

May 2011

# Visitor/Contractor Orientation

*Welcome to Pantex!*



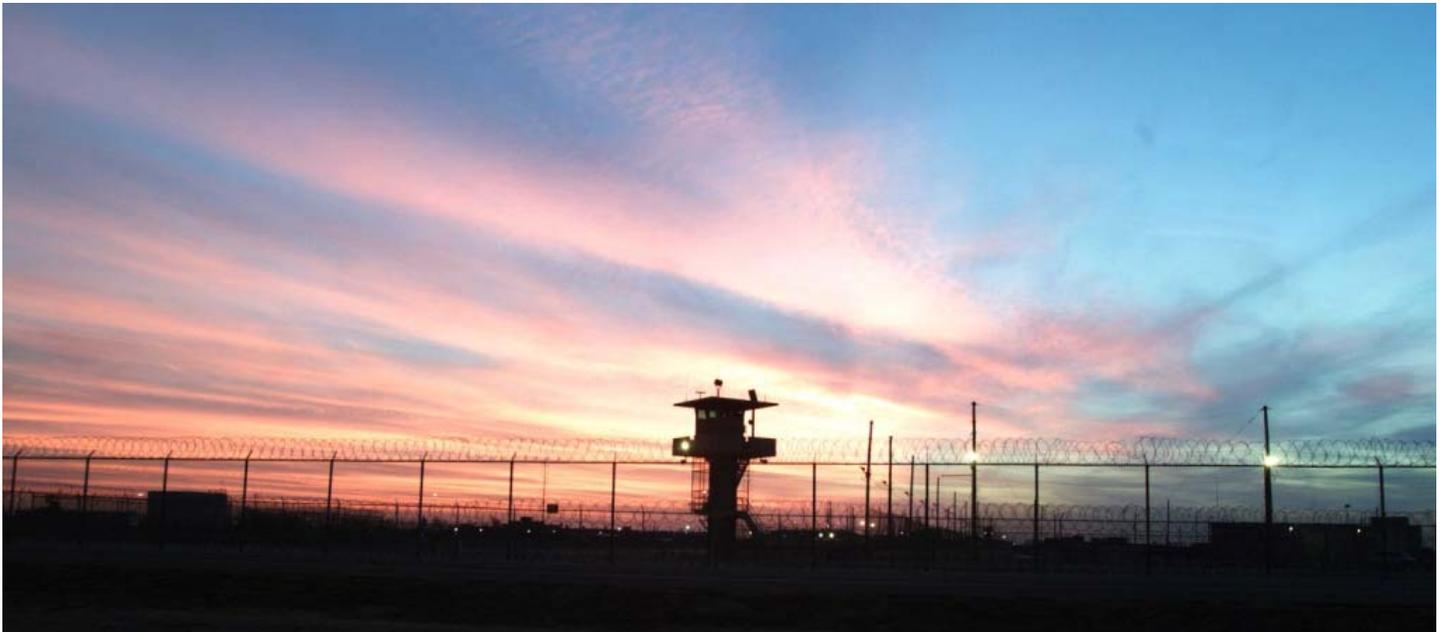
**B&W**  
Pantex

# Hello!

The staff of the Environment, Safety and Health Division for B&W Pantex would like to welcome you to the Pantex Plant. The following pages will give you important information about the Pantex Plant. You are required to read and comply with this information. Failure to comply with the rules and requirements of the Plant could result in immediate removal of access privileges; and in some circumstances, civil and/or criminal prosecution.

Once again, welcome to Pantex. If you have any questions after reading this information, please ask your escort or point-of-contact for clarification.

Have a safe and security conscious visit to the Pantex Plant.



# Visitor/Contractor Orientation

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After you read this information, you must fill out a Training Completion Report, PX-3864. This report must be filled out accurately or you will not receive credit in our training records system. The following page illustrates the proper way to fill out the PX-3864. All highlighted areas must contain the information requested. Leave the completed form with Access Control personnel before entering the Plant.

Call the section Point of Contact (POC) for questions or clarifications about the information contained in this book. For general information, contact Denise Durham, 806-477-6325.

## Document Symbols



This symbol indicates a point of contact for more information.

# Visitor/Contractor Orientation



This symbol indicates an important note.

# Visitor/Contractor Orientation

## PX-3864 Training Completion Report Example

**OUO**  
(Upon completion and submission to Pantex Plant)

**Instructions:**

- PRINT legibly, use BLACK INK stay inside the boxes
- VERIFY Reader information is complete and correct
- Complete Badge No. field at bottom, Sign & Date

|||||

Index No: PX-3864  
Page 1 of 1  
Issue No.: 19

**Training Completion Report**  
(Rev. 11/02/03 02/03/03 11/02/03 02/03/03 11/02/03 02/03/03)

Employee Name  
John Doe

Badge No. (or SSN)

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

Item Name  
Pantex Visitor/Contractor Orientation

Item No.

	5	5	3
--	---	---	---

Item Type

S	T
---	---

Item Revision Date

1	2	1	2	0	7
<small>M</small>	<small>M</small>	<small>D</small>	<small>D</small>	<small>Y</small>	<small>Y</small>

Test Version

--	--	--	--

Instructor Badge No.

--	--	--	--

Score

--	--

Complete

X	
<small>Y</small>	<small>N</small>

RIDS

A
---

Workflow Route No.

--	--	--	--

FSM Related?

	X
<small>Y</small>	<small>N</small>

---

**This training completion report will be used to activate your account in the training database. Please fill out the form completely and legibly, as all information is needed.**

Print Company Name: ABC Company

Plant Contact: Jane Partexar

Date of Birth: 07-04-57



\*\*\*\*\*

**ACKNOWLEDGMENT**

By signing and returning this report, I acknowledge that I have read and understand the information contained herein.

Pantex Visitor/Contractor  
#553.05

Further, I acknowledge that failure to follow and comply with the rules and regulations of this facility could result in immediate removal and in some circumstances, civil and/or criminal penalties.

**PLEASE VERIFY ALL INFORMATION IS CORRECT AND SIGN AND DATE**

---

Badge No. (or SSN)

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

Employee Signature:  
John Doe

Training Completion Date:

1	1	1	1	0	7
<small>M</small>	<small>M</small>	<small>D</small>	<small>D</small>	<small>Y</small>	<small>Y</small>

**OUO**  
(Upon completion and submission to Pantex Plant)

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## You Have a Right to a Safe and Healthful Workplace

# IT'S THE LAW!

- You have the right to notify your employer or the local Department of Energy (DOE) office about workplace hazards, without reprisal. You may ask that your name not be used.
- You have the right to participate in the activities referenced in 10 CFR 851 "Worker Safety and Health Program," on official time.
- You have the right to access copies of DOE worker protection publications; the worker safety and health program for your workplace; and the standards, controls, and procedures that apply to your workplace.
- You have the right to have access to some accident and illness recordkeeping logs and the information in records of any workplace illness or injury that you experienced.
- You have the right to observe monitoring or measuring of hazardous agents, to receive the results of your own monitoring, and be notified when monitoring results indicate an overexposure.
- You have the right to have a representative accompany the DOE's Director for enforcement or the Director's authorized personnel during the inspection of your workplace.
- You have the right to request and receive results of inspections and accident investigations.
- You have the right to decline to perform an assigned task because of your reasonable belief that, under the circumstances, the task poses an imminent risk of death or serious physical harm to you, coupled with your reasonable belief that there is insufficient time to seek effective redress through the normal hazard reporting and abatement procedures.
- Your employer must post this notice in your workplace.



Title 10 CFR 851 requires DOE contractors to provide their workers with a safe and healthful workplace. To obtain more information about those requirements and your rights; seek advice or assistance; or report an emergency contact your supervisor, your local DOE office, or the DOE Office of Health, Safety and Security (<http://www.hss.energy.gov>). Additional inquiries or concerns may be addressed to Brenda Finley, PXSO Employee Concerns Program Manager, or the B&W Pantex Employee Concerns Manager.

# Visitor/Contractor Orientation

## Security Awareness



### *Point of Contact*

Lauri Minton (806) 477-3556  
Opal Taylor (806) 477-5563  
Kyle Singleton (806) 477-5560

### **Pantex Plant's Mission:**

Pantex Plant is responsible for maintaining the safety, security and reliability of the nation's nuclear weapons stockpile. The facility is managed and operated by B&W Pantex for the U.S. Department of Energy (DOE)/National Nuclear Security Administration (NNSA).

### **Overview of facility/organization's major S&S program responsibilities**

There are six primary functions within the S&S Program:

1. **Program Planning and Management** establishes planning and management requirements for the overall S&S program.
2. **Information Security** establishes security requirements for the protection and control of information and matter required to be classified or controlled by statutes, regulations, or DOE directives.
3. **Personnel Security** assures that individuals with access to classified information and special nuclear material (SNM) do not pose a threat to the nation's security. Personnel Security coordinates background investigations for all prospective employees to ensure they are eligible, under DOE requirements, to receive an access authorization (security clearance).

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4. **Physical Protection** establishes requirements for protection of the physical aspects of security, including access control, alarms, barriers, and security systems installation and maintenance.
5. **Protective Force** exists for the protection of Special Nuclear Material, personnel, information, the environment, and government property from theft, diversion, sabotage, and malicious acts that could impact national security or the health and safety of employees and the public.
6. **Nuclear Material Control and Accountability (NMC&A)** provides management, control and accountability for all nuclear materials.

## Access Control

“Access Control” is the process of permitting or denying access to information, facilities, nuclear materials, resources, or designated security areas. Access Control measures include hardware and software features, physical controls, operating procedures, administrative procedures, and various combinations of these, designed to detect or prevent unauthorized access to Department of Energy interests.

## Escort Procedures

In some areas of the plant, visitors and sub-contractors must be escorted. The individual providing the escort is responsible for oversight and control of personnel in a security area who do not have the proper need-to-know or access authorization for that particular area. If you must be escorted in order to conduct your work at Pantex, it is your responsibility to stay with the person escorting you at all times. Failure to follow your escort’s guidance or direction can result in immediate – and possibly permanent – removal from Pantex Plant.

## Protection of Government Property

All employees are responsible for government-owned property provided for their use.

## Property removal

Government-owned property may not be removed from the Pantex Plant for any reason other than for official business or DOE/NNSA approved activities. Employees must have an approved property pass before removing government property from the plant.

# Visitor/Contractor Orientation

## Potential punishments

Conversion of government-owned property to personal use, misuse, or abuse is prohibited and punishable up to and including termination. Acts of theft or unlawful possession of property may result in fines of \$1000 to \$10,000 and/or 1 to 10 years of imprisonment.

## Badge Procedures

Security Badges are an important element of the access control system. It is your identification and allows you access into Pantex facilities. Security badges are issued at Access Control in Building 16-12. A security badge is issued only after an employee has been approved for access and has completed an Initial Security briefing.

## Wear Badge

Badges must be worn at all times while on DOE property. Place badge photo side out on the outer most piece of clothing, in a location above the waist,

### 1. Lost Badge

If you lose your badge, report to Access Control, Bldg. 16-12.

### 2. Stolen Badge

If your badge is stolen, report it immediately to Access Control at 477-3908 or 477-3909. If it is after hours, call the Operations Center at 477-5000.

### 3. Forgotten Badge

If you forget your badge, you may choose to return home or Access Control can issue a temporary badge for one day. If badge is lost or forgotten two or more times within a 12 month period, your management will be notified. Repeat offenders may risk losing access to Pantex property.

### 4. Badge Replacement - Your badge must be replaced if:

- Your contract company changes
- Your name or physical appearance changes
- It is faded or damaged

# Visitor/Contractor Orientation

## 5. Badge Verification

When entering Pantex, the security badge is used as verification to ensure only authorized personnel have access to the facility. Upon entering the Pantex facility present your badge for examination by the Security Police Officer or use the automated Argus System.

## 6. Badge Surrendering

Pantex employees, consultants, and contractors on leave for 30 consecutive days or those who will be gone for an unknown time period must return their badge to Access Control, Building 16-12. Security badges are the property of DOE and shall be returned to Access Control upon request, expiration, when no longer valid or required, or upon termination.

## 7. Badge Cautions

- It is against the law to counterfeit, alter, or misuse your badge.
- Do not use the DOE standard badge outside the Pantex facilities unless it is for an official government purpose.
- Remove badge when off-site.
- Protect your badge from theft; do not leave your badge in plain view or in your vehicle.

Questions about badges or badging procedures should be directed to 477-3908, 477-3909, or 477-6100.

## Identification of Prohibited and Controlled Items

### Prohibited Items

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The following are examples of prohibited items; these items are **NEVER** allowed **ANYWHERE** on-site at Pantex, unless prior authorization has been received from Safeguards & Security Division.

#### *Any type or amount of the following:*

- Alcohol
- Ammunition
- Arrows
- Blackjacks
- Chemical dispensing devices for pepper spray, mace, etc.
- Clubs (for items like golf clubs, see Controlled Items list)

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- Drug paraphernalia
- Controlled substances
- Drugs (prescriptions are allowed as long as they are prescribed for the employee who is using them – Medical must be notified of medication use)
- Compound bows
- Crossbows
- Explosives
- Explosive devices
- Fertilizer (Bulk)
- Firearms
- Illegal drugs
- Items that could be used to manufacture explosives
- Incendiary devices
- Knives with blade length exceeding 5 ½ inches
- Knuckles
- Nightsticks
- Nun chucks
- Stun guns
- Swords
- Technical Surveillance Equipment (i.e. any equipment specifically designed to clandestinely collect information)
- Zip guns

## Controlled Items

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The following are examples of controlled items that are allowed on-site at Pantex, but **MUST** remain in personal vehicles in the Property Protection Area.

*Any type or amount of the following:*

- Cameras
- Telephones (all types including cellular, and satellite)
  - **Exception:** Government-owned cellular telephones
- Computer Components
  - Cellular wireless cards
  - Wireless cards
    - **Exception:** Wireless cards issued for Pool Laptops in transit between 16-19 and your car
  - Bluetooth cards, devices, or adapters
  - Any other computer component or peripheral
- Computers not owned by Pantex – Exceptions for this category are given on a case-by-case basis by the ISSM or his designate
  - Laptops/Netbooks

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- Smart phones/PDAs (i.e. iPhones)
- Media players (i.e. iPods)
- Tablets, pads, and slates (i.e. iPads)
- Game devices (i.e. PSPs)
- Any other device with a processor and storage
- Global Positioning Systems (GPS) – (e.g., Portable (Transmit/Receive))
- Golf clubs
- On-Star
- Personal software
- Radio frequency (RF) devices  
(*Note: key fobs ARE allowed except in Nuclear Explosive Areas*)
- Recording devices (optical, video, audio, or data)
- XM or Sirius radio receivers with recording capabilities
- Any privately owned device, electronic or optical, capable of recording, processing, storing or transferring audio, computer data, video or photos.

*Basically – if you can plug it in, if you can upload, download, or transmit information with it, leave it in your personal vehicle in the Property Protection Area.*



**NOTE:** Government-owned equipment must be pre-approved and documented before it can be brought onto the plant site. Employees planning to purchase electronic equipment for use at work should contact the Technical Security Office prior to purchase.

## Protection of Unclassified Controlled Information

Unclassified Controlled Information (UCI) is broadly defined as unclassified information that may be exempt from public release and for which disclosure, loss, misuse, alteration, or destruction may adversely affect national security, government interests, or personal privacy. As with classified information, UCI is protected by giving access only to those who have had the proper training and the need-to-know. If you require access to UCI in order to perform your job, you will receive additional protection information at that time.

## Identification of Classification Markings

Classified information/material is protected according to federal statutes and Presidential Executive Orders. DOE is responsible, under the Atomic Energy Act of 1954, as amended, for classifying information and material related to atomic energy and its use in weapons. Executive Orders require some types of

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information to be classified for other aspects of national security. The Atomic Energy Act of 1954 and Executive Order 12958 govern classification policy.

Documents are marked to indicate that they are classified. Markings at the top and bottom of each page on classified documents will indicate the information is classified as Confidential, Secret, or Top Secret. Classified information must be protected at all times. It must either be locked in a GSA approved safe, vault, or vault-type-room, or safeguarded by an authorized cleared individual.

If you require access to classified information in order to perform your job, you must hold a DOE clearance, complete a Comprehensive Security Awareness briefing, sign a SF-312 Classified Information Nondisclosure Statement, and complete additional training prior to being given access.

## **Procedures for Reporting Incidents of Security Concerns**

It is everyone's responsibility to help deter, detect, and prevent an incident of security concern. Incidents of security concern are actions, inactions, or events at Pantex that:

1. pose threats to national security interests and/or critical DOE assets,
2. create potentially serious or dangerous security situations,
3. potentially endanger health and safety of the workforce or public (excluding safety related items),
4. degrade the effectiveness of the Safeguards and Security programs, or
5. adversely impact the ability of the organization to protect DOE safeguards and security interests.

*Any attempt to gain unauthorized access to classified information or matter, or any time classified is left unattended or unprotected are all considered Incidents of Security Concern.*

## **When Should YOU report an Incident of Security Concern?**

Immediately! Any person, who observes, finds, has knowledge or information about a potential incident of security concern must immediately report the information to their supervisor, an Incident of Security Concern (ISOC) Team Lead, or the Operations Center.

## Beryllium Awareness



### *Points of Contact*

Ken Meyer (806) 477-4209

Lou Ann Cox (806) 477-4417

Rosemary Camarillo (806) 477-5958

Beryllium is a lightweight metal. Beryllium dust can cause lung disease if inhaled. Beryllium is NOT radioactive.

Only a small percentage of the human population has the potential to be affected by beryllium. If you are reading this information, you are not expected to have any exposures. This information is for your general awareness and you will be given additional information if you are assigned to work in potential exposure areas.

Normal operations and maintenance do not release beryllium into the air. When there is a chance of releasing beryllium, exhaust systems are used if possible to capture the dust at the point of generation. Respirators are sometimes required if exhaust systems cannot be effectively used.

Pantex has also identified facilities with beryllium contamination from past operations. All active facilities that were previously contaminated have been cleaned to allowable levels as required by federal regulation for a safe workplace. These facilities have been released for normal operations and maintenance. Any demolition or other modifications to these facilities require a beryllium work permit which will specify protective equipment and controls.

## **Beryllium Medical Surveillance Program**

The Pantex Occupational Medicine Department (OMD) offers beryllium testing (called Be-LPT) to anyone who feels they have been exposed to beryllium. The beryllium test is a voluntary blood test used to identify individuals who have acquired a sensitivity or allergy to beryllium.

For questions about beryllium issues or work place monitoring, contact Industrial Hygiene at 806-477-4209 or 806-477-5958. For questions about medical testing for beryllium contact Occupational Medicine at 806-477-3179 or 806-477-5993.

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## Counterintelligence at Pantex



### *Points of Contact*

Bruce Johnston, Cyber CI Officer (806) 477- 3631

Michelle Abell, CI Awareness Coordinator (806) 477- 5374

To mitigate the threat to Pantex employees from both insider and foreign collection attempts, the DOE implements a required reporting system. If you, or a fellow Pantex employee experience any of the following, you must report it to the Pantex CI Field Office:

- Foreign travel to a sensitive country or where sensitive subjects will be discussed
- Any substantive professional, personal, or enduring financial relationship with sensitive country foreign nationals
- Any contacts with foreign nationals who make requests that could be attempts at exploitation or elicitation
- Requests for unauthorized access to classified or otherwise sensitive information
- Unusual solicitations (anyone of any nationality)
- Anomalies (behavior exhibited by a foreign national that is inconsistent with the expected norm)

Additional information can be obtained from your Pantex CI Field Office and the CI Web Site, located on the Pantex intranet. The Pantex Counterintelligence Team is here to support national security initiatives and encourages each employee to report any suspicious activity.

### ***Voluntary Protection Program***

B&W Pantex is participating in the U.S. Department of Energy's Voluntary Protection Program (DOE-VPP) and was awarded DOE-VPP Star status in May of 2010. This program closely parallels the Occupational Safety and Health Administration (OSHA) VPP.

The DOE-VPP extends official recognition to outstanding safety and health programs that are successful in reducing workplace hazards and fosters a cooperative relationship with DOE, the contractor, and contractor employees in



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their efforts to achieve excellence. The VPP encourages the creative stretch for excellence and goes beyond baseline compliance with OSHA-related requirements.

In addition to your individual safety and health responsibilities, you have the right to . . .

1. Willingly participate in safety and health issues.
2. Report or STOP unsafe acts and conditions.
3. Examine self-relevant reports such as dose reports and accident reports.
4. Demonstrate continuous improvement.
5. Become actively involved and ask questions.

You are encouraged and expected to consider safety and health prior to performing any work. This includes ensuring you understand the scope of work you are about to perform, being confident that all hazards have been identified and will be adequately controlled, and providing feedback on anything unusual, unexpected, or noteworthy.

## Emergency Preparedness



### *Points of Contact (including Emergency Numbers)*

Operations Center (806) 477-5000 (24 hrs)

Emergency Services Dispatch (806) 477-3333 (24 hrs) for Fire or Medical Emergency

Radiation Safety (806) 477-5555 (24 hrs)

Security (806) 477-3922 (24 hrs)

Although most of the Pantex emergency planning and emergency preparedness responsibilities are addressed by the Emergency Management Department, emergency preparedness is part of everyone's job. If there is an emergency, site-level drill or exercise, you should participate by responding appropriately for the event.

As a visitor/contractor to the plant, your Point of Contact (POC) is the person/group that is sponsoring your visit. Questions regarding emergency procedures or protective actions can be addressed by your POC or

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immediate job supervisor. If you are under escort by a Security Police Officer, the officer will provide direction for protective actions.

### ***Individual Responsibilities***

It is your responsibility, regardless of your employer or contracting tier, to take appropriate protective actions when you discover, or receive a report of, an unsafe condition. These responsibilities include, but are not limited to:

- Take actions to ensure your safety.
- Warn other personnel in the immediate area of the unsafe condition.
- Take actions to isolate the unsafe condition, if appropriate.
- Notify your POC/supervisor and the appropriate Plant emergency services of the unsafe condition.
- Assist co-workers and other personnel with implementation of protective actions, if necessary.
- Follow directions provided by emergency response personnel or as communicated by:
  - ✓ Public Address (PA) announcement
  - ✓ Alpha-numeric page
  - ✓ Two-way radio
  - ✓ Outdoor warning sirens activation (personnel should seek additional information as to whether the sirens were activated for severe weather or a hazardous materials release).

### ***Announcements that are precursors to additional potential weather warnings.***

While the above-mentioned notification systems should provide warning to the vast majority of plant personnel and visitors, each individual must exercise common sense and general safety awareness. For example, if you are working outdoors or preparing to work outdoors with a storm approaching and you are not aware of any weather warnings, contact your POC/supervisor or the Operations Center, extension 5000, to confirm any weather warnings that might be in effect at the current time.

The following warnings (except for the tornado warning) have no specific personnel protective actions associated with them, beyond providing a precursor to additional potential weather warnings. However, all personnel should use caution when going/working outdoors and contact your supervisor/POC for further direction.

- “Lightning Warnings are in effect” - Lightning strike within 35 miles of the Pantex Plant.

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- “Lightning Warnings with Personnel Safety Conditions are in effect” - Lightning strike within 10 miles of the Pantex Plant.
- “Severe Weather Warning for High Winds is in effect” - The National Weather Service (NWS) has issued a “High Wind Warning” for an area that includes the Pantex Plant.
- “A Severe Weather Warning with Personnel Safety Conditions for High Winds is in effect” - weather information source(s) indicates 50+ mph sustained or gust winds at or near the Pantex Plant.
- “The National Weather Service has issued a Severe Thunderstorm **\*Watch** - Plant personnel should remain alert for possible severe weather warnings.” The NWS has issued a Severe Thunderstorm Watch for Carson County.
- “A Severe Thunderstorm **\*Warning** is in effect”. All plant personnel should remain indoors - The NWS issues a “Severe Thunderstorm Warning” for Carson County or any of the eight surrounding counties.
- “The National Weather Service has issued a Tornado **\*Watch**. Plant personnel should remain alert for possible severe weather warnings.” - The NWS has issued a “Tornado Watch” for Carson County.
- “A Tornado **\*Warning** is in effect. All plant personnel Seek Shelter from Severe Weather immediately. Cease operations, cease transportation activities, and place materials in a safe and stable configuration.” - The NWS has issued a Tornado Warning for Carson County or any of the eight surrounding counties or there is a report of a tornado, funnel cloud, or rotating wall cloud near the Pantex Plant by Plant personnel. (Seek Shelter from Severe Weather procedures will be discussed in the protective actions section.)

## **Definitions of NWS, watch and warning:**

**Watch** - A watch is used when the risk of a hazardous weather has increased significantly, but its occurrence, location, and/or timing is still uncertain. It is intended to provide enough lead time so that those who need to set their plans in motion can do so.

**Warning** - A warning is issued when hazardous weather is occurring, is imminent, or has a very high probability of occurring. A warning is used for conditions posing a threat to life or property.

## ***Protective Actions***

Protective actions may be necessary in the event of emergency. The most prevalent protective actions for personnel at the Pantex Plant are:

- Avoid the Area

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- Shelter for Hazardous Material Release
- Shelter for Severe Weather
- Shelter for Security Event
- Evacuation

*These actions may be used individually or in combinations, as the situation warrants.*

## ***Shelter for Hazardous Material Release***

Shelter-in-Place for Hazardous Material Release is a standard protective action to protect personnel from an airborne hazardous material release (either radiological or chemical). Ask your supervisor or point of contact if you need more information. If you are directed to Shelter-in-Place for Hazardous Material Release:

- Move indoors (if outdoors).
- Move to the innermost area of the building or structure (put as many barriers as possible between you and the outside environment).
- Close exterior doors and windows.
- Close as many interior doors and windows within the building as possible.
- Turn off and cover exhaust fans (laboratory hoods, bathroom vent fans, kitchen fryer hoods, etc.), if possible.
- Turn off air conditioners, heaters, and air-handling units that draw in outside air, if possible.
- Refrain from eating, drinking, smoking, applying cosmetics, using tobacco products or chewing gum. Remain inside until either an “All-Clear” message or other instructions are received from the Operations Center or your supervisor.
- If you are in a vehicle and need to Shelter-in-Place for Hazardous Material Release, roll up windows and close vents that draw in outside air (including heater and air conditioning vents). Proceed to a safe area that is upwind of the incident area.
- ***Personnel with Medical Conditions*** If you have a pre-existing medical condition and are required to take medication during a Shelter-in-Place for Hazardous Material Release emergency, be sure you follow these guidelines prior to taking medicine or injections:
  - ✓ Wash your hands, face, and/or the injection area.
  - ✓ Proceed with administering of medication.
  - ✓ Report to the Occupational Medicine Department after termination of the emergency protective action.

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## *Shelter for Severe Weather*

Seek Shelter from Severe Weather is the protective action taken to protect personnel from the effects of severe weather. Employees and visitors are directed to seek the best shelter available in the amount of time available. To assist in making this decision, a sampling of Plant structures is listed below by general type and in order of declining level of protection:

- Sturdy or rugged buildings like 12-130, 12-37, 12-75, 12-116, bays or cells (***highest level of protection***)
- Brick buildings without windows
- Brick buildings with windows
- Cinder block buildings
- Metal buildings
- Temporary buildings and/or modular trailers (***lowest level of protection***)

If time permits, move to a more substantial building. However, it is safer to go to the center of a modular trailer than to be caught outdoors by a tornado while trying to get to a more substantial building.

If inside a building, the safest place is on the lowest level, in a small room in the interior portion of a building, away from all exterior doors and windows. Put as many walls as possible between you and the outside of the building to provide additional protection. If you cannot get to the lowest floor, center hallways are often the most reinforced part of a building.

Once you are in the safest location available:

- Protect yourself under a sturdy object, such as a heavy table or under stairs (modular office furniture is not suitable).
- Hold onto the sturdiest object available.
- Remain in place until the danger has passed and an “All Clear” message is received from the Operations Center (usually over the PA system).

## *Shelter for Security Event.*

The Shelter for Security Event protective action involves a series of protective measures implemented by the Protective Force and plant personnel to maximize the protection afforded national security assets and minimize the risk to plant personnel health and safety during an actual or potential security-related event or incident. These protective measures may be implemented individually, or in combination with other actions,

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to enhance the effectiveness of the Protective Force response and mitigate the consequences associated with event culmination, while limiting the exposure of plant personnel to adverse impacts.

The Shelter for Security Event protective action may be specific to an area or event. Subsequently, plant personnel must be attentive to public address (PA) announcements, pager messages, and instructions from Security personnel or other emergency responders, and implement the directed actions as quickly as possible.

### **Response:**

- Stop work.
- Secure classified materials/systems/repositories.
- Cease operations, cease transportation activities, and place materials in a safe and stable configuration.
- Report to, or remain at, your designated shelter location. (Shelter for Security Event may be applied to a building/facility, zone, or the entire plant.)
- Implement personnel and/or material accountability if directed by the OC or emergency response personnel.
- Implement Deny Access protective measures, if applicable to your work location.
- Restrict movement in ramps between security zones or the entire plant.
- Secure access to shelter location, if possible.
- Stay clear of doors and windows.
- Contact the Operations Center, x5000, to report suspicious personnel or activities.
- Evacuate a building/facility, zone, or the entire plant at the direction of emergency response personnel.

### ***Evacuation***

You may need to evacuate an area as result of emergency or as otherwise directed by a supervisor, Building Manager or PA announcement. If you are in another area of the Plant not affected by the evacuation, then you should remain clear of the evacuated area and evacuation routes.

If evacuation is required:

- Evacuate the building using the safest and fastest route possible, avoiding the area of the emergency condition to the greatest extent possible.
- Travel to the evacuation destination (*muster station*, an alternate on-site location, or an off-site location) designated by emergency responders.

## Visitor/Contractor Orientation

- ✓ **A Muster Station** is a specified location that is a safe distance and direction from the evacuated emergency scene. A Muster Station provides instructions on how to respond to a specific emergency, and a means of receiving and transmitting information. You will find maps for Muster Stations in most buildings on site. If your assigned Muster Station appears not be in a safe location during an evacuation, immediately proceed in a safe direction and manner to another Muster Station and promptly report your location to the Operations Center, 806-477-5000.
- Follow directions of Security Police Officers (SPOs), Firefighters, other emergency responders, or supervisors.
- Contact the OC at extension 5000, advising the Plant Shift Superintendent (PSS) of the emergency condition, evacuated location, any emergency assistance required (i.e., injuries), any unaccounted for personnel from the evacuated location, and any other pertinent information.
- Do not attempt to reenter an evacuated building. Initial emergency responders are responsible for controlling access to the evacuated area.
- Follow the instructions posted or provided by the PSS, Security Police Officers (SPOs), firefighters, other emergency responders, or supervisors.
- Contact Radiation Safety at extension 5555 if you evacuated because of a tritium alarm.
- Complete a PX-970 and provide the information to emergency responders and/or the OC.
- Remain at the muster station until given the all clear or otherwise directed by emergency response personnel or other competent authority.

Specific evacuation routes are not spelled out, because they are dependent on the incident, its location, and the current meteorological conditions.

### ***Personnel Accountability***

**Personnel Accountability** is a critical step in the protective action process, especially in conjunction with evacuation from an impacted facility. The objective of accountability procedures is to ensure that search, rescue, and/or assistance efforts can be initiated promptly to provide for the safety of building/facility personnel who may be injured, trapped, or unaware of the emergency condition. Additionally, a timely and accurate accountability of personnel can prevent the initial emergency responders (i.e., firefighters) from conducting a needless, and potentially hazardous, search and rescue mission.

# Visitor/Contractor Orientation

- **Muster Station Accountability** - In the event of a building evacuation, muster stations have been identified for specific zones and buildings to allow for evacuated personnel to have a pre-designated location to report so that personnel accountability may be performed. Once at the Muster Station, personnel are to complete a PX-970 and submit it to the Operations Center. Building Wardens should have a general knowledge of personnel located in their facility, while Supervisors are responsible for knowledge of their personnel's whereabouts (i.e., on plant site, off site, etc.). When the PX-970 is received, the Plant Shift Superintendent (PSS) compares the personnel listed on the form to the PeopleSoft database for facility occupants to determine if personnel are missing.
- **Plant-Wide Personnel Accountability** - Although plant-wide accountability is not a specific program requirement, there are situations and/or strategic decisions where plant accountability information would be beneficial to the Emergency Manager. Use of Plant-Wide Personnel Accountability is initiated when an emergency situation necessitates the accountability of on-site personnel, including visitors and subcontractors; typically, in conjunction with Seek Shelter from Severe Weather or Shelter-in-Place for Hazardous Material Release protective action.



**NOTE:** In the event of any accountability, visitors and subcontractors to the site should always report to their POC, supervisor, or Security Police Officer (SPO) escort as well as following site requirements.

## ***Emergency Notification***

The Plant Shift Superintendents (PSSs) monitor plant safety systems, including weather-related systems, to ensure plant personnel are provided with event-specific information as rapidly as possible. In addition to issuing directions to “Seek Shelter from Severe Weather,” if severe weather threatens the Pantex Plant, the PSS is responsible for issuing other protective actions, as well as the “All Clear” when emergency conditions no longer exist.

## ***Fire Safety***

If there is an indication of a potential fire, either by sight, smell, or activated alarm system, evacuate immediately.

Evacuate potentially burning buildings by the nearest available exit. This reduces the potential for becoming lost in confusing and smoky conditions, overcome by rapidly developing fire, moving into the fire area, or hampering emergency response efforts.

# Visitor/Contractor Orientation

If you are in a potentially burning building:

- If time allows, activate manual fire alarm pull station.
- Evacuate to the assigned Muster Station (only if the route is safe and not involved in the fire).
- Follow posted instructions, public address system announcements, or other provided directions.
- Remain at the Muster Station, or at a safe location away from the affected building(s), until an “All Clear” message has been issued by the Operations Center.

## Environmental Management System



### *Points of Contact*

EMS Hotline 2367

Pantex is committed to excellence in environmental stewardship. Your Company has adopted the Pantex Environmental Policy that establishes the basic principles for conducting work within the Pantex boundaries. You are our partner in protecting the environment while you are working here. We encourage you to look for opportunities that exceed the basic criterion of compliance, whether in waste management, pollution prevention, energy conservation or in the use of recycled materials, to accomplish your work. Your active support will help Pantex maintain national recognition as a leading DOE/NNSA facility.

## Environmental Policy

To Excel in:

- Implementing appropriate controls and actions to minimize environmental impacts caused by our activities, products and services;
- Continual improvement of our protection of the environment in Plant processes, including pollution prevention and recycling;
- Strict compliance with relevant regulations and requirements;
- Setting and reviewing environmental objectives and targets;
- Communication of this policy to all employees; and
- Availability of the policy to the public.

# Visitor/Contractor Orientation

## Pantex Environmental Programs

Pantex has a number of programs designed to help us meet our responsibilities:

- Environmental Management System
- National Environmental Policy Act (NEPA) Program\*
- Permitted Air (Emissions) Compliance Programs
- Permitted Water Compliance Programs (Waste Water, Storm Water, Drinking Water)
- Cultural Resource Program (History)
- Natural Resource Management Program\*\*
- Environmental Monitoring Program
- Waste Management Program
- Pollution Prevention/Waste Minimization Program
- Environmental Remediation Program\*\*\*

\*\* - Migratory birds frequently visit the Pantex site. Federal laws protect these birds, and their nests. Pantex is also home to wildlife species than can pose a nuisance. If you encounter any wildlife; please leave it and its home alone.

\*\*\* - Pantex Plant has analyzed and identified 252 areas of historic solid waste management as “Solid Waste Management Units” (SWMUs). Any soil disturbance (for example, digging, trenching, etc.) is subject to a SWMU Interference Notification Permit that must be approved by the Texas Commission on Environmental Quality.

## Spill Prevention and Control

Pantex maintains a plan for spill prevention and control. When a spill is observed, the Pantex Operations Center is notified as a central point of command for the activity.

## Energy Management

The vision of B&W Pantex Energy Management is to provide sustained and superior energy management services, and to position Pantex to meet NNSA energy requirement needs through 2025 and beyond. Energy Management’s mission is to incorporate renewable energy and energy efficiency technologies site-wide.

# Visitor/Contractor Orientation

## Hazardous Chemicals



### Point of Contact

Thorban Weaver (806) 477-5933

At Pantex, hazardous chemicals are labeled with a Plant-specific label. The hazards criteria on the Pantex label vary slightly from the hazards on the National Fire Protection Association (NFPA) label.

Visitors and contractors must not bring any hazardous chemicals onto the Plant site

without prior approval from Hazard Communication. When a chemical has been approved for use, the unused portion must be removed from the site when work is completed.

If a pregnant female reports her pregnancy to her supervisor and the supervisor is unable to determine the reproductive hazards of the chemicals with which that employee works, they may send a list of chemicals, with Material Safety Data Sheets (MSDS), to the Hazard Communication Group (HAZCOM) for analysis.

HAZCOM and Industrial Hygiene will do the evaluation and return recommendations to the subcontractor supervisor.

CHEMICAL NAME:		SPECIAL INFORMATION C-Carcinogen COR-Corrosive EXP-Explosive O <sub>2</sub> -Reacts with oxygen OX-Oxidizing Agent P-Pressure vessel PLY-Polymerizes SC-Suspect Carcinogen R-Reproductive hazard W-Reacts with water SKIN-Absorbs through or irritates the skin PER- May form explosive peroxide A -Contact with acids forms a toxic gas W -Contact with water forms a flammable gas S-Sensitizing Agent
HEALTH	FLAMMABILITY	
REACTIVITY	FORM	
SPECIAL INFORMATION		
4-Very High 3-High 2-Moderate		
1-Low 0-None		
IN CASE OF EMERGENCY CONTACT: PANTEX PLANT (806) 477-5000		

## General Employee Radiation Training (GERT) for Visitors and Contractors



### Points of Contact

Scott Wilson (806) 477-4946

Bill Hayes (806) 477-5243

Gary Britten (806) 477-4428

The material presented in this section is General Employee Radiation Training (GERT). This training material is provided to visitors and contractors who will require ENTRY into posted radiological areas or who could

## Visitor/Contractor Orientation

potentially receive occupational exposure. This means that you may routinely enter radiological controlled areas, encounter radiological barriers, postings, radioactive material, or radiation producing devices.

GERT will NOT suffice as the required training if you will be performing radiological work. This means if you will be using, handling, moving or operating any radioactive material or generating radioactive waste, additional training is required. Performing radiological work at Pantex requires further training such as:

- Radiological Worker 1 (CR 7.06 and JT 7.10)
- Radiological Worker 2 (CR 7.04 and JT 7.12)

If you will be performing radiological work please, contact your Pantex Point-of-Contact (POC) to schedule additional Radiological Worker training.

You are considered a **Visitor** at Pantex if you are:

- A visiting dignitary (Federal, state, local, and foreign officials.)
- A member of the public (tour group).
- A minor or a student.

You are considered a **Contractor** if you are an individual who is:

- Either a DOE or DOE contractor employee,
- An employee of a subcontractor to a DOE contractor,
- An individual who performs work for or in conjunction with DOE or utilizes DOE facilities.

The need for dosimetry services may be required by the posted radiological areas you will be entering at Pantex. Visitors/Contractors will need work with their assigned POC and submit a PX-5263. If a dosimeter is required it can be requested by completing a PX-2868, *Visitor Dosimetry Information*. If there are any questions, call 477-5243.

Contractors that are unescorted in posted areas and need a dosimeter will be required to take an instructor led GERT class (CR 7.03) and pass a written test.

Contact your Pantex POC for questions concerning this information.

# Visitor/Contractor Orientation

## **Visitor/Contractor Responsibilities**

A positive radiological attitude is everyone's responsibility. All individuals have an impact on maintaining exposures to radiation and radioactive material ALARA. Planning work is the key to minimizing your exposure and reducing your dose.

- You shall acknowledge receipt and an understanding of GERT for Visitors and Contractors by your signature on the Training Completion Report, PX-3864 and, if a TLD is required, on the Visitor Dosimetry Information form PX-2868.
- You shall enter only those areas that GERT training allows (see Table 1).
- You shall obey all radiological postings and labels.
- You shall **NOT** perform hands-on work with radioactive material.
- If issued a dosimeter (TLD), wear it clipped to your clothing between the neck and waist. (Clipped to a belt or belt loop is acceptable.)
- Should you lose your dosimeter, report to Building 12-122 and obtain a replacement. Do not take your dosimeter offsite. (Your dosimeter is sensitive to extreme heat and excessive moisture.)
- Return the dosimeter to your Pantex Point-of-Contact (POC) or leave it hanging on an official dosimeter storage location at the end of your visit.
- If you have a medical procedure performed that involves radioactive material inside your body notify Pantex's Occupational Medicine Department at extension 3033, who will notify RSD External Dosimetry.
- Use ALARA principles (minimum time, maximum distance, and shielding) when around radioactive materials or exposure to radiation.
- During a RAMS alarm, personnel outside of the affected area **MUST NOT** walk in front the area where a Tritium/Alpha alarm is going off.
- Do not enter any Radiation Areas unless Escorted.
- If visiting a Radiological Area with an Escort:
  - Obey the instructions of the Escort.
  - Obtain and properly wear dosimeter as instructed by procedure, Radiation Safety personnel, or your Escort.
  - Utilize ALARA techniques to minimize your exposure.
- Be alert and report unusual radiological situations to Radiation Safety at 477-5555.

# Visitor/Contractor Orientation

- Comply with Emergency Response Procedures

Table 1 below shows what radiological posted areas Visitors and Contractors may enter with GERT training. Several radiologically posted areas can be entered without an escort while other areas **require a radiological escort** as well as completion and approval of the PX-5263.

Table 1. Types of Posted Areas GERT Allows Entry

GERT Allowed Entry	
Types of Posted Radiological Areas	Can Visitors/Contractors Enter
Controlled Area	Yes, escort not required
Radioactive Material Area	Yes*, escort not required
Radiation Area	Entry* <b>ONLY</b> under Escort & RSD Approval
High Radiation Area	No
Very High Radiation Area	No
Airborne Radioactivity Area	No
Radiological Buffer Area	Entry* <b>ONLY</b> under Escort & RSD Approval
Contamination Area	Entry* <b>ONLY</b> under Escort & RSD Approval
High Contamination Area	No
Soil Contamination Area	Yes*, but <b>NO</b> soil disturbance
Fixed Contamination Area	Yes*, <b>NO</b> disturbance of fixed contamination
* No handling, using, or touching of Rad Material	

## ***Introduction***

GERT is provided to site Visitors/Contractors who will be entering radiologically controlled areas at the Pantex Site and will **NOT** be performing work with radioactive materials. Individuals are responsible for observing and obeying radiological postings and work procedures.

Additional radiological training is required for Visitors/Contractors who are identified as radiological workers. This means if you will be using, handling, moving or operating, any radioactive material or generating radioactive waste, additional training is required.

# Visitor/Contractor Orientation

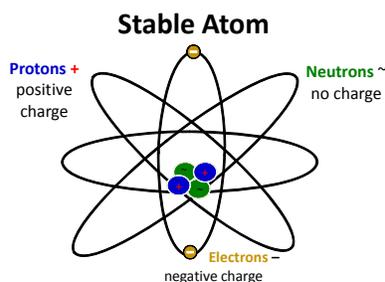
Every Visitor/Contractor must play an active part in maintaining exposures to radiation and radioactive materials to As Low As Reasonably Achievable (ALARA). In order to do this, we need to develop a sense of pride and ownership toward our daily activities and have a healthy respect -- not fear -- for the type of work that is performed at Pantex.

After completing GERT, you will be able to discuss the following

- Hazards associated with radiological areas and Radioactive Material,
- Limitations for working in or accessing radioactive controlled areas, and
- Responsibilities for complying with radiological requirements, including entry and emergency response actions.

## ***Identify Basic Radiological Fundamentals and Concepts (EO1)\****

All matter is composed of atoms. Atoms are composed of three basic particles: protons, neutrons, and electrons. As shown, protons have a positive charge, electrons a negative, and neutrons have no charge. Most atoms contain a ratio of neutrons and protons that renders them stable. They do not need to rid themselves of excess energy.

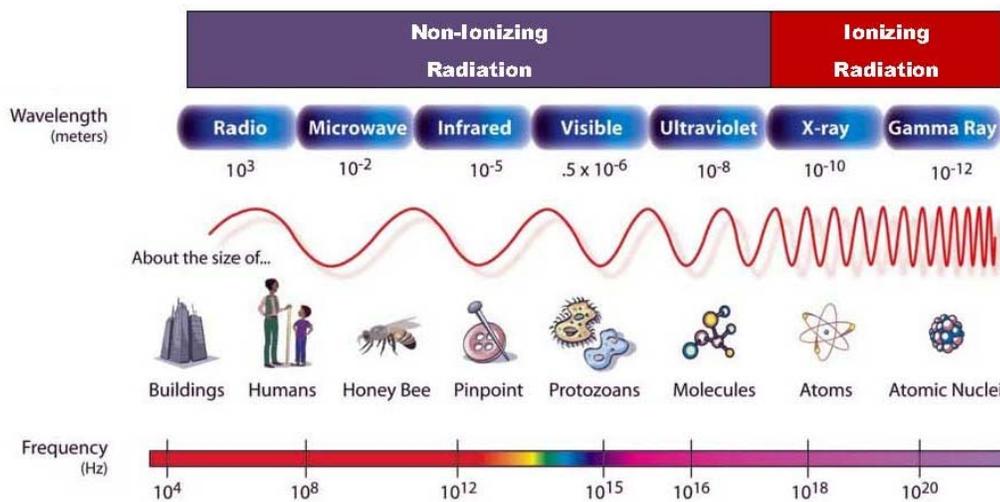


All radiation can be seen in the electromagnetic spectrum, such as radio, microwave, infrared, visible light, x-rays and gamma rays. The only difference between one type of electromagnetic radiation from another is the wavelength. The difference between them is their wavelength which relates to the amount of energy the wave can carry. The shorter the wavelength, the higher the energy. Radio waves have very large wavelengths in kilometers, and microwaves have shorter wavelengths in centimeters.

Below is a diagram showing the different types of radiation in the electromagnetic spectrum.

# Visitor/Contractor Orientation

## THE ELECTROMAGNETIC SPECTRUM

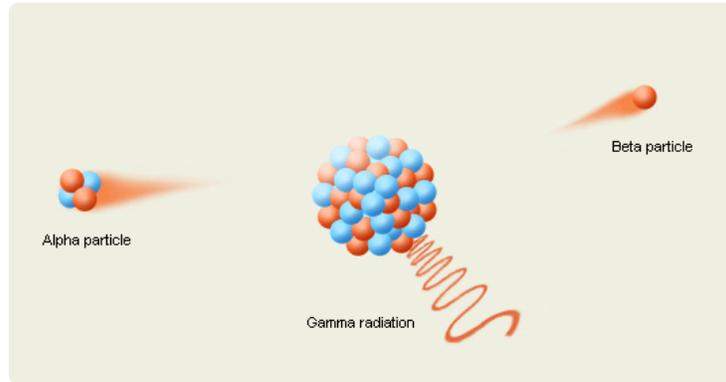


**Non-ionizing radiation** does not have enough energy to remove an electron from an electrically neutral atom. Even though non-ionizing radiation is capable of causing biological damage, it is not a major radiological concern. Types of non-ionizing radiation include:

- Radio waves
- Microwaves
- Infrared
- Visible Light
- Ultraviolet Light

**Ionizing radiation** has enough energy to remove electrons from electrically neutral atoms. Ionizing radiation is the greatest concern. Unstable atoms contain too much energy and therefore try to become stable by releasing their excess energy in the form of X-rays, particles, or energy waves. This release of energy is known as radiation. Radiation is *energy* emitted through space and matter.

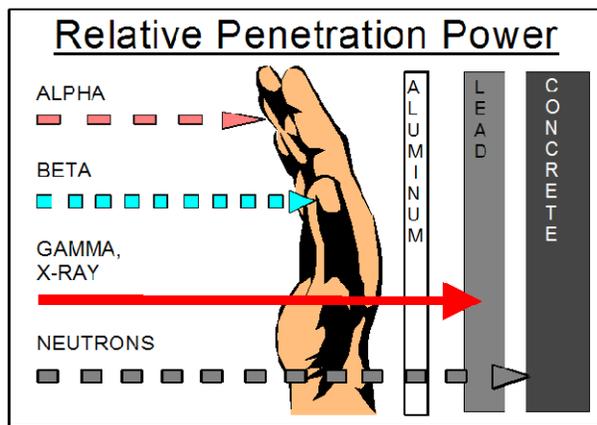
## Visitor/Contractor Orientation



***Ionizing radiation*** is energy released in the form of rays or particles and is emitted from unstable atoms.

There are four basic types of ionizing radiation:

- Alpha particles
- Beta particles
- Neutron particles
- Gamma rays or waves



Alpha particles can be stopped by your layer of skin or a sheet of paper. Beta particles have more energy and can be stopped by material such as aluminum. Gamma rays must be shielded by extremely dense material like lead or tungsten. Neutrons shielding must contain large hydrogen rich material, such as water or concrete.

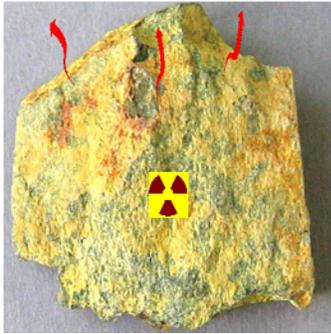
# Visitor/Contractor Orientation

## ***What is the difference between Radiation and Radioactive Contamination?***

Contamination is radioactive material in an unwanted place or location. Exposure to radiation does NOT result in contamination of a worker. Only if a worker came in contact with radioactive contamination would the potential exist for the worker's skin or clothing to be contaminated. Simply put,

***Radiation*** is energy and ***Contamination*** is unwanted radioactive material in a location.

**Radioactive material** is any material that emits radiation as it decays.



Radiation, which is energy, given off from Uranium Ore.



Desk contaminated with radioactive material.

## ***Sources of Radiation***

Throughout time, people have been exposed to radiation. We are exposed to naturally occurring and man-made radiation from our environment and even from materials inside our bodies. The average U. S. annual radiation dose to a member of the general population is about 620 mrem per year. The 620 mrem per year is a combination of both natural background and man-made sources of radiation. The unit "mrem" is the basic unit of measurement used to estimate the amount of biological injury to the cells in our bodies by radiation.

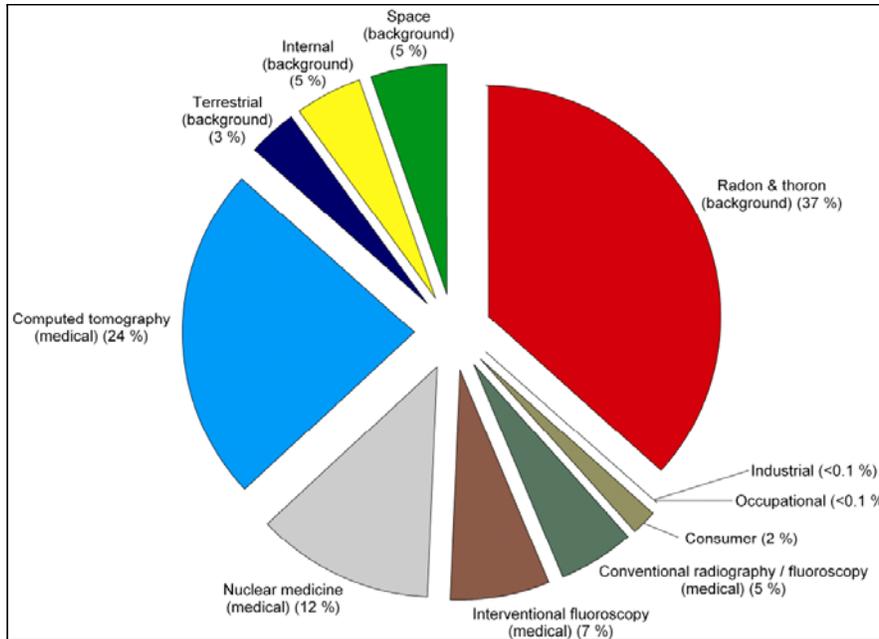


1 rem = 1000 mrem

This 620 mrem/year is a combination of both natural background and man-made sources of radiation. The pie chart below shows approximately the percentage each source contributes to the general population's annual radiological dose.

## Visitor/Contractor Orientation

### Average Dose for US General Population (620 mrem/yr)



**Natural background radiation** is the second largest contributor (about 310 mrem per year) to radiation doses.

The main sources of naturally occurring radiation are:

- Radon – a gas from naturally occurring Uranium in the soil - 37%
- Cosmic/Space radiation - from the sun and outer space - 5%
- Internal -materials present in our bodies such as Potassium-40 ~5%
- Terrestrial radiation - materials in the earth's crust such as rocks and soil - 3%

**Man-made sources of radiation** contribute to the remainder of the annual average radiation dose. Man-made sources include the following:

- Medical uses such as x-rays and nuclear medicine ~48%.
- Consumer products such as smoke detectors, tobacco products, building materials - 2%

What are the **Sources of Radiation at Pantex?**

- Plutonium
- Uranium
- Tritium
- Thorium
- Radiation Generating Devices (RGDs)
- Sealed Sources

# Visitor/Contractor Orientation

**Identify the relative risks of exposure to radiation and radioactive materials, including pre-natal radiation exposure. (EO2)\***

## *Risks in Perspective*

Radiation comes from background and man-made sources. We receive approximately 620 mrem per year. This is separate from occupational exposures that may be received on the job. The potential risks from occupational exposure can be compared to other risks we accept every day.

<b>Annual Radiation Dose from Other Sources</b>	
	mrem/year
Smoking 20 cigarettes/day	1300
Radon in homes	200
Medical exposures (diagnostic/nuclear medicine)	~500
Terrestrial radiation	30
Cosmic radiation	30
Round trip US by air	5
Building materials	3.6
World wide fallout (nuclear weapons)	<1



The risk associated with occupational exposures at Pantex is very small and considered acceptable when compared to health risks in other occupations (for example, being a coal miner or a construction worker). The Department of Energy's (DOE) whole body radiation dose limit for general employees is 5000 mrem/year. However, Pantex has set Administrative Control Limits well below the DOE limit. For Visitors/Contractors, Pantex's ACL for occupational exposure is 100 mrem per year for Visitors and 200 mrem per year for Contractors. It is each person's responsibility to comply with Pantex's Administrative Control Level (ACL). If you suspect your Administrative Control Level of 100 mrem for Visitors or 200 mrem for Contractors is being approached or exceeded, you should notify your Pantex point-of-contact or Radiation Safety immediately.

As shown below, Airline Flight crewmembers receive an occupational dose of 1000 mrem/year. Nuclear Power Plant Workers receive 700 mrem. Pantex's ACL limit for Visitors and Contractors is listed below in Table 2.

# Visitor/Contractor Orientation

## Dose for Various Occupations

	mrem/year
Airline flight crewmember	1000
Nuclear power plant worker	700
Medical personnel	70
DOE/DOE contractors	44

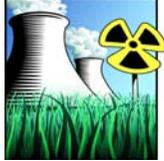


Table 2. Pantex Administrative Control Limits

	Visitors	Contractors
Pantex ACL	100 mrem/yr	200 mrem/yr

### Health Effects

Biological effects from large doses of radiation may occur in the exposed individual or in the future children of the exposed individual. There is scientific evidence of health effects (cancer) from radiation doses well above the annual limit for occupational exposures (greater than 10,000 mrem).

### Types of Exposure

#### Chronic Exposure

Chronic exposure refers to small radiological doses repeated over a long period of time. Examples of chronic radiation doses are those from natural background, routine medical exams, and occupational radiation.

Although, no evidence between chronic doses is linked to cancer, we assume that any exposure, no matter how low, has a risk to health.

### Chronic Radiation Dose

A **small** amount of ionizing radiation over a long period of time.

Natural Background



Occupational Exposure



# Visitor/Contractor Orientation

## *Acute Exposure*

Acute exposure refers to a large dose received over a short period of time. Acute exposure doses are typically received under accident conditions, such as Chernobyl. Effects from acute doses occur soon after the event.



## *So what is the difference between Dose and Exposure?*

*Dose* is the amount of radiation absorbed by the body or a particular organ.

*Exposure* is the amount of radiation measured in air.

## *Pre-natal Exposure*

Genetic changes to the parent's sperm and/or eggs that result in an observed effect in their offspring from ionizing radiation have been found in plants and animals but have not been observed in the human population. A developing fetus is especially sensitive to ionizing radiation. Radiation dose to the fetus may increase the chances that the child will develop conditions such as lower birth weight, slower mental growth, or childhood cancer. These effects may also be caused by many other hazards in our environment, such as smoking or consuming alcohol. The risk of these effects is minimized by implementing special protective measures for the embryo/fetus and by keeping all exposures As Low As Reasonably Achievable (ALARA).

A female visitor or contractor working on site has the option to declare her pregnancy in writing using a PX-2820 form. The form is provided to the Radiation Safety Department and the Occupational Medicine

Department so that they may evaluate the need for potential work restrictions. Radiation Safety does NOT review any medical records.

### ***Comparison of Risks of Occupational Radiation Doses with Other Health Risks***

Let's now compare the risk of working with or around sources of ionizing radiation versus the risks we accept as part of everyday life:

### ***Benefit versus Risk***

Accepting a risk is a personal matter, and each individual must weigh the benefits against the potential risk. We know that there are many benefits from ionizing radiation. However, because it may harm us if we receive too much, just like too many aspirin can kill you, we must learn to respect it and learn to work safely with and around radioactive materials.

***Identify engineered and administrative controls, limits, policies, procedures, alarms and other measures implemented at the facility to control doses. (EO3)\****

### ***Radiological Controls***

Radiological controls are established in order to protect individuals from exposure to radiation and radioactive material. These controls include a unique identification system using certain colors and/or symbols and radiological postings.

# Visitor/Contractor Orientation

## *Radiological Identification Systems*

Only specially-trained workers are permitted to enter areas controlled for radiological purposes. Additional radiological training is required in order to handle radioactive material. All areas or materials controlled for radiological purposes are identified by one or more of the following:

- Signs that have the standard radiation symbol colored magenta or black on a yellow background.
- Yellow and magenta rope, tape, chains, or other barriers that are used to designate boundaries of posted areas.
- Tags and labels with a yellow background and either a magenta or black standard radiation symbol that are used to identify radioactive material.

## *Postings*

Postings are used to alert personnel of potential or known radiological conditions and to aid them in minimizing exposures and preventing the spread of contamination. Let's discuss the different areas on site and whether this training will permit you to enter those areas.

***Controlled Area*** has been established to protect individuals from exposure to radiation and radioactive contamination. Controlled areas provide warning of the existence of a radiological hazard. This training WILL permit you to enter a Controlled Area unescorted.

***Radiological Material Area (RMA)*** is an area where radioactive materials are handled or stored. This training WILL permit you to enter a Radioactive Material Area unescorted. This training DOES NOT permit you to touch, move, or operate radioactive materials.

***Radiation Area (RA)*** identifies an area where the hazard is exposure to ionizing radiation. The levels are between 5 mrem/hr – 100 mrem/hr. This training will NOT allow you unescorted access to this area. Entry is allowed as long as there is an escort.

## Visitor/Contractor Orientation

**Radiological Buffer Area (RBA)** is an intermediate area established to prevent the spread of radioactive contamination and to protect personnel from radiation exposure. Entry is allowed as long as there is a radiological escort and is approved by RSD.

**Contamination Area** is an area where removable radioactive materials is not wanted and surface contamination levels exceed or are likely to exceed values in 10 CFR 835 Appendix D but do not exceed a 100 times the value.

**Soil Contamination Area (SCA)** is an area with contaminated soil that is not releasable in accordance with DOE Standard Radiological Controls. You **MAY** enter an SCA unescorted as long as the soil is not being disturbed. Disturbing the soil includes any activity that moves soil from one location to another, including driving or walking through mud or digging, trenching, plowing or mowing.

**Fixed Contamination Area (FCA)** is an area or equipment that contains radioactive materials that are not easily removed. You **MAY** enter an FCA unescorted as long as the material is not being disturbed.

GERT trained personnel are allowed to enter these areas as long as they **DO NOT** perform radiological work! This means you cannot touch any radiological material, even for a second!

There are other posted radiological areas established within the Controlled Area. Some examples include:

- High Radiation Areas
- Very High Radiation Areas
- High Contamination Areas
- Airborne Radioactivity Areas

GERT training **WILL NOT** permit you to enter these areas unless additional radiological training is completed.

Only Radiation Safety personnel are authorized to remove or post controlled radiological area signs. You should report torn or fallen postings to your point-of-contact.

# Visitor/Contractor Orientation

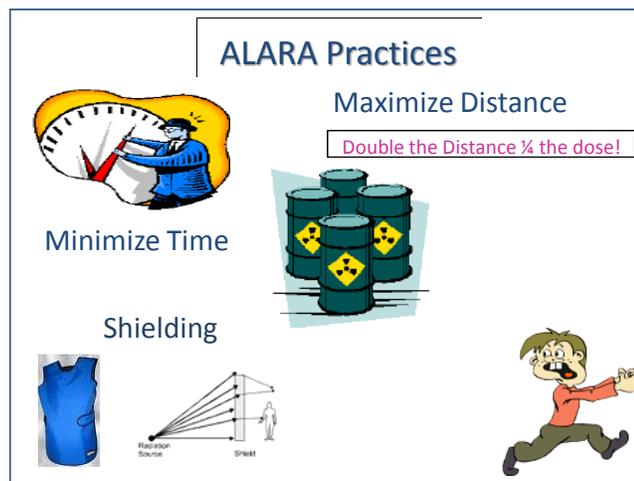
**Identify individual rights and responsibilities as related to implementation of the radiation protection program. (EO4)\***

## ***ALARA Concept***

The “As Low As Reasonably Achievable” (ALARA) process of managing radiation exposure is a fundamental requirement of the Pantex. ALARA is not a safety principle but a regulatory requirement. An effective ALARA process includes consideration, planning, and implementation of both physical design features (including engineering controls) and administrative controls to balance the risks of occupational radiation exposure against the benefits of finishing the job. ALARA is a process that has the objective of reducing doses as far below the applicable limits as is reasonably achievable, taking into account social, technical, economic, practical, and public policy considerations.

There are three basic practices personnel may use to minimize exposures:

- Time - Reduce the amount of time spent near a source of radiation.
- Distance - Stay as far away from the source as possible.
- Shielding - Utilize shielding placed between workers and the source.



**Identify actions implemented to control doses under emergency conditions. (EO5)\***

## ***Radiological Emergency Procedures***

A radiological incident is unlikely. However, everyone must know the emergency procedures, just in case. Follow all instructions announced over the public address system, given by your Escort and/or personnel in the

## Visitor/Contractor Orientation

immediate vicinity. If you see or hear an emergency alarm of any type, YOU CAN REPORT ANY/ALL ALARMS TO THE 24-HOUR OPERATIONS CENTER (806-477-5000).

### *Abnormal Conditions*

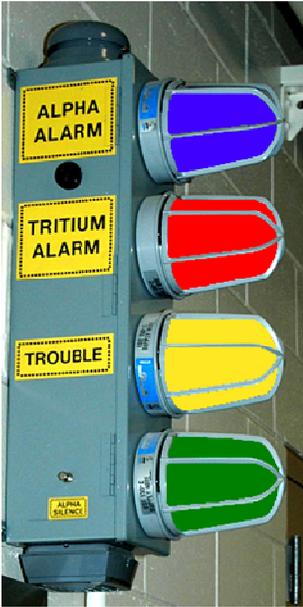
If you discover radioactive material where it does not belong, the following actions should be taken

- A. Do not touch, handle, operate, or move the material.
- B. Warn other personnel in the area.
- C. Guard the area at a safe distance.
- D. Call Radiation Safety at 477-5555 and wait for Radiological Technicians to arrive.
- E. ONLY Radiation Safety can release personnel from radiological alarms.

The Radiation Alarm Monitoring System (RAMS) uses air monitors that continuously sample and measure for levels of airborne radioactivity. The RAMS has visual and audible warnings.

Workers are trained to evacuate within 5 minutes in the event of an accident involving a Nuclear Explosive (NE), Configuration 2 Nuclear Explosive Like Assembly (NELA), Tritium Reservoir Assembly, or Pit, or electrical coupling involving a Tritium Reservoir without shorting plugs. In the event an accident with the above items occurs and there is no alarm personnel should evacuate in 5 minutes or less.

# Visitor/Contractor Orientation



## *Correct Responses to Alarms Evacuate Immediately*

Signal	Meaning	Action
Blue Light High Pitch Tone	Airborne Alpha Contamination	Exit Bay/Cell Remove PPE in Interlock Stand in Ramp at entrance Send 1 person to call 5000 or 5555 (Rad Safety)
Red Light Loud Bell	Airborne Tritium Contamination	Exit Bay/Cell Remove PPE in Ramp Continue to Muster Station Do NOT interact with others Call 5000 or 5555 (Rad Safety)
Amber Light Buzzer	Malfunction	STOP WORK Do not exit Call 5000 or 5555
Green Light No Sound	Normal Operations	Do NOT enter if there is NO green light call 5000.

***Identify exposure reports or other exposure data which may be provided and how to request these reports. (EO6)\****

### ***Monitoring (Dosimetry)***

Since radiation cannot be detected with any of the human senses, special detection devices must be used. It is possible based on the job you are going to perform and the location that the use of a dosimeter may not be necessary. If a dosimeter is required, Contractors will be required to take an instructor led GERT class.

### ***Thermoluminescent Dosimeters***

Thermoluminescent dosimeters (TLDs) are used to measure radiation from neutrons, gamma and x-rays, and all but very-low-energy beta particles. Each dosimeter contains materials that when exposed to radiation will capture the type and amount of radiation to which the individual is exposed. Very sensitive instruments measure this exposure, and worker dose may be calculated from the data obtained.



Note: The TLD measures external occupational radiation doses and is not a shield.

## Visitor/Contractor Orientation

### ***Wearing Your Dosimeter***

Wear your whole-body dosimeter clipped to clothing on the upper part of the body (on the torso, between the neck and the waist). Clipping your dosimeter to your belt or belt loop is acceptable. Do NOT hang your dosimeter on a neck lanyard or chain. Do NOT place your dosimeter through the security X-ray machines.



### ***Obtaining a Dosimeter***

Persons who enter radiation areas must obtain a dosimeter prior to entry into the area. Dosimeters can be requested by completing a PX-2868, *Visitor Dosimetry Information*. If there are any questions, call 477-5243.

### ***Traveling to Another Facility***

If you have visited another facility where you are issued a dosimeter, it is important that the Pantex Plant receives radiation exposure information from the facility so that we can maintain a complete radiation dose history for you.

### ***Dose Reports***

GERT trained individuals are not expected to receive occupation dose above their Pantex ACL; however, you may be monitored for exposure as a precautionary measure. Individuals who are monitored for exposure at Pantex have the right to request, in writing, a dose report at anytime. You will be mailed a radiation dose report each time your Pantex dosimeter is processed. This report details radiation doses for the current calendar year and contains year-to-date (annual) and lifetime doses received at Pantex.

### ***Leaving Work***

Return the issued dosimeter to your Pantex point-of-contact or leave it hanging on an official dosimeter storage location at the end of your visit. Only wear the dosimeter that has been assigned to YOU!

### ***Medical Applications***

Individuals who have recently been administered radionuclides for medical purposes should report their medical procedure to Pantex's Occupational Medicine Department at extension 3033. Radionuclide injections or

## Visitor/Contractor Orientation

ingestion for medical purposes may sound the alarm on portal monitors at the security stations and entry will not be allowed.

### *Lost or Damaged Dosimeters*

Should you lose or damage your dosimeter, exit the controlled area and contact Dosimetry at 477-4424 for a replacement.



Bottom line: Your dosimeter must be either on YOU or on the STORAGE BOARD while on the Pantex site.

### *Summary*

Pantex's Radiation Safety Department would like to thank you in advance for your cooperation and commitment in minimizing radiological exposure. It is important to be aware of radiological risks and to take appropriate protective measures to minimize the risks by using time, distance, and shielding throughout your time at Pantex. Through awareness and personnel responsibility, each individual who visits Pantex can contribute to a safe work environment. If you have any questions, feel free to contact the Radiation Safety Department.

\*Enabling Objectives can be found in the DOE-HDBK-1131-2007

## Substance Abuse Program



### *Point of Contact*

Terry Cox (806) 477-4354

The Pantex substance abuse program complies with all applicable Federal requirements. All subcontractors at Pantex are subject to for-cause (reasonable suspicion) and post incident, injury, accident or occurrence testing for illegal drugs and/or being under the influence of alcohol. Subcontractors that test positive for illegal drugs or alcohol misuse will permanently lose site access.

# Visitor/Contractor Orientation

## Traffic Safety



### *Point of Contact*

Pete Hughes (806) 477-5614

Pantex encompasses a fairly large area that requires driving vehicles, so traffic safety is a major concern. Always wear your seatbelt. Because of special safety requirements, it is essential to obey all posted speed limits. Park in designated areas only. Traffic monitoring is in effect.



 **NOTE:** If any vehicle approaches you with its warning lights on, pull over, stop completely, and let the vehicle pass. Remain stopped until all vehicles in the group have passed. If you are following a group of vehicles with flashing lights, remain at least 300 feet behind. Never attempt to pass a convoy of vehicles or any vehicle with flashing lights!

You may encounter material moves within the ramps. Be alert. A Walker/Spotter, wearing an orange/red vest, escorts material being moved by forklift. If a material move is approaching, stop and move as far to the side of the ramp as possible. Remain there until it has passed. Remain at least 25 feet behind. Always follow the directions of the Walker/Spotter.

## Visitor/Contractor Orientation



### Warning Signs



#### *Point of Contact*

Pete Hughes (806) 477-5614

As you move around the Plant, you may notice any number of warning signs. Heed them. Warning signs and barricades are common around construction sites, so be especially careful near these areas. Never enter a construction area without both authorization and the proper safety equipment. Never violate a barricade.

## Footwear Policy



### *Point of Contact*

Pete Hughes (806) 477-5614

Proper footwear is a significant aspect of the B&W Pantex Dress Code and is vital in meeting our internal safety goals. Employees should be aware of the role their footwear plays in minimizing injuries and promoting safety at work.

Pantex is an industrial worksite with great variation in quality of walking surfaces. All employees, regardless of the nature of their work, may encounter smooth surfaces, gravel surfaces, and/or uneven surfaces during the course of their work each day. All employees must wear appropriate footwear, as prescribed by safety requirements. This may include safety shoes and other personal protective equipment as required for employees working in operating areas, such as bays, cells, craft shops, labs and warehouses.

Employees working in areas where safety shoes are not required should remember that Pantex is an industrial site and wear adequate footwear. Adequate footwear, as defined in this policy, shall meet the following minimum criteria:

1. The entire foot shall be enclosed.
2. Shoe uppers shall be of leather or a comparable material.
3. The material shall be of sufficient strength and firmness to minimize potential for injury from a falling object.
4. Soles shall be of sufficient thickness to prevent penetration of metal particles, and shall be of leather or oil resistant material, i.e., rubber or neoprene.
5. Height of the heel shall not exceed two inches.
6. Diameter of the heel shall be at least one inch at the tread surface.

Footwear such as sandals, open heels, open toes, spiked heels and platform soles are considered unsafe and shall not be worn.

# Visitor/Contractor Orientation

## Differing Professional Opinion Program for Technical Issues Involving Environment, Safety, or Health



### *Point of Contact*

DPO Hotline Ext. 3235

The Department of Energy (DOE) has established a Differing Professional Opinion (DPO) process in DOE M 442.1-1 to facilitate dialogue and resolution on DPOs from employees for technical issues involving environment, safety, and health (ES&H).

Visitors and contractors who believe that they have knowledge of a significant technical issue regarding ES&H of a DOE facility or activity that is not being properly addressed should raise the issue to ensure it is properly considered in a timely manner. Before using the DPO Process to address an issue they should first attempt to resolve the issue through other available processes (e.g., existing complaint or resolution processes, and/or review and comment processes). If they have attempted to use available processes to address a technical issue related to ES&H satisfactorily, but they believe that the current position could have a significant negative impact on protection of the ES&H of employees or members of the public then they may initiate a DPO.

To initiate a DPO, employees must complete a PX-5476 documenting the technical issue related to ES&H to the B&W Pantex DPO Program Manager. The DPO process and forms are available to employees on the World Wide Web at [www.Pantex.com](http://www.Pantex.com). The web site provides the following:

- (1) Overview of the DPO program and process.
- (2) Work instruction “02.04.01.17.04 - Utilizing the Differing Professional Opinion Program”, that defines the process for submitting and processing a DPO.
- (2) PX-5476, “Differing Professional Opinion Submittal Form,” that must be submitted to begin the ES&H DPO technical issues process.
- (3) DPO Hotline.

Visitors and contractors shall perform work safely, in a manner that ensures adequate protection for employees, the public, and the environment, and shall be accountable for the safe performance of work. In the performance of work visitors and contractors:

- (1) have the right to report concerns on technical issues relating to ES&H through the DPO Process.
- (2) are encourage to raise technical issues related to ES&H, use the DPO Process when appropriate, and provide reasonable time and resources to use the DPO Process.

## Visitor/Contractor Orientation

(3) are protected from retaliation in any form for reporting DPOs.

Visitors and contractors shall comply with, and assist B&W Pantex in complying with, ES&H requirements of all applicable laws and regulations, and applicable directives on Laws, regulations, and DOE Directives and shall cooperate with Federal and non-Federal agencies having jurisdiction over ES&H matters.

Visitors and contractors are responsible for compliance with the ES&H requirements regardless of the performer of the work.



**Instructions:**

- 1. PRINT legibly, use BLACK INK --- stay inside the boxes
- 2. VERIFY Header information is complete and correct
- 3. Complete Badge No. field at bottom; Sign & Date

Index No: PX-3864  
 Page 1 of 1  
 Issue No.: 19



# Training Completion Report

(Ref. WI 02.03.02.03.03. WI 02.03.02.03.05, WI 02.03.02.03.06)

Employee Name \_\_\_\_\_

Badge No. (or SSN)

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Item Name

Pantex Visitor/Contractor Orientation

Item No.

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Item Type

S	T
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Item Revision Date

0	6	0	8	1	1
M	M	D	D	Y	Y

Test Version

1	1	0	6	1
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Instructor Badge No

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Score

--	--	--

Complete

X	
Y	N

RIDS

A
---

Workflow Route No.

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TSR Related?

	X
Y	N

**This training completion report will be used to activate your account in the training database. Please fill out the form completely and legibly, as all information is needed.**

Print Company Name: \_\_\_\_\_

Plant Contact: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

\*\*\*\*\*

## ACKNOWLEDGMENT

*By signing and returning this report,  
 I acknowledge that I have read and understand the information given in:*

*Pantex Visitor/Contractor Orientation  
 #553.05*

**Further, I acknowledge that failure to follow and comply with the rules and requirements of this facility could result in immediate removal of access privileges;  
 And in some circumstances, civil and/or criminal prosecution.**

\*\*\*\*\*

**PLEASE VERIFY ALL INFORMATION IS CORRECT  
 SIGN AND DATE**

**OFFICIAL USE ONLY**

May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552) exemption number(s) and category:   2, 6    
 Department of Energy review required before public release: Name/Org:   Len Rossiter/TTO   Date:   05/05/2011    
 Guidance (if applicable)   N/A  

Badge No. (or SSN)

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Employee Signature: \_\_\_\_\_

Training Completion Date:

M	M	D	D	Y	Y

