) + (56 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =	12	\$236
D	(((506 x 0.17) + (146 x 0.25))	21.80%] + [0 x (0.083 + 0.25)] =	27	\$507
Government Clinics				
Category A	(((52,156 x 0.17) + (14,312 x 0.25))	22.80%] + [16,013 x (0.083 + 0.25)] =	8,170	\$155,061
C	(((381 x 0.17) + (133 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =	31	\$588
D	(((3,808 x 0.17) + (1,142 x 0.25))	21.80%] + [0 x (0.083 + 0.25)] =	203	\$3,860
Blood/Plasma/Tissue Centers				
Category A	(((18,198 x 0.17) + (5,394 x 0.25))	21.80%] + [6,453 x (0.083 + 0.25)] =	3,117	\$59,165
C	(((200 x 0.17) + (44 x 0.25))	31.60%] + [139 x (0.083 + 0.25)] =	61	\$1,148
D	(((390 x 0.17) + (94 x 0.25))	36.30%] + [197 x (0.083 + 0.25)] =	98	\$1,864
Residential Care				
Category A	(((41,211 x 0.17) + (47,501 x 0.25))	49.60%] + [4,850 x (0.083 + 0.25)] =	10,980	
C	(((1,138 x 0.17) + (1,077 x 0.25))	31.60%] + [388 x (0.083 + 0.25)] =	275	\$5,227
D	(((6,753 x 0.17) + (7,050 x 0.25))	36.30%] + [2,571 x (0.083 + 0.25)] =	1,913	\$36,302
Personnel Services				
Category A	(((61,387 x 0.17) + (22,406 x 0.25)	100.00%] + [2,993 x (0.083 + 0.25)] =	17,034	\$323,305
D	(((102,090 x 0.17) + (51,045 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =	9,517	\$180,629
Funeral Services				
Category A	(((51,054 x 0.17) + (0 x 0.25))	21.80%] + [0 x (0.083 + 0.25)] =	1,892	\$35,911
C	(((2,721 x 0.17) + (410 x 0.25))	31.60%] + [11,735 x (0.083 + 0.25)] =	4,086	\$77,558
D	(((3,238 x 0.17) + (1,749 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =	312	\$5,924
Health Units in Industry				
Category A	(((34,184 x 0.17) + (0 x 0.25))	31.70%] + [0 x (0.083 + 0.25)] =	1,842	\$34,964
B	(((141,051 x 0.17) + (37,237 x 0.25))	21.80%] + [186,835 x (0.083 + 0.25)] =	69,473	\$1,318,594
D	(((3,497 x 0.17) + (1,049 x 0.25))	31.60%] + [0 x (0.083 + 0.25)] =	271	\$5,138

Table 19

Recordkeeping: Updating or Creating Training Records.

Hours + # employees x (1+ turnover rate/2) x 10 minutes (.017 hour)

Assumptions

One minute per employee per year will be required to create or update training records

				Hours	Cost
Office of Physicians					
Category A	967,626	x (1 + 22.80% / 2 x)	0.017 =	18,325	\$347,807
C	6,969	x (1 + 31.60% / 2 x)	0.017 =	137	\$2,604
D	69,685	x (1 + 21.80% / 2 x)	0.017 =	1,314	\$24,935
Office of Dentists					
Category A	359,662	x (1 + 26.80% / 2 x)	0.017 =	6,934	\$131,599
C	3,447	x (1 + 31.60% / 2 x)	0.017 =	68	\$1,288
Nursing Homes					
Category A	594,456	x (1 + 49.90% / 2 x)	0.017 =	12,627	\$239,663
C	38,352	x (1 + 31.60% / 2 x)	0.017 =	755	\$14,330
D	6,392	x (1 + 31.60% / 2 x)	0.017 =	126	\$2,388
Hospitals					
Category A	2,207,260	x (1 + 27.20% / 2 x)	0.017 =	42,627	\$809,053
B	188,595	x (1 + 21.80% / 2 x)	0.017 =	3,556	\$67,485
C	293,370	x (1 + 31.60% / 2 x)	0.017 =	5,775	\$109,615
Medical and Dental Labs					
Category A	227,773	x (1 + 21.70% / 2 x)	0.017 =	4,292	\$81,467
C	1,754	x (1 + 31.60% / 2 x)	0.017 =	35	\$655
D	197,766	x (1 + 31.60% / 2 x)	0.017 =	3,893	\$73,893
Home Health					
Category A	202,946	x (1 + 36.30% / 2 x)	0.017 =	4,076	\$77,368
C	3,000	x (1 + 31.60% / 2 x)	0.017 =	59	\$1,121
D	6,300	x (1 + 36.30% / 2 x)	0.017 =	127	\$2,402
Hospices					
Category A	10,565	x (1 + 36.30% / 2 x)	0.017 =	212	\$4,028
C	154	x (1 + 31.60% / 2 x)	0.017 =	3	\$58
D	27	x (1 + 36.30% / 2 x)	0.017 =	1	\$10
Hemodialysis					
Category A	11,926	x (1 + 25.50% / 2 x)	0.017 =	229	\$4,339
C	209	x (1 + 31.60% / 2 x)	0.017 =	4	\$78
D	553	x (1 + 21.80% / 2 x)	0.017 =	10	\$198
Drug Rehabilitation					
Category A	6,067	x (1 + 25.50% / 2 x)	0.017 =	116	\$2,207
C	149	x (1 + 31.60% / 2 x)	0.017 =	3	\$56
D	506	x (1 + 21.80% / 2 x)	0.017 =	10	\$181
Government Clinics					
Category A	52,156	x (1 + 22.80% / 2 x)	0.017 =	988	\$18,747
C	381	x (1 + 31.60% / 2 x)	0.017 =	8	\$142
D	3,808	x (1 + 21.80% / 2 x)	0.017 =	72	\$1,363
Blood/Plasma/Tissue Centers					
Category A	18,198	x (1 + 21.80% / 2 x)	0.017 =	343	\$6,512
C	200	x (1 + 31.60% / 2 x)	0.017 =	4	\$75

D	390	x (1 + 36.30% / 2 x)	0.017 =	8	\$149
Residential Care					
Category A	41,211	x (1 + 49.60% / 2 x)	0.017 =	874	\$16,595
C	1,138	x (1 + 31.60% / 2 x)	0.017 =	22	\$425
D	6,753	x + 36.30% / 2 x)	0.017 =	21	\$395
Personnel Services					
Category A	61,387	x (1 + 1.00% / 2 x)	0.017 =	1,049	\$19,906
D	102,090	x (1 + 31.60% / 2 x)	0.017 =	2,010	\$38,145
Funeral Services					
Category A	51,054	x (1 + 21.50% / 2 x)	0.017 =	961	\$18,244
C	2,721	x (1 + 31.50% / 2 x)	0.017 =	54	\$1,016
D	3,238	x (1 + 31.50% / 2 x)	0.017 =	64	\$1,209
Health Units in Industry					
Category A	34,184	x (1 + 31.60% / 2 x)	0.017 =	673	\$12,773
B	141,051	x (1 + 21.80% / 2 x)	0.017 =	2,659	\$50,472
D	3,497	x (1 + 31.60% / 2 x)	0.017 =	69	\$1,307
Research Labs					
Category A	87,484	x (1 + 21.80% / 2 x)	0.017 =	1,649	\$31,304
C	1,315	x (1 + 31.60% / 2 x)	0.017 =	26	\$491
D	352	x + 21.80% / 2 x)	0.017 =	1	\$12
Linen Service					
D	50,000	x (1 + 54.00% / 2 x)	0.017 =	1,080	\$20,489
Medical Equipment Repair					
Category A	473	x (1 + 36.30% / 2 x)	0.017 =	10	\$180
B	200	x (1 + 36.30% / 2 x)	0.017 =	4	\$76
C	5,152	x (1 + 21.80% / 2 x)	0.017 =	97	\$1,844
D	360	x (1 + 21.80% / 2 x)	0.017 =	7	\$129
Law Enforcement					
Category A	306,769	x + 10.10% / 2 x)	0.017 =	263	\$4,999
B	1,137	x (1 + 21.80% / 2 x)	0.017 =	21	\$407
C	2,617	x (1 + 31.80% / 2 x)	0.017 =	52	\$979
D	31,022	x (1 + 10.10% / 2 x)	0.017 =	554	\$10,515
Fire and Rescue					
Category A	113,866	x (1 + 21.80% / 2 x)	0.017 =	2,147	\$40,745
B	136,412	x (1 + 8.50% / 2 x)	0.017 =	2,418	\$45,885
D	1,770	x + 36.30% / 2 x)	0.017 =	5	\$104
Correctional Facilities					
Category A	8,381	x (1 + 31.60% / 2 x)	0.017 =	165	\$3,131
B	82,883	x + 41.00% / 2 x)	0.017 =	289	\$5,482
C	7,273	x (1 + 31.60% / 2 x)	0.017 =	143	\$2,717
D	21,687	x + 29.10% / 2 x)	0.017 =	54	\$1,018
Lifesaving					
Category A	5,000	x + 21.80% / 2 x)	0.017 =	9	\$176
Schools					
Category A	23,514	x + 25.00% / 2 x)	0.017 =	50	\$948
D	17,848	x + 36.30% / 2 x)	0.017 =	55	\$1,045
Waste Removal					
Category D	13,300	x + 36.30% / 2 x)	0.017 =	41	\$779
TOTALS				124,329	\$2,359,758