



INTERNAL CORRESPONDENCE

RECEIVED

OCT 18 1994

 SWRCo (UNIT)	TO	R. A. Clark W. G. Walker	DATE	October 17, 1994
	FROM	S. J. Breaux	SUBJECT	Regulatory Compliance Audit

WILLIAM G. WALKER

Attached are the results from the Regulatory Audit conducted by the Oklahoma City staff. You will note a number of items declared deficient by the auditors. I would appreciate your responding to the audit in a timely fashion.

S. J. Breaux/cb
S. J. Breaux

SJB/cb

Attachment

xc: J. E. Warn

1B 017129

SWRf/Asbestos 0721

INTERNAL CORRESPONDENCE

 Regulatory Compliance (UNIT)	TO F. K. Downey	DATE October 11, 1994
	FROM J. H. Mashburn P. M. Sullivan	SUBJECT Regulatory Compliance Audit/Southwestern Refinery

A Regulatory Compliance audit was conducted at the Southwestern Refinery on July 25-29, 1994. Bill Walker and Barbara Pope were the contacts for reviewing safety and health records. Roger Clark, Kirk Saffell, and Glen Jasek were the contacts for reviewing environmental records.

I. GENERAL INFORMATION

Kerr-McGee's Southwestern Refining Company, Inc. (SWRCO) is one of the larger refineries in the Corpus Christi area. Currently, the refinery's capacity is about 104,000 barrels of crude oil per day. The range of products made at Southwestern include all grades of gasoline, home heating oil, diesel fuel, and various petrochemicals. The refinery and terminals are located on 221 acres in Corpus Christi. The terminal facilities include tankage totalling six million barrels, two deep water docks, and one barge dock. Southwestern's employment averages 360 people.

II. SAFETY

II.A. OSHA Recordkeeping

II.A.1. OSHA 200 Log

29 CFR 1904.2(a) requires maintaining an OSHA 200 Log, or equivalent, with the recordable injuries and illnesses recorded in the log and summary as early as practicable, but no later than six working days after receiving information that a recordable injury or illness has occurred. The injury/illness records for 1993 and the first five months of October 11, 1994 were reviewed in detail.

29 CFR 1904.5(a) requires the employer to post an annual summary of occupational injuries and illnesses for each establishment.

No discrepancies were noted.

SWRf/Asbestos 0722

II.A.2. OSHA 101 Form

29 CFR 1904.4 requires each employer to have available for inspection, within six working days after receiving information that a recordable case has occurred, a supplementary record for each occupational injury or illness

1B 017130

for that establishment. The facility uses, instead of the OSHA 101 form, the Texas Workers' Compensation Commission (TWCC) form "Employer's First Report of Injury or Illness". A review of these records showed some records not meeting the "six working days" requirement. If there is a reason for this, whatever it is, a note should be attached to the form explaining why the "six working days" is exceeded. This may alleviate unnecessary questions from agency inspectors and company auditors.

The supplementary record must be completed in detail and must contain the information required by the OSHA form No. 101. Three items on the OSHA 101 form are not provided for on the TWCC-E1 form. These are:

- Item #9. Department
- Item #12. What was the employee doing when injured?
- Item #19. If hospitalized, name and address of hospital.

Ms. Pope confirmed that SWRCO is providing for all three items, adding them to existing information on the E1.

II.A.2.a. Facility Action Required

Ensure that the "six day" requirement is complied with when compiling this information. [29 CFR 1904.4]

II.A.3. Records Retention

29 CFR 1904.6 requires that the OSHA 200 and 101 forms be retained in each establishment for five years following the end of the year to which they relate. The records for 1989 through 1992 were reviewed in last year's Regulatory Compliance audit and the 1993 records were reviewed as discussed above.

No discrepancies were noted.

II.A.4. OSHA Poster

SWRf/Asbestos 0723

29 CFR 1903.2(a)(1) requires that each employer post in a conspicuous place a notice or notices, to be furnished by the Occupational Safety and Health Administration, informing employees of (1) the protections and obligations provided for in the Act, and (2) that for assistance and information, including copies of the Act, and of specific safety and health standards, employees should contact their employer or the nearest office of the Department of Labor. The OSHA Poster was posted at the main gate bulletin board. 29 CFR 1903.2 states "Each Employer shall take steps to insure that such notices are not altered, defaced, or covered by other material". The poster on the main gate bulletin board was partially covered by other material.

II.A.4.a. Facility Action Required

Ensure that the required OSHA notice is fully visible, with no portion covered. [29 CFR 1903.2]

II.A.5. ADA Posting

The Americans with Disabilities Act of 1989 (ADA) requires employers to post notices describing applicable provisions of the Act to applicants and employees. The ADA notice was properly posted as part of the EEOC poster.

No discrepancies were noted.

II.A.6. Exposure and Medical Records

29 CFR 1910.20(g)(1) states, "Upon an employee's first entering into employment, and at least annually thereafter, each employer shall inform current employees covered by this section of the following: i) the existence, location, and availability of any records covered by this section; ii) the person responsible for maintaining and providing access to records, and; iii) each employee's rights of access to these records." The memo addressing the requirements of exposure and medical records was posted on the bulletin board at the main gate. This is discussed with new employees as part of their new employee orientation. It is again discussed with each employee during their annual physical.

No discrepancies were noted.

II.B. Fire Protection

SWRf/Asbestos 0724

II.B.1. Inspection and Hydrostatic Testing

29 CFR 1910.157(e)(2) requires portable fire extinguishers to be visually inspected monthly. 29 CFR 1910.157(e)(3) requires the employer to ensure that portable fire extinguishers are subjected to an annual maintenance check. In addition, the employer is required to record the annual maintenance date and maintain this record for one year after the last entry, or for the life of the shell, whichever is less. 29 CFR 1910.157(f) requires that hydrostatic testing be performed on fire extinguishers on a variable basis, depending upon the type of extinguisher and the construction of the shell.

Area supervisors are responsible for performing the monthly visual checks and recording the information on an inspection checklist. The checklists are suppose to be returned to the Safety Department by the 15th of each month. Those performing this monthly inspection are instructed by Mel Tamez to "helt" the extinguishers to verify a full load, to check the hose and pressure, and to see that the instructions are facing out.

A spot inspection of these monthly inspection reports showed comments of "Could not find", or "Missing" on some extinguishers. A review was made of subsequent months inspection sheets showed some of the same extinguishers as still "Missing". Mr. Tamez stated that sometimes these units have been moved to a near-by work site, and that they are often within the area, but not where they are suppose to be mounted. He also stated that there are spare fire extinguishers available to fill vacant spots.

II.B.1.a. Facility Action Required

~~Ensure that there are fire extinguishers at all locations committed to.~~

29 CFR 1910.157 (e)(3) states "The employer shall assure that portable fire extinguishers are subjected to an annual maintenance check....The employer shall record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less. The record shall be available to the Assistant Secretary upon request."

The facility's written records of inspections were reviewed for compliance with the required regulations. The 1994 annual maintenance checks were performed by Corpus Fire Protection, Inc., Corpus Christi, TX, in May, 1994. This company provides a record of such annual checks. However, looking at their record implied that all of the units were last done in June, 1994. Mr. Tamaz stated that they were actually done over a three month period, from April through June. The actual "annual maintenance date" was not available on site. Mr. Tamaz will try to get this data from Corpus Fire Protection, Inc.

II.B.1.b. Facility Action Recommended

Keep the current records called for in 29 CFR 1910.157 (e)(3) on site.

The June, 1994, hydrostatic test report, compiled by the Corpus Fire Protection, was reviewed with Mr. Tamaz and with Joe Hernandez of Corpus Fire Protection. Each extinguisher has been bar coded, showing the location, serial number, last annual inspection date (Mo/Yr), last hydro test date (Mo/Yr), and size extinguisher. The Corpus Fire Protection representative scans each for data input for reports submitted to SWRCO.

The most recent report had errors in the column for "next hydro". It showed some due in 1989, which had previously been done in 1987. It showed CO₂ extinguishers last done in 1987, due next in 1999. It showed other units due in 1991, 1992, and 1993, all of which would now be past due. It was unknown

whether these units were over looked, or if they were actually maintained but the records hadn't been updated.

Mr. Hernandez, Mr. Tamaz, and the auditor decided that all units should be newly scanned, the new information downloaded, and a new report produced. Also, that old SWRCO (pre-bar coding) data and forms, data that may be throwing an accurate accounting off, be discarded. Then compare the new printout with recent activity (annual maintenance, hydro tests, replacement units) and update.

II.B.1.c. Facility Action Required

Ensure that all portable fire extinguishers are properly and timely tested as specified in 29 CFR 1910.157. Maintain a complete and accurate record of hydrostatic testing to satisfy OSHA recordkeeping requirements. [29 CFR 1910.157(f)(16), see Attachment A.]

II.B.2. Training

29 CFR 1910.157(g) requires the employer to provide an educational program to familiarize employees with the general principles of fire extinguisher use upon initial employment and at least annually thereafter. Employees received incipient fire training in December, 1993, administered by the Safety Department. This is next scheduled for October, 1994. Records were verified through the Training Department

No discrepancies were noted.

II.B.3. Fire Retardant Clothing

The facility implemented a fire retardant clothing program in April, 1992, designed to enhance employee safety and health. The program requires contractors, facility employees, and visitors to wear fire retardant clothing (NOMEX) while working or visiting within the fenced confines of the refinery.

II.C. Lockout/Tagout

29 CFR 1910.147 applies to the servicing and maintenance of machines and equipment in which the unexpected energization or start up of the machines or equipment, or release of stored energy, could cause injury to employees. The facility's written procedure was revised in 1993.

Item 1.A.3.a. of the written procedure specifies "...locking device and responsible department lock..." Each department appears to have a common style and color lock for use in their area. One operator, when questioned about this, was not sure of this practice, saying that this occurred "most" of the time. This should be evaluated and re-emphasized with employees involved.

Item 1.A.7. states "Each lock placed on a piece of equipment will have a tag to identify:

- a. Who placed the lock on the equipment;
- b. When the lock was placed on the equipment;
- c. Why the lock was placed on the equipment."

All locks noted during the walk through of the facility, with only one exception, had tags. Almost all of the tags lacked one or more of the items listed above (a, b, or c).

Item 1.A.8. states that "each person placing a lock on a piece of equipment,... shall comply with item #7 above." This implies use of multiple locks and locks used by contractors. The facility walk through and check of "contractor applied" lockout/tagout (in conjunction with Kerr-McGee applications, or solo) revealed some of the same information missing.

A "procedure review program" has been developed by the facility and is recorded on a form titled "Work Permit Audit". The audit is performed by each shift supervisor on every rotation to day-shift. The audit encompasses the following permits: Work Authorization (including lockout/tagout), Hot Work, Vehicle Entry, Confined Space. The audit is to incorporate the points required by the annual inspection, per 29 CFR 1910.147(c)(6). (See Attachment B)

A review of this audit procedure ("procedure review program" combined with "annual inspection" of program per 29 CFR 1910.147(c)(6)) was performed with two individuals responsible for its implementation. Discrepancies noted include:

1. "The periodic inspection shall be conducted to correct any deviations or inadequacies identified." (29 CFR 1910.147(c)(6)(B)). One such deviation, as described above concerns lack of required information on the attached tags.

2. "...the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities..." (29 CFR 1910.147(c)(6)(C)). This did not happen in the lockout/tagout inspection performed in the presence of this auditor. No contact was made with the "authorized employee". The responsible inspectors [29 CFR 1910.147(c)(6)(A)] gave no indication this program review is ever done.

II.C.1. Facility Action Required

SWRf/Asbestos 0727

Perform training, inspections and follow-up to be sure all points of the facility procedure and the OSHA Lockout/Tagout regulations are met, and that all applicable and affected

employees and contractors understand and practice details of the facility procedure, and of the various regulations.

II.D. Safety Meetings

KM Safety Guideline 1.6 recommends monthly safety meetings. Mike Blundell assigns safety topics each month for supervisors to present at the safety meetings. The meetings are documented on KM Form 958-B and include the signatures of attendees. Safety meeting topics included: benzene awareness, eye safety, heat stress, and emergency evacuation.

No discrepancies were noted.

II.E. Contractor Safety Policy

Kerr-McGee Corporate Policy 50.07 requires each operating unit to implement a contractor safety and health program to establish requirements for protecting the safety and health of contractor employees, and to ensure the protection of company employees, company property, and neighbors. The facility's written plan was dated August 15, 1992. The plan includes contractor selection, evaluation of contractor safety programs, monitoring of contractor performance, and the reporting of contractor injuries and illnesses.

No discrepancies were noted.

II.F. Confined Space

29 CFR 1910.146, Permit-Required Confined Spaces, contains requirements for practices and procedures to protect employees in general industry from the hazards of entry into permit required confined spaces. The standard became effective April 15, 1993.

II.F.1. Written Program

29 CFR 1910.146(c)(1) requires the employer to evaluate the workplace to determine if any spaces are permit-required confined spaces. The Safety Department utilized engineering drawings and visual inspections to identify potential confined spaces in the plant. A list of all such spaces was developed to be used as a reference when writing confined space entry permits.

29 CFR 1910.146(c)(2) requires the employer to inform employees of the dangers of confined spaces by posting danger signs or by any other equally effective means. The facility has determined that bolted manways into tanks and vessels do not require posting under the standard until they are opened. The facility has categorized open-top-floating-roof tanks as confined spaces. Mr. Walker and Mr. Pablo Garza verified that

danger signs have been posted at the top of the stairways on these tanks.

29 CFR 1910.146(c)(4) requires a covered employer to develop and implement a written permit space entry program. The facility has had a written program for several years. On April 12, 1993, the program was updated to comply with this standard.

29 CFR 1910.146(d) contains the requirements for the written program. The auditor reviewed the facility written program to verify inclusion of all requirements. In the facility "Procedure", Item L, is the requirement "All canceled entry-required permits must be kept for one year to facilitate the review of the permit required confined space program in accordance with OSHA Regulation 1910.146 paragraph (d)(14)."

29 CFR 1910.146(d)(14) states "Review the permit space program, using the canceled permits retained under paragraph (e)(6) of this section within 1 year after each entry and revise..." The facility is using the checking and signing of the "initial confined space permits...by the Safety Department" as this review. However, in checking with applicable individuals, "canceled entry-required permits...for one year" were not immediately available. When found, some gaps in permit sequence were evident, in that some known permits were missing, and with contractors permits were also missing.

II.F.1.a. Facility Action Required

~~Be sure all canceled permits are retained and used as specified in the facility procedure and in the regulations.~~

29 CFR 1910.146(e)(5) states "The entry supervisor shall terminate entry and cancel the entry permit..." The facility procedure, revised January, 1994, states in the Definition of Entry Supervisor, that he is the "person....responsible for....acceptable entry conditions..., for authorizing entry operations, and for terminating entry as required." This appears to meet the federal requirements.

In "Procedures, M. Summoning Rescue Team, Notes", states "Each member of the rescue service shall practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, manikins, or actual persons from the actual permit spaces or from representative permit spaces." This is accomplished via 40 hour ROCO Corporation "Confined Space/Structural Rescue I" training, last done June, 1994. The seven lead men on the ERT completed this training.

II.F.2. Confined Space - Entry Permit

29 CFR 1910.146(f) (See Attachment C) lists the information which "shall" be identified in each permit. These are also included in the facility confined space procedure (Revised: January, 1994), under PROCEDURE, F. Permit". The currently used Confined Space Entry Permit does not have space delegated for two items on this list. They are:

- k. The rescue and emergency services that can be summoned and the means for summoning those services, and
- l. The communication procedures used by authorized entrants and attendants to maintain contact during the entry.

II.F.2.a. Facility Action Required

~~Ensure that all required information and data is included in each entry permit, as specified in 29 CFR 1910.146(f).~~

II.G. Safety Training - General

A check of required training (SPCC, Hearing Conservation, SCBA/Respiratory, HAZCOM, Lockout/Tagout, Confined Space, Bloodborne Pathogen, etc.) showed that all was scheduled by the Training Department. An "Exception Report" can be printed from the department computer, listing the employees who haven't received the required training.

Each new employee is required to receive a series of training on different topics prior to starting work. The auditors checked this list verses several new employees, to verify that each received the prescribed training. One employee had not received a prescribed session, yet was permitted to begin work.

Since it is SWRCO policy that all new employees be specifically trained, it was discussed with Mr. Blundell the possibility that an Exception Report be developed for new hires, to verify that all training has been received.

III. INDUSTRIAL HYGIENE

III.A. Respiratory Protection

SWRF/Asbestos 0730

The facility's written program is contained in Safe Work Procedure No. 95, Respiratory Protection Program. The program addresses use, maintenance, and care of respirators, as required by 29 CFR 1910.134(e)(f). Fit testing is performed by Fit Testers, Inc., Corpus Christi, TX. About 200 people have been given training and fit tests over the past year. These include operators, maintenance personnel, and terminal

personnel, along with some supervisors and engineers. New employees are also included.

A written program (Standard Operating Procedure for selection and use of respirators) [29 CFR 1910.134(b)(1)] exists at the facility. A revision of this, dated January, 1994, is yet to be approved and implemented.

No discrepancies were noted.

III.A.1. Respirator Physicals

29 CFR 1910.134(b)(10) requires that a physician determine that employees who are required to use respirators are physically able to do so. Ms. Flores determines which employees may be subject to respirator use, oversees and does EKG, PFT, hearing, and blood work. Dr. Tom Maloney of Corpus Christi, signs the form (as the required local physician) for respirator use.

No discrepancies were noted.

III.B Exposure and Medical Records

29 CFR 1910.20(g)(1) states, "Upon an employee's first entering into employment, and at least annually thereafter, each employer shall inform current employees covered by this section of the following: i) the existence, location, and availability of any records covered by this section; ii) the person responsible for maintaining and providing access to records, and; iii) each employee's rights of access to these records." The memo addressing the requirements of exposure and medical records was posted on the bulletin board at the main gate. This is discussed with new employees as part of their new employee orientation. It is again discussed with each employee during their annual physical.

No discrepancies were noted.

III.C. Hazard Communication

SWRf/Asbestos 0731

III.C.1. Chemical Inventory Lists

29 CFR 1910.1200(e)(1) requires employers to develop, implement, and maintain a written hazard communication program for their workplaces. 29 CFR 1910.1200(e)(1)(i) requires that the employer maintain, "a list of hazardous chemicals known to be present, using an identity that is referenced on the appropriate Material Safety Data Sheet (MSDS) (the list may be compiled for the workplace as a whole, or for individual work areas)".

Ms. Pope has developed MSDS books for the following units: Cyclohexane, Sulfolane, Penex, and MTBE. Each book has: 1)

chemical list; 2) vessel, exchange, pump lists showing description, contents of the vessel, vessel number, and NFPA codes; 3) MSDS; 4) list of sample points including chemicals present and NFPA numbers. A complete chemical list, per 29 CFR 1910.1200(e)(1)(i), was being updated at the time of this audit.

29 CFR 1910.1200(f)(5) requires, "Except as provided in paragraphs (f)(6) and (f)(7) of this section, the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with the following information: (i) Identity of the hazardous chemical(s) contained therein; and, (ii) Appropriate hazard warnings, or alternatively, words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical." This has been interpreted to include hazards to 'target organs'. Target organ warnings were not on the applicable tanks and containers.

III.C.1.a. Facility Action Recommended

Determine which tanks have contents which are hazardous to applicable organs, and label those tanks and other containers with "target organ warnings". 29 CFR 1910.1200(f)(5)

III.C.2. Training

29 CFR 1910.1200(h) requires employers to provide employees with information and training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new hazard is introduced into their work area. Hazard communication training for 1993 was completed for employees in August.

III.D. Hearing Conservation Program

SWRf/Asbestos 0732

III.D.1 Monitoring

29 CFR 1910.95(d)(1) requires the employer to develop and implement a monitoring program for employees who may exceed the 8-hour time-weighted-average of 85 decibels. 29 CFR 1910.95(d)(1)(ii) states, "Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, the employer shall use representative personal sampling to comply with the monitoring requirements of this paragraph unless the employer can show that area sampling produces equivalent results". The facility has

established that hearing protection is required in all process units.

III.D.2. Audiometric Testing

29 CFR 1910.95(g)(1) requires the employer to establish and maintain an audiometric testing program for all employees whose exposures equal or exceed an 8-hour time weighted average of 85 decibels. 29 CFR 1910.95(g)(5)&(6) require that employees included in the audiometric testing program receive baseline and annual audiograms. A test booth has been installed at the facility so they can perform these tests on site.

29 CFR 1910.95(g)(7)(i) requires that each employee's annual audiogram be compared to the baseline audiogram to determine if the audiogram is valid and if a "standard threshold shift" has occurred. The facility forwarded 1993 audiograms to Corporate Medical Services for evaluation. There were no OSHA-recordable hearing losses detected or reported.

No discrepancies were noted.

III.D.3. Training

29 CFR 1910.95(k)(2) requires annual training for each employee included in the hearing conservation program. Training information must be updated to be consistent with changes, protective equipment, and work processes. According to Ms. Flores, hearing training is provided for each individual at the time of audiometric testing. Training is scheduled for October 4-26, 1994. However, the Training Center had no record of training occurring in 1993.

No discrepancies were noted.

III.D.4. Access To Information

29 CFR 1910.95(l)(1) requires the employer to make copies of the hearing standard available to employees, and also to post a copy in the workplace. A copy of the standard was posted at the main gate bulletin board.

III.E. Bloodborne Pathogens

29 CFR 1910.1030 applies to all occupational exposures to blood or other infectious materials. The facility's exposure determination included 44 members of the Emergency Rescue Team (ERT) and the plant nurse.

III.E.1. Exposure Control Plan

SWRF/Asbestos 0733

The bloodborne pathogens standard requires the employer to (1) develop a written exposure control plan, (2) specify control

methods including personal protective equipment, (3) address and provide Hepatitis B vaccinations.

The facility updated their Safe Work Procedure No. 101, Occupational Exposure to Bloodborne Pathogens, in March, 1993, revised in January, 1994. The procedure addresses the topics outlined in the above paragraph. ERT members received training on the new procedure. Hepatitis B vaccinations were made available to ERT members. Members who refused the vaccination signed a refusal statement (29 CFR 1910.1030(f)(2)(iv)). The facility has recorded no employee exposures to bloodborne pathogens since the inception of the standard.

No discrepancies were noted.

III.F. Radiation License

The facility operates nuclear level detection gauges under Texas license L04373, Amendment 5. The expiration date of the license is January 31, 1995.

III.F.1. Agency Inspection

Texas is a Nuclear Regulatory Commission (NRC) agreement state, and does not receive NRC inspections. A State inspection of the facility was received January 5, 1993. There were no violations noted.

III.F.2. Inventory

10 CFR 20.201 and the facility's license require that an evaluation of radiation hazards, a survey of the location of the equipment, and measurements of levels of radiation be performed every 6 months. Surveys were performed in February, 1993, September, 1993, and February, 1994, to comply with these requirements.

The two X-ray fluorescence machines at the facility must be subjected to an annual inventory. A survey was performed in May, 1993.

No discrepancies were noted.

III.F.3. Leak Test

The facility license requires that each gauge be tested for leakage of radioactive material at least once every three years. The leak tests were performed by the facility Radiation Safety Officer (RSO) in January of 1989, and in March of 1992. Leak test analyses, performed by Kay-Ray/Sensall, Mount Pleasant, Illinois, were reported negative in 1989 and 1992. This testing will be due again in 1995.

No discrepancies were noted.

SWRf/Asbestos 0734

III.F.4. Survey Instrument

The Eberline ASP-1 survey instrument was calibrated January 25, 1994, and the Victoreen instrument was calibrated January 14, 1994.

No discrepancies were noted.

III.F.5. Posting of Notices

10 CFR 19.11 requires each licensee to post form NRC-3 and a notice describing the location of 10 CFR 19 and 10 CFR 20 regulations, the facility's license, the operating procedure applicable to license activities, and notices of violations. The notices were posted at the main gate bulletin board and at the Alkylation Unit, and the Main Control Room, as required.

No discrepancies were noted.

III.F.6. Personnel Monitoring

10 CFR 20.202 requires personnel monitoring for each individual who enters a high radiation area or enters an area where they might receive a dose during any calendar quarter in excess of 25% of the applicable value specified in paragraph (a) of 10 CFR 20.101. The facility's license requires badges to be worn by personnel conducting surveys or maintenance activity. The RSO, Industrial Hygienist, and three instrument technicians, are assigned badges for regulated work. The exposures were well below the NRC limit of 1,250 mrem, whole body dose, per quarter. Ms. Pope stated that the film badge results were posted as required.

No discrepancies were noted.

III.G. Heat Stress Monitoring

Ms. Pope measures heat stress when requested by Operations or by Maintenance. The auditor reviewed forms filled out for this for 1993 and 1994. They contain heat stress TLVs that have been calculated, which can be determined by the measured values Ms. Pope derives. From these, if some work/rest regimen is necessary, such can be determined and recommended. Evidence shows this stress can develop in both the summer and in the winter.

III.H. Personnel Protective Equipment

SWRf/Asbestos 0735

This regulation, 29 CFR 1910.132 became effective July 5, 1994. The facility procedure, dated June, 1994, is in the process of being approved. A hazardous assessment to determine equipment needs is a requirement of this regulation (the implementation has been delayed until October 5, 1994), will

be done by a team composed of a unit supervisor, safety and October 11, 1994 hourly personnel. The facility written procedure appears to address the hazard assessment and training requirements, plus all the required components of eye and face protection, head protection, foot protection, hand protection, body protection, and heat stress.

IV. ENVIRONMENTAL

IV.A. Water Pollution Control

IV.A.1. Discharge Permits

The Refinery discharges treated waste water, in accordance with permits issued by both the EPA and the Texas Natural Resource Conservation Commission (TNRCC). SWRCO monitors four outfalls:

- 001 - Treated Process Water
- 002 - Stormwater - Terminal 1 Area
- 003 - Stormwater - Terminal 2 Area
- 004 - Stormwater - Terminal 3 Area

The EPA NPDES Permit, No. TX0006599, was issued September 22, 1988, and expired September 21, 1993.

The TNRCC Discharge Permit No. WQ0000457 was issued December 13, 1988, and expired May 24, 1993.

IV.A.2. Permit Renewal

SWRCO submitted the renewal application to the EPA on March 25, 1993. SWRCO submitted a similar permit renewal application to the TNRCC on May 21, 1993. TNRCC has a draft permit available now. When this is approved, EPA will issue their permit. 31 TAC 305.63 requires renewal applications to be submitted 180 days prior to permit expirations. However, the facility has on file a letter dated October 29, 1992, from the TNRCC, stating that permit renewal applications would be accepted up to the expiration date of the permit. This permit renewal is out for public comment.

No discrepancies were noted.

SWRf/Asbestos 0736

IV.A.3. Discharge Monitoring Report (DMR)

SWRCO submits DMRs to both the TNRCC, by the 20th of the month, and the EPA Region VI, by the 25th for the previous months discharges. The facility's DMRs were reviewed for June 1993, through June 1994. The DMR were complete, with signatures and certification. One excursion of the pH daily maximum occurred in August, 1993. An exception report was sent to TNRCC and EPA. The exception report states that the situation was quickly brought into control and resulted in no

negative impact to the Wastewater Treatment System biological mass.

IV.A.4. Stormwater NOI

The refinery submitted a Notice of Intent (NOI) (EPA form 3510-6) on September 28, 1992, to discharge stormwater under an EPA General Stormwater Permit.

IV.A.5. Pollution Prevention Plan

The refinery has developed a Pollution Prevention Plan (PPP), as required by the general permit. The PPP was prepared by Retec, Inc., of Austin, Texas, in March, 1993. The PPP contains the following items:

- Pollution Prevention Team with individual responsibilities.
- Spill notification procedures
- Hazardous substance list
- Identification of the stormwater outfalls
- Material inventory
- Best management practices
- Commitment to conduct an annual site compliance evaluation.

A requirement/goal of this PPP is to minimize pollution in stormwater runoff. Though not required, the hazardous materials list from the SPCC plan is included in the PPP (by the Environmental Department). The hazardous materials list in the SPCC plan has been updated fairly recently, but the old list is still in the PPP.

IV.A.5.a. Facility Action Recommended

If the hazardous materials list is to be kept as a part of the PPP, update it as materials change.

IV.A.6. Agency Inspection

SWRf/Asbestos 0737

On May 25-26, 1994, TNRCC Region 14 representatives conducted an annual compliance inspection of the wastewater treatment facilities. This inspection coincided with a multimedia inspection involving the following agency representatives:

- James Navarrette TNRCC Austin Coordinator
- Ramon Juarez TNRCC Wastewater
 Region 14

• Suzanne Parr	TNRCC	Wastewater
	Region 14	
• Jose Montoya	TNRCC	Air
	Region 14	
• Ed Kasprzyk	TNRCC	Air
	Region 14	
• Pamela Larrison	EPA	TSCA

One written report, from the TNRCC Water Program, dated July 22, 1994, stated "no violations or substantial deficiencies noted." SWRCO is responding to some minor concerns, that addressed flow measurement accuracy and DMR numerical errors.

As of July 29, 1994, TNRCC had issued no other reports regarding the multimedia inspection.

IV.B. Groundwater Monitoring and Product Recovery Program

The facility entered into an Agreed Order (A.O.) on March 11, 1992, with TNRCC, resolving an enforcement action for violations of the Texas Solid Waste Disposal Act. The order encompasses quarterly groundwater monitoring (previously conducted voluntarily by SWRCO), annual reporting, and free phase hydrocarbon delineation investigations for Terminal 1 and Terminal 2.

The annual report of the Groundwater Monitoring and Product Recovery Program was prepared for submittal on August 1, 1994 to the Section Chief, Hazardous and Solid Waste Section, TNRCC. The report includes results of quarterly groundwater monitoring. Other reports prepared for submittal are: Recovery Feasibility Report (Terminal 1) and Dissolved Phase Hydrocarbon Groundwater Investigation Report (Terminal 2). Discussions with Mr. Saffell indicated SWRCO is current with regards to the Administrative Order.

IV.C. Spill Protection

IV.C.1. OPA-90 Response Plan

The facility has developed an on-water Oil Spill Response plan, as required by the Oil Pollution Act of 1990. The Plan was developed by Don Oakes, Manager of Economics and Products Coordination, SWRCO. The plan has management approval indicated by the signatures of E. F. McMahon and J. E. Warn. The plan was submitted on February 15, 1993, to the U.S. Coast Guard, the USEPA, and the State of Texas, General Land Office. The plan follows the guidelines in Coast Guard circular NVIC 7-92.

Mr. Ed Theisen noted that the U.S. Coast Guard had acknowledged receipt of the plan. Also, that the USEPA had asked for a clarification of some items, which SWRCO responded to in July, 1994.

SWRf/Asbestos 0738

IV.C.2. Spill Prevention Control and Countermeasure Plan (SPCC)

Southwestern Refining Corporation has an SPCC plan per 40 CFR 112. A draft copy of a revised plan has been prepared by Jones and Neuse, Inc., Environmental Engineering Services in July, 1992. The revised plan follows the guidelines in 40 CFR 112.7. The containment capacities of the diked areas are being reviewed prior to the engineering certification. This has occurred.

IV.D. SARA Title III Submittals

IV.D.1 Tier II

The Tier II report, required by 40 CFR 370.25, was submitted on March 24, 1994, to:

- Ms. Paula McKinney, Chief
Hazard Communication Branch
Texas Department of Health
- Paul Parrot, LEPC Chairman
- Corpus Christi Fire Department

The report was not filed by March 1st [40 CFR 370.20(b)(2)] due to delays in distribution of the forms from the state. The Texas Department of Health extended the reporting deadline to April 1, 1994.

IV.D.2. Toxic Chemical Release Inventory

Section 313 of SARA Title III requires annual reporting of listed toxic chemicals that are processed, manufactured, or otherwise used at a facility, in excess of thresholds given in 40 CFR 372.25. The facility submitted the 1993 Toxic Release Inventory, required by 40 CFR 372, on July 1, 1994. The report was sent to the EPCRA Reporting Center, Merrifield, VA, and to the office of Pollution Prevention and Recycling, TNRCC. TRI forms were prepared for twenty-two substances:

Ammonia	Methanol
Benzene	Methyl Tert-Butyl Ether
1,3 Butadiene	Molybdenum Trioxide
Carbon Tetrachloride	Nickel Compounds
Chlorine	Propylene
Cyclohexane	Sulfuric Acid
Diethanolamine	Tetrachloroethylene
Ethylbenzene	Toluene
Ethylene	1,2,4-Trimethylbenzene
Hydrochloric Acid	Xylene (Mixed Isomers)
Hydrogen Fluoride	Zinc Compounds

IV.D.3. Supplier Notification

Owners or operators who manufacture or process a listed toxic chemical [40 CFR 372.65] and sell or distribute the mixture or trade name product containing the chemical must notify the receiving individual [40 CFR 372.45(a)]. Manufacturers and processors must provide notification with the first shipment of each calendar year and state:

- ° the product contains a chemical subject to reporting requirements of section 313 of Title III of SARA of 1986, and 40 CFR 372.
- ° the name and CAS number of each chemical
- ° the percent by weight of each chemical in the product [40 CFR 372.45(b)(1-3)].

If a Material Safety Data Sheet is required, per 29 CFR 1910.1200, the above notification must be attached to, or incorporated into, the MSDS.

Several MSDSs, for SWRCO products containing toxic chemicals, were reviewed. The MSDS, containing the above information, is an acceptable form of supplier notification. The facility did not have an MSDS for fuel gas, that is distributed to Javelina. Fuel gas, according to the facility's Form R records, contains toxic chemicals including 1,3 butadiene (0.36%), ethylene (6.47%), and propylene (1-6%). All toxic chemicals present in concentrations greater than the de minimis levels in 372.38(a) must be reported on the MSDS.

IV.D.3.a. Facility Action Required

Develop and distribute an MSDS for fuel gas that is sold or distributed. The MSDS must contain the supplier notification specifics for any toxic chemicals.

IV.E. RCRA

IV.E.1. Annual Waste Summary

The facility submitted the Annual Waste Summary to TNRCC, on January 18, 1994. This listed the quantity of waste generated for each waste on the Notice of Registration.

IV.E.2. Waste Minimization Plan

Remediation Technologies, Inc., Austin, TX, prepared the Waste Minimization Plan for SWRCO. An executive summary of the plan, with certification of completion, was submitted June, 1993, to TNRCC. The plan addresses the elements under "TAC 335, Subchapter Q, Pollution Prevention: Source Reduction and

Waste Minimization; 335.471-335.480." TNRCC has commented on the exceptional quality of the plan.

The Annual Waste Minimization Report was submitted February 28, 1994, to TNRCC.

IV.E.3. Facility Walk Through

A walk through inspection of the facility was conducted by Mr. Sullivan and Mr. Saffell. The following :

- O Small spill at the 522 tank vacuum truck nozzle.
- O Crossover at E fence of Terminal 1, barbed wire down and empty barrels used as steps.
- O Exchanger cleaning area, hazardous waste could splash on building.

IV.E.3.a. Facility Action Required

Provide corrective action for the items mentioned above.

IV.F PCB

The PCB storage area and other PCB units (capacitors, PCB-contaminated transformers) were inspected by EPA TSCA inspectors (Houston) in May, 1994. This was part of a Texas Multimedia inspection. The inspection team wrote up a few "minimal concerns", due to minor leaks on some units. No NOV's were issued. The units that could be cleaned up were, and the cleanup materials were placed in drums in the PCB storage area (a warehouse at the 'back' of the facility). Some leaks can't be repaired except during a shut down (scheduled now for November, 1994. The Environmental Department is keeping the TSCA inspectors notified of these plans).

The auditors noted at the storage site that the storage container was not labeled with the initial storage date [40 CFR 761.65(c)(8)]. Also, that there was combustible material within 5 meters of a PCB transformer [40 CFR 761.30(a)(1)(viii)].

IV.F.1. Facility Action Required

Make the necessary adjustments to the PCB storage area.

IV.G. Air Emission Control

IV.G.1. Permits

The facility has the following Texas Air Control Board (TACB) permits:

Southwestern Refinery Audit

<u>Unit</u>	<u>TACB Permit No.</u>	<u>Operating Permit Granted</u>	<u>Continuance Granted</u>
Tank S-6	277	05/10/74	01/26/89
Tank S-7	314	05/10/74	01/26/89
Tank S-8	315	06/11/75	04/14/89
Crude II/Dehex	376	02/14/74	02/02/89
Tank 209 (113)	576	01/28/74	02/02/89
Tank 210 (114)	628	05/10/74	02/02/89
Tank 211 (115)	629	05/10/74	02/02/89
Kero Desulf/ Raffinate Treater	1334	01/21/87	
Diesel Desulf	1335	04/24/85	
Sulfur Plant	1413	09/02/83	
Vac Gas Oil Desulf	1740	03/29/85	
Ha-8, HA-9 Boilers	2495	07/12/77	07/31/92
New Flare	2904	09/17/76	02/05/92
Hydrobon Unit	3153	08/25/77	* below
FCCU II	6308	08/19/85; PSD	
Truck Rack & VRU	7035		Renewal Pending
Alkylation Expansion	R-18338	08/28/90	
Isomerization (Heater)	C-20689	08/17/91	

* The permit continuance for the Hydrobon unit, at the time of this audit, was being reviewed by TNRCC for possible public hearing.

IV.G.2. VOC Monitoring

The facility monitors several units for VOC, per requirements under Texas Regulation V (TAC 115, Fugitive Emission Control in Petroleum Refineries), Texas Regulation 28 MID, Federal NSPS, and Federal NESHAPS. These programs have several similarities, so the following records were reviewed for each covered unit:

- o Leak Repair/maintenance log (Required by federal and state)
- o Calibration requirements for the VOC analyzer (federal and state regulations)
- o Semi-annual reporting (NSPS and NESHAPS units)

Most of the units, monitored for VOC leaks, fall under 31 TAC 115 (Reg. V). 31 TAC 115.324 requires petroleum refineries to conduct a Volatile Organic Compound (VOC) leak detection and repair program. Any piece of equipment (i.e. pump, valve, compressor, pressure relief valve....) that is found to be leaking more than 10,000 ppm of VOC is to be tagged and repaired within 15 days of detection. (If the repair of the equipment would require a unit shutdown, the repair may be delayed until the next scheduled shutdown).

The facility uses Environmental Analytic, Inc. (EA), of Corpus Christi, Texas, to conduct the VOC monitoring program. EA uses a computerized program to maintain the recordkeeping requirements of 31 TAC 115.326. 31 TAC 115.326(2) requires the owners or operators of a petroleum refinery to "maintain a leaking-components monitoring log for all leaks of more than 10,000 ppmv of volatile organic compound detected by the monitoring program required by § 115.324 of this title (relating to Inspection Requirements). This log shall contain, at a minimum, the following data:

- (A) the name of the process unit where the component is located;
- (B) the type of component (e.g., valve or seal);
- (C) the tag number of the component;
- (D) the date on which a leaking component is discovered;
- (E) the date on which a leaking component is repaired;
- (F) the date and instrument reading of the recheck procedure after a leaking component is repaired;
- (G) a record of the calibration of the monitoring instrument;
- (H) those leaks that cannot be repaired until turnaround; and
- (I) the total number of components checked and the total number of components found leaking".

IV.G.3. Discrepancies

The following discrepancies were noted with the VOC monitoring records:

o Leak/repair log - (TAC 115.326(b)) The log appears to consistently document the required items except for (F), the date of the recheck procedure following repair of leak. The log frequently shows the original monitoring date. (Required for all Reg V units).

o Monitoring plan - This must be submitted to the Executive Director (TAC 115.326(b)(1)) but the regulation does not give compliance dates for Nueces, Gregg, and Victoria Counties.

o Timely repair of leaks (15 days) - A spot check of each units repair log showed this was fairly consistently done in 1994. One exception was noted in the Crude I log, for value COD 3273 in July, 1993.

o Calibration of VOC analyzer - The records and procedure compared favorably with the calibration requirements in 40 CFR 60.485. Include the cylinder numbers of calibration and zero air gases on the quarterly precision check sheets and daily calibration logs.

IV.G.3.a. Facility Action Required

SWRf/Asbestos 0743

Correct the deficiencies noted in the VOC monitoring records.

IV.G.4. Facility Inspection

The auditors accompanied Glen Jasek, SWRCO Environmental Engineer, on an inspection of several of the units include in the VOC monitoring program: Isomerization, Crude I, Sulfolane, and Cyclohexane units. The Crude I unit had some open-ended valves that need to be plugged:

O Valves 2355, 2352, 2376, 2388, and 3423.

IV.G.4.a. Facility Action Required

Provide plugs for the open-ended valves located in the Crude I unit.

IV.G.5. Agency Inspection

TACB conducted an air inspection of the refinery on April 21, 1993. No report was issued.

EPA Region VI followed up with an inspection on July 1, 1993, with TRNCC attending. One unmarked valve, with an un-plugged end was identified in the Benzene Extraction Unit. EPA reviewed the NSPS units and NESHAPS units.

A Complaint and Notice of Opportunity for Hearing was received from EPA VI on June 23, 1994, related to this EPA inspection. The complaint addressed two counts:

1. Failure to mark valves in Volatile Hazardous Air Pollutant Service [40 CFR 61.242-1(d)].
2. Failure to plug open ended valve.

SWRCO responded July 8, 1994, contesting the counts, based on EPA/TRNCC misidentification of the valve. Written notification has been received from EPA rescinding the NOV.

A close-out meeting was held with Sherwood Breaux, Vice-President Refining, Mr. Walker, Mr. Clark, and Mr. Saffell on July 29, 1994, to discuss audit findings.

JHM/PMS:srt

swref94.rpt

SWRf/Asbestos 0744

1B 017152

ATTACHMENT A

Sec. 1910.157 Portable fire extinguishers.

(f) Hydrostatic testing. (1) The employer shall assure that hydrostatic testing is performed by trained persons with suitable testing equipment and facilities.

(2) The employer shall assure that portable extinguishers are hydrostatically tested at the intervals listed in Table L-1 of this section, except under any of the following conditions:

(i) When the unit has been repaired by soldering, welding, brazing, or use of patching compounds;

(ii) When the cylinder or shell threads are damaged;

(iii) When there is corrosion that has caused pitting, including corrosion under removable name plate assemblies;

(iv) When the extinguisher has been burned in a fire; or

(v) When a calcium chloride extinguishing agent has been used in a stainless steel shell.

(3) In addition to an external visual examination, the employer shall assure that an internal examination of cylinders and shells to be tested is made prior to the hydrostatic tests.

(4) The employer shall assure that portable fire extinguishers are hydrostatically tested whenever they show new evidence of corrosion or mechanical injury, except under the conditions listed in paragraphs (f)(2)(i)-(v) of this section.

(5) The employer shall assure that hydrostatic tests are performed on extinguisher hose assemblies which are equipped with a shut-off nozzle at the discharge end of the hose. The test interval shall be the same as specified for the extinguisher on which the hose is installed.

(6) The employer shall assure that carbon dioxide hose assemblies with a shut-off nozzle are hydrostatically tested at 1,250 psi (8,620 kPa).

(7) The employer shall assure that dry chemical and dry powder hose assemblies with a shut-off nozzle are hydrostatically tested at 300 psi (2,070 kPa).

(8) Hose assemblies passing a hydrostatic test do not require any type of recording or stamping.

(9) The employer shall assure that hose assemblies for carbon dioxide extinguishers that require a hydrostatic test are tested within a protective cage device.

(10) The employer shall assure that carbon dioxide extinguishers and nitrogen or carbon dioxide cylinders used with wheeled extinguishers are tested every 5 years at 5/3 of the service pressure as stamped into the cylinder. Nitrogen cylinders which comply with 49 CFR 173.34(e)(15) may be hydrostatically tested every 10 years.

(11) The employer shall assure that all stored pressure and Halon 1211 types of extinguishers are hydrostatically tested at the factory test pressure not to exceed two times the service pressure.

(12) The employer shall assure that acceptable self-generating type soda acid and foam extinguishers are tested at 350 psi (2,410 kPa).

(13) Air or gas pressure may not be used for hydrostatic testing.

(14) Extinguisher shells, cylinders, or cartridges which fail a hydrostatic pressure test, or which are not fit for testing shall be removed from service and from the workplace.

(15)(i) The equipment for testing compressed gas type cylinders shall be of the water jacket type. The equipment shall be provided with an expansion indicator which operates with an accuracy within one percent of the total expansion or .1cc (.1mL) of liquid.

(ii) The equipment for testing non-compressed gas type cylinders shall consist of the following:

(A) A hydrostatic test pump, hand or power operated, capable of producing not less than 150 percent of the test pressure, which shall include appropriate check valves and fittings;

(B) A flexible connection for attachment to fittings to test through the extinguisher nozzle, test bonnet, or hose outlet, as is applicable; and

(C) A protective cage or barrier for personal protection of the tester, designed to provide visual observation of the extinguisher under test.

(16) The employer shall maintain and provide upon request to the Assistant Secretary evidence that the required hydrostatic testing of fire extinguishers has been performed at the time intervals shown in Table L-1. Such evidence shall be in the form of a certification record which includes the date of the test, the signature of the person who performed the test and the serial number, or other identifier, of the fire extinguisher that was tested. Such records shall be kept until the extinguisher is hydrostatically retested at the time interval specified in Table L-1 or until the extinguisher is taken out of service, whichever comes first. October 13, 1994

ATTACHMENT B

29 CFR 1910.147

(c) General--(1) Energy control program. The employer shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, start up or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source, and rendered inoperative."

(2) Lockout/tagout. (i) If an energy isolating device is not capable of being locked out, the employer's energy control program under paragraph (c)(1) of this section shall utilize a tagout system.

(ii) If an energy isolating device is capable of being locked out, the employer's energy control program under paragraph (c)(1) of this section shall utilize lockout, unless the employer can demonstrate that the utilization of a tagout system will provide full employee protection as set forth in paragraph (c)(3) of this section.

(iii) After January 2, 1990, whenever replacement or major repair, renovation or modification of a machine or equipment is performed, and whenever new machines or equipment are installed, energy isolating devices for such machine or equipment shall be designed to accept a lockout device."

(3) Full employee protection. (i) When a tagout device is used on an energy isolating device which is capable of being locked out, the tagout device shall be attached at the same location that the lockout device would have been attached, and the employer shall demonstrate that the tagout program will provide a level of safety equivalent to that obtained by using a lockout program.

(ii) In demonstrating that a level of safety is achieved in the tagout program which is equivalent to the level of safety obtained by using a lockout program, the employer shall demonstrate full compliance with all tagout-related provisions of this standard together with such additional elements as are necessary to provide the equivalent safety available from the use of a lockout device. Additional means to be considered as part of the demonstration of full employee protection shall include the implementation of additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization.

(4) Energy control procedure. (i) Procedures shall be developed, documented and utilized for the control of potentially hazardous energy when employees are engaged in the activities covered by this section.

Note: Exception: The employer need not document the required procedure for a particular machine or equipment, when all of the following elements exist: (1) The machine or equipment has no potential for stored or residual energy or reaccumulation of stored energy after shut down which could endanger employees; (2) the

machine or equipment has a single energy source which can be readily identified and isolated; (3) the isolation and locking out of that energy source will completely deenergize and deactivate the machine or equipment; (4) the machine or equipment is isolated from that energy source and locked out during servicing or maintenance; (5) a single lockout device will achieve a locked-out condition; (6) the lockout device is under the exclusive control of the authorized employee performing the servicing or maintenance; (7) the servicing or maintenance does not create hazards for other employees; and (8) the employer, in utilizing this exception, has had no accidents involving the unexpected activation or reenergization of the machine or equipment during servicing or maintenance.

(ii) The procedures shall clearly and specifically outline the scope, purpose, authorization, rules, and techniques to be utilized for the control of hazardous energy, and the means to enforce compliance including, but not limited to, the following:

(A) A specific statement of the intended use of the procedure;

(B) Specific procedural steps for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy;

(C) Specific procedural steps for the placement, removal and transfer of lockout devices or tagout devices and the responsibility for them; and

(D) Specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

(5) Protective materials and hardware. (i) Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be provided by the employer for isolating, securing or blocking of machines or equipment from energy sources.

(ii) Lockout devices and tagout devices shall be singularly identified; shall be the only devices(s) used for controlling energy; shall not be used for other purposes; and shall meet the following requirements:

(A) Durable. (1) Lockout and tagout devices shall be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected.

(2) Tagout devices shall be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible.

(3) Tags shall not deteriorate when used in corrosive environments such as areas where acid and alkali chemicals are handled and stored.

(B) Standardized. Lockout and tagout devices shall be standardized within the facility in at least one of the following criteria: Color; shape; or size; and additionally, in the case of tagout devices, print and format shall be standardized.

(C) Substantial--(1) Lockout devices. Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.

(2) Tagout devices. Tagout devices, including and their means

of attachment, shall be substantial enough to prevent inadvertent or accidental removal. Tagout device attachment means shall be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all-environment-tolerant nylon cable tie.

(D) Identifiable. Lockout devices and tagout devices shall indicate the identity of the employee applying the device(s).

(iii) Tagout devices shall warn against hazardous conditions if the machine or equipment is energized and shall include a legend such as the following: Do Not Start, Do Not Open, Do Not Close, Do Not Energize, Do Not Operate.

(6) Periodic inspection. (i) The employer shall conduct a periodic inspection of the energy control procedure at least annually to ensure that the procedure and the requirements of this standard are being followed.

(A) The periodic inspection shall be performed by an authorized employee other than the ones(s) utilizing the energy control procedure being inspected.

(B) The periodic inspection shall be conducted to correct any deviations or inadequacies identified."

(C) Where lockout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized employee, of that employee's responsibilities under the energy control procedure being inspected.

(D) Where tagout is used for energy control, the periodic inspection shall include a review, between the inspector and each authorized and affected employee, of that employee's responsibilities under the energy control procedure being inspected, and the elements set forth in paragraph (c)(7)(ii) of this section.

(ii) The employer shall certify that the periodic inspections have been performed. The certification shall identify the machine or equipment on which the energy control procedure was being utilized, the date of the inspection, the employees included in the inspection, and the person performing the inspection.

(7) Training and communication. (i) The employer shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees. The training shall include the following:

(A) Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.

(B) Each affected employee shall be instructed in the purpose and use of the energy control procedure.

(C) All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

1B 017157

(ii) When tagout systems are used, employees shall also be trained in the following limitations of tags:

(A) Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.

(B) When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.

(C) Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.

(D) Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.

(E) Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.

(F) Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

(iii) Employee retraining.

(A) Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.

(B) Additional retraining shall also be conducted whenever a periodic inspection under paragraph (c)(6) of this section reveals, or whenever the employer has reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.

(C) The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

(iv) The employer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.

(8) Energy isolation. Lockout or tagout shall be performed only by the authorized employees who are performing the servicing or maintenance.

(9) Notification of employees. Affected employees shall be notified by the employer or authorized employee of the application and removal of lockout devices or tagout devices. Notification shall be given before the controls are applied, and after they are removed from the machine or equipment.

ATTACHMENT C

29 CFR 1910.146

(f) Entry permit. The entry permit that documents compliance with this section and authorizes entry to a permit space shall identify:

- (1) The permit space to be entered;
- (2) The purpose of the entry;
- (3) The date and the authorized duration of the entry permit;
- (4) The authorized entrants within the permit space, by name or by such other means (for example, through the use of rosters or tracking systems) as will enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space;

Note: This requirement may be met by inserting a reference on the entry permit as to the means used, such as a roster or tracking system, to keep track of the authorized entrants within the permit space.

- (5) The personnel, by name, currently serving as attendants;
- (6) The individual, by name, currently serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry;
- (7) The hazards of the permit space to be entered;
- (8) The measures used to isolate the permit space and to eliminate or control permit space hazards before entry;

Note: Those measures can include the lockout or tagging of equipment and procedures for purging, inerting, ventilating, and flushing permit spaces.

- (9) The acceptable entry conditions;
- (10) The results of initial and periodic tests performed under paragraph (d)(5) of this section, accompanied by the names or initials of the testers and by an indication of when the tests were performed;
- (11) The rescue and emergency services that can be summoned and the means (such as the equipment to use and the numbers to call) for summoning those services;
- (12) The communication procedures used by authorized entrants and attendants to maintain contact during the entry;
- (13) Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this section;
- (14) Any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety; and
- (15) Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.

TABLE I

Facility Action Required

<u>Item No.</u>	<u>Description</u>
II.A.2.a.	Ensure that the "six day" requirement is complied with when compiling this information. [<u>29 CFR 1904.4</u>]
II.A.4.a.	Ensure that the required OSHA notice is fully visible, with no portion covered. [<u>29 CFR 1903.2</u>]
II.B.1.a.	Ensure that there are fire extinguishers at all locations committed to.
II.B.1.c.	Ensure that all portable fire extinguishers are properly and timely tested as specified in <u>29 CFR 1910.157</u> . Maintain a complete and accurate record of hydrostatic testing to satisfy OSHA recordkeeping requirements. [<u>29 CFR 1910.157(f)(16)</u>], see Attachment A.]
II.C.1.	Perform training, inspections and follow-up to be sure all points of the facility procedure and the OSHA Lockout/Tagout regulations are met, and that all applicable and affected employees and contractors understand and practice details of the facility procedure, and of the various regulations.
II.C.1.	Perform training, inspections and follow-up to be sure all points of the facility procedure and the OSHA Lockout/Tagout regulations are met, and that all applicable and affected employees and contractors understand and practice details of the facility procedure, and of the various regulations.
II.F.1.a.	Be sure all canceled permits are retained and used as specified in the facility procedure and in the regulations.
II.F.2.a.	Ensure that all required information and data is included in each entry permit, as specified in <u>29 CFR 1910.146(f)</u> .
IV.D.3.a.	Develop and distribute an MSDS for fuel gas that is sold or distributed. The MSDS must contain the supplier notification specifics for any toxic chemicals.

TABLE I (Continued)

Facility Action Required (Continued)

<u>Item No.</u>	<u>Description</u>
IV.E.3.a.	Provide corrective action for the items mentioned above.
IV.F.1.	Make the necessary adjustments to the PCB storage area.
IV.G.3.a.	Correct the deficiencies noted in the VOC monitoring records.
IV.G.4.a.	Provide plugs for the open-ended valves located in the Crude I unit.

TABLE II

Facility Action Recommended

<u>Item No.</u>	<u>Description</u>
II.B.1.b.	Keep the current records called for in <u>29 CFR 1910.157 (e)(3)</u> on site.
III.C.1.a.	Determine which tanks have contents which are hazardous to applicable organs, and label those tanks and other containers with "target organ warnings". <u>29 CFR 1910.1200(f)(5)</u>
IV.A.5.a.	If the hazardous materials list is to be kept as a part of the PPP, update it as materials change.