

#### 4.5 480V Disconnect Switches

##### 4.5.1 Discussion

The issues contained within this element were determined to be not substantiated.

##### 4.5.1.1 Site-Specific - WBN

Permanent 480V receptacles within the plant do not have separate disconnect switches. These circuits do however, have remote circuit breakers, in accordance with DS-E12.5.2, which serve as a disconnect means. Temporary 480V receptacles utilized by WBN DNC ("power pack" receptacles) are numbered and each has a corresponding disconnect switch inside the top cover of the unit.

The NEC does not require that permanent receptacles have a means of disconnect beyond that provided for by the use of a "suitable receptacle and plug" (NEC, Article 422-22, Attachment B). Such receptacles and plugs must (a) guard against inadvertent contact with live parts, (b) be capable of interrupting their rated current without hazard to the operator, and (c) not be interchangeable with lesser rated receptacles or plugs. The 480V permanent receptacles and plugs in use within the plant comply with the requirements of DS-E12.5.2, 480V power receptacles, and are manufactured by Crouse-Hinds Company under the trade name "Arktite."

These receptacles and plugs have a fourth extra connector which serves as an additional ground connection grounding both the receptacle and the plug. Because of the design of the plug and receptacle, any arc formed by inserting or pulling the plug under full-rated load is contained within an insulated chamber within the receptacle and is isolated from the grounded receptacle and plug body. Both the receptacle and the matching plug utilized by TVA meet all NEC requirements.

WBN DNC utilize portable "power packs" to supply 480V for welding and other uses. Each 480V receptacle on these "power packs" is numbered and has a corresponding disconnect switch/breaker inside

the top cover of the unit. In addition, the receptacles and plugs used are also grounded. Receptacles and plugs meet or exceed NEC Article 305.

Two concerns involved unplugging energized welding machines or other equipment from 480V receptacles. One involved the qualifications of employees, and the other questioned the lack of disconnect switches on receptacles utilized for welding operations to prevent potential plug explosions. The NEC (Article 630) requires that welding machines be provided with disconnecting means whenever such machines do not have integral disconnects ("on-off" switches). All welding machines observed within the plant (both WBN DNC and ONP) have such disconnect switches.

Informal interviews with both WBN DNC and ONP electricians indicated that while an improperly wired plug could overheat, normal arcing upon connection or disconnection under load would not cause an explosion of the plug or the receptacle since the circuit breaker would trip out.

**4.5.1.3 Site-Specific - SQN**

The safety concern which involved modified or loose prongs in 480V plugs to welding machines at SQN (concern EAC-85-005) was determined to be valid. This problem was reported by modifications electricians, and has been corrected by SQN ONP Electrical Maintenance.

**4.5.2 Findings/Conclusions**

**4.5.2.1 Site-Specific - WBN**

Based on the above discussion, the issue raised by the employee concerns within this element is not substantiated. The 480V electrical supply system in use at the plant provides an adequate amount of employee protection.

**4.5.2.2 Site-Specific - SQN**

Based on the above discussion, the issue raised by the subject safety suggestion is substantiated. However, it represents an isolated incident. The

practice of intentionally modifying 480V plugs to provide power to 230V electrical equipment such as welders is an accepted practice.

#### 4.6 Crane Disconnect Switch

Based on the findings of this element the issue raised by the subject employee concern is not substantiated.

##### 4.6.1 Discussion

###### 4.6.1.1 Site-Specific - WBN

Pendant operated cranes at WBN are subject to, and in compliance with the provisions of ANSI B30.2 and are equipped with disconnect switches in accordance with ANSI B30.11-1.95. While there are also NEC provisions governing cranes and the placement of crane disconnect switches (NEC Article 610), these are less specific, general industry standards.

The ANSI standard for pendant operated crane disconnect switches (ANSI B30.11-1.95) states that:

The power supply to runway or monorail conductors shall be controlled by a switch or circuit breaker located on a fixed structure, accessible from the floor, with provision for being locked in an open position.

It further requires that on floor or remote operated cranes an enclosed disconnect device also be provided in the leads from the runway conductors. It states that this device can be either:

- a. A nonconductive rope attached to the main disconnect device on floor mounted cranes.
- b. An undervoltage trip for the main circuit breaker, operated by an emergency stop button accessible to the operator, or
- c. A main line contactor operated by a switch or push button accessible to the operator.

Pendant operated cranes at WBN have a primary 480V motor control switch (I.T.E. model A1051, or equivalent) which is lockable in the open position. This motor control disconnect switch is

normally located at a motor control panel on the same floor elevation as the crane. It may, however, not be in the immediate vicinity of the crane itself. This isolation is either the result of the need to locate the disconnect switch away from the potentially hazardous area of the crane, or because of electrical design criteria. The concern questioned the lack of a safety disconnect mounted on a wall near the crane, but neither the applicable ANSI nor the NEC standards require that the disconnect switch be mounted on a wall.

In addition to this motor disconnect, the pendant crane control box contains a "remote" or "safety" disconnect accessible at all times to the operator. The control box contains spring loaded "deadman" push buttons controlling the bridge, hoist, and trolley movement, a positive action "start" button, and a red positive action "stop" button.

This red "stop" button constitutes the safety disconnect. When this button is pressed, it disconnects all the motor control circuits, thereby stopping all crane movement. This system is in compliance with method (C.) above.

It is true that the shunt trips employed by this safety disconnect system are not strictly "fail safe." However, since this circuit is independent of the other motor control circuits, an equipment failure-related accident could be possible only as a result of the simultaneous failure of both circuits. Even in such case, the likelihood that an accident could occur would be mitigated by the safety design systems and features of the crane. All cranes at WBN have travel limiting, hoist limiting, and load limiting switches and fuses which override operator control, or interrupt power to the various crane motors. In addition, the hoist and travel brakes on cranes are designed to fail in the locked mode. The loss of power to the crane for whatever reason stops all crane travel.

#### 4.6.2 Findings/Conclusions

##### 4.6.2.1 Site-Specific - WBN

Based on the above discussion, the issue raised by the employee concern within this element is unsubstantiated. Pendant operated cranes at WBN are equipped with safety disconnect switches in full compliance with all applicable requirements. The current safety disconnect system provides adequate employee protection.

#### 4.7 Welding Leads

Based on the findings of this element, the issue raised by the subject employee concerns is not substantiated.

##### 4.7.1 Discussion

###### 4.7.1.1 Site-Specific - WBN

Approximately 60 randomly selected welding leads were traced outward from welding units in several plant areas to determine the overall conditions of such leads. No damaged welding leads were found during the course of this investigation.

Welding leads do not have a separate formal inspection, but are inspected as part of the monthly quality control inspections conducted by WBN DNC pursuant to the provisions of WBN QCI-1.36 and WBN QCP-1.36. These require that monthly storage and housekeeping inspections be performed on all areas of the plant.

The WBN ACSs are responsible for developing plans for conducting and documenting such monthly inspections for the areas and crafts under their authority. These inspections are conducted by the various craft superintendents or foremen as a team. Following each such inspection, the ACS prepares a report of findings and issues a list of such findings back to the various crafts for correction or repair, and signoff. These records are maintained by the ACS, and problem areas are identified and targeted for increased surveillance. In addition to this formal inspection, the WBN Health and Safety Committee also conducts a formal inspection of one or more plant areas each month. The results of these inspections are also forwarded to the various craft for correction or repair.

These two inspections are in addition to the formal semiannual management inspections conducted in accordance with TVA policy and OSHA requirements (Part 1960, Subpart D).

DNC electricians are responsible for moving and hooking up all welding machines. The existing leads are pulled at that time, and are inspected and repaired or replaced by the electrical section prior to their usage by the welder.

Welding leads are also inspected as part of the "roll-back" process. This informal process, which normally occurs during the last hour of the last Friday of each month, involves pulling down, inspecting, and winding up all welding leads in use by WBN DNC. Welding leads which are damaged are repaired or replaced, and unused welding leads are removed from the work area.

Welding leads are formally inspected by WBN ONP once each year, and again each time they are issued by the toolroom. Four welding leads were inspected in the ONP toolroom. None of these leads were damaged or improperly repaired. Damaged leads are sent to Electrical Maintenance for repair or replacement.

#### 4.7.2 Findings/Conclusions

##### 4.7.2.1 Site-Specific - WBN

Based both on the frequency and scope of the current inspections conducted by WBN DNC and on the informal inspections of welding leads conducted by the DNC electrical maintenance personnel, the current maintenance/inspection program and related activities utilized by WBN DNC are adequate. The inspection of welding leads by WBN ONP is also considered adequate.

#### 4.8 Electrical Supply Trailers and Transformers

Based on the findings of this element, the issues raised by the subject employee concern and safety suggestion are not substantiated.

4.8.1 Discussion

4.8.1.1 Site-Specific - WBN

Electrical supply trailers which supply temporary power to WBN DNC and to temporary structures and facilities onsite comply with the applicable provisions of the NEC (Article 110, Part B), and 29 CFR 1926.402(d). These provisions govern the construction of guards around transformers enclosed within these supply trailers and require that access to such transformers be controlled.

The temporary electrical supply trailers onsite are protected by a wooden slat fence and are enclosed at the top, precluding all but deliberate entry efforts. The door accessing the supply transformers is locked at all times. The key to this locked door is controlled by the WBN DNC electrical superintendent and/or the foremen.

Approximately 55 temporary electrical supply trailers are on the site. Twenty-two of these trailers were inspected during the investigation. All were soundly constructed to meet all applicable NEC requirements, had obvious warning signs posted on and around them, and were locked against casual or improper access.

Discussions with WBN NUC CON personnel revealed that minor isolated incidents of vandalism to these trailers has occurred in the past. These incidents have been limited to minor pranks such as deflating the tires, or spray painting the exterior. Based on this, no serious threat of vandalism to these trailers exists.

Interviews with electricians and WBN DNC Electrical Maintenance personnel revealed that they knew of no problems associated with the supply trailers. Discussions with both WBN DNC and ONP medical personnel revealed that there were no reported injuries associated with work conducted on or to the supply trailers.

Whenever work is required within a supply trailer, the power supply is first disconnected either at the WBN DNC substation or at the trailer itself, dependent upon the nature of the work to be done. Only linemen qualified to work on such equipment enter these trailers.

The related issue suggesting that transformers at WBN could explode was not found to be valid. The safety suggestion questioned if the explosion and subsequent fire which occurred on the roof of the American National Bank Building in Chattanooga, Tennessee, in the fall of 1985, could occur at WBN.

The concern was investigated by the site safety staff, and the individual who submitted the safety suggestion has received a response to his or her concern. This investigation revealed that, based on their discussions with the Chattanooga Utilities Board, the subject explosion and fire did not involve a transformer.

Based on existing site maintenance procedures, requirements, and instructions, and on TVA and industry history, transformers at WBN pose no significant safety hazard as a result of explosions or fires.

#### 4.8.2 Findings/Conclusions

##### 4.8.2.1 Site-Specific - WBN

Based on the discussion above, the issue raised by the employee concern and the safety suggestion included within this element is not substantiated.

#### 4.9 Permanent Lighting

Several of the issues raised by the employee concerns contained within this element are substantiated

##### 4.9.1 Discussion

###### 4.9.1.1 Site-Specific - WBN

The concern addressing the need for permanent lighting in the steam generator "doghouses" was not found to be valid. Discussions with WBN ONP and DNC Electrical Maintenance personnel revealed that no permanent lighting is or will be installed in this area. Permanent lighting is not necessary or desirable in this area because of the very limited need for access following fuel loading, and also because of the increased maintenance required for lighting systems in such high radiation areas. Whenever entry is required within this area, temporary lighting will be utilized.

The concern addressing the need for better lighting in the condensate demineralizer polisher tank rooms as it applied to WBN was found to be partially substantiated. A survey of both unit 1 and unit 2 condensate demineralizer polisher tank rooms was conducted utilizing a hand-held light level meter (Weston-Schlumberger Model 615 Illumination meter, calibrated March 21, 1986). Observed lighting levels were between 5 and 20 footcandles (FC), with the average reading being slightly over 15 FC. Based on the applicable design and industry standards this level of lighting is adequate for the tank room area.

However, as the concern states, the tanks have two vertically oriented sightglasses mounted on their sides. These sightglasses are mounted 6.5 and 10 feet above the floor level. Readings must be taken through one or both of these sightglasses on up to 6 tanks each shift during operation by the AUO. Because of the construction of the sightglasses, readings are currently taken with a flashlight.

While this is an inconvenience, it is the only current means of taking such readings. However, the only means of access currently available to the AUO conducting these readings is either by (a) climbing up the tank supports, conduit, etc., to reach these sightglasses (an observed practice), or (b) utilizing a ladder stationed in the area for such readings. The utilization of an unsecured ladder to reach these sightglasses may be preferable to climbing up the tank supports; however, since the tank is round and has a smooth exterior, neither of the currently available access options constitute a safe working practice.

Based on the available lighting levels, no additional permanent overhead lighting is necessary in the condensate demineralizer polisher rooms at WBN.

The safety suggestion which requested that permanent lighting be installed within the pipe gallery on the 692' elevation has been investigated by the site ONP safety staff, and the issue raised is valid. No permanent lighting was designed to be installed within this area because of the perceived lack of need for routine access. The area does receive some

light through deck gratings from the 676' and 713' elevations. Based on expected access needs, the ONP safety staff is evaluating the need for permanent lighting within this area. Because of this, no additional action is warranted.

The safety suggestion which requested that permanent lighting be installed in the waste gas analyzer room on the 613' elevation of the Auxiliary Building does not raise a valid issue. The room in question is very small, and contains a single instrument enclosure. This instrument panel has a permanently mounted light which is sufficient to safely illuminate the room. Based on the presence of this light, no additional permanent lighting is necessary.

The safety suggestion questioning the location of the "permissive" light installed over the two "airlock" doors leading to the 713 elevation unit 2 access portal is being evaluated by the ONP safety staff as part of the existing site safety suggestion program. Based on this, no further action is warranted.

#### 4.9.1.2 Site-Specific - SQN

The concern addressing the need for better lighting in the polisher tank rooms within the Condensate Demineralizer Building at SQN was found to be substantiated.

A survey was conducted of both the units 1 and 2 condensate polisher tank rooms with a member of the SQN Safety Staff. While the instrumentation areas and system control areas of the building were well lighted, no permanent lighting was installed in either of the two tank rooms. Whenever it is necessary to check the level of the resin bed in the various tanks, the AUO must utilize a flashlight and tripod-mounted temporary light(s). Because of the amount of space available within these rooms (as opposed to the limited amount of space in the corresponding tank rooms at WBN), access is accomplished by using a set of rolling stairs.

A discussion was held with a SQN Shift Engineer to determine why no permanent lighting was installed within these tank rooms and to determine the frequency of required access to these tanks. When SQN was designed, permanent lighting was not planned

for the tank rooms because (1) it was assumed that routine access to these tanks would not be necessary, and (2) since the condensate system is in contact with the primary reactor loop, it was believed that minor cross-system leaks would make the polisher tank room areas radioactive during operation of the plant, thereby making the maintenance of such permanent lighting more difficult. However, as a result of operating experience at SQN, access is routinely required to these tank rooms to physically verify the level of the resin beds within these tanks during operations. Although the area has low radiation levels, routine access to the area is not precluded.

Based on the fact that routine access is required (a minimum of 2 to 3 times each week) to observe resin bed levels within the polisher tank rooms and on the finding that observed operational radiation levels within these areas are far below the levels anticipated in the plant design, there is no reason to continue to rely on temporary lighting within these polisher tank rooms at SQN.

The installation of properly designed permanent lighting will decrease the probability of the occurrence of an access related injury to ONP employees.

The two safety suggestions submitted at SQN which related to the lack of adequate permanent lighting within the lower containment in unit 1 were determined to address a valid problem. When the interim hydrogen ignition system was installed it was necessary to supply dedicated power to the system. Since the only available dedicated lines in the area at that time were the plant emergency lighting circuits, these circuits were utilized to provide power to the temporary hydrogen ignition system. Since this action would result in a loss of somewhat less than half of the normal illumination level, temporary lighting was utilized to provide adequate light levels during the modification efforts.

The permanent hydrogen ignition system, together with its own source of dedicated power has been installed, thus freeing up the dedicated lighting circuits. However, three (3) of the lighting fixtures removed during the course of this

modification were either damaged, or could not be located. Since the manufacturer of these fixtures had gone out of business, additional, replacement fixtures have not been located either within or outside TVA to date. Discussions with the site safety staff and with SQN modifications reveal that activities are continuing in an attempt to replace these lighting fixtures. However, this may require the preparation of a Design Change Request to allow the use of different lighting fixtures within this area.

Temporary lighting is currently being utilized to augment the remaining permanent lighting whenever access to the area is required. Based on these findings, no further action is identified.

The safety suggestion submitted at SQN which involved the lack of sufficient permanent yard lighting in the area of the condensate storage tank is only partially valid. The existing lighting level meets applicable security and general yard lighting standards and requirements. The suggestion is valid in that the work in question was being done without the use of adequate levels of supplemental temporary lighting. As a result of this safety suggestion, the responsible supervisor rescheduled the subject work activity so that it could be done during daylight hours.

While this indicated that the supervisor did not properly consider the need for additional lighting, adequate administrative controls are in place in the form of pre-job safety planning requirements contained in SQN HCI-G2, SQS-7, and in the SQN Supervisors Handbook to avoid reoccurrence of this problem.

#### 4.9.2 Findings/Conclusions

##### 4.9.2.1 Site-Specific - WBN

The condensate demineralizer polisher tank rooms within the Turbine Building at WBN are adequately illuminated to permit the safe performance of normal work activities. However, because of associated access problems, and because required sightglass readings conducted on these tanks necessitate the use of a direct light source, additional permanent lighting or fixed task lighting should be installed.

4.9.2.2 Site-Specific - SQN

The condensate demineralizer tank rooms within the condensate Demineralizer Building at SQN do not have permanent lighting installed. While this is in accordance with design, plant operating experience has necessitated more frequent access to this area. Based on this increased access requirement, the need for permanent lighting within this plant area should be reevaluated.

4.10 Dipstick/Arcing Problem

While the finding revealed that the issue raised by the subject employee concern is valid, the situation and factors which gave rise to the subject employee concern no longer exist.

4.10.1 Discussion

4.10.1.1 Site-Specific - WBN

No similar problem or conditions exist at WBN. Diesel engines are found in only two locations at the plant: one portable, wheel mounted diesel engine driven sump pump is located on the elevation 685 of the Turbine Building, and permanently mounted diesel engines are contained in the Diesel Generator and Auxiliary Diesel Generator Buildings. The portable diesel engine is a Detroit Deisel which is attached to a Peabody-Barnes pump. It is utilized on an occasional basis for draining the turbine building sump. The battery on this unit is on the opposite side from the the oil dipstick, thereby posing no similar problem. The battery banks within the various engine bays within the Diesel Generator Buildings are situated far from the engines themselves, thereby again posing no similar problem.

4.10.1.2 Site-Specific - BFN

The safety suggestion at BFN was submitted as the result of the proximity of the starting battery bank to a 325 horsepower diesel engine which provides backup fire protection water. The battery bank is located against a wall with the battery terminals facing the diesel engine. The walkway between the the engine and these batteries is only about three to four feet (3-4')

wide. Because of the length of the engine oil dipstick, and because of the fact that the dipstick is located on the side facing the batteries, the dipstick could come in contact with the bare battery terminals during its removal or reinsertion.

This employee concern was one of eight suggestions submitted to the site Health and Safety Committee during the month of August 1984. It was selected as the "best" suggestion.

Since the committee only has the authority to recommend and pass on safety suggestions for subsequent formal evaluation by the appropriate site organizations, every suggestion received, even "winning" suggestion may or may not be subsequently determined to require corrective action. The subject safety suggestion was forwarded to Electrical Maintenance for review. However, no record could be found as to the final disposition of the suggestion, and no action was ever taken correcting the problem addressed by the subject safety suggestion.

Since no conclusive evidence existed proving that the safety suggestion received formal review, this evaluator requested an additional review of the subject safety suggestion. This review was coordinated by the site safety staff and resulted in the preparation of an MR (MR 746254) by the Fire Protection Group.

The safety award program process has been revised, effective February 1986, to incorporate a tracking system, and to provide follow-up letters to employees submitting safety suggestions. All employees submitting safety suggestions now receive a letter stating whether their suggestions was determined to require corrective action. Where appropriate, this letter also lists the corrective actions to be taken and lists the appropriate MR, Design Change Request, etc. Those employees whose suggestions are judged to require corrective action receive an additional letter following the completion of the required corrective actions(s).

4.10.2 Findings/Conclusions

4.10.2.1 Site-Specific - WBN

No conclusions were developed which affect WBN

4.10.2.2 Browns Ferry

The issue raised by this element was valid. No action was taken on a "winning safety award" at BFN. This inaction resulted from an apparent (undocumented) negative determination by the site Electrical Maintenance Section as to the validity of the concern. Since, as a result of this investigation, the subject safety suggestion has received a documented review, the issue is no longer valid. In addition, the conditions which gave rise to the subject employee concern have been eliminated. Employees at BFN now receive feedback as the status and disposition of their safety suggestions.

Because of the above facts, no further action is warranted on this issue.

5.0 COLLECTIVE SIGNIFICANCE

5.1 Management Effectiveness

Management does not adequately stress or address the importance of the industrial safety program as it applies to the safe use of electrical equipment. This reduces their effectiveness as supported by the conclusions of Subcategory Report 90100 (Management of Safety). Existing electrical maintenance policies, procedures, and practices are considered to be adequate in most cases. However, they generally result in the day-to-day "clean-up" of various known recurring safety problems rather than resulting in the correction of the causes of such problems.

Temporary wiring and lighting within the plant is in poor condition, is not adequately maintained, and is not always in compliance with applicable NEC requirements. This poor condition increases the risk of electrical shock to employees.

Certain ONP and DNC electrical procedures do not adequately protect employees from electrical shock.

5.2 Employee Effectiveness

Employee effectiveness is reduced primarily because of the potential shock hazards posed by temporary wiring and lighting within the plant. Since this problem is caused in part by the employees themselves, they do not feel that industrial safety is important.

5.3 Technical Adequacy

The findings of this subcategory do not directly address technical adequacy.

6.0 CAUSES

The following is a summary of the causes of those findings which require corrective actions.

6.1 Temporary Lighting

6.1.1 Site-Specific - WBN

The current level of administration of WBN procedures, practices, and policies dealing with temporary lighting, service cords, and extension cords utilized primarily by DNC does not result in the adequate maintenance of such temporary electrical equipment.

Employees are not motivated to properly maintain such temporary wiring, nor are they disciplined when such equipment is intentionally damaged, improperly modified, or altered.

Site policies within DNC concerning the requirements for guards on "Tuff-Skin" bulbs are inconsistent.

6.2 Drilling into Concrete

6.2.1 Site-Specific - WBN

There was insufficient communication between ONP and DNC as to the availability of site "wall survey" equipment and special employee protective equipment. Because of this lack of communication, ONP and DNC procedures do not adequately address when and where such equipment should be used, or describe the use and capabilities of such equipment.

### 6.3 Permanent Lighting

#### 6.3.1 Site-Specific - WBN

The amount of permanent lighting installed within the condensate demineralizer polisher tank rooms was adequate for such a general use area. However, this designed illumination level is inadequate to permit employees safe access to conduct specific required activities.

#### 6.3.2 Site-Specific - SQN

The lack of permanent lighting within the condensate demineralizer tank rooms at SQN was the result of the design assumption that access to this area would not be required. Even though operating experience has dictated that frequent access is required within this area, no permanent lighting has been installed.

### 6.4 Dipstick/Arcing Problem

#### 6.4.1 Site-Specific - BFN

The safety suggestion program at BFN at the time the subject safety suggestion received a monthly award (August 1984) did not provide any means of communication with the concerned employee. Since there was no communication, employees did not know if their suggestions were determined to be invalid or if they were being implemented.

This cause no longer exists. The communication problem was identified and corrected. No further corrective actions needs to be identified.

## 7.0 CORRECTIVE ACTIONS

No immediate corrective actions or stop work orders were initiated as a direct result of the subcategory evaluations. One corrective action was initiated by the WBN ONP safety staff on May 28, 1986 to correct an access problem encountered as a result of the investigation process. This corrective action involved the preparation of an MR to correct an access problem, and is discussed in section 7.2(d.) below.

No outstanding corrective actions exist as a result of any prior investigation of the employee concerns addressed by this report

The following is a listing of problems identified in Corrective Action Tracking Documents (CATDs).

7.1 Site-Specific - Watts Bar

- a. **Problem Description:** WBN procedures, practices, and policies dealing with the maintenance of temporary electrical wiring, light strings, service cords, extension cords, etc., are not implemented in such a manner as to result in the adequate maintenance of such temporary electrical wiring.

Corrective Action Plan:

CATD 90600-1 DNC will: (1) conduct an inspection to verify the integrity and adequacy of temporary lighting and extension cords presently in use (by September 8, 1986), (2) ensure that qualified journeyman status craft persons are assigned to temporary maintenance functions (by September 8, 1986), (3) develop and distribute a notification to site employees concerning maintenance of these systems (by September 8, 1986), (4) target this item during all inspections conducted after October 1, 1986, (5) hold DNC managers accountable for positive program results (effective October 1, 1986), and (6) develop a temporary electrical maintenance procedure to include requirements for temporary wiring on or before November 14, 1986 for issue on or before January 1, 1987.

CATD 90600-2 ONP has evaluated its applicable procedures, practices, and policies governing temporary wiring. Based on this evaluation, ONPs procedures, practices, and policies are considered to be more than adequate to assure employee safety. Since WBN DNC will evaluate the implementation of procedures similar to ONP, and will propose a specific "site procedure," no corrective action is deemed necessary.

- b. **Problem Description:** WBN policies regarding the need to install guards on "Tuff-Skin" bulbs are inconsistent between DNC and ONP.

Corrective Action Plan:

CATD 90600-3 DNC will: (1) specifically correct present variations of Tuff-Skin light bulb use to comply with NEC Article 305 by September 1, 1986, and limit their use to areas with high impact potential, (2) implement a policy requiring the use of materials meeting applicable NEC requirements (by October 1, 1986), (3) establish routine, "interlocking" discipline inspections (by October 1, 1986), and (4) incorporate this issue into a consistent site document for implementation on or before January 1, 1987.

CATD 90600-4 ONP Policies regarding the need to install guards on "Tuff-Skin" bulbs comply with NEC requirements. Since DNC

---

intends to also comply with these requirements, the current site policy inconsistencies will no longer exist. As a result of this, no corrective action is proposed.

- c. Problem Description: Site procedures governing drilling, cutting, and chipping operations conducted on permanent concrete structures do not address the site availability, or capabilities of existing employee protection devices and "wall survey" instrumentation. In addition, they do not provide any guidelines or requirements for their usage as a specific part of the job planning activities.

Corrective Action Plan:

CATD 90600-5 DNC will (1) improve the present work-safety preplanning effort under QCI-1.6G by regulating the use of "wall survey" equipment and the Drill stop equipment in all applicable workplans, (2) ensure that responsible craft supervision (those actually performing the work) will be included in the prework system walkdowns and "wall surveys" and (3) review the DNC procedure for "Safety Task Assignment" to ensure that workers are adequately informed on prejob surveys and are provided with the information and equipment necessary to safely complete the work. The above actions will be completed on or before September 14, 1986. DNC will incorporate this issue into consistent site procedures for implementation by January 1, 1987.

CATD 90600-6 ONP AI-9.8, "Drilling, Cutting, Chipping, and Excavating," will be revised before January 1, 1987 to reflect the availability, capabilities, and requirement of use of the "Evader" or Drill stop, and DNCs "wall survey" equipment. Mechanical maintenance section will be responsible for this action.

- d. Problem Description: Permanent lighting provided within the Condensate Demineralizer Polisher tank rooms in the Turbine Building is inadequate to permit employees to safely conduct certain required activities (sight glass readings) without the use of a flashlight.

Corrective Action Plan:

CATD 90600-7 An MR was written by ONP on May 28, 1986 (MR 578720) to install stairways and work platforms in this area. This action will be complete on or before January 1, 1987. No additional permanent lighting is judged necessary.

7.2 Site-Specific - Sequoyah

Problem Description: Permanent lighting is not provided within the tank room areas of the Condensate Demineralizer Building. Operating experience has shown that routine access to this area is required. To allow the safe conduct of required activities within this area, the installation of permanent lighting should be considered.

Corrective Action Plan:

CAID 90600-8 SQN ONP will conduct a formal evaluation to determine if the polisher tankrooms within the Condensate Demineralizer Building require the addition of permanent lighting. Such evaluation will consider known and anticipated access requirements and all work functions performed within this area. This evaluation will be completed no later than six months following the startup of unit 1.

8.0 LIST OF EVALUATORS

David H. Petree

9.0 ATTACHMENTS

Attachment A, Subcategory Summary Table

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 INP - 1555 - RHM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECP5)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 1  
 RUN TIME - 14:30:14  
 RUN DATE - 01/28/87

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED 3 FIND CLASS BF BL SQ HB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906
FN-85-002-00201	SF	906	N	BFH	1 Y H H H 2 NO HA HA HA 3 C HA HA HA		NSRS	DURING THE EXIT INTERVIEW THE CI EXPRESSED HIS CONCERN THAT NO ACTION HAS BEEN TAKEN ON A WARNING SAFETY WARNING ON THE DIESEL FIRE PUMP BATTERY TERMINAL; I.E., INSULATION TO PREVENT CONTACT ARCING WITH DIPSTICK WHEN O	1.2.10, 2.3.2.5.4, 3.1.1.4.10, 6.4
LJ-85-004	01	SF 906	N	SQH	1 H H Y H 2 NA NA NO NA 3 NA NA C NA		OECF	INDUSTRIAL SAFETY - THE YARD LIGHTING IS UNSUFFICIENT IN THE AREA OF THE CONDENSATE STORAGE TANK.	1.2.9, 2.3.9.2.5.3, 3.1.9.4.9, 5.1.9.
LJ-85-005	01	SF 906	N	SQH	1 H H Y H 2 NA NA NO NA 3 NA NA C NA		OECF	INDUSTRIAL SAFETY - PLUG ON PROJECTOR HAS GROUND PRONG CUT OFF OF PLUG.	1.2.2, 2.3.2.3.2.2, 4.2

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 INP - ISSS - RHM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 2  
 RUN TIME - 16:50:14  
 RUN DATE - 01/28/87

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 2 3	REPORT SAF RELATED FIND CLASS	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906
AC-85-005	01	SF 906	N	SQN	1	N N Y N		OECF	MODIFIED OR LOOSE PRONGS INSIDE PLUGS ON POWER SUPPLY CABLES FOR 480 VOLT WELDING MACHINES IS INJURY POTENTIAL FOR EMPLOYEES.	1.2.5, 2.3.5 3.1.5, 4.5
AC-85-010	01	SF 906	N	SQN	1	N N Y N		OECF	AREA LIGHTING IN RB1 LOWER CONTAINMENT IS INADEQUATE IN A NUMBER OF AREAS BECAUSE THE LIGHTING CIRCUITS PREVIOUSLY USED FOR THE INTERIM HYDROGEN LIGHTERS HAVE NOT BEEN RESTORED.	1.2.9, 2.3.9 2.5.3, 3.1.9 4.9, 5.1.9,
X -85-064-00301 T50183	SF	906	S	HBN	1	N N N Y	EX-85-064-003	QTC	AT TIMES THERE IS UNSAFE EQUIPMENT IN THE FIELD SUCH AS LIGHT CORDS WITH BROKEN LIGHTS, BOARDS WITH NAILS IN THEM.	1.2.9, 2.3.9 2.5.3, 3.1.9 4.9, 5.1.9, 6.3, 7.0
	02	SF 910	S	HBN	2	NA NA NA NO				

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 INP - ISSS - RWM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 3  
 RUN TIME - 16:50:14  
 RUN DATE - 01/28/87

TEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL				HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906		
					2 SAF RELATED	3 FIND CLASS	BF	BL					SQ	WB
X -85-072-00501 T50187	SF	906	N	WBN	1	N	N	N	Y	EX-85-072-005	QTC	AT TIMES, THERE ARE BROKEN LIGHT BULBS IN THE LINES WHILE CURRENT IS IN THE LINE. REACTOR BUILDING, UP BEHIND THE STEAM GENERATOR. UNIT NOT KNOWN. CONSTRUCTION DEPT CONCERN. CI HAS NO ADDITIONAL INFORMATION.	1.2.9, 2.3.9 2.5.3, 3.1.9 4.3, 5.1.9, 6.3, 7.0	
X -85-154-00601 T50206	SF	906	N	WBN	1	N	N	N	Y	EX-85-154-006	QTC	PENDANT OPERATED CRANES DO NOT HAVE A SAFETY DISCONNECT MOUNTED ON WALL NEAR CRANE AS REQUIRED BY NATIONAL ELECTRICAL CODE. EXISTING. EMERGENCY STOP SYSTEMS USE SHUNT TRIPS WHICH ARE NOT FAIL SAFE. CI HAS NO FURTHER CONCERN.	1.2.6, 2.3.6 3.1.6, 4.6	
X -85-154-00701 T50206	EN	235	S	WBN	1	Y	Y	Y	Y		QTC	PERSONNEL SAFETY IS SERIOUSLY ENDANGERED BY LACK OF DISCONNECT SWITCHES AT 480 VOLT WELDING OUTLETS. MANY PERSONNEL WHO CONNECT AND DISCONNECT WELDING CONDUCTORS TO THESE OUTLETS MIGHT NOT KNOW IF CIRCUITS ARE ENERGIZED WHILE ENERGIZED COULD CAUSE AN EXPLOSION AND COULD EMBED SMALL METALLIC PARTICLES IN THE ARMS, FACE AND TORSO OF THE PERSON. CI HAS NO MORE INFORMATION. CONSTRUCTION DEPT. CONCERN.	1.2.5, 2.3.5 3.1.5, 4.5	
	02	SF	906	S	WBN	1	N	N	N	Y				
						2	NA	NA	NA	NO				
						3	NA	NA	NA	A				

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 NP - ISSS - RWM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 4  
 RUN TIME - 16:50:14  
 RUN DATE - 01/28/87

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED 3 FIND CLASS	B F	B L	S Q	H B	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906
X -85-154-00801 T50206	SF	906	N	WBN	1 N N N Y 2 NA NA NA NO 3 NA NA NA A						QTC	UNQUALIFIED EMPLOYEES (POSITION KNOWN). EXAMPLE: AN EMPLOYEE DID NOT KNOW THAT IT IS DANGEROUS TO UNPLUG A WELDING CONNECTOR FROM ITS RECEPTACLE WHILE THE CIRCUIT IS ENERGIZED AT 480 VOLTS AND BETWEEN 60 AMPS AND 10 CONSTRUCTION DEPT. CONCERN.	1.2.5, 2.3.5 3.1.5, 4.5
I -85-042-N0201	SF	906	N	WBN	1 N N N Y 2 NA NA NA NO 3 NA NA NA A						HRC	NRC IDENTIFIED THE FOLLOWING CONCERN FROM REVIEW OF THE QTC FILE: "WELDING LEADS HAD CUTS IN INSULATION THAT WERE JUST TAPED UP - A LOT OF THE ENDS WERE FALLING APART. WELDING LEADS ARE DRAPED OVER PIPES. MANY LEADS ARE DRAPED OVER PIPES. MANY LEADS ARE DRAPED OVER PIPES. MANY LEADS ARE DRAPED OVER PIPES."	1.2.7, 2.3.7 3.1.7, 4.7
N -85-050-00301 T50177	SF	906	N	WBN	1 N N N Y 2 NA NA NA NO 3 NA NA NA A					IN-85-050-003	QTC	WELDING LEADS DAMAGED AND FRAYED. UNSAFE TO USE. THIS OCCURED IN REACTOR OR BLDG. #2 ELEV. 692 TO ELEV. 713 THROUGH PIPE CHASE. CONST DEPT. CONCERN. NO FURTHER INFORMATION AVAILABLE. NO FOLLOW UP REQUIRED.	1.2.7, 2.3.7 3.1.7, 4.7

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 INP - ISSS - RHM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 5  
 RUN TIME - 16:50:14  
 RUN DATE - 01/28/87

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL				HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906	
					2 SAF RELATED	3 FIND CLASS	BF	BL					SQ
N -85-235-00901 T50172	SF	906	N	WBN	1	N	N	N	Y	IN-85-235-009	QTC	THERE IS NO QUALITY CONTROL OVER THE CARE AND MAINTENANCE OF WELDING LEADS AND ELECTRICAL CORDS. CONST. DEPT. CONCERN. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP REQUIRED.	1.2.7, 2.3.7 3.1.7, 4.7
N -85-355-00101 T50026	SF	906	N	WBN	1	N	N	N	Y		QTC	WATER IS SPILLED ON FLOOR OF REACTOR BUILDING AND AUX. (713') BUILDING DURING FLUSHES. (6-8 INCHES) ELECTRICAL EQUIPMENT, CORDS, AND WELD MACHINES ARE ON FLOOR CAUSING A PERSONNEL HAZARD. APPROX 5-18-85 6 TO 8 INCH 2.	1.2.2, 2.3.2 3.1.2, 4.2
N -85-402-00101 T50013	SF	906	N	WBN	1	N	N	N	Y	IN-85-402-001	QTC	CRAFT PERSONNEL (KNOWN) ARE REQUIRED TO DRILL INTO CONCRETE WALLS CONTAINING REBAR AND LIVE ELECTRICAL WIRES IN CONDUIT, WHICH IS EMBEDDED WITHIN THE WALL, WITHOUT THE BENEFIT OF AN ELECTRONIC "WALL SURVEY" TO DETERMINE MS. CI STATED THAT THE DRILL USED WILL PENETRATE CONDUIT OR REBAR BEFORE THE OPERATOR CAN STOP THE DRILL, RESULTING IN EITHER ELECTROCUTION, OR DISCIPLINARY LETTER FOR CARELESS WORK PRACTICES WHERE REBAR IS DAMAGED. WHEN CI BROUGHT THIS SITUATION	1.2.4, 2.3.4 2.5.2, 3.1.4 4.4, 5.1, 6.0 7.0

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 INP - ISSS - RHM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 6  
 RUN TIME - 16:50:14  
 RUN DATE - 01/28/87

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R PLT D LOC	1 REPORT APPL 2 SAF RELATED 3 FIND CLASS BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906
N -85-714-00101 T50070	OP	310	S WBN	1 2 3	IN-85-714-001	QTC	WHEN WORKING ON ELECTRICAL LINES, THE SWITCH BOX CONTROLLING THOSE LINES SHOULD BE LOCKED. AT THE PRESENT TIME SWITCHBOXES ARE ONLY TAGGED. THIS OCCURS SITE-WIDE. NO FOLLOW-UP REQUIRED.	1.2.3, 2.3.3 3.1.3, 4.3
	02	SF 906	S WBN	1 N N Y Y 2 NA NA NO NO 3 NA NA B B				
N -85-957-00101 T50104	SF	906	N WBN	1 N N N Y 2 NA NA NA NO 3 NA NA NA A		QTC	CI EXPRESSED CONCERN FOR PERSONNEL SAFETY AND POSSIBLE VANDALISM TO ELECTRICAL SUPPLY TRAILERS 568-573. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP REQUIRED.	1.2.8, 2.3.8 3.1.8, 4.8
N -86-002-00101 T50099	SF	906	N WBN	1 N N N Y 2 NA NA NA NO 3 NA NA NA B	IN-86-002-001	QTC	PERMANENT LIGHTING WITH AN EASILY ACCESSIBLE CONTROLLING LIGHT SWITCH IS NEEDED INSIDE THE STEAM GENERATOR "DOG HOUSE" FOR PERSONNEL SAFETY. CI HAS NO FURTHER INFORMATION. NO FOLLOW UP REQUIRED.	1.2.9, 2.3.9 2.5.3, 3.1.9 4.9, 5.1.9, 6.3

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 NP - ISSS - RWM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 7  
 RUN TIME - 16:50:1  
 RUN DATE - 01/28/8

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 2 3	REPORT CLASS	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906
N -86-141-00201 T50126	SF	906	N	WBN	1	N N N Y	IN-86-141-002	QTC	TEMPORARY LIGHTING WIRING THROUGHOUT UNIT 2 (REACTOR, TURBINE AND AUX BUILDINGS) IS A SAFETY PROBLEM. EXAMPLES: NO GUARDS AROUND LIGHT BULBS, EMPTY SOCKETS WHERE LIGHT BULBS SHOULD BE, AND DROP CORDS HAVE INSULATION DEPT CONCERN. CI COULD NOT PROVIDE SPECIFIC LOCATIONS. CI HAS NO ADDITIONAL INFORMATION.	1.2.1, 2.3.1 2.5.1, 3.1, 5.0, 6.1, 7.
N -86-313-00101 T50163	SF	906	N	WBN	1	N N N Y	IN-86-313-001	QTC	808' OR 812' ELEV, ANNULUS AREA, AUX BUILDING, UNIT #2. AN ELECTRICAL LINE FEEDING THE TEMPORARY LIGHTING HAS TOO MUCH AMPERAGE- BEING FED BY A 200 AMP. SWITCH AND WHEN IT IS GROUNDED IT WILL NOT KILL THE LIGHTING. THE CONDITION WAS REPORTED TO TVA JULY '85. CONSTRUCTION DEPT CONCERN. CI HAS NO FURTHER INFORMATION. NO FOLLOWUP REQUIRED.	1.2.1, 2.3.1 2.5.1, 3.1, 4.1, 5.0, 6. 7.0
NO-86-001	01	SF 906	N	SQN	1	N N Y N		OECP	INADEQUATE LIGHTING IN RB1 LOWER CONTAINMENT IN AREAS WHERE PERMANENT LIGHTING IS DE-ENERGIZED ON A HOLD ORDER FOR MODIFICATIONS.	1.2.9, 2.3.9 2.5.3, 3.1.9 4.9, 5.1.9,

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 INP - ISSS - RHM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 8  
 RUN TIME - 16:50:14  
 RUN DATE - 01/28/87

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL				HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906
					2 SAF RELATED	3 FIND CLASS	BF	BL				
QM-86-006-00101 T50259	SF	906	N	SQN	1 N N Y Y	2 NA NA NO NO	3 NA NA D D		QTC	THERE IS INSUFFICIENT PERMANENT LIGHTING IN THE CONDENSATE DEMINERALIZER BUILDING POLISHER ROOMS. ASSISTANT UNIT OPERATORS MUST CLIMB LADDERS AND PLATFORMS TO VERIFY SIGHT GLASS READINGS, WHICH ARE INSTALLED OVER 8 FT SOURCE CURRENTLY AVAILABLE IS A FLASHLIGHT, WHICH IS INADEQUATE AND COULD CONTRIBUTE TO THE PERSONNEL SAFETY HAZARD CAUSED BY A LACK OF LIGHTING. NO FURTHER INFORMATION AVAILABLE IN THE FILE. ANONYMOUS CONCERN. NO FOLLOW-UP REQUIRED.	1.2.9, 2.3.9 2.5.3, 3.1.9 4.9, 5.1.9, 6.3, 7.0	
QM-86-012-00101 T50268	SF	905	S	SQN	1 N N Y Y	2 NA NA NO NO	3 NA NA B B		QTC	CI CONCERNED THAT A SPECIFIC DEPARTMENT (KNOWN) IS A FIRE TRAP. THE EXITS ARE SITUATED SUCH, THAT IF AN EXPLOSION OCCURRED DUE TO THE STORAGE OF CHEMICALS, THE PEOPLE WOULD BE TRAPPED. ALSO, DUE TO THE AMOUNT OF ENERGY IS A HIGH RISK OF ELECTROCUTION IF THE SPRINKLER SYSTEM WAS ACTIVATED. NUCLEAR POWER CONCERN. ANONYMOUS CONCERN.	1.2.2, 2.3.2 3.1.2, 4.2	
	02	SF		906	S	SQN	1 N N Y Y	2 NA NA NO NO	3 NA NA A A			
QP-86-010-00101 T50272	OP	310	S	SQN	1 N N N N	2	3		QTC	WHILE WORKING AT SEQUOYAH IN 1973 ON ELECTRICAL LINES, THE SWITCH BOX CONTROLLING THESE LINES WAS ONLY TAGGED. TO ENHANCE PERSONNEL SAFETY, CI FEELS THAT THE SWITCH BOXES SHOULD HAVE BEEN LOCKED AND THE ELECTRICIAN SHOULD HAVE THE KEY TO THE LOCK ON THE SWITCH BOX. CI HAS NO ADDITIONAL INFORMATION. CONSTRUCTION DEPARTMENT CONCERN.	1.2.3, 2.3.3 3.1.3, 4.3	
	02	SF		906	S	SQN	1 N N Y Y	2 NA NA NO NO	3 NA NA B B			

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 NP - ISSS - RWM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 9  
 RUN TIME - 16:50:19  
 RUN DATE - 01/28/87

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL 2 SAF RELATED 3 FIND CLASS BF BL SQ WB	HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906
BM-86-008-00101 T50268	SF	905	S	WBN	1 N N Y Y 2 NA NA NO NO 3 NA NA B B		QTC	CI IS CONCERNED THAT A SPECIFIC DEPARTMENT (KNOWN) IS A FIRE TRAP. THE EXITS ARE SITUATED SUCH, THAT IF AN EXPLOSION OCCURRED DUE TO THE STORAGE OF CHEMICALS, THE PEOPLE WOULD BE TRAPPED. ALSO, DUE TO THE AMOUNT OF THERE IS A HIGH RISK OF ELECTROCUTION IF THE SPRINKLER SYSTEM WAS ACTIVATED. NUCLEAR POWER CONCERN. ANONYMOUS CONCERN.	1.2.2, 2.3.2 3.1.2, 4.2
	02	SF 906	S	WBN	1 N N Y Y 2 NA NA NO NO 3 NA NA A A				
BN-0056	01	SF 906	N	WBN	1 N N N Y 2 NA NA NA NO 3 NA NA NA C		OECP	METAL TAGS INSTALLED ON INSTRUMENTS IN PANELS ARE SAFETY HAZARDS DUE TO ELECTRIC SHOCK. ALSO, EQUIPMENT COULD BE DAMAGED. EXAMPLE 1-L-275 ELEV . 729 MFPT "A".	1.2.2, 2.3.2 3.1.2, 4.2
BN-0110	01	SF 906	N	WBN	1 N N N Y 2 NA NA NA NO 3 NA NA NA C		OECP	THE 692' PIPE GALLERY IS VERY DARK BECAUSE NO PERMANENT LIGHTING HAS EVER BEEN INSTALLED. THERE ARE SEVERAL MOV'S IN THIS AREA THAT REQUIRE FREQUENT MAINTENANCE LIKE PM'S, LIMITORQUE INSPECTIONS, AND MOVATTS TESTING NGERS, SUPPORT AND ETC. THAT HAVE BEEN INSTALLED ABOUT ONE FOOT FROM THE FLOOR AND HEAD HEIGHT.	1.2.9, 2.3.9 2.5.3, 3.1.9 4.9, 5.1.9,

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 NP - ISSS - RHM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 10  
 RUN TIME - 16:50:14  
 RUN DATE - 01/28/87

REGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R D	PLT LOC	1 REPORT APPL				HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 906
					2 SAF RELATED	3 FIND CLASS	BF	BL				
BN-0216	01	SF 906	N	WBN	1	N	N	N	Y	OECP	NECK STRAIN CAUSED BY LOCATION OF PERMISSIVE LIGHT ON DOORS A56 & A57 EL 713 AB	1.2.9, 2.3.9 2.5.3, 3.1.9 4.9, 5.1.9,
BN-85-0C3PI	01	SF 906	N	WBN	1	N	N	N	Y	OECP	PERMANENT LIGHT NEEDS TO BE INSTALLED IN THE WASTE GAS ANALYSER ROOM (AUX. BUILDING ELEV. 713)	1.2.9, 2.3.9 2.5.3, 3.1.9 4.9, 5.1.9, 6.3
BN-85-009	01	SF 906	N	WBN	1	N	N	N	Y	OECP	CI WAS CONCERNED THAT TRANSFORMER EXPLOSIONS SUCH AS OCCURRED AT THE AMERICAN NATIONAL BANK BUILDING IN CHATTANOOGA CAN OCCUR AT WBN, AND PLANT EMPLOYEES WOULD BE INJURED AS THEY WERE IN THE BANK INCIDENT.	1.2.8, 2.3.8 3.1.8, 4.8

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.

REFERENCE - ECPS131J-ECPS131C  
 FREQUENCY - REQUEST  
 ONP - ISSS - RNM

TENNESSEE VALLEY AUTHORITY  
 OFFICE OF NUCLEAR POWER  
 EMPLOYEE CONCERN PROGRAM SYSTEM (ECPS)  
 EMPLOYEE CONCERN INFORMATION BY CATEGORY/SUBCATEGORY  
 SUBCATEGORY: 906 ELECTRICAL

PAGE - 11  
 RUN TIME - 16:50:1  
 RUN DATE - 01/28/8

CATEGORY: SF INDUSTRIAL SAFETY

CONCERN NUMBER	CAT	SUB CAT	S H R PLT D LOC	1 REPORT APPL				HISTORICAL REPORT	CONCERN ORIGIN	CONCERN DESCRIPTION	REF. SECTION CAT - SF SUBCAT - 90
				2 SAF RELATED	3 FIND CLASS	BF	BL				
I -85-044-00301 T50250	SF	906	N WBN	1 N	N N	N Y			QTC	CI EXPRESSED CONCERN REGARDING TEMPO RARY LIGHTING IN RB #2 AND STATED TH AT IT IS UNSAFE. NO ADDITIONAL INFO RMATION IS AVAILABLE IN THE FILE. C ONSTRUCTION DEPARTMENT CONCERN. NO FOLLOW UP REQUIRED.	1.2.1, 2.3.1 2.5.1, 3.1, 5.0, 6.1, 7.

31 CONCERNS FOR CATEGORY SF SUBCATEGORY 906

CONCERNS ARE GROUPED BY FIRST 3 DIGITS OF SUBCATEGORY NUMBER.





ECSP CORRECTIVE  
Action Tracking Document  
(CATD)

INITIATION

1. Immediate Corrective Action Required:  Yes  No
2. Stop Work Recommended:  Yes  No
3. CATD No. 90600-3
4. INITIATION DATE 08-12-86
5. RESPONSIBLE ORGANIZATION: WBN NU CON
6. PROBLEM DESCRIPTION:  QR  NQR WBN policies regarding the need to install guards on "Tuff-Skin" bulbs are inconsistent between NU CON and ONP.
7. PREPARED BY: NAME DH Pature  ATTACHMENTS DATE: 08-12-86
8. CONCURRENCE: CEG-H Zan C. Ellis DATE: 8-12-86
9. APPROVAL: ECTG PROGRAM MGR. DW Stewart DATE: 2/2/87

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. PROPOSED BY: DIRECTOR/MGR: \_\_\_\_\_  ATTACHMENTS DATE: \_\_\_\_\_
12. CONCURRENCE: CEG-H: \_\_\_\_\_ DATE: \_\_\_\_\_  
SRP: \_\_\_\_\_ DATE: \_\_\_\_\_  
ECTG PROGRAM MGR: \_\_\_\_\_ DATE: \_\_\_\_\_

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

\_\_\_\_\_  
SIGNATURE TITLE DATE

ECSP CORRECTIVE  
Action Tracking Document  
(CAID)

INITIATION

1. Immediate Corrective Action Required:  Yes  No
2. Stop Work Recommended:  Yes  No
3. CATD No. 90600-4
4. INITIATION DATE 08-12-86
5. RESPONSIBLE ORGANIZATION: WBN ONP
6. PROBLEM DESCRIPTION:  QR  NQR WBN policies regarding the need to install guards on "Tuff-Skin" bulbs are inconsistent between NU CON and ONP.
7. PREPARED BY: NAME W.H. Poston  ATTACHMENTS  
DATE: 08-12-86
8. CONCURRENCE: CEG-H Lon C. Ellis DATE: 8-12-86
9. APPROVAL: ECTG PROGRAM MGR. W. Steunol DATE: 2/2/89

CORRECTIVE ACTION

10. PROPOSED CORRECTIVE ACTION PLAN:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. PROPOSED BY: DIRECTOR/MGR: \_\_\_\_\_ DATE: \_\_\_\_\_
12. CONCURRENCE: CEG-H: \_\_\_\_\_ DATE: \_\_\_\_\_  
SRP: \_\_\_\_\_ DATE: \_\_\_\_\_  
ECTG PROGRAM MGR: \_\_\_\_\_ DATE: \_\_\_\_\_

VERIFICATION AND CLOSEOUT

13. Approved corrective actions have been verified as satisfactorily implemented.

\_\_\_\_\_  
SIGNATURE TITLE DATE







