

C. Field QC Inspectors did not "affix a hold tag to all discrepant items reported on a DCN". During the Final Walkdown Inspection Program for Rupture Restraints no hold tags were affixed when a deficient condition was identified and then listed on the QC/Eng. Walkdown sheet. Deficient (discrepant) conditions were identified on paper but were not identified in the field by having a hold tag affixed. These deviations from ESD 273 and ESD 268 were carried out by Field QC Inspectors and Engineers based on verbal instruction from QA/QC and Engineering Management.

Additional noncompliances to ESD 273 were identified on DCN#476-030 (5/16/80):

1. Field QC Inspectors did not reference assembly drawings for their examinations of the U Bolt. Verbal instructions on QA/QC Management to Field QC inspectors was to only assure U Bolts were in place and not perform detailed examinations to the drawings as required by ESD 273.
2. Field QC Inspectors did not check pipe ~~clearances~~ ^{clearances} (cold ~~gaps~~ ^{Hold}) as required by ESD 273.
3. Field QC Inspectors did not examine assembly drawings component ~~d~~^escriptions against installed assemblies to insure all components had been installed. Verbal instructions from QA/QC Management were to only assume that U Bolts were in place and not to perform detailed examinations to the drawings. ^{Hold}

ESD 273 would be revised by Pullman implementing the verbal instructions used to perform all Unit I Final Inspections after the whole Unit I Walkdown program was completed. PG&E would approve this revision in late May/early June 1980.

The Unit I Final Walkdown Inspection Program would ~~have~~ ^{How} identified significant numbers of discrepancies and resulted in major rework. Pullman DR#4259 is representative of the type of discrepancies identified. DR#4259 identified that connections on Rupture Restraint 126, modified in March 1976, were not to specification. The following discrepancies were identified:

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1. A plate added was not documented on a material requisition or marked to identify source.
2. FW 32, designed as a full penetration weld on three sides of the added plate, was $1/16$ " below flush and the weld had not been ultrasonically examined and was now inaccessible.
3. Original eight bolt holes in the receiver plate were plug welded without documentation. The technique used did not comply with AWS DI.0-69 code.
4. The four new lower bolts were drilled through FW 32 and its backing strap. The backing strap was not trimmed to facilitate full seating at the bolt head and the strap had a maximum gap of $1/4$ ".
5. Design required eight $5/8$ " A 325 bolts but eight $3/4$ " A490 bolts were installed. Washers were installed under the turned element but not under the bolt head. Bolts were not documented on a material requisition or marked to identify source.
6. The top south bolt had received air arc damage resulting in fusion of the nut and bolt.
7. The bottom north bolt did not have full engagement.
8. All bolts have been tensioned, evidenced by torque seal, however, process sheets were not documented.
9. Splice plate had been installed with a $1/16$ " gap at top and $1/8$ " gap at the bottom without shims.

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The Unit #I Final Walkdown Inspection began in June 1982. To expedite the Walkdown process ESD 273 was revised to delete from the Walkdown process all bolted and welded connections installed after 1/24/79. The basis for this deletion was PG&E's NCR # ~~Del~~ ^{DCI-} 79-RM-003, dated 1/24/79, which stated under Corrective Action to Prevent Recurrence that "Pullman Power Products has developed and implemented a program which assures adequate control of design changes. Training and indoctrination programs have been developed and implemented which assures adequate performance of inspection personnel."

As Internal Auditor, in a July 7, 1982 Pullman Interoffice Correspondence to the QA/QC Manager, I requested a reconsideration of the deletion of Final QC Walkdown Inspection of Bolted and Welded Connections installed after 1/24/79: "There is documented evidence available which raises questions about the "adequate performance of inspection personnel". Since January 1979, there have been approximately one hundred (100) findings concerning discrepancies or noncompliances to procedures, committed by Field QC Inspectors or committed by others but not identified and/or corrected by QC Inspectors. These findings are documented on Pullman Internal Audit Reports and PG&E Minor Variation Reports. Most of these findings involve Unit #2 work. The areas of discrepancies or non-compliances identified were Quality Control Inspections, Process Sheet Discrepancies, Discrepancies with Installed Material Removed and To be Reinstalled, Discrepancies with Material Storage and Traceability and Discrepancies with Field Warehouse Requisition and Material.

But Pullman QA/QC Management would not reconsider and Unit #I Final Walkdowns were not performed on post 1/24/79 rupture restraint work. The Unit II Final Walkdown Inspections would also result in major rework of rupture restraint. Subsequently, Pullman Field Engineers wrote several Discrepancy Reports on post 1/24/79 work when the work was inadequately reviewed by Engineering. Also Deficient Condition Notices would be written identifying documentation problems missed in pre-1979 work.

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NOH In 1982 serious problems were identified in the calibration process for torque wrenches used in the rupture restraint bolting program. The problem extended beyond rupture restraints to calibrated equipment used on ANSI B31.7 and ASME code work. PG&E's General Construction Department had been providing calibration services to Pullman at the Diablo Canyon site since at least 1974. PG&E calibrated a variety of tools including: torque wrenches, hydrogages, thermometers, heat temperature recorders, hygrometers and trip-volt-ohm^M meters. As a result of Pullman Vendor Audits in PG&E's General Construction I was notified that some tools were being forwarded to PG&E's Nuclear Plant Operations for calibration. PG&E's NPO calibration service had never been subjected to a QA program audit by Pullman as required. Pullman, through myself, performed a vendor audit of PG&E's NPO Department in October 1982 and identified the following deficiencies:

1. There were no documented instructions for the calibration of Pullman torque wrenches and subsequent documentation.
2. The traceability of calibration operation for their torque wrenches and subsequent certification could not be assured because:
 - a. The identification of the torque wrench on related documentation was not consistent.
 - b. The certification documentation was confusing and inadequate.
 - c. Documentation necessary for maintaining traceability and certification proving traceability was not generated.
3. The calibration documentation for NPO Standards had deficiencies:
 - a. There were no documented calibration frequencies for a standard used in a calibration process.
 - b. Calibration information labels attached to NPO equipment did not provide positive identification of the devices for which the information was intended.

As a result of the audits in PG&E's General Construction and NPO Departments, Pullman removed PG&E from its Approved Vendor's ~~list~~ ^{list} NOH until such a time as corrective action measures and measures to preclude recurrence were completed and approved. NOH

Subsequently PG&E would write a Minor Variation Report #M-4406 against Pullman. The discrepancy would identify that Pullman had procured calibration services from PG&E General Construction Department without written contract or specification which delineated Quality and Technical requirements. This calibration service had been going on as far back as 1974 without Quality and Technical requirements.

Also in 1982, significant Program deficiencies were identified in the application of Weld Procedure Code 7/8 to Rupture Restraint Welding. In August, through Pullman Unscheduled Internal Audit #32 I identified in both Units of the plant a large number of square groove welds made in one inch thick material using Code 7/8. These type welds were not a prequalified joint detail of the AWS Welding Code. Weld Code 7/8 did not have Procedure Qualification Records for the Type Weld as required by the AWS when joint details differed from those prescribed by the code. PG&E and Bechtel responded on 1/24/83 to a Pullman letter concerning this problem by stating that the square groove welds would not be allowed. In addition, the PG&E and Bechtel letter stated: "Weld procedure specification code 7/8 has been approved for the process and joint configuration itemized on the WPS. There itemized parameters are considered prequalified by AWS or are supported by tests and procedure qualification records. If Pullman wishes to use WPS Code 7/8 for processes or joint configurations not itemized a new WPS and PQR's are required."

04 B Based on this PG&E and Bechtel letter, my Pullman Unscheduled Internal Audit #35, dated 12/1/82 with a final prepared date of 3/23/83, identified in both units of the plant a number of single level groove welds in skewed T joints with special fit up requirements and fillet welds with special fit up requirements which were not prequalified AWS welds. The welds were made with Code 7/8 without establishing Procedure Qualification Records.

In addition, eight other types of joint configurations were identified as made with Code 7/8, but which were not itemized in the code 7/8 WPS. These welds did not conform to the intent

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of the PG&E and Bechtel letter and were nonconformances to the Weld Procedure Code. Other Weld Procedure Code 7/8 deficiencies were also identified. Pullman spent 1983 and 1984 implementing corrective action to these Weld Code 7/8 problems. But the corrective action has not addressed all the problems. Code 7/8 was revised and new weld procedure #AWS 1-10 generated which addressed joint configurations not listed in Code 7/8. But the actual welds in the field made in nonconformance to Code 7/8 have not been addressed. The Pullman Power Products construction program for Pipe Ruptures Restraint has a long and continued listing of discrepancies and nonconformances to PG&E specification and 10 CFR 50 Appendix B Quality Assurance Requirements. There can be no assurance that all of the problems have been identified, reported and corrected. PG&E in F.S. #8833XR defines Quality Assurance as those planned and systematic actions necessary to establish confidence that material (equipment and systems) will perform satisfactory to services. PG&E defines Quality Control as those Quality Assurance actions which provide a means to control the quality of material supplied (and work performed) to predetermined requirements. Pipe rupture restraints have had a continuing history of failure to meet basic codes and quality assurance standards. Perhaps quality assurance is all irrelevant. If QA matters, however, there is no basis for confidence that if an earthquake occurs, the piping will be sufficiently restrained to avoid damaging surrounding equipment.

I have read the above 47 page affidavit and it is true, accurate and complete to the best of my knowledge and belief.

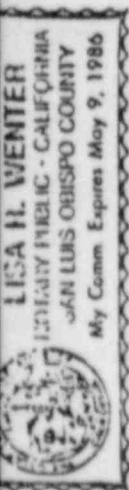
Signed Harold O. Hudson Date 6-5-84
Harold Hudson *June*

STATE OF CALIFORNIA
COUNTY OF SAN LUIS OBISPO

On June 5, 1984, before me, the undersigned, a Notary Public in and for said County, personally appeared HAROLD O. HUDSON, proved to me on the basis of satisfactory evidence to be the person whose name appears in the above instrument, and acknowledged to me that he executed same.

HH/nw WITNESS my hand and official seal.

Lisa H. Wenter
Lisa Wenter,
Notary Public



COCKATON
OFFICE

AFFIDAVIT

'84 JUN 21 AIO:48

My name is Larry (Doc) Kinney. I am submitting this affidavit freely and voluntarily, without any threats, inducement, or coercion to Mr. Thomas Devine, who has identified himself to me as the legal director of the Government Accountability Project. This statement evidences my concern for inadequate controls on early concrete pours at the Diablo Canyon Nuclear Power Plant and any lingering effects on the condition of the plant, particularly if the plant should be subjected to the stresses from an earthquake. I am also concerned about the effects on consumers who have to pay for Diablo Canyon, if the waste that I observed continued during the ten years after I left.

I worked for Pacific Gas and Electric Company (PG&E) at Diablo Canyon from 1968-January 1973, initially as a surveyor but primarily as an inspector for early concrete pours and installation of rebar at Unit I and Unit II. I also served as night shift inspector for the breakwater, and as an inspector for cadwelds. I resigned in 1973. Among the reasons for my resignation were the following:

1) Failure to review as-built drawings. Supposedly as-built drawings were checked after being signed off. I suspected that was not the case, however and decided to test my suspicions. In mid-late 1972 I signed drawings as "Roy Rogers," "Gene Autry," "Donald Duck" and "John Wayne." I then waited to be challenged. No one noticed.

2) Harassment of field inspectors. Field inspectors

from Pittsburgh Testing were ^{LS} hired to check reinforcement bar steel. They regularly complained to me of threats from PG&E 's steel contractor, Pacific States Steel, if they wrote up problem reports for conditions such as excessive numbers of voids in cadwelds. I recall the reports of harassment as follows: "We pay your check, so keep your mouth shut or you 'll be fired."

3) Management veto of enforcement efforts. One of the main reasons I resigned was that there were too many things that I couldn 't sign off, but management wouldn 't let me reject. Management consistently overrode my attempts to stop work. One example involved reinforcement bar steel that had been bent back and forth. I wrote up the practice, because it establishes break points and compromises the strength of the steel. This is a basic rule of concrete work. Even on this issue however, management overrode me.

4) Too much payola on the job. Construction supervisors offered me \$100 per night to keep my eyes shut during the breakwater work. I declined but was disillusioned both with the offer and myself for briefly considering it.

5) Advance warning and gag orders for Atomic Energy Commission inspections. In my four years on-site, management always gave us at least one day advance warning before all Atomic Energy Commission (AEC) inspections. Management told the inspectors not to ask questions or volunteer any information beyond what was specifically requested by the AEC.

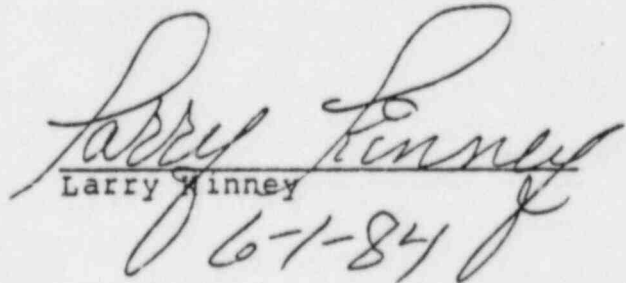
6) Waste. I feel strongly that a significant amount of the construction costs were indefensible. One example

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involved \$30,000 that was spent^K to build the guards shack and fence. I told my boss that it was unacceptable to spend so much for so little. To the best of my recollection, the message that he communicated to me could be summarized as follows: "You might as well accept it, because we can just go to the Public Utilities Commission and get it all back. The plant will be paid off six months after it begins operating."

With Mr. Devine as my legal representative, I will cooperate with any good faith NRC attempts to follow up on this disclosure and will help direct Commission personnel to specific examples of the conditions described above.

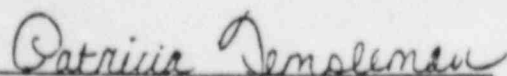
I have read the above -3- page statement and it is true, accurate and complete to the best of my knowledge and belief.^K


Larry Kinney
6-1-84

State of Idaho, Kootenai County SS

On this 1st day of June, 1984, before me, Patricia Templeman
a Notary Public in the for said county and state, personally appeared
Larry Kinney, know to me to be the person who executed the foregoing
instrument, and acknowledged to me that he executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal
the day and year in this certificate first above written.


Notary Public residing at:
Coeur d'Alene, Idaho