

5.12S Nonradiological Health Impacts

5.12S.1 Public Health

Operation of STP 3 & 4 could have nonradiological health impacts on the public. Nonradiological air emissions can move offsite to nearby residences or businesses. Noise may be heard offsite. The electrical transmission system can produce induced currents in metal fences and vehicles beneath the transmission lines. Subsection 5.6.3, "Impacts to Members of the Public" (from transmission line operation), examines the risk from electric shock from induced currents under transmission lines. The magnitude of the shock is shown to be within the limits established by the National Electrical Code and the impacts are SMALL. Subsection 5.8.1, "Physical Impacts," describes the risks from noise and air pollution and concludes that the impacts are SMALL.

5.12S.2 Occupational Health

Workers at STP 3 & 4 are susceptible to industrial accidents (e.g., falls, electric shock, burns), or occupational illnesses due to noise exposure, exposure to toxic or oxygen replacing gases, and other hazards. STPNOC currently has safety and health programs and personnel to promote safe work practices and respond to occupational injuries and illnesses. STPNOC also has a Personal Safety Group and Personal Safety Program procedures. The procedures have the objective of providing personnel who work at STP with an effective means of preventing accidents due to unsafe conditions and unsafe acts. The procedures' safe work practices address hearing protection, confined space entry, personal protective equipment, heat stress, electrical safety, ladders, chemical handling, storage, and use, and other industrial hazards. The Personal Safety Group develops training materials on STPNOC safety procedures and oversees training of STPNOC personnel on safety procedures.

STPNOC maintains records of a statistic known as total recordable cases (TRC). TRCs include work-related injuries or illnesses that include death, days away from work, restricted work activity, medical treatment beyond first aid, and other criteria. The average TRC incidence rate for the STP workforce for 2002 through 2006 was 0.6 cases per 100 workers or 0.6 percent. This compares favorably to the nationwide TRC rate for electrical power generation workers of 3.3 percent (Reference 5.12S-1) and of 3.1 percent for Texas for electrical power generation, transmission, and distribution (Reference 5.12S-2). STPNOC estimates that 888 employees would be needed to operate STP 3 & 4.

The number of TRCs per year for STP 3 & 4 can be estimated as the number of workers multiplied by the TRC rate. The estimated TRC incidences would be:

No. of Workers	TRC Incidence at US Rate	TRC Incidence at TX Rate	TRC Incidence at STP Rate
888	29	28	5

The STP TRC incidence rate is well below the U.S. and Texas rates for the electrical power generation industry, indicating that STPNOC's safety program is effective. This same program would be used to guide operations at STP 3 & 4 to ensure that employees work in a safe manner and prevent work-related injuries or illness.

5.12S.3 References

- 5.12S-1 “Table 1. Incidence rates of nonfatal occupational injuries and illnesses,” BLS (Bureau of Labor Statistics) 2006. Available at <http://www.bls.gov/iif/oshwc/osh/os/ostb1619.pdf>, accessed February 19, 2007.
- 5.12S-2 “Table 6. Incidence rates of nonfatal occupational injuries and illnesses by industry and case types, 2005, Texas,” BLS (Bureau of Labor Statistics) 2006. Available at <http://www.bls.gov/iif/oshwc/osh/os/pr056tx.pdf>, accessed February 19, 2007.