Industrial Safety and Health Annual Performance Report

Waste Isolation Division

Department of Energy

VPP Star Site

1995 Annual Report of the status of Industrial Safety and Health at the Waste Isolation Pilot Plant

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1995 Annual Industrial Safety Report
Executive Summary

The safety focus for 1995 began with reaffirming a commitment to maintain the momentum of the WIPP's strong safety culture and realigning the human resource to efficiently carry out that commitment.

The pledge began with the new General Manager, who affirmed the Waste Isolation Pilot Plant's (WIPP) commitment to the safety and well-being of its personnel, general public, and physical assets. The commitment reiterated that safety is "woven" into every operation; that commitment brings with it the assurance that the threads creating the tapestry of our safety culture remain vibrant. Plaques were distributed to all managers and supervisors and displayed in all areas of the site as a constant reminder of our safety pledge. This commitment was again reaffirmed as the Industrial Safety and Health section of Environmental, Safety, and Health was reorganized. The new manager realigned the section to create a more synergistic working team. Occupational Health Services (OHS) were transferred from Human Resources Department to Industrial Safety and Hygiene and Emergency Management. The realignment provides a closer, more efficient working relationship among areas such as accident/injury/illness response, hearing conservation, training for emergency responders, and accident investigation. Positions were consolidated to eliminate redundant reporting and to provide for efficient safety trending.

The personal commitment that builds the momentum to fuel and maintain the safety culture was again reaffirmed when the WID exceeded 1.8 million hours without a lost-time injury or illness. The WID completed the year without a lost-time injury/illness and with a recordable rate of 0.73, compared with a general industry rate of 8.7; and a DOE rate of 3.7, further confirming that safety is more than a priority, it is a legitimate value system.

Throughout 1995, IS&H personnel enhanced the commitment by pursuing degrees in higher education and recertification, by performing routine and specialized site inspections, and by enhancing programs such the Management Safety Accountability Program (MSAP) through training and the development and distribution of a new MSAP brochure and the Subcontractor Safety Program with the development and distribution of a subcontractor's safety manual.

As individual commitments merge with departmental and sitewide commitments, the end result is the preservation of an exemplary Department of Energy--Voluntary Protection Program (DOE-VPP) Star Status. As stated in the VPP Annual Evaluation, "The division's pursuit of continuous improvement opportunities, safety rigor, diligence, and a universal safety commitment enhances its industry leadership role and the reputation as 'Best in Class.'" As the first and only Star Site, WID has fulfilled many Star Site responsibilities. The WID's expertise is being sought, not only for the VPP application process, but as a mentor to Westinghouse sister sites and outside industry. Representatives from the WID have maintained a high profile to assist others in their quest for a safety culture reflective of the vibrancy found at the WIPP.

1.0 SIGNIFICANT ACHIEVEMENTS OF 1995

In accordance with the Department of Energy (DOE) Voluntary Protection Program (VPP) and the Occupational Safety and Health Administration (OSHA) Safety and Health Program Management Guidelines, the following significant achievements for 1995 were accomplished.

1.1 WID Site Exceeds 1.8 Million Employee Hours

WID exceeded 1.8 million hours without a lost-time injury/illness. Additionally, the WID completed the year without an injury or illness that resulted in days away from work.

1.2 Voluntary Protection Program Star Status (VPP)

The WID achieved many milestones as the DOE's first and only Star Site. The first DOE-VPP Annual Evaluation reaffirmed the positive momentum of the WID's safety culture. The positivism was expressed by Industrial Safety and Health (IS&H) representatives at the National Voluntary Protection Program Participants Association (VPPPA) Conference in Washington, DC. More recently, the Cypress Miami Mining Company sought WID expertise in the DOE-VPP application processes and requested that WID mentor Cypress Miami Mining Company's VPP application. This will make the WID the first DOE/VPP mentor site.

1.3 Mine Safety Health Administration (MSHA) Inspections

Three quarterly MSHA inspections of the facility, both on the surface and underground, were completed with no Compliance Assistance Visit (CAV) notices.

1.4 Management Safety Accountability Process (MSAP)

The MSAP was enhanced to include training. Each manager or supervisor attended a four-hour seminar, which addressed Managing by Walking Around, Managing Injuries, Managing the Environment, Managing Creativity, and Managing Safety Meetings. A total of 77 managers and supervisors attended the seminars. Brochures explaining the process were also developed and distributed.

2.0 MANAGEMENT COMMITMENT AND EMPLOYEE INVOLVEMENT

2.1 General

To be effective, a Safety and Health program must begin with visible management commitment that encourages involvement by all employees. It is this aspect that best initiates and provides the environment for a strong safety culture.

The following 1995 activities fulfill this commitment:

2.2 VPP Status

During 1995, the WID achieved many milestones as the DOE's first and only Star Site. The first VPP Annual Evaluation, completed in May 1995, reaffirmed that the momentum of the WID's safety culture continues to be exemplary. In September, IS&H representatives presented the achievements of the WID at the national VPPPA Conference in Washington, DC. In October, a tour group representing the El Paso Natural Gas Company visited the WID and were presented programs that WID used to accomplish DOE-VPP goals. Additionally, the DOE Rocky Flats Safety Manager requested meetings with the DOE Rocky Flats Field Office (RFFO), WID senior staff, and the Carlsbad Area Office (CAO) to discuss the VPP Star Status from a contractor's perspective, as well as a DOE perspective. The Operations manager gave a brief overview of how the WID employees transformed from a workforce constrained by highly conservative procedures and processes to an empowered, efficient workforce with an excellent safety culture. The MSAP and Landlord Program were discussed as examples of activities that helped WID become successful in creating the existing safety culture at the WIPP. In November, the Cyprus Miami Mining Company sought WID expertise in VPP application processes and requested that WID mentor Cyprus Miami Mining Company's VPP application process. This will make the WID the first DOE-VPP mentor site. Additionally, a team of DOE managers and union representatives from the Oakridge facility spent three days with the WID personnel to gain insight into the WID's safety culture. These meetings and tours fulfill some of the responsibility of the WID's DOE-VPP Star Status.

2.3 Safety Committees

The following committees demonstrate the participation and decision-making authority given to the WIPP employees.

2.3.1 WIPP Executive Safety Council

The council provides broad overview and recommendations to enhance facilities and to assist managers and safety committee members. The WIPP Executive Safety Council consists of the WID senior management, DOE Carlsbad Area Office (CAO), Sandia National Laboratories (SNL)

and New Mexico Environment Department (NMED) participants. Hourly employee representatives are provided from the Operations Safety and Communications Council (OS&CC). These employees sit as regular members on the Council. Additionally, the council promotes awareness programs and process improvements.

During 1995, there were 11 WIPP Executive Council meetings. At all of the meetings there was a report given on the activities of the site safety committees; the Electrical Safety Committee, The Operations Safety and Communications Committee, the ALARA committee, the Surface Management Council, and the Federal Employees Safety Committee.

In addition to these reports, other items of interest and/or concern were presented and assigned as actions to committee members. For example, the council attended a WID Subject Matter Expert Board. The process was observed and questions were asked. An area of concern was addressed on some junk cars south of the site and the action was completed to have them removed and disposed of properly. A small study was done in response to the question of Springtime employees' accident rate since the move of the contractor work hours from evening to daytime hours. The result was a reduction in reported accidents. Anouther was the WIPP 28 subsidence fault was causing delays in quarterly ground levels monitoring because of road inaccessibility. The action to have the road repaired was completed within a months time.

2.3.2 Surface Management Council (SMC)

The WIPP SMC consists of Westinghouse, CAO, and SNL participants. The council reviews landlord activities, identifies unresolved surface-site safety issues, recommends corrective actions/improvements and facilitates these tasks.

During 1995, the Landlord Program Management Policy was distributed, the Area Landlord Training Program (ALL-101) was revised, and the *Landlord Reference Manual* was created.

A concern was addressed regarding proper use of back support belts. Industrial Hygiene personnel presented a program on proper lifting techniques to Springtime employees. A discussion occurred regarding current research from the National Institute of Occupational Safety and Health (NIOSH). The discussion revealed that the research was inconclusive regarding the use of back support belts in reducing back injuries. The NIOSH recommends, however, that back injuries can be managed effectively through an Ergonomics Program that includes task assessment training, surveillance, and a medical-management program.

The SMC unanimously adopted the NIOSH recommendations. The SMC did not, however, move to recommend discontinuance of the use of back support belts.

Another concern was introduced at the SMC on the number of black widow spider sightings. A safety bulletin was issued by IS&H personnel notifying employees about the problem and the reporting requirements of a sighting. This was followed up by operations who ensured necessary treatments by a vendor were performed to eliminate the spider population.

2.3.3 Operations Safety and Communications Committee (OS&CC)

The OS&CC meets weekly and is chaired and co-chaired by nonexempt volunteers from the Operations group. The committee also functions as a communication source, addressing issues from root cause analysis to the issues appearing in the Operations Quarterly Safety Report.

During the fourth quarter, the OS&CC met thirteen times. Thirty-five Operations employees, three Industrial Safety employees, and five employees from other organizations attended the weekly meetings. Twelve action items were identified by committee members. All were closed during the quarter. Forty-three safety-related information items were discussed.

During 1995, 176 operations employees, 13 Industrial Safety representatives, and 16 representatives from other organizations attended committee meetings. The OS&CC was commended by the VPP assessment team for raising, recognizing, and mitigating safety issues in a timely fashion. The VPP assessment team's review of meeting minutes revealed that the committee is action oriented and serves as an effective communication conduit to employees. Additionally, 52 action items were identified, 307 information items were discussed, and 7 *TRUNews* articles were published.

2.3.4 WIPP Electrical Safety Committee (WESC)

The WESC is chaired by the Facility Operations department, and consists of exempt and nonexempt personnel from Operations, Maintenance, Safety, Engineering, and Quality Assurance.

The following achievements were noted:

Two significant achievements of WESC were noted in 1995: The first was the development of the Ground Continuity Program. This program was developed in response to recommendations made by MSHA

inspectors during the second quarterly inspection. The program initiated changes in the engineering specification, work control process, and the Condition Assessment Survey/Capital Asset Management Process (CAS/CAMP) procedure to ensure grounding installation, testing, and inspections are documented and retrievable. The committee developed an action plan to revise: 1) the Engineering Specification, EP-247, to include grounding testing on all the WIPP voltage systems; 2) development of a preventive maintenance procedure to ensure testing is completed for the main grounding electrode; 3) modified the Facility Inspection Program to include annual visual inspections of the entire grounding system at the WIPP; and 4) change two controlling procedures that ensure all modification, corrective, and preventive maintenance instructions include the requirements.

The second significant achievement was the adoption and modification of the program to identify electrical equipment that was not listed from a Nationally Recognized Testing Laboratory (NRTL). This action shifted the overall responsibility for implementation from IS&H to the WESC. This program was initially developed in response to a National Electrical Code (NEC) assessment finding. The program established an Approval Review Team (ART) to review criteria of non-NRTL listed equipment. When unique electrical equipment is needed and such equipment is not available with a NRTL listing, then the equipment specifications are reviewed by ART to ensure electrical safety criteria is met. The ART team consists of representatives from Quality Assurance, Electrical Engineering, and Industrial Safety and Health.

To ensure that non-NRTL equipment previously brought on site is evaluated by the ART, the program developed a checklist to be administered by the CAS/CAMP and the Landlord Program. Non-NRTL electrical devices are identified on the checklist, then transmitted to the ART. The equipment is then approved/retired, depending upon the evaluation.

2.4 Employee Concerns and Complaints

Employees are encouraged to address concerns through their manager/supervisor or through the chain of command. The Employee Concern Program is administered by Human Resources. During 1995, two safety concern letters were written. One concerned WIPP bus transportation. The buses will now be re-routed beginning January 1996. The other concerned scorpions in a restroom facility. Pest control was increased to include all restroom facilities sitewide.

The WID maintains a Safety Hotline (T-A-L-K or 8255) to provide another mechanism for employees to address concerns. Hotline concerns are addressed within 72 hours. During the first two quarters of 1995, no Hotline calls were received; during the third

quarter, one call was received, involving the failure of an emergency light located in Training Room 2 during a power outage. Because the room has no windows, Room 2 was dark. The building landlord stated that an Action Request (AR) was submitted to correct the defective lighting. The lights were repaired by Maintenance the next day. During the fourth quarter, there were no hotline calls.

2.5 General Manager's Commitment

During 1995, the WID General Manager conducted four Employees' Meetings and two award ceremonies. Agenda items included status of facility progress, overall priorities, issues and perspectives, accomplishments and awards, and safety in the workplace.

2.6 Staffing

A reorganization occurred in the IS&H section. The WID manager of Industrial Safety was rotated to an assignment in the Operations Department. This position was then filled by a manager internal to the ES&H Department.

The staffing of the IS&H section was aligned during the reorganization to create a more synergistic working team. Occupational Health Services (OHS) personnel were transferred from the Human Resources Department to the same reporting chain as Industrial Safety and Hygiene and Emergency Management. The move enabled a closer working relationship on such items as hearing conservation, accident/injury/illness response, training for emergency responders, accident reporting, and accident investigating. Various responsibilities were reassigned within the section to streamline processes. For example, the responsibilities for all safety statistics, OSHA logs, DOE 5000.3B reporting, and lessons learned have been consolidated and included into one safety professional's job. This eliminated redundant reporting and provided for better identification of safety trends. A dedicated team leader was assigned to provide technical direction to the Industrial Safety and Hygiene section. This improved communications and enhanced efficiency within the section.

2.7 GOCO Industrial Hygiene and Safety Committees

The Westinghouse Industrial Hygiene and Safety Committee has been leading the implementation of the DOE-VPP for the Westinghouse GOCO sites. This program is being used as the vehicle for an improved safety culture at the Westinghouse sites. The WID is providing the mentorship to assist sister sites in obtaining Star Status.

2.7.1 GOCO Accomplishments

Other GOCO accomplishments included the preparation of a Subcontractor Safety Seminar and onsite VPP reviews of Westinghouse Hanford and Savannah River Companies. The committee supported the Savings Through Sharing/Cross Cultivation Committee Annual Meeting in Denver, Colorado. This meeting was designed to showcase the accomplishments of the

Westinghouse G&ESCO Cross Cultivation Committees to representatives of the Safe Sites of Colorado, DOE-Rocky Flats, Kaiser-Hill, and the local Denver media. The WID supported the meeting by providing materials for and a presentation on obtaining DOE-VPP Star Status.

2.7.2 GOCO Electrical Safety Meeting

IS&H personnel participated in the Westinghouse GOCO Electrical Subcommittee electrical assessment at Westinghouse Hanford Company (WHC). The intent of the assessment was to validate an electrical safety checklist that was developed to comply with DOE Electrical Safety Guidelines. Observations made during the assessment were presented to the cognizant WHC manager for disposition.

2.8 Operations' Subcontractor Safety Meeting

During this reporting period, Budwine Service Electric Company, Constructor's Inc., Day and Zimmerman, LLC., and Springtime Cleaning Services, subcontractors performing construction, security, and janitorial work at the WIPP site, conducted 51 safety meetings, covering 42 topics.

2.9 Process Improvement Program (PIP)

A total of 72 safety-related PIP suggestions were submitted during 1995. These suggestions varied from ergonomically designed water cooler bottles, doorway safety, to Ground Fault Circuit Interrupter (GFCI) protection.

3.0 WORKSITE ANALYSIS AND HAZARD CONTROL

3.1 General

Worksite analysis is a combination of systematic actions that provide information to recognize and understand the hazards and potential hazards in the workplace. Once these actions are investigated, a program of prevention and control can be designed.

The following 1995 activities fulfill the worksite analysis and hazard control commitment:

3.2 Industrial Safety and Hygiene Oversite Inspections

The focus of IS&H personnel has evolved from a posture of administering policies and procedures to that of consulting. Direct consultation with responsible managers and/or supervisors, the diligent efforts toward effective landlord inspections, and self-assessments from the Operations group, coupled with processes such as the Condition Assessment Survey (CAS) and the Management Safety Accountability Process (MSAP), have resulted in few safety infractions.

When a safety infraction has serious safety implications, is not covered by existing procedures, or when repeated procedural violations have the potential of becoming a bad habit, a safety observation is issued.

3.2.1 First Quarter Inspection Results

During the first quarter of 1995, IS&H issued three Safety Observations for deviations from standards. All three of these Safety Observations were corrected or mitigated immediately. The Safety Observations included one electrical for a potential National Electric Code (NEC) violation; one sanitation for a trash can left uncovered over a weekend, which became infested with gnats; and a slippery floor identified during a static coefficient of friction test.

IS&H personnel participated in 17 consultation requests for assistance from landlords, maintenance, and work control groups. Assistance included walking with the landlords during their monthly inspections, validating work instructions prior to performing the work, reviewing corrective actions, participating in engineering evaluations of equipment and facilities, and resolution of contract language.

During the DOE-VPP evaluation, the review team recommended that trend analysis of inspection reports be provided at the department level to enable each department to evaluate and concentrate on problems specific to their areas.

The trending of inspections and minor observations by facility sections for the first quarter follows:

- **Construction Management**

  Oversight Inspections 17
  Minor Observations 0

- **Maintenance Operations**

  Oversight Inspections 17
  Minor Observations 1
  Category:
  Electrical 1
  NEC violation

- **Hoisting Operations**

  Oversight Inspections 14
  Minor Observations 0

- **Operations Work Control**

  Oversight Inspections 15
  Minor Observations 0

- **Experimental Operations**

  Oversight Inspections 12
  Minor Observations 0

- **Controller**

  Oversight Inspections 5
  Minor Observations 0

- **Underground Operations**

  Oversight Inspections 16
  Minor Observations 1
  Category:
  Life Safety Code 1
  Sanitation (unsanitary trash can)

- **Human Resources**

Oversight Inspections 2
Minor Observations 1
Category:
Life Safety Code 1
Slippery floor in cafeteria

3.2.2 Second Quarter Inspection Results

During the second quarter, IS&H personnel performed 10 consultation requests for assistance from landlords, maintenance, and work control groups. Assistance included walking with the landlords during their monthly inspections, validating work instructions before performing the work, reviewing corrective actions, participating in engineering evaluations of equipment and facilities, and resolution of contract language.

During this quarter, IS&H issued two Safety Observations. The Safety Observations included one for insufficient light in a shop area and one to ensure appropriate lifting methodology was developed for installation of a fan motor. All Safety Observations were corrected or mitigated immediately.

The trending of inspections and minor observations by facility sections for the second quarter follows:

- **Construction Management**

Oversight Inspections 25
Minor Observations 0

- **Maintenance Operations**

Oversight Inspections 22
Minor Observations 2
Category:
Best management practice 0

- **Hoisting Operations**

Oversight Inspections 13
Minor Observations 0

- **Operations Work Control**

  Oversight Inspections 8
  Minor Observations 0

- **Experimental Operations**

  Oversight Inspections 12
  Minor Observations 0

- **Underground Operations**

  Oversight Inspections 16
  Minor Observations 0

- **Human Resources**

  Oversight Inspections 2
  Minor Observations 0

3.2.3 Third Quarter Inspection Results

During the third quarter, one Safety Observation was issued which involved an improper lifting process during replacement of a 55-gallon drum on a horizontal stand. Safety methodology was developed and changes in the lifting process were discussed during the weekly safety meeting.

IS&H personnel participated in 14 consultation requests from landlords and individuals in maintenance and work control groups. The level of consultation ranged from conducting monthly landlord inspections, validating work instructions prior to performing work, reviewing corrective actions, and participating in engineering evaluations of equipment and facilities.

IS&H personnel responded to four concerns from the WIPP employees. These concerns included (1) inadequate personal protective equipment (PPE) used during steam cleaning operations; (2) a maintenance contractor using a potential sparking tool at a nearby fuel station; (3) bee and wasp nests in the pipe segments of the perimeter fence; and (4) bird droppings and dead birds on the roof of Building 411. Each issue was investigated and immediate action was taken to mitigate any hazards.

The trending of inspections and minor observations by facility sections for the third quarter follows:

- **Construction Management**

Oversight Inspections 20
Minor Observations 1
Category:
Fire Protection 1
Blocked fire extinguisher underground

- **Maintenance Operations**

Oversight Inspections 18
Minor Observations 3
Category:
Housekeeping 1
General Housekeeping underground
Ergonomics 1
Improper lifting techniques
General Safety 1
Using a defective tool

- **Hoisting Operations**

Oversight Inspections 5
Minor Observations 0

- **Operations Work Control**

Oversight Inspections 7
Minor Observation 1
Category:
Haz Com 1

- **Experimental Operations**

Oversight Inspections 12
Minor Observations 0

- **Underground Operations**

Oversight Inspections 14
Minor Observations 1
Category:
Improper use of tool 1
Using a hammer as a wrench

- **Material Control**

Oversight Inspections 5
Minor Observations 1
Category:
Electrical 1
Improper use of extension cord

3.2.4 Fourth Quarter Inspection Results

During the fourth quarter, no Safety Observations were issued. IS&H personnel responded to five consultation requests from individuals in maintenance, engineering, and work control. The level of consultation ranged from validating work instructions prior to performing work, reviewing corrective actions, participating in engineering evaluations of equipment and facilities, and resolving corrective actions on employee concern issues.

IS&H personnel responded to three concerns from WIPP employees. These concerns included (1) modifications to a laboratory electrical system were not designed to meet NEC class 1, Division 1 Standards; (2) ladders in the tool crib were damaged and not removed from service; (3) a nitrogen canister in the analytical laboratory storage area was leaking. Each issue was investigated and immediate action was taken to mitigate hazards.

The trending of inspections and minor observations by facility sections for the fourth quarter follows:

- **Construction Management**

Oversight Inspections 11
Minor Observations 2
Category:
Housekeeping 1
Barrier partially open
Electrical 1
Blocked electrical equipment

- **Maintenance Operations**

Oversight Inspections 10
Minor Observations 0

- **Hoisting Operations**

Oversight Inspections 3
Minor Observations 0

- **Operations Work Control**

Oversight Inspections 3
Minor Observations 0

- **Experimental Operations**

Oversight Inspections 2
Minor Observations 0

- **Underground Operations**

Oversight Inspections 2
Minor Observations 0

- **Material Control**

Oversight Inspections 7
Minor Observations 0

- **Sandia National Laboratory (SNL)**

Oversight Inspections 2
Minor Observations 5
Category:
Haz Com 1
Update MSDS book
Electrical 3
Provide GFCI protection on outside receptacles, label circuit breakers.
Housekeeping 1
Unsecured nitrogen cylinder

3.3 Landlord Inspections

The revised Landlord Program has resulted in a 100 percent participation during 1995. Landlords now submit a list of the area (s) inspected, deficiencies found, corrective actions, and the status of the actions. This Landlord Program included 18 landlords, performing 73 total inspections. There was a documented total of 798 deficiencies for the year. The number of closed deficiencies at the end of the year was 703. All remaining open deficiencies were non-safety related and consisted of items such as painting and re-carpeting. IS&H personnel perform periodic reviews to insure prompt closure of safety items.

The new program established a Landlord Coordinator who maintains the landlord inspection records and approves the area landlord checklists. The Landlord Coordinator compiles the information in a Landlord Status Report for each area. The Coordinator ensures that each deficiency is tracked to closure and documents the closure date on the Landlord Status Report. Landlord Inspection Findings, by category, for 1995, are found in Attachment 1.

As a result of the Landlord Program, the following three Process Improvement Program (PIP) suggestions were implemented.

- A crosswalk was painted in the alley connecting the CAO Greene Street Building facility to the new west parking lot.
- Mirror domes were installed in strategic blind corners of CAO Greene Street Building.
- A small glass window in the fire door located at east stairwell on the first floor of Building 452 was replaced with a larger glass window to enable personnel in both directions to see oncoming traffic.

Due to the evolution of the Landlord Program, resulting in changes in the landlord's areas of responsibility, the results are reported separately for consistency.

Listed below is a categorization of the findings from landlord inspections The results are categorized by designated landlord areas.

3.3.1 First Quarter Landlord Activity

• Area #1 Grounds Inside the Fence, Perimeter Fence, Perimeter Road, including Connexes and Parking Lots.

Findings 7
Category:
Housekeeping 3
Improper storage

Life Safety Code 1
Blocked aisle
Mechanical 3
Entry gate and rail need repair

• Area #2 All Sandia Trailers, Porta Camp, and Connexes

Findings 9
Category:
Housekeeping 5
Blocked exit, improper storage, general housekeeping
Life Safety Code 2
Door damage and door lock stuck
Electrical 1
Panel schedule not updated
Miscellaneous 1
Damage to vehicle brake light wires

• Area #3 Westinghouse Trailers West of Salt Hoist and Building 459

Findings 26
Category:
Housekeeping 14
Improper storage, material stored in hall and general housekeeping
Life Safety Code 3
Equipment blocking exit and unsecured stairs
Electrical 8
Broken receptacles, damaged panel cover, and clearances
Miscellaneous 1
Damaged bathroom equipment

• Area #4 All Hoists, Grout Yard, and Buildings 465 and 365 A

Findings 47
Category:
Housekeeping 29
Improperly stored material, faded signs
Life Safety Code 6
Door damaged, posted emergency phone numbers, fire extinguishers not hung, and faded signs
Haz Com 4
Unlabeled containers

Electrical 1
Electrical box missing identification tag
Miscellaneous 3
Loose tile and door weather stripping

• Area #9 Building 452 and 965

Findings 5
Category:
Housekeeping 2
Excessive clutter in work area and damaged carpet, creating a tripping hazard
Life Safety Code 1
Hazardous cabinet found unlocked
Electrical 2
Ungrounded equipment and unsecured electrical cabinet

• Area #10 Building 486

Findings 6
Category:
Housekeeping 2
Cluttered storage and burned out light bulbs
Life Safety Code 1
Emergency light not working
Miscellaneous 3
Bathroom fixtures broken or not in place

• Area #11 Buildings 413,413 (A&B) 365, 364

Findings 6
Category:
Housekeeping 2
Trash in corridor and at airlock housekeeping
Life Safety Code 2
Confined space entry sign needed
Miscellaneous 2
Guard missing screws and wrong fittings

• Area #12 Westinghouse Porta-camp, Reusable Yard, Construction Landfill, and Buildings 474

Findings 16
Category:
Housekeeping 4

Dirty floor and general housekeeping

Miscellaneous 12

Information signs needed, missing bottle caps, erosion problems, and missing safety equipment

•Area #13 Sewage Lagoon and Met Tower

Findings 10

Category:

Housekeeping 6

Improper storage of equipment, dirty fixtures, and unsanitary conditions

Miscellaneous 4

Corroded equipment, erosion, and building needs painting

•Area #14 Electrical Substation, Switch Tracks, and Diesel Generators 255.1 and 255.2

Findings 12

Category:

Housekeeping 11

Light bulbs burned out

Electrical 1

Light fixture not working

•Area #15 WOIC, Greene Street Facility

Findings 13

Category:

Housekeeping 4

Improper storage of office consumables and general housekeeping

Life Safety Code and Fire Protection 5

Water cups not provided, fire equipment not accessible and fire equipment inoperative

Electrical 4

Open holes in electrical equipment, ground plug missing on cord, and switch cover cracked

•Area #16 Westinghouse Trailers, East of Salt Hoist, and all Construction Trailers

Findings 1

Category:

Housekeeping 1

Cluttered aisles

• Area #17 Training Building 489

Findings 15
Category:
Housekeeping 5
Unsecured storage of office consumables, uneven floor, and microwave
Life Safety Code 4
No emergency lights, defective paper cutter, and inadequate handrails
Electrical 1
Unlabeled electrical box
Miscellaneous 5
Damaged weather strip on doors, unsecured television cabinet, and loose thermal control cover

• Area #18 304 North Main Street Facility

Findings 2
Category:
Life Safety Code 2
Inadequate lighting

• Area #19 514 East Greene Street (In-town warehouse)

Findings 9
Category:
Housekeeping 6
Lights burned out, dirty floor, tripping hazards, and damaged wood pallets
Fire Protection 1
Need fire extinguisher signs
Electrical 2
Receptacle cover plates damaged

3.3.2 Second Quarter Landlord Activity

Landlord participation during the second quarter of 1995 was 100 percent. Each landlord performed a minimum of three inspections. A total of 176 findings were reported; 101 of the findings were abated during the quarter; 2 of the findings were listed as safety issues. These open safety issues included a damaged outside light fixture cover and a spongy (weak) floor in the hall of an office trailer. Both of these safety issues have been closed. The remaining open issues include

enhancements and repairs, such as painting, damaged/bent exterior panels, holes in wallboard, and roof leaks.

Listed below is a categorization of the findings of landlord inspections. The results are categorized by designated landlord areas. Two categories, electrical and miscellaneous, were significantly high. Electrical findings were primarily burned-out lights. The remaining electrical findings included cracked and chipped receptacle outlets. The miscellaneous findings were primarily painting and building exterior integrity issues.

- **Area #1** **Grounds Inside the Fence, Perimeter Fence, Perimeter Road, including Connexes and Parking Lots.**

Findings 0

- **Area #2** **All Sandia Trailers, Porta Camp, and Connexes**

Findings 43
Category:
- Housekeeping 2
  General clutter
- Life Safety Code 6
  Door damage and door lock stuck
- Electrical 5
  Damaged light cover and burned out lights
- Miscellaneous 30
  General painting, loose baseboards, and faded signs

- **Area #3** **Westinghouse Trailers West of Salt Hoist and Building 459**

Findings 20
Category:
- Housekeeping 4
  Improper storage and cluttered office areas
- Life Safety Code 3
  Equipment blocking exit and exit signs too low
- Electrical 4
  Broken receptacles and burned out lights
- Miscellaneous 9
  Painting and trailer skirting needs repair

• Area #4 All Hoists, Grout Yard, and Buildings 465 and 365 A

Findings 21
Category:
- Housekeeping 12
  - Improperly stored material and general cleaning
- Haz Com 1
  - MSDS missing for chemicals
- Miscellaneous 4
  - Cracked window, water damage, and painting/repair on hardware
- Electrical 4
  - Burned out lights

• Area #5 Buildings 451

Findings 12
Category:
- Housekeeping 3
  - General clutter
- Electrical 2
  - Lights burned out and GFCI receptacle needed in bathroom
- Life Safety Code and Fire Protection 5
  - Obstructions in travelways
- Miscellaneous 2
  - Damaged wallboard

• Area #6 Building 413 (A&B) 365, 364, 412, 411 (excluding WH tower)

Findings 8
Category:
- Housekeeping 3
  - Improper storage and general housekeeping
- Miscellaneous 4
  - Rain damage
- Electrical 1
  - Exposed telephone terminal

• Area #7 Buildings 412, 456, 457, 458, 473, 475, 485

Findings 3

Category:
- Housekeeping 2
  - Improper storage and general housekeeping
- Electrical 1
  - Light bulbs burned out

• Area #8 Buildings 452 and 965

Findings 0

• Area #9 Building 486

Findings 6

Category:
- Life Safety Code 2
  - Door hinge loose, and fire extinguisher signs missing
- Electrical 2
  - Lights burned out
- Miscellaneous 2
  - Soap dispenser missing and carpet needs cleaning

• Area 10 Buildings 453, 454, 455, 480, 482

Findings 3

Category:
- Electrical 3
  - Panel schedule not updated, broken receptacle, and hole in electrical box

• Area 11 Westinghouse Porta-Camp, Reusable Yard, Construction Landfill, and 474

Findings 12

Category:
- Miscellaneous 7
  - Labels, missing screws, and minor erosion
- Electrical 3
  - Lights burned out
- Walking/working surfaces 2
  - Missing safety chain and erosion in walkway

• Area 12 Sewage Lagoon, Met Tower

Findings 11

Category:

Walking/working surfaces 1
Erosion

Miscellaneous 8
Information signs damaged and painting

Life Safety Code 1
Fire extinguisher not mounted

Haz Com 1
Confined space sign missing

• Area 13 Sewage Lagoon, Met Tower

Findings 6

Category:

Housekeeping 2
General cleaning of floor and tables

Miscellaneous 2
Ant bed at east door and painting

Electrical 2
Lights burned out

• Area #14 WOIC

Findings 6

Category:

Life Safety Code 3
Slippery floor

Electrical 1
Light bulbs burned out and emergency lights not operational

Walking/working surfaces 2
Tripping hazards on stairway and carpet seams

• Area #15 Westinghouse Trailers East of Salt Hoist and All Construction Trailers

Findings 5

Category:

Housekeeping 2
Improper storage of construction materials

Life Safety Code 1
Exit signs not posted and fire equipment inoperative

Electrical 2
Electrical information sign not posted

• Area #16 Building 489

Findings 3
Category:
Walking/working surfaces 2
Loose carpet
Miscellaneous 1
Damaged weather stripping

• Area #17 304 North Main Street Facility

Findings 3
Category:
Life Safety Code 1
Copy machine block exit
Miscellaneous 2
Loose ceiling tiles

• Area #18 514 East Greene Street (In-town Warehouse)

Findings 2
Category:
Life Safety Code 1
Fire alarm system not functioning
Miscellaneous 1
Roll-up door needing repair

3.3.3 Third Quarter Landlord Activity

Landlord participation during the third quarter was tracked at 100 percent, with each landlord performing a minimum of three inspections. A total of 156 findings were reported during the this third quarter period; 133 were closed; 28 remained open. These open issues included enhancements and repairs such as painting, damaged/bent exterior panels, burned-out light, holes in wallboard, roof leaks and emergency lights. None of the 28 were considered safety issues.

Two categories yielded a high number of findings. These included: electrical findings involving burned-out lights, cracked, and chipped receptacles, and discrepancies in panel schedules; and (2) miscellaneous findings involving paint and exterior building integrity issues.

Listed below is a categorization of the findings from landlord inspections. The results are categorized by designated landlord areas.

• Area #1 Grounds Inside the Fence, Perimeter Fence, Perimeter Road, including Connexes and Parking Lots.

Findings 0

• Area #2 All Sandia Trailers, Porta Camp, and Connexes

Findings 3
Category:
- Housekeeping 2
  - General clutter (moving of employees)
- Miscellaneous 1
  - Skirting and wall panels loose

• Area #3 Westinghouse Trailers West of Salt Hoist and Building 459

Findings 25
Category:
- Housekeeping 6
  - Improper storage and cluttered office areas
- Life Safety Code 1
  - Exit light sign burned out
- Electrical 7
  - Burned out lights, exit light not working
- Miscellaneous 10
  - Roof leak, defrost refrigerators, holes in ceiling tiles
- Walking/working surfaces 1

• Area #4 All Hoists, Grout Yard, and Buildings 465 and 365 a

Findings 15
Category:
- Housekeeping 4
  - Improperly stored material and general cleaning
- Life Safety Code and Fire Protection 2
  - Damaged door latch, inoperative emergency light
- Electrical 4
  - Burned out lights
- Miscellaneous 2
  - Improper storage of mop water, humidifier storage
- Walking/working surfaces 1
  - Scaling bar left on ground

Haz Com 2
Oil spilled on cabinet, unlabeled container

• Area #5 Buildings 451

Findings 5
Category:
Housekeeping 1
Light lens loose
Electrical 2
Lights burned out
Miscellaneous 2
Water leak, ceiling tile damaged

• Area #6 Building 413 (A&B) 365, 364, 412, 411 (excluding WH tower)

Findings 30
Category:
Housekeeping 7
Improper storage and general housekeeping
Miscellaneous 10
Office door damaged, AC units need draining, level catwalk
Life Safety Code 1
Fire extinguisher tag missing
Electrical 8
Broken receptacles, burned out lights and emergency lights
Walking/working surfaces 2
Floor cracked, holes in floor
Haz Com 2
Missing MSDS, unlabeled container

• Area #7 Buildings 412, 456, 457, 458, 463, 473, 475, 485

Findings 0

• Area #8 Buildings 452, 965

Findings 0

• Area #9 Building 486

Findings 14

Category:
Electrical 8
Overhead and emergency lights burned out
Miscellaneous 6
Loose restroom fixture, holes in the wall, and clogged drains

• Area #10 Buildings 453, 454, 455, 480, 482

Findings 3
Category:
Electrical 3
Lights burned out

• Area #11 Westinghouse Porta-Camp, Reusable Yard, Construction Landfill, and Building 474

Findings 3
Category:
Housekeeping 1
Remove transport racks
Miscellaneous 1
Need to excess unused equipment
Waling/working surfaces 1
Cracked manhole cover

• Area #12 Sewage Lagoon, Met Tower

Findings 3
Category:
Miscellaneous 3
Signs damaged and painted

• Area #13 Electrical Substations, switch racks 255.1, 255.2

Findings 15
Category:
Miscellaneous 8
Loose sign, painting, door gasket
Electrical 7
Lights burned out, panel schedule updated

• Area #14 WOIC

Findings 26

Category:
Housekeeping 1
General housekeeping
Miscellaneous 10
Ceiling door open, broken commode, no locks on cabinets, signs not legible, improper vehicle parking
Lift Safety Code 1
Fire extinguisher blocked
Electrical 10
Panel schedule needs update, burned out lights, electrical
Walking/working surfaces 3
Carpet loose, boxes stored in hall, need carpet runners
Haz Com 1
Missing MSDS for copier supplies

• Area #15 Westinghouse Trailers East of Salt Hoist and All Construction Trailers

Findings 5
Category:
Housekeeping 2
General housekeeping, insufficient barrier at construction area
Life Safety Code 1
Fire extinguisher blocked
Electrical 2
Lights burned out

• Area #16 Building 489

Findings 5
Category:
Miscellaneous 4
Damaged door, bugs in light fixture, ceiling tile broken
Electrical 1
Lights burned out

• Area #17 304 North Main Facility

Findings 4
Category:
Miscellaneous 3
Loose ceiling tiles, roof leak
Life Safety Code 1
No central fire alarm or pull station

• Area #18 514 East Greene Street (In-town Westinghouse)

Findings 0

3.3.4 Fourth Quarter Landlord Activity

Landlord participation during the fourth quarter of 1995 was 100 percent. Each landlord performed a minimum of three inspections. A total of 246 deficiencies were reported. There were no open safety issues. The open issues included enhancements and repairs, such as painting, damaged/bent exterior panels, burned-out lights, holes in wall board, and roof leaks.

Highlights from the Landlord Program during the fourth quarter included: (1) Landlord initial training, ALL-101 and refresher training ALL-101A is now offered on a quarterly basis. This will reduce cancellations and minimize the amount of unnecessary training. (2) A new field was added to the landlord database. The new field identifies each deficiency by safety category. (3) Examples of current MSHA citations were compiled and issued to each landlord. These MSHA citations occurred at local mines and provided the landlords with insight to the problems of a similar industry and enabled the landlord to take corrective action.

Three categories, Miscellaneous, Electrical, and Housekeeping were significantly high. The Miscellaneous Findings were primarily general repair and painting. Housekeeping Findings were improper storage of material. Electrical Findings were primarily burned-out lights and panel schedule issues.

Listed below is a categorization of the findings from landlord inspections. The results are categorized by designated landlord areas.

• Area #1 Grounds Inside the Fence, Perimeter Fence, Perimeter Road, including Connexes and Parking Lots.

Findings 0

• Area #2 All Sandia Trailers, Porta Camp, and Connexes

Findings 11
Category:
Housekeeping 5
Improperly stored material and general housekeeping

Electrical 2
Electrical panel blocked and lights not working
Walking/Working Surface 1
Tripping hazard at an outside step
Miscellaneous 3
General clutter and missing/improperly stored equipment and boxes

- **Area #3 Westinghouse Trailers West of Salt Hoist and Building 459**

Findings 22
Category:
Housekeeping 2
General clutter and housekeeping
Electrical 4
Lights burned out, broken door latch, outdated panel schedule
Life Safety Code 4
Improperly stored materials and blocked accesses
Walking/Working Surface 3
Unlabeled, sharp edged AC bracket and lack of nonskid covers for stairs
Miscellaneous 9
Tile replacement, general housekeeping, and hazardous door jam

- **Area #4 All Hoists, Grout Yard, and Buildings 465 and 365 A**

Findings 23
Category:
Housekeeping 6
General clutter, housekeeping, and improperly stored, and unlabeled containers
Electrical 9
Burned out lights, broken light covers, and outdated assured grounding
Haz Com 2
Improperly stored and unlabeled containers
Walking/Working Surface 3
Extension cord lying across walkway, wall pull protruding, poorly located fire alarm pull bottle
Miscellaneous 3
General repair and clutter

•Area #5 Buildings 451

Findings 7
Category:
Housekeeping 1
General housekeeping
Electrical 3
Burned out lights and outdated panel schedule
Miscellaneous 3
Damaged equipment, missing floor plate tile

•Area #6 Building 413 (A&B) 365, 364, 412, 411 (excluding WH tower)

Findings 78
Category:
Housekeeping 27
General housekeeping, clutter, and improperly stored equipment
Electrical 18
Burned out lights and missing diffusers
Life Safety Code 1
Improperly oiled access doors
Walking/Working Surface 2
Broken lens cover, plastic tubing left on floor, and general cleaning
Miscellaneous 30
General clutter, improperly stored equipment, and unlabeled equipment

•Area #7 Buildings 412, 456, 457, 458, 463, 473, 475, 485

Findings 40
Category:
Housekeeping 16
General housekeeping, clutter, and improperly stored equipment
Electrical 8
Burned out lights and panel schedule incorrectly redlined
Haz Com 1
Proper Noise Level signs needed
Miscellaneous 15
Improperly stored equipment, broken furniture, and broken fixtures and equipment

• Area #8 Buildings 452, 965

Findings 3
Category:
Electrical 2
Burned out lights
Walking/Working Surface 1
Electrical cable to modular furniture connected to wall

• Area #9 Building 486

Findings 14
Category:
Electrical 2
Burned out light and cracked fixture cover
Life Safety Code 5
Low pressure on fire extinguishers, inappropriate position and location of fire extinguishers
Walking/Working Surface 1
Splash block hazard to traffic
Miscellaneous 6
Cracked/broken fixtures and general repair

• Area #10 Buildings 453, 454, 455, 480, 482

Findings 9
Category:
Housekeeping 2
General housekeeping and improperly stored equipment
Electrical 4
Burned out lights and broken receptacles
Life Safety Code 2
MSDS not posted/faded signs
Miscellaneous 1
Loose tiles on floor

• Area #11 Westinghouse Porta-Camp, Reusable Yard, Construction Landfill, and Building 474

Findings 3
Category:
Housekeeping 1
Improperly stored equipment

Electrical 1
Worn ground strap
Miscellaneous 1
Erosion on west side

• Area #12 Sewage Lagoon, Met Tower

Findings 4
Category:
Housekeeping 1
Detached sign
Miscellaneous 3
General repairs to connexes and repair to domestic waterline

• Area #13 Electrical Substations, switch racks 255.1, 255.2

Findings 3
Category:
Electrical 2
Burned out light and incorrect panel schedule
Miscellaneous 1
East door does not close tightly

• Area #14 WOIC

Findings 22
Category:
Housekeeping 2
General housekeeping
Electrical 12
Burned out lights
Life Safety Code 1
Improperly stored materials
Walking/Working Surface 4
Slippery floor and broken door catcher, cracked concrete ramp, and water leak
Miscellaneous 3
General repairs and general cleaning and maintenance

• Area #15 Westinghouse Trailers East of Salt Hoist and All Construction Trailers

Findings 2

Category:
Walking/Working Surface 2
General clutter in and around a subcontractor trailer/loose material

• Area #16 Building 489

Findings 3
Category:
Electrical 1
Emergency lighting burned out
Walking/Working Surface 1
Loose carpet stripping
Miscellaneous 1
Leak in ceiling above office cubes

• Area #17 304 North Main Facility

Findings 2
Category:
Miscellaneous 2
Damaged tiles and panels

• Area #18 514 East Greene Street (In-town Westinghouse)

Findings 0

3.4 External Appraisals

3.4.1 Mine Safety and Health (MSHA) Inspections

MSHA conducted three quarterly inspections during 1995. The inspections involved both underground facilities, as well as surface facilities. There were no Compliance Assistance Visit (CAV) notices issued.

3.4.2 State Mine Inspection

The New Mexico Bureau of Mine Inspection State Mine Inspector visited the site during the fourth quarter to perform an annual inspection. The inspection included the underground, shafts, hoists, and records. There were no findings as a result of the inspection. The Inspector stated that the site was in excellent condition and encouraged sharing of WIPP systems and programs with the local mining community.

3.4.3 Department of Energy-Carlsbad Area Office Oversite Inspections

The DOE-CAO conducted eight Occupational Safety and Health Surveillances during the past year. The topics included fire protection, electrical safety, accident analysis and reporting, food service sanitation, lockout/tagout of equipment, machinery and heavy equipment safety, hazards communications, and mine safety.

The first quarter surveillances, conducted in February, were on the Fire Protection Program and WID's level of compliance with specified DOE Orders and the WID's electrical safety management program. The Fire Protection compliance surveillance was conducted through personnel interviews, document reviews, work practices, observations, and facility inspections. There were many proficiencies noted, for example: the responsibilities for implementation of the program were clearly defined, and the knowledge of the staff was commended. There were ten deficiencies noted. Two deficiencies were Category III, noncompliance with regulatory requirements, the other eight were Category IV, deviations from acceptable industry practices for which there is not an associated major programmatic impact. All of the deficiencies have been addressed and closed with the exception of one which dealt with the inspection records for fire hoses. The program is presently being rebaselined to correct the errors.

The Electrical Safety Program surveillance concentrated on the management directives, policies, staffing, training, communication process, documentation practices, planning, and performance associated with the Electrical Safety Program. There were many proficiencies noted, such as an excellent preventive maintenance program, knowledgeable staff, and safe work control procedures. There was one observation issued which consisted of the following: (1) Define who needs NEC training; (2) Review and address the recommendations from a 1994 WID internal self-assessment; and (3) Develop a set of goals for the WID Electrical Safety Program. Work to address these observations is continuing.

The second quarter surveillance, conducted in April, was on the Accident and Reporting Program. This surveillance evaluated the adequacy and effectiveness of WID's Occupational Accident Analysis and Reporting Program. The surveyors determined the accident reporting documentation was in full compliance with OSHA requirements. However, an observation concerning monitoring of corrective actions, and the number of accidents due to improper footwear, was issued. Both of these observations have been closed.

The third quarter surviellances, conducted in September, were on the Food Service Sanitation Program, the Lockout/Tagout (LOTO) Program, and Machinery and Heavy Equipment Safety Program.

The Food Service Sanitation Program surveillance evaluated the adequacy and effectiveness of the WID's food sanitation program. The surveillance team determined the program to be well implemented with regular, internal inspections being performed and appropriate corrective actions taken.

The LOTO surveillance evaluated the adequacy and effectiveness of the WID's LOTO program. The surveillance team determined that the LOTO requirements of 29 CFR 1910.147 and DOE Order 5480.19 were incorporated into the program. The team recognized two noteworthy practices, one noncompliance condition, and two observations. The noteworthy practices were on the high level of knowledge of the procedures by all personnel interviewed and the procedural compliance matrix delineating responsibilities for implementation of the LOTO requirements. The noncompliant condition resulted from several LOTO procedures not being fully implemented. The two observations addressed the lack of action on a previous self- assessment finding and the lack of reference to subcontractor involvement in the LOTO procedures. Both of these observations are currently being addressed. The noncompliant condition and both of the observations are currently being addressed.

The Machinery and Heavy Equipment Safety Program surveillance evaluated the level of WID's worker safety when operating machinery and heavy equipment. The surveillance identified one noncompliance condition and three observations in the areas of operator qualifications and procedures. However, a noteworthy practice was identified in that the system to control, inspect, and store slings and other below-the-hook lifting devices was the best observed at a DOE-AL contractor site. The physical qualifications for mobile crane operators were not being implemented in accordance with ANSI B30-5 and the DOE Hoisting and Rigging Manual. The significance of the noncompliant condition was low since the WID mobile crane operations are limited. The observations were on the following: not formally adopting the DOE Hoisting and Rigging Manual; qualification cards not referencing the current hoisting and rigging standards; and stationary crane and forklift operators not being required to be physically qualified. All of these issues are completed.

The fourth quarter surveillances conducted in December were on the Hazardous Communication Program and Mine Safety. The Hazardous

Communication Program surveillance evaluated the WID procedures and Haz Com records for compliance with 29 CFR 1910.1200. The surveillance identified no noncompliant conditions and no observations. It was noted that the WID Haz Com Program is efficient, and the employees are given ownership over the program which contributes to an effective operation.

The Mine Safety surveillance evaluated the level of WID's mine safety during normal hoisting operations and ground control activities. The WIPP Mine Ventilation Plan was also reviewed for accuracy. The surveillance identified no noncompliance issues and nine observations in the area of Hoisting Operations and Ventilation. Two noteworthy practices were identified: one in Training and one in Ground Control. Seven of the observations were on minor procedural changes that are required to correctly reflect the proper operations of the Salt and Waste Handling Hoist. The remaining observations were ventilation ducts shown on the drawings, but not in the Ventilation Plan, and the removal of obsolete flow monitoring devices. All corrective actions have been completed with the exception of the flow monitoring devices, which have been tagged out of service.

3.5 Contractor Oversight Activities

IS&H conducts periodic oversight of construction contractor activity to maintain communication with contractor management and to ensure compliance with all of the WIPP requirements and provide support and oversight to the following:

3.5.1 Contractors Pre-Work and Pre-Award Activity

A pre-construction award meeting and a technical assistance review were conducted with the new Heating, Ventilation, and Air conditioning (HVAC) contractor. The purpose of the meeting and review was to acquaint the subcontractor with OSHA requirements, specific work releases, work instruction documentation, the WIPP safety, and training requirements. Additionally, an inspection of equipment to be used at the site was conducted concurrently with the meeting and reviewed at the subcontractors office. Specific inspection issues requiring correction were listed in a report and corrected prior to commencement of work.

3.5.2 North-Access Road Repair

IS&H personnel participated in the pre-bid review of the North Access Road repair. Three potential vendors were represented. The North Access Road was inspected, and areas of special interest were identified. Safety and contractual issues were discussed with the vendors. A vendor

was selected, and work was completed on schedule, with no safety deficiencies or incidents. A final inspection was then performed.

3.5.3 H-19 Well Drilling Contract

IS&H personnel attended an initial safety meeting at the Sandia H-19 well drilling site. The meeting was also attended by the prime contractor and Sandia National Laboratory (SNL) personnel responsible for the project. After the meeting, an inspection was conducted of the drilling equipment, the SNL generators, and the office trailer. Continual, periodic oversight inspections are being performed.

3.5.4 Access Road and Fence

IS&H personnel participated in a meeting with G&O Fencing. G&O Fencing installed six miles of fence, as well as cattle guards on the South Access Road. Specific safety issues were discussed. Follow-up inspections were completed without any safety discrepancies.

3.5.5 In-town Warehouse

IS&H personnel attended a comment resolution meeting on contract verbiage for leasing offsite warehouse buildings. The meeting was conducted to ensure contract language satisfied site requirements for IS&H, Fire Prevention and Protection, Warehousing, and Procurement. Language was developed that met all the requirements for warehousing.

3.5.6 Maintenance Contractors

IS&H personnel revised language for maintenance subcontractor contracts. The new language ensures compliance with the WIPP's safety procedures. The revision was performed on the accident prevention section of the new procurement guidelines and now requires a Job Hazard Analysis (JHA) or an approved work package for hazardous work activities.

3.5.7 Training Building Carpet Repair

IS&H personnel participated in the final inspection of carpet repair in the Training Building. The original installation was deficient; consequently, with use, a large carpeted area had loosened, becoming a tripping hazard. The original prime contractor reglued the loose areas, eliminating the tripping hazard.

3.5.8 Communication Tower

IS&H personnel inspected the erection of a 150-foot tower north of the parking lot. The installation crew was given safety instructions. Fall protection equipment was thoroughly inspected before use. No safety concerns were noted during the one-day construction process.

3.5.9 New Uninterruptible Power Supply (UPS)

IS&H personnel participated in the vendor inspection and testing of the new UPS in Building 451. The testing included a review of the acceptance criteria for the electrical feeder connection testing and energization/voltage verification. Safety issues discussed during the observation included personal protective equipment (PPE) used during the testing process. Perimeters of the safe zone for spectators were also established. No safety concerns were observed and testing was successful.

3.5.10 Mass Spectrometer Transfer

IS&H personnel participated in a site meeting to discuss the process for removing the VG 30-38 Mass Spectrometer from Building 451. The Mass Spectrometer was transferred to the Pantex Plant in Amarillo, Texas. One issue was addressed during the meeting. The issue was the submittal of a safety plan/procedure to show a step-by-step sequence of events. The safety plan/procedure was submitted to IS&H and approved.

3.5.11 Suspended Ceiling Access

IS&H personnel performed an evaluation of a potential work-area problem in the Training Building. The evaluation was conducted by IS&H personnel, as well as a supervisor from Budwine Electric. The work area in question involved a suspended ceiling where access to equipment was obstructed by modular furniture. Platform scaffolds were purchased and approved for access.

3.5.12 Cleaning of Electrical Substations

IS&H personnel participated in the validation of the revised JHA for cleaning activities within electrical substations. The validation was performed with the supervisor and cleaning crew of the janitorial service responsible for cleaning the sub stations. The JHA was approved for use.

3.6 Earthquake Recovery

An earthquake occurred on May 13, 1995. All work was suspended until IS&H personnel participated in an inspection of all the hoist headframes and hoist equipment, including shafts, for potential damage. No damage was noted and normal work resumed.

3.7 Slip Resistance Testing

A concern was raised at an OS&CC meeting that the walkway approaching the gatehouse was slippery when wet. IS&H personnel performed a slip resistance test with the Ergodyne Slip-Resistance Tester. The test indicated the walkway exceeded the OSHA slip-resistance criteria when wet.

3.8 Safety Bulletins

A total of eleven Safety Bulletins and three safety reminders were issued during 1995.

The following lists the Safety Bulletins issued:

Golf Cart Safety
Side Shields on Safety Glasses
Dusk Masks
Heat Alert
New Electrical Safety Equipment--PVC Insulating Sheets
Modular Furniture Safety
Potluck Alert
Black Widow Spider Alert
Exhaust Gas Warning
Driving Into the Sun
Safety Tips for Welders

The following lists the Safety Reminders issued:

Elevated Work Platforms
OSHA 29 CFR 1910 and 29 CFR 1926 (Manual distribution)
Face Shield Requirements

3.9 Root Cause Analysis

IS&H personnel participated as part of a Root Cause Analysis Team (RCAT), investigating an injury involving a Chuck Tender. The injury occurred when a 6-foot section of drill steel hit the Chuck Tender on the left ring finger knuckle while he was assisting Gopher Drill operator in drilling dywidag bolt holes in the underground. The injury consisted of a small laceration to the left ring finger knuckle. The injury was

treated by OHS, and the employee returned to work. The RCAT reviewed statements written by the injured employee and personnel that witnessed the accident. In addition, the RCAT observed a drilling operation involving the use of a Gopher Drill to drilling dywidag bolt holes.

A written report was issued on June 15, 1995. The report identified the root cause, direct cause, contributing causes, and corrective actions to prevent recurrence. The root cause of the event was determined to be personnel error, inattention to detail. The Chuck Tender should have been paying closer attention to the drilling operation. In order to prevent recurrence, a one-on-one meeting was conducted with the injured employee. The purpose of the meeting was to reinforce the responsibility of the Chuck Tender in handling drill steel when drilling dywidag bolt holes with a Gopher Drill.

IS&H personnel participated in RCAT investigation regarding damage to a 13.8 KV cable damaged on August 17, 1995. The damage occurred when a forklift being used to move a drill press struck the cable located a E-140 drift. The damage to the outer jacket of the cable was superficial, however, it caused a breaker to trip, loosing power to the north end of the mine, the salt hoist, and the training building. The cable was replaced. The RCAT reviewed the facility operations logs, the statements from the forklift operator, and the training records of the forklift operator. The RCAT performed an inspection of the accident scene, and the forklift involved in the incident.

A written report was issued indentifing the root cause, direct cause, and suggested corrective actions. The root cause was determined to be a training deficiency; the qualification card did not require any knowledge of critical lifts or what precautions should be taken during critical lifts. The direct cause was personnel error in attention to detail. The operator did not check all obstacles in the path of movement for proper clearance. The suggested corrective action included changes to the forklift qualification card, requiring knowledge of critical lifts and requiring the use of a spotter during these critical lifts. The final report was issued August 1995.

4.0 INDUSTRIAL HYGIENE PROGRAM REVIEW

4.1 General

Industrial Hygiene is the science and art devoted to the anticipation, recognition, evaluation, and control of those environmental factors or stresses arising in or from the workplace, which may cause sickness, impaired health and well-being, or significant discomfort among workers or among citizens of the community.

At the WIPP site, an Industrial Hygiene Program (IHP) has been established to meet the demands of this facility. The IHP activities at the WIPP support the four goals of Industrial Hygiene: (1) anticipation, (2) recognition, (3) evaluation, and (4) control. Industrial Hygiene personnel performed the following specific activities to support the goals of the program:

4.2 Potable Water Sampling

During 1995, 163 water samples were sent to the City of Carlsbad Wastewater Laboratory for coliform testing. The majority of the samples taken were for weekly testing done on the domestic drinking water system. All test results were acceptable. Because of a break occurring in the waterline north of the site, 8 of the 163 samples tested were taken from this location. The results of these tests were also acceptable.

4.2.1 New Waterline Installed

In February 1995, construction of a new waterline east of the Safety Building was completed. Prior to connecting, the waterline was disinfected using the "Slug Method." Industrial Hygiene personnel monitored residual chlorine levels during the operation to assure compliance with methods established by the American Water Works Association, AWWA C651-86, *Disinfecting Water Mains*. Once the main was thoroughly flushed of excess chlorine and refilled with distribution system water, bacteriological samples were taken to establish the success of the disinfection procedure.

Additionally, nine tests for the chlorine content of the WIPP Site Domestic Water System were conducted this year. All tests resulted in acceptable limits.

During the fourth quarter, 2 of the 163 samples were taken from the new waterline. All test results were acceptable.

4.2.2 Bottled Water Jugs/Bottled Water Dispensers

An employee concern raised the issue of the quality of the bottled water the WID received from the bottled water vendor. Eight samples were sent to offsite laboratories for testing; two of the eight samples were tested for general mineral analysis; the other six samples were tested for conductivity. Test results

indicated the bottled water had not been through reverse osmosis process and/or charcoal filters. The quality of the water was good, but did not meet bottled water standards.

After extensive sampling, development of a JHA for cleaning bottled water dispensers, and acquisition of a new vendor, the bottled drinking water now meets the requirements.

4.2.3 Sampling of Domestic Drinking Water System

Industrial Hygiene personnel completed gathering water samples for lead and copper testing. The results of this sampling indicated the site samples were below the maximum contaminant level (MCL) for lead and copper. Because of these results, the WIPP has reduced lead and copper sampling from biannual testing to annual testing. The New Mexico Environment Department (NMED) approved the submittal of a "Request for Reduced Lead and Copper Tap Water Monitoring."

4.3 Hazard Communication Program

4.3.1 Material Safety Data Sheets (MSDS)

Purchase requisitions and work orders were reviewed to identify hazardous materials. The reviews identified hazardous materials being requisitioned and, when possible, recommended less hazardous substitutes.

4.3.2 Employee Concerns

Two concerns were raised regarding Haz com labeling requirements. The first involved improper labeling of gas cylinders. An investigation determined that the labeling was acceptable, however, the label was difficult to read. The problem was corrected by replacing the label. The other concern was related to proper labeling of environmental samples. Industrial Hygiene personnel gave presentations on labeling of samples to Environmental Monitoring and the Analytical Laboratories departments.

Another concern related to the method of obtaining MSDSs for hazardous materials on purchase requisitions. A joint meeting, attended by personnel from Industrial Hygiene, Environmental Compliance, and Procurement resulted in methodology which would ensure that necessary MSDSs are onsite and approved prior to receipt of hazardous materials.

4.4 Hearing Conservation

Currently, all employees have been trained in hearing conservation and approximately one half of the workforce receives annual audiometric examinations.

4.4.1 Noise Survey

Industrial Hygiene personnel identified noise sources and related job categories requiring area noise sampling or noise dosimetry. A noise survey was developed and distributed to all employees and their managers or supervisors.

Thirty area and 35-full shift samples were collected for various jobs using the Metrosonic dB3100 system and Microsoft software. Data collected has determined that engineering controls in some areas of the site have effectively reduced noise to levels allowing employees to be removed from the Hearing Conservation Program.

In response to an employee concern, Industrial Hygiene personnel conducted noise dosimetry for an employee during a Mesa commuter flight. Noise levels averaged 91 dB during the flight. This could overexpose an employee should he/she be on a small aircraft for more than three hours during a eight-hour workday.

4.5 Respirator Program

4.5.1 Respirator Inventory

The emergency respirator inventory increased to a total of 82. This increase was due to the addition of 18 new MSA Ultra Elite respirators, which will be used by the WIPP sampling team. These new respirators and spare parts were purchased by EC&S, but will be maintained (washed, bagged, inspected, and repaired) by IS&H.

4.5.2 Annual Respiratory Inspection

The annual inspection of all nonemergency respirators was completed in February 1995, as required. Three hundred and eighteen of the nonemergency respirators were rebagged, and the inspection was documented.

4.5.3 Respiratory Fit Tests

During 1995, 140 respirator fit tests were conducted. Each fit test takes approximately 30 minutes, requiring the employee to perform a series of exercises in a test atmosphere. Industrial Hygiene personnel successfully fitted all employees requiring respirators.

4.5.4 Respirator Maintenance

A new respirator washing machine was installed in the Industrial Hygiene Laboratory. The machine reduces the time required to wash respirators and enhanced turn-a-round time for respirator maintenance.

4.5.5 Self-Contained Breathing Apparatus (SCBA)

Industrial Hygiene personnel reduced the number of SCBAs stored in the underground. In the past, six SCBAs were stored in various locations. As processes changed, these units were no longer required, but were still being maintained and inspected on a monthly basis. The units have subsequently been removed from the underground. The only SCBAs left underground are those on the Emergency Rescue Truck.

4.6 Ergonomics

Twenty Visual Display Terminal (VDT) workstations were evaluated by Industrial Hygienist personnel during 1995. Corrective action plans, if required, were developed for the workstations and implemented. Using a videotape entitled "Back in Shape," Industrial Hygiene personnel conducted presentations on back safety. The presentation included demonstration of stretching exercises that can be used to warm up the back muscles prior to use.

4.7 Chemical Hygiene Plan

The *Chemical Hygiene Plan* was reviewed by the Chemical Hygiene Committee. The committee found the plan was not an official site document. In response to this finding, the document was revised, review comments were incorporated, and the document was distributed.

An audit of the *Chemical Hygiene Plan* was conducted by EC&S. The audit resulted in no findings and five observations. The five observations included minor verbiage changes. Procedure Change Notices (PCN) were completed to correct the observations.

4.8 Heat Stress Measurements

In June 1995, a heat stress study was initiated to determine when heat alerts are appropriate. The study involved taking 35 separate afternoon measurements of dry bulb temperature, black bulb temperature, wet bulb temperature, and the combined wet bulb globe temperatures. The measurements provided a baseline used to develop a program to control employee exposure to temperature extremes.

Heat Stress conditions were monitored 53 times in 1995. One 30-minute work stoppage occurred as a result of extreme heat. During that time, nonemergency, outside work was postponed. Employees working in the extreme heat were monitored closely, reminded to drink extra fluids, and rest frequently.

In July 1995, a draft of the document, *Control of Employee Exposure to Extreme Temperatures Program*, was completed. The program addressed both acclimatized and nonacclimatized workers, use of personnel protective equipment (PPE), and physiological monitoring. Management from Human Resources, Technical Training, and Operations selected representatives to participate in the technical review of the draft. The team recommended that the document be separated into two parts--part one would be the policy manual; part two would be a simple step-by-step procedure. The program, incorporating these recommendations, will be completed in 1996. In the interim, the "Temperature Extreme" section of the *WIPP Safety Manual*, WP 12-1, was revised to incorporate the latest ACGIH recommendations for both heat and cold stress.

4.9 Process Improvement Program (PIP)

Industrial Hygiene personnel submitted two PIPs. The first PIP involved replacing 3M 8710 respirators with 3M 8500 dust masks for operations involving nonhazardous dust exposure. Unlike the 8710 respirators, the 8500 dust masks do not require the employee to be trained and do not require annual physical exams because they are not respirators. The PIP had an estimated cost avoidance and savings of over $20,000. The second PIP involved replacing the eyewash water changeout frequency from quarterly to semiannually. The antibacterial additive, which lasts twice as long, allowed for the implementation for the suggestion.

4.10 Emergency Eyewash Station Inspections

Emergency eyewash stations were inspected quarterly, emptied, and refilled with clean water and antibacterial fluid. New inspection tags were also installed.

4.11 Indoor Air Quality

Indoor Air Quality concerns were addressed at the CAO Greene Street offices. Industrial Hygiene personnel conducted air monitoring for carbon monoxide, carbon dioxide, and organic contaminants. The evaluation of the Greene Street offices yielded no adverse chemical contamination or dust accumulation. The evaluation did reveal the two air systems were being operated with the make-up air ducts closed, providing no make-up air to the building. The building landlord and building owner were contacted, and the situation was corrected.

At the request of employees in the Engineering Department, an evaluation of the air quality in the Engineering Document Room was conducted. Employees were complaining of burning eyes and coughing. An investigation determined that during

the week the reactions occurred, the heating units had been activated for the first time during the season and black "sooty" material had been released into the room. The building landlord arranged to have the room cleaned and the "sooty" material removed. No further adverse effects were reported. The building landlord was instructed to contact the cleaning service immediately should this material be noticed in the future.

4.12 Illumination

Two concerns about office illumination were investigated during 1995. The first was generated from the new WID offices at 304 North Main Street. Measurements indicated illumination levels were within the range recommended by the Illumination Engineers Society.

Industrial Hygiene personnel conducted an illumination study in the TRUPACT Maintenance Facility (TMF), where new cubicles were installed. Light levels were 5-8 footcandles. It was recommended that a work package be approved to increase lighting to standard levels of 20 footcandles. The package is scheduled for implementation in 1996.

4.13 New Computer Support

Two pieces of equipment were purchased for IS&H personnel during 1995. A Canon H570 Video Still Camera and software package allowing pictures to be taken during site inspections and accident investigations. These pictures convert to bitmap images, which can be incorporated in investigation documents.

A laptop computer, containing 80,000 specific manufacturer MSDSs and over 220,000 chemical entries was also purchased. This software provides updated information quarterly. This extensive database enhances the Industrial Hygiene capabilities in emergency response activities involving chemical releases. It is also used to verify manufacturer information on MSDSs received at the site.

4.14 Silica Sampling

During the year, the Underground Operations department conducted drilling in poured concrete. Industrial Hygiene personnel conducted personal and area-exposure monitoring to determine exposure to silica. Full-shift samples were collected using standard NIOSH procedures. The samples were analyzed by NATLSCO Laboratories. The results indicated that during the sampling period, operators were exposed to no measurable airborne concentrations of silica. Letters containing the results were sent to those operators who were monitored.

4.15 New Product Implementation

Industrial Hygiene personnel supported Quality Assurance (QA) by conducting air sampling during a test of a substitute nondestructive examination testing product being used for inspection of the TRU-PAC. The substitute comes in bulk containers and is transferred to an applicator charged with plant air. The old product was packaged in spray cans with a CO_2 propellant which contained minute amounts of CO. When QA personnel used this product, the TRU-PAC became a Permit Required Confined Space. The new product does not represent a hazard to the operator, and the TRU-PAC can maintain the status of a Non-Permit Confined Space during inspection activities. This is just another example of the WIPP's commitment to ALARA principles in relation to chemical exposures.

4.16 Westinghouse GOCO Subcontractor Safety Workshop

Industrial Hygiene personnel attended a Westinghouse GOCO Industrial Safety and Hygiene Committee Subcontractor Safety Workshop in Augusta, GA. Attendees at the workshop included representatives from the Westinghouse GOCO sites and personnel from the DOE Headquarters. Topics of discussion included the DOE Contract Reform Strategy, Contract Language, Subcontractor Oversight programs, Subcontractor Selection and Qualification, and Subcontractor Training Programs. Representatives from the WID shared information concerning Subcontractor Oversight/Support Programs and Subcontractor Training Programs.

4.17 Support On Unusual Permit-Required Confined Space Entry

Industrial Hygiene personnel supported Experimental Operations personnel on a permit-required confined space entry. An employee was at the bottom of a vertical bore hole performing cutting with a cutting torch. Carbon monoxide and heat stress were issues. A CMX 410 Multigas Detector with a remote sampler was used to monitor air pollutants during the entry. Accurate atmospheric heat stress measurements were not possible due to the configuration of the space and the work being performed. To ensure that the employee was not experiencing excessive heat stress, Industrial Hygiene personnel established a work/rest cycle for the employee. The EST monitored vital signs at each break. Vital signs were all normal indicating that proper heat stress control was effective.

5.0 FIRE PROTECTION

5.1 Impairments:

A total of 46 impairments were recorded at the WIPP from October through December of 1995. Impairments were initiated for work activities impacting the WIPP's fire protection and control systems. The impairment process is designed to minimize impacts to systems by limiting work to essential activities, expedite restoration, and ensure that adequate interim measures are taken. Impairments were initiated for preventive maintenance work, electrical outages, and construction activities.

A review of data revealed that 31 impairments (67 percent) had a duration of one day or less. Six impairments lasting five days or longer comprised 13 percent of the quarterly total. This data is consistent with previous quarterly figures. Lengthy impairments were due to troubleshooting work on the Radio Fire Alarm Reporter (RFAR) system and underground mining operations work.

Duration of Impairment	October	November	December
1 Day	13	8	10
2 Days	2	1	3
3 Days	0	0	0
4 Days	1	1	1
5 or more	0	2	4
TOTAL: 46	16	12	18

5.2 Construction Activities

Fire Protection personnel supported work activities for the tie-in of Trailer 993 automatic sprinkler system to the main fire water loop. Activities included: isolating the fire water system in the northeast quadrant of the site, excavation and pipefitting work, system leak check, and the realignment of the fire water system. Inspections and acceptance testing were completed on December 19, 1995.

Fire Protection supported activities to upgrade the emergency lighting systems on site and assisted Engineering with a site survey to assess needed modifications to comply with the National Fire Protection Association (NFPA) 101, Life Safety Code. Action

Requests will be initiated to standardize emergency lighting systems and bring them into compliance with current standards.

5.3 Inspection Activities

Fire Protection personnel assisted in the following inspection activities:

- Performed a fire alarm system inspection and test at the WID offices located at 304 North Main Street. Testing was unsatisfactory due to a failed audible alarm. The building owner performed repairs to the system per the contract agreement. A retest of the system was performed satisfactorily.

- Provided oversight for fire protection equipment inspections being performed by the ESTs. Accountability for the inspections, testing, and maintenance program of portable fire extinguishers is being performed with the use of the Bar Code Management System.

- Performed acceptance inspection of the brush truck. A list of items was compiled of corrective actions to be performed by the vendor. The vehicle was returned to the site on November 30, 1995, and the vendor completed the corrective actions: the postmodification inspection was satisfactory.

5.4 National Fire Protection Week

Fire Protection personnel participated in IS&H section activities October 8-14, 1995, to observe National Fire Protection Week. Fire safety reminders, brochures, and children's booklets were distributed to emphasize fire prevention awareness for employees and their families at work and home. A new video on "Home Fire Extinguishers" was shown and employees were encouraged to check out the video for safety meetings or to take home for family viewing.

5.5 Incidents

Fire Protection personnel assisted with the following:

- Responded to an offsite vehicle fire under the Mutual Aid Agreement. The incident occurred on Highway 128 on November 29, 1995. The ERT was activated and successfully extinguished the blaze.

- Provided support to the Underground Facility Operations department to determine why an equipment operator could not manually activate the dry chemical fire suppression system. An investigation revealed the activation cartridge had vibrated loose, thus, disabling the manual function of the system. The automatic function of the system was still operable. To mitigate the situation, the following activities were conducted: a safety meeting was held

with all operators to provide instructions on checking cartridges; a revision to checklists included cartridge checks; and inspections were performed on other similar equipment for proper cartridge attachment.

- Supported Emergency Management personnel with an evacuation and accountability drill of the WIPP underground on October 13, 1995. The Fire Protection Engineer (FPE) participated as a "Controller/Evaluator" during the event and provided postdrill comments.

- Participated in an emergency response drill initiated by the Emergency Management section on November 30, 1995. The FPE responded as a member of the ERT and alternate Incident Commander.

5.6 Other Activities

Fire Protection personnel participated in the following:

- Assisted the WID Technical Training section with Hazardous Waste Worker (HWW-101) onsite. Training included demonstrations of fire and explosion hazards. Using the Carmody Combustible Hazards Trainer Kit.

- Received an initial copy of *Implementation Guide* for use with DOE Orders 420.1 and 440.1, Fire Safety Program. The document is being reviewed for facilitating the development, implementation, and maintenance of the fire protection program at the WIPP.

6.0 TRAINING

6.1 General

It is crucial that all employees understand their role in the safety and health program and that they have sufficient knowledge through training to protect themselves and to ensure participation in the site programs.

6.2 Technical Training Course Development and Revisions

Technical Training developed the following safety-related training courses in 1995:

Hazardous Waste Worker, HWW-102
Hazardous Waste Supervisor, HWS-101
Hazardous Waste Responder, HWR-101

The following training courses were revised:

Area Landlord Training, ALL-101
Area Landlord Training, Refresher, ALL-101A
Lockout/Tagout, EQP-405
Lockout/Tagout Refresher, EQP-405A
Incidental Rigger, RIG-001
General Employee Training, GET-195
General Employee Training Refresher, GET-195/A
Radiation Worker I, (Initial), RAD-101
Radiological Worker II, (Initial), RAD-201
Emergency Management Training Program, ERO-001 - ERO-019

6.3 Industrial Safety and Health Training

The following training was attended by IS&H personnel:

- The New Mexico Rural Water Users Conference in Albuquerque, NM: The conference provided training credit for recertification as a Drinking Water Utility Operator. This certification is maintained by the Industrial Hygienist.

- The American Management Association for New or Prospective Managers: The course covered such topics as coaching, time management, interviewing, problem solving, and appraisals.

- The Certified Safety Professional (CSP) Review, St. Petersburg, FL: The course provided refresher training in preparing for the CSP exam. Subjects included fire protection, statistics, toxicology, environmental concerns, system safety, equipment, and facility inspections.

- The Annual American Industrial Hygiene Conference and Exposition and the Annual DOE Industrial Hygiene Conference: The conferences provided information on the latest direction the DOE is taking in Industrial Hygiene. The exposition provided information on advances in indoor air monitoring, noise cancellation technology, industrial hygiene training, and database management.

- The Advanced Respirator Protection Training Courses: The courses provided information and training in the use of the TSI Portacount Respirator Fit Test Units used at the WIPP. The course certified that Industrial Hygiene personnel are properly trained to operate the TSI Portacount.

- The Advanced Industrial Hygiene and Safety Course: The course covered issues in ergonomics, OSHA regulations, time management, supervisor training, workplace violence, VPP, and safety standards proposed by the International Standards Organization.

- The American Society of Safety Engineers Conference in Albuquerque, NM: The conference offered classes on lead exposure, lockout/tagout, new fall protection standards, and new respiratory protection standards.

- The Principles of Accident Investigation Training in St. Paul, MN. Training included methodology in conducting an investigation to reduce the probability of future accidents. Communication, photography, change analysis, events and causal factors analysis and the use of the Management Oversight and Risk Tree were covered.

- A Fire and Explosion Risk Assessment and Consequence Modeling Seminar held in Knoxville, TN: The seminar was sponsored by HSB Professional Loss Control. Topics included risk assessment scope, hazard identification, consequence assessment, probability assessment, risk estimation, monitoring, and reduction analysis.

- Fall Protection, Electrical Safety on DOE Construction Projects, and Health Hazards in Construction: The new fall protection standards for construction 29CFR1926, Subpart M were reviewed. The Electrical Safety training class included a general review and an update on current interpretations. Health hazards training was designed to provide a basic course in health hazards for the nonhygienist.

- A National Electrical Code (NEC) 40 Hour Class: This training included general familiarity of the NEC code book including an electrical load determination with calculations for a typical industrial building.

- The 1995 DOE/Contractor Fire Protection Conference: The conference provided a forum for information concerning fire protection issues at DOE

facilities. A draft of the *Implementation Guide* for use with the DOE Order 470, Fire Safety Program, was presented to attendees for review comments. Directives were given for the transport of halon to the DOE designated repository at the Savannah River site.

- The WIPP Emergency Response Team at the New Mexico Fire Fighting Training Academy in Socorro, NM: The training included fire fighting techniques for attacking flammable liquids and structural fires.

- The Environmental Science and Technology Program of New Mexico State University at Carlsbad and the Carlsbad Fire Department: The program on alternatives to Aqueous Film Forming Foam for fire suppression was presented by Fire Response Systems, Inc., Denver, CO.

- The National Fire Protection Association (NFPA) 1995 Annual Meeting and Fire Safety Exhibit in Denver, CO. Seminars provided various technical and educational programs on fire safety developments. Proposed changes to the NFPA codes and standards were voted upon. The Fire Safety Exhibit provided an opportunity to observe the latest technology in fire safety equipment.

- A Farm Rescue course presented by the New Mexico State Medical Academy: The course included an overview of hazards associated with the farm industry and accident probabilities. Actual hands-on experience with rescue equipment and a field trip to familiarize attendees with farm equipment was conducted.

- A Certificate in Fire Protection offered through National Technological University via satellite transmission to the WIPP site: The two-year program is sponsored by the University of California-Davis and the Northern California-Nevada Chapter of the Society of Fire Protection Engineers.

- Hazardous Waste Containers held at Lawrence Livermore National Laboratory. Berkley, CA. The purpose of the workshop was to provide an open forum to present and discuss current and future needs for the DOE Hazardous Waste Storage Facilities.

- Health and Safety Officer training seminar held in Hobbs, NM: The Federal Emergency Management Agency presented the seminar sponsored by the New Mexico Firefighters Training Academy. The seminar provided training on identifying and analyzing health and safety aspects that affect emergency responder safety in both emergency and nonemergency situations.

- Fire and Explosion Risk Assessment: The seminar was presented by HSB Professional Loss Control. The course provided training on the practical aspects of quantitative modeling and risk assessment methodology and techniques.

- An Accident Investigation Course in Minnesota: The course is the new version of the MORT training. The course taught methods of conducting an investigation to reduce the probability of any similar event in the future. Some of the specific areas covered in the course included communication, photography, change analysis, events, and causal factors analysis, and the use of the Management Oversight and Risk Tree Analysis.

6.4 Potash Basin Safety Engineers Association

The WID IS&H engineers were invited to join the monthly meeting of the Potash Basin Safety Engineers Association. The meeting agenda included an update on the Congressional action to combine MSHA and OSHA, cooperative training for first aid, and a review of the New Mexico Potash electrical burn accident.

6.5 GOCO Meetings Attended

IS&H personnel attended the quarterly GOCO Electrical Subcommittee meeting in Salt Lake City, UT. The meeting agenda included a review of the electrical incidents during the last quarter, and how to develop an electrical checklist to audit compliance with the DOE Model Electrical Safety Programs.

IS&H personnel represented the WIPP at the Westinghouse Ergonomics Workshop in Charlotte, NC. Presentations were given on "Establishing an Ergonomic Program at WIPP" and "Office Ergonomics."

7.0 MOTIVATION AND AWARENESS

7.1 General

To measure continuing improvements in worker safety and health and to maintain a strong safety culture, mechanisms are needed to motivate and heightened employee awareness in the face of competing priorities.

7.2 Safety and Health Fair

The third annual Safety and Health Fair was held for three consecutive weeks in 1995. Exhibits were displayed in the Guard and Security Auditorium. The booths contained both internal and external exhibits which focused upon a specific theme weekly and encouraged employees to practice good health and safety through informational displays, safety reminder gifts, and various brochures.

Internal exhibitors' displays included blood pressure checks and environmental concerns. External exhibitors' displays included Southwestern Public Service, Santa Fe Railroad, Carlsbad Police Department's DARE officers, American Red Cross, Lions Club, and the Poison Control Center.

7.3 Managing Creativity

To proactively motivate safety, a process was developed to award employees for creating and maintaining a safer work environment. Employees were asked to submit ideas to make their work area or the site safer. When an employee submitted a suggestion, it was evaluated by an ad hoc safety committee for validity. If the suggestion was approved, the employee received a letter commending them and a VPP Belt Buckle. The employee's manager was also recognized with a booklet. The booklet was "Life's Little Instruction Book," which is a culmination of ideas, experiences, and suggestions. During 1995, 80 suggestions were submitted; 67, approved.

7.4 Dollars and Sense

In 1995 a Dollars and Sense awareness campaign was instituted. This campaign was designed to give instant recognition for safe acts. Cards were printed that read, "Others may give you a penny (a real penny is pasted to the card) for your thoughts we gave you a dollar (a Susan B. Anthony dollar is pasted to the card) for your safe actions." These cards have been distributed to various managers at the WID, the CAO, Springtime, Constructors, Inc., and Day and Zimmerman, LLC., to reward the WIPP employees for their safe actions.

7.5 TRUNews Articles

During 1995, 720 *TRUNews* articles were published. Of this number, 190 articles or 26 percent were safety/health related.

7.6 Safety and Health Bulletins

Safety and Health Bulletins distributed during 1995 included: "Modular Furniture Safety," "Potluck Alert," "Dust Masks Now Available for Use at Site," "Heat Alert Notice," "New Electrical Safety Equipment," and "Black Widow Spiders."

7.7 Defensive Driving Seminars

Defensive Driving Seminars were conducted during the fourth quarter, reminding the WIPP employees to drive safely during the holiday season. An in-town seminar, attended by WID and DOE employees, as well as several seminars at the WIPP site, afforded employees an opportunity to hear defensive driving strategies and techniques. The seminars were presented by a representative from the New Mexico State Police, as well as a member of IS&H. Crash test dummies, Larry and Vince, gave each attendee a steering wheel cover. Brochures and literature on a variety of defensive driving techniques were also made available.

7.8 "Family Safety and Health" Booklets

"Family Safety and Health" booklets were purchased and sent to employees' homes each quarter of 1995. The booklets address topics such as holiday safety, cookout safety, boating safety, swimming accidents, and general health issues. The intent of these booklets is to increase off-the-job family safety.

7.9 One Million Safe Work Hours

The WID achieved one million employee hours without a lost-time injury in April 1995. To reinforce employee involvement and participation, each employee was given a rechargeable flashlight.

7.10 Fire Prevention Week

In observance of National Fire Prevention Week, Fire Protection personnel distributed fire safety reminders, brochures, and children's booklets to employees. The information emphasized fire prevention awareness for WIPP employees and their families. A new video, "Home Fire Extinguishers" was shown, and employees were encouraged to check out the video for safety meetings or to take home for family viewing.

7.11 Safety Commitment Plaques

New plaques entitled "Safety Commitment of the Waste Isolation Pilot Plant" were distributed to all the WID managers and supervisors. The plaques recognize the VPP Star Status and the new General Manager's commitment. These plaques reinforce management's commitment to safety and are displayed in all areas of the site.

8.0 TECHNOLOGY TRANSFER

8.1 General

During 1995, 219 technology transfers were completed, with 300 organizations/ individuals receiving technology transfer notices.

8.2 Safety-Related Technology Transferred

The 31 modules in the Management And Supervisor Training (MAST) program fulfill requirements in DOE Orders 5480.19, *Conduct of Operations Requirements for DOE* Facilities and *Personal Selection, Qualification, Training and Staffing Requirements.* The following lists the transfer of MAST modules containing safety-related topics to companies, corporations, and institutions of higher learning:

AFROTC at Saint Louis University, Saint Louis, MI
American Academy of Physician Assistants, Alexandria, VA
Battelle Human Factors Transportation Center, Boise, ID
BDM Federal, Albuquerque, NM
Blessings Corporation, Williamsburg, VA
Brookhaven National Laboratory, Upton, NY
C Prompt Business Solutions, Industry, CA
Consulting Firm in Vienna, VA
Defense Contract Management, Mansfield, OH
Downes Associates, Richmond, MA
Eddy Potash Mine, Carlsbad, NM
Edison Plastics, Williamburg, VA
Hudson Associates Consulting, Virginia Beach, VA
Indiana University, Purdue University at Indianapolis, IN
Los Alamos National Laboratories, Los Alamos, NM
Magnavox Electronics, Torrance, CA
New York State Department of Environmental Conservation, Albany, NY
Panamco, Miami, FL
Personnel Dynamics, Highland Park, IL
Pima County Community College, Tucson, AZ
Phillips Petroleum Company, Bartlesville, OK
Social Security Administration, Inglewood, CA
St. Rita's Occupational Health Center, Lima, OH
SUNY, Oneonta, NY
TRW, Aurora, CO
Ultimate Resource, Roseville, CA
University of California, Riverside, CA
University of Central Florida, Orlando, FL
University of Colorado, Boulder, CO
University of Florida, Gainesville, FL

University of Minnesota at Duluth
University of Nebraska at Omaha
University of Rochester, Rochester, NY
Virginia State University, Petersburg, VA
Westinghouse Government Technology Services Division, Albuquerque, NM
Westinghouse Science and Technology Center, Pittsburgh, PA

The following miscellaneous technology transfers occurred in 1995:

Excess TRUPACT-IIs and Confined Space Lesson Plans and Student Handouts were transferred to the Firefighting Academy of NM and ENMU, Roswell, NM

Lessons Learned Module to Safety Training Systems, Portland, OR

Medical equipment and training materials to Guadalupe Medical Center, Carlsbad, NM

The WIPP Safety Manual, WP-12-1, was transferred to SEG, Carlsbad, NM and to the University of Rochester, Rochester, NY

9.0 OCCUPATIONAL HEALTH SERVICES

9.1 General

Occupational Health Services (OHS) is dedicated to helping provide a safe and healthful work environment to all the WID employees, employees of other companies, and the public visiting the WIPP by promoting health awareness.

A summary of activities for 1995 Occupational Health Services I charted in Attachment 2. Other activities for the year follow:

9.2 Case Review and Management

During 1995, the role of the WID Occupational Health Nurses (OHNs) was markedly expanded to include proactive case review and management. Traditional nursing involved first aid of any occupational injury or illness, through awaiting a full release from the treating physician. Passively waiting for an employee to return to work was not cost effective and did not effectively utilize the WIDs most valuable asset: a fully trained, experienced, and motivated employee who wanted to return to work.

The consolidation of the OHNs, the Occupational Medical Director (OMD), and the Industrial Safety and Hygiene personnel improved the process of managed care for injured employees. The managed-care process is enhanced because of individual team members' expertise in areas such as workers' compensation, ergonomics, and return-to-work issues.

9.3 Hearing Conservation Program

OHS and Industrial Safety and Hygiene personnel meet monthly to share ideas to improve the quality of the WID's Hearing Conservation Program. The meetings have generated mutually agreed upon goals, specific objectives: and improved methodologies. Data generated from Industrial Hygiene has improved the efficiency of OHS in conducting audiometric testing.

9.4 Essential Job Function Analysis (EJFA)

An EJFA survey was created as a tool to assess what capacities an employee could function within the matrix of the job description, rather than focusing on what the employee could not do. This positive means of looking at an employees' abilities has been very successful.

Since implementation in October, OHS has directed case management for four employees (two work related injuries, one nonoccupational return-to-work evaluation, and one medical fitness-for-duty evaluation) by assembling accurate EJFA and organizing common meetings with a OHN, the employee, the

employee's manager, and OMD. All four employees have successfully returned to work.

9.5 OMD Activities

In addition to actively participating in EJFAs, the OMD was also instrumental in other OHS developments in 1995:

- To comply with computer security recommendations, an arrangement has been made with the WIPP Mail Services department for transport and exchange of Bernoulli back-up disks containing Health Services medical information to the OMD.

- A cost/benefit analysis was done onsite cholesterol testing. This analysis indicated that it is more cost effective to defer cholesterol testing to the OMD. The Lipid Profile was added to the Westinghouse physical exam, and it was also made available to employees who request a cholesterol screening as part of the WID wellness program.

- A contract was completed with the OMD to provide contract nursing services on an as-needed basis, effective December 18, 1995. This service provides support during periods of high OHS demand.

9.6 Document Updates

- The updated Drug Abuse Policy statement was distributed to senior staff. This program is scheduled for implementation in June 1996.

- The *WIPP Exposure Control Plan* was incorporated in WP 15-3. This closed an Environmental Compliance Assessment Process (ECAP) finding, which had been opened since 1994.

- A Charter was developed for OHS and review comments are being incorporated.

- The WID's Technical Training personnel submitted the first draft of the Hearing Conservation Program self-paced training module for review by OHS. This module will be given to each employee in the HCP and an exam administered at the time the annual hearing test is given by the OHN. Proper use and fitting of hearing protection will also be done by the OHN.

9.7 Breath Alcohol Testing

- As of January 1, 1995, in accordance with 49 CFR Part 40, WID implemented systems to perform random Department of Transportation (DOT) breath alcohol testing.

9.8 Vaccines Administered

- Influenza vaccines were offered to all WIPP employees. OHS administered 405 influenza vaccinations this year.

- Hepatitis B vaccines were given to employees in the Facility Operations department, and they received training on bloodborne pathogens.

- The tetanus immunization status was checked on all employees exposed to a sewage spill. Those not immune were given tetanus/diphtheria toxoid injections.

9.9 Expanded Services

The WID's OHNs expanded their services by providing nursing resources to in-town employees. The centralized location at the Greene Street facility promotes wellness among the WIPP employees. An OHN is available on Fridays from 2-4 p.m. for blood pressure screening, minor treatments, and health and nutrition counseling.

9.10 OHN Continuing Education

OHNs enhanced their knowledge and skills of occupational health nursing at the WID by taking classes in several areas of occupational health and safety which included wellness and medical surveillance programs, workers compensation, and case management. Classes also prepared OHNs for there certification.

- DOE presented a seminar which reviewed all new DOT regulations and their impact on drivers at DOE facilities. An OHN represented the WID.

- An OHN attended a post-graduate class on Case Management offered by the UNM College of Nursing. The basic principles of case management were presented, applicable to all areas of nursing at the WID.

- An OHN attended a Respiratory Protection Program. OHNs participation in the respiratory protection program included: performing pulmonary function testing on employees and scheduling the respirator fit physicals.

- The OHNs attended a 32-hour EKG Interpretation Class, as a prelude to Advanced Cardiac Life Support recertification. This recertification is required on a biannual basis and consists of the advanced skills necessary to recognize and treat cardiac dysrhythmias in the pre-hospital setting. Course skills are essential for site medical personnel, who, in emergency cardiac situations, are located approximately 40 miles from the nearest emergency treatment facility. The skills gained in this class have been utilized in several employee cardiac situations.

- As part of the OHN's commitment to remain current in the area of occupational health nursing and in preparation for an OHNs for certification exam, several home study continuing education courses were completed including: toxicology, ergonomic studies, management and administration, and epidemiology.

- An OHN attended meetings on workers' compensation and legal issues. The first meeting, held in Roswell, NM, was entitled "Management of Workers Compensation Costs." The second meeting in Dallas, TX, was hosted by staff from Gates-McDonald. The agenda included updates on legal issues, documentation changes, and procedural issues in workers' compensation cases. Information gleaned from these meetings will decrease turnaround-time and increase the overall efficiency of the system.

- An OHN attended Compressed Gas Cylinder Safety, which stressed the safe use of compressed gas cylinders, in accordance with approved industry standards. The compressed gas, helium, is essential for the operation of the Alco-Analyzer 2100.

- An OHN attended the LIFE LOC PBA 3000 B training course on the portable breath alcohol unit. This provided the WID the ability to certify and train other health care professionals on the machine, resulting in travel and other cost avoidances.

- OHNs attended Occupational Health Nurse Certification Review courses in preparation for the National Occupational Health Nursing Board Examination. Certification in occupational health nursing reflects expert practice and knowledge, and a commitment to occupational nursing, as well as continued professional growth and development.

- An OHN attended the 1995 American Occupational Health Conference. This conference specifically focused on occupational health nursing and offered training in safety, workers' compensation, cost management, ergonomics, and over-the-counter medicine management.

9.11 Occupation Medical Director's Continuing Education

As part of the WID's continuing effort to stay apprised of the latest occupational medical technology, the OMD attended several classes.

- The OMD attended the 1995 American Occupational Health Conference. This conference specifically focused on occupational medicine. The OMD completed a portion of the core curriculum in Occupational and Environmental medicine. This additional knowledge gained by the OMD will provide better employee-injury management, as well as greater understanding of medical management in the occupational setting.

- The OMD attended the Respiratory Protection Class. This class provided an update on 29 CFR 1910.134 and fulfilled requirements of DOE 5480.8A 11.b. This participation allowed the OMD to be better informed about the actual problems encountered by workers utilizing respirators. As a result of this class, OHS has designed and implemented a new respirator medical clearance form.

9.12 Employee Health Awareness

9.12.1 Great American Smoke Out

The WID participated in the Great American Smokeout, November 16, 1995. Five hundred packets filled with information on smoking for adults and children were distributed by OHS for the Great American Smoke Out. Four hundred were distributed to employees onsite. One hundred were distributed to employees in town. Response was favorable. Smoking cessation is an important OHS wellness program.

9.12.2 Bloodborne Pathogen Awareness Training

Bloodborne Pathogens Awareness Training was given to Security, Facility Operations personnel, and the Mine Rescue Teams. This training enhanced knowledge of the WID's policies in this area and met requirements of 29 CFR 1910.1030.

9.12.3 Resource Book on Health-Related Topics

The Center for Disease Control and Prevention (CDC) provides a FAX service for obtaining documents on current, health-related topics. A resource book was developed by OHS which lists the documents in directories according to subjects. Topics include immunizations; viral and bacterial diseases such as tuberculosis, AIDS, chronic fatigue syndrome,

Hantavirus and plague; international travel disease, risk and prevention; OSH; and smoking and health-related issues. Employees requesting specific health information can consult the appropriate directory located in the resource book and request the document number by phone.

Additionally, the reorganization of OHS literature provides employees up-to-date health information.

9.13 Additional WID Wellness Program Activities

As part of the WID Wellness Program, OHS conducted a variety of employee health awareness seminars throughout 1995, including:

- Purpose for medical surveillance and testing procedures
- Bloodborne pathogens and universal precautions
- Hantavirus sampling precautions
- Africanized honey bee precautions
- Avoidance and management of occupational injuries, including workers' compensation and return-to-work issues
- Safe use of prescription and over-the-counter medication in the workplace
- Heat extremes and heat cramps, exhaustion, and stroke
- Food safety: proper food preparation and handling
- Medication and safety
- Stress management
- Following a local outbreak of pertussis, OHNs spoke to employees during safety meetings. Information about pertussis from the CDC was presented and questions were answered. The importance of taking antibiotics as prescribed by the physician was emphasized.

  OHS provided information on pertussis from the CDC for an article in the *TRUNews*.

  A directive was received from the OMD for screening employees who were exposed to pertussis. A questionnaire was developed by the OHNs to implement the directive and provide continuity of care to employees.

- An OHN attended the monthly board meetings of the local American Cancer Society. Breast Cancer Awareness Month was scheduled for the month of October, 1995. Seventeen mammograms were scheduled and employees were encouraged to learn the Breast Self-Examination when visiting OHS. As part of cancer awareness education, 55 Prostate Specific Antigen tests were scheduled. Models were used to teach Testicular Self-Examination to employees. Shower cards with instructions for both procedures were available to employees.

9.14 Participation on the Cafeteria Committee

An OHN addressed nutritional concerns with the cafeteria vendor service. OHS provided two laminated posters on low-fat eating and hidden ingredients such as salt, sugar, and fat that were displayed in the cafeteria for employee lunch-time awareness/

9.15 Community Health Awareness

Community Health Awareness outreach was performed by the OHNs during the year and include the following:

- A site tour for Hobbs, NM, nursing students with presentation on occupational health nursing
- Dangers of the Africanized honey bee to local youth groups
- Loaning equipment and teaching aids to the Loving and Jal Clinics for health fairs
- An interactive program on nutrition presented to Loving High School students
- As a technology transfer, the WID's OHS provided Breath Alcohol Technician (BAT) training to employees of Columbia Guadalupe Medical Center. This class, at no cost to the hospital, resulted in a significant savings for the regional community medical facility, while fostering goodwill for the project within the community.
- An OHN was invited to speak to the Federally Employed Women at their monthly meeting. The stress management presentation which included practice of stress relief techniques, was enthusiastically received.

9.16 Certifications/Awards/Recognition

- In 1995 an OHN completed a rigorous, voluntary certification program regulated by the American Board of Occupational Health Nurses. The certification, which began in 1982, recognizes demonstrated knowledge in the

field of occupational health nursing. Nationally, only 5,000 out of 24,000 occupational health nurses have completed this program. This certification brings additional expertise to the WIPP employees through the certification process and the advanced training it provides in the area of occupational health. Of the 1,400 participants in the program who took the certification test, the WID OHN scored in the top 15 percent. This certification entitles the OHN to use the designation Registered Nurse, Certified Occupational Health Nurse-Specialist (R.N. COHN-S). Areas of emphasis in the certification process include direct patient care, education and counseling, management and administration of Occupational Medical programs, legal and ethical issues, health and environmental issues, and research.

- An OHN received a certificate of merit award from the American Cancer Society for "Cancer Awareness Efforts at the WIPP Site."

9.17 Audits and Surveillances

- EC&S completed a response to a bloodborne pathogen audit observation. The audit observation questioned whether OHS is a storage or accumulation area. The determination was made that OHS is an accumulation area and does not have to comply with storage area regulations, thereby satisfying the audit observation.

- OHS was audited by the Department of Agriculture, Pesticide Division, on cold sterilization methods. No deficiencies were noted.

- The WID contract pharmacist conducted quarterly inspections of OHS and submitted reports with no deficiencies noted.

- The New Mexico Board of Pharmacy made an unscheduled inspection of WID OHS. OHS was found to be in compliance with state regulations.

- The New Mexico Environmental Department's Solid Waste Bureau conducted a closeout session for audit 1-9501, Hazardous Waste. The WID's OHS is regulated by this agency because of the generation of medical waste. Two minor findings were issued and addressed.

- OHS was audited by the WIPP Technical Assistance Contractor (WTAC) on compliance with DOE order 5480.8A. No findings were noted.

- The Employee Concern Program was audited by the WTAC to evaluate the WID's response to health and safety concerns submitted in 1994 and 1995. No deficiencies were noted.

9.18 Upcoming Events

- Completion of construction of the new Health Services building is expected in Spring 1996. This expansion will provide greatly needed space and allow for privacy as services are rendered.

- An OHN has applied to the American Board of Occupational Health Nurses (ABOHN) for certification. The certification program recognizes nurses who have met designated eligibility requirements for education, experience, and licensure and who have demonstrated specialized knowledge in Occupational Health Nursing. The ABOHN is expanding their certification program in 1996 to include two certifications. The first certification is a Certified Occupational Health Nurse (COHN), and the second is a Certified Occupational Health Nurse Specialist (COHN-S). A Baccalaureate degree or higher is required to take the COHN-S examination. The OHN has applied to take the COHN-S exam.

10.0 ANNUAL INJURY REPORT

10.1 General

The WIPP's Annual Injury/Illness Report accentuates the Westinghouse Electric Corporation Waste Isolation Division's statistics.

10.1.1 WIPP Workforce Hours and Recordable Injury/Illness Rate

The WIPP employees worked a total of 1,861,890 hours in 1995. The 1995 recordable Injury/Illness rate was 0.85. The WIPP, including its subcontractors, reported 49 injuries during 1995; 30 of which involved the WID employees. These 30 injuries consisted of 5 recordable and 25 first-aid cases, as defined by the *Bureau of Labor Statistics Recordkeeping Guide*. The WID did not experience any lost-workdays during 1995.

10.1.2 WID Illness/Injury Rates

The WID employees worked 1,369,568 hours during 1995. The WID recordable Injury/Illness rate was 0.73, as shown in Attachment 3. This rate is a substantial decrease over the previous year's rate of 2.69.

10.1.3 WID Subcontractor Illness/Injury Rate

During 1995, the WID's subcontractors worked 216,271 hours. Nineteen injuries were reported by subcontractor personnel. The 19 injuries consisted of 1 lost time, 2 recordable, and 16 first-aid cases, as defined by the *Bureau of Labor Statistics Recordkeeping Guide*. The WID subcontractors 1995 recordable Injury/Illness rate was 2.8 compared with 1.11 for 1994.

10.1.4 Charts and Graphs

The following attachments validate the statistical data: Attachment 4 identifies the Injury by Nature; Injury by Body Part; Injury by Type, and Injury by Task; Attachment 5 consists of the IS&H Monthly Report; and Attachment 6 consists of the first aid, recordable, and lost-time injury summaries.

10.2 Statistical Analyses

Several statistical analyses of the WIPP's safety data were performed. This data has been on record since March 1985. The data was tested to determine if there was a relationship between the number of incidents and the number of paid employees' hours during the month. A second test was performed to determine if there was either an increase or decrease in the incident rate, with respect to time. Both of these tests were performed using a 95 percent confidence level. In addition, the incident rate incurred in each month was compared with statistical process control limits to determine if the incident rate in any month was higher than the norm. The results of these tests are given below.

During the period from March 1985 through December 1995, there is a statistically significant dependence between the number of paid employee hours during a month, and the number of accidents/injuries. An increase or decrease in the number of paid employee hours is associated with a higher or lower number of accidents/injuries. This dependence is estimated to be 20.73 percent.

The chronological data has correlation of 0.812 percent to the accident/injury rate. This means there is not a statistically significant dependence between the chronological date and the accident/injury rate.

The incident rate during each month for the 12 months ending December 1995 was in statistical control: no monthly incident rate exceeded the upper control limit.

A graph summarizing the data for this process is shown on Attachment 7.

11.0 MANAGEMENT SAFETY ACCOUNTABILITY PROGRAM STATUS

11.1 General

The Management Safety Accountability Program (MSAP) began during the fourth quarter of 1994, and has been shared with other facilities. As part of the program, quarterly reports are submitted. The following fourth quarter, 1995, reports validate WID's accountability toward achieving the six-step MSAP process. Minimum technical review has been given to each report, with the intent of maintaining each department's written integrity.

CONTROLLER'S DEPARTMENT

Summary

During the fourth quarter, managers in the Controller Department conducted safety inspections throughout the department and findings were minimal. Fourteen safety meetings were recorded, and a meeting for the entire department included a discussion by the Occupational Health Nurse on Stress Management. This quarterly safety achievement is primarily due to daily safety awareness by management and employees, as a direct result of group safety meetings and management walk-throughs.

Managing the Environment

Minimal unsafe working conditions were identified by the managers' safety inspections and daily walk-throughs. The following conditions were identified and corrected:

Identified Items/Corrective Actions

1. Excess supplies and office equipment were removed from Trailer 986 to eliminate tripping hazards and the possibility of items falling.

2. A safety concern was expressed through the Process Improvement Program regarding trucks backing up to the loading dock at the warehouse. The concern was that a person might be in the blind area behind the truck. Inventory Control and Safety have agreed that mounting a mirror on the loading dock would enable the drivers to see behind them at all times when backing. An Action Request has been initiated to install a mirror.

3. An individual was observed not wearing safety glasses and steel toe shoes in the Hazardous Materials storage facility. The individual was reminded of the requirements of the facility. A sign has been installed on the entrance gate detailing that eye protection and safety shoes are to be worn while occupying the facility.

4. Minor housekeeping issues were identified in the Support Building Computer Room. These issues have been corrected and two additional inspections have resulted in no findings.

5. The Material Control manager conducted a housekeeping and safety inspection on the following storage facilities:

   In-Town Warehouse, 514 East Greene
   Warehouse WIPP Site Building 453
   Hazardous Material Facility
   Port-A-Camp
   Reusable Yard
   Building 951
   Site Connexes

   There were no major findings and all corrective actions have been completed.

Managing Creativity

All employees within the Controller's Department are given the opportunity to raise safety related concerns they may have during section safety meetings, staff meetings, or anytime a safety concern is identified.

Several sections have monthly safety meetings conducted by all employees in the department. Each month an employee is required to present a topic to the section concerning safety issues.

Managing by Walking Around and Listening

The Controller's Department conducts quarterly managers' safety inspections of each section in the department. Each manager performs an inspection of another section. The inspection consists of a departmental walk-through, completion of a checklist identifying findings, and each manager involved must sign the checklist.

Managing Injuries

There were no work related accidents or injuries reported for the quarter.

Managing Safety Meetings and Training

Safety meetings conducted in the Controller's Department for the quarter included the following:

Food Safety During the Holidays (presented by the Eddy County Extension Office)
Defensive Driving (presented by the New Mexico State Police)
"Individual Responsibility for Safety" (film)

"Hazards of Working Environment" (film)
"Safety Housekeeping Reviewed" (film)
Parking Lot Safety
Fire Safety in Your Home (presented by an EMT)
Home Security (presented by the Carlsbad Police Captain)

An OHN presented techniques to effectively identify and manage stress.

Property Management hired three temporary service workers to assist with the annual inventory process. These workers attended WID General Employee Training and Industrial Hygiene personnel conducted a special safety briefing for the workers for "good inventory practices."

ENGINEERING DEPARTMENT

Summary

During the fourth quarter, Engineering identified and corrected seven potentially unsafe working conditions; a member of Drafting Support received a PIP award for submitting a suggestion to eliminate a possible tripping hazard; several sections conducted independent walk-around inspections; and implemented several safety measures to ensure safe working conditions. Engineering conducted eleven safety meetings or attended training courses during the period.

Engineering's safety awareness and conscientious application of safe working conditions resulted in no recordable injuries during the quarter.

Managing the Environment

- Electrical Engineering conferred with the Operations and Safety organizations and altered the approach on three electrical work packages that may be performed in the proximity of energized equipment. The work entails the replacement (to a smaller size) of over current protection fuses in the Substations #1, 2, and 4. Engineering helped determine the appropriate safety measures for the electricians, and then changed the work instructions to include the mandatory safety precautions and protection.

- Mechanical and Civil Engineering prepared an Engineering Change Order (ECO) to hard-pipe the chlorine tank fill lines in the pumphouse in Building 456. The operation currently uses a hose to fill the chlorine tanks. When implemented, this will eliminate water on the floor, which causes a safety hazard to maintenance personnel.

Identified Items/Corrective Actions

1. The October and November Landlord reports for Building 486 were completed and submitted to Operations. The majority of open items pertains to emergency lighting in the building. During various outages, it was observed that not all the emergency lights functioned properly. Some did not come on at all and some did not stay on for the length of time required by Life Safety Code.

   Corrective Action: Maintenance, under a Work Order, rewired various battery ballasts to determine if battery recharging will improve. This rewiring eliminated the night light feature.

2. The issue of inadequate emergency lighting systems at the WIPP site is being addressed in Electrical Engineering. The emergency lights in many buildings do not remain illuminated for the 90-minute period required by the National Fire Protection Association (NFPA) Life Safety Code, and the WIPP System design Description.

Corrective Action: Through interactive meetings initiated by Engineering, various internal groups have agreed to stringent performance specifications for emergency lighting in those buildings required by the occupancy classifications from the Life Safety Code. Engineering will now design upgrades for emergency lighting systems in these buildings to ensure compliance.

3. As a result of a landlord inspection, a potential safety hazard existed in the Engineering File Room due to interference between the drawer cabinets and the sprinkler heads. Also, lighting improvements were required in the work area.

   Corrective Action: A request was made to Work Control to relocate the drawing and system history files to correct interference with the sprinkler heads. This change also improved the lighting conditions.

- In October, the emergency lighting malfunction in the engineering building was identified to the Electrical Safety Committee. A proposal to specify which lights are "emergency" and required by code as opposed to which are for "convenience" is being evaluated by Electrical Engineering with input from Configuration Management and Startup, Safety, and Operations. A meeting is planned to finalize the proposal and resolve any issues in preparation for an ECP and revision to the System Design Description. The ultimate "fix" will be based on the results.

Managing Creativity

- A Drafting Support employee received a PIP award for suggesting that a centralized ceiling-mounted retractable extension cord be provided in the Engineering Building conference room to avoid having to extend a cord across the floor during presentations.

- Electrical Engineering representatives attended the semiannual meeting of the DOE Backup Power Working Group. The group shares and disseminates knowledge on diesel generator, battery backup, and lightning protection systems from experiences at various DOE facilities. The topics included safety issues on these systems, plus a special session on the use of thermography to identify electrical overloads for immediate corrective actions and prevention of safety incidents.

Managing by Walking Around

Identified Items/Corrective Actions

1. Mechanical and Civil Engineering prepared an ECO addressing the removal of utility stub-ups at Trailer 917. The domestic water stub-up is a potential cross-connection concern and the sanitary sewer stub-up and clean out are tripping hazards. Since the stub-ups are no longer needed, they are to be removed.

Corrective Action: An ECO was routed for approval signatures. Associated work instructions were completed pending approval of the ECO.

2. During the Engineering Building inspections, it was determined that one of the fire extinguisher's pressure had discharged.

   Corrective Action: This was identified to Safety ESTs who replaced the extinguisher with one that is fully charged.

3. During a regular walk-down of work areas, the manager of Mechanical and Civil Engineering was notified by one of the engineers that many black widows were located on the outside south and west walls of the engineering building.

   Corrective Action: An Action Request was submitted to IS&H, and Pest Control was contracted. The potential hazard was corrected.

- Engineering updated the Material Safety Data Sheets during the week ending December 8, 1995.

Managing Safety Meetings and Training

- An Engineering Department all-hands safety meeting was presented by the WIPP's OHN, on December 14, 1995. The subject was "How to Manage Stress." Pamphlets were distributed and questions answered regarding various aspects on the topic.

- On December 14, 1995, members of the Engineering Department attended a session conducted by a member of the New Mexico State Police who spoke on the subject of "Defensive Driving." Topics such as the new speed limit laws, and driving under the influence of alcohol were also discussed at length.

- Geotechnical Engineering personnel presented three safety meetings. Videos shown included: "Fire Prevention at Home," and "Ladder Safety." A walk-around inspection was conducted of the Geotechnical Engineering office area.

- Two meetings were conducted and videos were shown to the Mechanical and Civil Engineering group which included topics on: "Home Fire Extinguishers" and "Walkway Safety - Slips, Trips & Falls."

- Plant Engineering/Monitoring Systems Engineering conducted a workplace safety meeting on November 15. The meeting was prompted by a safety memo issued by WID IS&H dealing with office and site safety hazards.

- An engineering representative attended formal performance-based interpretation (training) of the National Electrical Code (1996) on November 13-15 in Albuquerque, NM. This course addressed changes to the code from the 1993 edition to the 1996 edition.

- The Mine Engineering group conducted two safety meetings. A video on "Walkway Safety" was presented as well as a meeting to heighten awareness of and the need for Job Hazard Analysis under certain working conditions using the E-140 Back (Roof) Removal/ Stabilization Work Safety exercise as an example.

Managing Injuries

- Configuration Management and Startup distributed three Lessons Learned Reports to Engineering managers involving injuries and hazardous material spills for inclusion in "required reading for appropriate personnel."

Engineering did not report any work-related injuries or illnesses this quarter.

Additional Safety Activities

- The manager of Mechanical and Civil Engineering is a member of the Surface Management Council (SMC) and attends monthly meetings as the engineering representative. The SMC is the WID's governing body for the Landlord Program and general plant surface issues (safety and other) that are not resolved through other means. For example, the concern regarding nonfunctioning emergency lights in the Engineering Building was brought to the attention of the SMC, and the priority was increased on the Work Orders, which resulted in the work being accomplished quickly.

ENVIRONMENT, SAFETY, and HEALTH DEPARTMENT

Summary

During this quarter, Environment, Safety, and Health (ES&H) identified several potential unsafe working conditions. All conditions identified are corrected or mitigated. ES&H continually conducts activities encouraging and commending employee creativity and involvement. Employees are encouraged to openly provide suggestions to improve safety at the WIPP. ES&H continually conducts safety inspections and walk-throughs. These walk-throughs are not only within ES&H work Areas, but include work areas throughout the site. This provides one-on-one interfaces with employees, and encourages employees to openly discuss areas of concern. ES&H, along with the Occupational Medical Director (OMD), evaluated job requirements of one employee, enabling the employee to return to work sooner. ES&H made safety presentations to the CAO, and the WID; additionally, ES&H invited employees from other WID sections to provide safety presentations in their area of expertise.

Managing the Environment

Several potential unsafe working conditions were identified and corrected (or mitigated where necessary) by sections within ES&H. These include the following:

Identified Items/Corrective Actions

1. A landlord inspection of the Emergency Management supply room revealed clutter and equipment that needed to be placed in excess.

   Corrective Action: Emergency Management reorganized and cleaned the room. All unneeded items were placed in excess, resulting in greater efficiency and productivity thereby reducing potential hazards.

2. The recent cold weather resulted in ice on the sidewalks and other areas around the Safety building.

   Corrective Action: The areas were salted, resulting in a safer work environment. There were no injuries as a result of the ice.

3. Compliance and Permitting (C&P) identified potential fire hazards in storage cabinets in the technical reference library.

   Corrective Action: C&P cleaned out the cabinets, reducing potential fire hazards and improving efficiency.

4. During a weekly Satellite Accumulation Inspection, Environmental Compliance and Support (EC&S) staff noticed that an eyewash station on the east side of Building 454 was in the direct sunlight. During the summer months, the temperature of the water

reaches elevated levels. If a person used the eyewash station while the water temperature was elevated, the hot water could potentially cause damage to the eye.

Corrective Action: The eyewash station was moved to the north side of Building 454 under the canopy.

5. During a release assessment sampling activity, EC&S sampling team members identified a potential electrical hazard due to the underground electrical wires.

   Corrective Action: Sampling activities were halted, and IS&H personnel worked with EC&S and Work Control personnel to develop a brief job hazard analysis and new work instructions to account for the potential hazard. No mechanized equipment was used to collect samples, and digging activities were supervised by Safety and Construction Management personnel.

6. IS&H personnel observed two contractors on two different days not wearing their hard hats in a construction area.

   Corrective Action: IS brought this to their attention, and they quickly corrected the situation.

7. IS&H personnel observed personnel in Maintenance changing oil in the 700B fan. The oil pan had been cut to fit under the bearing housing, and the area where the pan was cut was left unprotected.

   Corrective Action: The craft supervisor was contacted to modify the oil pan to eliminate the rough edges.

8. IS&H personnel performed an inspection of well-site H19. Areas inspected include: office trailers, electrical generators, associated electrical cables, the haz-com program, and the well site. All safety concerns from the previous inspections had been corrected. The following observations were identified during this inspection:

   - Install shrink tubing on the pump cable splice before energizing the pump.
   - Label generator circuit breakers with permanent labels.
   - Update MSDS book legend.

   Corrective Action: A follow up inspection was performed to ensure observations were corrected.

9. IS&H personnel participated in the CAO facility inspection of Building 482. The following observations were found:

   a. Two storage areas in the connexes immediately behind building 482 were cluttered.
   Corrective Action: The cognizant manager for each area was notified immediately of the observation. Both areas were being cleaned before the inspection was completed.

   b. A fire extinguisher sign was found without a fire extinguisher.

   Corrective Action: The fire protection engineer stated that a fire extinguisher was not required in that area, and the sign was removed.

10. IS&H personnel participated in the landlord inspection of Building 452. During the inspection, four electrical devices were found that did not have an NRTL (UL, FM, CSA) label.

    Corrective Action: The NRTL inspection form was completed for each device. The forms were furnished to the Electrical Safety Committee for disposition. No other safety issues were found.

11. Environmental Monitoring (EM) identified a potential for exposure to H_2S around some gas/oil and water wells.

    Corrective Action: Personnel H_2S monitors have been ordered and will be worn by groundwater, oil, and gas surveillance crews.

Managing Creativity

Compliance and Permitting completed Supervisor's Training in Accident Reduction Techniques (START) training for the Section manager's direct reports.

EC&S staff developed a new strategic plan which includes taking a proactive approach by encouraging other WID employees to create a safer work environment. EC&S staff members are encouraged to "make the first move" addressing safety and environmental awareness concerns through proactive communication. The following are examples of employee/customer awareness concerns through proactive communication:

- EC&S staff communicates on a daily basis with employees from all WID organizations inquiring about any safety or environmental concerns.

- EC&S is planning to initiate a site Environmental Awareness Program scheduled to begin in January 1996. This motivating campaign is comprised of three components: the Environmental Awareness Campaign, the "Manager's Environmental Handbook,"

and the Management Environmental Accountability program. Each phase of the campaign involves full WID participation and awareness of environmental responsibilities and safety concerns. The program will kickoff on January 12, 1996, with the issuance of the "Manager's Environmental Handbook."

- In a proactive move by EC&S, the WID is now receiving CAO assessment checklists in advance of the assessment. Discussions on potential issues, required action, and integration/interface activities are discussed prior to the formal assessment. As a result, the first assessment conducted under these conditions resulted in no findings or observations requiring a written response.

- EC&S staff is currently developing an Environmental Awareness hotline. Suggestions and concerns related to environmental issues will be addressed through this hotline. The hotline target date is March 1996.

Emergency Management is in the process of procuring a blanket order to fill the ambulance medical oxygen bottles in town rather than filling the bottles on site. This is in response to concerns expressed about filling the bottles with no explosion cage or automatic pressure shutoff.

An E&RC employee coordinated the December safety meeting for the section. The topic was holiday safety. The employees discussed highlights of the featured safety video and created a handout including nonalcoholic beverage recipes.

The Groundwater Quality Surveillance group took the initiative to implement compliance with MSHA Directive 12030. The directive addresses ground-fault circuit interrupter protection for portable or vehicle mounted generators. Environmental Monitoring was proactive in pursuing compliance; taking necessary action to initiate modifications to EM generators prior to the direction given by the WIPP Electrical Safety Committee to do so.

IS&H personnel submitted and implemented a PIP suggestion to change eyewash water from a quarterly change to a semiannual change time frame. This suggestion will save approximately $6,000.

IS&H personnel sponsored 16 safety articles for the TRU News and special postings. The following subjects were covered:

- Fire Prevention Week - Prevent Home Fires
- Tips for Fire Safety
- Protect Yourself Against Fire Danger
- Tool Tips - Screwdrivers
- Speaking of Safety - Caution When Walking in Areas Where Heavy Equipment is Operating
- Safety Meetings Don't Have to be Boring
- Gun Safety for Kids

- Daylight Savings Time Change and Driving into the Light
- Conditions that Affect Driving
- Bottled Water Update
- Safety Tips for Highway Cleanup Volunteers
- Test Your Fire Awareness Quiz
- Fire Safety Awareness Quiz Results
- Are You Feeling Stressed Out? Ways Your Can Cope
- Holiday Safety
- Invitation for all to the American Society of Safety Engineers Monthly Meeting

Managing by Walking Around and Listening

Compliance and Permitting (C&P) conducted daily walk-arounds to discuss safety issues with employees. Example of discussions: maintaining a safe working environment (reduce piles of material in cubicles).

EC&S management continued to visit each work area assessing work progress, listening to employee concerns, and offering suggestions for improvement in safety or efficiency. Additionally, EC&S staff were encouraged to interface with other WID organizations regarding environmental or safety concerns. A "target audience matrix" was developed to facilitate this interaction.

The IS&H Manager accompanied the New Mexico State Mine Inspector on an inspection of the facility during this quarter. The inspector examined the Hoisting systems and was given a presentation on the remote monitoring system of the underground conditions. The inspection resulted in no findings and comments of excellence from the State Mine Inspector on the WIPP program.

The IS&H Manager completed six walk around inspections of the surface and underground facilities. The inspections were done in conjunction with the Surface Operations and Underground Operations Managers. During these inspections, observations were noted on housekeeping. These items were corrected within the same day as the observations.

Managing Injuries

Emergency Management, in conjunction with the OMD, and OHS evaluated medical restrictions and adjusted the job requirements for an employee. This enabled the employee to return to work sooner to the benefit of both Westinghouse and the employee.

There were no injuries or illnesses reported during this period.

Managing Safety Meetings and Training

C&P conducted new employee briefings for personnel on manager's commitment to safety and employee's responsibilities per the Managements' Safety Accountability Program.

The EC&S monthly safety meetings continued during this quarter. The following topics were presented: "Environmental Sampling Safety," and "Safety Away from the Workplace."

One member of Emergency Management, along with two members of Industrial Safety & Hygiene attended the State Mine Inspector's Safety Conference held in Socorro, New Mexico on December 13 through 15, 1995. The conference agenda included: MSHA update, electrical safety, fall protection, explosion regulations, coal concerns, and an overview of the WIPP's activities including our safety record and the safety culture inherent at the WIPP. ES&H staffed a booth depicting a pictorial view of site activities and accomplishments with handouts available.

EC&S held safety discussions during weekly staff meetings regarding the importance of safety during the Thanksgiving, Christmas, and New Years holidays and various hazards associated with icy conditions, electrical safety and food contamination.

EM safety meeting topics for this quarter included:

- Adherence to procedures
- Field use of vehicles
- Hydrogen Sulfide hazards around wells
- Managing Stress

IS&H personnel hosted Defensive Driving sessions in anticipation of the holiday season. The session were presented by the NM State Police, and were attended by approximately 450 DOE and Westinghouse personnel. The Vince and Larry dummies were on hand to present session attendees with steering wheel covers and defensive driving pamphlets.

An Industrial Hygiene technician completed Water Certification Training in Albuquerque. This will enable the technician to collect domestic water samples at the WIPP site.

Additional Safety Activities

The WIPP Sampling Team initiated an informal pre-job function briefing before each sampling activity to discuss possible related sample concerns and the proper personal protective equipment required for the activity.

EXTERNAL AFFAIRS DEPARTMENT

Summary

During the fourth quarter, safety continued to be a top priority and dominated the External Affairs staff activities. Daily walk-throughs and one-on-one communication with personnel by management is part of the conduct of business. Two External Affairs staff members were moved to 304 Main Street. This action required extensive movement of files and office furniture within the section. Safety briefings and areas of responsibility were conducted and the moves were completed safely and efficiently. External Affairs provided a surface and underground safety briefing for approximately 43 tours, with 446 visitors. Safety is an important issue for visitors touring the WIPP facility. External Affairs had one first aid injury to report during this quarter.

Managing the Environment

Several unsafe working conditions were identified and corrected (or are in process) by sections within the External Affairs Department. These include the following:

Identified Items/Corrective Actions

1. A hazardous situation was identified when employees entered the main hallway from the receptionist area and viewed a ceiling light cover hanging precariously.

   Corrective Action: The area was immediately blockaded to prevent employees and visitors from possible injury. The building landlord was contacted and action to replace the light cover was completed.

2. Improper storage of printed materials.

   Corrective Action: Shelves were installed and the printed materials were placed for easy retrievability.

3. Ergonomics regarding the position and height of the keyboard and mousepad.

   Corrective Action: A site ergonomics specialist was asked to assess the station. Temporary modification of the existing keyboard and mouse tray have been implemented. Permanent changes are being investigated.

4. Slippery walk area behind the auditorium stage.

   Corrective Action: The wax buildup was stripped, leaving behind a non-slippery floor.

5. Improper storage of antitheft screens ordered for the Radiological Assistance Program vehicle created a tripping hazard.

   Corrective Action: The screens and bulkheads were moved to a safer storage location.

6. Restricted aisle space caused by extra file cabinets.

   Corrective Action: Items in the filing cabinets were placed elsewhere, and the file cabinets were excessed.

7. Battery gang charger could tip off the radio battery storage area.

   Corrective Action: Storage area was reconfigured to eliminate any tipping of the chargers.

8. Incorrect use of extension cords.

   Corrective Action: Surge protected power strips replaced the extension cords.

Managing Creativity

Employees in External Affairs are encouraged to create a safer work environment. Safety is emphasized at all levels. The following is an example of employee creativity:

- Staff members are encouraged to present articles for inclusion in the section read file.

Managing by Walking Around and Listening

Managers make it a regular practice to walk through work areas and discuss safety and health topics with staff. Staff members are encouraged to raise any health and safety issues immediately. The staff manager and section managers emphasize the open-door policy for all employees on all issues.

Managing Injuries

The External Affairs Department reported one incident this quarter. The employee, while cleaning the work area, dropped a piece of equipment on the top part of the foot. The incident was reported to the immediate manager, who transported the employee to the OMD for

treatment. The employee returned to work immediately with follow-up checkups scheduled. Management advised staff members on proper lifting techniques.

Managing Safety Meetings and Training

Date	Topic	Location
10/95	I Was Only Doing My Job and It Can't Happen to Me	Site
	Stress Relief in the Workplace	*WOIC*
11/95	Workplace Stress	Site
	Safety Orientation in An Office Environment	*WOIC*
12/95	Tree Stand Safety	Site
	Driving Defensively	*WOIC*

Additional Safety Activities

- Safety Bulletin On Vehicle Exhaust Gas Fumes
- Safety Bulletin On Medication Alert
- Safety Bulletin On Hazards of Our Working Environment
- Lessons Learned Bulletin No. 95-016

HUMAN RESOURCES/TRAINING DEPARTMENT

Summary

HR/Training identified and corrected four potentially unsafe working conditions, submitted one PIP suggestion, conducted landlord inspections, and visited each work area to ensure safety improvements and efficiency. Technical Training actively supports safety, onsite with Westinghouse, DOE and subcontractors and offsite in the local communities.

Managing the Environment

- Training performed a needs analysis on site scissor lift mobile work platforms and associated qualifications. The analysis will result in minor changes to current qualification instruments. This analysis is part of an ongoing process to validate safety and operational standards within existing programs.

- HR conducted an extensive inspection of the cafeteria noting several areas for improvement. These items, along with their corrective actions, are listed below:

  Item: Raised linoleum was noted at the edge of the food preparation area.
  Corr: Metal strips were installed to secure the linoleum.

  Item: Identified need for food covers over warmer trays.
  Corr: Covers were ordered and installed.

  Item: Dishwasher leaks were noted, as well as partially clogged drains.
  Corr: Drains were cleared and leaks repaired.

Managing Creativity

Employees in HR/Training are encouraged to create a safer work environment. Safety is emphasized at all levels. The following are examples of employee creativity:

- One employee submitted a PIP to update wiring the Lab and Training Room #1 for Ground Fault Protection.

- WID Employee Communications continues to support the emphasis of Environment, Safety and Health information throughout the division. Safety statistics and general workplace safety information are shared with employees in regular all-employee meetings, and safety and health awareness programs are advertised through the employee newsletter and bulletin board postings.

  TRUNews continues to emphasize ES&H in its weekly mix of information. For 1995, ES&H information accounted for 26 percent of all information published. More weight

is given to ES&H information than any other topic, reflecting the division's strong safety culture

Managing by Walking Around and Listening

- The Technical Training manager conducted inspections of both training connexes storage areas and directed a cleanup of each.

Managing Injuries

- There were no work related injuries or illnesses reported during this period.

Managing Safety Meetings and Training

HR conducted a department safety meeting on "Back Injury Avoidance" on December 12, 1995.

Additional Safety Activities

- Assigned one instructor to attend OSHA 510 courses for construction standards as well as the OSHA 500 course for instructors.
- Certified one "Stoller Co." instructor as a "National Safety Council - Defensive Driving Course" instructor.
- Conducted one CPR course for the Otis Fire Department.
- Assisted with the N.M. EMT Refresher.
- One Technical Training instructor has accepted a position on the Carlsbad American Heart association (AHA) board.
- One Technical Training instructor was nominated to the Board of Trustee's at Guadalupe Medical Center.

OPERATIONS DEPARTMENT

Summary

During the fourth quarter, Operations staff and personnel discovered thirty-one areas in the workplace where improvements could be made to help eliminate potential hazards. These discoveries were made during quadrant inspections, roving watches, landlord inspections or daily observations. The WIPP Electrical Safety Committee took a proactive approach to bring the site in compliance with a recent MSHA policy requiring grounding testing on all high voltage systems. Also during the reporting period, Operations began conducting assessments from a performance-based perspective, as opposed to compliance based. Operations personnel had two recordable injuries and tow first aid injuries during the quarter.

Managing the Environment

Identified Items/Corrective Actions

1. The diesel fuel tank was observed parked too close to the Exhaust Filter Building.

   Corrective Action: Operations personnel were notified and the fuel tank was immediately relocated.

2. The eyewash station located outside Building 454 was missing the weekly inspection sign-off card.

   Corrective Action: The landlord was contacted to correct the condition.

3. The 480V main disconnect switch located in Building 454 was missing the blue clip for the door closure.

   Corrective Action: The landlord was contacted to correct the condition.

4. The distribution box above 45-P-MCC04/3 has no cover on the back.

   Corrective Action: An Action Request (AR) was written to correct the condition.

5. Two electrical distribution panels were identified as having spare breakers in the closed position.

   Corrective Action: The breakers were checked to verify the spare status and were opened.

6. Industrial Hygiene was contacted concerning a "hearing protection required" sign missing from Building 463.

Corrective Action: The sign was replaced.

7. Tripping hazards in the form of ledges left from excavation were identified in the S-1300 fabrication shop and at the N-150 overcast.

   Corrective Action: The areas were barriered until steps were fabricated and subsequently installed.

8. Drummy rib was identified along the north rib of S-1600 between Rooms 5 and 6.

   Corrective Action: The area was barriered off and subsequently mechanically scaled thereby eliminating the hazard.

9. A bulkhead door in S-1950 was rubbing against an airline presenting a potential hazard in the form of sudden release of energy.

   Corrective Action: The door was tagged out of service and the airline raised to allow adequate clearance for the door, thereby eliminating the hazard.

10. An electric cable was hanging too low at the 0-E/N-300 intersection presenting a hazard to heavy equipment operators working in the area.

    Corrective Action: The electric cable was locked out and subsequently rehung, thereby eliminating the hazard.

11. Drummy rib was identified along the west rib in E-140 between S-90 and N-150.

    Corrective Action: The area was barriered off and mechanically scaled thereby eliminating the hazard.

12. The wrong type of electric cable was identified on one of the railer mounted ventilation fans.

    Corrective Action: The fan was tagged out of service and the cable was subsequently replaced with the proper type of cable.

13. An area of poor visibility was identified on the Fletcher mobile scaler presenting a hazard to personnel and property in the vicinity of scaling activities.

    Corrective Action: A closed-circuit television system was installed on the boom of the mobile scaler thereby significantly reducing the hazard potential.

14. Electrical troubleshooting of the Air Intake Shaft hoist timers and relays had to be performed while the high voltage contractors were energized due to both relays and contractors located in the same cabinet.

Corrective Action: The relays were moved to a separate cabinet to facilitate higher level of safety while troubleshooting hoist relays.

15. A concern was identified that there is no place to tie off safely, while busting rocks on the grizzly at the salt loading pocket.

    Corrective Action: Personnel have been instructed not to work on the grizzly at any time. The Tamrock scaler will be utilized to break rocks until Engineering has evaluated and implemented a solution to the concern.

Managing Creativity

Operations personnel are encouraged to create safe environments and participated in the following:

1. Operations participated in an underground evacuation drill October 17, 1995. The exercise went well with all proper notifications and announcements made. All underground personnel were evacuated and accounted for within 39 minutes.

2. The Central Monitoring Room Operator participated in the WIPPTREX 95-2 accident drill held in Ogden, Utah. The exercise required communications from the Central Monitoring Room to DOE officials and state officials of Utah. The exercise went well with no concerns noted.

3. As a result of the 1994 Operational Readiness Review, Facility Operations has taken a critical look at the system lineup process. Using guidance in DOE Order 5480.19, *Conduct of Operations at DOE Nuclear Facilities*, a decision tree was developed. The risk-based decision tree was utilized for analysis of each WIPP system. The analysis provides a graded approach to the process. A Systems Lineups Desktop Instruction that guides the process was developed and approved. The system lineups will be validated during performance of the lineups during the next quarter.

4. Facility Operations is working with Technical Training to finalize a required training matrix. The additional training required for operational readiness and as dictated by DOE Orders 5480.18, *Nuclear Facility Training Accreditation Program* and 5480.20A, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities*, was factored into the five-year budget planning process.

5. Facility Operations has received portable locking devices for electrical breakers. In conjunction with Electrical Maintenance, the panel locking devices that come loose when a panel cover is removed are being replaced with the portable devices.

6. Operations personnel conducted an extensive review of all JHAs used by the janitorial services subcontractor, Springtime Cleaning. The JHAs were reviewed for applicability, updated, and then validated by the Springtime Cleaning and Operations

employees. After validation, the JHAs, along with all the appropriate emergency notification information, were condensed into a pocket-size work instruction booklet for all Springtime employees.

7. A list of frequent violations noted during MSHA inspections at other facilities has been incorporated into the monthly landlord inspection program as reference. The examples enhances the current program, assuring continued success.

Managing by Walking Around and Listening

Nine Operations section managers and two administrative assistants participated in the management by walking around program. The goal set by Operations is for section managers to contact each employee in their respective section each week. During this reporting period Operations managers had 9216 interfaces with Operations employees and 1285 with CAO, SNL, and WID managers.

Managing Injuries

During this reporting period, Operations had two recordable injuries. One recordable injury was a burn from welding slag; the other was a foreign particle in the eye while the employee was working underground. Two employees required first aid attention. One of the first aid cases involved an employee who pinched his hand while moving a cabinet and one employees twisted a knew while walking.

Managing Safety Meetings and Training

Safety Meetings

Operations sections held a total of 48 safety meetings. Some of the topics are listed below:

- Detensioning of Dywidag bolts
- Underground ventilation and escapeways
- Underground equipment awareness
- Restricted access areas in the underground
- First Aid Kits
- Personal Protective Equipment
- Use of the Dimex drill
- Hearing protection
- Whooping Cough
- Access to the Waste Handling Building 4th and 5th floors
- Labeling secondary containers
- Warning signs onsite
- Appropriate clothing when welding
- Defensive driving
- Inspection of tools prior to use

- Flammable cabinets
- Winter driving conditions
- Use of the pin on the Waste Shaft flatcar
- General site safety
- Home safety
- Healthy eating habits
- Noise levels
- Underground barriers
- Air Intake Shaft controlled areas
- Sump work
- Combustible materials
- Storage of gas bottles
- Sound check monitoring
- Satellite Accumulation Areas
- Exhaust gas warning
- Water/boating safety
- General electrical safety
- Operations Safety and Communication Committee Meeting minutes
- Portable generator inverters
- MSHA directive 12030
- Charging stations
- Installing 12 foot Dywidag bolts
- Cutting with an Acetylene torch
- Safe driving during the holiday season

Twelve safety related video tapes were viewed by Operations employees during safety meetings.

- Ergonomics With Hand Tools
- Home Safety
- Good Housekeeping
- Safety Attitudes and Practices
- The Ten Thousand Night Dream
- The Hazard Zone
- Fall and Winter Safety
- If One Green Bottle
- The No Man
- Air Purifying Respirators
- Friday the 13th - Office Safety
- Cocaine and Crack

Safety Related Training and Qualifications

1. Nine employees completed HWW-101, Hazardous Waste Worker Training. This class assures compliance by maintaining trained operators in accordance with the Resource Conservation and Recovery Act (RCRA) permit.

2. One employee completed TRG-296, Root Cause Analysis Training.

3. Three employees completed SAF-515, Confined Space/Heated Environment Training.

4. Two employees attended State of New Mexico Visible Emissions Re-certification Training and both passed the test and have been recertified. The certification meets State of New Mexico Clean Air Act requirements for Diesel Opacity Testing.

PROGRAM MANAGEMENT

Summary

During the fourth quarter, Program Management continued the aggressive safety program that was implemented and maintained during 1995. Four safety items were identified as requiring corrective action, with all items corrected prior to the end of the quarter. There were no injuries or work-related illnesses during the quarter, and three scheduled safety meetings were conducted. This was all in addition to the routine safety inspections, management emphasis and employee participation that were implemented successfully during this quarter.

Managing the Environment

Routine safety inspections are conducted on a monthly basis and section staff members are encouraged to conduct frequent inspections of their work areas to ensure the absence of unsafe conditions. This includes a monthly employee self-inspection of computer equipment to ensure both safety and ergonomic correctness. Employees are also empowered to correct any unsafe condition that they are capable of addressing, such as open drawers, tripping hazards, etc. Results of routine safety inspections follow:

Identified Items/Corrective Actions

1. A kickplate under a work space in Room 202, Support Building, was off the railing, exposing electrical wiring and phone lines.

   Corrective Action: The kickplate was resecured by the inspecting employee.

2. Boxes were located in a Program Management employee's workstation in the Support Building creating a possible tripping hazard.

   Corrective Action: The boxes were unpacked and the contents placed in proper files and supply cabinets.

Managing Creativity

Employees are actively encouraged to practice safety in all their daily routines, both on and off the work site, and to communicate safety concerns to management. Examples of employee creativity include the following:

- A continuing program for procurement of ergonomically correct equipment, and adjustment of existing equipment.

- Development and use of section walk-through checklists for use by section employees.

- Incorporation of off-site topics for safety meetings.

- Development and use of computer equipment safety inspection checklists.

Managing by Walking Around and Listening

Due to the size and proximity of section personnel within Program Management, section staff and management interface daily and emphasize the open-door policy to encourage communication. Staff members are encouraged to raise safety and health issues immediately and safety is a primary discussion topic in all section meetings.

Managing Injuries

There were no work related illnesses or injuries reported for the quarter.

Managing Safety Meetings and Training

Three scheduled safety meetings were conducted during the quarter in addition to safety discussions at each staff meeting held during the period. The scheduled safety meetings included the following topics:

- Home Security: Carlsbad Chief of Police discussed what to look for on the inside and outside of a home in order to make it more secure and less appealing to a burglar.

- Household Food Safety: A representative from Eddy County Extension Service Office discussed guidelines for keeping food safe throughout the holidays.

- Holiday Safety. A video entitled " Holiday Safety Is No Joke" was presented to remind employees of the hazards associated with the holiday season and associated activities.

Additional Safety Activities

Program Management personnel are further reminded of safety on the job site through the use of safety bulletins and incident reports. These articles are routinely routed as required reading and, when appropriate, discussed by management to reinforce good safety practices.

QUALITY AND REGULATORY ASSURANCE

Summary

Quality and Regulatory Assurance (Q&RA) is responsible for conducting activities on the surface and in the underground safely. These activities varied from the performance of audits, which assess compliance with training procedures for emergency response personnel and teams to the actual hands-on nondestructive examinations such as magnetic particle, liquid penetrant, and leak testing performed on the TRUPACT-IIs, to roof bolt inspections in the underground. With this varied scope of work in mind, no reportable injuries or illnesses were sustained by Q&RA personnel during this quarter .

During this reporting period Q&RA personnel conducted monthly safety inspections of the four work locations occupied by the group resulting in four potential safety hazards which have been corrected or mitigated. Landlord inspections were conducted and corrective actions implemented for findings. Regular safety meetings were held to inform employees of safety concerns and safety was the topic of several training classes. Q&RA will continue to strive to be a quality archetype in the safety field.

Managing the Environment

Q&RA uses a workplace safety checklist to assess individual office areas. Each month an employee is designated to complete the checklist and initiate corrective actions, if necessary. The purpose of the checklist is to demonstrate ownership of our workplace and empower each employee to inspect their surroundings critically to the checklist. These inspections were performed on the four work locations of the Quality and Regulatory Assurance Department and resulted in the findings listed below:

Identified Items/Corrective Actions

1. It was discovered that a pane of glass in an exterior window was not secure.

   Corrective Action: This hazard was reported to the Facility Inspection, Repair, and Service Team and actions were taken to tighten the glass.

2. Empty boxes were found on top of fire rated cabinets.

   Corrective Action: The boxes were removed.

3. It was noted that there were lights burned out in the corner of the building.

   Corrective Action: The light bulbs were replaced.

4. It was observed that housekeeping in the records storage area needed attention.

Corrective Action: A cleanup of the area was completed. A massive records turn-over campaign is underway, which when complete, will assist in the housekeeping efforts of the records storage areas.

During the site Landlord monthly inspection, it was noted that the stairs at both south entrances to one of the Q&RA work areas were safety hazards. An action request was written and new stairs with non-skid expanded metal coverings were constructed to prevent mishaps.

Unused/obsolete equipment and materials were identified and isolated. When scheduling permits, this equipment and material will be placed in excess.

Managing Creativity

The Q&RA staff is committed to excellence in all aspects of job performance. Safety is a key element in the achievement of total quality and the Department's pledge is to attain:

- Zero lost work days
- Zero Mine Safety and Health Administration notices
- 99% plant availability
- 100% of our contract deliverables

Managing by Walking Around and Listening

The Q&RA Manager, Deputy Manager, and four Team Leaders participate in the management by walking around program. The goal set is for each team leader to contact each employee in their respective section each day, and for the department manager and deputy manager to interface with all employees at least once each week. These goals were attained. Also during this reporting period Q&RA management had interfaces with the CAO and NMED each week.

Managing Injuries:

During this reporting period Q&RA had no work related recordable or lost-time injuries.

Managing Safety Meetings and Training:

During this reporting period, Q&RA held two all-hands meetings and bi-weekly team leaders/managers meetings. All meetings addressed safety issues with safety being the sole focus of several meetings. Below are some of the issues that were addressed:

- During the two monthly Q&RA all-hands meetings, employees viewed video selections available through the Industrial Safety and Hygiene section entitled, "Safety Attitudes and Practices" and "Holiday Safety is No Joke."

- During the bi-weekly team leaders/managers meeting, safety bulletins were discussed and handed out for posting in each Q&RA work area. Each team leader then addressed these bulletins with their respective teams.

In addition to the meetings listed above, a section of Q&RA held weekly section meetings addressing safety areas which are of concern to those who do field work, above- and underground. Of the safety topics discussed, here are a few:

- Proper lifting techniques
- Flu season health precautions
- Use of hard hats and the areas involved
- Ground control knowledge and underground cautions
- Caution areas and barriers
- Chemical usage
- Proper use of Material Safety Data Sheets.
- Inclement weather

Q&RA personnel attended Defensive Driving sessions covering general defensive driving strategies, including how to drive in inclement weather.

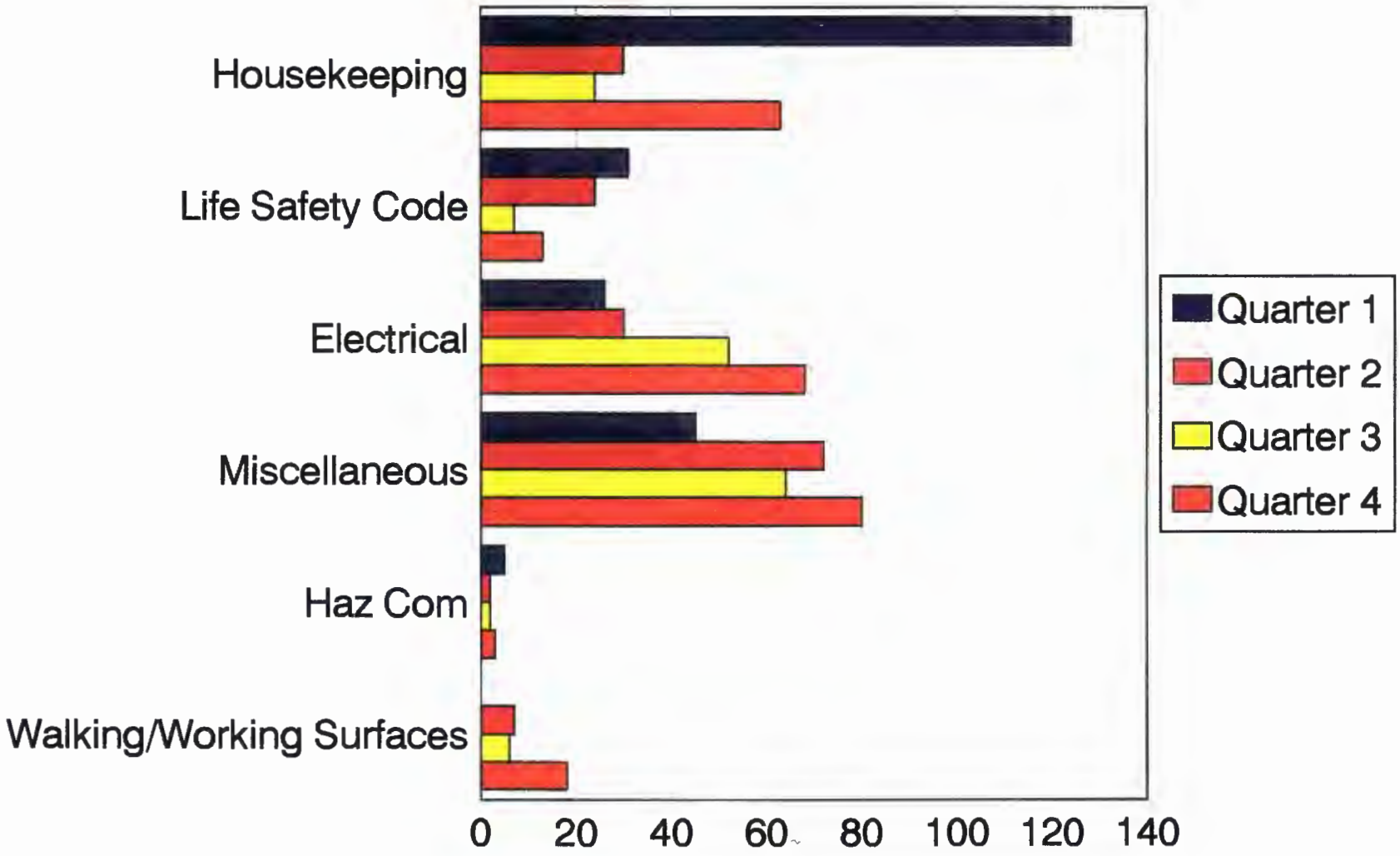
Q&RA logged in excess of 40 hours of safety related training during this reporting period. This training consisted of Underground Refresher, Hazardous Waste Worker Refresher, and First Aid/Cardiopulmonary Resuscitation.

Additional Safety Activities:

A member of Q&RA serves on the ALARA Committee. The charter of this committee is to provide an overview of facility activities and techniques that minimize personnel exposures to ionizing radiation. It is the responsibility of the ALARA Committee to ensure that appropriate measures are taken to maintain radiation exposure in controlled areas through the design and control of facility equipment. Three meetings were held during this reporting period highlighting areas such as: ALARA Committee member training requirements, changes to the ALARA Manual, and new ALARA Committee forms. Three assessments were completed: (1) Planning Radiological Work, (2) Individual Monitoring, and (3) DOE RADCON 313. Five action items resulted from the Planning Radiological Work Assessment. These items were assigned to an ALARA Committee member for resolution.

Landlord Activity 1995

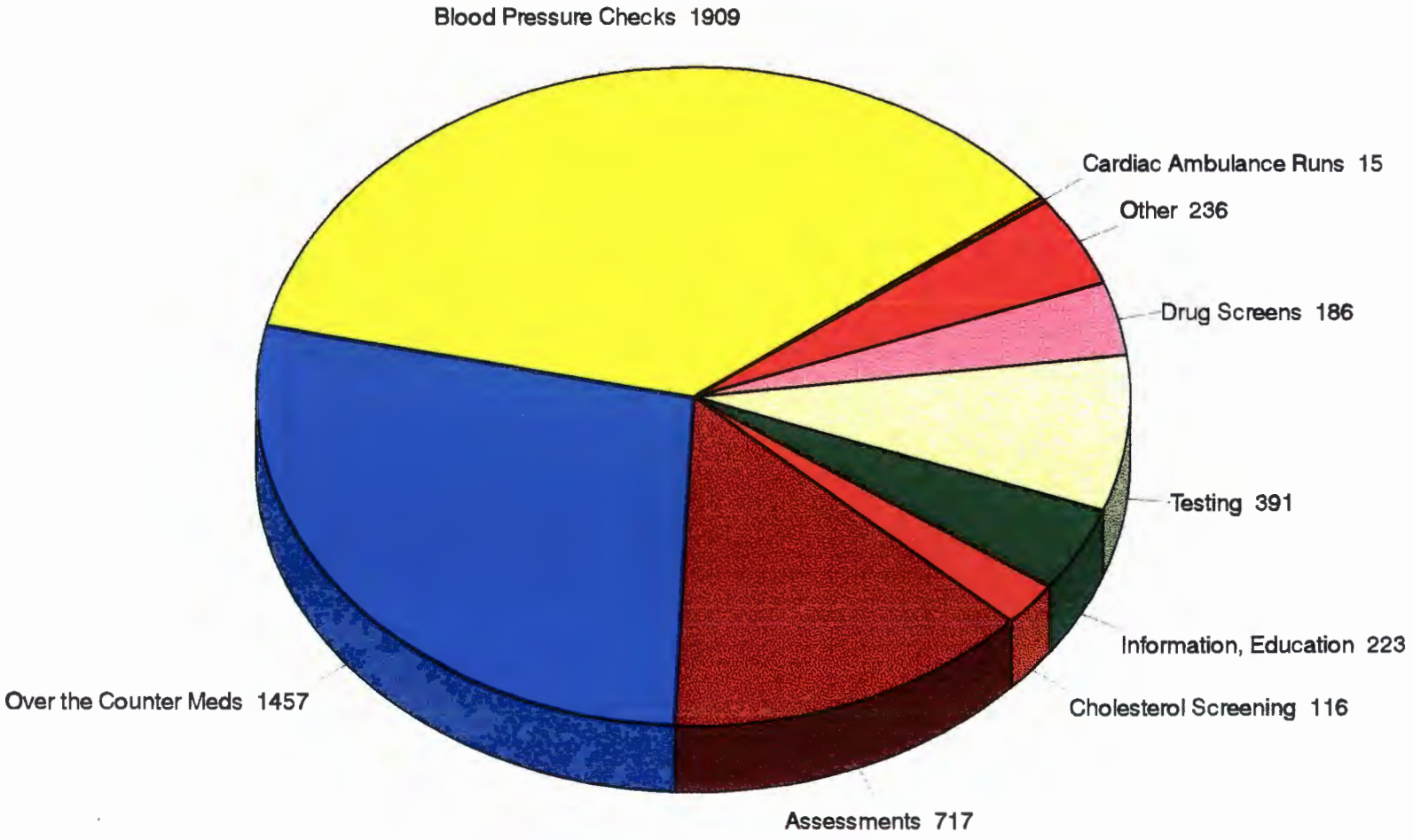
Inspection Findings



Attachment 1

Occupational Health Services

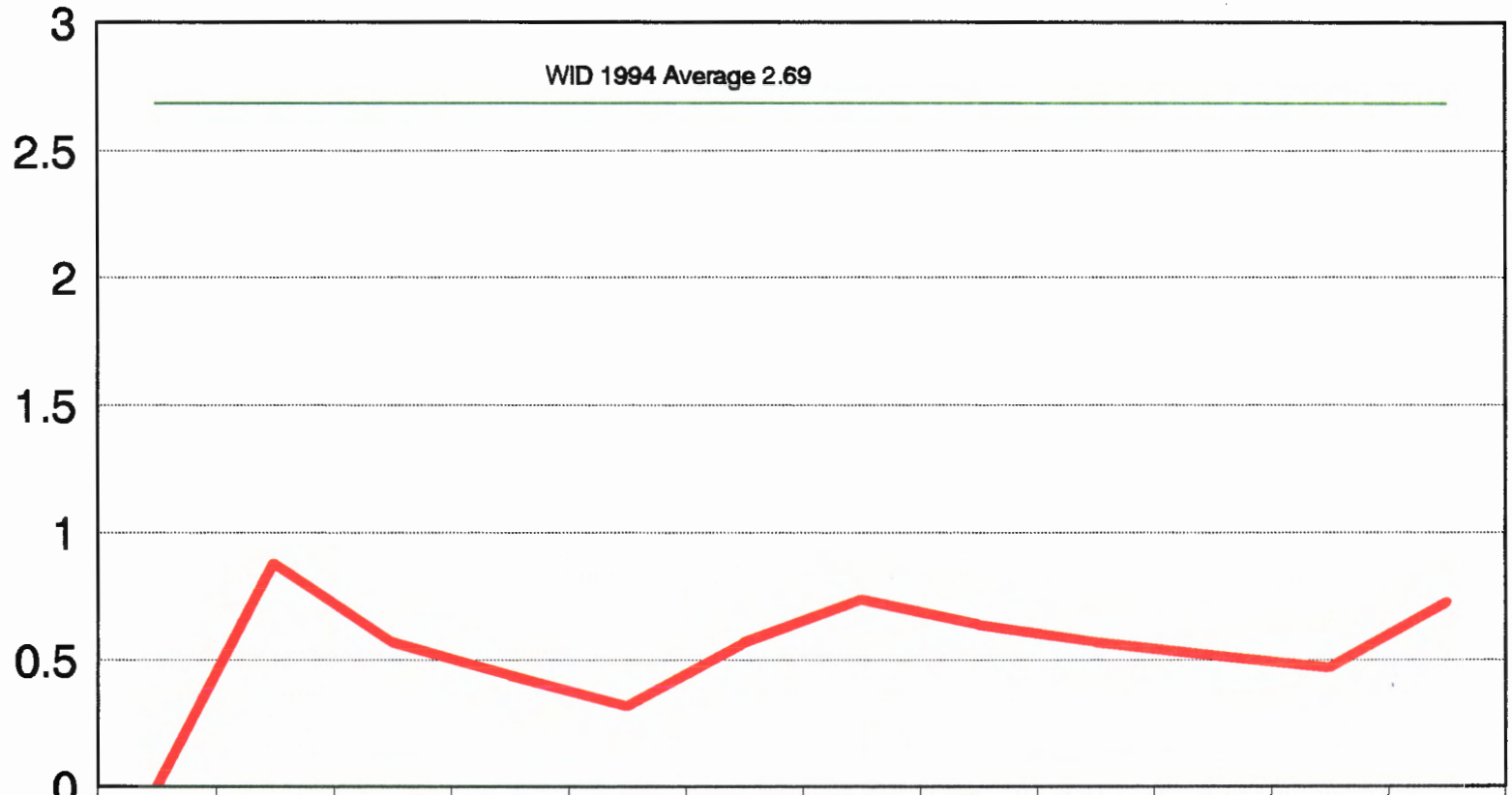
1995 Annual Report Summary



Attachment 2

WID Recordable Incident Rate

1995

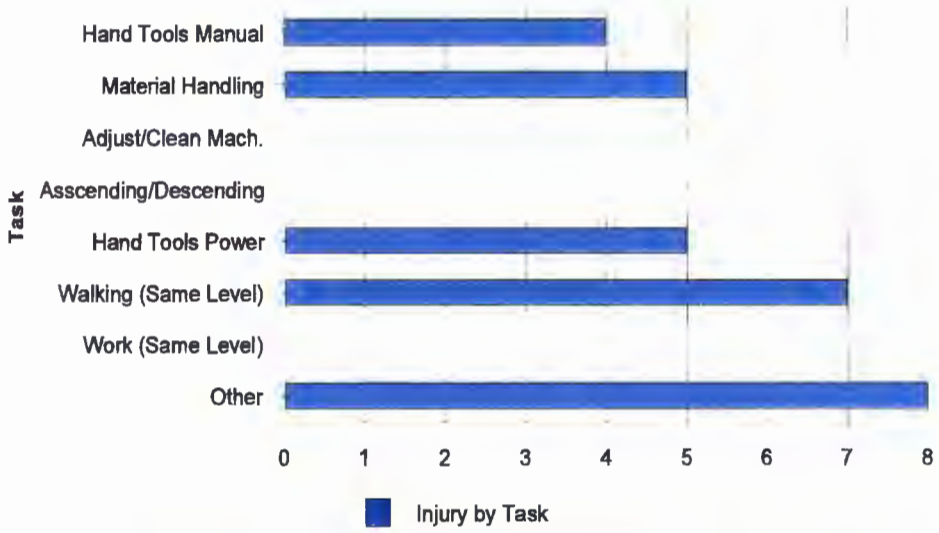


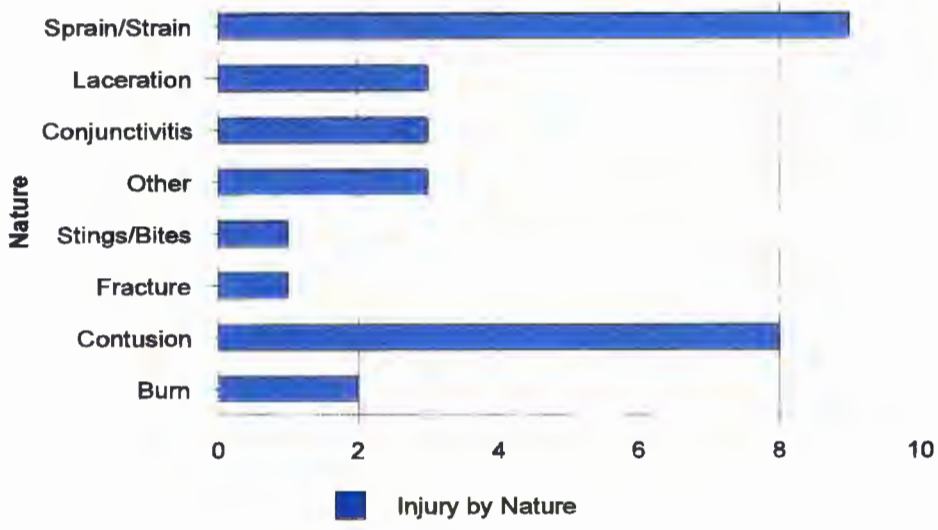
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Work Hours	119448	108032	120016	106752	124168	118112	111520	119584	107560	111752	111856	106768
Recordable Injuries/Illnesses	0	1	0	0	0	1	1	0	0	0	0	2
YTD Rates	0	0.88	0.57	0.44	0.32	0.57	0.74	0.64	0.57	0.52	0.47	0.73

Rate=# injuries+illnesses X 200,000/workhours

Attachment 3

Injury Trends





1-1-95 Through 12-31-95
Includeds First Aid and Recordable Injuries

Attachment 4

INDUSTRIAL SAFETY MONTHLY REPORT

December 1995

WID: Two Recordable Injuries/Illnesses
No Lost Time Injuries

Subcontractors: No Recordable Injuries/Illnesses

Statistics

	Workhours	Recordable Injury/Illnesses	Rate
Westinghouse Year-to-Date	1,369,568	5	.73
Westinghouse Site Subcontractor Year-to-Date	216,271	3	2.8
Site Year-to-Date (includes CAO, SNL, CTAC)	1,861,890	8	.85
Westinghouse hours since lost time *	1,859,418		
Site hours since lost time*	604,038		
Subcontractor hours since lost time*	62,101		

*Lost Time - Defined by the National Safety Council as days away from work.
This is not the basis used for the WID Contract Performance Indicator.

SUMMARY OF FIRST AID INJURIES YTD

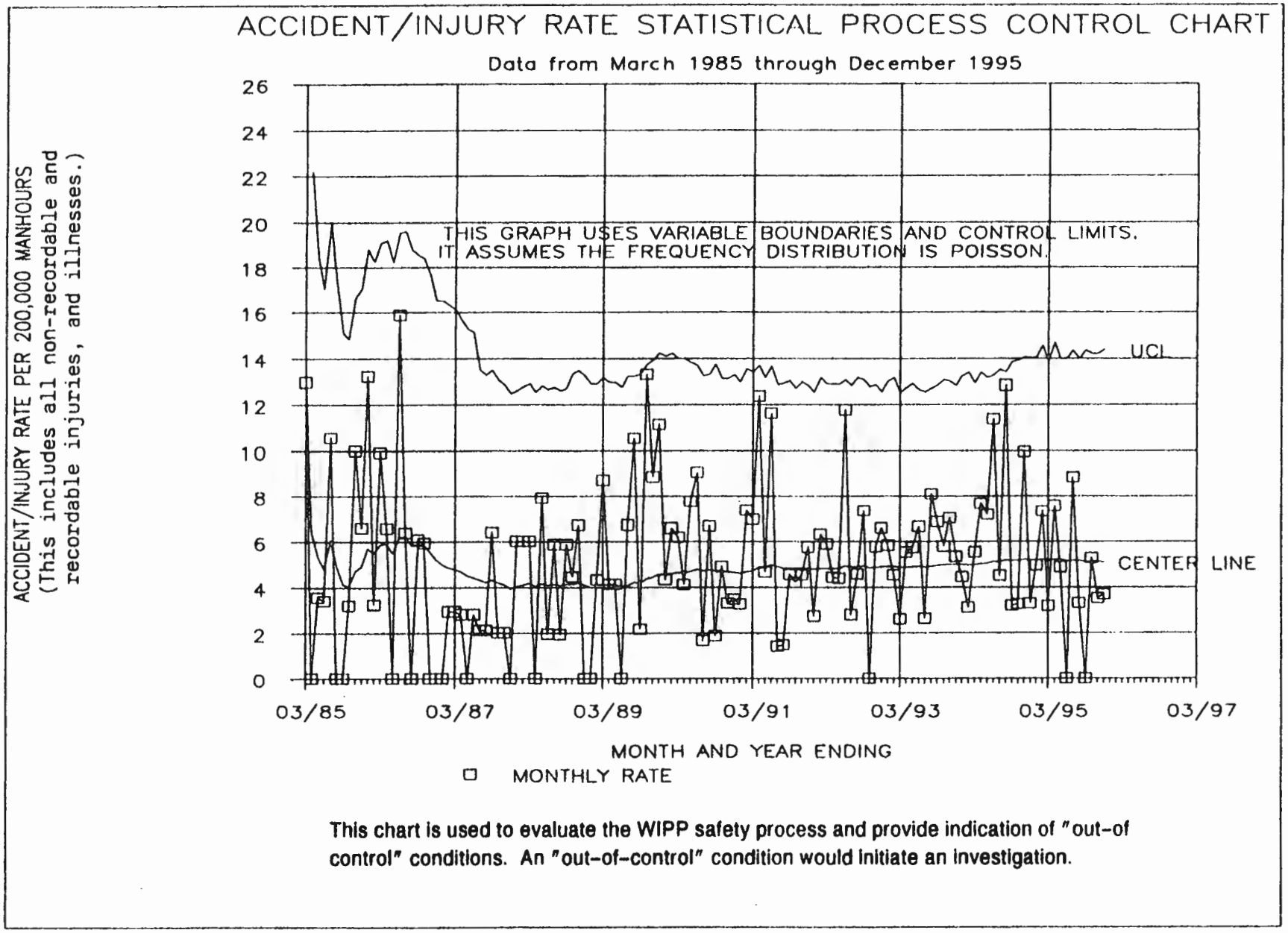
DATE	DESCRIPTION	CAUSE(S)	WID DEPARTMENT
01-04-95	Contusion - Left arm	Fell on ice	Engineering
01-06-95	Back Strain	Drilling at Wast Hoist	Operation
01-16-95	Sprain - right ankle	Stepped off sidewalk	Operations
02-07-95	Contusion - finger	Stuck by rock while scaling	Mine Operations
02-20-95	Burn right arm	Touched hot drill steel	Mine Operations
02-24-95	Foreign body in eye	Dust in eye while grinding	Maintenance Ops.
03-07-95	Strain knee	Twisted knee	Engineering
03-21-95	Back Strain	Installing Circuit Breaker	Maintenance
04-03-95	Strain Shoulder	Picking up ladder	Engineering
04-03-95	Insect Bite	Contact with Insect	ESH&RC
04-19-95	Abrasion hand	Struck back of hand	Exp. Ops.
04-24-95	Contusion Elbow	Hit elbow on wall partition	Controller
05-10-95	Back Strain	Moving materials	Maint. Operations
05-19-95	Hand Contusion	Struck hand with drill steel	Mine Operations
07-05-95	Laceration on right finger	Slipped while putting up flagging, cut finger	Construction

DATE	DESCRIPTION	CAUSE(S)	WID DEPARTMENT
07-06-95	Contusion hand	Hit hand with hammer	Maint. Operations
07-17-95	Contusion foot	Set leg of drill on foot	Mine Operations
07-25-95	Back strain	Chair broke, pulled muscle	CM&S
08-08-95	Scratch	Struck hand on doorway	Q&RA
08-24-95	Contusion finger	Wrench slipped, struck finger	Maint. Operations
10-27-95	Deep cold sensation on left hand from neuromuscular occurance	Moving materials	Mine Operations
11-02-95	Strained left knee	Walking, stepped on loose gravel	Construction
11-03-95	Cut left hand	Moving cabinet	Construction

RECORDABLE CASES

SUMMARY OF INJURIES/ILLNESSES YTD

DATE	DESCRIPTION	CAUSE(S)	WID DEPARTMENT
02-02-95	Laceration Forehead	Fall of employee	ESH&RC
05-25-95	Back Strain	Pushing open tornado door	Engineering
07-05-95	Fracture hand	Struck steel door	Experimental Operations
12-12-95	Foreign Body in eye	Unknown	Mine Operations
12-20-95	Second degree burn	hot slag from cutting	Mine Operations



This chart is used to evaluate the WIPP safety process and provide indication of "out-of control" conditions. An "out-of-control" condition would initiate an investigation.

R. J. CONNORS

01/02/96

Attachment 7