

Interview of Bud Wilcox – 8/22/00

B. Wilcox
2-16-01

INTERVIEW SUMMARY

Witness: Burdette "Bud" Wilcox, Mgr., Pipeline Control, Operations Control Department, El Paso Natural Gas Company *BW*

Time and Date of Interview: 2:00 PM August 22, 2000

Location: El Paso Natural Gas Company Corporate Offices, 100 North Stanton Street, El Paso, Texas

Investigators: Eric Sager, Chuck Koval

Accident: El Paso Natural Gas Company Pipeline Rupture and Fire that Occurred Near Carlsbad, New Mexico (August 19, 2000)

Digest:

Overview of Control Center and Personnel

Mr. Wilcox provided an overview and profile of control room operations including personnel qualifications and training. He stated that there are two main pipeline systems operated from the center, the "north" and "south" lines. The normal work shift in the center consists of a controller for each line and the shift coordinator whose primary duty is to serve as a resource person to the controllers. Mr. Wilcox added that coordinators also serve in a supervisory capacity overseeing controllers, *while on shift.* *BW*

BW
is actually about 11 years
He said there are 10 [full service] controllers at the center, all of whom are qualified to operate the north and south lines on either day or night shifts. Mr. Wilcox indicated that the average control center job service time for the ^{most} controllers is between ~~15 to 18 years~~ *probably* *BW* *BW* *BW* He noted that the controller with the least experience has been at the center for 2 years. He said there are five coordinators all of whom are qualified to operate either of the main lines from the coordinator's console or from the controllers' positions.

Mr. Wilcox explained that there are three levels of controllers at the center. These levels are determined largely by years of experience on the job as follows: the entry level position, the senior controller who must have a minimum of approximately two years of experience in the next lower position (there ~~were~~ *are* 2 senior controllers), *BW* and the systems controller who must have a minimum of approximately five years of experience in the next lower position (there ~~were~~ *are* 8 systems controllers). *BW* The systems controllers also fill in as needed for shift coordinators. Mr. Wilcox noted that in addition to the minimum time needed for promotion to a higher controller rank, Mr. Wilcox, Mr. Mathis and selected coordinators had evaluated the operating proficiency of each controller before the advancement occurred. Mr Mathis is another management official who reports directly to Mr. Wilcox.

Controller/Coordinator Selection and Training

Mr. Wilcox explained that controllers and coordinators were selected mostly from the work force of El Paso field technicians. He noted that exceptions to this practice were three coordinators who had backgrounds in scheduling and dispatching before they came to El Paso. He indicated that controller training was intended to meet the needs of personnel who had experience in field operations.

Mr. Wilcox stated that in the field, employees advanced through three levels, from entry level technicians, to senior technicians, to chief technicians. He said that advancement through the field ranks was based on the employees' skills and knowledge acquired on the job rather than through training. ^{typically} *bw*

Mr. Wilcox explained that El Paso does not use computer simulation methods for controller training. Entry level controllers are given a copy of the control center "Information Manual" and provided with general training in company pipeline operation given by a systems controller, a coordinator, or by himself and Mr. Mathis. He said it is assumed that entry level controllers have local knowledge because of their field experience. He stated that upon satisfactory completion of the general training phase, ^{*bw*} ~~(i.e., based on written test scores)~~, each entry level controller is assigned to work on an OJT basis with one experienced controller side by side for at least one month. Mr. Wilcox stated that new controllers are paired only with the center's best controllers and best trainers. ^{*bw*} Training is conducted under the supervision of Mr. Charles Mathis. *(coordination of the*

Mr. Wilcox said all controllers work a schedule of four or five weeks at a time on each of the pipelines, and they all work day and nighttime shifts. Mr. Wilcox stated the complete rotation cycle for each controller provides one week where he is not assigned to a shift in the control room. Mr. Wilcox said that during this break from control room activities the controllers may do several things including: working to improve their computer skills, doing a special project for the center, or taking trips to visit stations in the field. He said that on the field trips controllers may review station emergency response procedures, they may observe starting and stopping equipment or they watch equipment maintenance. Controllers are supposed to write a one-page report of each trip, and written information about the trips is kept in each controller's training folder. He showed one controller's* training folder to investigators that included notations for a field trip.

He said that in addition to the week set aside from control room activities, controllers and coordinators participate in other training activities. He said that El Paso had sent controllers to outside classes in "gas controller training," but the controllers' comments about the classes were not favorable and the training was discontinued.

*The record was not for one of the controllers working at the time of the pipeline rupture and fire.

Mr. Wilcox said controllers are also required to submit safety audit information once a year that identified an unsafe condition or activity that they knew about. He said that coordinators also hold monthly safety meetings for controllers, and he noted that El Paso requires safety meetings to be held on a quarterly basis. Safety meetings usually last from 20 to 30 minutes but he recalled that some have lasted an hour. He said that there have been a variety of topics discussed in back and forth exchanges between and among coordinators and controllers. Mr. Wilcox identified past topics for a typical one year period, (i.e., coordinators reviewed sections of the center's *Operations and Maintenance Manual* with the controllers, or controllers discussed regulations, SCADA system alarms, emergency response procedures, and drug awareness issues).

He said that training records are reviewed annually by both himself and Mr. Mathis, and individual training needs are discussed directly with controllers. Mr. Wilcox said the parent company has a training department in Houston, and the company assigned a liaison person to assist El Paso Natural Gas management with maintaining training records, keeping up with training regulations and providing learning resources for employees.

SCADA and Field Sites

Mr. Wilcox said that displays on the control center SCADA are updated with current data every four minutes. He said that four minutes is that time required for data obtained from the pipeline system to be received, analyzed and presented on the console displays.

Mr. Wilcox was asked how long it takes before a compressor unit can be restarted at unmanned stations after it has tripped. He explained that after a unit has stopped, the alarms associated with the trip have to be cleared. He also said that a controller cannot start the unit from the center if one of the alarms after a normal stop does not clear. In this situation, the controller must call out a field technician to start the unit manually. He said that trips and alarms are logged automatically for control center records.

He said that ^{some of the} company's reciprocating units cannot be started or stopped remotely. ^{BN} Because of their age, and the cost for ^{adding} remote controls for reciprocating equipment is ^{maybe} prohibitive. Mr. Wilcox indicated that ^{at} units at the Monument, Keystone and Eunice stations must be started and stopped manually, ^{for this reason}. He noted that the Monument stations ^{are} manned 24 hours a day. ^{BN}

Mr. Wilcox was questioned about various safety devices and instrumentation installed in the pipeline system. He indicated that there ^{are} were devices on the pipeline to

as opposed to leaving the stations manned. BN

provide high pressure protection, ^{and BW} but there were ^{all BW} no low pressure devices that would automatically shut equipment down (such as during a pipeline rupture), ^{BW} but valves (mainline) ^{BW} do not close automatically.

He stated that with the exception of the Terrell and Puckett stations, gas chromatograph equipment was not installed at delivery points for measuring product impurities such as water, carbon dioxide, and hydrogen sulfide. However, he said that gas samples were taken when a delivery contract was first signed. He explained that carbon dioxide measurements were made at the two stations [downstream] with alarms to warn controllers of high concentration levels. He continued that the Farmington portion of the pipeline has carbon dioxide slam shut valves, and that the Permian part of the system has slam shut valves for hydrogen sulfide. Slam shut valves are not employed at other locations on the system ^{BW} with the exception of hydrogen sulfide ^{BW} for hydrogen sulfide ^{BW} all ^{BW}

Mr. Wilcox said that the Keystone station does not have chromatograph instrumentation to measure hydrogen sulfide in product. However, there is adequate detection instrumentation at the station and an alarm to warn controllers when hydrogen sulfide is higher than normal. He said that the Lea County natural gas pipeline also has an alarm for hydrogen sulfide with no on-line chromatography.

^{BW} and also has an ^{BW}

End Digest (other analyzers)

^{BW}

^{BW} These impurities are detected by other types of analyzers.

^{BW} m a monkey boots