U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION I

Report No. 50-352/80-09
50-353/80-08

Docket No. 50-352
50-353

License No. CPPR-106
CPPR-107 Priority -- Category A2
A2

Licensee: Philadelphia Electric Company (PECO)

2301 Market Street

Philadelphia, Pennsylvania 19101

Facility Name: Limerick Generating Station (LGS)

Inspection At: Limerick, Pennsylvania

Inspection Conducted: May 22-27, 1980

Inspectors: T. J. Jackson — 7/3/80
T. J. Jackson, Radiation Specialist (Intern) — date

_____ — date

_____ — date

Approved by: Robert J. Bores — 7/7/80
R. J. Bores, Chief, Environmental & Special Projects Section, FF&MS Branch — date

Inspection Summary:

Inspection on May 22-27, 1980 (Combined Report Nos. 50-352/80-09; 50-353/80-08)
Areas Inspected: Routine, unannounced inspection of environmental protection program (construction phase), including: observations made by the inspector of the existing environmental conditions at the construction site and the surrounding environment; determination of the implementation status of the Construction Permit requirements; verification of the implementation of the Construction Permit requirements; management controls and procedures for implementing the environmental protection program during site preparation and construction. The inspection involved 24 inspector-hours onsite by one regionally based inspector.

Results: Of the three areas inspected, no items of noncompliance were found in two areas; one item of noncompliance (Deficiency - failure to control an untreated wastewater discharge from the site - Paragraph 5.b(2)) was found in one area.

DETAILS

1. Individuals Contacted

J. M. Corcoran, Field QA Branch Head, LGS, PECO
*D. A. DiPaolo, QAE, PECO
*D. T. Clohecy, QAE, PECO
*M. S. Hammond, Construction Engineer, PECO
*J. Doering, Staff Engineer, PECO
E. Purdy, Group Leader, Biological and Thermal Monitoring, PECO
A. Marie, Group Leader, Radiological and Meteorological Programs, PECO
H. Hansell, Engineer, PECO
J. M. Bechtel, Shift Supervisor, PECO
C. Hartman, Plant Operator, PECO
J. Melaugh, Tester, PECO
G. C. Blinebury, Tester, PECO
*R. Leingang, APFE, Bechtel
*E. R. Klossin, PQAE, Bechtel
*J. Fallon, APFQCE, Bechtel
*J. J. Curci, QAE, Bechtel
*R. Stockholm, Assistant Field Engineer, Bechtel
*M. G. Tokolies, QAE, Bechtel
*B. A. Dragon, QAE, Bechtel
*P. R. Dunn, QAE, Bechtel

*denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Open) Inspector Followup Item (352/78-11-03 and 353/78-07-03) Spoils Area Reclamation: The inspector examined the spoils areas east and west of Longview Road and noted that some areas were graded. The licensee stated that they planned to seed these areas before June 13, 1980 (Details 5.c). This item will be re-examined at a subsequent inspection.

(Closed) Inspector Followup Item (352/78-11-04 and 353/78-07-04) Spill of Untreated Waste: Followup of the licensee's Corrective Action Report (CAR) #214 showed that the "spill of untreated waste" was a spill of raw sewage, some of which entered Possum Hollow Run, which flows into the Schuylkill River. The inspector stated that this was in noncompliance with regulatory requirements (352/80-09-01; 353/80-08-01) (Details 5.b(2).

3. General

The inspection consisted of a review of the licensee's environmental protection program including measures taken to protect the environment during site preparation and construction. The licensee's current requirements in this area are listed in Sections 3.C and 3.E of the Construction Permits, (CPPR-106 and CPPR-107), and described in the application and hearing

records. The environmental protection requirements are summarized in Section 4.5 of the Final Environmental Statement (FES). The inspection included a review of the licensee's records, procedures and audits, interviews with licensee personnel and observations made by the inspector.

4. Determination of Implementation Status of the Construction Permit Requirements

The inspector discussed with the licensee the implementation status of the Construction Permit requirements. The inspector noted that the environmental protection program was implemented through site instructions, procedures and checklists. The licensee stated that in addition to the documented measures taken to protect the environment and to minimize the environmental impact of the construction operations, all the construction operations are under constant observation and management supervision. The inspector reviewed Bechtel QA audits of the site Pollution Control Program Nos. PFA-243 (5/3 - 6/1/79) and PFA-279 (4/24 - 4/25/78) and a Bechtel Audit dated 10/1 - 10/15/79, and noted that no program deficiencies were identified.

The licensee stated that the radiological and biological/ecological monitoring programs are currently suspended with the exception of water chemistry studies including the measurements of 24 parameters sampled monthly at five locations on the Schuylkill River, Perkiomen Creek, and the Delaware River. The licensee stated that they currently planned to re-start the pre-operational radiological monitoring program by the middle of 1980.

5. Verification of the Construction Permit Requirements

a. Site Tour

Upon arrival at the Limerick Generating Station (LGS) construction site, the inspector toured the area and examined the prevailing environmental conditions at the site and the surrounding environment. The inspector observed the environmental conditions at the Schuylkill River waterfront, the temporary spoils area, the site perimeter, the holding pond, sewage treatment facilities, concrete batch plant, construction and laydown areas, and meteorological instrumentation.

One unresolved item discussed in Paragraph 5.b(3) and one unresolved item discussed in Paragraph 5.b(4) were identified.

b. Effluent Treatment and Discharges

The inspector discussed with the licensee the treatment of site wastewater, including operation of the permanent holding basin, the sewage treatment plant, the temporary holding pond, the concrete batch plant, and the site storm drain system.

(1) Holding Basin

The licensee stated that untreated wastewater is pumped to the site permanent holding basin, which is operated in a batch mode, for appropriate treatment and released to Possum Hollow Run when the required effluent specifications are met. The inspector noted that current NRC requirements for holding basin discharge are contained in Pennsylvania Department of Environmental Resources (PaDER) Water Quality Management Permit No. 4671202. The inspector reviewed the holding pond discharge records completed since January, 1978. The licensee stated that the temporary holding basin on site received dewatering water and that this basin has never had to be discharged due to evaporation and limited volume of influent. The licensee stated that it is intended that the site storm drain system which collects rainwater and runoff will drain directly into Possum Hollow Run when it is completed. Parts of the storm drain system presently discharge into the permanent holding basin.

(2) Sanitary Waste

The inspector discussed with the licensee the operation of the site sewage treatment plant. The inspector reviewed the circumstances of two discharges from the site of raw sewage into Possum Hollow Run which flows into the Schuylkill River. The licensee stated that on February 8, 1978, sewage had overflowed from the construction site sewage holding tanks located near the sewage treatment plant at a rate of 2-5 gpm for 1.5 hours, and that this spill had entered the storm drain system across the road from the holding tanks and flowed into Possum Hollow Run. This spill had resulted in the initiation of Corrective Action Report (CAR) #214 as noted in the last NRC inspection of this area (352/78-11-04; 353/78-07-04), as an item to be re-examined.

The inspector noted that a CAR had also been issued for a spill of raw sewage from the construction site sewage holding tanks on July 3, 1979 which had also entered Possum Hollow Run. The licensee stated that this spill resulted when a blockage in the pipe carrying sewage to the holding tanks was cleared, causing an unusually high flow to reach the holding tanks. The licensee stated that sewage had been released through a vent pipe which had been capped after the spill to prevent future such occurrences. The inspector observed no cap on the sewage holding tank vent at the time of the inspection. The licensee then stated that a recent modification in operation of the holding tanks had required an air hose to enter the tank through the vent and therefore the cap had been removed. The inspector stated that the above failures to prevent untreated wastewater from reaching the natural water

bodies in the area was in noncompliance with Sections 3.E.1 and 3.E.9 of the Construction Permits, which reference the Commonwealth of Pennsylvania Water Quality Management Permit No. 4671202 and the Final Environmental Statement (352/80-09-01; 353/80-08-01).

The licensee stated that the final design of the sewage treatment plant specified that sewage would flow directly into the sewage treatment plant and not normally enter the sewage holding tanks. The inspector reviewed the drawings describing a valve to be placed in the sewage treatment plant influent line which would allow sewage to flow directly to the treatment plant without first entering the holding tank (through which sewage currently flows). The licensee stated that after the described modification is completed the sewage holding tanks would only be used if needed, not on a regular basis, and that this modification should reduce the potential for spills through the holding tank vent. The licensee stated that the sewage treatment plant modification would be completed in the near future but could not provide the inspector with a specific date.

The licensee stated that the two other sewage holding tanks on site (at the pipe shop and at the concrete batch plant) were equipped with level alarms, and were pumped out by a contractor as needed. The licensee stated that portable toilets onsite were also pumped out and that all sanitary waste removed from the site was disposed of at a licensed treatment facility.

(3) Oil Separator

The inspector discussed with the licensee the operation and current design of the oil separator system at the OE Shop area. The inspector observed evidence of small quanitites of oil on the slope where the oil separator system discharges and in the drainage ditch at the base of the slope. The licensee stated that current problems which could allow oil to escape from the oil separator system include inadequate piping and oil back-up from the associated waste oil tank during times of high influent volume, such as when it rains. The licensee stated that modifications to the oil separator system were planned which would eliminate the backup from the waste oil tank and alter the piping to enable adequate flow in the system, and that these modifications would reduce the probability of oil being discharged from the system. The inspector reviewed a work request for the described modifications and noted that the work had been approved although a completion date for the work was not available at the time of the inspection. The licensee stated that oil reaching the drainage ditch at the bottom of the slope beneath the oil separator discharge flows to the holding basin where it is collected before discharge to Possum Hollow Run. The licensee also stated that when there is a large volume of site runoff, such as when it rains, water flowing through the drainage ditch at the

base of the slope where the oil separator discharges is diverted away from the holding basin and directly into Possum Hollow Run. The inspector stated that until the proposed modifications are made on the oil separator system there exists the potential for oil being discharged to Possum Hollow Run, and therefore this item is considered unresolved pending completion of the system modifications (352/80-09-02; 353/80-08-02).

(4) Construction Area Drainage

During the site tour on May 22, 1980, the inspector examined the drainage patterns of the site and noted that where the site road (from the Schuylkill River area to the Longview Road spoils area) crosses Possum Hollow Run there is a natural depression which acted as a settling basin and accumulated sediment. The inspector observed a line of old hay bales at the area which the licensee stated had been placed there in an effort to help control runoff water turbidity and prevent suspended solids material in the runoff water from reaching Possum Hollow Run. The inspector observed that the elevation of the depression area had been raised by deposited silt and sediment to approximately that of the surrounding woodland. The licensee stated that actions would be taken as needed at this location to assure that the settling area continued to prevent turbid runoff water from reaching the natural water bodies in the area. The inspector stated that this area would be re-examined in a subsequent inspection (352/80-09-03; 353/80-08-03).

The inspector also examined the construction near the Schuylkill River water intake structure on May 22, 1980, and observed a depression area near the intake building, the slopes of which had all covering vegetation removed. In addition, the inspector observed a pile of crushed stone and fine material stored at the edge of the depression and a drainage culvert at the bottom of the depression which ended through the intake structure wall several feet above river water level. The inspector stated that there was potential for turbid runoff water from the depression area to flow through the drainage culvert and into the Schuylkill River, thereby violating the requirements of the licensee's wastewater discharge permit. The licensee stated that action necessary to prevent untreated wastewater from the depression from entering the river would be accomplished. The inspector stated that this item is considered unresolved pending completion of corrective actions necessary to prevent untreated wastewater from reaching the Schuylkill River (352/80-09-04; 353/80-08-04).

The inspector examined the spray pond construction area and noted that a trench had been dug at approximately the middle of the north side of the spray pond excavation. The licensee stated

that this trench had been made to drain water from the spray pond excavation. The inspector followed the drainage path of water from the excavation via this trench northward through a laydown area and to the fence at the site boundary on Sanatoga Road near the intersection with Evergreen Road. The inspector observed no silt or sedimentation off site but did observe deposited material onsite at the site boundary. The inspector noted that continuation of water drainage out of the spray pond excavation through this trench could allow turbid runoff water to reach Sanatoga Road. The licensee stated that drainage through the trench from the spray pond would be discontinued. The inspector stated that this area would be re-examined in a subsequent inspection (352/80-09-05; 535/80-08-05).

c. Spoils Areas and Solid Waste Disposal

The inspector examined the spoils areas east and west of Longview Road. The licensee stated that only a small part of the spoils area west of Longview Road is still being actively used. The licensee stated that those spoils areas not in use will be seeded by June 13, 1980. The licensee stated that the following additional onsite areas are to be included in this seeding program.

(1) Permanent Storm System Outfall at Possum Hollow Run

(2) West Bank of the Cooling Tower Area

(3) Northwest Bank of the Cable Reel Storage Area

The inspector noted that these areas had been graded in anticipation of seeding.

The inspector observed the active portion of the spoils area west of Longview Road during site tours on May 22 and 23, 1980, and noted that assorted solid waste material other than excavation spoils (including waste concrete, metal, plastic, and foam rubber) had been deposited in the area. The licensee stated that it was not normal procedure to place these materials in the spoils area. The inspector verified prior to the completion of the inspection that the licensee had issued CAR No. 284 on May 27, 1980 requesting that these materials be removed from the spoils area and be disposed of properly. The inspector noted that other solid wastes are collected in specifically marked containers, and the licensee stated that solid wastes are disposed of offsite by contractor arrangement at a licensed landfill. The inspector had no further questions in this area.

6. Management Controls and Program Implementation Procedures

The inspector reviewed the licensee management controls as related to the environmental protection program - construction phase. The inspector noted

that the program was implemented through approved procedures and checklists. The inspector reviewed the licensee program records and noted that the results of the site observations were documented. Areas reviewed included the following:

	Category	Review Frequency
a.	Erosion Control	Monthly
b.	Dust Control	Weekly
c.	Dewatering	Monthly
d.	Sanitary Facilities - waste disposal	Monthly
e.	Trash Removal	Bi-weekly
f.	Weed Control and Reseeding	Monthly during growing season
g.	Yard Lighting	Semi-annually
h.	Holding Pond Operations	Bi-monthly
i.	Sound Survey	Semi-annually
j.	Sanitary Facilities - holding tanks	Monthly
k.	Accidental Spills	Each spill
l.	Pollution Control Program & Schedule Review	Quarterly
m.	Oil Spill Prevention	Monthly

The inspector reviewed the licensee's periodic inspection reports in the above categories completed since the last NRC inspection in this area.

The licensee's system of Corrective Action Reports (CAR) was discussed. The licensee stated that a CAR is issued whenever the Pollution Control Engineer determines that corrective action is necessary in an area. The inspector reviewed the licensee's CAR's Nos. 253-283 covering the period December 14, 1978 - May 2, 1980.

The inspector had no further questions in this area at this time.

7. Meteorological Instrumentation

The inspector reviewed the licensee's meteorological instrumentation at the tower onsite, the second tower located across the Schuylkill River from the plant site, and the satellite tower near the discharge diffuser structure. The licensee stated that wind speed, wind direction, air temperature, humidity, precipitation and solar radiation were measured at various elevations. The licensee stated that data was collected on chart-paper and sent to a meteorological contractor, Meteorological Evaluation Services, in Amityville, New York, for evaluation. Calibration of meteorological instrumentation was discussed. The inspector noted that the meteorological instrumentation appeared to be functioning with the exception of the 304' elevation wind direction instrument on Tower No. 2, which was approximately 180^{0} out of phase. The licensee stated that this instrument would be repaired during the calibration scheduled to be completed by the end of June, 1980.

No items of noncompliance were identified.

8. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Two unresolved items were disclosed during this inspection. These items are discussed in Paragraphs 5.b(3) and 5.b(4).

9. Exit Interview

The inspector met with the licensee representative (denoted in Paragraph 1) at the conclusion of the inspection on May 27, 1980, at the Limerick Construction site. The inspector summarized the purpose and the scope of the inspection and the inspection findings, including each of the unresolved items and item of noncompliance.