
**Attachment 60 to PLA-6219
PPL Susquehanna Environmental
Inspection Plan Procedure CH-ER-314**

(NRC Document Request 120)

PROCEDURE COVER SHEET

PPL SUSQUEHANNA, LLC PROCEDURE		
SSES ENVIRONMENTAL INSPECTION PROGRAM		CH-ER-314 Revision 1 Page 1 of 17
ADHERENCE LEVEL: INFORMATION USE		
QUALITY CLASSIFICATION: <input type="checkbox"/> QA Program <input checked="" type="checkbox"/> Non-QA Program		APPROVAL CLASSIFICATION: <input type="checkbox"/> Plant <input type="checkbox"/> Non-Plant <input checked="" type="checkbox"/> Instruction
EFFECTIVE DATE: <u>3-14-2005</u> PERIODIC REVIEW FREQUENCY: <u>N/A</u> PERIODIC REVIEW DUE DATE: <u>N/A</u>		
RECOMMENDED REVIEWS: Station Engineering		
Procedure Owner: <u>Jerrold McCormick</u> Responsible Supervisor: <u>Supervisor-Program & Services</u> Responsible FUM: <u>Manager-Chemistry</u> Responsible Approver: <u>Manager-Chemistry</u>		

PROCEDURE REVISION SUMMARY

TITLE: SSES ENVIRONMENTAL INSPECTION PROGRAM

- 1) Incorporated PCAF 2004-1115.
- 2) Added Archeological Site "25LU43" Section 6.7 and Attachment C.
- 3) Grammatical corrections in Sections 1.0 and 7.0.

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1. PURPOSE

This procedure outlines an inspection program designed to reveal potential environmental problems that may develop as a result of Susquehanna SES Operations.

2. SCOPE

This procedure applies to areas outside of enclosed buildings, inside and outside the security fence, which are related to station operation or which may be impacted by station activities. This procedure also includes the inspection requirements for the NEIL-insured water storage tanks at SSES – specifically, the exterior inspection requirements for these tanks. This program does not include the Waste Accumulation Area, as this area is covered by Procedure WM-NR-100.

3. REFERENCES

- 3.1 Environmental Compliance Manual
- 3.2 Final Environmental Statement for the Susquehanna SES, NUREG-0564, June 1981.
- 3.3 3.3 Susquehanna SES Unit 1, Facility Operating License No. NPF-14, Appendix B, Environmental Protection Plan, July 17, 1982.
- 3.4 3.4 Susquehanna SES Unit 2, Facility Operating License No. NPF-22, Appendix B, Environmental Protection Plan, March 23, 1984.
- 3.5 National Pollutant Discharge Elimination System Permit No. PA-0047325.
- 3.6 NDAP-QA-0702, Action Request and Condition Report
- 3.7 WM-NR-100, Waste Management Inspections.
- 3.8 NDAP-QA-0642, Nonradiological Environmental Compliance Program
- 3.9 Commonwealth Associates Inc., 1981. Archeological Investigations at the Susquehanna SES Floodplain.
- 3.10 SSES Units 1 & 2. 1987 Annual Environmental Operating Report (Nonradiological).
- 3.11 Preparedness , Prevention and Contingency Plan
- 3.12 Nuclear Electric Insurance Limited (NEIL) Members Manual
- 3.13 NR-QA-001, Nuclear Records Transmittal Procedure

- 3.14 Wetland Delineation for the South Drainage Area at the Susquehanna Steam Electric Station, 2002. Ecology III, Inc., James D. Montgomery, Ph.D.
- 3.15 PLI-92092. South Parking Lot Expansion Project; DEP/ACOE Waiver for S-2 Wetland Granted.
- 3.16 Applicability Determination No. A-01-1138.

4. DEFINITIONS

- 4.1 ACOE – Army Corp. of Engineers
- 4.2 PaDEP – Pennsylvania Dept. of Environmental Protection

5. RESPONSIBILITIES

- 5.1 The Supervisor-Programs & Services is responsible for:
 - Coordinating activities between functional groups as necessary to support implementation of the environmental inspection program
 - Facilitating close-out of action items identified as a result of the environmental inspection program
 - Performing an annual review of the environmental inspection program.
- 5.2 A Senior Environmental Scientist-Nuclear, Environmental Scientist-Nuclear, or an Environmental Specialist-Nuclear is responsible for implementing the environmental inspection program and ensuring that all records resulting from this program are properly maintained.

6. INSTRUCTIONS

- 6.1 Chemistry - Environmental Services will coordinate environmental inspections at Susquehanna SES which may be affected by station construction, maintenance, and operation activities. A list of these areas is given in Attachment A, Attachment B, and in Attachment D. The frequency and time frame for completion of the inspection for each area is indicated on these inspection sheets. Inspection frequency has been established based on three factors: any permit or license requirement, the potential for and degree of possible environmental impacts, and the resources required to conduct the inspection.

6.2 Chemistry - Environmental Services will conduct environmental inspections of the following Inspection Areas:

- Sewage Treatment Plant
- Transformer Areas and 500 kV Switchyard
- Soil Erosion and Storm Drainage
- Storm Water Retention Ponds
- Archeological Sites
- Exterior Inspections of NEIL-Insured Water Storage Tanks
- Weekly Visible and Fugitive Emissions Inspections

6.2.1 An environmental inspection consists of an area inspection and a walkdown of the area in order to observe any abnormal activities or occurrences including but not limited to those listed below:

- Oil spills
- Erosion
- Fugitive dust
- Animal Activity
- Vegetation growth
- General housekeeping (outside)
- Unreviewed environmental questions
- Unusual or significant environmental events

6.2.2 In addition to the general observations listed above, area-specific observations in the following sections provide guidance for each inspection effort.

6.3 Sewage Treatment Plant (NPDES Outfall 079)

6.3.1 Some area-specific observation items:

- Influent flow
- Surge tank level
- Aeration tank operation
- Effluent quality
- Chlorination equipment status
- Dechlorination equipment status
- Permit parameters
- Chemical supplies and housekeeping/maintenance needs
- General material condition (mechanical, electrical, and instruments & controls)

6.4 Transformer Areas and 500 kV Switchyard

- 6.4.1 A map denoting transformer locations, along with a transformer data table are available in the Prevention, Preparedness and Contingency (PPC) Plan.

CAUTION

Energized Transformers Shall Be Inspected From A Distance. Only Authorized Persons May Enter The Fenced Area Surrounding An Energized Transformer.

- 6.4.2 Some area-specific observation items:

- Oil spills
- Transformer leakage
- Capacitor leakage
- Obvious equipment damage
- Unusual operating noise
- Runoff damage or ponding

6.5 Soil Erosion and Storm Drainage (contact system engineer prior to inspecting)

- 6.5.1 General assessment of any negative impacts soil erosion is having inside and outside the protected area; includes any observable degraded stability or support of SSES structures, and degradation of SSES grounds (example: the formation of ground fissures due to unmanaged rainwater runoff from a paved surface.)

- 6.5.2 Inspections of the Storm Drainage System are performed to evaluate and report the physical condition and effectiveness of the system with respect to its ability to capture and efficiently convey rainwater runoff. Since soil erosion (also an inspection item) is an effectiveness indicator of the Storm Drainage System, these two inspections should be performed in conjunction with one another.

- 6.5.3 Some area-specific observation items:

- Unusual flows
- Sediment accumulation
- Clogged pipes/culverts
- Broken pipes
- Leaking pipes
- Stagnant water
- Permit parameters
- Plant modifications

6.6 Storm Water Retention Ponds

S-2 Pond	(NPDES Outfall 070)
Peach Stand Pond	(NPDES Outfall 075)
C-1 Pond	(NPDES Outfall 080)

6.6.1 Some area-specific observation items:

- Sedimentation pond operation
- Water quality
- Runoff damage
- Sediment accumulation
- Weed growth
- ~~Algae blooms~~
- Evidence of fish activity
- Bank erosion
- Berm damage
- Animal activity

6.6.2 Despite the fact that the S-2 Pond is a delineated wetland area, it is also a man-made structure maintained for the management of stormwater, and this means (at least informally) that neither the PaDEP or the ACOE have any jurisdiction over it (see Ref. 3.15). If PPL Susquehanna desires to affect any changes to the landscape surrounding the S-2 Pond that will impact the wetland area:

- a. No Water Obstruction and Encroachment Permit will be required
- b. PaDEP and ACOE still expect to PPL to supply them with a delineation map showing where the proposed changes would be located in order to obtain a formal waiver letter from the agencies.
- c. Permits may still be required from the Luzerne County and/or Salem Township.

6.7 Archeological Sites

- 6.7.1 The cultural resource remains of four Indian archeological sites (SES 3, SES 6, SES 8, and SES 11) are located on the property which contains PPL's Susquehanna Steam Electric Station (SSES) Units 1 and 2 (Ref. 3.9). The four sites (refer to Attachment C for locations) were determined eligible for inclusion in the National Register of Historic Places on February 10, 1983. On October 28, 1987, a "no adverse effect" determination for the four sites was made. This determination (Ref. 3.10) evaluated what effect continued operation of SSES would have on these four sites.
- 6.7.2 As a result of the corporate reorganization in 2000, PPL Susquehanna property now includes portions of the transmission corridors on the eastern side of the Susquehanna River. Archeological site 36LU43 (also known as "Knouse Site") is located on the east shore of the river across from SSES (refer to Attachment C for location) and comes under PPL Susquehanna's purview as a result of the reorganization.
- 6.7.3 PPL Susquehanna is obligated to ensure that the four archeological sites, along with site 36LU43, are not disturbed due to any anthropogenic activity; therefore, this inspection serves as PPL Susquehanna's means of ensuring the preservation of these sites.
- 6.7.4 Some area-specific observation items:
- Ground disturbances
 - Unauthorized activity
 - Excavation
 - Landscaping
 - Construction

6.8 Exterior Inspections of NEIL-insured Water Storage Tanks

- 6.8.1 PPL Susquehanna's insurance provider, Nuclear Electric Insurance Limited (NEIL), requires that the Well Water Storage Tank (0T594) and the Clarified Water Storage Tank (0T523) each have scheduled inspections of their exteriors.

6.8.2 These inspections of the tank exteriors must be performed per the National Fire Protection Association (NFPA) code 25. The associated NFPA 25 inspection items are listed on the Annual Inspection Log for NEIL-Insured Water Storage Tanks (Attachment A) form.

6.8.3 These annual exterior tank inspection items are not required to be performed by persons from Chemistry - Environmental Services; these inspections may be performed by any SSES personnel. Regardless of who performs the inspection, the inspection results must be documented on the "Annual Inspection Log for NEIL-Insured Water Storage Tanks" (Attachment B), and copies sent to Chemistry - Environmental Services, and Nuclear Engineering - Site Fire Protection Engineer (does not matter which of the two receives the original).

6.9 Weekly Visible and Fugitive Emissions Inspections

Section C, III, 011 (a) of SSES's Air Pollution Control State Only Operating Permit (No. 40-00027) states that "a visual inspection of the facility shall be performed on a weekly basis to determine if fugitive or visible emissions are detectable at the facility."

To comply with this requirement, a weekly inspection will be performed by the Chemistry-Environmental Services Group during daylight hours to detect any visible or fugitive emissions.

- 6.9.1 The following areas shall be checked for fugitive emissions (i.e. dust clouds kicked-up by the wind or vehicles emanating from the SSES facility) leaving PPL Susquehanna property:
- a. Cinder overflow lot adjacent to South Parking Lot (Owner Controlled Area)
 - b. Cinder Lot below the Meteorological Tower (Owner Controlled Area)
 - c. 500 kV Yard maintenance road and plateau (Owner Controlled Area)
 - d. Onsite unpaved areas / maintenance roads lacking vegetative cover (Protected Area)
 - e. Any excavation sites on PPL Susquehanna property (Protected Area or Owner Controlled Area)

- 6.9.2 The inspector shall look at the stack emission(s) of any operating diesel generators for unusual or unexpected emissions.
- 6.9.3 The inspector shall record inspection result (check NO or YES as appropriate) on Attachment D.

<p>NOTE: The Control Room has ultimate responsibility for determination and completion of required notifications. Chemistry – Environmental Services has a consultant role and may complete the required notifications to PaDEP at the request of the Shift Supervisor, as Environmental Services serves as the primary interface with PaDEP during normal working hours. During off-hours, the PaDEP can be reached by dialing (570) 826-2511.</p>
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- 6.9.4 If a fugitive emission is observed leaving PPL property:
 - a. The inspector shall initiate an AR to document the event and start the reportability determination process (per NDAP-QA-0720). The AR number shall be recorded on the Attachment D.
 - b. A notification to the PaDEP is required within **4 hours** of discovery if a determination is made that a reportable emission has left the property.
- 6.9.5 For an unusual visible emission from an operating diesel generator:
 - a. The inspector shall initiate an AR to document the event and the reportability determination process (per NDAP-QA-0720). The AR number shall be recorded on the Attachment D.
 - b. Determine if the operating generator has experienced a malfunction.
 - (1) A notification to the PaDEP is required within **1 Hour** of becoming aware of diesel generator malfunction that results in, or may result in, visible emissions of air contaminants in excess of the Permit limits.
 - (2) A written follow-up report to the PaDEP is required within **2 days** for 1-hour reportable events.

- c. For unusual visible emissions from an operating diesel generator which are **NOT the result of a generator malfunction**:
- (1) Have a DEP-Certified Opacity Observer determine whether the opacity of the visible emissions exceeds the permit limits.
 - (2) A notification to PaDEP is required within **4 hours** of discovery for an unusual visible emission which exceeds applicable permit limits and/or prior agreements with the state.

NOTE: Whether an inspection item is considered *less-than-significant* or *significant* is initially at the discretion of the inspector and the program administrator. The Supervisor-Programs & Service will make the final determination for any items whose classification is contested.

- 6.10 The inspector will record the status of each area inspected on a copy of Attachment A, B, or D as appropriate.
- 6.10.1 In performing the inspections listed on Attachment A, the inspector should use the provided area-specific observation items as guidance only – these observation items are by no means all-inclusive, and use of other relevant reference/guidance materials
- 6.10.2 If *less-than-significant* inspection items are identified during inspection of areas listed on Attachment A, the status of that area will be indicated by marking "SAT" in the appropriate space on the copy of Attachment A.

NOTE: An inspection does not have to be judged as "UNSAT" for an Environmental Concern to be logged.

- 6.10.3 If a *significant* inspection item is identified during inspection of areas listed on Attachment A, then that inspection is "UNSAT". Additionally, each significant item shall have an AR / CR submitted (per NDAP-QA-0702), and be evaluated as a Significant Environmental Event (per NDAP-QA-0642) if appropriate.
- 6.10.4 In the spaces provided on Attachment A, the Inspector will record the status of the area(s) checked along with any remarks, the date each evaluation was completed, and her or his initials

7. RECORDS

- 7.1 The *SSES Annual Environmental Inspection Log* (Attachment A), the Annual Inspection Log for the NEIL-Insured Water Storage Tanks (Attachment B), and the weekly Fugitive/ Visible Emissions Inspection Form (Attachment D) will serve as documentation for the completed inspections. The *completed* Attachments (A, B, and D) will be transmitted to Nuclear Records at the conclusion of each year. These records will be maintained by Nuclear Records.

SSES ANNUAL ENVIRONMENTAL INSPECTION LOG

IN THE CORRESPONDING BLOCK BELOW:

YEAR _____

- Place status (SAT/UNSAT) of area inspected
- Date area inspected
- Any comments, AR / CR # reference if applicable
- Initials of person who performed the inspection

INSPECTION AREA	INSPECTION RESULTS
Sewage Treatment Plant (NPDES Outfall 079)	
Transformer Areas and 500kV Switchyard	
Soil Erosion & Storm Drainage	
S-2 Pond (NPDES Outfall 070)	
Peach Stand Pond (NPDES Outfall 075)	
C-1 Pond (NPDES Outfall 080)	
Archeological Sites	
Other Inspections	

SUSQUEHANNA STEAM ELECTRIC STATION
Annual Inspection Log for NEIL-Insured Water Storage Tanks

YEAR _____

NEIL-Insured Water Storage Tank	Annual Inspection Items
OT523 Clarified Water Storage Tank (Circle response)	1) Is the tank in service? Yes No 2) Has the tank remained in service since last inspection? Yes No 3) Exterior of tank, support structure, catwalks and ladders strong and free from obvious damage? Yes No 4) Area surrounding tank free from combustibles, materials which could accelerate corrosion and ice? Yes No <p align="right">Date _____ Initials _____</p>
OT594 Well water Storage Tank (Circle response)	1) Is the tank in service? Yes No 2) Has the tank remained in service since last inspection? Yes No 3) Exterior of tank, support structure, catwalks and ladders strong and free from obvious damage? Yes No 4) Area surrounding tank free from combustibles, materials which could accelerate corrosion and ice? Yes No <p align="right">Date _____ Initials _____</p>

NOTE: Upon completion of tank inspection, copies of this form must be sent to:

1. Chemistry - Environmental Services
2. Nuclear - Engineering - Site Fire Protection Engineer

**Page(s) removed as per
37 Pa.C.S.A. §506(c)
and consultation with the
Pennsylvania Historical
and Museum Commission.**

YEAR

Air Permit No. SM 40-00027
Weekly Fugitive & Visible Emissions Inspection

Week (dd/mm)	Date/Time Inspection Performed	Inspector (Initials)	Visible or Fugitive Emissions Observed? (Check No or Yes)
			<input type="checkbox"/> No <input type="checkbox"/> Yes; See AR #
			<input type="checkbox"/> No <input type="checkbox"/> Yes; See AR #
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			<input type="checkbox"/> No <input type="checkbox"/> Yes; See AR #
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