

Public Service  
Electric and Gas  
Company

Steven E. Miltenberger

Public Service Electric and Gas Company P.O. Box 236, Hancock Bridge, NJ 08038 609-339-1100

Vice President and Chief Nuclear Officer

MAR 30 1990

NLR-N90038

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

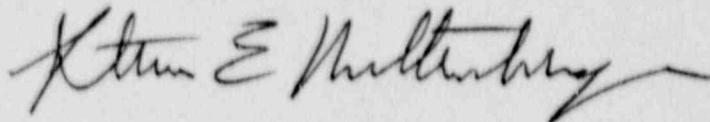
Gentlemen:

NJPDES PERMIT NJ0025411  
HOPE CREEK GENERATING STATION  
FACILITY OPERATING LICENSE NO. NFP-57  
DOCKET NO. 50-354

The enclosed application in support of a request for renewal of New Jersey Pollutant Discharge Elimination System (NJPDES) permit NJ0025411 is submitted pursuant to the requirements of Subsection 3.2 of Hope Creek Generating Station Environmental Protection Plan (EPP), Non-Radiological, (Appendix B to Facility Operating License NFP-57, Docket No. 50-354). The renewal request for the NJPDES permit is submitted in accordance with the New Jersey Administrative Code, Section 7:14A-2.1(g) 5. The existing NJPDES permit limitations and monitoring requirements were implemented predicated upon anticipated design characteristics. Substantial new information has been obtained from plant testing and operations which was not available at the time of issuance of the existing NJPDES permit and is incorporated in this application to substantiate the request to revise limitations and monitoring requirements consistent with plant operations and design.

Should you or your staff require any additional information, please contact Mr. Bruce Preston, Manager - Licensing and Regulation at (609) 339-1229.

Sincerely,



Enclosure

9004110058 900330  
PDR ADOCK 05000354  
P PDC

Cool  
11

MAR 30 1990

C (All W/O Enclosure)

Mr. C. Y. Shiraki  
Licensing Project Manager

Mr. T. P. Johnson  
Senior Resident Inspector

Mr. W. T. Russell, Administrator  
Region I

Mr. Kent Tosch, Chief  
New Jersey Department of Environmental Protection  
Division of Environmental Quality  
Bureau of Nuclear Engineering  
CN 415  
Trenton, NJ 08625



Public Service  
Electric and Gas  
Company

Steven E. Miltenberger

Public Service Electric and Gas Company P.O. Box 236, Hancocks Bridge, NJ 08038 609-339-1300

Vice President and Chief Nuclear Officer

VIA CERTIFIED MAIL  
(NO. P 426 612 240)

MAR 30 1990  
NLR-E90044

Mr. George Caporale  
Bureau of Information Systems and Data Processing  
Division of Water Resources  
New Jersey Department of Environmental Protection  
CN-029  
Trenton, New Jersey 08625-0029

Dear Mr. Caporale:

APPLICATION FOR RENEWAL  
NJPDDES PERMIT NO. NJ0025411

Pursuant to N.J.A.C. 7:14A-2.1(g)5, Public Service Electric and Gas Company (PSE&G) hereby submits two copies of an application in support of its request that the New Jersey Department of Environmental Protection (NJDEP) renew the above referenced New Jersey Pollutant Discharge Elimination System (NJPDDES) permit which expires September 30, 1990 for its Hope Creek Generating Station (Hope Creek).

This application provides a update to the application submitted in June, 1989 in support of PSE&G's request for a revocation and reissuance. Hope Creek is located in Salem County, New Jersey at Artificial Island. Since the original permit was issued prior to the facility's becoming operational, all parameters were determined based on engineering designs and calculations. Operational experience and data are now available and support the imposition of different permit limitations.

The following documents are enclosed:

1. notarized certifications by the General Manager - Hope Creek Operations and the Vice President and Chief Nuclear Officer in compliance with N.J.A.C. 7:14A-2.4(a) and (c).
2. completed Standard Application Form CP#1, together with "Endorsement E" executed by S. E. Miltenberger Vice President and Chief Nuclear Officer, and J. J. Hagan, General Manager - Hope Creek Operations.

Mr. George Caporale  
NLR-E90044

2

3. completed WQM-001 Form, Application to Discharge Wastewaters and Residuals to the State's Land and Water.
4. Form WQM-003, Endorsements, with a copy of the letter to Lower Alloways Creek Township, the local municipality and the local sewage authority.
5. completed Form 2C (EPA Form 3510-2C) including analytical results and a summary of new data in support of this application.
6. U. S. Geological Survey Topographic Map.
7. schematic drawings showing the layout of the facility, discharge points, and monitoring locations.

Hope Creek consists of one boiling water nuclear reactor with a net electrical capability of approximately 1,067 megawatts. Equipment which supports plant operation and discharges in accordance with the NJPDES permit include the cooling tower (DSN 461A), low volume waste system (DSN 461C), yard drains (DSN 462A and 463A), and the sewage treatment plant (DSN 462B); the perimeter storm drain (DSN 464) is also included in the NJPDES existing permit.

The Cooling Tower removes heat from the recirculated cooling water. The small amount of blowdown from the Cooling Tower is made up through the service water system which withdraws water from the Delaware River Estuary. Cooling Tower blowdown (DSN 461A) comes from the bulk water in the cooling tower and therefore is discharged at a temperature higher than the Delaware River Estuary. The initial limitations for temperature and heat rate based on conceptual design are inadequate. The Cooling Tower Blowdown study (CTB study) being performed in accordance with the Administrative Consent Order dated January 11, 1990 (ACO) will provide the data necessary for NJDEP's determining appropriate temperature and heat limitations.

The low volume waste system (DSN 461C) collects potentially oily water from throughout the facility and processes this wastewater through an oil water separator system. Since no metal cleaning wastes are processed in this system, requirements for copper and iron should be deleted. PSE&G requests pH be monitored at the end of pipe consistent with other low volume waste streams. Other minor changes are requested reflecting operating conditions and history of the system.

MAR 30 1990

The yard drains (DSN 462A and 463A) collect and transport primarily stormwater from the facility to the Delaware River Estuary. These yard drains were not operational at the time the NJPDES permit was issued and the effluent was expected to be representative of stormwater runoff. Operational experience and engineering review have identified that these yard drains are partially flooded with Delaware River Estuary water at all times, making the discharge more representative of the Delaware River Estuary than stormwater. No practical method of removing this tidal influence has been identified and PSE&G is performing a study to determine what constitutes representative monitoring of stormwater (TSS Study) in accordance with the ACO.

The former sewage treatment plant (DSN 462B) has been replaced with an oxidation ditch type of treatment system as approved by Treatment Works Approval waiver. This new sewage treatment plant has replaced the Hope Creek system and the Salem Generating Station system and the FSOD allocation for these two systems has been combined by the Delaware River Basin Commission. PSE&G requests this new allocation and the minor changes required with the new treatment system be incorporated in the NJPDES permit.

The perimeter storm drain system (DSN 464) is an earthen drainage channel containing natural vegetation external to the facility. This storm drain does not collect runoff from industrial areas and was accepted in the existing NJPDES permit because of construction activities in the drainage area. These construction activities have terminated with facility startup and PSE&G believes the TSS Study will demonstrate that the application of limitations or monitoring requirements at this outfall would not enhance environmental protection nor provide any useful data regarding sources of pollution.

The parameters which have a monitoring frequency of "continuous" are addressed in the application to provide an alternate means and periodicity for monitoring if the continuous monitors are out of service for maintenance or calibration. Continuously monitored parameters are normally recorded once per hour and the daily average and daily maximum values are calculated from the hourly readings. All limitations in the NJPDES permit for minimum and maximum should be identified as "daily minimum" or "daily maximum" consistent with the definitions in N.J.A.C. 7:14A-1.9.

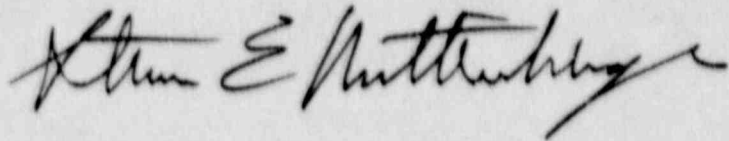
Mr. George Caporale  
NLR-E90044

4

MAR 30 1990

If you have or any of the members of your staff have any questions concerning the information provided herein, please contact Mr. Edward J. Keating at (609) 339-1466. We would like to meet with you or your staff at your earliest convenience to discuss this matter.

Sincerely,

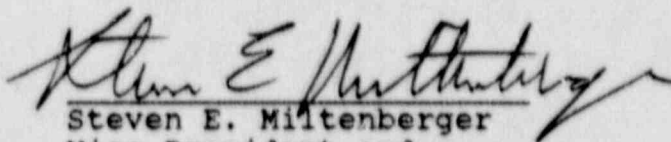
A handwritten signature in dark ink, appearing to read "William E. Keating", with a long, sweeping horizontal stroke extending to the right.

Enclosure

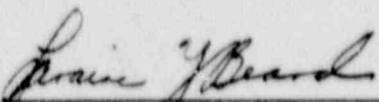


County of Salem  
State of New Jersey

I, Steven E. Miltenberger, Vice President and Chief Nuclear Officer, certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including the possibility of fine and/or imprisonment.

  
Steven E. Miltenberger  
Vice President and  
Chief Nuclear Officer

Sworn and subscribed to  
before me this  
30<sup>th</sup> day of April 1990

  
Notary Public of New Jersey  
My Commission Expires

LARAIN Y. BEARD  
Notary Public of New Jersey  
My Commission Expires May 1, 1991




County of Salem  
State of New Jersey

I, Joseph J. Hagan, General Manager - Hope Creek Operations, certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including the possibility of fine and/or imprisonment.

  
\_\_\_\_\_  
Joseph J. Hagan  
General Manager -  
Hope Creek Operations

Sworn and subscribed to  
before me this  
28 day of March 1990

  
\_\_\_\_\_  
Notary Public of New Jersey  
My Commission Expires

SHERRI L. HUSTON  
NOTARY PUBLIC - NEW JERSEY  
My Commission Expires Dec. 22, 1990

HOPE CREEK GENERATING STATION  
APPLICATION FOR RENEWAL  
NJPDES PERMIT NO. NJ0025411  
DISCHARGE TO SURFACE WATER

CONTENTS

Standard Application Form CP#1

Application to Discharge Wastewaters  
and Residuals to the State's Land  
and Water (WQM-001)

Endorsements (WQM-003)

Application Form 2C - Items I - IV

Application Form 2C - Item V for the  
following:

DSN 461A  
DSN 461C  
DSN 464A  
DSN 462B  
DSN 463A  
DSN 464

Part IV-B/C

Maps, Figures, and Photographs



**State of New Jersey**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**STANDARD APPLICATION FORM (CP #1)**  
**CONSTRUCTION PERMIT NUMBER 1**  
**CONSTRUCTION AND DISCHARGE PERMITS**

FOR OFFICIAL USE

READ REQUIREMENTS — FOLLOW INSTRUCTIONS CAREFULLY — PLEASE PRINT OR TYPE

- 1a. Applicant/Owner\*\* Public Service Electric & Gas Company Telephone (609) 339-1100  
 Permanent Legal Address 80 Park Plaza  
 City or Town Newark State NJ Zip Code 07101  
 Federal Tax I.D. or S.S. # \_\_\_\_\_
- 1b. Applicant/Operator Public Service Electric & Gas Company Telephone (609) 339-3463  
 Permanent Legal Address Post Office Box 236  
 City or Town Hancocks Bridge State NJ Zip Code 08038
- 1c. Co-permittee\* N/A Telephone ( ) \_\_\_\_\_  
 Permanent Legal Address \_\_\_\_\_  
 City or Town \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_
2. Location of Work Site Artificial Island  
 Name of Facility, if applicable Hope Creek Generating Station  
 Address (Street/Road) Foot of Buttonwood Road (Artificial Island)  
 Lot No.s 4 and 5 Block No. 26 E.P.A. I.D. # \_\_\_\_\_  
 City or Town Hancock's Bridge State New Jersey Zip Code 08038  
 Municipality Lower Alloways Creek Township County Salem
3. If applicable, give name of: Engineer/Surveyor/Well Driller/Geologist/Soil Scientist (Specify)  
 Name N/A N.J. License No. \_\_\_\_\_  
 Name of Firm, if employee \_\_\_\_\_  
 Address (Street/Road) \_\_\_\_\_  
 City or Town \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Municipality \_\_\_\_\_ County \_\_\_\_\_  
 Telephone ( ) \_\_\_\_\_
4. This is an application for NJPDES - DSW Permit  
 (Name of permit, certification, approval, jurisdictional determination, or exemption. See item 9, next page.)

- \* This section must be completed by any local governmental unit when it is a Co-permittee. (Not required for Treatment Works Approvals.)
- \*\* Sewer System Applications (Treatment Works Approvals) should be made on behalf of the eventual owner of the proposed system.

DETACH FORM FROM PRECEDING DOCUMENT

5. Fee is attached (if applicable). \$ No Fee

6. Estimated construction cost of project:

a. \$ N/A total cost of the project

b. \$ N/A portion for which this permit is requested

7. I have included certifications of any public notifications. Yes ☒ No

8. If applicable:

(For Waterfront Development and Stream Encroachment applications, 8c. must be completed.)

a. Source of Water Supply Delaware River and On-site Wells

b. For Treatment at (Water Treatment Plant)

c. Stream, Waterway, Pond or Lake Delaware River

d. Wastewater Treatment Facility

9. Have any other applications for this site/project been submitted, or have any state permits been issued for this project? (If yes, indicate status and project number below.)

☒ Yes ☐ No ☐ Decision

Identify any state Green Acres or federal Land and Water Conservation Fund projects separately.

PERMIT TYPE (Use additional sheets if necessary)	APPLICATION STATUS	
	(Pending - Approved)	PROJECT #
9.1 CAFRA.....	See Table No. 1	
9.2 Waterfront Development .....	See Table No. 1	
9.3 Tidal or Coastal Wetlands.....	See Table No. 1	
9.4 Freshwater Wetlands Permit.....		
9.5 Freshwater Wetlands Transitional Area Waiver (after July 1, 1989).....		
9.6 Stream Encroachment.....	See Table No. 1	
9.7 Water Quality Certificate (Section 401).....		
9.8 Open Water Fill.....		
9.9 Tidulands (Riparian) Grant, Lease or License.....	See Table No. 1	
9.10 Dam Construction/Repair.....		
9.11 Purchase Water.....		
Diversion:		
9.12 Divert Water Supply for Public Use.....		
9.13 Divert Surface Waters for Private Use.....	See Table No. 1	
9.14 Divert Subsurface/Percolating Water for Private Use.....	See Table No. 1	
9.15 Well Drilling.....		
9.16 Permanent Water Lowering.....		

**PERMIT TYPE** (Use additional sheets if necessary)

**APPLICATION  
STATUS**  
(Pending -  
Approved)

**PROJECT #**

9.17 Temporary Water Lowering.....	_____	_____
9.18 Construct/Modify, Operate Public Potable Water Works.....	_____	_____
9.19 Connection between an approved water supply and non-approved supply.....	_____	_____
9.20 Sewer Systems: Collectors, Pump Station, etc.....	_____	_____
9.21 Exemption from Sewer Ban.....	_____	_____
9.22 New Jersey Pollution Discharge Elimination System (Specify).....	See Table No. 1	_____
9.23 Solid Waste Permits (Specify).....	_____	_____
9.24 Air Quality Permits (Specify).....	See Table No. 1	_____
9.25 Delaware and Raritan Canal Review Zone "Certificate of Approval".....	_____	_____
9.26 Pinelands Certificate.....	_____	_____
9.27 Green Acres Program Review "Certificate of Approval" (Specify projects).....	_____	_____
9.28 Other State agencies' permits.....	See Table No. 1	_____
9.29 Local Permits.....	_____	_____
9.30 Federal Permits.....	See Table No. 1	_____

10. Brief Description of the Proposed Project and Intended Use:

Facility Discharges include:

A) Cold-side cooling tower blowdown prevents the build-up of solids in condenser cooling water, B) Sewage treatment plant treats sanitary wastes, C) Low volume and oily waste system treats auxiliary boiler blowdown and potentially oily wastes, D) Liquid radioactive waste system removes radioactive isotopes from certain liquid waste streams, and E) Storm water runoff.



## 9. APPLICATIONS/PERMITS FOR THE HOPE CREEK GENERATING STATION

TABLE NO. 1

SECTION	DESCRIPTION	APPLICATION PERMIT NO. STATUS
<b>FEDERAL GOVERNMENT</b>		
U.S. Army Corp of Engineers	Maintenance Dredging	APPROVED 85-829-9
U.S. Army Corp of Engineers	Outfall Structure	APPROVED 87-1685 (NP7)
U.S. Federal Aviation Administration	Air Navigation Determination	APPROVED 82-ABA-0822-0E
U.S. Nuclear Regulatory Commission	Facility Operating License	APPROVED NPP-57
<b>INTERSTATE AGENCIES</b>		
Delaware River Basin Commission	Docket Decision (New STP)	APPROVED D-87-70
Delaware River Basin Commission	Docket Decision (Project)	APPROVED D-73-193CP (revised)
Delaware River Basin Commission	Docket Decision (STP Allocation)	APPROVED D-85-60CP
Delaware River Basin Commission	Water Supply Contract	APPROVED D-73-193CP (revised)
<b>STATE GOVERNMENT - N.J. DEPT. OF ENVIRONMENTAL PROTECTION</b>		
Air Pollution Control	Asphalt Storage Tank 00-7558 (097)	APPROVED 072773
Air Pollution Control	Boiler No. 1 (033)	APPROVED 042178
Air Pollution Control	Boiler No. 2 (034)	APPROVED 042179
Air Pollution Control	Boiler No. 3 (035)	APPROVED 042180
Air Pollution Control	Caustic Storage Tank OAT-500 (040)	APPROVED 073572
Air Pollution Control	CT Field Test Unit Boiler	APPROVED 075432
Air Pollution Control	Diesel Fire Pump (Detroit Diesel)	APPROVED 076185
Air Pollution Control	Diesel Generator No. 1 (025)	APPROVED 042170
Air Pollution Control	Diesel Generator No. 2 (026)	APPROVED 042171
Air Pollution Control	Diesel Generator No. 3 (027)	APPROVED 042172
Air Pollution Control	Diesel Generator No. 4 (028)	APPROVED 042173
Air Pollution Control	Diesel Storage Tank #1 (096)	APPROVED 071369
Air Pollution Control	Diesel Storage Tank #2 (095)	APPROVED 071368
Air Pollution Control	Filter, Recirc, Vent Sys (092)	APPROVED 071367
Air Pollution Control	Guardhouse, Stdbdy Diesel Generator	APPROVED 077172
Air Pollution Control	Guardhouse Health Physics Exh (089)	APPROVED 071364
Air Pollution Control	Hyperbolic Cooling Tower (058)	APPROVED 041932
Air Pollution Control	Leaded Gasoline Tanks (066)	APPROVED 062426
Air Pollution Control	Liberty-Westcon, 20,000 gal (068)	APPROVED 063787
Air Pollution Control	Liberty-Westcon, 3,000 gal (069)	APPROVED 063439
Air Pollution Control	Lube Oil Receive Tank OT 120 (087)	APPROVED 066251
Air Pollution Control	Lube Oil Storage Tank OT 119 (086)	APPROVED 066250
Air Pollution Control	NaOH Storage Tank OOT-124 (093)	APPROVED 071331
Air Pollution Control	NaOH Storage Tank OOT-140 (094)	APPROVED 071332
Air Pollution Control	OET-501 (037)	APPROVED 042215
Air Pollution Control	OET-501 (038)	APPROVED 042216
Air Pollution Control	OET-501 (042)	APPROVED 042221
Air Pollution Control	OET-501 (043)	APPROVED 042221
Air Pollution Control	Painting & Sandblasting Shop (088)	APPROVED 067426
Air Pollution Control	Radioactive Gas Sys No. Plant (090)	APPROVED 071365

## 9. APPLICATIONS/PERMITS FOR THE HOPE CREEK GENERATING STATION

TABLE NO. 1

SECTION	DESCRIPTION	APPLICATION PERMIT NO. STATUS
STATE GOVERNMENT - N.J. DEPT. OF ENVIRONMENTAL PROTECTION (CONTINUED)		
Air Pollution Control	Radioactive Gas Sys So. Plant (091)	APPROVED 071366
Air Pollution Control	Sulphuric Acid Storage Tank 00T-125	APPROVED 072774
Air Pollution Control	Sulphuric Acid Storage Tank 00T-141	APPROVED 072775
Air Pollution Control	Unleaded Gasoline Tank (060)	APPROVED 062204
Air Pollution Control	Waste Oil Storage Tank 00T-546 (100)	APPROVED 072776
Air Pollution Control	02 Fuel Oil Tank AT-403 (009)	APPROVED 042154
Air Pollution Control	02 Fuel Oil Tank BT-403 (010)	APPROVED 042155
Air Pollution Control	02 Fuel Oil Tank CT-403 (011)	APPROVED 042156
Air Pollution Control	02 Fuel Oil Tank ET-403 (012)	APPROVED 042157
Air Pollution Control	02 Fuel Oil Tank FT-403 (013)	APPROVED 042158
Air Pollution Control	02 Fuel Oil Tank GT-403 (014)	APPROVED 042159
Air Pollution Control	02 Fuel Oil Tank HT-403 (015)	APPROVED 042160
Air Pollution Control	02 Fuel Oil Tank IT-403 (016)	APPROVED 042161
Air Pollution Control	02 Fuel Oil Tank 00T-516 (036)	APPROVED 042181
Air Pollution Control	02 Fuel Oil - Tank 00T-527 (008)	APPROVED 042152
Bureau of Potable Water	Public Water Supply No.	APPROVED 1704306
Coastal Resources	CAPRA	APPROVED 740014
Coastal Resources	CAPRA (mod. in detail - 4 facilities)	APPROVED 74-14-5
Coastal Resources	CAPRA (mod. - STP)	APPROVED 74-14-5
Coastal Resources	CAPRA (Road)	APPROVED CA-82-0591-5
Coastal Resources	Riparian License	APPROVED 74-046
Coastal Resources	Stream Encroachment (Road)	APPROVED 82-1704
Coastal Resources	Tidelands License	APPROVED 85-0738-1
Coastal Resources	Type "B" Wetlands Permit	APPROVED 874-042
Coastal Resources	Type "B" Wetlands Permit (Stormdrain)	APPROVED 87-0549-2
Coastal Resources	Waterfront Development Permit	APPROVED 85-0738-1
Coastal Resources	Waterfront Development Permit (Stormdrain)	APPROVED 87-0878-1
Coastal Resources	Wetlands "B" (Road)	APPROVED 82-0248-2
Div. Fiscal Serv. & Supp.	Laboratory Certification	APPROVED 17451
Waste Management	Hazardous Waste Facility Registration	APPROVED NJD980646939
Water Resources	Surface Water Discharge Permit	APPROVED NJ0025411
Water Resources	Underground Storage Tank Registration Certificate	APPROVED 0041573
Water Resources	Water Allocation Permit	APPROVED 2059P

11. I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment.

Steven E. Wittenberger  
Type: Name and Date

Steven E. Wittenberger  
Signature of Applicant Owner

Vice President and Chief Nuclear Officer  
Type: Position

3-30-90  
Date

Joseph Hagan  
Type: Name and Date

Joseph Hagan  
Signature of Applicant Operator

General Manager - Hope Creek Generating Station  
Type: Position

3-28-90  
Date

\_\_\_\_\_  
Type: Name and Date

\_\_\_\_\_  
Signature of Co-permittee\*

\_\_\_\_\_  
Type: Position

\_\_\_\_\_  
Date

### ENDORSEMENTS

*Some permit applications require specific endorsements of owners, agents, municipalities, etc. Endorsements may be required for your permit.*

*Verify the need for endorsements in the "Requirements" section of the Standard Application Form CP #1 booklet or with the appropriate DEP agency.*

#### A. PROPERTY OWNER'S CERTIFICATION\*

I hereby certify that \_\_\_\_\_  
Property Owner's Name  
is the owner of the property upon which the proposed work is to be done. This endorsement is certification that the owner grants permission for the conduct of the proposed activity.

In addition, the aforementioned property owner shall certify:

1. Whether any work is to be done within an easement — Yes \_\_\_\_\_ No \_\_\_\_\_  
(Initial) (Initial)
2. Whether any part of the entire project (i.e., pipeline, roadway, cable, transmission line, etc.) will be located within property belonging to the State of New Jersey — Yes \_\_\_\_\_ No \_\_\_\_\_  
(Initial) (Initial)

\_\_\_\_\_  
Type or Print Name and Address of Owner,  
if different from Item 1 on Page 1

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Owner

\* Not required for Sewer System Application (Treatment Works Approvals)

**B. APPLICANT'S AGENT**

I, the Applicant/Owner \_\_\_\_\_ or Applicant/Operator (when  
the owner of the facility and the operator of the facility are distinct parties) \_\_\_\_\_  
or Co-permittee (when the Co-permittee is a local governmental unit) \_\_\_\_\_

authorize to act as my agent/representative in all matters pertaining to my application the following person:

Name \_\_\_\_\_ Phone \_\_\_\_\_  
Address \_\_\_\_\_ County \_\_\_\_\_  
City or Town \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Occupation/Profession \_\_\_\_\_

\_\_\_\_\_  
(Signature of Applicant/Owner)

\_\_\_\_\_  
(Signature of Applicant/Operator)

\_\_\_\_\_  
(Signature of Co-permittee)\*

**AGENTS CERTIFICATION**

Sworn before me  
this \_\_\_\_\_ day of \_\_\_\_\_  
\_\_\_\_\_ 19 \_\_\_\_\_

I agree to serve as agent for the above-mentioned applicant

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
(Signature of Agent)

**C. PROPER CONSTRUCTION AND OPERATION CLAUSE**  
(Sewer Extensions, Treatment Works Approval, Water Works)

I, the Applicant/Owner \_\_\_\_\_ or Applicant/Operator (when the owner  
of the facility and the operator of the facility are distinct parties) \_\_\_\_\_  
or Co-permittee (when the Co-permittee is a local governmental unit) \_\_\_\_\_

agree that the works will be properly constructed and operated in accordance with the engineering plans and  
specifications, as approved, and the conditions under which approval is granted by the State Department of  
Environmental Protection.

\_\_\_\_\_  
(Signature of Applicant/Owner)

\_\_\_\_\_  
(Signature of Applicant/Operator)

\_\_\_\_\_  
(Signature of Co-permittee)\*

\* Not required for Sewer System Application (Treatment Works Approvals)



D. STATEMENT OF PREPARER OF PLANS, SPECIFICATIONS, SURVEYOR'S OR ENGINEER'S REPORT

I hereby certify that the engineering plans, specifications and engineer's report applicable to this project comply with the current rules and regulations of the State Department of Environmental Protection with the exceptions as noted.

\_\_\_\_\_  
(Signature of Engineer)

\_\_\_\_\_  
Type: Name and Date

\_\_\_\_\_  
Position, Name of Firm

PROFESSION ENGINEER'S  
EMBOSSSED SEAL

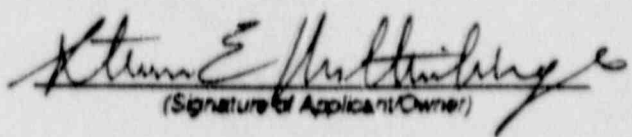
E. OWNER'S COMPLIANCE WARRANT (NPDES ONLY)

I, the Applicant/Owner Public Service Electric and Gas Company or Applicant/Operator (when the owner of the facility and the operator of the facility are distinct parties) \_\_\_\_\_  
or Co-permittee (when the Co-permittee is a local governmental entity) \_\_\_\_\_  
hereby agree that any treatment works constructed to meet the NPDES/NJPDES permit discharge limits will be properly constructed and operated to meet those limits. I also warrant that the discharge(s) will meet the effluent limitations as described in the NPDES/NJPDES permit, as issued.

3-30-90  
(Date)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Date)

  
(Signature of Applicant/Owner)

\_\_\_\_\_  
(Signature of Applicant/Operator)

\_\_\_\_\_  
(S)

\* Not required for Treatment Works Approvals



**F. PARTY RESPONSIBLE FOR THE CONSTRUCTION OF THE PROPOSED FACILITY**  
(Sewer Extensions, Treatment Works Approvals)

Name of Developer \_\_\_\_\_

Phone \_\_\_\_\_

Address \_\_\_\_\_ County \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Contact Person \_\_\_\_\_

STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER RESOURCES



NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM  
SUPPLEMENT TO THE STANDARD APPLICATION FORM CP #1

APPLICATION TO DISCHARGE WASTEWATERS AND  
RESIDUALS TO THE STATE'S LAND AND WATER



Answer all questions. Please print or type.

1. Circle the letter(s) for those discharge activities presently conducted or to be conducted as part of the facility's operation.  
(Seasonal facility operation shall be considered as a present operation.)

In the space provided, indicate if there is an existing NJPDES or NJPDES permit for each circled activity (yes/no).  
In the space provided, indicate if this application is for a "new" source, and "existing" source, or a "renewal" of a current permit.

DISCHARGE ACTIVITY	YES/NO	NEW, EXISTING, RENEWAL
<input checked="" type="radio"/> A. Sanitary Surface Water Discharge	Yes	Renewal
<input checked="" type="radio"/> B. Industrial/Commercial Surface Water Discharge	Yes	Renewal
B1. DPCC-DCR/BMP Plan		
<input checked="" type="radio"/> B2. BMP Plan	Yes	Existing
<input checked="" type="radio"/> B3. DPCC/DCR/Plan	Yes	Existing
<input checked="" type="radio"/> C. Thermal Surface Water Discharge	Yes	Renewal
CG. General Permit Non-Contact Cooling Water		
D. Land Application of Sludge and Septage		
E. Land Application of Industrial Waste Residuals		
F. Landfill — Industrial/Commercial Waste		
G. Spray Irrigation — Industrial		
H. Overland Flow — Industrial		
I. Infiltration/Percolation Lagoon — Industrial		
J. Surface Impoundment — Industrial		
K. Underground Injection (UIC) — Industrial		
L. Indirect Discharge to POTW (STU)		
M. Subsurface Disposal — Industrial		
N. Community Septic System		
O. Landfill — Municipality/Sanitary		
P. Spray Irrigation — Sanitary		
Q. Overland Flow — Sanitary		
R. Infiltration/Percolation Lagoon — Sanitary		
S. Surface Impoundment — Sanitary		
T. Underground Injection (UIC) — Sanitary		
U. Dredge Spoils		
V. Sludge Processing/Distribution Facility		
<input checked="" type="radio"/> W. Oil/Water Separators	Yes	Renewal
X. Confidentiality Request		
Y. 316 Variance Work		
Z. Residuals Transfer Facilities (Sludge)		
1. Municipal Solid Waste Transfer Facility		
2. Sanitary Sludge Storage Facility		
3. Residuals Infiltration/Percolation Lagoon		
4. Residuals Surface Impoundment		
<input checked="" type="radio"/> 5. Group I — Stormwater Runoff	Yes	Renewal
SG. General Permit Industrial Site Storm Water Runoff		
6. Group II — General Permit Stormwater Runoff		
7. Underground Storage Tank		
8. Other/Miscellaneous		
9. Master Performance Permits		

2. Location of Discharge: Latitude N39° 27' 53" Longitude W75° 32' 12"  
Receiving Stream Delaware River  
River Basin Delaware River Basin

(Over)

3. Name and address of applicant's parent corporation, subsidiary, or partnership data.  
(Attach additional sheets if necessary.)

Name Public Service Enterprise Group Telephone No. (201) 430-7000  
Mailing Address 80 Park Plaza  
City or Town Newark State New Jersey Zip Code 07101

4. Facility's Contact Person (This person must be responsible for and familiar with the facility operation.)  
Hope Creek

Name Joseph Hagan General Manager - Generating Station Telephone No. (609) 339-3463  
Address of Operator Public Service Electric and Gas Company, P.O. Box 236  
City or Town Hancocks Bridge State New Jersey Zip Code 08038

5. Is the facility a ☐ Federal Facility ☐ Public Facility (a local government subdivision)  
☐ State Facility ☒ Private Facility
6. List in order of priority all Standard Industrial Codes (SIC) which best reflect the principal products or services provided by the facility.

<u>SIC</u>	<u>PRODUCTS OR SERVICES PROVIDED</u>
<u>4911</u>	<u>Generation of Electricity for Sale</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

7. If applicable, identify all administrative orders, temporary or permanent injunctions, civil administrative penalties, civil penalties, or criminal actions concerning pollution issued against the facility during the last five (5) years.

<u>ENFORCEMENT ACTION</u>	<u>DATE OF ACTION</u>	<u>RESULT</u>
<u>See Attachment</u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

8. If applicable, list all locations involved in the storage of solid or liquid waste at the facility for which the NJPDES application is being made and the ultimate disposal sites of solid or liquid wastes generated by the facility being permitted.

<u>STORAGE SITE(S)</u>	<u>ULTIMATE DISPOSAL SITE(S)</u>
<u>See Attachment</u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

7. ENFORCEMENT ACTIONS AT HOPE CREEK GENERATING STATION  
WITHIN PAST FIVE YEARS

<u>Date</u>	<u>Enforcement Action</u>	<u>Result</u>
4-19-89	Administrative Order and Notice of Civil Administrative Penalty Assessment.	Administrative Consent Order executed January 11, 1990

8. LOCATIONS AT HOPE CREEK GENERATING STATION  
USED FOR STORAGE OF SOLID OR LIQUID WASTES  
AND ULTIMATE DISPOSAL OF EACH

<u>WASTE TYPE</u>	<u>WASTE SOURCE</u>	<u>ULTIMATE DISPOSAL*</u>
Sludge	Sewage Treatment Plant	Trucked off-site for disposal by approved method to Cumberland County Municipal Utilities Authority.
Liquid	Sewage Treatment Plant DSN 462B	Treatment Plant effluent discharged to Delaware River through the North Storm Drain.
Liquid	Demineralizer Regenerant Waste Storage Tank	Transferred to the Salem Generating Station Industrial Treatment System for treatment.
Liquid	Low Volume and Oily Waste Treatment System DSN 461C	System effluent discharged to Delaware River.
Sludge	Oily Sludge, Low Volume and Oily Waste Treatment System DSN 461C	Trucked off-site for disposal by approved method to Rollins Environmental Services.
Liquid	Waste Oil, Low Volume and Oily Waste Treatment System DSN 461C	Trucked off-site for disposal by approved method to Rollins Environmental Services.
Liquid	Liquid Radioactive Waste System	Recycled, concentrated for off-site disposal or treated and discharged to Delaware River in accordance with discharge limits in 10CFR20.
Solid	Spent Nuclear Fuel	Stored on-site in spent fuel pool.
Solid	Low Level Solid Radio- active Waste System	Shipped off-site to NRC licensed burial site at Barnwell, S.C.
Sediments	Cooling Tower Basin (bottom sediment)	Deposited in on-site dredge spoils disposal site in accordance with U.S. Army Corps of Engineers permit and NJDEP Division of Coastal Resources Permit.

\* The ultimate disposal facilities are representative of licensed facilities employed by Public Service Electric and Gas Company for waste disposal. Other approved ultimate disposal facilities may be utilized for waste disposal although not listed here.



STATE OF NEW JERSEY

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER RESOURCES

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM (NJPDES)  
SUPPLEMENT TO THE STANDARD APPLICATION FORM CP # 1

ENDORSEMENTS

NOTICE: The following citation relates to violations of the Water Pollution Control Act.

N.J.S.A. 58:10A-10 Violations; remedies, fines and penalties; enforcement

Paragraph (f) "Any person who knowingly makes a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under this act or who falsifies, tampers with or knowingly renders inaccurate, any monitoring device or method required to be maintained pursuant to this act, shall upon conviction, be subject to a fine of not more than \$10,000.00 or by imprisonment for not more than 6 months, or by both."

A. Endorsements by the municipality in which the project is to be located.

\*\*CERTIFICATION BY GOVERNING BODY

This project as proposed is in conformance with the requirements of all municipal ordinances and the Governing Body of this municipality/authority approves of the project as proposed by the applicant.

Endorsed by: \_\_\_\_\_  
(Name of Municipality or Authority)

Signed\* \_\_\_\_\_

\_\_\_\_\_  
Print or Type: Name and Title Date

\* Give authorization to sign for the Governing Body \_\_\_\_\_  
Submit the resolution granting such authority to sign. If no such resolution granting authority to sign exists, the full resolution approved by the Governing Body endorsing the project must be submitted with this application.

\*\* NOTE

Where a municipality has created a sewerage authority, utilities authority, municipal utilities authority or a joint meeting responsible for sewers in the area, the endorsement of the affected sewerage authority(ies) is requested for a sewer extension approval.

B. Determination by the WQMP Agency

This project or activity, as proposed, has been reviewed by this agency in accordance with the Arden-Cove Water Quality Management Plan (WQMP). The following determination has been made by either the appropriate designated WQMP agency, or the Department (where appropriate).

- ☐ Project is consistent with Plan  
☐ Project is not inconsistent with Plan\*  
☐ Project is inconsistent with Plan\*\*

_____	_____
<i>Name of Project</i>	<i>Authorized Signature</i>
_____	_____
<i>Name of Plan</i>	<i>Name (Print or Type)      Date</i>
_____	_____
<i>Name of Agency</i>	<i>Title</i>

NOTE: For the name of the appropriate WQMP agency, or any other questions, contact the Division of Water Resources at (800) 984-4429.

- \* A finding of not inconsistent has the same effect as a finding of consistent.
- \*\* A finding of inconsistent must be accompanied by a letter describing the reason for the finding.

Sewer systems (interceptors, collectors, pump stations) for residential developments of 50 units or more and industrial/commercial and mixed use (including residential) developments having flows of 25,000 gpd or more, do require consistency determinations. Projects that are extensions or modifications to existing projects where the cumulative total for the project is greater than 50 units or 25,000 gpd, as appropriate, shall require a consistency determination (N.J.A.C. 7:15-1 et seq.)

Sewer systems to serve less than 50 units or less than 25,000 gpd do not require a consistency determination but must still be consistent with approved WQM/201 plans.

C. Endorsement by the Sewerage Agency in which the project is to be located.CERTIFICATION BY THE 201 SEWERAGE AGENCY

This project as proposed is in conformance with the requirements of all Sewerage Agency rules and regulations and the applicable "201" Facilities Plan and the Governing Body of this Sewerage Agency approves of the project as proposed by the applicant.

Endorsed by \_\_\_\_\_  
*Name of Treatment Plant*

Signed\* \_\_\_\_\_

\_\_\_\_\_  
*Print or Type:      Name and Title      Date*

- \* Cite authorization to sign for the Sewerage Agency \_\_\_\_\_  
 Submit the resolution granting such authority to sign. If no such resolution granting authority to sign exists, the full resolution approved by the Sewerage Agency endorsing the project must be submitted with the application.

- D. Endorsement by owner of the treatment plant receiving the wastewater.

CERTIFICATION BY OWNER

SEWAGE TREATMENT FACILITY

I (we) hereby certify that the sum of the DEP currently approved projects plus the actual metered flow for the (name of the plant) does not exceed the present design capacity. I (we) further certify that with the addition of this project, the approved design capacity will not be exceeded. Further I (we) certify that the treatment plant is currently complying with its New Jersey Pollutant Discharge Elimination System permit (NPDES) requirements and should continue to do so with the additional flow from this project. -

Endorsed by \_\_\_\_\_  
Name of Treatment Plant

Signed \_\_\_\_\_

Print or Type: \_\_\_\_\_ Name and Title \_\_\_\_\_ Date \_\_\_\_\_

If the owner is a public agency, cite authorization to sign for the publicly owned treatment works. Submit the resolution granting such authority to sign. If no such resolution granting authority to sign exists the full resolution approved by the governing body endorsing the project must be submitted with the application.

- E.
- 1) Pursuant to N.J.S.A. 58:10A-6 and N.J.A.C. 7:14A-12.1 et seq., no person may build, install, modify or operate any facility for the collection treatment or discharge of any pollutant, including any "extension" as defined in the regulations without the prior approval of the Department.
  - 2) Approvals, permits, service contracts or other reservation of capacity issued or agreed to by any participating municipality or sewerage agency does not constitute the required approval of the Department.
  - 3) For computation of actual flow at the sewer plant, the average flow processed by the facility for the four (4) month period immediately preceding the submission shall be used. Under NJPDES Regulations no application shall be submitted if the waste treatment facility is not meeting its discharge permit limits. Under Sewer Ban Regulations, no project is to be submitted if the sewer plant is committed to 100% of its design capacity.
  - 4) The owner of the sewage treatment plant shall submit to NJDEP on a quarterly basis the status of sewage flow entering the plant including all outstanding approved sewer extension permits not yet on line. These reports will be used for tracking capacity at the receiving sewage treatment plant. See Form WQM-007.

Public Service  
Electric and Gas  
Company

**Steven E. Miltenberger**

Public Service Electric and Gas Company P.O. Box 236, Hancocks Bridge, NJ 08038 609-339-1100

Vice President and Chief Nuclear Officer

VIA CERTIFIED MAIL  
(NO. P 426 612 245)

MAR 30 1990  
NLR-E90040

Honorable Michael H. Facemyer  
Mayor  
Lower Alloways Creek Township  
Locust Island Road  
Hancocks Bridge, NJ 08038

Dear Mayor Facemyer:

APPLICATION IN SUPPORT OF A REQUEST FOR RENEWAL  
NJPDES PERMIT NJ0025411  
HOPE CREEK GENERATING STATION  
MUNICIPALITY ENDORSEMENT

Public Service Electric and Gas Company (PSE&G) is filing an application in support of a request to renew the New Jersey Pollutant Discharge Elimination System (NJPDES) permit for Hope Creek Generating Station, located within your municipality. This permit allows for the discharge of recirculated cooling water, certain other effluents, and stormwater runoff from the facility.

PSE&G, pursuant to N.J.A.C. 7:14A-2.1(k), is required to forward a copy of its application to the municipality where the facility is located and to obtain the municipality's endorsement of same. This endorsement, which must be in the form of a resolution, adopted by the Mayor and Council, must specify:

1. That the project is in conformance with all municipal ordinances; and
2. that the Mayor and Council of Lower Alloways Creek Township accept the project as proposed.

For your convenience, I have attached a copy of the pertinent section of N.J.A.C. 7:14A-2.1(k). This application for renewal is substantially similar to the application to revoke and reissue the NJPDES Permit endorsed during 1989 on which the New Jersey Department of Environmental Protection has not taken any action to date.



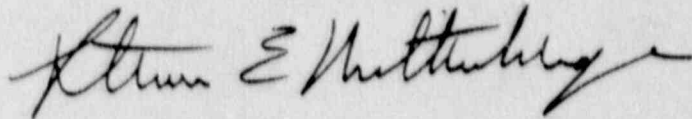
Michael Facemyer  
NLR-E90040

2

MAR 30 1990

Assuming the above statements are accurate, PSE&G respectfully requests that the Lower Alloways Creek Township Council adopt a resolution endorsing the attached application at the Township's earliest convenience. If you or any members of your staff have any questions, please contact Edward J. Keating at (609) 339-1466.

Sincerely,

A handwritten signature in dark ink, appearing to read "Edward J. Keating", with a long horizontal flourish extending to the right.

Attachment

C G. Caporale, NJDEP



STATE OF NEW JERSEY

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER RESOURCES

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM (NJPDES)  
SUPPLEMENT TO THE STANDARD APPLICATION FORM CP # 1

ENDORSEMENTS

NOTICE: The following citation relates to violations of the Water Pollution Control Act.

N.J.S.A. 58:10A-10 Violations; remedies, fines and penalties; enforcement

Paragraph (f) "Any person who knowingly makes a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under this act or who falsifies, tampers with or knowingly renders inaccurate, any monitoring device or method required to be maintained pursuant to this act, shall upon conviction, be subject to a fine of not more than \$10,000.00 or by imprisonment for not more than 6 months, or by both."

A. Endorsements by the municipality in which the project is to be located.

\*\*CERTIFICATION BY GOVERNING BODY

This project as proposed is in conformance with the requirements of all municipal ordinances and the Governing Body of this municipality/authority approves of the project as proposed by the applicant.

Endorsed by: \_\_\_\_\_  
(Name of Municipality or Authority)

Signed\* \_\_\_\_\_

\_\_\_\_\_  
Print or Type: Name and Title Date

\* Cite authorization to sign for the Governing Body \_\_\_\_\_  
Submit the resolution granting such authority to sign. If no such resolution granting authority to sign exists, the full resolution approved by the Governing Body endorsing the project must be submitted with this application.

\*\* NOTE:

Where a municipality has created a sewerage authority, utilities authority, municipal utilities authority or a joint meeting responsible for sewers in the area, the endorsement of the affected sewerage authority(ies) is requested for a sewer extension approval.

B. Determination by the WQMP Agency

This project or activity, as proposed, has been reviewed by this agency in accordance with the Areawide Water Quality Management Plan (WQMP). The following determination has been made by either the appropriate designated WQMP agency, or the Department (where appropriate).

- ☐ Project is consistent with Plan \*
- ☐ Project is not inconsistent with Plan \*
- ☐ Project is inconsistent with Plan \*\*

_____	_____	
<i>Name of Project</i>	<i>Authorized Signature</i>	
_____	_____	_____
<i>Name of Plan</i>	<i>Name (Print or Type)</i>	<i>Date</i>
_____	_____	
<i>Name of Agency</i>	<i>Title</i>	

NOTE: For the name of the appropriate WQMP agency, or any other questions, contact the Division of Water Resources at (609) 984-4429.

- \* A finding of not inconsistent has the same effect as a finding of consistent.
- \*\* A finding of inconsistent must be accompanied by a letter describing the reason for the finding.

Sewer systems (interceptors, collectors, pump stations) for residential developments of 50 units or more and industrial/commercial and mixed use (including residential) developments having flows of 25,000 gpd or more, do require consistency determinations. Projects that are extensions or modifications to existing projects where the cumulative total for the project is greater than 50 units or 25,000 gpd, as appropriate, shall require a consistency determination (N.J.A.C. 7:15-1 et seq.)

Sewer systems to serve less than 50 units or less than 25,000 gpd do not require a consistency determination but must still be consistent with approved WQM/201 plans.

C. Endorsement by the Sewerage Agency in which the project is to be located.CERTIFICATION BY THE 201 SEWERAGE AGENCY

This project as proposed is in conformance with the requirements of all Sewerage Agency rules and regulations and the applicable "201" Facilities Plan and the Governing Body of this Sewerage Agency approves of the project as proposed by the applicant.

Endorsed by \_\_\_\_\_  
*Name of Treatment Plant*

Signed\* \_\_\_\_\_

\_\_\_\_\_  
*Print or Type: Name and Title Date*

- \* Give authorization to sign for the Sewerage Agency \_\_\_\_\_
- Submit the resolution granting such authority to sign. If no such resolution granting authority to sign exists, the full resolution approved by the Sewerage Agency endorsing the project must be submitted with the application.

- D. Endorsement by owner of the treatment plant receiving the wastewater.

CERTIFICATION BY OWNER

SEWAGE TREATMENT FACILITY

I (we) hereby certify that the sum of the DEP currently approved projects plus the actual metered flow for the (name of the plant) does not exceed the present design capacity. I (we) further certify that with the addition of this project, the approved design capacity will not be exceeded. Further I (we) certify that the treatment plant is currently complying with its New Jersey Pollutant Discharge Elimination System permit (NPDES) requirements and should continue to do so with the additional flow from this project. ~

Endorsed by \_\_\_\_\_  
*Name of Treatment Plant*

Signed\* \_\_\_\_\_

\_\_\_\_\_  
*Print or Type: Name and Title Date*

If the owner is a public agency, cite authorization to sign for the publicly owned treatment works such authority to sign. If no such resolution granting authority to sign exists the full resolution approved by the governing body endorsing the project must be submitted with the application.

- E. 1) Pursuant to N.J.S.A. 58:10A-6 and N.J.A.C. 7:14A-12.1 et seq., no person may build, install, modify or operate any facility for the collection treatment or discharge of any pollutant, including any "extension" as defined in the regulations without the prior approval of the Department.
- 2) Approvals, permits, service contracts or other reservation of capacity issued or agreed to by any participating municipality or sewerage agency does not constitute the required approval of the Department.
- 3) For computation of actual flow at the sewer plant, the average flow processed by the facility for the four (4) month period immediately proceeding the submission shall be used. Under NJPDES Regulations no application shall be submitted if the waste treatment facility is not meeting its discharge permit limits. Under Sewer Ban Regulations, no project is to be submitted if the sewer plant is committed to 100% of its design capacity.
- 4) The owner of the sewage treatment plant shall submit to NJDEP on a quarterly basis the status of sewage flow entering the plant including all outstanding approved sewer extension permits not yet on line. These reports will be used for tracking capacity at the receiving sewage treatment plant. See Form WQM-007.



7. Identification of administrative orders, administrative consent orders, notices of violations, complaints filed, or other corrective or enforcement action(s) required by any governmental agency(ies) with regard to the operation of the applicant at that site concerning pollution within the previous five years;

8. To the extent practicable, the location of all sites involved in the storage of solid or liquid waste at the facility for which the NJPDES application is being made and the ultimate disposal sites of solid or liquid waste generated by any facility with a discharge;

9. A topographic map (U.S. Geological Survey Topographic Map, 7.5 minute Quadrangle Series) extending one mile beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the map area;

10. A brief description of the nature of the business.

(i) The Department may require that an applicant for an NJPDES permit provide additional data, reports, specifications, plans or other information concerning the existing or proposed pollution control program. For new discharges to groundwater permits and all discharges to surface water permits, the Department shall not make a final determination on any application until such time as the applicant has supplied the requested information and corrected any deficiencies therein.

(j) Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under N.J.A.C. 7:14A-2.1, 3.2(DSW), 4.4(IWMF), 5.8(UIC) and N.J.A.C. 7:14A-6 and 7:14A-10 for a period of at least five years from the date the application is signed.

(k) Applicants for NJPDES permits shall provide endorsements and comments as follows:

1. Prior to the submission of an application for a permit to discharge to surface or groundwater, DAC, or to gain approval for a treatment works or sewer connection, the applicant shall submit (return receipt requested) a copy of the application and the applicable information required pursuant to this chapter to the affected sewage authority(ies) and to the municipality in which the discharge(s) will be located, with a request that they endorse the application.

i. Permit applications submitted to the Department for a new discharge to surface water or groundwater, DAC, or to gain approval for

7:14A-2.1 POLLUTANT DISCHARGE ELIMINATION SYSTEM

a treatment works on sewer connection shall include the endorsement from both the affected sewage authority(ies) and municipality in which the discharge(s) will be located.

ii. Applications submitted to the Department for renewal of NJPDES permits or discharges which exist as of March 6, 1981 shall include a copy of all endorsements and comments received or a copy of the request for an endorsement and receipt (return receipt requested) sent to the affected sewage authority(ies) and municipality in which the discharge(s) will be located.

2. An endorsement by a municipality shall be as follows:

i. An endorsement by a municipality concerning a proposed discharge or treatment works shall include the following statements:

(1) The project as proposed is in conformance with the requirements of all municipal ordinances; and

(2) The governing body of the municipality accepts and approves of the project as proposed by the applicant.

ii. An endorsement shall be in the form of a resolution by the governing body.

iii. Proof that the applicant has made a request for endorsement shall be submitted to the Department by the applicant with the application.

iv. If the endorsement is to be signed by anyone other than the mayor, the municipality shall file with the Department an official resolution by the governing body delegating such responsibility to a named individual.

3. An endorsement by an affected sewage authority shall be as follows:

i. For purposes of this section, "affected sewerage authority" means the sewerage authority whose service area includes the site where the discharge requiring a NJPDES permit is located.

ii. An endorsement by an affected sewage authority concerning a proposed discharge of pollutants or a treatment works shall include the following statements:

(1) The project as proposed is in conformance with the applicable 201 facilities plan and all ordinances, rules or regulations of the authority.

(2) The governing body of the authority accepts and approves of the project as proposed by the applicant.

iii. The endorsement must be in the form of a resolution by the governing body.

iv. Proof that the applicant has made a request for endorsement shall be submitted to the Department by the applicant with the application.

4. The lack of an endorsement for renewal of NJPDES permits of discharges which exist as of March 6, 1981 may have the following effect:



i. The affected sewage authority or municipality must endorse the application or submit comments within 60 days of the request for endorsement. Prior to the expiration of the 60-day period to request an endorsement, the municipality or sewage authority may request a 30-day extension for review of a request for endorsement.

ii. Any document issued by a sewage authority or a municipality which is a tentative, preliminary, or conditional approval shall not be considered an endorsement.

iii. Where the affected sewerage authority or municipality denies endorsement to a project, it shall state all reasons for rejection or disapproval in a resolution and send a certified copy of the resolution to the Department.

iv. Where the municipality or affected sewage authority denies an endorsement or does not issue an endorsement, the Department shall review the reasons for denial or for the lack of endorsement, if known. These reasons shall be considered by the Department in making a determination of whether to issue a draft permit in accordance with N.J.A.C. 7:14A-7.6.

5. The lack of an endorsement or denial of an endorsement for a new discharge to surface or groundwater, DAC, or approval of a treatment works or sewer connection shall have the following effect:

i. When the affected sewage authority or municipality denies endorsement to a project, the permit application may be determined by the Department to be incomplete for processing.

ii. Where the municipality or affected sewage authority denies an endorsement or does not issue an endorsement, the Department shall review the reason for denial or for the lack of endorsement, if known.

As amended, R.1982 d.495, effective January 17, 1983.

See: 15 N.J.R. 85(u).

(c): "interim NJPDES permit" exception added.

Amended by R.1987 d.458, effective November 16, 1987.

See: 19 N.J.R. 2085(a), 19 N.J.R. 2152(a).

Substantially amended.

### **7:14A-2.2 Emergency permits**

(a) The Department may issue an emergency permit to allow the activities listed in (b) below only after making a finding that:

1. An imminent and substantial endangerment to human health will result unless an emergency permit is granted; or

2. Except with regard to an injection under the UIC program, an imminent and substantial endangerment to the environment will result unless an emergency permit is granted; or

3. A substantial and irretrievable loss of oil or gas resources will occur unless an emergency permit is granted to a Class II well under the UIC program; and

Public Service  
Electric and Gas  
Company

Steven E. Miltenberger

Public Service Electric and Gas Company P.O. Box 236, Hancocks Bridge, NJ 08038 609-339-1100

Vice President and Chief Nuclear Officer

VIA CERTIFIED MAIL  
(NO. P 426 612 222)

MAR 30 1990

NLR-E90041

Honorable Michael H. Facemyer  
Mayor  
Lower Alloways Creek Township  
Locust Island Road  
Hancocks Bridge, NJ 08038

Dear Mayor Facemyer:

APPLICATION IN SUPPORT OF A REQUEST FOR RENEWAL  
NJPDDES PERMIT NJ0025411  
HOPE CREEK GENERATING STATION  
AFFECTED SEWAGE AUTHORITY ENDORSEMENT

Public Service Electric and Gas Company (PSE&G) is filing an application in support of a request to renew the New Jersey Pollutant Discharge Elimination System (NJPDDES) permit for its facility, Hope Creek Generating Station, located within your municipality. This permit allows for the discharge of recirculated cooling water, certain other effluents, and stormwater runoff from the facility.

PSE&G, pursuant to N.J.A.C. 7:14A-2.1(k), is required to forward a copy of its application to the affected sewage authority where the facility is located and to obtain endorsement of same. The Hope Creek Generating Station does not discharge any effluents to your facilities. This endorsement, which must be in the form of a resolution, adopted by the Mayor and Council, must specify:

1. that the project as proposed is in conformance with the applicable 201 facilities plan and all ordinances, rules or regulations of the authority; and
2. that the Governing Body accepts and approves the project as proposed.

For your convenience, I have attached a copy of the pertinent section of N.J.A.C. 7:14A-2.1(k). This application for renewal is substantially similar to the application to revoke and reissue the NJPDDES Permit endorsed during 1989 on which the New Jersey

Michael H. Facemyer  
NLR-E90041

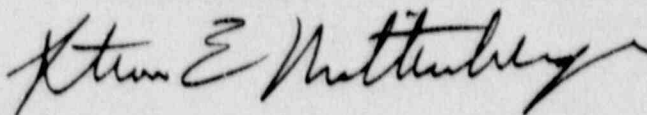
2

MAR 30 1990

Department of Environmental Protection has not taken any action to date.

Assuming the above are accurate statements, PSE&G respectfully requests the the Lower Alloways Creek Township Council adopt a resolution endorsing the attached application at the Township's earliest convenience. If you or any members of your staff have any questions, please contact Edward J. Keating (609) 339-1466.

Sincerely,

A handwritten signature in dark ink, appearing to read "Steven E. Matthews", written in a cursive style.

Attachment

C G. Caporale, NJDEP



STATE OF NEW JERSEY

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER RESOURCES

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM (NJPDES)  
SUPPLEMENT TO THE STANDARD APPLICATION FORM CP # 1

ENDORSEMENTS

NOTICE: The following citation relates to violations of the Water Pollution Control Act.

N.J.S.A. 58:10A-10 Violations; remedies, fines and penalties; enforcement

Paragraph (f) "Any person who knowingly makes a false statement, representation, or certification in any application, record, or other document filed or required to be maintained under this act or who falsifies, tampers with or knowingly renders inaccurate, any monitoring device or method required to be maintained pursuant to this act, shall upon conviction, be subject to a fine of not more than \$10,000.00 or by imprisonment for not more than 6 months, or by both."

A. Endorsements by the municipality in which the project is to be located.

\*\*CERTIFICATION BY GOVERNING BODY

This project as proposed is in conformance with the requirements of all municipal ordinances and the Governing Body of this municipality/authority approves of the project as proposed by the applicant.

Endorsed by: \_\_\_\_\_  
(Name of Municipality or Authority)

Signed\* \_\_\_\_\_

\_\_\_\_\_  
Print or Type: Name and Title Date

\* Give authorization to sign for the Governing Body \_\_\_\_\_  
Submit the resolution granting such authority to sign. If no such resolution granting authority to sign exists, the full resolution approved by the Governing Body endorsing the project must be submitted with this application.

\*\* NOTE:

Where a municipality has created a sewerage authority, utilities authority, municipal utilities authority or a joint meeting responsible for sewers in the area, the endorsement of the affected sewerage authority(ies) is requested for a sewer extension approval.

B. Determination by the WQMP Agency

This project or activity, as proposed, has been reviewed by this agency in accordance with the Areawide Water Quality Management Plan (WQMP). The following determination has been made by either the appropriate designated WQMP agency, or the Department (where appropriate).

- ☐ Project is consistent with Plan \*
- ☐ Project is not inconsistent with Plan \*
- ☐ Project is inconsistent with Plan \*\*

_____		_____	
<i>Name of Project</i>		<i>Authorized Signature</i>	
_____		_____	
<i>Name of Plan</i>		<i>Name (Print or Type)</i>	<i>Date</i>
_____		_____	
<i>Name of Agency</i>		<i>Title</i>	

NOTE: For the name of the appropriate WQMP agency, or any other questions, contact the Division of Water Resources at (609) 984-4429.

- \* A finding of not inconsistent has the same effect as a finding of consistent.
- \*\* A finding of inconsistent must be accompanied by a letter describing the reason for the finding.

Sewer systems (interceptors, collectors, pump stations) for residential developments of 50 units or more and industrial/commercial and mixed use (including residential) developments having flows of 25,000 gpd or more, do require consistency determinations. Projects that are extensions or modifications to existing projects where the cumulative total for the project is greater than 50 units or 25,000 gpd, as appropriate, shall require a consistency determination (N.J.A.C. 7:15-1 et seq.)

Sewer systems to serve less than 50 units or less than 25,000 gpd do not require a consistency determination but must still be consistent with approved WQM/201 plans.

C. Endorsement by the Sewerage Agency in which the project is to be located.CERTIFICATION BY THE 201 SEWERAGE AGENCY

This project as proposed is in conformance with the requirements of all Sewerage Agency rules and regulations and the applicable "201" Facilities Plan and the Governing Body of this Sewerage Agency approves of the project as proposed by the applicant.

Endorsed by \_\_\_\_\_  
*Name of Treatment Plant*

Signed\* \_\_\_\_\_

\_\_\_\_\_  
*Print or Type: Name and Title Date*

- \* Cite authorization to sign for the Sewerage Agency \_\_\_\_\_
- Submit the resolution granting such authority to sign. If no such resolution granting authority to sign exists, the full resolution approved by the Sewerage Agency endorsing the project must be submitted with the application.



- D. Endorsement by owner of the treatment plant receiving the wastewater.

CERTIFICATION BY OWNER

SEWAGE TREATMENT FACILITY

I (we) hereby certify that the sum of the DEP currently approved projects plus the actual metered flow for the (name of the plant) does not exceed the present design capacity. I (we) further certify that with the addition of this project, the approved design capacity will not be exceeded. Further I (we) certify that the treatment plant is currently complying with its New Jersey Pollutant Discharge Elimination System permit (NPDES) requirements and should continue to do so with the additional flow from this project. ~

Endorsed by \_\_\_\_\_  
*Name of Treatment Plant*

Signed\* \_\_\_\_\_

\_\_\_\_\_  
*Print or Type: Name and Title Date*

If the owner is a public agency, cite authorization to sign for the publicly owned treatment works. Submit the resolution granting such authority to sign. If no such resolution granting authority to sign exists the full resolution approved by the governing body endorsing the project must be submitted with the application.

- E. 1) Pursuant to N.J.S.A. 58:10A-6 and N.J.A.C. 7:14A-12.1 et seq., no person may build, install, modify or operate any facility for the collection treatment or discharge of any pollutant, including any "extension" as defined in the regulations without the prior approval of the Department.
- 2) Approvals, permits, service contracts or other reservation of capacity issued or agreed to by any participating municipality or sewerage agency does not constitute the required approval of the Department.
- 3) For computation of actual flow at the sewer plant, the average flow processed by the facility for the four (4) month period immediately preceding the submission shall be used. Under NJPDES Regulations no application shall be submitted if the waste treatment facility is not meeting its discharge permit limits. Under Sewer Ban Regulations, no project is to be submitted if the sewer plant is committed to 100% of its design capacity.
- 4) The owner of the sewage treatment plant shall submit to NJDEP on a quarterly basis the status of sewage flow entering the plant including all outstanding approved sewer extension permits not yet on line. These reports will be used for tracking capacity at the receiving sewage treatment plant. See Form WQM-007.

7. Identification of administrative orders, administrative consent orders, notices of violations, complaints filed, or other corrective or enforcement action(s) required by any governmental agency(ies) with regard to the operation of the applicant at that site concerning pollution within the previous five years;

8. To the extent practicable, the location of all sites involved in the storage of solid or liquid waste at the facility for which the NJPDES application is being made and the ultimate disposal sites of solid or liquid waste generated by any facility with a discharge;

9. A topographic map (U.S. Geological Survey Topographic Map, 7.5 minute Quadrangle Series) extending one mile beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the map area;

10. A brief description of the nature of the business.

(i) The Department may require that an applicant for an NJPDES permit provide additional data, reports, specifications, plans or other information concerning the existing or proposed pollution control program. For new discharges to groundwater permits and all discharges to surface water permits, the Department shall not make a final determination on any application until such time as the applicant has supplied the requested information and corrected any deficiencies therein.

(j) Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under N.J.A.C. 7:14A-2.1, 3.2(DSW), 4.4(IWMF), 5.8(UIC) and N.J.A.C. 7:14A-6 and 7:14A-10 for a period of at least five years from the date the application is signed.

(k) Applicants for NJPDES permits shall provide endorsements and comments as follows:

1. Prior to the submission of an application for a permit to discharge to surface or groundwater, DAC, or to gain approval for a treatment works or sewer connection, the applicant shall submit (return receipt requested) a copy of the application and the applicable information required pursuant to this chapter to the affected sewage authority(ies) and to the municipality in which the discharge(s) will be located, with a request that they endorse the application.

i. Permit applications submitted to the Department for a new discharge to surface water or groundwater, DAC, or to gain approval for

7:14A-2.1 POLLUTANT DISCHARGE ELIMINATION SYSTEM

a treatment works on sewer connection shall include the endorsement from both the affected sewage authority(ies) and municipality in which the discharge(s) will be located.

ii. Applications submitted to the Department for renewal of NJPDES permits or discharges which exist as of March 5, 1981 shall include a copy of all endorsements and comments received or a copy of the request for an endorsement and receipt (return receipt requested) sent to the affected sewage authority(ies) and municipality in which the discharge(s) will be located.

2. An endorsement by a municipality shall be as follows:

i. An endorsement by a municipality concerning a proposed discharge or treatment works shall include the following statements:

(1) The project as proposed is in conformance with the requirements of all municipal ordinances; and

(2) The governing body of the municipality accepts and approves of the project as proposed by the applicant.

ii. An endorsement shall be in the form of a resolution by the governing body.

iii. Proof that the applicant has made a request for endorsement shall be submitted to the Department by the applicant with the application.

iv. If the endorsement is to be signed by anyone other than the mayor, the municipality shall file with the Department an official resolution by the governing body delegating such responsibility to a named individual.

3. An endorsement by an affected sewage authority shall be as follows:

i. For purposes of this section, "affected sewerage authority" means the sewerage authority whose service area includes the site where the discharge requiring a NJPDES permit is located.

ii. An endorsement by an affected sewage authority concerning a proposed discharge of pollutants or a treatment works shall include the following statements:

(1) The project as proposed is in conformance with the applicable 201 facilities plan and all ordinances, rules or regulations of the authority.

(2) The governing body of the authority accepts and approves of the project as proposed by the applicant.

iii. The endorsement must be in the form of a resolution by the governing body.

iv. Proof that the applicant has made a request for endorsement shall be submitted to the Department by the applicant with the application.

4. The lack of an endorsement for renewal of NJPDES permits or discharges which exist as of March 6, 1981 may have the following effect:



i. The affected sewage authority or municipality must endorse the application or submit comments within 60 days of the request for endorsement. Prior to the expiration of the 60-day period to request an endorsement, the municipality or sewage authority may request a 30-day extension for review of a request for endorsement.

ii. Any document issued by a sewage authority or a municipality which is a tentative, preliminary, or conditional approval shall not be considered an endorsement.

iii. Where the affected sewerage authority or municipality denies endorsement to a project, it shall state all reasons for rejection or disapproval in a resolution and send a certified copy of the resolution to the Department.

iv. Where the municipality or affected sewage authority denies an endorsement or does not issue an endorsement, the Department shall review the reasons for denial or for the lack of endorsement, if known. These reasons shall be considered by the Department in making a determination of whether to issue a draft permit in accordance with N.J.A.C. 7:14A-7.6.

5. The lack of an endorsement or denial of an endorsement for a new discharge to surface or groundwater, DAC, or approval of a treatment works or sewer connection shall have the following effect:

i. When the affected sewage authority or municipality denies endorsement to a project, the permit application may be determined by the Department to be incomplete for processing.

ii. Where the municipality or affected sewage authority denies an endorsement or does not issue an endorsement, the Department shall review the reason for denial or for the lack of endorsement, if known.

As amended, R.1982 d.495, effective January 17, 1983.

See: 15 N.J.R. 85(a).

(c): "interim NJPDES permit" exception added.

Amended by R.1987 d.458, effective November 16, 1987.

See: 19 N.J.R. 2085(a), 19 N.J.R. 2152(a).

Substantially amended.

## **7:14A-2.2 Emergency permits**

(a) The Department may issue an emergency permit to allow the activities listed in (b) below only after making a finding that:

1. An imminent and substantial endangerment to human health will result unless an emergency permit is granted; or

2. Except with regard to an injection under the UIC program, an imminent and substantial endangerment to the environment will result unless an emergency permit is granted; or

3. A substantial and irretrievable loss of oil or gas resources will occur unless an emergency permit is granted to a Class II well under the UIC program; and

NJ0025411

FORM  
2C  
NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY  
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER  
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS  
Consolidated Permits Program

## I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
461A	39	28	15	75	32	30	Delaware River
461B	39	28	15	75	32	30	Delaware River
461C	39	28	15	75	32	30	Delaware River
462A	39	28	15	75	32	30	Delaware River
462B	39	28	15	75	32	30	Delaware River
463A	39	28	00	75	32	30	Delaware River

## II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
	A. OPERATION (list)	B. AVERAGE FLOW (include units)	C. DESCRIPTION	D. LIST CODES FROM TABLE 2C.1
461A	Cooling Tower Blowdown	31 MGD	See Attachment	1F 2E
				2F 4A
				5P
461B	Liquid Radioactive Waste System	0.039 MGD	See Attachment	1F
	(Batch Operation)			2K 4A
				4C 5Q
461C	Low Volume and Oily Waste Treatment System	0.062 MGD	See Attachment	2J
				1H 1U
				4A 5D
462A	North yard Storm Drain	0.169 MGD	See Attachment	4A
	(Intermittent Flow)			
462B	Sewage Treatment System	0.032 MGD	See Attachment	1Q 1U
				2F 3A
				4A 5L
463A	South Yard Storm Drain	0.205 MGD	See Attachment	4A
	(Intermittent Flow)			

OFFICIAL USE ONLY (effluent guidelines sub-categories)





C. EXCEPT FOR STORM RUNOFF, REBS, OR SPILLS, ARE ANY OF YOUR DISCHARGES DESCRIBED BY 1. (a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z) (aa) (ab) (ac) (ad) (ae) (af) (ag) (ah) (ai) (aj) (ak) (al) (am) (an) (ao) (ap) (aq) (ar) (as) (at) (au) (av) (aw) (ax) (ay) (az) (ba) (bb) (bc) (bd) (be) (bf) (bg) (bh) (bi) (bj) (bk) (bl) (bm) (bn) (bo) (bp) (bq) (br) (bs) (bt) (bu) (bv) (bw) (bx) (by) (bz) (ca) (cb) (cc) (cd) (ce) (cf) (cg) (ch) (ci) (cj) (ck) (cl) (cm) (cn) (co) (cp) (cq) (cr) (cs) (ct) (cu) (cv) (cw) (cx) (cy) (cz) (da) (db) (dc) (dd) (de) (df) (dg) (dh) (di) (dj) (dk) (dl) (dm) (dn) (do) (dp) (dq) (dr) (ds) (dt) (du) (dv) (dw) (dx) (dy) (dz) (ea) (eb) (ec) (ed) (ee) (ef) (eg) (eh) (ei) (ej) (ek) (el) (em) (en) (eo) (ep) (eq) (er) (es) (et) (eu) (ev) (ew) (ex) (ey) (ez) (fa) (fb) (fc) (fd) (fe) (ff) (fg) (fh) (fi) (fj) (fk) (fl) (fm) (fn) (fo) (fp) (fq) (fr) (fs) (ft) (fu) (fv) (fw) (fx) (fy) (fz) (ga) (gb) (gc) (gd) (ge) (gf) (gg) (gh) (gi) (gj) (gk) (gl) (gm) (gn) (go) (gp) (gq) (gr) (gs) (gt) (gu) (gv) (gw) (gx) (gy) (gz) (ha) (hb) (hc) (hd) (he) (hf) (hg) (hh) (hi) (hj) (hk) (hl) (hm) (hn) (ho) (hp) (hq) (hr) (hs) (ht) (hu) (hv) (hw) (hx) (hy) (hz) (ia) (ib) (ic) (id) (ie) (if) (ig) (ih) (ii) (ij) (ik) (il) (im) (in) (io) (ip) (iq) (ir) (is) (it) (iu) (iv) (iw) (ix) (iy) (iz) (ja) (jb) (jc) (jd) (je) (jf) (jg) (jh) (ji) (jj) (jk) (jl) (jm) (jn) (jo) (jp) (jq) (jr) (js) (jt) (ju) (jv) (jw) (jx) (jy) (jz) (ka) (kb) (kc) (kd) (ke) (kf) (kg) (kh) (ki) (kj) (kk) (kl) (km) (kn) (ko) (kp) (kq) (kr) (ks) (kt) (ku) (kv) (kw) (kx) (ky) (kz) (la) (lb) (lc) (ld) (le) (lf) (lg) (lh) (li) (lj) (lk) (ll) (lm) (ln) (lo) (lp) (lq) (lr) (ls) (lt) (lu) (lv) (lw) (lx) (ly) (lz) (ma) (mb) (mc) (md) (me) (mf) (mg) (mh) (mi) (mj) (mk) (ml) (mm) (mn) (mo) (mp) (mq) (mr) (ms) (mt) (mu) (mv) (mw) (mx) (my) (mz) (na) (nb) (nc) (nd) (ne) (nf) (ng) (nh) (ni) (nj) (nk) (nl) (nm) (nn) (no) (np) (nq) (nr) (ns) (nt) (nu) (nv) (nw) (nx) (ny) (nz) (oa) (ob) (oc) (od) (oe) (of) (og) (oh) (oi) (oj) (ok) (ol) (om) (on) (oo) (op) (oq) (or) (os) (ot) (ou) (ov) (ow) (ox) (oy) (oz) (pa) (pb) (pc) (pd) (pe) (pf) (pg) (ph) (pi) (pj) (pk) (pl) (pm) (pn) (po) (pp) (pq) (pr) (ps) (pt) (pu) (pv) (pw) (px) (py) (pz) (qa) (qb) (qc) (qd) (qe) (qf) (qg) (qh) (qi) (qj) (qk) (ql) (qm) (qn) (qo) (qp) (qq) (qr) (qs) (qt) (qu) (qv) (qw) (qx) (qy) (qz) (ra) (rb) (rc) (rd) (re) (rf) (rg) (rh) (ri) (rj) (rk) (rl) (rm) (rn) (ro) (rp) (rq) (rr) (rs) (rt) (ru) (rv) (rw) (rx) (ry) (rz) (sa) (sb) (sc) (sd) (se) (sf) (sg) (sh) (si) (sj) (sk) (sl) (sm) (sn) (so) (sp) (sq) (sr) (ss) (st) (su) (sv) (sw) (sx) (sy) (sz) (ta) (tb) (tc) (td) (te) (tf) (tg) (th) (ti) (tj) (tk) (tl) (tm) (tn) (to) (tp) (tq) (tr) (ts) (tt) (tu) (tv) (tw) (tx) (ty) (tz) (ua) (ub) (uc) (ud) (ue) (uf) (ug) (uh) (ui) (uj) (uk) (ul) (um) (un) (uo) (up) (uq) (ur) (us) (ut) (uu) (uv) (uw) (ux) (uy) (uz) (va) (vb) (vc) (vd) (ve) (vf) (vg) (vh) (vi) (vj) (vk) (vl) (vm) (vn) (vo) (vp) (vq) (vr) (vs) (vt) (vu) (vv) (vw) (vx) (vy) (vz) (wa) (wb) (wc) (wd) (we) (wf) (wg) (wh) (wi) (wj) (wk) (wl) (wm) (wn) (wo) (wp) (wq) (wr) (ws) (wt) (wu) (wv) (ww) (wx) (wy) (wz) (xa) (xb) (xc) (xd) (xe) (xf) (xg) (xh) (xi) (xj) (xk) (xl) (xm) (xn) (xo) (xp) (xq) (xr) (xs) (xt) (xu) (xv) (xw) (xx) (xy) (xz) (ya) (yb) (yc) (yd) (ye) (yf) (yg) (yh) (yi) (yj) (yk) (yl) (ym) (yn) (yo) (yp) (yq) (yr) (ys) (yt) (yu) (yv) (yw) (yx) (yy) (yz) (za) (zb) (zc) (zd) (ze) (zf) (zg) (zh) (zi) (zj) (zk) (zl) (zm) (zn) (zo) (zp) (zq) (zr) (zs) (zt) (zu) (zv) (zw) (zx) (zy) (zz)

☒ YES (complete the following table)

1. OUTFALL NUMBER (list)	2. OPERATION/ CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				5. R.A. (if any)
		3. DAYS PER WEEK (specify frequency)	3. MONTHS PER YEAR (specify frequency)	3. FLOW RATE (in mgd)		3. TOTAL VOLUME (specify units)		
				3. LONG TERM AVERAGE	3. MAXIMUM DAILY	3. LONG TERM AVERAGE	3. MAXIMUM DAILY	
461B	Liquid Radioactive Waste System	7	12	0.0388	0.095	0.0388 MGD	0.095 MGD	N/A

### III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☒ YES (complete Item III B)

☐ NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?

☐ YES (complete Item III C)

☒ NO (go to Section IV)

C. If you answered "yes" to Item III B, list the quantity which represents an actual measurement of your level of production, expressed in the terms of units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (list unit)
3. QUANTITY PER DAY	4. UNITS OF MEASURE	5. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

### IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or water treatment equipment or practices or any other environmental programs which may affect the discharges described in this application but is not limited to permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders or other conditions.

☐ YES (complete the following table)

☒ NO (go to Item IV B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT
	2. NO.	2. SOURCE OF DISCHARGE	

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

CONTINUED FROM PAGE 2

## V. INTAKE AND EFFLUENT CHARACTERISTICS

**A, B, & C:** See instructions before proceeding - Complete one set of tables for each outfall - Annotate the outfall number in the space provided.  
**NOTE:** Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-3.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Asbestos (DSN 461A)	Asbestos is a constituent of cooling tower fill, distribution piping and drift eliminators. Operating data shows no net addition of asbestos from operation of the cooling tower.		

## VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (list all such pollutants below)☐ **NO** (go to Item VI-B)

## VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on the receiving water in relation to your discharge within the last 3 years?

☐ YES (Identify the test(s) and describe their purposes below)

☒ NO (Go to Section VIII)

No biological toxicity testing was conducted on any of the discharges for which this application is being made. In the past biological toxicity testing was conducted on DSN 463B, however, this discharge was deleted from the NJPDES by permit modification effective February 15, 1987. The biological toxicity testing was completed and transmitted to the NJDEP in 1985 and 1986 and all results were within permit limitations.

## VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ YES (List the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

☐ NO (Go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (List)
National Environmental Testing (formerly Century Laboratories Inc.)	1501 Grandview Avenue Thorofare, NJ 08086	(609) 848-3939	Routine analyses required by Discharge Monitoring Reports (DMRs) except Temperature and TRC and pH.
South Jersey Testing Lab	PO Box 360 Bridgeton, NJ 08302	(609) 455-4204	
Lancaster Laboratories, Inc.	2425 New Holland Pike Lancaster, PA 17601-5994	(717) 656-2301	COD
RMC Environmental Services	Fricks Lock RD#1 Pottstown, PA 19464	(215) 326-9662	Analyses required by Form 2C-V, Parts A B, & C
Talbot Laboratories	600 Upland Ave. Upland, PA 19015	(215) 499-7474	Sewage Plant Analyses

## IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (Type or print)

Steven E. Miltenberger - Vice President and Chief Nuclear Officer

B. PHONE NO. (area code & no.)

(609) 339-1100

C. SIGNATURE

*Steven E. Miltenberger*

D. DATE SIGNED

3-30-90



II.B.3.a. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES  
ATTACHMENT

OUTFALL NUMBER/TREATMENT DESCRIPTION

<u>OUTFALL NO.</u>	<u>OPERATION</u>	<u>TREATMENT</u>
461A	Cooling Tower Blowdown	
	a.) Cooling Tower Blowdown is Delaware River Water concentrated approximately 1.3 times. Makeup to the Cooling Tower is provided from the Service Water System.	a.) Condenser cooling water is treated to remove heat by circulation through an evaporative natural draft (counter flow) cooling tower. Sodium hydroxide is added to control scaling. Sodium hypochlorite is added for biofouling prevention. PEG01 dispersant may be added to control condenser fouling. A portion of this water is continuously removed to prevent solids buildup as required, and is treated with ammonium bisulfite, a dechlorinating agent, to reduce chlorine residuals to permitted levels.
		b.) Cooling tower basin sediment is removed during maintenance outages to an onsite dredge spoil disposal area.
461B	Liquid Radioactive Waste System	
	a.) The Liquid Radioactive Waste System collects and processes water arising from various radioactive processes within the plant.	a.) These liquid wastes are treated in order to recycle water with a specific conductance of less than or equal to 1.0 umho per centimeter. Treated effluents in excess of plant need are discharged to the Delaware River in accordance with all Nuclear Regulatory Commission requirements.

OUTFALL NO.OPERATIONTREATMENT

- b.) Contaminated residues and deionizing resins created in the treatment of liquid radioactive wastes are solidified for off-site shipment and disposal in a Nuclear Regulatory Commission licensed facility.

This discharge is included in the permit application for completeness. The statement of basis for the draft NJPDES Permit dated 1985 for DSN 461B states:

"Limitations have not been imposed by this Division as this outfall is regulated by the Nuclear Regulatory Commission, however, all applicable Surface Water Quality Standards contained herein, must be satisfied."

This statement is applicable in this renewal of the NJPDES Permit.

461C

Low-Volume and Oily  
Waste Treatment System

- a.) The low-volume and oily waste treatment system collects potentially oily water from area, building, and equipment drains throughout the site. Most flows to the system are intermittent. Auxiliary boiler blowdown and quench waters are also treated in the low volume and oily waste treatment system.
- a.) These liquid wastes may have floatable and oily constituents, which are removed in an API-type oil separator. Solids are removed from the waste stream by gravity separation. After treatment, water discharges to the Delaware River through DSN 461A.
- b.) Oily sludges isolated from the oil-water separator are stored in a holding tank and trucked off-site to a licensed disposal facility.
- c.) Oil and floatables removed in the separator are routed to the waste oil tank. The materials are trucked off-site to a licensed disposal facility.

OUTFALL NO.OPERATIONTREATMENT

462A

North Yard Storm Drain

- a.) The north yard storm drain accepts area run-offs and site drainage from the facility parking lot, building roof drains, catch basins, etc. The Sewage Treatment Plant (DSN 462B) also discharges through this outfall but is treated and monitored independently.

- a.) No treatment is required since this is stormwater. These waters discharge directly to the Delaware River.
- b.) No sludges are generated by this system.

462B

Sewage Treatment System

- a.) The Sewage Treatment System at Hope Creek collects and treats sanitary wastes in an oxidation ditch (extended aeration-activated sludge type).

- a.) Solids are removed from the effluent by two gravity clarifiers, and a polishing sand filter. Sewage plant effluent is chlorinated prior to discharging to the Delaware River through DSN 462A.
- b.) Sludge from the process is gravity thickened and trucked off-site to a licensed treatment or disposal facility.

463A

South Yard Storm Drain

- a.) The south yard storm drain accepts area run-off and site drainage from the facility guardhouse, service water intake structure, roof drains, catch basins, etc.

- a.) No treatment is required and these waters discharge directly to the Delaware River.
- b.) No sludges are generated by this system.

OUTFALL NO.

OPERATION

TREATMENT

464

Perimeter Storm Drain

a.) The perimeter storm drain accepts storm water run-off and site drainage from areas external to the Hope Creek project.

a.) No treatment is required for stormwater and these waters discharge to the Delaware River.

b.) No sludges are generated by this system.



ATFALL NO.

OPERATION

TREATMENT

ITEM A

Service Water Travelling  
Screen Backwash, Strainer  
Backwash, and Sumps

a.) During operation of the Service Water Travelling Screens, debris collected from the river is removed from the screens by the spray of Service Water in a counterflow direction. This debris and backwash is routed through a trough back to the Delaware River.

a.) The inlet water for these sources is Delaware River Estuary Water and the discharge will be the same as the inlet with the exception of sodium hypochlorite which is added to Service Water before the Service Water Pumps for macro invertebrate fouling control. The discharge receives no treatment prior to return to the Delaware River Estuary and the amount of residual chlorine contained poses no adverse environmental effect.

b.) The strainers are backwashed when they accumulate materials and the differential pressure across the strainers rises to a predetermined setpoint. The volume of backwash water and the duration will vary with the cleanliness of the Delaware River Estuary and the number of strainers in service. This backwash water discharges with the travelling screen backwash water.

c.) The Service Water structure sumps collect ventings, drippage, and leakage from the components within the structure which contain Service Water (Delaware River Estuary Water). They are routed back to the Delaware River Estuary.

OUTFALL NO.OPERATIONTREATMENT

ITEM B

## Chlorination Structure Drains

- |   |  |
|---|--|
| a.) The sodium hypochlorite tank dike, control building, and bulk unloading spill containment can be directed to drain through DSN 463A.  | a.) No treatment of this discharge is performed on site.   |
| b.) The sodium hypochlorite tank dike has a valved drain which is normally closed.  | b.) When rainwater collects in this dike, it is analyzed for residual chlorine concentration and drained via this path if no residual chlorine is detected. If sodium hypochlorite leaks or spills into the dike, the contents would be removed to a licensed treatment facility.                                    |
| c.) The sodium hypochlorite unloading spill containment is designed to collect the maximum probable spill and prevent this material from reaching the Delaware River Estuary.   | c.) This spill containment is isolated during chemical handling. If a spill occurs during handling, the material is removed to a licensed treatment facility. Normal rainwater is allowed to flow to the South Yard Drain.   |
| d.) Floor drains in the sodium hypochlorite control building are directed to the South Yard Drains through a valved pipe. The Service Water chlorine analyzer, currently an Orion model 1770, continuously measures the residual chlorine in the Service Water System influent. Analytical residual and sample bypass are directed to the South Yard Drain. | d.) Spills of sodium hypochlorite would normally be absorbed or removed to a licensed treatment facility. The small volume of chlorinated Delaware River Estuary water which discharges from the continuous analyzer does not warrant any treatment as the South Yard Drain is tidal throughout much of its' length. |

Note: The NJDEP eliminated the settling pond discharge, DSN 463B, from the NJPDES permit on July 1, 1987. This discharge was used only during the time period when the Hope Creek Generating Station was under construction. This discharge ceased and an approved closure plan was effected when this stage of construction was completed.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS

EPA ID NUMBER (copy from Item 4 of Form 1)

NJ0025411

Form Approved  
OMB No. 2000-0059  
Approval expires 12-31-85

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

461A

PART A You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	2.0	230.0					1	mg/l	kg/d	4.0	782.1	1
b. Chemical Oxygen Demand (COD)	698.0	82375.4					1	mg/l	kg/d	654	127878.6	1
c. Total Organic Carbon (TOC)	2.6	306.8	32.00	n/A			1	mg/l	kg/d	2.2	430.2	1
d. Total Suspended Solids (TSS)	56.0	6608.9					1	mg/l	kg/d	146.0	28547.8	1
e. Ammonia (as N)	0.65	76.7					1	mg/l	kg/d	0.42	82.1	1
f. Flow	VALUE		VALUE		VALUE					VALUE		
	72.50		N/A		31.47		cont.	N/A	MGD	51.66		cont.
g. Temperature (winter)	VALUE		VALUE		VALUE				°C	VALUE		
	33.80		N/A		18.96		cont.			9.72		821
h. Temperature (summer)	VALUE		VALUE		VALUE				°C	VALUE		
	35.73		N/A		28.70		cont.			25.03		458
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM								
	6.3	9.8	N/A	N/A			312	STANDARD UNITS				

PART B Mark "X" in column 2 a for each pollutant you know or have reason to believe is present. Mark "X" in column 2 b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly or indirectly but expressly in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <small>(optional)</small>			
	a. PRESENT YES NO	b. ABSENT YES NO	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			1. CONCENTRATION	2. MASS	1. CONCENTRATION	2. MASS	1. CONCENTRATION	2. MASS				1. CONCENTRATION	2. MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual	X		1.30	20.73			0.01	1.30	4380	mg/l	kg/d			
c. Color	X									CLPT Units	N/A	20.0	N/A	1
d. Total Coliform	X									MPN/ 100 ml	N/A	488	N/A	6
e. Fecal Coliform	X									mg/l	kg/d	0.14	Ind	6
f. Total Solids (TSS) (4-185-001)	X									mg/l	kg/d	5.12	IND	105









1. POLLUTANT AND CAS NUMBER (if available)	2. MARK X			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	100-1000 LBS	1000-10000 LBS	10000-100000 LBS	A. MAXIMUM DAILY VALUE		B. MINIMUM 30 DAY VALUE (if available)		C. LONG TERM AVERAGE VALUE (if available)		UNIT OF MEASUREMENT	CONCENTRATION	MASS	A. LONG TERM AVERAGE VALUE		B. NO. OF ANAL YSES
				1-D MAX	1-D MAX	1-D MAX	1-D MAX	1-D MAX	1-D MAX						
GAS FRACTION - VOLATILE COMPOUNDS															
1V Acetoin (107 02 8)	X		X	<5.0	IND.					1	ug/L	kg/d	<5.0	IND	1
2V Acrylonitrile (107 13 1)	X		X	<5.0	IND.					1	ug/L	kg/d	<5.0	IND	1
3V Benzene (71 43 2)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
4V Bis (Chloro methyl) Ether (542 00 1)	X		X	ND	IND.					1	ug/L	kg/d	ND	IND	1
5V Bromoform (75 26 2)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
6V Carbon Tetrachloride (56 23 5)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
7V Chlorobenzene (108 90 7)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
8V Chloro- bromomethane (124 48 1)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
9V Chloroethane (75 00 3)	X		X	<10.0 ND	IND.					1	ug/L	kg/d	<10.0 ND	IND	1
10V 2 Chloro ethylmethyl Ether (110 75 8)	X		X	<10.0 ND	IND.					1	ug/L	kg/d	<10.0 ND	IND	1
11V Chloroform (67 66 3)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
12V Dichloro bromomethane (75 27 4)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
13V (Dichloro difluoromethane (75 71 0)	X		X	<10.0 ND	IND.					1	ug/L	kg/d	<10.0 ND	IND	1
14V 1,1 Dichloro ethane (75 34 3)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
15V 1,2 Dichloro ethane (107 06 2)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
16V 1,1 Dichloro ethylene (75 35 4)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
17V 1,2 Dichloro propane (78 07 5)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
18V 1,3 Dichloro propane (542 75 0)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
19V 1,1,1 Trichloro (110 81 4)	X		X	<5.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
20V Methyl bromide (74 83 3)	X		X	<10.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1
21V Methyl chloride (74 87 3)	X		X	<10.0 ND	IND.					1	ug/L	kg/d	<5.0 ND	IND	1



1 POLLUTANT AND CAS NUMBER (if available)	2 NAME			3 EFFICIENT			4 UNITS			5 INTAKE (estimated)		
	NAME	USE	TYPE	MAXIMUM DAILY VALUE	MAXIMUM VOLUME VALUE	MAXIMUM VOLUME VALUE	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION
GASE FRACTION - BASE NEUTRAL COMPOUNDS												
10 Acetophenone (83-32-9)	X			IND						1	ug/L	kg/d
20 Acetophenone (83-32-9)	X			IND						1	ug/L	kg/d
30 Anthracene (120-12-7)	X			IND						1	ug/L	kg/d
40 Benzidine (122-67-6)	X			IND						1	ug/L	kg/d
50 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
60 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
70 2,4-Dichloro-Fluorobenzene (208-99-2)	X			IND						1	ug/L	kg/d
80 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
90 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
100 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
110 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
120 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
130 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
140 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
150 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
160 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
170 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
180 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
190 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
200 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
210 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
220 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
230 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
240 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
250 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
260 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
270 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
280 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
290 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
300 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
310 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
320 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
330 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
340 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
350 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
360 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
370 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
380 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
390 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
400 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
410 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
420 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
430 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
440 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
450 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
460 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
470 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
480 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
490 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
500 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
510 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
520 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
530 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
540 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
550 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
560 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
570 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
580 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
590 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
600 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
610 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
620 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
630 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
640 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
650 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
660 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
670 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
680 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
690 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
700 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
710 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
720 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
730 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
740 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
750 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
760 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
770 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
780 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
790 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
800 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
810 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
820 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
830 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
840 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
850 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
860 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
870 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
880 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
890 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
900 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
910 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
920 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
930 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
940 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
950 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
960 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
970 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
980 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
990 Benzene (66-75-1)	X			IND						1	ug/L	kg/d
1000 Benzene (66-75-1)	X			IND						1	ug/L	kg/d





COMPUTERIZED FINANCIAL TIME FORECAST

[illegible]

[illegible]

HOPE CREEK GENERATING STATION  
NJPDDES PERMIT NJ0025411

APPLICATION FORM 2C-V EXPLANATIONS - DSN 461A

The cooling tower blowdown is Delaware River Estuary water (intake) concentrated an average of 1.3 times during the heat removal process in the cooling tower. The cooling tower is not designed to remove pollutants from the intake water, however, some gravity settling of entrained silt will occur in the low velocity sections of the system, especially the cooling tower basin. Intake data is provided from historical analyses performed during facility construction, startup testing and operation.

PART A

C. Total Organic Carbon

As required by the application, reported analyses are on a single composite sample. Grab samples collected over a four year period indicate an average effluent concentration of 6.68 mg/l and an average intake concentration of 5.82 mg/l.

D. Total Suspended Solids

As required by the application, reported analyses are on a single composite sample. Grab samples collected over a four year period indicate an average effluent concentration of 111.69 mg/l and an average intake concentration of 86.35 mg/l.

PART B

Residual chlorine, phosphorus, and sulfate were analyzed due to the potential introduction to the process from the addition of sodium hypochlorite, BETZ Powerline PEG 01 dispersant, and ammonium bisulfate respectively. Other parameters marked "believed present" are based only on their presence in the Delaware River Estuary intake water.



HOPE CREEK GENERATING STATION  
NJPDDES PERMIT NJ0025411

APPLICATION FORM 2C-V EXPLANATIONS - DSN 461A

PART C - METALS, CYANIDE, AND TOTAL PHENOLS

The pollutants identified are believed to be present only due to their presence in the Delaware River Estuary intake water. The differences in the reported values are believed to be due to concentration in the cooling tower (which averages 1.3 times) and analytical variability. No measurable input of these parameters can be attributed to facility operations.

# HOPE CREEK GENERATING STATION NJPDES PERMIT NJ0025411 RENEWAL PERMIT SUMMARY TABLE

DSN 461A  
COOLING TOWER BLOWDOWN  
SHEET 1 OF 2

PARAMETER	EXISTING PERMIT		FILES	SWQS	DRBC	RECOMMENDATIONS		NOTES
	LIMIT	FREQUENCY				PERMIT LIMIT	FREQUENCY	
FLOW (MGD)	N/A	CONTINUOUS	31.47 AVG 72.5 MAX	N/A		N/A	CONTINUOUS	N/A
TEMPERATURE INFLUENT ° F (° C)	N/A	CONTINUOUS	15.07° C AVG 30.22° C MAX	N/A		N/A	CONTINUOUS	N/A
TEMPERATURE EFFLUENT ° F (° C)	96 (35.6)	CONTINUOUS	22.72° C AVG 35.73° C MAX	86 (30) <sup>5</sup>	110 (43.3) <sup>4</sup>	110 (43.3) MAX DAILY	CONTINUOUS	N/A
NET HEAT RATE OCT-MAY (MBTU/HR)	330 <sup>1</sup>	CONTINUOUS	154.17 AVG 490.53 MAX	N/A <sup>5</sup>	N/A	MAX DAILY	CALCULATED	CALC
NET HEAT RATE JUNE-SEPT (MBTU/HR)	230 <sup>1</sup>	CONTINUOUS	79.66 AVG 248.10 MAX	N/A <sup>5</sup>	N/A	MAX DAILY	CALCULATED	CALC
TRC (MG/L)	0.2 AVG 0.5 MAX	CONTINUOUS <sup>2</sup>	0.01 AVG 1.30 MAX	N/A	N/A	0.2 AVG 0.5 MAX DAILY	THREE TIMES/WEEK	N/A
PETROLEUM HC, NET (MG/L)	10 MAX <sup>3</sup>	TWICE MONTHLY	0.46 AVG 2.9 MAX	N/A <sup>3</sup>	N/A	DELETE	----->	
TSS, NET (MG/L)	N/A	TWICE MONTHLY	30.68 AVG 280.80 MAX	N/A	30 DAY AVG 100 MG/L <sup>6</sup>	DELETE	----->	

**HOPE CREEK GENERATING STATION  
NJPDDES PERMIT NJ0025411 RENEWAL  
PERMIT SUMMARY TABLE**

**DSN 461A  
COOLING TOWER BLOWDOWN  
SHEET 2 OF 2**

PARAMETER	EXISTING PERMIT			FILES	SWQS	DRBC	PERMIT RECOMMENDATIONS			
	LIMIT	FREQUENCY	TYPE				LIMIT	FREQUENCY	TYPE	NOTES
TOC, NET (MG/L) <sub>7</sub>	20 MAX	TWICE MONTHLY	N/A	0.89 AVG 21.00 MAX	N/A	N/A	20 DAILY MAX	TWICE MONTHLY	GRAB	18
pH RANGE (S.U.)	6.0 MIN 9.0 MAX	TWICE WEEKLY	GRAB	6.30 MIN 9.80 MAX	6.5 MIN 8.5 MAX	6.5 MIN 8.5 MAX	6.0 MIN 9.0 MAX	TWICE WEEKLY	GRAB	19
ASBESTOS (UG/L) <sub>9</sub>	N/A	TWICE MONTHLY	GRAB	NET 0.11 AVG 12.00 MAX	N/A	N/A	DELETE			20
PHOSPHORUS (MG/L)	N/A	TWICE MONTHLY	GRAB	NET 0.10 AVG 2.00 MAX	N/A	N/A	N/A NET	TWICE MONTHLY (IF ADDED)	GRAB	21
COPPER, NET <sub>8</sub> (MG/L)	0.2 MAX	TWICE MONTHLY	GRAB	EFF 0.03 AVG 0.18 MAX	N/A	0.2 10	0.2 DAILY MAX	TWICE MONTHLY (IF ADDED)	GRAB	22
ZINC NET <sub>8</sub> (MG/L)	0.6 MAX	TWICE MONTHLY	GRAB	EFF 0.05 AVG 0.15 MAX	N/A	0.6 10	0.6 DAILY MAX	TWICE MONTHLY (IF ADDED)	GRAB	22
CHROMIUM, NET <sub>8</sub> (MG/L)	0.2 MAX	TWICE MONTHLY	GRAB	EFF 0.03 AVG 0.20 MAX	N/A	0.1 10	0.2 DAILY MAX	TWICE MONTHLY (IF ADDED)	GRAB	22

EXPLANATION OF EXISTING PERMIT REFERENCE NOTES

1. The net rate of addition of heat is determined by the product of heat capacity, discharge flow and discharge-intake temperature difference (Part III-B/C, page 2 of 9).
2. During periods of chlorination (Part III-B/C, page 2 of 9).
3. And no visible sheen, (Part III-B/C, page 2 of 9).
4. Where readily accessible to human contact (DRBC Administrative Manual, Part III).
5. Temperature and Heat Dissipation Areas (Part III-B/C, page 9 of 9)
  1. Temperature, except in designated heat dissipation areas shall not be raised above ambient temperature by more than 4 degrees Fahrenheit during the period from September through May not more than 1.5 degrees Fahrenheit during the period from June through August, nor shall maximum temperatures exceed 86.
  2. The heat dissipation area for the cooling tower blowdown, DSN 461A, shall be defined as a rectangle extending 2500 feet upstream or downstream and 1500 feet outshore from the point of discharge.
6. Suspended Solids (DRBC Resolution No.80-2).
7. Based on written request from the permittee, this limit has replaced the Chemical Oxygen Demand limitation (Part III-B/C, page 2 of 9).
8. Sampling is required only if maintenance chemicals containing these metals are used (Part III-B/C, page 2 of 9).
9. Monitoring shall be conducted using the EPA test, EPA-600/4-80-005, January, 1980, Interim Method for determining Asbestos in Water (Part III-B/C, page 2 of 9).
10. From DRBC Interpretive Guideline No. 1.



EXPLANATION OF NOTES

11. The cooling tower blowdown flowrate is continuously monitored and recorded. The daily value is calculated by computer. For all continuous monitoring at this outfall, if the continuous recorder fails, readings will be taken once per 8 hour shift to fulfill the continuous monitoring requirement.
12. The Influent Temperature from the Delaware River Estuary is monitored at the same frequency as the Effluent Temperature to provide the information required to calculate the total Heat Rate.
13. The Cooling Tower Blowdown discharges to the Delaware River Estuary. The current Effluent Temperature limitation was based on initial engineering calculations prior to actual construction or operation of the Cooling Tower. Temperature monitoring has been conducted and reported since August of 1986 and a maximum effluent temperature value of 35.73 Deg C was reported for August of 1988. The Cooling Tower Blowdown Study as approved by the NJDEP will provide recommended limitations for this parameter.
14. The limitations for Heat Rate in the current permit are under review in the Cooling Tower Blowdown Study approved by the NJDEP. Based on the results of this Study, recommended limitations will be developed.

EXPLANATION OF NOTES

15. Total Residual Chlorine (TRC) may not be discharged from the generating unit for more than 2 hours per day. Since the cooling tower has demonstrated that the addition of the biocide is necessary for continued operation, a dechlorination system utilizing ammonium bisulfite is in service. This dechlorination system automatically controls the TRC discharged below 0.2 milligrams per liter average and 0.5 milligram per liter daily maximum and ensures TRC is not discharged from the generating unit for more than 2 hours per day. The current monitoring frequency of "continuous" should be modified to three times per week consistent with the existing Salem Generating Station NJPDDES permit (NJ0005622) and other generating facility Total Residual Chlorine monitoring frequencies. As can be seen from the attached Total Residual Chlorine concentration graph, the monthly TRC average discharge does not exceed the 0.2 milligram per liter limitation and monitoring in excess of three times per week is therefore unwarranted.

The Cooling Tower Blowdown (DSN 461A) schematic (attached) shows the flow from the Delaware River through the service water system, consisting of the safety auxiliaries cooling system and reactor auxiliaries cooling system heat exchangers, which provides makeup to the cooling tower. The safety auxiliaries cooling system and reactor auxiliaries cooling system collectively are called the service water (SW) system which is a nuclear safety related system, required by the Nuclear Regulatory Commission to be available and operable at all times (License Number NFP-57 Technical Specification). As was demonstrated at Salem Generating Station, macroinvertebrate fouling is a severe problem and chlorination of the service water system is routinely conducted 24 hours a day, seven days per week. The discharge from the service water system, a low volume waste system, is normally supplied to the cooling tower for make up water. However, when the cooling tower is not in operation a cooling tower bypass line is provided to allow this low volume waste stream to discharge back to the Delaware River Estuary through DSN 461A. The applicant requests that TRC discharges in excess of 2 hours per day be allowed to accommodate continuous chlorination of the service water system, provided that TRC discharges resulting from the cooling tower (electric generating unit) chlorination do not exceed two hours per day.

EXPLANATION OF NOTES

The intake deicing flowpath shown on the enclosed Schematic of Water Flow allows a small amount of heated water from the circulating water system or service water system to be directed to the intake area to prevent icing during harsh winter conditions. This flowpath is infrequently used and most of the water used for deicing is returned to the system through the service water pumps.

16. The average net petroleum hydrocarbon concentration in this outfall has not been measurable in the discharge for the last three years as can be seen on the attached graph entitled Average Petroleum Hydrocarbon Concentration DSN 461A. The cooling tower blowdown (DSN 461A) schematic shows there is no location within this system which would allow the introduction of petroleum hydrocarbons in sufficient quantities to be monitored in the effluent. Based on the infeasibility of introduction of measurable quantities of petroleum hydrocarbons to the system and the three year historical data showing an average of 0.0 milligrams per liter discharged, the applicant requests monitoring and limitations for this parameter be deleted. A surrogate measure of any petroleum hydrocarbon discharged is accomplished by analyzing for total organic carbon (TOC) as discussed in note 18 below. Adequate protection of the environment is also provided by the "no visible sheen" requirement.
17. The Total Suspended Solids (TSS) monitoring requirements should be deleted. TSS was included in the 1985 NJPDDES Permit as a monitored parameter to develop a one year database for evaluation of future limitations. The four years of data collected indicate that TSS cannot be reliably measured, nor it is representative of the cooling tower blowdown. Based on the three year average discharge flow rate of DSN 461A, to discharge even just 30 milligrams per liter net TSS would require dissolving and resuspending approximately 120 tons of condenser and piping material each month. Obviously, the plant would be incapable of operating at erosion or corrosion rates of a 120 tons per month. Based on the nonrepresentativeness of this parameter and the infeasibility of discharging at even the most restrictive level, deletion of the monitoring requirements for this parameter is recommended.



EXPLANATION OF NOTES

18. The Total Organic Carbon (TOC) monitoring and limitations have been incorporated in the permit by the modification effective November 1, 1989 with a net limitation of 20 mg/l. Based on the three year average discharge flow rate of DSN 461A, to discharge even 20 milligrams per liter net TOC would require the addition of approximately 80 tons of organic material each month. Based on the infeasibility of adding this amount of organic material, deletion of the monitoring requirements for this parameter should be considered.
19. No change in the monitoring or limitations are requested for this parameter.
20. Asbestos is a naturally occurring substance in the Delaware River Estuary intake water. Monitoring of intake and effluent asbestos concentration for over four years has demonstrated no measurable net addition of asbestos from the cooling tower. Monitoring for asbestos has been conducted using the EPA test, EPA-600/4-80-005, January, 1980, Interim Method for Determining Asbestos in Water. Based on the data collected to date, asbestos should be deleted as a monitored parameter.
21. Phosphorus monitoring requirements were incorporated based on the modification to the NJPDES issued May 27, 1987 and effective July 1, 1987. The attached phosphorus concentrations graph shows the effluent phosphorus concentration from May, 1987 through December 1989, and the influent concentration from August, 1988 through December, 1989. The modification to the NJPDES permit was requested to allow the addition of Betz Power Line PEG-01 anti-scalant additive to the cooling tower to maintain its operating efficiency. Influent phosphorus concentration measurements were initiated in August 1988 to determine the net addition of phosphorus in the cooling tower blowdown. As the net phosphorus concentration graph shows, a major contributor to phosphorus in the cooling tower discharge is the phosphorus concentration in the Delaware River Estuary influent. Continued monitoring of the net phosphorus discharge is appropriate and a note should be added to the phosphorus parameter stating that sampling is required only if an anti-scalant containing phosphorus is used. An additional note should be added to allow deletion of the monitoring requirements for this parameter if one additional year of monitoring data shows no net addition of phosphorus as a twelve month average.



EXPLANATION OF NOTES

22. Copper, zinc, and chromium are currently limited in the permit and are annotated to indicate that sampling is required only if maintenance chemicals containing these metals are used. Although maintenance chemicals containing these metals are not currently in use at the facility, retention of these effluent limitations and monitoring requirements is acceptable.

To ensure the operability, integrity, and efficiency of the cooling tower, PSE&G plans to test various maintenance chemical additives in the cooling tower. A summary of generic maintenance chemical additives for cooling water identified throughout the industry is attached. It is not intended to suggest that a listed chemical is feasible for use at Hope Creek; in fact there are many that are not feasible. The list has been prepared to evaluate all testing options. To facilitate this maintenance chemical test program, it is requested that the following paragraph be inserted in Part IV-B/C of the permit:

Since the permittee has identified the need to test various maintenance chemical additives in the cooling tower to preserve the operability, integrity and efficiency of the cooling tower system, the testing of cooling water maintenance chemical additives may be conducted by the permittee without further approval by the Department. When a maintenance chemical additive is identified by the permittee for testing, the permittee shall notify the department by letter at least 30 days before the initiation of the test and provide the following information:

- a) Chemical(s) to be tested.
- b) Copy of Material Safety Data Sheet (or equivalent) for the maintenance chemical additive.
- c) Anticipated date of test initiation.
- d) Approximate duration of test.
- e) Concentration range of the chemical additive in the cooling tower.
- f) Concentration of constituent pollutants in the blowdown. If this concentration is below the detectability limits for this parameter, provide a calculated effluent concentration.
- g) Effluent monitoring to be conducted in conjunction with this test.

EXPLANATION OF NOTES

If the permittee's testing indicates that an additive is appropriate and will be used as a maintenance chemical additive for the cooling water system, a permit modification request will be submitted to the department for appropriate action.

This allowance for a testing program for maintenance chemical additives will allow the permittee to determine the most effective chemical additives for use in the cooling tower and provide the information necessary to the Department to ensure continued protection of the environment without inhibiting the maintainability of the cooling tower.

Summary of Generic Maintenance Chemical Additives For Cooling Water  
Not Necessarily Applicable To Any Single Facility

Corrosion Inhibitors

Chromate  
Molybdate  
Orthophosphate  
Orthosilicate  
Phosphonate  
Polyphosphate  
Polysilicate  
Triazole  
Zinc

Deposit Inhibitors

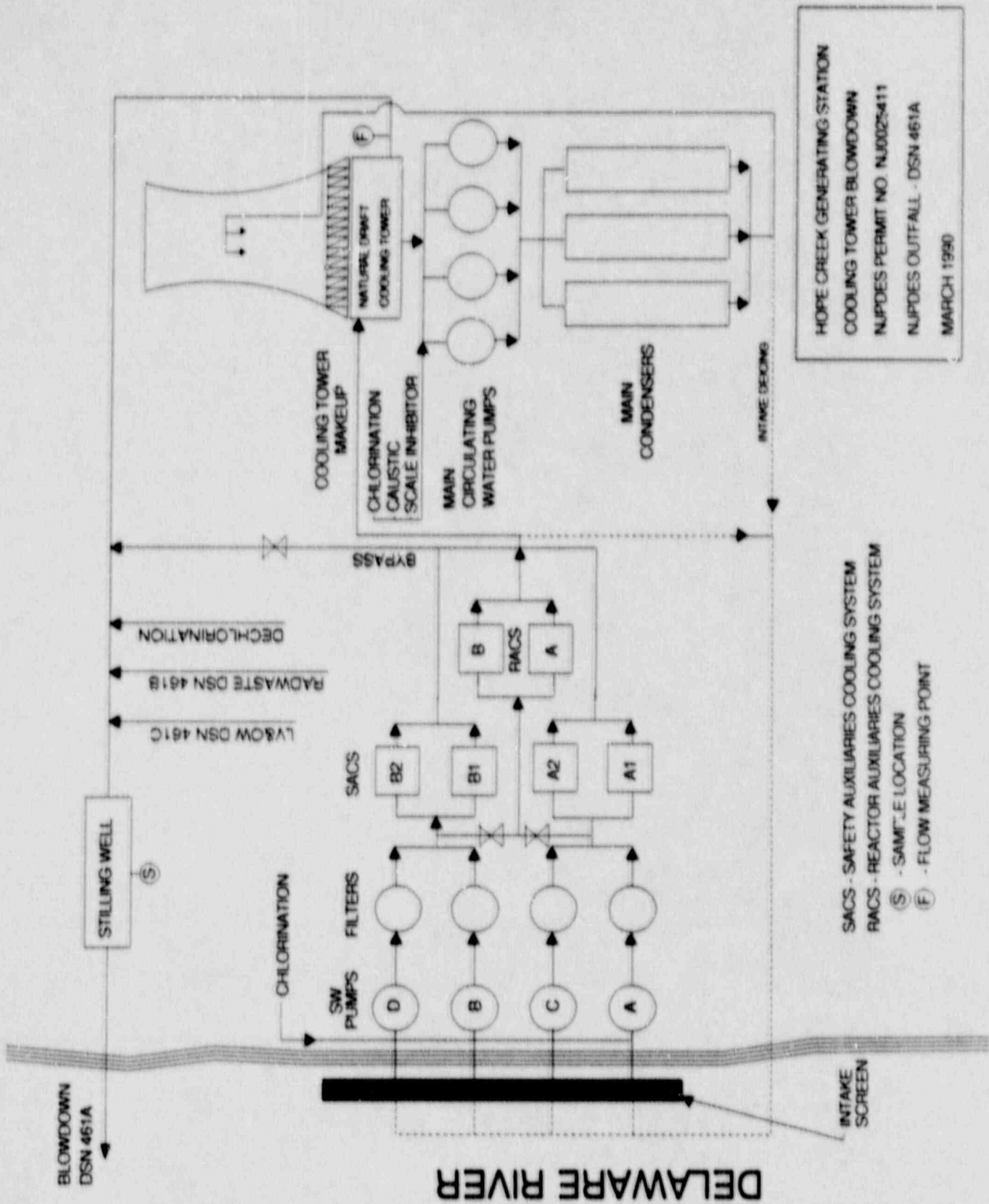
Lignosulfonate  
Phosphonate  
Polyacrylate  
Polyacrylamide  
Polymaleic Acid  
Sulfonated Polystyrene  
Tannin

Biocides + Dechlorination  
Chemicals

Acrolein  
Ammonia and Amines  
Arsenates and Arsenites  
Beta-Bromo-Beta-Nitrostyrene  
Brominated Propionamide  
Bromine  
Bromine Chloride  
Carbon Dioxide  
Chlorinated Phenol  
Chlorine  
Chlorine Dioxide  
Cyano Compounds  
Dimethyldithiocarbamate  
Ferrate  
Hydrogen Peroxide  
Hypochlorite  
Iodine  
Methylene Bis-Thiocyanate  
Organometals  
Ozone  
Permanganate  
Quaternary Ammonium Salts  
Sodium Sulfates + Sulfites  
Sulfur Dioxide

Other (Solvents, Cleaning  
Solutions, pH Control,  
Chelating Agents)

Ammoniated Bromate  
Ammonium Biofluoride  
Ammoniated Citric Acid  
Ammonium Peroxydisulfate  
Citric Acid  
Ethylenediamine/Salicylic Acid  
Ethylenediaminetetracetic Acid  
Hydrochloric Acid  
Hydroxyacetic-Formic Acid  
Limestone  
Mono-Ammonium Citrate  
Phosphoric Acid  
Sodium Hydroxide  
Sulfamic Acid  
Sulfuric Acid



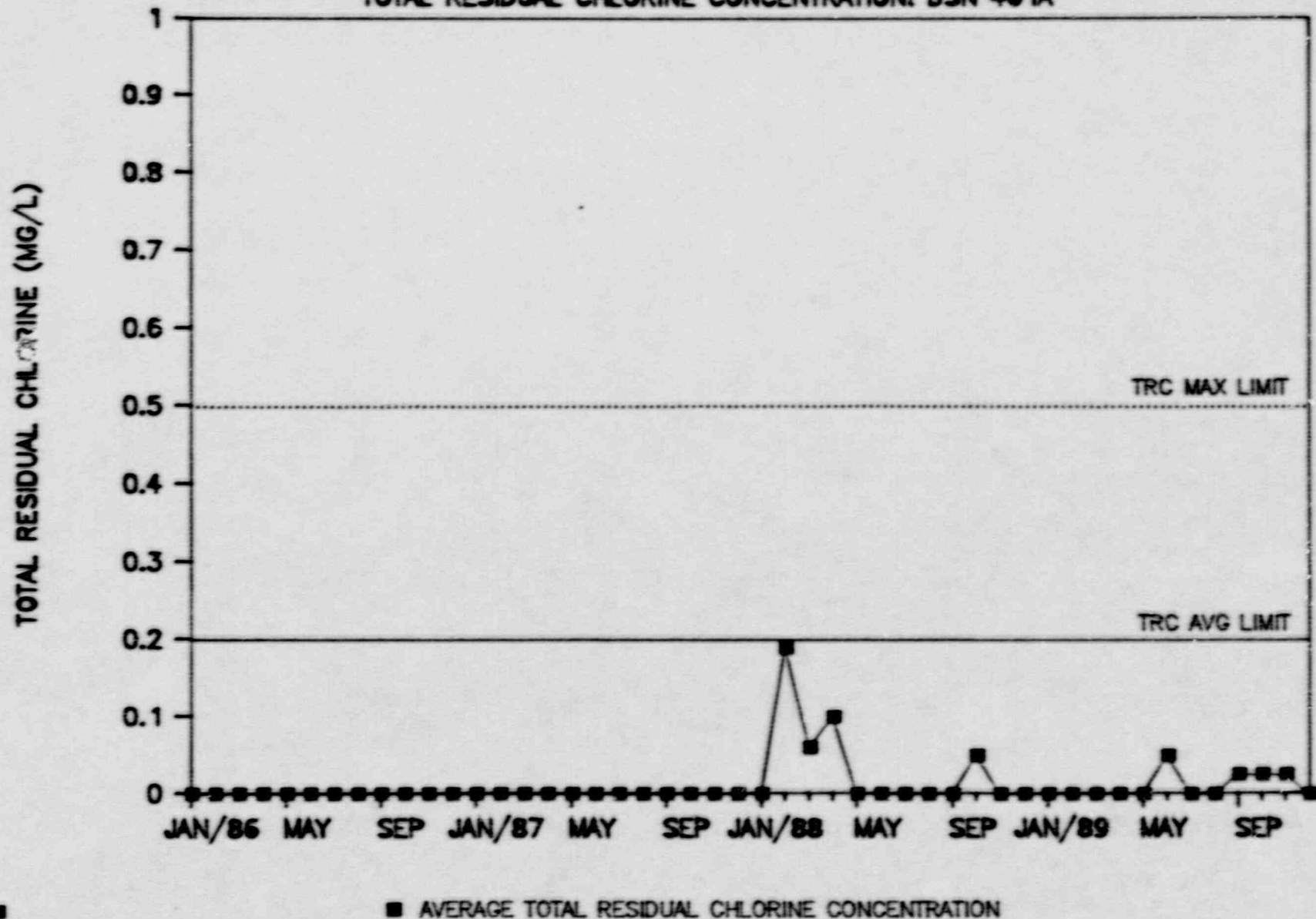
HOPE CREEK GENERATING STATION  
 COOLING TOWER BLOWDOWN  
 NUPDES PERMIT NO. NU0025411  
 NUPDES OUTFALL - DSN 461A  
 MARCH 1990

SACS - SAFETY AUXILIARIES COOLING SYSTEM  
 RACS - REACTOR AUXILIARIES COOLING SYSTEM  
 (S) - SAMPLE LOCATION  
 (F) - FLOW MEASURING POINT



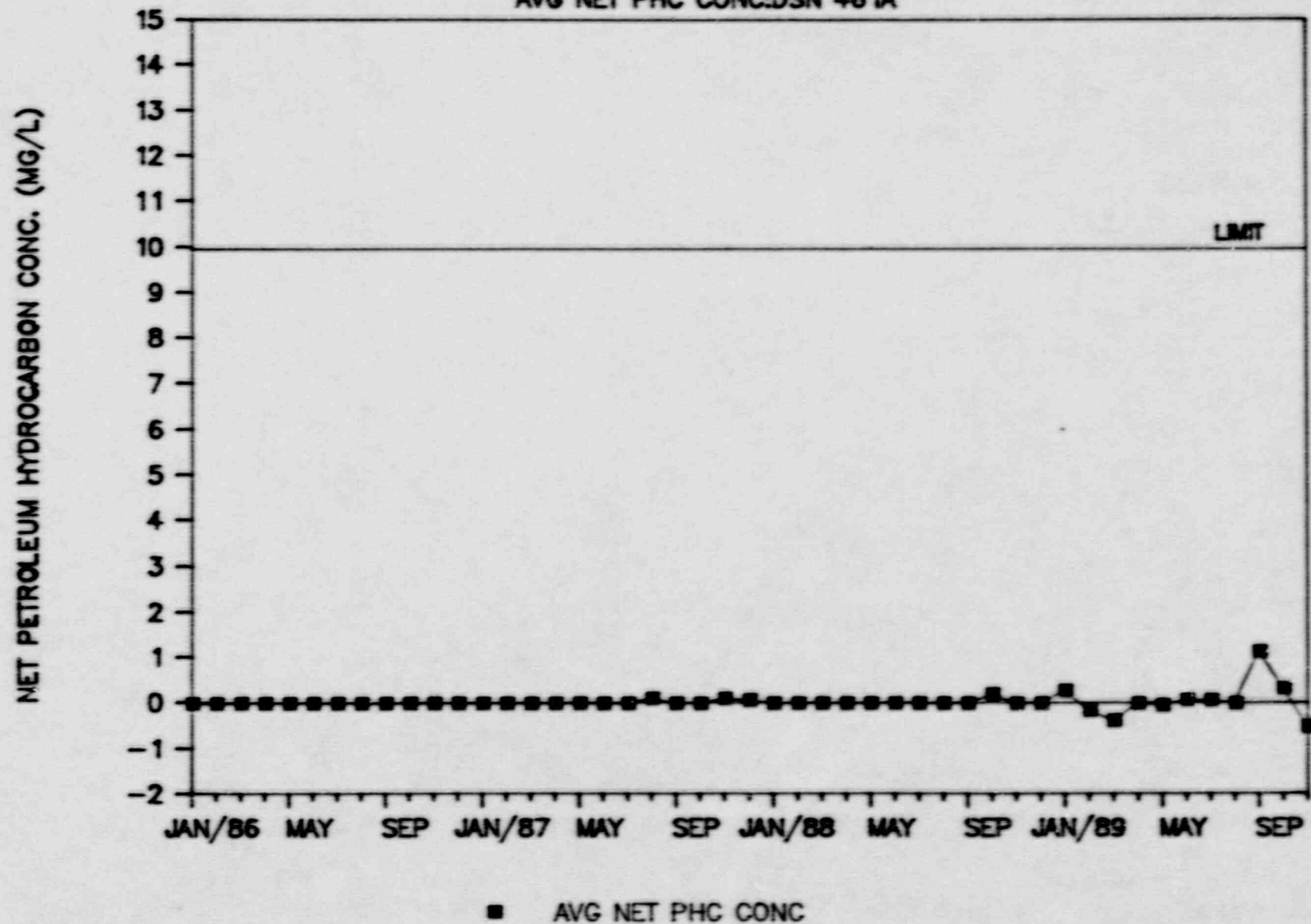
# HOPE CREEK GENERATING STATION

TOTAL RESIDUAL CHLORINE CONCENTRATION: DSN 461A



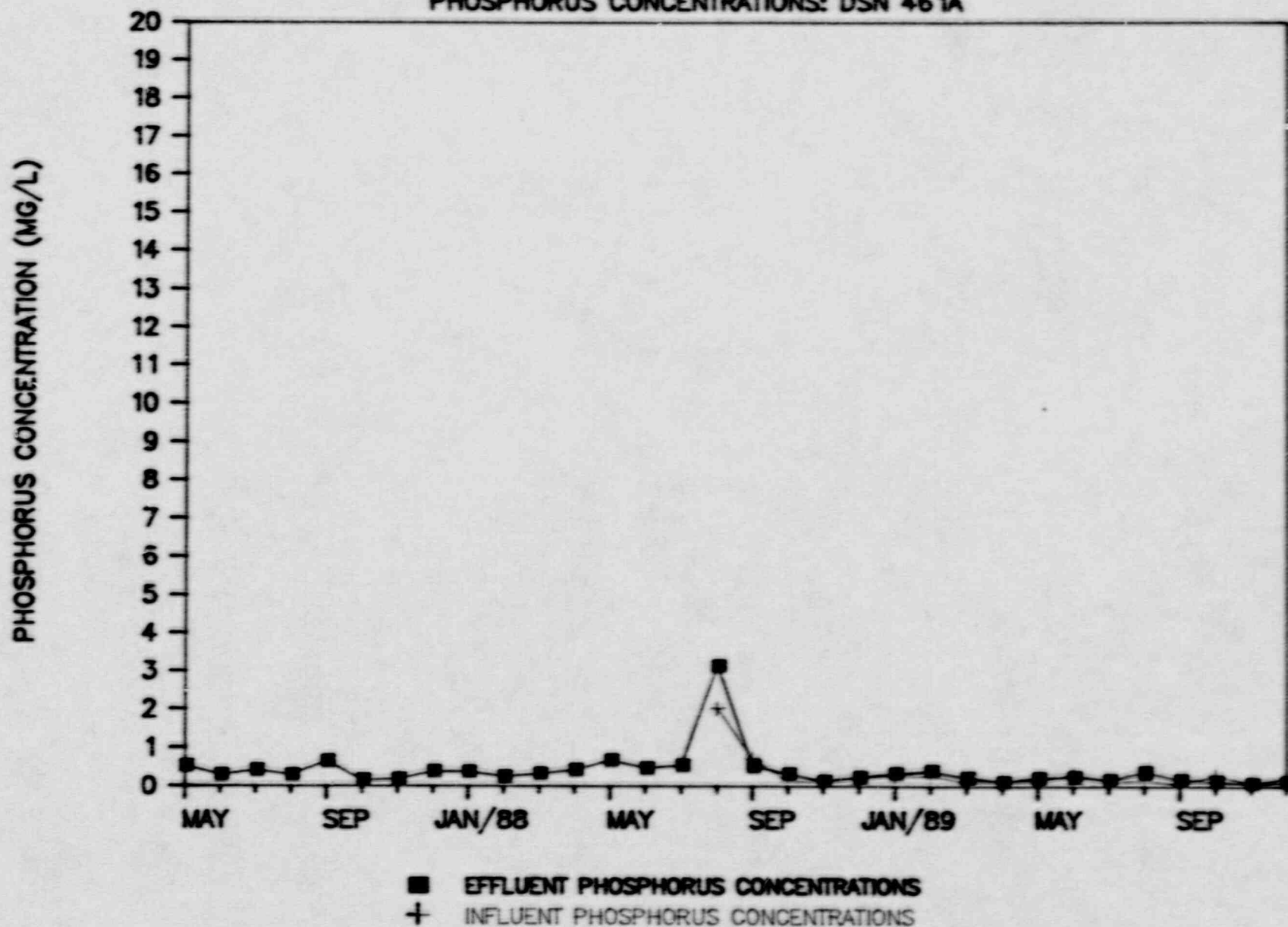
# HOPE CREEK GENERATING STATION

AVG NET PHC CONC:DSN 46 1A



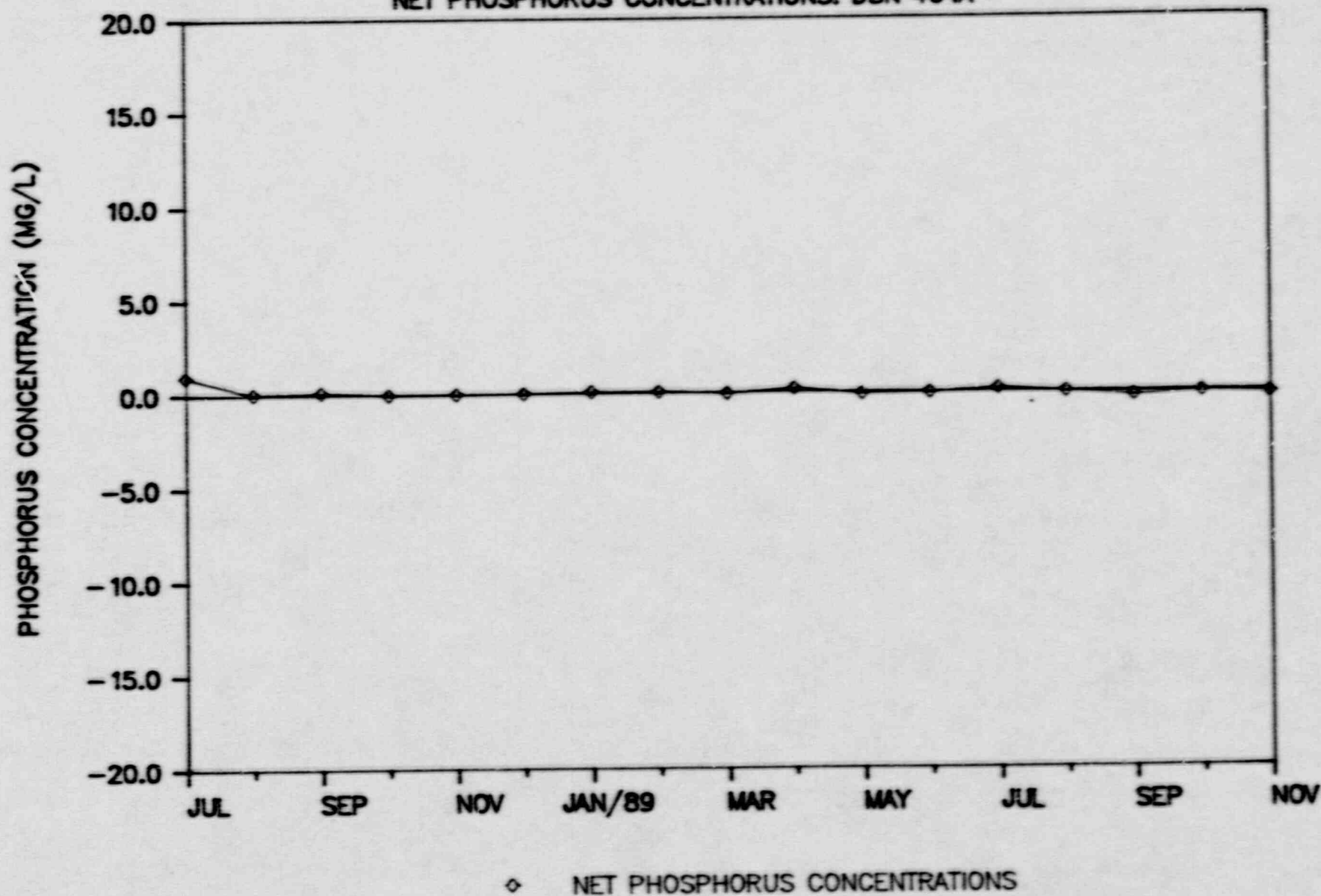
# HOPE CREEK GENERATING STATION

PHOSPHORUS CONCENTRATIONS: DSN 46 1A



# HOPE CREEK GENERATING STATION

NET PHOSPHORUS CONCENTRATIONS: DSN 461A





PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS

EPA ID NUMBER (copy from Item 1 of Form 1)

NJ0025411

Form Approved  
OMB No. 2000-0059  
Approval expires 12-31-05

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

461C

PART A: You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1 POLLUTANT	2 EFFLUENT						3 UNITS (except if blank)		4 INTAKE (gpm/mgd)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	0.5	0.1					1	mg/L	Kg/D			
b. Chemical Oxygen Demand (COD)	1200.0	281.34			45.27	10.61	96	mg/L	Kg/D			
c. Total Organic Carbon (TOC)	400.00	93.78			11.43	2.66	96	mg/L	Kg/D			
d. Total Suspended Solids (TSS)	184.00	IND			10.82	2.54	96	mg/L	Kg/D			
e. Ammonia (as N)	106.00	24.85			1.66	0.37	96	mg/L	Kg/D			
f. Flow	VALUE		VALUE		VALUE					VALUE		
	0.37		N/A		0.062		Cont.		MGD	N/A		
g. Temperature (winter)	VALUE		VALUE		VALUE				°C	VALUE		
	50.00		N/A		23.92		256			N/A		
h. Temperature (summer)	VALUE		VALUE		VALUE				°C	VALUE		
	33.00		N/A		25.56		128			N/A		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS				
	6.10	12.6	N/A	N/A			384					

PART B: Mark "X" in column 2 a for each pollutant you know or have reason to believe is present. Mark "X" in column 2 b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1 POLLUTANT AND CAS NO. (if available)	2 MARK X		3 EFFLUENT						4 UNITS		5 INTAKE (gpm/mgd)			
	a. NO. OF ANALYSES PER MONTH	b. NO. OF ANALYSES PER YEAR	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color		X												
d. Fecal Coliform	X									MPN 100 ML	N/A	488	N/A	6
e. Fecal Streptococcus (F+)	X									mg/L	Kg/D	0.14	IND	6
f. Total Coliform	X									mg/L	Kg/D	5.12	IND	105





1 POLLUTANT AND CAS NUMBER (if available)	2 NAME		3 MAXIMUM DAILY VALUE		4 EFFLUENT		5 EFFLUENT		6 UNITS		7 INTAKE (approx)	
	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%	100% 100% 100%
1V Acetone (107-02-8)	X	X	<5.0	IND					ug/L	Kg/D		
2V Acrylonitrile (107-13-1)	X	X	<5.0	IND					ug/L	Kg/D		
3V Benzene (71-43-2)	X	X	<5.0 ND	IND					ug/L	Kg/D		
4V Bis (Chloromethyl) Ether (50-82-1)	X	X	ND	IND					ug/L	Kg/D		
5V Bromoform (75-26-2)	X	X	<5.0 ND	IND					ug/L	Kg/D		
6V Carbon Tetrachloride (50-23-5)	X	X	<5.0 ND	IND					ug/L	Kg/D		
7V Chlorobenzene (108-90-7)	X	X	<5.0 ND	IND					ug/L	Kg/D		
8V Chloroethane (124-48-1)	X	X	<5.0 ND	IND					ug/L	Kg/D		
9V Chloroethane (106-60-3)	X	X	<10.0 ND	IND					ug/L	Kg/D		
10V 2 Chloroethylmethyl Ether (110-75-6)	X	X	<10.0 ND	IND					ug/L	Kg/D		
11V Chloroform (67-68-3)	X	X	<5.0 ND	IND					ug/L	Kg/D		
12V Dichlorobromomethane (75-27-4)	X	X	<5.0 ND	IND					ug/L	Kg/D		
13V Dichloroethane (78-37-6)	X	X	<10.0 ND	IND					ug/L	Kg/D		
14V 1,1 Dichloroethane (78-36-3)	X	X	<5.0 ND	IND					ug/L	Kg/D		
15V 1,2 Dichloroethane (107-06-3)	X	X	<5.0 ND	IND					ug/L	Kg/D		
16V 1,1 Dichloroethylene (78-35-4)	X	X	<5.0 ND	IND					ug/L	Kg/D		
17V 2 Dichloropropane (78-87-6)	X	X	<5.0 ND	IND					ug/L	Kg/D		
18V 1,3 Dichloropropane (542-75-9)	X	X	<5.0 ND	IND					ug/L	Kg/D		
19V 1,1,1 Trichloroethane (70-14-1)	X	X	<5.0 ND	IND					ug/L	Kg/D		
20V 1,1,2 Trichloroethane (70-14-1)	X	X	<5.0 ND	IND					ug/L	Kg/D		
21V 1,1,1 Trichloroethane (70-14-1)	X	X	<10.0 ND	IND					ug/L	Kg/D		
22V 1,1,2 Trichloroethane (70-14-1)	X	X	<10.0 ND	IND					ug/L	Kg/D		



CONTINUED FROM PAGE V-4

EPA ID NUMBER (copy from 1)

NJ0025411

of Form 15

OU 11 ALL NUMBER

461C

USEPA No. 2040-1000

Approval expires 7-31-88

1. POLLUTANT AND CAS NUMBER (if available)				2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
				1.1	1.2	1.3	6. MAXIMUM DAILY VALUE (if available)		7. MAXIMUM 30 DAY VALUE (if available)		8. LONG TERM AVERAGE VALUE (if available)		9. NO. OF ANALYSES	10. CONCENTRATION	11. MASS	12. LONG TERM AVERAGE VALUE (if available)		13. NO. OF ANALYSES
				1.1	1.2	1.3	1.1	1.2	1.1	1.2	1.1	1.2				1.1	1.2	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)																		
22V Methylene Chloride (75 09 2)	X		X	<5.0 ND*	IND								1	ug/L	Kg/D			
23V 1,1,2,2 Tetra chloroethane (79 34 5)	X		X	<5.0 ND	IND								1	ug/L	Kg/D			
24V Tetrachloro ethylene (127-18 4)	X		X	<5.0 ND	IND								1	ug/L	Kg/D			
25V Toluene (108 00 3)	X		X	<5.0 ND	IND								1	ug/L	Kg/D			
26V 1,2 Trans Dichloroethylene (156 60 8)	X		X	<5.0 ND	IND								1	ug/L	Kg/D			
27V 1,1,1 Tri chloroethane (71 66 6)	X		X	<5.0 ND	IND								1	ug/L	Kg/D			
28V 1,1,2 Tri chloroethane (79 00 6)	X		X	<5.0 ND	IND								1	ug/L	Kg/D			
29V Trichloro ethylene (79 01 6)	X		X	<5.0 ND	IND								1	ug/L	Kg/D			
30V Trichloro fluoromethane (75 69 4)	X		X	<5.0	IND								1	ug/L	Kg/D			
31V Vinyl Chloride (75 01 4)	X		X	<10.0 ND	IND								1	ug/L	Kg/D			
GC/MS FRACTION - ACID COMPOUNDS																		
1A 2 Chlorophenol (98 57 8)	X		X	<10.0 ND	IND								1	ug/L	Kg/D			
2A 2,4 Dichloro phenol (120 83 2)	X		X	<10.0 ND	IND								1	ug/L	Kg/D			
3A 2,4 Dimethyl phenol (105 67 9)	X		X	<10.0 ND	IND								1	ug/L	Kg/D			
4A 4,6 Dinitro O Cresol (834 82 1)	X		X	<50.0 ND	IND								1	ug/L	Kg/D			
5A 2,4 Dinitro phenol (51 28 5)	X		X	<50 ND	IND								1	ug/L	Kg/D			
6A 2 Nitrophenol (88 75 5)	X		X	<10 ND	IND								1	ug/L	Kg/D			
7A 4 Nitrophenol (100 02 7)	X		X	<50.0 ND	IND								1	ug/L	Kg/D			
8A p Chloro M Cresol (59 50 7)	X		X	<10.0 ND	IND								1	ug/L	Kg/D			
9A Pentachloro phenol (87 86 5)	X		X	<50.0 ND	IND								1	ug/L	kg/D			
10A Phenol (108 95 2)	X		X	<10.0 ND	IND								1	ug/L	Kg/D			
11A 2,4,6 Tri chlorophenol (100 06 2)	X		X	<10.0 ND	IND								1	ug/L	Kg/D			



CONTINUED FROM PAGE V-8

EPA ID. NUMBER (copy from Item 1 of Form 1)

NJ0025411

961C

Form Approved

OMB No. 2040-0086

Approval expires 7-31-88

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	1.1 CONC. IN WATER OR SLURRY	1.2 CONC. IN SLURRY OR GAS	1.3 CONC. IN GAS	6. MAXIMUM DAILY VALUE		7. MAXIMUM 30 DAY VALUE		8. LONG TERM AVERAGE VALUE		9. NO. OF ANAL YSES	10. CONCEN- TRATION	11. MASS	12. LONG TERM AVERAGE VALUE		13. NO. OF ANAL YSES
				(1) CONC. CONCENTRATION	(2) MASS	(1) CONC. CONCENTRATION	(2) MASS	(1) CONC. CONCENTRATION	(2) MASS				(1) CONCEN- TRATION	(2) MASS	
OCAS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
228. 1,4 Dichlorobenzene (108-46-7)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
238. 3,3' Dichlorobenzidine (91-84-1)	X		X	<20.0 ND	IND					1	ug/L	Kg/D			
248. Diethyl Phthalate (84-66-2)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
258. Dimethyl Phthalate (131-11-3)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
268. Di-N-Butyl Phthalate (84-74-2)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
278. 2,4 Dinitrotoluene (121-14-2)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
288. 2,6 Dinitrotoluene (88-26-2)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
298. Di-N-Octyl Phthalate (117-84-0)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
308. 1,2-Diphenylhydrazine (or Azobenzene) (122-66-7)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
318. Fluoranthene (206-44-0)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
328. Fluorene (86-73-7)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
338. Hexachlorobenzene (118-76-1)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
348. Hexachlorobutadiene (87-68-3)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
358. Hexachlorocyclopentadiene (77-47-4)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
368. Hexachloroethane (67-72-1)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
378. Indene (1,2,3-cd) Pyrene (193-38-6)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
388. Isophorone (78-59-1)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
398. Naphthalene (91-20-3)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
408. Nitrobenzene (98-95-3)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
418. N-Nitro-N-dimethylaniline (62-75-9)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			
428. N-Nitrosodi-N-Propylamine (11-73-8-7)	X		X	<10.0 ND	IND					1	ug/L	Kg/D			



1. POLLUTANT AND CAS NUMBER (if available)	2. HAZARD			3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
	HAZ. ID	HAZ. CLASS	HAZ. CODE	5. MAXIMUM DAILY VALUE	5. MAXIMUM 30 DAY VALUE	5. MAXIMUM 90 DAY VALUE	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION
<b>GC/MS FRACTION - BASE NEUTRAL COMPOUNDS (continued)</b>												
438 N Nitro-methylphenylamine (88-30-8)	X		X	IND	IND	IND	IND	IND	IND	IND	IND	IND
448 Phenanthrene (83-01-8)	X		X	IND	IND	IND	IND	IND	IND	IND	IND	IND
458 Pyrene (129-00-9)	X		X	IND	IND	IND	IND	IND	IND	IND	IND	IND
488 1,2,4-Trichlorobenzene (120-82-1)	X		X	IND	IND	IND	IND	IND	IND	IND	IND	IND
<b>GC/MS FRACTION - PESTICIDES</b>												
1P Aldrin (130-00-2)			X									
2P D DHC (1310-84-8)			X									
3P BHC (1310-84-8)			X									
4P DHC (1310-84-8)			X									
5P DHC (1310-84-8)			X									
6P Chlordane (187-74-9)			X									
7P 4,4'-DDT (50-29-3)			X									
8P 4,4'-DDE (172-80-9)			X									
9P 4,4'-DDD (172-84-8)			X									
10P Dieldrin (60-67-1)			X									
11P D Endosulfan (1116-20-7)			X									
12P B Endosulfan (1116-20-7)			X									
13P Endosulfan Sulfate (1031-07-8)			X									
14P Endrin (172-20-8)			X									
15P Endrin Dichloride (172-20-8)			X									
16P Heptachlor (176-44-8)			X									



EPA ID NUMBER (copy from Form 1 of Form 1) OUTFALL NUMBER

WJ0025411

461C

CONTINUED FROM PAGE V-8

1 POLLUTANT AND CAS NUMBER (if available)	2 NAME		3 EFFLUENT		4 UNITS		5 INTAKE (optional)	
	NAME	CAS NO.	MAXIMUM DAILY VALUE	MAXIMUM 30 DAY VALUE	CONCENTRATION	CONCENTRATION	CONCENTRATION	CONCENTRATION
OCAMS FRACTION - PESTICIDES (continued)								
17P. Heptachlor Epoxide (1024-87-3)		X						
18P. PCB 1242 (85500-31-0)		X						
19P. PCB 1284 (11007-00-1)		X						
20P. PCB 1221 (11165-30-2)		X						
21P. PCB 1288 (11161-10-0)		X						
22P. PCB 1240 (12072-20-0)		X						
23P. PCB 1200 (11000-02-0)		X						
24P. PCB 1010 (12074-11-2)		X						
25P. Toxaphene (8001-35-2)		X						

HOPE CREEK GENERATING STATION  
NJPDES PERMIT NJ0025411

APPLICATION FORM 2C-V EXPLANATION - DSN 461C

DSN 461C is the effluent from a low volume wastewater system consisting of an oil water separator and support equipment. The system components are shown on the enclosed Low Volume and Oily Waste Treatment System Schematic. Influent value are derived from the fresh water supply which provides the primary source of wastewater to this system.

**HOPE CREEK GENERATING STATION  
NJPDDES PERMIT NJ0025411 RENEWAL  
PERMIT SUMMARY TABLE**

**DSN 461C  
LV&OW SYSTEM  
SHEET 1 OF 1**

PARAMETER	EXISTING PERMIT			FILES	SWQS	DRBC	PERMIT RECOMMENDATIONS			
	LIMIT	FREQUENCY	TYPE				LIMIT	FREQUENCY	TYPE	NOTES
FLOW (MGD)	0.45 MAX	CONTINUOUS <sub>1</sub>	N/A	0.06 AVG 0.37 MAX	N/A	N/A	0.45 MAX	CONTINUOUS	N/A	8
TEMPERATURE ° F (° C)	N/A	WEEKLY	GRAB	23.82 AVG 50.00 MAX	86 (30)	110 (43.3)	DELETE	----->		9
TSS (MG/L)	30, 45 AVG <sub>2</sub> 100 MAX	TWICE MONTHLY	COMP	10.82 AVG 184.0 MAX	N/A	30, 45 AVG <sub>3</sub>	30 AVG 100 MAX	TWICE MONTHLY	COMP	10
TOC (MG/L) <sub>4</sub>	N/A	N/A	N/A	11.43 AVG 400.00 MAX	N/A	N/A	50 MAX	TWICE MONTHLY	COMP	11
pH RANGE (S.U.)	6.0 MIN 9.0 MAX	WEEKLY	GRAB	6.10 MIN 12.6 MAX	6.5 MIN 8.5 MAX	6.5 MIN 8.5 MAX	DELETE	----->		12
AMMONIA (MG/L)	35 AVG	TWICE MONTHLY	COMP	1.60 AVG 106.00 MAX	N/A	35 AVG <sub>5</sub>	35 AVG	TWICE MONTHLY	COMP	13
COPPER (MG/L)	0.2 MAX <sub>6</sub>	TWICE MONTHLY	GRAB	0.024 AVG 0.19 MAX	N/A	0.2 MAX <sub>6</sub>	DELETE	----->		14
IRON (MG/L)	N/A	TWICE MONTHLY	GRAB	0.89 AVG 14.00 MAX	N/A	N/A	DELETE	----->		14
PETROLEUM HC (MG/L)	10 AVG 15 MAX <sub>7</sub>	TWICE MONTHLY	GRAB	1.5 AVG 24.0 MAX	N/A	N/A	10 AVG 15 MAX DAILY	TWICE MONTHLY	GRAB	15

EXPLANATION OF EXISTING PERMIT REFERENCE NOTES

1. A measuring and totalizing flowmeter is installed.
2. TSS shall not exceed 45 mg/l as a 7-day average (DRBC Resolution 80-2).
3. Suspended Solids (DRBC Resolution No.80-2).
  1. For wastewater treatment facilities, not to exceed:
    - (i) 30 mg/l as a 30-day average.
    - (ii) 45 mg/l as a 7-day average.
  2. For industrial wastewater treatment facilities' discharges with a concentration greater than 1(i) or 1(ii):
    - (i) up to 100 mg/l as a 30-day average may be permitted:  
and
    - (ii) at least 85 percent reduction as a 30-day average is achieved as may be modified by DRBC Water Code Section 3.10.6D3.
    - (iii) The limit in 2(i) may be waived upon application, if it is determined that there is an established USEPA best conventional pollutant control technology (BCT) effluent limitation and that the treatment level meets the applicable BCT limitation.
4. Based on the written request from the permittee, this limit has been changed to 50 mg/l TOC (Part III-B/C, page 3 of 9).
5. In tidal waters, not to exceed a 30-day average of 35 mg/l as nitrogen (DRBC Administrative Manual 4.30.5.D.2).
6. DRBC Interpretive Guideline No. 1.
7. And no visible sheen (Part III-B/C, page 3 of 9).

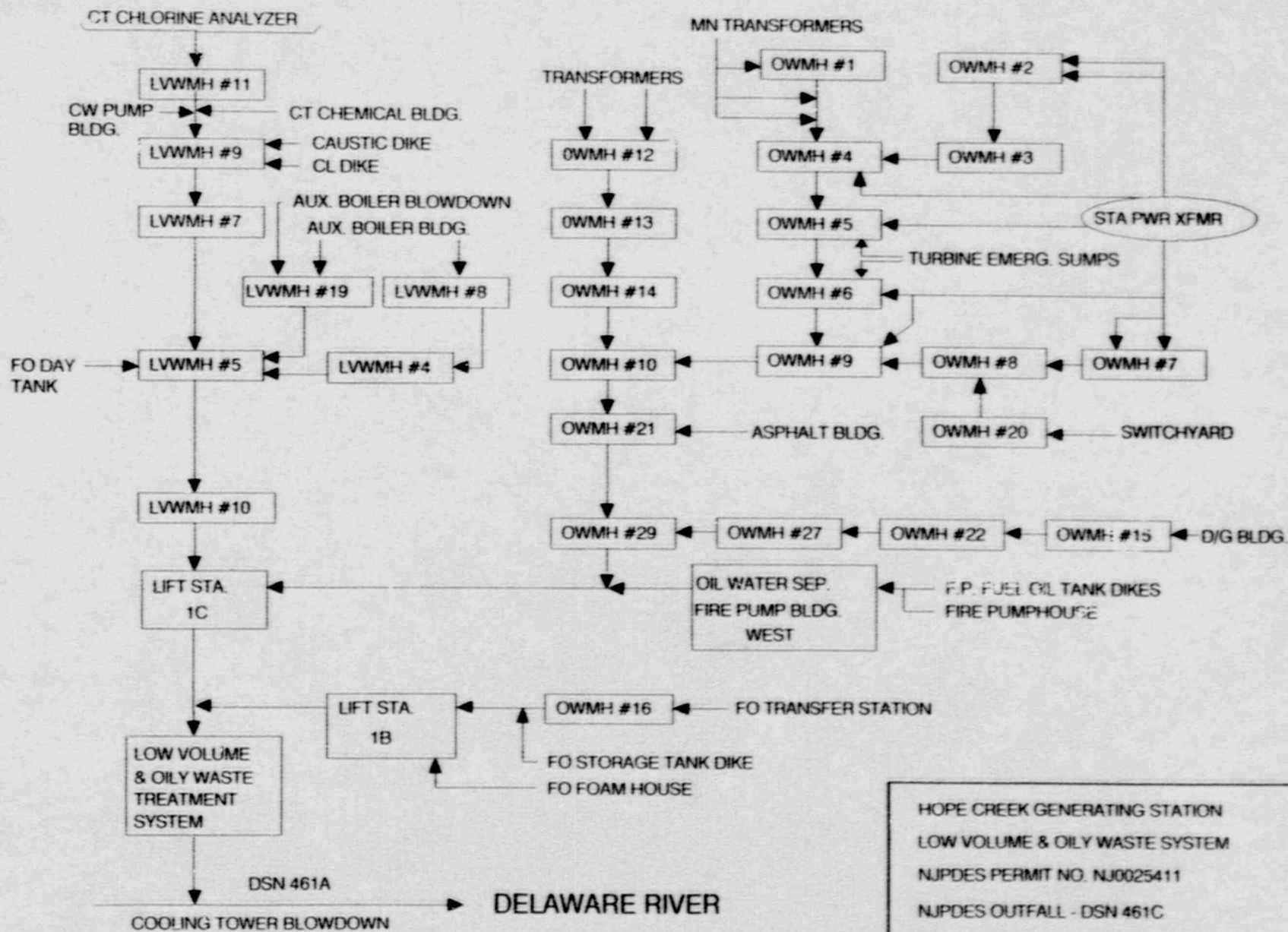


EXPLANATION OF NOTES

8. Continuous flow measurement is accomplished with an installed flow meter and totalizer. If the installed flowmeter and totalizer is inoperable, "continuous" monitoring will be accomplished by either measuring the operating times for the lift station pumps providing influent to the system (and calculating from their design flow rate the system flow) or by measuring the effluent flow on a daily basis.
9. Effluent temperature monitoring was required to allow development of a database to determine whether limitations are necessary. Data reported on Discharge Monitoring Reports shows the monthly average and monthly maximum DSN 461C effluent temperatures follow the seasonal trend; the effluent is colder in the winter and warmer in the summer. The low volume and oily waste schematic shows the influents to the treatment system. The combination of influent from inside buildings with controlled temperature environments and those exposed to the outside environment creates the seasonable variability in the DSN 461C effluent temperature. Based on the four years of monitoring data presented, the permittee requests deletion of temperature monitoring at the effluent DSN of 461C.
10. The effluent Total Suspended Solids (TSS) is monitored twice monthly using a 24 hour composite sample. The total suspended solids results show that since the unit has been fully operational, the treatment system is capable of meeting the existing limitations. The permittee requests the 45 milligram per liter, 7 day average limitation be deleted from the discharge monitoring report since this limitation is only representative when multiple samples are routinely collected within a seven day period. The twice monthly sampling frequency requires reporting of the same analytical value as both the maximum daily value and seven day average value. The 30 day average limitation provides a more restrictive indication of average effluent TSS concentration. Increasing the frequency to provide a representative seven day average value is not warranted by the historical TSS in the effluent from DSN 461C.
11. Based on a request to the NJDEP, the Chemical Oxygen Demand (COD) monitoring and limitation requirements have been replaced with Total Organic Carbon (TOC) monitoring and limitations as allowed in Part III-B/C of the existing permit in a modification to the permit effective November 1, 1989.

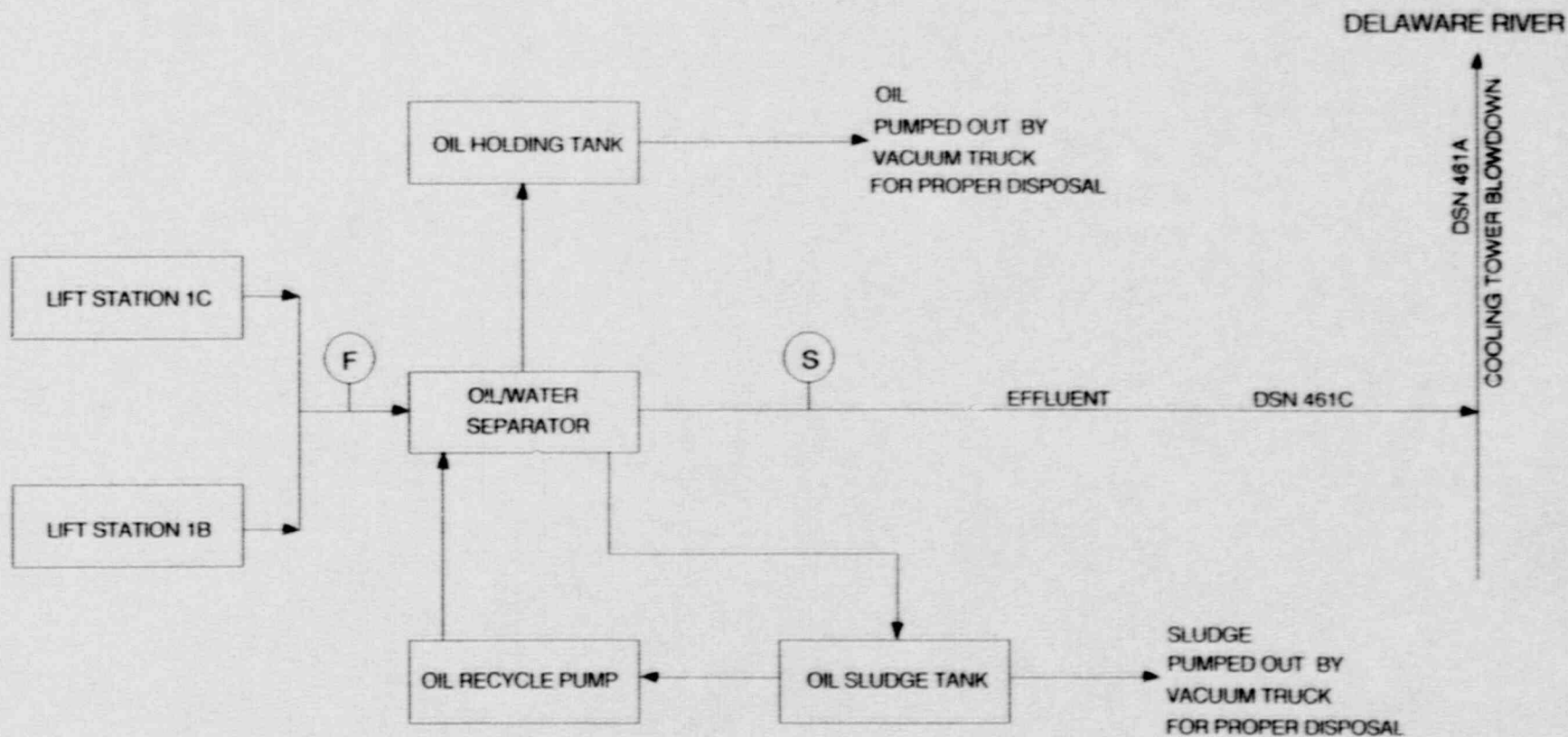
EXPLANATION OF NOTES

12. The low volume and oily waste treatment system is a low volume waste stream which discharges to DSN 461A, the cooling tower blowdown. The permittee requests pH be monitored and limited at the "end of pipe" discharge which is DSN 461A. DSN 461A is currently required to be monitored twice weekly and is limited to a minimum pH of 6.0 and a maximum pH of 9.0. The USEPA Steam Electric Power Generating Point Source Category effluent limitations have been interpreted by the USEPA to define the compliance point for pH monitoring as the "end of pipe" final discharge. Therefore, additional monitoring and reporting of pH at this low volume internal waste stream is not warranted.
13. The ammonia limitation of 35 milligrams per liter average is based on the Delaware River Basin Commission (DRBC) limitation on the effluents to tidal waters. Although the outfall is a low volume waste stream which mixes with the cooling tower blowdown prior to discharge, historical data, as reported on the Discharge Monitoring Reports, demonstrates compliance with this conservative limitation. The source of the ammonia is the auxiliary boiler blowdown. The auxiliary boilers utilize hydrazine and ammonia for corrosion control, most hydrazine is thermally decomposed to ammonia in the auxiliary boilers. No change is requested at this time.
14. No metal cleaning wastes are generated at Hope Creek Generating Station for treatment. As can be seen on the attached Low Volume & Oily Waste schematic, there are no sources of significant input of iron or copper to the treatment system. A review of the historical analyses provided on the Discharge Monitoring Reports and the fact that no metal cleaning wastes are introduced into the system confirm that the limitations and monitoring requirements for iron and copper should be deleted.



HOPE CREEK GENERATING STATION  
 LOW VOLUME & OILY WASTE SYSTEM  
 NJPDES PERMIT NO. NJ0025411  
 NJPDES OUTFALL - DSN 461C  
 MARCH 1990





- (S) - SAMPLE LOCATION  
(F) - FLOW MEASUREMENT

HOPE CREEK GENERATING STATION  
LOW VOLUME AND OILY WASTE TREATMENT SYSTEM  
NJPDES PERMIT NO. NJ0025411  
NJPDES OUTFALL - DSN 461C  
MARCH 1990



PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)

NJ0025411

Form Approved  
OMB No. 2000-0059  
Approval expires 12-31-85

**V. INTAKE AND EFFLUENT CHARACTERISTICS** (continued from page 3 of Form 2-C)

OUTFALL NO. 462A

**PART A** You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)	4. INTAKE (optional)				
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)			a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
	(i) CONCENTRATION	(j) MASS	(i) CONCENTRATION	(j) MASS	(i) CONCENTRATION	(j) MASS		a. CONCENTRATION	b. MASS		a. LONG TERM AVERAGE VALUE	
											(i) CONCENTRATION	(j) MASS
a. Biochemical Oxygen Demand (BOD)	4.0	2.4					1	mg/L	Kg/D	4.0	IND	1
b. Chemical Oxygen Demand (COD)	106.0	64.2					1	mg/L	Kg/D	654.0	IND	1
c. Total Organic Carbon (TOC)	3.4	2.1					1	mg/L	Kg/D	2.2	IND	1
d. Total Suspended Solids (TSS)	67.0	40.6					1	mg/L	Kg/D	146.0	IND	1
e. Ammonia (as N)	3.0	1.8					1	mg/L	Kg/D	0.42	IND	1
f. Flow	VALUE		VALUE		VALUE		45		MGD	VALUE		
	N/A		N/A		0.169					N/A		
g. Temperature (winter)	VALUE		VALUE		VALUE		1		°C	VALUE		821
	3.4									9.72		
h. Temperature (summer)	VALUE		VALUE		VALUE				°C	VALUE		
										25.0		458
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM			42	STANDARD UNITS				
	6.10	8.5	N/A	N/A								

**PART B** Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant which is limited either directly or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2-a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BE PRESENT	b. BE ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(i) CONCENTRATION	(j) MASS	(i) CONCENTRATION	(j) MASS	(i) CONCENTRATION	(j) MASS				(i) CONCENTRATION	(j) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color	X									CLPT Units	N/A	20.0	N/A	1
d. Total Coliform	X									MPN/100 ml	N/A	488	N/A	6
e. Fecal Coliform (FEC-004-35-0)	X									mg/L	Kg/D	0.14	IND	6
f. Fecal Streptococcus	X									mg/L	Kg/D	5.12	IND	105

1. POLLUTANT AND CAS NO. (if available)	2. MARK X		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. NO. LISTED FWS 82NT	b. NO. LISTED HAPs 42 NT	6. MAXIMUM DAILY VALUE		7. MAXIMUM 30 DAY VALUE (if available)		8. LONG TERM AVERAGE VALUE (if available)		9. NO. OF ANAL YSES	10. CONCENTRATION	11. MASS	12. AVERAGE VALUE		13. NO. OF ANAL YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X									mg/L	Kg/D	0.845	IND	6
h. Oil and Grease	X									mg/L	Kg/D	283	IND	6
i. Phosphorus (as P), Total (7723 14 0)	X									mg/L	Kg/D	0.27	IND	1
j. Radioactivity														
(1) Alpha, Total	X									pCi/L	N/A	1.3	N/A	48
(2) Beta, Total	X									pCi/L	N/A	43	N/A	48
(3) Radium, Total	X									pCi/L	N/A	15.5	N/A	48
(4) Radium 226, Total	X									pCi/L	N/A	15.5	N/A	48
k. Sulfate (as SO <sub>4</sub> ) (14808 79 8)	X									mg/L	Kg/D	660	IND	1
l. Sulfide (as S)		X												
m. Sulfite (as SO <sub>3</sub> ) (14206 46 3)		X												
n. Surfactants	X									mg/L	Kg/D	0.02	IND	1
o. Aluminum, Total (7429 90 8)		X												
p. Barium, Total (7440 39 3)		X												
q. Boron, Total (7440 42 8)		X												
r. Cobalt, Total (7440 48 4)		X												
s. Iron, Total (7439 89 6)	X													
t. Magnesium, Total (7439 96 4)	X									mg/L	Kg/D	2.68	IND	1
u. Molybdenum, Total (7439 98 7)		X								mg/L	Kg/D	266	IND	1
v. Manganese, Total (7439 96 6)		X												
w. Tin, Total (7440 31 6)		X												
x. Titanium, Total (7440 32 6)		X												

CONTINUED FROM PAGE 3 OF FORM 2-C

**PART C** If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for Mark "X" in column 2a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2a (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), mark "X" in column 2b for each pollutant you know or have reason to believe is present. Mark "X" in column 2c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6-dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part, please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2 MARK 'X'			3. EFFLUENT						4 UNITS		5 INTAKE (optional)			
	A. TEST INCL. SO. QUANT. SR	B. SO. QUANT. SR	C. SO. QUANT. SR	6. MAXIMUM DAILY VALUE		7. MAXIMUM 30 DAY VALUE (if available)		8. LONG TERM AVERAGE VALUE (if available)		9. NO. OF ANAL. YRS	a. CONCENTRATION	b. MASS	10. LONG TERM AVERAGE VALUE		11. NO. OF ANAL. YRS
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M Antimony, Total (7440 36 0)			X								mg/L	Kg/D	<0.002	IND	1
2M Arsenic, Total (7440 38 2)		X									mg/L	Kg/D	<0.002	IND	1
3M Beryllium, Total (7440 41 7)			X								mg/L	Kg/D	<0.005	IND	1
4M Cadmium, Total (7440 43 8)		X									mg/L	Kg/D	<0.002	IND	1
5M Chromium, Total (7440 47 3)		X									mg/L	Kg/D	<0.002	IND	1
6M Copper, Total (7440 50 8)		X									mg/L	Kg/D	<0.002	IND	1
7M Lead, Total (7439 92 1)		X									mg/L	Kg/D	<0.002	IND	1
8M Mercury, Total (7439 97 6)		X									mg/L	Kg/D	<0.002	IND	1
9M Nickel, Total (7440 02 0)			X								mg/L	Kg/D	<0.005	IND	1
10M Selenium, Total (7782 49 2)			X								mg/L	Kg/D	<0.002	IND	1
11M Silver, Total (7440 22 4)			X								mg/L	Kg/D	<0.002	IND	1
12M Thallium, Total (7440 28 0)			X								mg/L	Kg/D	<0.002	IND	1
13M Zinc, Total (7440 66 6)		X									mg/L	Kg/D	0.03	IND	1
14M Cyanide, Total (57 12 5)			X								mg/L	Kg/D	<0.009	IND	1
15M Phenols, Total			X								mg/L	Kg/D	0.021	IND	1
DIOXIN															
2,3,7,8 Tetra-chlorodibenzo-p-dioxin (1764 01 6)			X	DESCRIBE RESULTS											



1 POLLUTANT AND CAS NUMBER (if available)	2 MANN X			3 EFFLUENT							4 UNITS		5 INTAKE (optional)		
	POLLUTANT CAS NO.	MANN X	C. NO. OF ANALYSES	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	E. CONCENTRATION	F. MASS	G. LONG TERM AVERAGE VALUE		H. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107 02 8)			X								ug/L	Kg/D	<5.0	IND	1
2V. Acrylonitrile (107 13 1)			X								ug/L	Kg/D	<5.0	IND	1
3V. Benzene (71 43 2)			X								ug/L	Kg/D	<5.0 ND	IND	1
4V. Bis (Chloro- methyl) Ether (542 80 1)			X								ug/L	Kg/D	ND	IND	1
5V. Bromoform (75 26 2)			X								ug/L	Kg/D	<5.0 ND	IND	1
6V. Carbon Tetrachloride (56 23 8)			X								ug/L	Kg/D	<5.0 ND	IND	1
7V. Chlorobenzene (108 90 7)			X								ug/L	Kg/D	<5.0 ND	IND	1
8V. Chloro- bromomethane (124 48 1)			X								ug/L	Kg/D	<5.0 ND	IND	1
9V. Chloroethane (75 00 3)			X								ug/L	Kg/D	<5.0 ND	IND	1
10V. 2 Chloro- ethylvinyl Ether (110 75 8)			X								ug/L	Kg/D	<10.0 ND	IND	1
11V. Chloroform (67 68 3)			X								ug/L	Kg/D	<10.0 ND	IND	1
12V. Dichloro- bromomethane (75 27 4)			X								ug/L	Kg/D	<5.0 ND	IND	1
13V. Dichloro- difluoromethane (75 71 8)			X								ug/L	Kg/D	<5.0 ND	IND	1
14V. 1,1 Dichloro- ethane (75 34 3)			X								ug/L	Kg/D	<10.0 ND	IND	1
15V. 1,2 Dichloro- ethane (107 06 2)			X								ug/L	Kg/D	<5.0 ND	IND	1
16V. 1,1 Dichloro- ethylene (75 35 4)			X								ug/L	Kg/D	<5.0 ND	IND	1
17V. 1,2 Dichloro- propane (78 87 5)			X								ug/L	Kg/D	<5.0 ND	IND	1
18V. 1,3 Dichloro- propane (542 76 8)			X								ug/L	Kg/D	<5.0 ND	IND	1
19V. Ethylbenzene (100 41 4)			X								ug/L	Kg/D	<5.0 ND	IND	1
20V. Methyl Bromide (74 83 2)			X								ug/L	Kg/D	<5.0 ND	IND	1
21V. Methyl Chloride (74 87 3)			X								ug/L	Kg/D	<5.0 ND	IND	1



CONTINUED FROM PAGE V-4

EPA ID NUMBER (copy from 1)

NJ0025411

of Form 1)

OUTFALL NUMBER

462A

CDD No. 2040 (0006)

Approval expires 7-31-98

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"				3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	3.1.1.1 IN MAY JUN	3.1.1.2 JUL AUG SEP	3.1.1.3 OCT NOV DEC	3.1.1.4 JAN FEB MAR	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	E. CONCEN- TRATION	F. MASS	G. LONG TERM AVERAGE VALUE		H. NO. OF ANALYSES
					(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)																
22V Methylene Chloride (75-09-2)			X									ug/L	Kg/D	<5.0 ND	IND	1
23V 1,1,2,2 Tetra chloroethane (79-34-5)			X									ug/L	Kg/D	<5.0 ND	IND	1
24V Tetrachloro- ethylene (127-18-4)			X									ug/L	Kg/D	<5.0 ND	IND	1
25V Toluene (108-88-3)			X									ug/L	Kg/D	<5.0 ND	IND	1
26V 1,2 Trans Dichloroethylene (156-80-6)			X									ug/L	Kg/D	<5.0 ND	IND	1
27V 1,1,1 Tri- chloroethane (71-98-6)			X									ug/L	Kg/D	<5.0 ND	IND	1
28V 1,1,2 Tri- chloroethane (79-00-6)			X									ug/L	Kg/D	<5.0 ND	IND	1
29V Trichloro- ethylene (79-01-6)			X									ug/L	Kg/D	<5.0 ND	IND	1
30V Trichloro- fluoromethane (75-68-4)			X									ug/L	Kg/D	<5.0 ND	IND	1
31V Vinyl Chloride (75-01-4)			X									ug/L	Kg/D	<5.0 ND	IND	1
GC/MS FRACTION - ACID COMPOUNDS																
1A 2 Chlorophenol (98-57-8)			X									ug/L	Kg/D	<10.0 ND	IND	1
2A 2,4 Dichloro phenol (120-83-2)			X									ug/L	Kg/D	<10.0 ND	IND	1
3A 2,4 Dimethyl phenol (105-67-9)			X									ug/L	Kg/D	<10.0 ND	IND	1
4A 4,6 Dinitro O Cresol (834-82-1)			X									ug/L	Kg/D	<10.0 ND	IND	1
5A 2,4 Dinitro phenol (81-38-6)			X									ug/L	Kg/D	<50.0 ND	IND	1
6A 2 Nitrophenol (88-75-6)			X									ug/L	Kg/D	<50.0 ND	IND	1
7A 4 Nitrophenol (100-02-7)			X									ug/L	Kg/D	<10.0 ND	IND	1
8A p Chloro M Cresol (69-50-7)			X									ug/L	Kg/D	<50.0 ND	IND	1
9A Pentachloro phenol (87-86-5)			X									ug/L	Kg/D	<10.0 ND	IND	1
10A Phenol (108-95-2)			X									ug/L	Kg/D	<50.0 ND	IND	1
11A 2,4,6 Tri chlorophenol (100-06-2)			X									ug/L	Kg/D	<10.0 ND	IND	1

N30025411

462A

CONTINUED FROM THE FRONT

1 POLLUTANT AND CAS NUMBER (if available)	2 NAME & CAS NO.		3 MAXIMUM DAILY VALUE		4 MAXIMUM 30 DAY VALUE		5 EFFLUENT		6 CLASS. VIB. APT. VALUE		7 CONCEN. TREATMENT		8 UNITS		9 INTAKE (approx.)		10 NO. OF ANAL. VES.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	Pollut. Name	CAS No.	Unit	mg/l	mg/kg	Unit	mg/l	mg/kg	Unit	mg/l	mg/kg	Unit	mg/l	mg/kg	Unit	mg/l																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

CONTINUED FROM PAGE V-6

EPA I.D. NUMBER (copy from Item 1 of Form 1) OUTFALL NUMBER

NJ0025411

462A

Form Approved  
(400 No. 204) 0306  
Approval expires 7-31-88

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	P. 11.11 11.11 11.11 11.11	D. 05. 05. 05. 05.	C. 05. 05. 05. 05.	6. MAXIMUM DAILY VALUE		7. MAXIMUM 30 DAY VALUE (if available)		8. LONG TERM AVERAGE VALUE (if available)		9. NO. OF ANAL- YSES	10. CONCENTRATION	11. MASS	12. LONG TERM AVERAGE VALUE		13. NO. OF ANAL- YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
228. 1,4-Dichloro- benzene (106-46-7)			X								ug/L	Kg/D	<5.0 ND	IND	1
238. 3,3'-Dichloro- benzidine (81-94-1)			X								ug/L	Kg/D	<20.0 ND	IND	1
248. Diethyl Phthalate (84-66-2)			X								ug/L	Kg/D	<10.0 ND	IND	1
268. Dimethyl Phthalate (131-11-3)			X								ug/L	Kg/D	<10.0 ND	IND	1
268. Di-N-Butyl Phthalate (84-74-2)			X								ug/L	Kg/D	<10.0 ND	IND	1
278. 2,4-Dinitro- toluene (121-14-2)			X								ug/L	Kg/D	<10.0 ND	IND	1
288. 2,6-Dinitro- toluene (80P-20-2)			X								ug/L	Kg/D	<10.0 ND	IND	1
298. Di-N-Octyl Phthalate (117-84-0)			X								ug/L	Kg/D	<10.0 ND	IND	1
308. 1,2-Diphenyl- hydrazine (or Azobenzene) (122-66-7)			X								ug/L	Kg/D	<10.0 ND	IND	1
318. Fluoranthene (208-44-0)			X								ug/L	Kg/D	<10.0 ND	IND	1
328. Fluorene (86-73-7)			X								ug/L	Kg/D	<10.0 ND	IND	1
338. Hexachlorobenzene (118-74-1)			X								ug/L	Kg/D	<10.0 ND	IND	1
348. Hexa- chlorobutadiene (87-68-3)			X								ug/L	Kg/D	<10.0 ND	IND	1
358. Hexachloro- cyclopentadiene (77-47-4)			X								ug/L	Kg/D	<10.0 ND	IND	1
368. Hexachloro- ethane (87-72-1)			X								ug/L	Kg/D	<10.0 ND	IND	1
378. Indene (1,2,3-cd) Pyrene (193-39-6)			X								ug/L	Kg/D	<10.0 ND	IND	1
388. Isophorone (78-59-1)			X								ug/L	Kg/D	<10.0 ND	IND	1
398. Naphthalene (91-20-3)			X								ug/L	Kg/D	<10.0 ND	IND	1
408. Nitrobenzene (98-95-3)			X								ug/L	Kg/D	<10.0 ND	IND	1
418. N-Nitro- sodiumethylamine (62-75-9)			X								ug/L	Kg/D	<10.0 ND	IND	1
428. N-Nitrosodi- N-Propylamine (621-64-7)			X								ug/L	Kg/D	<10.0 ND	IND	1



CONTINUED FROM THE FRONT NJ0025411

462A

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT			4. LONG TERM VALUE			5. UNITS		6. NO OF ANAL YSES	7. NO OF ANAL YSES
	1a. In use	1b. Not in use	1c. Not in use	3a. MAXIMUM DAILY VALUE	3b. MAXIMUM 30 DAY VALUE	3c. MAXIMUM 90 DAY VALUE	4a. CONCEN TRATION	4b. CONCEN TRATION	4c. CONCEN TRATION	5a. CONCEN TRATION	5b. CONCEN TRATION	6a. CONCEN TRATION	6b. CONCEN TRATION
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)													
43B N Nitro-2-chlorophenylamine (88-30-8)			X										
44B Phenanthrene (83-01-8)			X										
45B Pyrene (129-00-0)			X										
46B 1,2,4-Tris-chlorobenzene (120-82-1)			X										
GC/MS FRACTION - PESTICIDES													
1P Aldrin (1300-00-2)			X										
2P D DHC (1310-84-8)			X										
3P BHC (1310-88-7)			X										
4P GHC (88-80-9)			X										
5P DHC (1310-88-8)			X										
6P Chlordane (87-74-8)			X										
7P 4,4'-DDT (80-20-3)			X										
8P 4,4'-DDE (172-85-8)			X										
9P 4,4'-DDD (172-84-8)			X										
10P Dieldrin (80-87-1)			X										
11P D Endosulfan (1110-28-7)			X										
12P B Endosulfan (1110-28-7)			X										
13P Endosulfan Sulfate (11031-07-8)			X										
14P Endrin (172-20-8)			X										
15P Endrin Dichloride (17421-53-4)			X										
16P Heptachlor (176-44-8)			X										



EPA ID NUMBER (copy from Item 1 of Form 1) OUSFALL NUMBER  
NJ0025411 462A

CONTINUED FROM PAGE V-8

1 POLLUTANT AND CAS NUMBER (if available)	2 NAME		3 EFFLUENT		4 UNITS		5 INTAKE (estimated)	
	USE	USE	MAXIMUM DAILY VALUE (if available)	MAXIMUM DAILY VALUE (if available)	CONCENTRATION (if available)	NO. OF ANAL YSES	CONCENTRATION (if available)	NO. OF ANAL YSES
<b>OCMS FRACTION - PESTICIDES (continued)</b>								
17P Heptachlor Epoxide (102467-3)		X						
18P PCB 1242 (83489-21-8)		X						
19P PCB 1254 (11087-88-1)		X						
20P PCB 1221 (11164-28-2)		X						
21P PCB 1222 (11181-16-8)		X						
22P PCB 1248 (12872-26-8)		X						
23P PCB 1260 (11088-82-5)		X						
24P PCB 1016 (12874-11-2)		X						
25P Toxaphene (8001-35-2)		X						

HOPE CREEK GENERATING STATION  
NJPDES PERMIT NJ0025411

APPLICATION FORM 2C-V EXPLANATION - DSN 462A

The outfall for DSN 462A is tidal in nature due to the facility elevations and proximity to the Delaware River Estuary. Based on this tidal influence, pollutants found in the Delaware River Estuary are also found in the effluent from outfall DSN 462A. These pollutants are identified as "INTAKE" characteristics on Form 2C-V for this outfall in accordance with the Form 2C-V instructions.

**HOPE CREEK GENERATING STATION  
NJPDDES PERMIT NJ0025411 RENEWAL  
PERMIT SUMMARY TABLE**

**DSN 462A  
NORTH YARD DRAIN  
SHEET 1 OF 1**

PARAMETER	EXISTING PERMIT			FILES	SWQS	DRBC	PERMIT RECOMMENDATIONS			
	LIMIT	FREQUENCY	TYPE				LIMIT	FREQUENCY	TYPE	NOTES
FLOW (MGD)	N/A	MONTHLY <sub>1</sub>		0.17 AVG 0.58 MAX	N/A	N/A	N/A	MONTHLY	CALC	4, 5
pH RANGE (S.U.)	6.0 MIN 9.0 MAX	MONTHLY <sub>1</sub>	GRAB	6.10 MIN 8.50 MAX	6.5 MIN 8.5 MAX	6.5 MIN 8.5 MAX	6.0 MIN 9.0 MAX	MONTHLY	GRAB	4, 6
PETROLEUM HC (MG/L)	15	MONTHLY <sub>2</sub>	MULTI GRAB	0.00 AVG 7.15 MAX	N/A	N/A	NET 15 MAX DAILY	MONTHLY	GRAB	4, 7
TOC (MG/L)	N/A	N/A	N/A	9.40 AVG 49.16 MAX	N/A	N/A	NET 50 MAX	MONTHLY	COMP	4, 8
TSS (MG/L)	30, 45 AVG 100 MAX	MONTHLY <sub>1</sub>	GRAB	193.10 AVG 1670 MAX	N/A	N/A				

EXPLANATION OF EXISTING PERMIT REFERENCE NOTES

1. During a discharge event (Part III-B/C, page 4 of 9).
2. During the first precipitation event of the month which causes a discharge during working hours and which is preceded by a minimum dry period of 72 hours. The permittee shall take samples 15, 30 and 45 minutes after the onset of the discharge. The permittee shall analyze each sample individually and report a maximum value for the samples (Part III-B/C, page 4 of 9).
3. TSS shall not exceed 45 mg/l as a 7-day average (Part III-B/C, page 4 of 9).

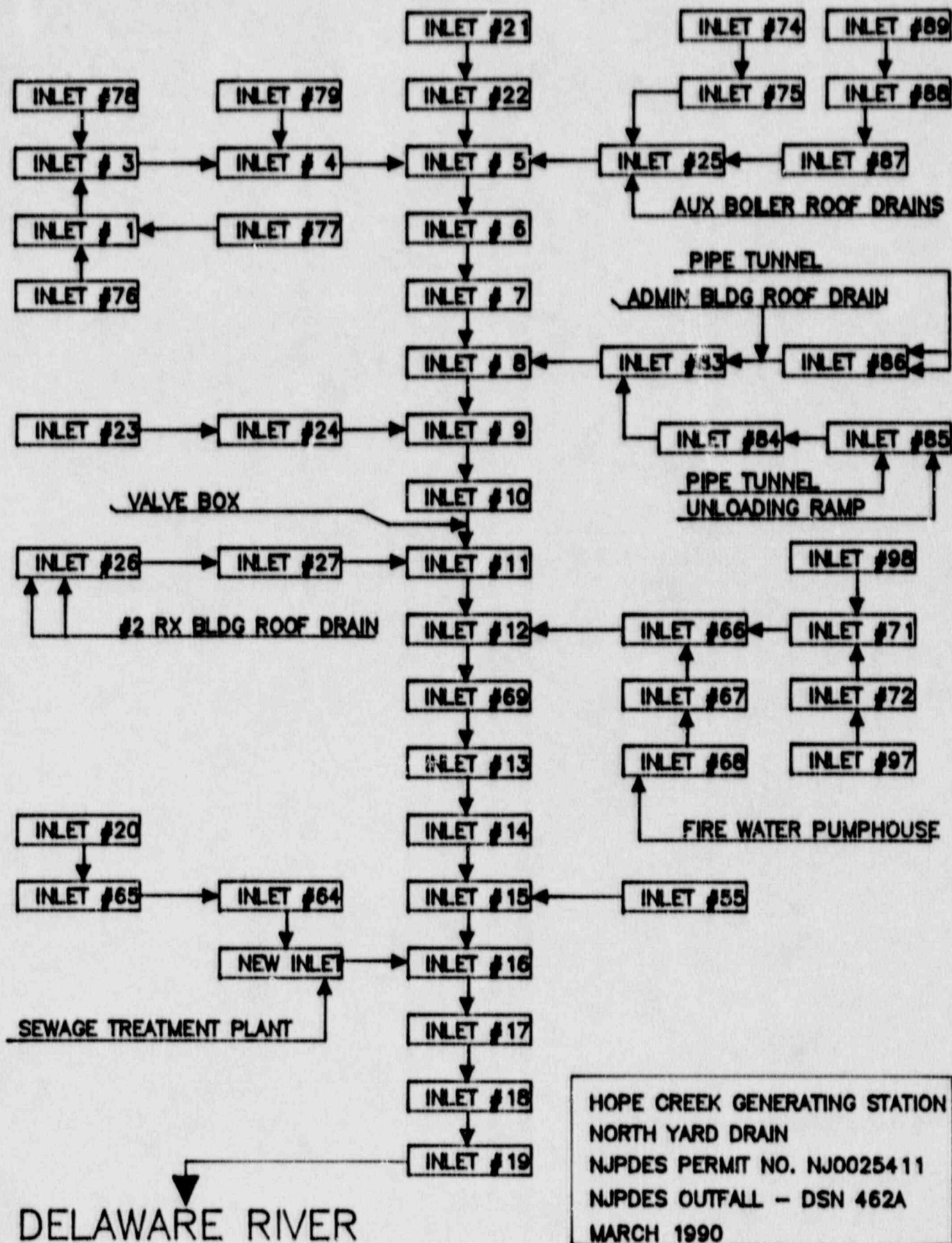


EXPLANATION OF NOTES

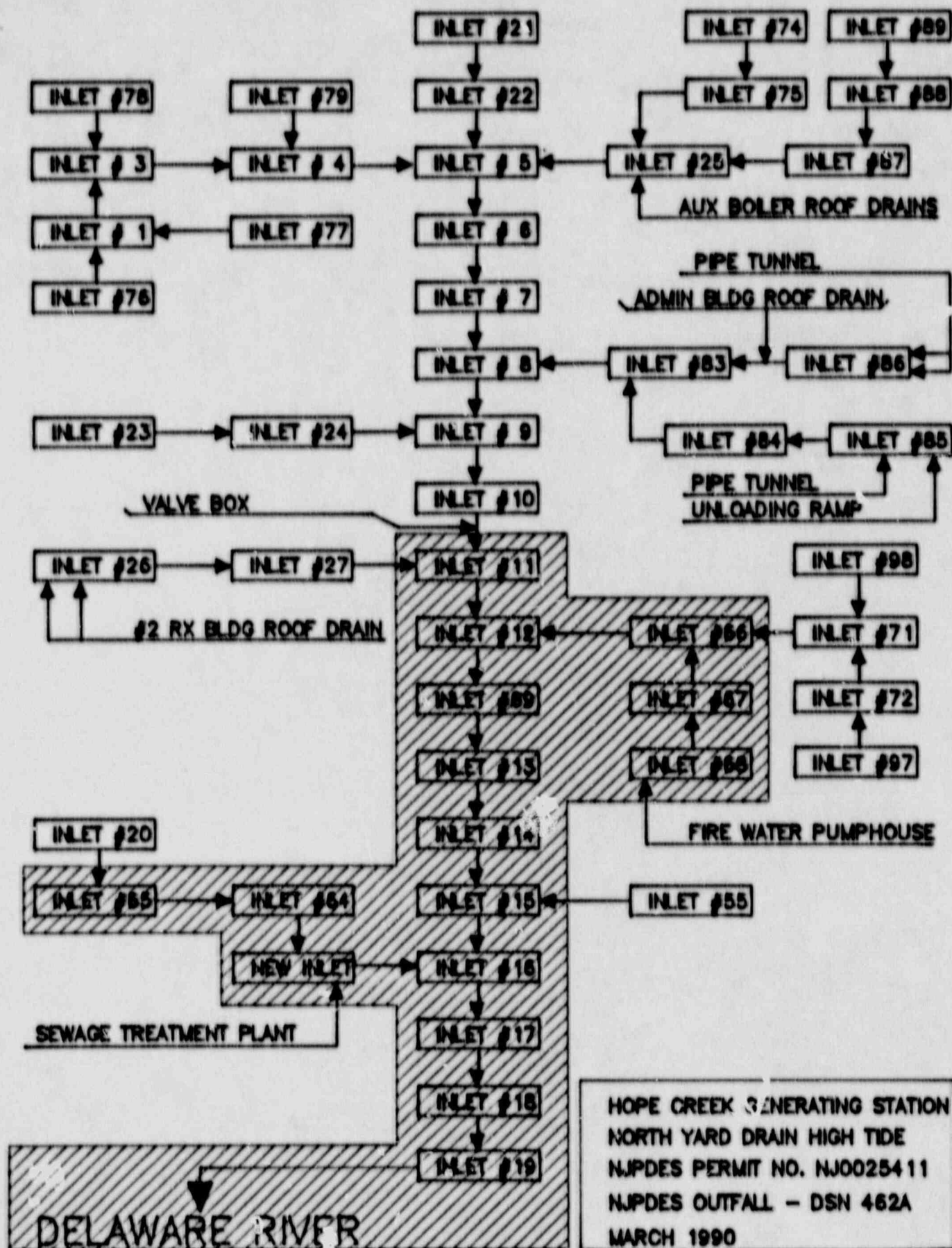
4. The North Yard Drain, DSN 462A, includes runoff from grade level inlets, building roof drains, and the sewage treatment plant effluent (DSN 462B). The outfall for DSN 462A is tidal in nature due to the facility elevations and proximity to the Delaware River Estuary. Fully one half of the drainage piping experiences tidal influences under normal tidal conditions (see North Yard Drain high water schematic). During conditions such as high high tide, wave run up due to meteorological conditions, or wave run up due to ships passing through the Delaware River Estuary channel, most of the system is projected to contain Delaware River water.
5. Flow cannot accurately be measured in a partially filled pipe with bi-directional flow and nonlaminar flow characteristics. Flow should be reported monthly as the calculated precipitation related discharge for the reporting period and reported in units of million gallons per day. The flow contribution from the sewage treatment plant effluent (DSN 462B) should not be included in this reported value since it is monitored and reported independently on a separate DMR.

EXPLANATION OF NOTES

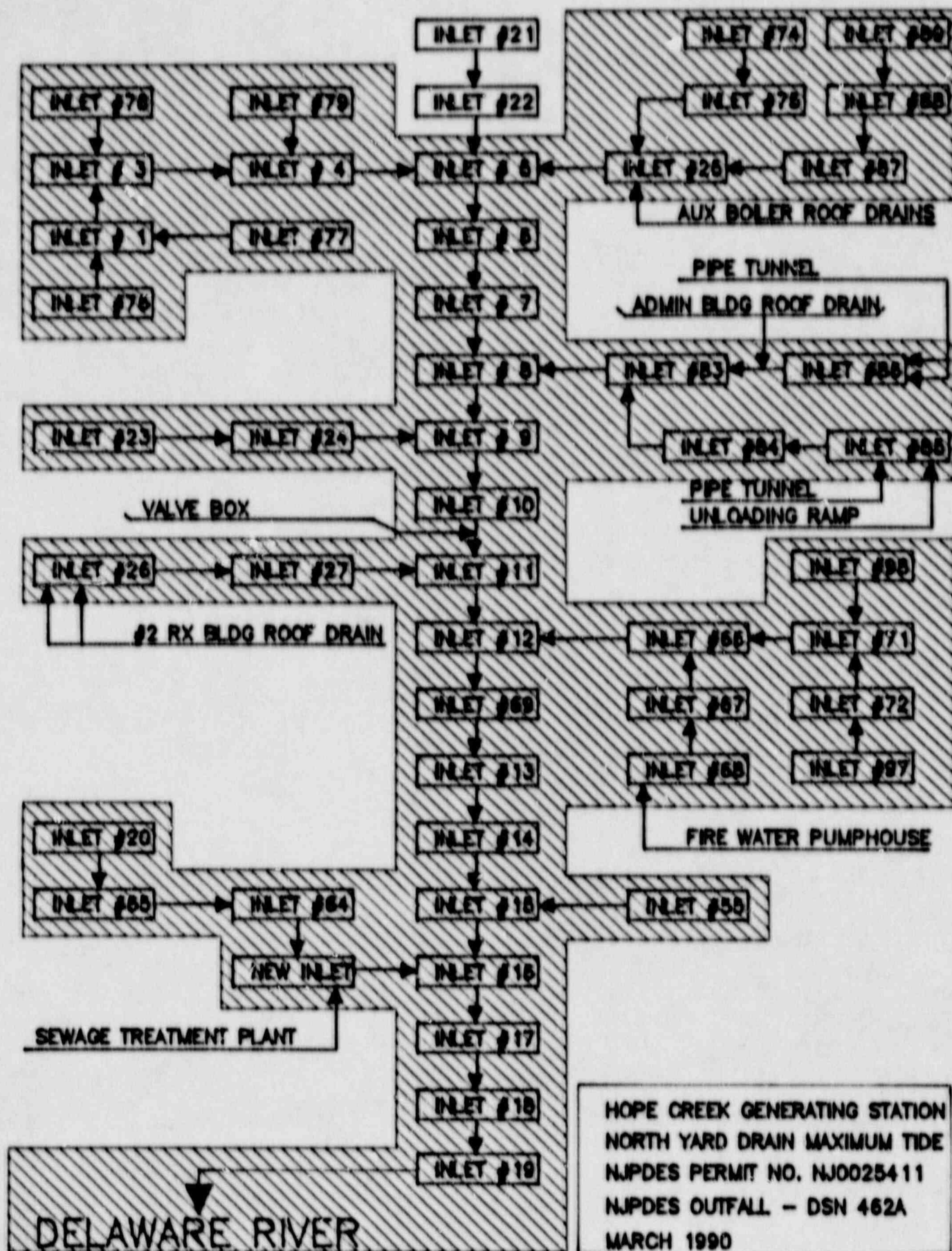
6. The pH at the outfall should be greater than 6.0 and less than 9.0. When the intake pH is less than 6.0, the discharge pH shall not be less than the intake pH; when the intake pH is greater than 9.0, the discharge pH shall not exceed the intake pH. pH should be monitored monthly at both the outfall and in the Delaware River.
7. The petroleum hydrocarbon concentration in the outfall and in the Delaware River should be measured monthly and reported as a net discharge. The sample type should be grab for this parameter.
8. The NJDEP substituted Total Organic Carbon (TOC) for Chemical Oxygen Demand (COD) in the permit modification effective November 1, 1989. The TOC limitation of 50 milligrams per liter should be based on a composite sample collected at the outfall and in the Delaware River Estuary on a monthly basis and reported and limited as a net value.
9. The Total Suspended Solids (TSS) monitoring and limitations are under evaluation in the Representative Monitoring of Stormwater Study submitted to the NJDEP. The results of the Study will provide recommendation for TSS monitoring and limitations.



HOPE CREEK GENERATING STATION  
 NORTH YARD DRAIN  
 NJPDES PERMIT NO. NJ0025411  
 NJPDES OUTFALL - DSN 462A  
 MARCH 1990







PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *use the same format* instead of completing these pages. SEE INSTRUCTIONS.

EPA ID NUMBER (copy from Item 1 of Form 1)

NJ0025411

Form Approved  
EPA No. 3060-0059  
Approval expires 12-31-85

**V. INTAKE AND EFFLUENT CHARACTERISTICS** (continued from page 3 of Form 2-C)

4628

**PART A.** You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (Specify if None)		4. INTAKE (Specify if None)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE	
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS
a. Biochemical Oxygen Demand (BOD)	0.4	0.042					1	mg/L	Kg/D		
b. Chemical Oxygen Demand (COD)	102.0	10.8					1	mg/L	Kg/D		
c. Total Organic Carbon (TOC)	25.0	2.6					1	mg/L	Kg/D		
d. Total Suspended Solids (TSS)	458.70	3.75	N/A		54.73	1.70	48	mg/L	Kg/D		
e. Ammonia (as N)	36.8	3.9					1	mg/L	Kg/D		
f. Flow	VALUE		VALUE		VALUE					VALUE	
	0.35		N/A		0.03		Cont.		MGD		
g. Temperature (winter)	VALUE		VALUE		VALUE				°C	VALUE	
	5.2						1				
h. Temperature (summer)	VALUE		VALUE		VALUE				°C	VALUE	
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM							
	4.7	8.3	N/A	N/A			384		STANDARD UNITS		

**PART B.** Mark "X" in column 2a for each pollutant you know or have reason to believe is present. Mark "X" in column 2b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS (Specify if None)		5. INTAKE (Specify if None)		
	a. IF PRESENT	b. IF ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS
a. Bromide (24959-67-9)		X											
b. Chlorine, Total Residual	X		3.39	0.4					1	mg/L	Kg/D		
c. Color	X		70.0	N/A					1	CLPT	N/A		
d. Fecal Coliform	X		<1.0	N/A					1	MPN/100 ml	N/A		
	X									mg/L	Kg/D	5.6	IND
	X		16.61	1.8						mg/L	Kg/D		

1. POLLUTANT AND CAS NO. (if available)	2. FORM #	3. EFFLUENT			4. LIMITS			5. INTAKE (if present)		
		a. MAXIMUM DAILY VALUE		b. CONCENTRATION	c. CONCERN FORM	d. MIN OF ANNUAL VALUE	e. CONCERN FORM	f. CONCENTRATION	g. INTAKE VALUE	h. INTAKE VALUE
		1.1	1.2							
g. Nitrogen, Total Organic (as N)	X	5.0	0.5		mg/L	1	mg/L	Kg/D		
h. Oil and Grease	X	1.2	0.1		mg/L	1	mg/L	Kg/D		
i. Phosphorus (as P), Total (1723 10 0)	X	6.5	0.7		mg/L	1	mg/L	Kg/D		
j. Radioactivity										
(1) Alpha, Total	X									
(2) Beta, Total	X									
(3) Radium, Total	X									
(4) Radium 226, Total	X									
k. Barium (as Ba)	X				mg/L		mg/L	Kg/D	1.5	100
(14308 79 0)										8
l. Cadmium (as Cd)	X									
(14308 79 0)										
m. Copper (as Cu)	X				mg/L		mg/L	Kg/D	13.6	100
(14308 03 3)										2
n. Fluoride	X	0.72	0.023		mg/L	3	mg/L	Kg/D	0.017	100
(14308 03 3)										2
o. Aluminum, Total (17430 00 0)	X				mg/L		mg/L	Kg/D	0.01	100
(17430 00 0)										2
p. Boron, Total (17430 30 3)	X				mg/L		mg/L	Kg/D	0.074	100
(17430 30 3)										2
q. Manganese, Total (17430 03 0)	X									
(17430 03 0)										
r. Zinc, Total (17430 03 0)	X				mg/L		mg/L	Kg/D	0.56	100
(17430 03 0)										1
s. Chromium, Total (17430 03 0)	X				mg/L		mg/L	Kg/D	5.7	100
(17430 03 0)										1
t. Nickel, Total (17430 03 0)	X									
(17430 03 0)										
u. Molybdenum, Total (17430 03 0)	X									
(17430 03 0)										
v. Magnesium, Total (17430 03 0)	X									
(17430 03 0)										
w. Tin, Total (17430 31 5)	X				mg/L		mg/L	Kg/D	0.02	100
(17430 31 5)										1
x. Titanium, Total (17430 32 5)	X									
(17430 32 5)										







4628

NJ0025411

CONTINUED FROM THE PREVIOUS PAGE

1. POLLUTANT AND CAS NUMBER (if available)	2. NAME		3. EFFLUENT		4. LONG TERM VALUE		5. LIMITS		6. INTAKE (pounds)	
	USE	TYPE	CONCENTRATION	UNIT	CONCENTRATION	UNIT	CONCENTRATION	UNIT	CONCENTRATION	UNIT
GAS FRACTION - VOLATILE COMPOUNDS										
1V Acetone (107 02 8)										
2V Acrylonitrile (107 13 1)										
3V Benzene (71 43 2)										
4V Bis (Chloromethyl) Ether (542 80 1)										
5V Bromoform (75 26 2)										
6V Carbon Tetrachloride (50 23 9)										
7V Chloroacetylene (100 00 7)										
8V Chloroacetylene (124 48 1)										
9V Chloroethane (75 00 3)										
10V 2 Chloroethyl Ether (110 75 8)										
11V Chloroform (67 66 3)										
12V Dichlorobromomethane (75 27 4)										
13V Dichlorodifluoromethane (75 71 8)										
14V 1,1 Dichloroethane (75 34 3)										
15V 1,2 Dichloroethane (107 06 2)										
16V 1,1 Dichloroethylene (75 38 4)										
17V 1,2 Dichloropropane (75 87 6)										
18V 1,3 Dichloropropane (842 75 8)										
19V 1,4 Dichlorobenzene (100 41 4)										
20V 1,4-Dichlorobenzene (100 41 4)										
21V 1,4-Dichlorobenzene (100 41 4)										
22V 1,4-Dichlorobenzene (100 41 4)										
23V 1,4-Dichlorobenzene (100 41 4)										
24V 1,4-Dichlorobenzene (100 41 4)										
25V 1,4-Dichlorobenzene (100 41 4)										
26V 1,4-Dichlorobenzene (100 41 4)										
27V 1,4-Dichlorobenzene (100 41 4)										
28V 1,4-Dichlorobenzene (100 41 4)										
29V 1,4-Dichlorobenzene (100 41 4)										
30V 1,4-Dichlorobenzene (100 41 4)										
31V 1,4-Dichlorobenzene (100 41 4)										
32V 1,4-Dichlorobenzene (100 41 4)										
33V 1,4-Dichlorobenzene (100 41 4)										
34V 1,4-Dichlorobenzene (100 41 4)										
35V 1,4-Dichlorobenzene (100 41 4)										
36V 1,4-Dichlorobenzene (100 41 4)										
37V 1,4-Dichlorobenzene (100 41 4)										
38V 1,4-Dichlorobenzene (100 41 4)										
39V 1,4-Dichlorobenzene (100 41 4)										
40V 1,4-Dichlorobenzene (100 41 4)										
41V 1,4-Dichlorobenzene (100 41 4)										
42V 1,4-Dichlorobenzene (100 41 4)										
43V 1,4-Dichlorobenzene (100 41 4)										
44V 1,4-Dichlorobenzene (100 41 4)										
45V 1,4-Dichlorobenzene (100 41 4)										
46V 1,4-Dichlorobenzene (100 41 4)										
47V 1,4-Dichlorobenzene (100 41 4)										
48V 1,4-Dichlorobenzene (100 41 4)										
49V 1,4-Dichlorobenzene (100 41 4)										
50V 1,4-Dichlorobenzene (100 41 4)										
51V 1,4-Dichlorobenzene (100 41 4)										
52V 1,4-Dichlorobenzene (100 41 4)										
53V 1,4-Dichlorobenzene (100 41 4)										
54V 1,4-Dichlorobenzene (100 41 4)										
55V 1,4-Dichlorobenzene (100 41 4)										
56V 1,4-Dichlorobenzene (100 41 4)										
57V 1,4-Dichlorobenzene (100 41 4)										
58V 1,4-Dichlorobenzene (100 41 4)										
59V 1,4-Dichlorobenzene (100 41 4)										
60V 1,4-Dichlorobenzene (100 41 4)										
61V 1,4-Dichlorobenzene (100 41 4)										
62V 1,4-Dichlorobenzene (100 41 4)										
63V 1,4-Dichlorobenzene (100 41 4)										
64V 1,4-Dichlorobenzene (100 41 4)										
65V 1,4-Dichlorobenzene (100 41 4)										
66V 1,4-Dichlorobenzene (100 41 4)										
67V 1,4-Dichlorobenzene (100 41 4)										
68V 1,4-Dichlorobenzene (100 41 4)										
69V 1,4-Dichlorobenzene (100 41 4)										
70V 1,4-Dichlorobenzene (100 41 4)										
71V 1,4-Dichlorobenzene (100 41 4)										
72V 1,4-Dichlorobenzene (100 41 4)										
73V 1,4-Dichlorobenzene (100 41 4)										
74V 1,4-Dichlorobenzene (100 41 4)										
75V 1,4-Dichlorobenzene (100 41 4)										
76V 1,4-Dichlorobenzene (100 41 4)										
77V 1,4-Dichlorobenzene (100 41 4)										
78V 1,4-Dichlorobenzene (100 41 4)										
79V 1,4-Dichlorobenzene (100 41 4)										
80V 1,4-Dichlorobenzene (100 41 4)										
81V 1,4-Dichlorobenzene (100 41 4)										
82V 1,4-Dichlorobenzene (100 41 4)										
83V 1,4-Dichlorobenzene (100 41 4)										
84V 1,4-Dichlorobenzene (100 41 4)										
85V 1,4-Dichlorobenzene (100 41 4)										
86V 1,4-Dichlorobenzene (100 41 4)										
87V 1,4-Dichlorobenzene (100 41 4)										
88V 1,4-Dichlorobenzene (100 41 4)										
89V 1,4-Dichlorobenzene (100 41 4)										
90V 1,4-Dichlorobenzene (100 41 4)										
91V 1,4-Dichlorobenzene (100 41 4)										
92V 1,4-Dichlorobenzene (100 41 4)										
93V 1,4-Dichlorobenzene (100 41 4)										
94V 1,4-Dichlorobenzene (100 41 4)										
95V 1,4-Dichlorobenzene (100 41 4)										
96V 1,4-Dichlorobenzene (100 41 4)										
97V 1,4-Dichlorobenzene (100 41 4)										
98V 1,4-Dichlorobenzene (100 41 4)										
99V 1,4-Dichlorobenzene (100 41 4)										
100V 1,4-Dichlorobenzene (100 41 4)										

1. POLLUTANT AND CAS NUMBER (if available)	2. MAXIMUM DAILY VALUE (mg/kg body weight per day)			3. EFFLUENT (mg/kg body weight per day)			4. UNITS			5. INTAKE (mg/kg body weight per day)		
	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	GCMS FRACTION	
GCMS FRACTION - VOLATILE COMPOUNDS (continued)												
22V Methylene Chloride (75-00-2)												
23V 1,1,2,2-Tetra chloroethane (78-34-6)												
24V Tetrachloro ethylene (127-18-4)												
25V Toluene (108-90-3)												
26V 1,2-Trans Dichloroethane (156-60-5)												
27V 1,1,1-Trichloroethane (71-95-6)												
28V 1,1,2-Trichloroethane (78-00-5)												
29V Trichloro ethylene (79-01-6)												
30V Trichloro fluoromethane (75-00-4)												
31V Vinyl Chloride (75-01-4)												
GCMS FRACTION - ACID COMPOUNDS												
1A 2-Chlorophenol (106-67-6)												
2A 2,4-Dichlorophenol (120-83-2)												
3A 2,4-Dimethylphenol (100-07-0)												
4A 4,6-Dinitro-O-Cresol (83-52-1)												
5A 2,4-Dinitrophenol (81-20-5)												
6A 2-Nitrophenol (100-75-5)												
7A 4-Nitrophenol (100-02-7)												
8A p-Chloro M-Cresol (105-50-7)												
9A p-Toluenesulfonic acid (87-86-5)												
10A Phenol (108-95-2)												
11A 2,4,6-Trichlorophenol (100-06-2)												

CONTINUED FROM THE FRONT

NJ0025411

462B

1. POLLUTANT AND CAS NUMBER (if available)	2. NAME			3. MAXIMUM DAILY VALUE			3. EFFLUENT			4. UNITS			5. INTAKE (if available)		
	Pollut. No.	CAS No.	Chemical Name	100% (a)	10% (b)	1% (c)	100% (a)	10% (b)	1% (c)	COMBUSTION	WATER	AIR	100% (a)	10% (b)	1% (c)
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
10 Acenaphthene (83-32-6)															
20 Acenaphthylene (203-06-0)															
30 Anthracene (120-12-7)															
40 Benzidine (92-07-0)															
50 Benzene (61-83-3)															
60 Benzene (61-83-3)															
70 3,4-Benzofluoranthene (203-06-2)															
80 Benzene (61-83-3)															
90 Benzene (61-83-3)															
100 Benzene (61-83-3)															
110 Benzene (61-83-3)															
120 Benzene (61-83-3)															
130 Benzene (61-83-3)															
140 Benzene (61-83-3)															
150 Benzene (61-83-3)															
160 Benzene (61-83-3)															
170 Benzene (61-83-3)															
180 Benzene (61-83-3)															
190 Benzene (61-83-3)															
200 Benzene (61-83-3)															
210 Benzene (61-83-3)															
220 Benzene (61-83-3)															
230 Benzene (61-83-3)															
240 Benzene (61-83-3)															
250 Benzene (61-83-3)															
260 Benzene (61-83-3)															
270 Benzene (61-83-3)															
280 Benzene (61-83-3)															
290 Benzene (61-83-3)															
300 Benzene (61-83-3)															
310 Benzene (61-83-3)															
320 Benzene (61-83-3)															
330 Benzene (61-83-3)															
340 Benzene (61-83-3)															
350 Benzene (61-83-3)															
360 Benzene (61-83-3)															
370 Benzene (61-83-3)															
380 Benzene (61-83-3)															
390 Benzene (61-83-3)															
400 Benzene (61-83-3)															
410 Benzene (61-83-3)															
420 Benzene (61-83-3)															
430 Benzene (61-83-3)															
440 Benzene (61-83-3)															
450 Benzene (61-83-3)															
460 Benzene (61-83-3)															
470 Benzene (61-83-3)															
480 Benzene (61-83-3)															
490 Benzene (61-83-3)															
500 Benzene (61-83-3)															
510 Benzene (61-83-3)															
520 Benzene (61-83-3)															
530 Benzene (61-83-3)															
540 Benzene (61-83-3)															
550 Benzene (61-83-3)															
560 Benzene (61-83-3)															
570 Benzene (61-83-3)															
580 Benzene (61-83-3)															
590 Benzene (61-83-3)															
600 Benzene (61-83-3)															
610 Benzene (61-83-3)															
620 Benzene (61-83-3)															
630 Benzene (61-83-3)															
640 Benzene (61-83-3)															
650 Benzene (61-83-3)															
660 Benzene (61-83-3)															
670 Benzene (61-83-3)															
680 Benzene (61-83-3)															
690 Benzene (61-83-3)															
700 Benzene (61-83-3)															
710 Benzene (61-83-3)															
720 Benzene (61-83-3)															
730 Benzene (61-83-3)															
740 Benzene (61-83-3)															
750 Benzene (61-83-3)															
760 Benzene (61-83-3)															
770 Benzene (61-83-3)															
780 Benzene (61-83-3)															
790 Benzene (61-83-3)															
800 Benzene (61-83-3)															
810 Benzene (61-83-3)															
820 Benzene (61-83-3)															
830 Benzene (61-83-3)															
840 Benzene (61-83-3)															
850 Benzene (61-83-3)															
860 Benzene (61-83-3)															
870 Benzene (61-83-3)															
880 Benzene (61-83-3)															
890 Benzene (61-83-3)															
900 Benzene (61-83-3)															
910 Benzene (61-83-3)															
920 Benzene (61-83-3)															
930 Benzene (61-83-3)															
940 Benzene (61-83-3)															
950 Benzene (61-83-3)															
960 Benzene (61-83-3)															
970 Benzene (61-83-3)															
980 Benzene (61-83-3)															
990 Benzene (61-83-3)															
1000 Benzene (61-83-3)															





4628

NJ0025411

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MAXIMUM DAILY VALUE		3. EFFLUENT		4. CLEAN WATER ACT VALUE		5. UNITS		6. INTAKE (pounds)	
	100% MTD	100% MTD	100% MTD	100% MTD	100% MTD	100% MTD	100% MTD	100% MTD	100% MTD	100% MTD
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (unpublished)										
430 n Nitro- and Polychlorinated (100 20-0)										
440 Phenanthrene (100 01-0)										
450 Pyrene (120 05-0)										
460 1,2,4-Trichlorobenzene (120 02-1)										
GC/MS FRACTION - PESTICIDES										
1P Aldrin (100 00-2)										
2P D DTC (110 00-0)										
3P D DTC (110 00-1)										
4P D DTC (110 00-2)										
5P D DTC (110 00-3)										
6P D DTC (110 00-4)										
7P D DTC (110 00-5)										
8P D DTC (110 00-6)										
9P D DTC (110 00-7)										
10P D DTC (110 00-8)										
11P D DTC (110 00-9)										
12P D DTC (110 01-0)										
13P D DTC (110 01-1)										
14P D DTC (110 01-2)										
15P D DTC (110 01-3)										
16P D DTC (110 01-4)										
17P D DTC (110 01-5)										
18P D DTC (110 01-6)										
19P D DTC (110 01-7)										
20P D DTC (110 01-8)										
21P D DTC (110 01-9)										
22P D DTC (110 02-0)										
23P D DTC (110 02-1)										
24P D DTC (110 02-2)										
25P D DTC (110 02-3)										
26P D DTC (110 02-4)										
27P D DTC (110 02-5)										
28P D DTC (110 02-6)										
29P D DTC (110 02-7)										
30P D DTC (110 02-8)										
31P D DTC (110 02-9)										
32P D DTC (110 03-0)										
33P D DTC (110 03-1)										
34P D DTC (110 03-2)										
35P D DTC (110 03-3)										
36P D DTC (110 03-4)										
37P D DTC (110 03-5)										
38P D DTC (110 03-6)										
39P D DTC (110 03-7)										
40P D DTC (110 03-8)										
41P D DTC (110 03-9)										
42P D DTC (110 04-0)										

EPA ID NUMBER (copy from Item 1 of Form 1) OUTFALL NUMBER  
 80025411 4628

CONTINUED FROM PAGE V-8

1 POLLUTANT AND CAS NUMBER (if available)	2 NAME			3 EFFLUENT			4 UNITS		5 INTAKE (approx.)		
	NAME	TYPE	USE	MAXIMUM DAILY VALUE (if available)	CONCENTRATION (if available)	CONCENTRATION (if available)	CONCENTRATION (if available)	CONCENTRATION (if available)	CONCENTRATION (if available)	CONCENTRATION (if available)	CONCENTRATION (if available)
<b>GLASS FRACTION - PESTICIDES (continued)</b>											
1P. Heptachlor Epoxide (100-97-2)											
1P. PCB 1242 (83-40-2)											
1P. PCB 1204 (11007-40-1)											
2P. PCB 1221 (11160-20-2)											
2P. PCB 1209 (11141-90-0)											
2P. PCB 1240 (12072-30-0)											
2P. PCB 1200 (11000-82-0)											
2P. PCB 1010 (12074-11-2)											
2P. Toxaphene (5001-30-2)											

**HOPE CREEK GENERATING STATION  
NJPDES PERMIT NJ0025411 RENEWAL  
PERMIT SUMMARY TABLE**

**DSN 462B  
SEWAGE TREATMENT PLANT  
SHEET 1 OF 1**

PARAMETER	EXISTING PERMIT			FILES	SWQS	DRBC	PERMIT RECOMMENDATIONS			
	LIMIT	FREQUENCY	TYPE				LIMIT	FREQUENCY	TYPE	NOTES
FLOW (MGD)	N/A	DAILY	METER	0.032 AVG 0.350 MAX	N/A	N/A	N/A	DAILY	METER	8
BOD <sub>5</sub> LBS/DAY (Kg/DAY)	15 (6.8)	MONTHLY	GRAB	(1.58) AVG (9.0) MAX	N/A	SEE NOTE <sub>4</sub>	N/A	MONTHLY	COMP	9
BOD <sub>5</sub> (% REMOVAL)	87.5	MONTHLY	CALC	95.25 AVG 99.90 MAX	N/A	87.5 <sub>6</sub> 85 <sub>4</sub>	87.5	MONTHLY	CALC	
FSOD LBS/DAY (Kg/DAY)	18 (8.2)	N/A	N/A	(1.74) AVG (10.80) MAX	N/A	N/A	21 (9.6)	MONTHLY	CALC	9
TSS (MG/L)	30, 45 AVG 100 MAX <sub>1</sub>	MONTHLY	COMP	54.73 AVG 458.7 MAX	N/A	30, 45 AVG	30 AVG 100 MAX	MONTHLY	COMP	10
F. COLI (MPN/100 ML)	200 AVG 400 MAX <sub>2</sub>	MONTHLY	GRAB	190.29 AVG 3100 MAX	200 <sub>7</sub>	200 <sub>7</sub>	200 AVG 400 MAX	MONTHLY	GRAB	
OIL AND GREASE (MG/L)	10 AVG 15 MAX <sub>3</sub>	MONTHLY	GRAB	3.64 AVG 16.7 MAX	N/A	15 <sub>5</sub>	10 AVG 15 MAX DAILY	MONTHLY	GRAB	
pH RANGE (S.U.)	6.0 MIN 9.0 MAX	TWICE WEEKLY	GRAB	6.4 MIN 8.3 MAX	6.5 MIN 8.5 MAX	6.5 MIN 8.5 MAX	6.0 MIN 9.0 MAX	TWICE WEEKLY	GRAB	
TSS % REMOVAL	85	MONTHLY	CALC	82.47 AVG 100.00 MAX	N/A	85 <sub>6</sub>	85	MONTHLY	CALC	

EXPLANATION OF EXISTING PERMIT REFERENCE NOTES

1. TSS shall not exceed 45 mg/l as a 7-day average (DRBC Resolution 80-2).
2. This average shall be the geometric mean over a 30 consecutive day period and the maximum shall be a geometric mean over a 7-consecutive day period (Part III-B/C, page 5 of 9).
3. And no visible sheen (Part III-B/C, page 5 of 9).
4. Carbonaceous Oxygen Demand. Pursuant to the provisions of DRBC Water Code Section 3.10.4.E, the DRBC determines that the 1964 carbonaceous oxygen demand of the effluent load to Zones 2, 3, 4, and 5 exceeded the waste assimilative capacity of those zones to meet the stream quality objectives. Accordingly, the total carbonaceous oxygen demand exerted by the sum of all waste discharges to each of these zones shall be reduced to the following:

Zone 2	18,600 pounds per day
Zone 3	144,800 pounds per day
Zone 4	91,000 pounds per day
Zone 5	67,600 pounds per day

- a. Reserve. In Zones 2, 3, 4, and 5, as part of the initial allocation, and each subsequent reallocation, a reserve of about 10 percent of the total permissible load to the Zone may be set aside by the DRBC.
- b. Allocation to Individual Discharges.
  - 1) Within Zones 2, 3, 4, and 5, the pounds of carbonaceous oxygen demand prescribed above, minus the reserve, will be allocated among individual discharges.
  - 2) Allocations will be based upon the concept of uniform reduction of raw waste in a zone.
  - 3) Upon application, in special cases, for dilute industrial process wastewater, an allocation may be assigned consistent with DRBC Water Code Section 4.30.3B.3.
- c. Allowable Variations.
  - 1) The number of pounds in the discharge permitted by the allocation will be determined by an average of samples taken over each period of thirty consecutive days of the year.
  - 2) It is recognized that optimum efficiency may not be achieved with certain secondary treatment facilities during the colder months. A discharge exceeding the



EXPLANATION OF EXISTING PERMIT REFERENCE NOTES

allocation may be permitted by the Commission when it results from reduced plant efficiency caused by temperatures below 59° F (15° C), provided that the pounds discharged by an individual discharger shall not exceed its allocation by more than an average of two-thirds over any consecutive ten days.

- d. Allocations from the Reserve. Allocations from the reserve will be made upon the same principles as provided in DRBC Water Code Section 4.30.7.B.1.b. based upon the concept of uniform raw waste reduction in a zone at the time the allocation is made.
- e. Reallocations. Reallocations will be made upon the same principles as provided by DRBC Water Code Section 4.30.7.B.1.b., provided that where the waste reduction by an discharger results in lower poundage input than it has been allocated such poundage differential will not be returned to the reserve in the absence of conditions requiring a reallocation for the zone.
- f. Tidal Tributaries.
  - 1) Wastes discharged to the portions of tributaries of the Delaware River Estuary affected by tidal action are included in the total permissible load in each zone, and poundage allocations will be assigned to these dischargers on the same basis as effluents discharged directly to the estuary.
  - 2) However, additional requirements may be imposed if any one or group of waste dischargers complying with estuary load allocations exceeds the waste assimilative capacity of the tidal tributary.
- 5. Oil and Grease (DRBC Administrative Manual).
- 6. BOD Percent Removal based on DRBC Docket D-87-70.
- 7. Maximum geometric average of 200 per 100 ml from R.M.59.5 to 48.2 Samples shall be taken at such frequency and location as to permit valid interpretation.

EXPLANATION OF NOTES

8. Flow is limited by the design of the Sewage Treatment Plant and needs no additional limitations applied in the NJPDDES permit. The daily monitoring is performed with an installed flowmeter. If the flowmeter is inoperable, a v-notched weir is installed and flow will be measured daily.
9. Biochemical Oxygen Demand (BOD) is based on the DRBC allocation of First Stage Carbonaceous Oxygen Demand (FSOD). DRBC docket D-87-70 approved the construction of the sewage treatment plant and authorized an allocation of 21 lbs per day (9.6 kilograms per day) of FSOD. FSOD is calculated based on the BOD:FSOD ratio of 1:1.2 using the BOD concentration measured in the effluent. The BOD loading should be reported monthly but not limited since it is a direct mathematical conversion of FSOD and would be redundant. BOD concentration should also be reported but not limited. The FSOD allocation assigned by the DRBC provides the best representation of these common parameters. To provide the most representative evaluation of loading, a 24 hour composite sample is recommended to comply with this monitoring requirement.
10. Retention of the Total Suspended Solids (TSS) limitations of 30 milligrams per liter monthly average and 100 milligrams per liter daily maximum is supported by data submitted herein and on the DMRs submitted. The 45 milligram per liter 7 day average should not be applied as a limitation. The single monthly composite sample represents the daily maximum, if additional sampling is conducted the 30 day average limitation would apply. The 7 day average limitation is not representative of the effluent of DSN 462B and no limitation should be applied.

DSN 462A

NORTH STORM DRAIN

CHLORINE  
CONTACT TANKS

ASCENDING  
WEIR

CHLORINATOR

(F)

(S)

SLUDGE  
PUMPED OUT BY  
VACUUM TRUCK  
FOR PROPER DISPOSAL

SLUDGE  
HOLDING  
TANK

CLARIFIERS

WASTE  
ACTIVATED  
SLUDGE

RETURN  
ACTIVATED  
SLUDGE

POLISHING  
SAND  
FILTER

FILTER  
LIFT  
STATION

BACKWASH

OXIDATION DITCH

LIFT STATION

LIFT STATION

(F) - FLOW MEASUREMENT

(S) - SAMPLE LOCATION

HOPE CREEK GENERATING STATION  
SEWAGE TREATMENT PLANT  
NPDES PERMIT NO. NJ0025411  
NPDES OUTFALL - DSN 462B  
MARCH 1990

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA ID NUMBER (copy from Item 1 of Form 1)

NJ0025411

Form Approved  
OMB No. 2000-0059  
Approval expires 12-31-05

**V. INTAKE AND EFFLUENT CHARACTERISTICS** (continued from page 3 of Form 2-C)

OUTFALL NO.

463A

**PART A:** You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (Specify if Mass)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVEG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	2.4	1.6					1	mg/L	Kg/D	4.0	IND	1
b. Chemical Oxygen Demand (COD)	96.3	65.6					1	mg/L	Kg/D	654	IND	1
c. Total Organic Carbon (TOC)	4.9	3.3					1	mg/L	Kg/D	2.2	IND	1
d. Total Suspended Solids (TSS)	17	11.6					1	mg/L	Kg/D	146.0	IND	1
e. Ammonia (as N)	1.25	0.9					1	mg/L	Kg/D	0.42	IND	1
f. Flow	VALUE N/A		VALUE N/A		VALUE 0.205		45		MGD	VALUE N/A		
g. Temperature (winter)	VALUE 3.3		VALUE		VALUE					°C	VALUE 2.8	
h. Temperature (summer)	VALUE		VALUE		VALUE		1		°C	VALUE		1
i. pH	MINIMUM 6.2	MAXIMUM 9.0	MINIMUM N/A	MAXIMUM N/A			41	STANDARD UNITS				

**PART B:** Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. NO. OF ANALYSES PER YEAR	b. NO. OF ANALYSES PER YEAR	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVERAGE VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	g. LONG TERM AVERAGE VALUE		h. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X												
b. Chlorine Total Residual		X												
c. Color	X									CLPT Units	N/A	20.0	N/A	1
d. Fecal Coliform	X									MPN/ 100 ml	N/A	488	IND	6
e. Hexachlorobenzene (118-74-2)	X									mg/L	Kg/D	0.14	IND	6
f. Hexachlorocyclopentadiene (118-74-2)	X									mg/L	Kg/D	5.12	IND	105



## ITEM V B CONTINUED FROM FRONT

NJ0025-411

463A

1. POLLUTANT AND CAS NO. (if available)	2. MARSH X a. wet area b. dry area	3. EFFLUENT			4. MONITORING DAILY VALUE			5. MONITORING 30 DAY VALUE			6. MONITORING 90 DAY VALUE			7. MONITORING 365 DAY VALUE			8. UNITS			9. INTAKE (optional)			10. NO. OF ANAL. YEARS
		1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2	4.3	5.1	5.2	5.3	6.1	6.2	6.3	7.1	7.2	7.3	
g. Nitrogen, Total Organic (as N)	X																mg/L	Kg/D		0.865	IND		6
h. Oil and Grease	X																mg/L	Kg/D		2.83	IND		6
i. Phosphorus (as P), Total (7723 14-0)	X																mg/L	Kg/D		0.27	IND		1
j. Radioactivity																							
(1) Alpha, Total	X																pCi/L	N/A		1.3	IND		48
(2) Beta, Total	X																pCi/L	N/A		43	IND		48
(3) Radium, Total	X																pCi/L	N/A		15.5	IND		48
(4) Radium 226, Total	X																pCi/L	N/A		15.5	IND		48
k. Sulfate (as SO <sub>4</sub> ), Total (14208 46-3)	X																mg/L	Kg/D		660	IND		1
l. Sulfide (as S)																							
m. Sulfite (as SO <sub>3</sub> )	X																						
n. Surfactants	X																						
o. Aluminum, Total (7429 00-8)	X																mg/L	Kg/D		0.02	IND		1
p. Barium, Total (7440 30-2)	X																						
q. Boron, Total (7440 42-0)	X																						
r. Cadmium, Total (7440 48-4)	X																						
s. Iron, Total (7439 00-8)	X																						
t. Magnesium, Total (7439 95-4)	X																mg/L	Kg/D		2.68	IND		1
u. Manganese, Total (7439 96-6)	X																mg/L	Kg/D		266	IND		1
v. Molybdenum, Total (7439 00-7)																							
w. Nickel, Total (7440 31-5)																							
x. Tin, Total (7440 31-5)																							
y. Titanium, Total (7440 32-6)																							

N10025411

46.3A

CONTINUED FROM PAGE 3 OF FORM 2-C

Form Approved  
(OMB No. 2040-0086)  
Approval expires 7-31-00

**PART C.** If you are a primary industry and this outfall contains process wastewater, refer to Table 2c. 2 in the instructions to determine which of the GC/MS fractions you must test for Mark "X" in column 2 a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2 a for secondary industries, enterprises, wastewater outfalls, and nonregulated GC/MS fractions, mark "X" in column 2 b for each pollutant you know or have reason to believe is present. Mark "X" in column 2 c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for arsenic, cyanide, dinitrophenol, or 2-methyl-4,6-dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons that pollutant is expected to be discharged. Note that there are 7 pages to this part, please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT		4. CONCENTRATION		5. UNITS		6. LONG TERM AVERAGE VALUE		7. NO OF ANAL. VOLS	
	2a	2b	3a	3b	4a	4b	5a	5b	6a	6b	7a	7b
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>												
100 Arsenic, Total (7440-38-0)		X										
200 Arsenic, Total (7440-38-0)		X										
300 Boron, Total (7440-41-7)												
400 Cadmium, Total (7440-43-0)		X										
500 Chromium, Total (7440-47-3)		X										
600 Copper, Total (7440-50-9)		X										
700 Lead, Total (7439-92-1)		X										
800 Mercury, Total (7439-97-6)		X										
900 Nickel, Total (7440-02-0)		X										
1000 Selenium, Total (7782-49-2)		X										
1100 Silver, Total (7440-22-4)		X										
1200 Thallium, Total (7440-28-0)		X										
1300 Zinc, Total (7440-66-6)		X										
1400 Cyanide, Total (57-12-5)		X										
1500 Phenols, Total		X										

ECHOING

2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.

EPA SC NUMBER ME SUR TS

X

2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 885. 886. 887. 888. 889. 890. 891. 892. 893. 894. 895. 896. 897. 898. 899. 900. 901. 902. 903. 904. 905. 906. 907. 908. 909. 910. 911. 912. 913. 914. 915. 916. 917. 918. 919. 920. 921. 922. 923. 924. 925. 926. 927. 928. 929. 930. 931. 932. 933. 934. 935. 936. 937. 938. 939. 940. 941. 942. 943. 944. 945. 946. 947. 948. 949. 950. 951. 952. 953. 954. 955. 956. 957. 958. 959. 960. 961. 962. 963. 964. 965. 966. 967. 968. 969. 970. 971. 972. 973. 974. 975. 976. 977. 978. 979. 980. 981. 982. 983. 984. 985. 986. 987. 988. 989. 990. 991. 992. 993. 994. 995. 996. 997. 998. 999. 1000.

463A

CONTINUED FROM THE PREVIOUS PAGE

| 1. POLLUTANT AND CAS NUMBER (if available) | 2. MAIN USE |      | 3. MAXIMUM DAILY VALUE |      | 4. EFFICIENT |      | 5. LONG TERM VALUE |      | 6. SHORT TERM VALUE |      | 7. HAZARD (if available) |      |
|--|-------------|------|------------------------|------|--------------|------|--------------------|------|---------------------|------|--------------------------|------|
|  | USE         | TYPE | VALUE                  | UNIT | VALUE        | UNIT | VALUE              | UNIT | VALUE               | UNIT | VALUE                    | UNIT |
| GENS FRACTION - VOLATILE COMPOUNDS         |             |      |                        |      |              |      |                    |      |                     |      |                          |      |
| 1V Acetone (107-02-8)                      |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 2V Acrylonitrile (107-13-3)                |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 3V Benzene (71-43-2)                       |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 4V Bis (Chloromethyl) Ether (542-88-1)     |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 5V Bromoform (75-26-2)                     |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 6V Carbon Tetrachloride (56-23-5)          |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 7V Chlorobenzene (108-90-7)                |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 8V Chloroform (124-38-1)                   |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 9V Chloroethane (75-00-3)                  |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 10V 2 Chloroethylvinyl Ether (110-75-8)    |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 11V Chloroform (67-66-3)                   |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 12V Dichlorobromomethane (75-27-4)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 13V Dichlorodifluoromethane (75-71-8)      |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 14V 1,1 Dichloroethane (78-36-3)           |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 15V 1,2 Dichloroethane (107-06-2)          |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 16V 1,1 Dichloroethylene (75-35-4)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 17V 1,2 Dichloropropane (78-87-5)          |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 18V 1,3 Dichloropropane (542-75-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 19V 1,4 Dichloropropane (140-41-4)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 20V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 21V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 22V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 23V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 24V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 25V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 26V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 27V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 28V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 29V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 30V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 31V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 32V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 33V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 34V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 35V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 36V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 37V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 38V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 39V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 40V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 41V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 42V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 43V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 44V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 45V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 46V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 47V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 48V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 49V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 50V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 51V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 52V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 53V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 54V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 55V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 56V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 57V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 58V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 59V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 60V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 61V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 62V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 63V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 64V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 65V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 66V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 67V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 68V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 69V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 70V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 71V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 72V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 73V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 74V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 75V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 76V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 77V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 78V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 79V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 80V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 81V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 82V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 83V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 84V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 85V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 86V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 87V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 88V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 89V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 90V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 91V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 92V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 93V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 94V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 95V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 96V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 97V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 98V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 99V 1,4 Dichlorobenzene (106-48-8)         |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |
| 100V 1,4 Dichlorobenzene (106-48-8)        |             |      | X                      |      |              |      |                    |      |                     |      |                          |      |

CONTINUED FROM PAGE V-4

EPA ID NUMBER (copy from Bb)

NJ0025411

of Form 33

OUTFALL NUMBER

463A

CERCLA No. 2040-0000

Approval expires 7/31/88

| 1. POLLUTANT AND CAS NUMBER<br>(if available)   | 2. MARK X          |                     |                   | 3. EFFLUENT            |           |   |           |   |           | 4. UNITS                    |                    | 5. INTAKE (optional) |                            |           |                             |
|---|--------------------|---------------------|-------------------|------------------------|-----------|---|-----------|---|-----------|-----------------------------|--------------------|----------------------|----------------------------|-----------|-----------------------------|
|   | C<br>CONC.<br>mg/L | M<br>MASS<br>lb/day | A<br>ANAL.<br>NO. | 6. MAXIMUM DAILY VALUE |           | 7. MAXIMUM 30 DAY VALUE<br>(if available) |           | 8. LONG TERM AVG. VALUE<br>(if available) |           | D<br>NO. OF<br>ANAL.<br>YES | E<br>CONCENTRATION | F<br>MASS            | 9. LONG TERM AVERAGE VALUE |           | H<br>NO. OF<br>ANAL.<br>YES |
|   |                    |                     |                   | C<br>CONCENTRATION     | M<br>MASS | C<br>CONCENTRATION                        | M<br>MASS | C<br>CONCENTRATION                        | M<br>MASS |                             |                    |                      | C<br>CONCENTRATION         | M<br>MASS |                             |
|   |                    |                     |                   |                        |           |   |           |   |           |                             |                    |                      |                            |           |                             |
| GC/MS FRACTION - VOLATILE COMPOUNDS (continued) |                    |                     |                   |                        |           |   |           |   |           |                             |                    |                      |                            |           |                             |
| 22V. Methylene Chloride (75-09-2)               |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 23V. 1,1,2,2-Tetrachloroethane (79-34-5)        |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 24V. Tetrachloroethylene (127-18-6)             |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 25V. Toluene (108-00-3)                         |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 26V. 1,2-Trans-Dichloroethylene (156-60-5)      |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 27V. 1,1,1-Trichloroethane (71-55-6)            |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 28V. 1,1,2-Trichloroethane (79-00-5)            |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 29V. Trichloroethylene (79-01-6)                |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 30V. Trichlorofluoromethane (75-68-4)           |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <5.0 ND                    | IND       | 1                           |
| 31V. Vinyl Chloride (75-01-4)                   |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |
| GC/MS FRACTION - ACID COMPOUNDS                 |                    |                     |                   |                        |           |   |           |   |           |                             |                    |                      |                            |           |                             |
| 1A. 2-Chlorophenol (95-57-8)                    |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |
| 2A. 2,4-Dichlorophenol (120-83-2)               |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |
| 3A. 2,4-Dimethylphenol (105-67-9)               |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |
| 4A. 4,6-Dinitro-O-Cresol (834-82-1)             |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <50.0 ND                   | IND       | 1                           |
| 5A. 2,4-Dinitrophenol (51-28-5)                 |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <50.0 ND                   | IND       | 1                           |
| 6A. 2-Nitrophenol (88-75-5)                     |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |
| 7A. 4-Nitrophenol (100-02-7)                    |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <50.0 ND                   | IND       | 1                           |
| 8A. P-Chloro-M-Cresol (59-50-7)                 |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |
| 9A. Pentachlorophenol (87-86-5)                 |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <50.0 ND                   | IND       | 1                           |
| 10A. Phenol (108-95-2)                          |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |
| 11A. 2,4,6-Trichlorophenol (88-06-2)            |                    |                     | X                 |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |
|   |                    |                     |                   |                        |           |   |           |   |           |                             | ug/L               | Kg/D                 | <10.0 ND                   | IND       | 1                           |









EPA ID NUMBER (copy from Item 1 of Form 1) OVERALL NUMBER

RJ00075411

463A

CONTINUED FROM PAGE V-8

| 1. POLLUTANT AND CAS NUMBER (if available) | 2. NAME |     | 3. EFFLUENT |     | 4. EFFLUENT |     | 5. EFFLUENT (continued) |     |
|--|---------|-----|-------------|-----|-------------|-----|-------------------------|-----|
|  | WATER   | AIR | WATER       | AIR | WATER       | AIR | WATER                   | AIR |
| OCAS FRACTION - PESTICIDES (continued)     |         |     |             |     |             |     |                         |     |
| 17P. Heptachlor Epoxide (10024-91-2)       |         | X   |             |     |             |     |                         |     |
| 18P. PCB-1242 (83409-21-0)                 |         | X   |             |     |             |     |                         |     |
| 19P. PCB-1204 (11007-68-1)                 |         | X   |             |     |             |     |                         |     |
| 20P. PCB-1221 (11100-20-2)                 |         | X   |             |     |             |     |                         |     |
| 21P. PCB-1209 (11101-10-0)                 |         | X   |             |     |             |     |                         |     |
| 22P. PCB-1249 (12072-20-0)                 |         | X   |             |     |             |     |                         |     |
| 23P. PCB-1200 (11000-62-0)                 |         | X   |             |     |             |     |                         |     |
| 24P. PCB-1010 (12076-11-2)                 |         | X   |             |     |             |     |                         |     |
| 25P. Toxaphene (8001-30-2)                 |         | X   |             |     |             |     |                         |     |



HOPE CREEK GENERATING STATION  
NJPDDES PERMIT NJ0025411

APPLICATION FORM 2C-V EXPLANATION - DSN 463A

The outfall for DSN 463A is tidal in nature due to the facility elevations and proximity to the Delaware River Estuary. Based on this tidal influence, pollutants found in the Delaware River Estuary are also found in the effluent from outfall DSN 463A. These pollutants are identified as "INTAKE" characteristics on Form 2C-V for this outfall in accordance with the Form 2C-V instructions.

**HOPE CREEK GENERATING STATION  
NJPDES PERMIT NJ0025411 RENEWAL  
PERMIT SUMMARY TABLE**

**DSN 463A  
SOUTH YARD DRAIN  
SHEET 1 OF 1**

| PARAMETER              | EXISTING PERMIT                    |                      | TYPE          | FILES                 | SWQS               | DRBC               | PERMIT RECOMMENDATIONS |           | NOTES |      |
|------------------------|------------------------------------|----------------------|---------------|-----------------------|--------------------|--------------------|------------------------|-----------|-------|------|
|                        | LIMIT                              | FREQUENCY            |               |                       |                    |                    | LIMIT                  | FREQUENCY |       |      |
| FLOW (MGD)             | N/A                                | MONTHLY <sub>1</sub> |               | 0.205 AVG<br>0.82 MAX | N/A                | N/A                | N/A                    | MONTHLY   | CALC  | 4, 5 |
| pH RANGE<br>(S.U.)     | 6.0 MIN<br>9.0 MAX                 | MONTHLY <sub>1</sub> | GRAB          | 6.00 MIN<br>9.00 MAX  | 6.5 MIN<br>8.5 MAX | 6.5 MIN<br>8.5 MAX | 6.0 MIN<br>9.0 MAX     | MONTHLY   | GRAB  | 4, 6 |
| PETROLEUM HC<br>(MG/L) | 15                                 | MONTHLY <sub>2</sub> | MULTI<br>GRAB | 0.42 AVG<br>5.80 MAX  | N/A                | N/A                | NET 15<br>MAX DAILY    | MONTHLY   | GRAB  | 4, 7 |
| TOC (MG/L)             | N/A                                | N/A                  | N/A           | 15.51 AVG<br>59.0 MAX | N/A                | N/A                | NET 50<br>MAX          | MONTHLY   | CORP  | 4, 8 |
| TSS (MG/L)             | 30, 45 AVG <sub>3</sub><br>100 MAX | MONTHLY <sub>1</sub> | GRAB          | 106.35 AVG<br>630 MAX | N/A                | N/A                |                        |           |       |      |

EXPLANATION OF EXISTING PERMIT REFERENCE NOTES

1. During a discharge event (Part III-B/C, page 4 of 9).
2. During the first precipitation event of the month which causes a discharge during working hours and which is preceded by a minimum dry period of 72 hours. The permittee shall take samples 15, 30 and 45 minutes after the onset of the discharge. The permittee shall analyze each sample individually and report a maximum value for the samples (Part III-B/C, page 4 of 9).
3. TSS shall not exceed 45 mg/l as a 7-day average (Part III-B/C, page 4 of 9).

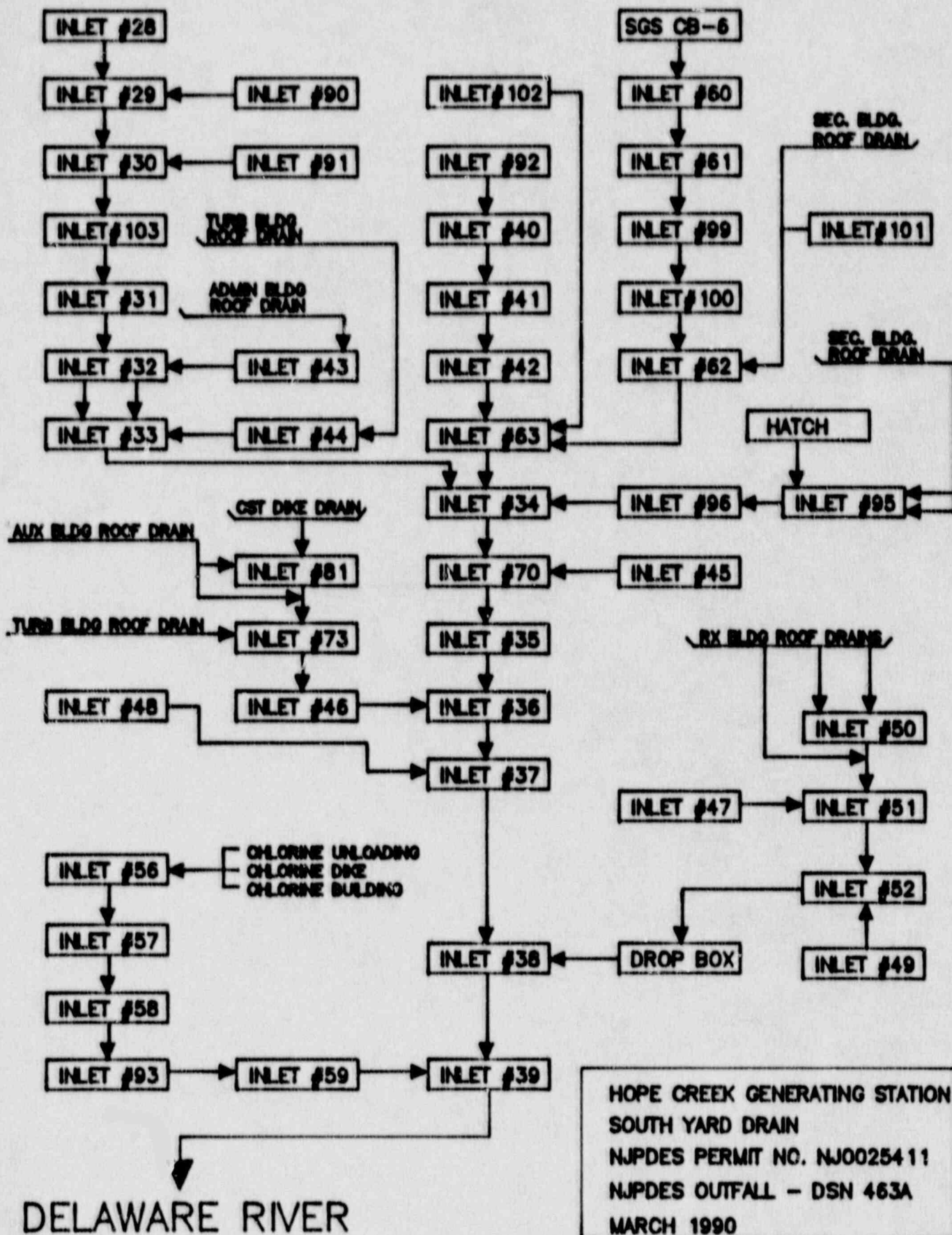
EXPLANATION OF NOTES

4. The South Yard Drain, DSN 463A, includes runoff from grade level inlets and building roof drains. The outfall for DSN 463A is tidal in nature due to the facility elevations and proximity to the Delaware River Estuary. Fully one half of the drainage piping experiences tidal influences under normal tidal conditions (see South Yard Drain high water schematic). During conditions such as high high tide, wave run up due to meteorological conditions, or wave run up due to ships passing through the Delaware River Estuary channel, most of the system is projected to contain Delaware River Estuary water (see South Yard Drain maximum tide schematic).
5. Flow cannot accurately be measured in a partially filled pipe with bi-directional flow and nonlaminar flow characteristics. Flow should be reported monthly as the calculated precipitation related discharge for the reporting period and reported in units of million gallons per day.

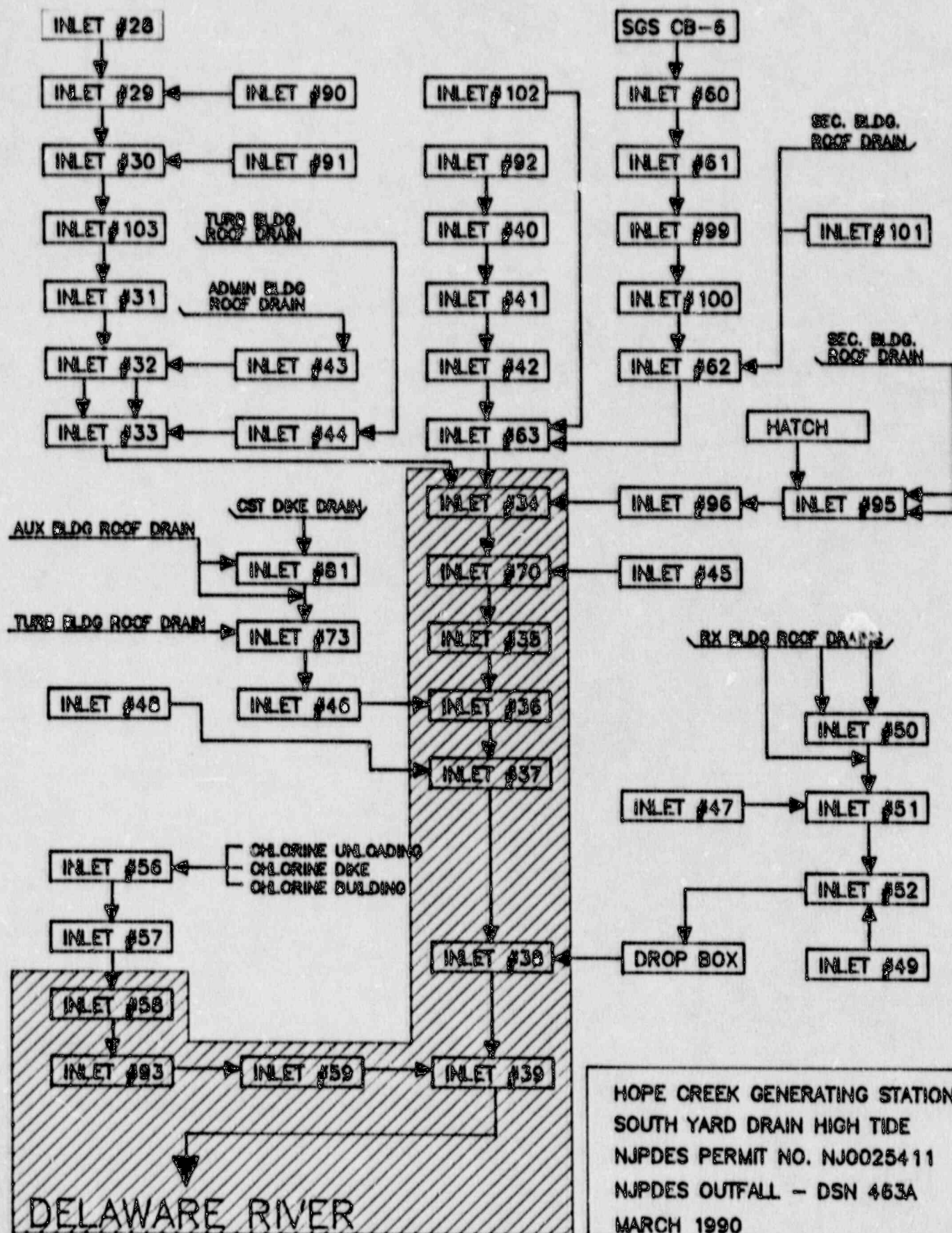


EXPLANATION OF NOTES

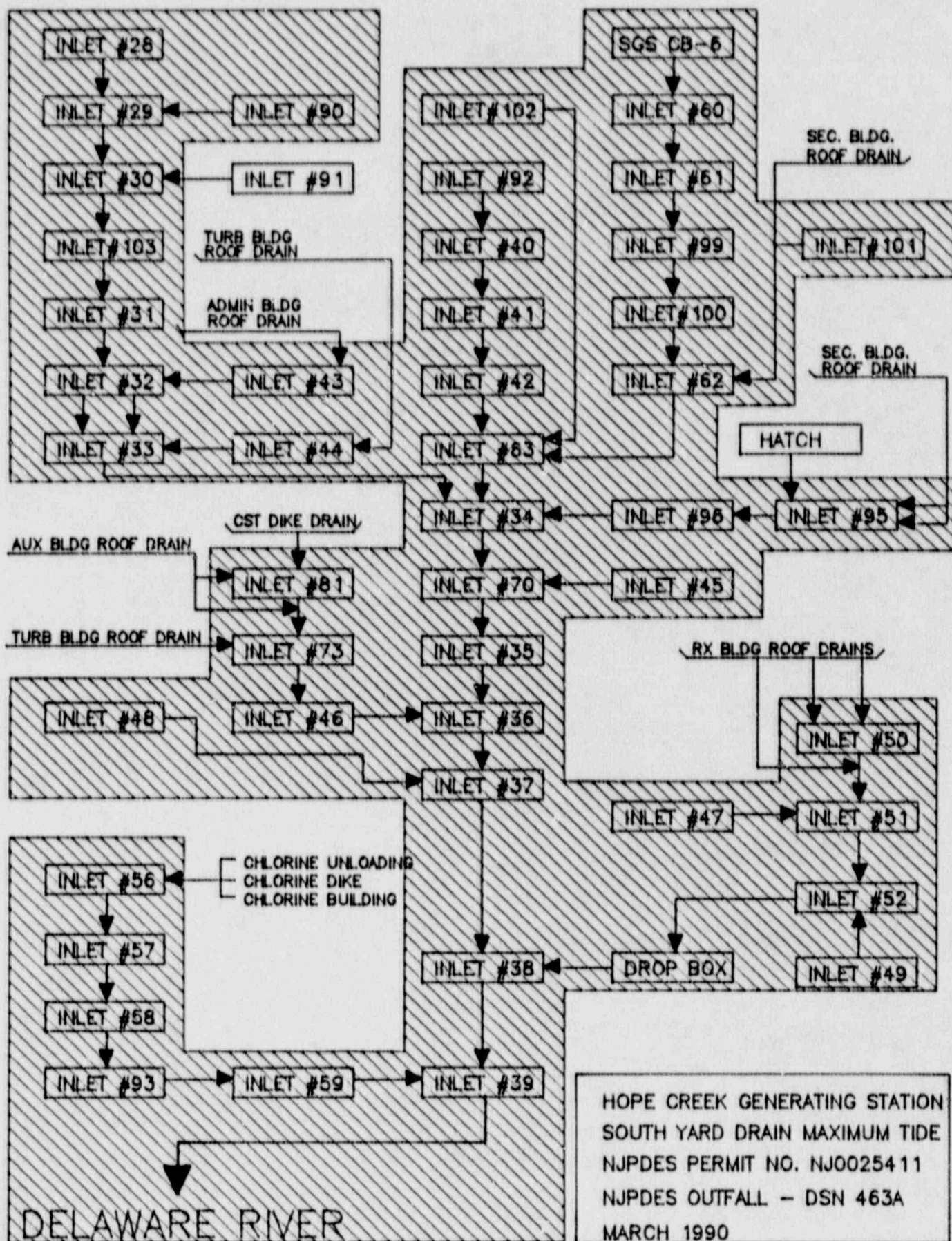
6. The pH at the outfall should be greater than 6.0 and less than 9.0. When the intake pH is less than 6.0, the discharge pH shall not be less than the intake pH; when the intake pH is greater than 9.0, the discharge pH shall not exceed the intake pH. pH should be monitored monthly at both the outfall and in the Delaware River.
7. The petroleum hydrocarbon concentration in the outfall and in the Delaware River should be measured monthly and reported as a net discharge. The sample type should be grab for this parameter.
8. The NJDEP substituted Total Organic Carbon (TOC) for Chemical Oxygen Demand (COD) in the permit modification effective November 1, 1989. The TOC limitation of 50 milligrams per liter should be based on a composite sample collected at the outfall and in the Delaware River Estuary on a monthly basis and reported and limited as a net value.
9. The Total Suspended Solids (TSS) monitoring and limitations are under evaluation in the Representative Monitoring of Stormwater Study submitted to the NJDEP. The results of the Study will provide recommendation for TSS monitoring and limitations.



HOPE CREEK GENERATING STATION  
 SOUTH YARD DRAIN  
 NJPDES PERMIT NO. NJ0025411  
 NJPDES OUTFALL - DSN 463A  
 MARCH 1990









PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)

NJ0025411

Form Approved  
OMB No. 2000-0059  
Approval expires 12-31-85

## V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

464

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

| 1. POLLUTANT                       | 2. EFFLUENT            |                |   |                |   |          | 3. UNITS<br>(specify if blank) |                  | 4. INTAKE (optional) |                            |          |                    |
|------------------------------------|------------------------|----------------|---|----------------|---|----------|--------------------------------|------------------|----------------------|----------------------------|----------|--------------------|
|                                    | a. MAXIMUM DAILY VALUE |                | b. MAXIMUM 30 DAY VALUE<br>(if available) |                | c. LONG TERM AVG. VALUE<br>(if available) |          | d. NO. OF ANALYSES             | e. CONCENTRATION | f. MASS              | g. LONG TERM AVERAGE VALUE |          | h. NO. OF ANALYSES |
|                                    | (1) CONCENTRATION      | (2) MASS       | (1) CONCENTRATION                         | (2) MASS       | (1) CONCENTRATION                         | (2) MASS |                                |                  |                      | (1) CONCENTRATION          | (2) MASS |                    |
| a. Biochemical Oxygen Demand (BOD) | 3.8                    | 3.2            |   |                |   |          | 1                              | mg/L             | Kg/D                 | 4.0                        | IND      | 1                  |
| b. Chemical Oxygen Demand (COD)    | 104.0                  | 86.6           |   |                |   |          | 1                              | mg/L             | Kg/D                 | 654.0                      | IND      | 1                  |
| c. Total Organic Carbon (TOC)      | 8.2                    | 6.8            |   |                |   |          | 1                              | mg/L             | Kg/D                 | 2.2                        | IND      | 1                  |
| d. Total Suspended Solids (TSS)    | 29.0                   | 24.1           |   |                |   |          | 1                              | mg/L             | Kg/D                 | 146.0                      | IND      | 1                  |
| e. Ammonia (as N)                  | 0.61                   | 0.5            |   |                |   |          | 1                              | mg/L             | Kg/D                 | 0.42                       | IND      | 1                  |
| f. Flow                            | VALUE<br>N/A           |                | VALUE<br>N/A                              |                | VALUE<br>0.235                            |          | 45                             |                  | MGD                  | VALUE<br>N/A               |          |                    |
| g. Temperature (winter)            | VALUE<br>6.0           |                | VALUE                                     |                | VALUE                                     |          | 1                              | °C               |                      | VALUE                      |          |                    |
| h. Temperature (summer)            | VALUE                  |                | VALUE                                     |                | VALUE                                     |          |                                | °C               |                      | VALUE                      |          |                    |
| i. pH                              | MINIMUM<br>6.0         | MAXIMUM<br>9.0 | MINIMUM<br>N/A                            | MAXIMUM<br>N/A | <div></div>                               |          | 36                             | STANDARD UNITS   |                      | <div></div>                |          |                    |

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2-a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

| 1. POLLUTANT AND CAS NO.<br>(if available) | 2. MARK "X"   |              | 3. EFFLUENT            |          |   |          |   |          | 4. UNITS           |                  | 5. INTAKE (optional) |                            |          |                    |
|--|---------------|--------------|------------------------|----------|---|----------|---|----------|--------------------|------------------|----------------------|----------------------------|----------|--------------------|
|  | a. IF PRESENT | b. IF ABSENT | a. MAXIMUM DAILY VALUE |          | b. MAXIMUM 30 DAY VALUE<br>(if available) |          | c. LONG TERM AVG. VALUE<br>(if available) |          | d. NO. OF ANALYSES | e. CONCENTRATION | f. MASS              | g. LONG TERM AVERAGE VALUE |          | h. NO. OF ANALYSES |
|  |               |              | (1) CONCENTRATION      | (2) MASS | (1) CONCENTRATION                         | (2) MASS | (1) CONCENTRATION                         | (2) MASS |                    |                  |                      | (1) CONCENTRATION          | (2) MASS |                    |
|  |               |              |                        |          |   |          |   |          |                    |                  |                      |                            |          |                    |
| a. Bromide<br>(24959-67-9)                 |               | X            |                        |          |   |          |   |          |                    |                  |                      |                            |          |                    |
| b. Chlorine,<br>Total Residual             |               | X            |                        |          |   |          |   |          |                    |                  |                      |                            |          |                    |
| c. Color                                   | X             |              |                        |          |   |          |   |          |                    | CLPT<br>Units    | N/A                  | 20.0                       | N/A      | 1                  |
| d. Fecal<br>Coliform                       | X             |              |                        |          |   |          |   |          |                    | MPN/<br>100 ml   | N/A                  | 488                        | N/A      | 6                  |
| e. Fluoride<br>(14804-38-2)                | X             |              |                        |          |   |          |   |          |                    | mg/L             | Kg/D                 | 0.14                       | IND      | 6                  |
| f. Cyanide<br>(506-67-4)                   | X             |              |                        |          |   |          |   |          |                    | mg/L             | Kg/D                 | 5.12                       | IND      | 105                |

| 1. POLLUTANT AND CAS NO.<br>(if available)    | 2. MARK 'X'<br>B. H. SIGNATURE<br>P. 25<br>SENT | C. H. SIGNATURE<br>P. 25<br>SENT | 3. EFFLUENT            |          |   |          |  |          | 4. UNITS           |                  | 5. INTAKE (optional) |                            |          |                    |
|---|---|----------------------------------|------------------------|----------|---|----------|--|----------|--------------------|------------------|----------------------|----------------------------|----------|--------------------|
|   |   |                                  | B. MAXIMUM DAILY VALUE |          | C. MAXIMUM 30 DAY VALUE<br>(if available) |          | D. LONG TERM AVERAGE VALUE<br>(if available) |          | E. NO OF ANAL YSES | F. CONCENTRATION | G. MASS              | H. LONG TERM AVERAGE VALUE |          | I. NO OF ANAL YSES |
|   |   |                                  | (1) CONCENTRATION      | (2) MASS | (1) CONCENTRATION                         | (2) MASS | (1) CONCENTRATION                            | (2) MASS |                    |                  |                      | (1) CONCENTRATION          | (2) MASS |                    |
| g. Nitrogen, Total Organic (as N)             | X   |                                  |                        |          |   |          |  |          |                    | mg/L             | Kg/D                 | 0.845                      | IND      | 6                  |
| h. Oil and Grease                             | X   |                                  |                        |          |   |          |  |          |                    | mg/L             | Kg/D                 | 2.83                       | IND      | 6                  |
| i. Phosphorus (as P), Total (7723-14-0)       | X   |                                  |                        |          |   |          |  |          |                    | mg/L             | Kg/D                 | 6.408                      | IND      | 6                  |
| j. Radioactivity                              |   |                                  |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| (1) Alpha, Total                              | X   |                                  |                        |          |   |          |  |          |                    | pCi/L            | N/A                  | 1.3                        | IND      | 48                 |
| (2) Beta, Total                               | X   |                                  |                        |          |   |          |  |          |                    | pCi/L            | N/A                  | 43                         | IND      | 48                 |
| (3) Radium, Total                             | X   |                                  |                        |          |   |          |  |          |                    | pCi/L            | N/A                  | 15.5                       | IND      | 48                 |
| (4) Radium 226, Total                         | X   |                                  |                        |          |   |          |  |          |                    | pCi/L            | N/A                  | 15.5                       | IND      | 48                 |
| k. Sulfate (as SO <sub>4</sub> ) (14808-79-8) | X   |                                  |                        |          |   |          |  |          |                    | mg/L             | Kg/D                 | 516.7                      | IND      | 1                  |
| l. Sulfide (as S)                             |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| m. Sulfite (as SO <sub>3</sub> ) (14206-48-3) |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| n. Surfactants                                | X   |                                  |                        |          |   |          |  |          |                    | mg/L             | Kg/D                 | 0.02                       | IND      | 1                  |
| o. Aluminum, Total (7429-90-8)                |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| p. Barium, Total (7440-39-3)                  |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| q. Boron, Total (7440-42-8)                   |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| r. Cobalt, Total (7440-48-4)                  |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| s. Iron, Total (7439-89-8)                    | X   |                                  |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| t. Magnesium, Total (7439-95-4)               | X   |                                  |                        |          |   |          |  |          |                    | mg/L             | Kg/D                 | 2.68                       | IND      | 1                  |
| u. Molybdenum, Total (7439-98-7)              |   | X                                |                        |          |   |          |  |          |                    | mg/L             | Kg/D                 | 266                        | IND      | 1                  |
| v. Manganese, Total (7439-96-5)               |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| w. Tin, Total (7440-31-5)                     |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |
| x. Titanium, Total (7440-32-6)                |   | X                                |                        |          |   |          |  |          |                    |                  |                      |                            |          |                    |

|  |                |
|--|----------------|
| EPA ID NUMBER (copy from Item 1 of Form 1) | OUTFALL NUMBER |
| NJ0025411                                  | 464            |

Form Approved  
OMB No. 2040-0086  
Approval expires 7-31-88

CONTINUED FROM PAGE 3 OF FORM 2-C

**PART C** - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c. 2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2 a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2 a (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), mark "X" in column 2 b for each pollutant you know or have reason to believe is present. Mark "X" in column 2 c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol, you must provide the results of at least one analysis for each of those pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part, please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

| 1. POLLUTANT AND CAS NUMBER<br>(if available)    | 2. MARK "X"        |                    |                    | 3. EFFLUENT            |           |  |           |   |           | 4. UNITS             |                  | 5. INTAKE (optional) |                            |           |                      |  |
|--|--------------------|--------------------|--------------------|------------------------|-----------|--|-----------|---|-----------|----------------------|------------------|----------------------|----------------------------|-----------|----------------------|--|
|  | a. ANAL. FRAC. NO. | b. ANAL. FRAC. NO. | c. ANAL. FRAC. NO. | a. MAXIMUM DAILY VALUE |           | b. MAXIMUM 30 DAY VALUE (if available) |           | c. LONG TERM AVERAGE VALUE (if available) |           | d. NO. OF ANAL. YRS. | a. CONCENTRATION | b. MASS              | e. LONG TERM AVERAGE VALUE |           | f. NO. OF ANAL. YRS. |  |
|  |                    |                    |                    | (i) CONCENTRATION      | (ii) MASS | (i) CONCENTRATION                      | (ii) MASS | (i) CONCENTRATION                         | (ii) MASS |                      |                  |                      | (i) CONCENTRATION          | (ii) MASS |                      |  |
| <b>METALS, CYANIDE, AND TOTAL PHENOLS</b>        |                    |                    |                    |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 1M Antimony, Total (7440-36-0)                   |                    |                    | X                  |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 2M Arsenic, Total (7440-38-2)                    |                    | X                  |                    |                        |           |  |           |   |           |                      | mg/L             | Kg/D                 | 0.012                      | IND       | 1                    |  |
| 3M Beryllium, Total (7440-41-7)                  |                    |                    | X                  |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 4M Cadmium, Total (7440-43-9)                    |                    | X                  |                    |                        |           |  |           |   |           |                      | mg/L             | Kg/D                 | 0.016                      | IND       | 1                    |  |
| 5M Chromium, Total (7440-47-3)                   |                    | X                  |                    |                        |           |  |           |   |           |                      | mg/L             | Kg/D                 | 0.035                      | IND       | 1                    |  |
| 6M Copper, Total (7440-50-9)                     |                    | X                  |                    |                        |           |  |           |   |           |                      | mg/L             | Kg/D                 | 0.051                      | IND       | 1                    |  |
| 7M Lead, Total (7439-92-1)                       |                    | X                  |                    |                        |           |  |           |   |           |                      | mg/L             | Kg/D                 | 0.132                      | IND       | 1                    |  |
| 8M Mercury, Total (7439-97-6)                    |                    | X                  |                    |                        |           |  |           |   |           |                      | mg/L             | Kg/D                 | 0.0006                     | IND       | 1                    |  |
| 9M Nickel, Total (7440-02-0)                     |                    |                    | X                  |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 10M Selenium, Total (7782-49-2)                  |                    |                    | X                  |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 11M Silver, Total (7440-22-4)                    |                    |                    | X                  |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 12M Thallium, Total (7440-28-0)                  |                    |                    | X                  |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 13M Zinc, Total (7440-66-6)                      |                    | X                  |                    |                        |           |  |           |   |           |                      | mg/L             | Kg/D                 | 0.057                      | IND       | 1                    |  |
| 14M Cyanide, Total (57-12-5)                     |                    |                    | X                  |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 15M Phenols, Total                               |                    |                    | X                  |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| <b>DIOXIN</b>                                    |                    |                    |                    |                        |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |
| 2,3,7,8 Tetra-chlorodibenzo-p-dioxin (1764-01-6) |                    |                    | X                  | DESCRIBE RESULTS       |           |  |           |   |           |                      |                  |                      |                            |           |                      |  |



NJ0025411

464

CONTINUED FROM THE FRONT

| 1. POLLUTANT<br>NUMBER<br>(if available)        |  | 2. MAXIMUM<br>ALLOWED<br>CONC.<br>M/L |   | 3. MAXIMUM DAILY VALUE<br>(if available) |  | 3. EFFLUENT<br>CONCENTRATION |  | 4. LONG TERM<br>EXPOSURE VALUE<br>(1) mass (2) mass |  | 5. INTAKE (optional)<br>CONCENTRATION |  | 6. UNITS<br>CONCENTRATION |  | 7. NO OF<br>ANAL<br>YES |  |
|---|--|---------------------------------------|---|--|--|------------------------------|--|---|--|---------------------------------------|--|---------------------------|--|-------------------------|--|
| GC/MS FRACTION - VOLATILE COMPOUNDS             |  |                                       |   |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 1V Acrolein<br>(107 02 8)                       |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 2V Acrylonitrile<br>(107 13 1)                  |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 3V Benzene<br>(71 43 2)                         |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 4V Bis (Chloro-<br>methyl) Ether<br>(542 88 1)  |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 5V Bromoform<br>(75 26 2)                       |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 6V Carbon<br>Tetrachloride<br>(56 23 5)         |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 7V Chlorobenzene<br>(108 90 7)                  |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 8V Chlorodi-<br>bromomethane<br>(124 48 1)      |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 9V Chloroethane<br>(75 00 3)                    |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 10V 2 Chloro-<br>ethylvinyl Ether<br>(110 75 8) |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 11V Chloroform<br>(67 68 3)                     |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 12V Dichloro-<br>bromomethane<br>(75 27 4)      |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 13V Dichloro-<br>difluoromethane<br>(75 71 8)   |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 14V 1,1 Dichloro-<br>ethane (75 34 3)           |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 15V 1,2 Dichloro-<br>ethane (107 06 2)          |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 16V 1,1 Dichloro-<br>ethylene (75 38 4)         |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 17V 1,2 Dichloro-<br>propane (75 87 5)          |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 18V 1,3 Dichloro-<br>propylene (542 75 4)       |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 19V 1-Ethylbenzene<br>(100 41 4)                |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 20V Methyl<br>Bromide (74 83 2)                 |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |
| 21V Methyl<br>Chloride (74 87 3)                |  |                                       | X |  |  |                              |  |   |  |                                       |  |                           |  |                         |  |



[illegible]

CONTINUED FROM THE FRONT

NJ0025411

464

| 1. POLLUTANT<br>AND CAS<br>NUMBER<br>(if available) | 2. NAME |         | 3. EFFLUENT                        |                              | 4. UNITS                     |                              | 5. INTAKE (upstream)         |                              |
|---|---------|---------|------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
|   | NAME    | CAS NO. | MAXIMUM DAILY VALUE<br>(1) (2) (3) | CONCENTRATION<br>(1) (2) (3) | CONCENTRATION<br>(1) (2) (3) | CONCENTRATION<br>(1) (2) (3) | CONCENTRATION<br>(1) (2) (3) | CONCENTRATION<br>(1) (2) (3) |
| OCMS FRACTION - BASE/NEUTRAL COMPOUNDS              |         |         |                                    |                              |                              |                              |                              |                              |
| 18 Aconaphthene<br>(83 32 8)                        |         |         |                                    |                              |                              |                              |                              |                              |
| 28 Aconaphthylene<br>(208 96 8)                     |         |         |                                    |                              |                              |                              |                              |                              |
| 38 Anthracene<br>(120 12 7)                         |         |         |                                    |                              |                              |                              |                              |                              |
| 48 Benzidine<br>(92 47 5)                           |         |         |                                    |                              |                              |                              |                              |                              |
| 58 Benzene (a)<br>Anthracene<br>(94 99 3)           |         |         |                                    |                              |                              |                              |                              |                              |
| 68 Benzene (a)<br>Pyrene (94 32 4)                  |         |         |                                    |                              |                              |                              |                              |                              |
| 78 3,4-Benz-<br>fluoranthene<br>(208 96 2)          |         |         |                                    |                              |                              |                              |                              |                              |
| 88 Benzene (b)<br>Pyrene<br>(101 24 2)              |         |         |                                    |                              |                              |                              |                              |                              |
| 98 Benzene (b)<br>Fluoranthene<br>(207 08 8)        |         |         |                                    |                              |                              |                              |                              |                              |
| 108 8a (3-Chloro-<br>ethoxy) Methane<br>(111 91 1)  |         |         |                                    |                              |                              |                              |                              |                              |
| 118 8a (3-Chloro-<br>ethoxy) Ethane<br>(111 44 4)   |         |         |                                    |                              |                              |                              |                              |                              |
| 128 8a (2-Chloro-<br>propyl) Ether (105 85 1)       |         |         |                                    |                              |                              |                              |                              |                              |
| 138 8a (3-Ethyl-<br>hexyl) Phthalate<br>(117 91 7)  |         |         |                                    |                              |                              |                              |                              |                              |
| 148 4-Bromo-<br>phenyl Phenyl<br>Ether (101 95 3)   |         |         |                                    |                              |                              |                              |                              |                              |
| 158 Butyl Benzyl<br>Phthalate (98 48 7)             |         |         |                                    |                              |                              |                              |                              |                              |
| 168 2-Chloro-<br>naphthalene<br>(81 65 7)           |         |         |                                    |                              |                              |                              |                              |                              |
| 178 4-Chloro-<br>phenyl Phenyl<br>Ether (1008 72 3) |         |         |                                    |                              |                              |                              |                              |                              |
| 188 Chrysene<br>(218 01 8)                          |         |         |                                    |                              |                              |                              |                              |                              |
| 198 Dibenz (a,h)<br>Anthracene<br>(53 70 3)         |         |         |                                    |                              |                              |                              |                              |                              |
| 208 1,2-Dichloro<br>benzene (98 96 1)               |         |         |                                    |                              |                              |                              |                              |                              |
| 218 1,3-Dichloro<br>benzene (841 73 1)              |         |         |                                    |                              |                              |                              |                              |                              |

SPRINT NUMBER (copy from Item 1 of Form 1) OUTFALL NUMBER  
NJ0025411 464

CONTINUED FROM PAGE V-6

| 1. POLLUTANT<br>AND CAS<br>NUMBER<br>(if available)       | 2. MARSH<br>CLASS<br>NO.<br>CLASS<br>NO. | 3. EFFLUENT               |          | 4. UNITS                  |          | 5. INTAKE (optional)          |          |
|---|--|---------------------------|----------|---------------------------|----------|-------------------------------|----------|
|   |  | 6. MAXIMUM DAILY VALUE    |          | 7. CONCEN-<br>TRATION     |          | 8. LONG TERM<br>AVERAGE VALUE |          |
|   |  | (1) mass<br>concentration | (2) mass | (1) mass<br>concentration | (2) mass | (1) mass<br>concentration     | (2) mass |
| GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)       |  |                           |          |                           |          |                               |          |
| 228 1,4 Dichloro<br>benzene (106-46-7)                    |  | X                         |          |                           |          |                               |          |
| 238 3,3' Dichloro<br>benzidine<br>(91-94-1)               |  | X                         |          |                           |          |                               |          |
| 248 Diethyl<br>Phthalate<br>(84-66-2)                     |  | X                         |          |                           |          |                               |          |
| 268 Dimethyl<br>Phthalate<br>(131-11-3)                   |  | X                         |          |                           |          |                               |          |
| 288 Di-N-Butyl<br>Phthalate<br>(84-74-2)                  |  | X                         |          |                           |          |                               |          |
| 278 2,6 Dinitro-<br>toluene (121-14-2)                    |  | X                         |          |                           |          |                               |          |
| 298 2,6 Dinitro-<br>toluene (808-20-2)                    |  | X                         |          |                           |          |                               |          |
| 298 Di-N-Octyl<br>Phthalate<br>(117-84-0)                 |  | X                         |          |                           |          |                               |          |
| 308 1,2-Diphenyl-<br>hydrazine (as Azobenzene) (122-86-7) |  | X                         |          |                           |          |                               |          |
| 318 Fluoranthene<br>(208-44-0)                            |  | X                         |          |                           |          |                               |          |
| 328 Fluorene<br>(86-73-7)                                 |  | X                         |          |                           |          |                               |          |
| 338 Hexachlorobenzene<br>(118-36-1)                       |  | X                         |          |                           |          |                               |          |
| 348 Hexa-<br>chlorobutadiene<br>(87-68-3)                 |  | X                         |          |                           |          |                               |          |
| 358 Hexachloro-<br>cyclopentadiene<br>(177-47-4)          |  | X                         |          |                           |          |                               |          |
| 368 Hexachloro-<br>ethane (87-73-1)                       |  | X                         |          |                           |          |                               |          |
| 378 Indene<br>(1,2,3-cd) Pyrene<br>(193-39-8)             |  | X                         |          |                           |          |                               |          |
| 388 Isophorone<br>(78-68-1)                               |  | X                         |          |                           |          |                               |          |
| 398 Naphthalene<br>(91-20-3)                              |  | X                         |          |                           |          |                               |          |
| 408 Nitrobenzene<br>(98-95-3)                             |  | X                         |          |                           |          |                               |          |
| 418 N Nitro-<br>sulfonethylaniline<br>(62-75-9)           |  | X                         |          |                           |          |                               |          |
| 428 N Nitrobutyl<br>N Propylaniline<br>(62-16-7)          |  | X                         |          |                           |          |                               |          |



CONTINUED FROM THE FRONT

464

NJ0025411

| 1. POLLUTANT AND CAS NUMBER (if available)          | 2. NAME |         | 3. EFFLUENT                |                            | 4. UNITS      |         | 5. INTAKE (optional)           |                 |
|---|---------|---------|----------------------------|----------------------------|---------------|---------|--------------------------------|-----------------|
|   | NAME    | CAS NO. | MAXIMUM DAILY VALUE (mg/l) | MAXIMUM DAILY VALUE (mg/l) | CONCENTRATION | IN MADE | LONG TERM AVERAGE VALUE (mg/l) | NO OF ANAL VOLS |
| GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued) |         |         |                            |                            |               |         |                                |                 |
| 438 N Nitro-methylbenzylamine (88-39-8)             |         |         | X                          |                            |               |         |                                |                 |
| 448 Phenanthrene (85-61-8)                          |         |         | X                          |                            |               |         |                                |                 |
| 488 Pyrene (129-00-4)                               |         |         | X                          |                            |               |         |                                |                 |
| 488 1,2,4-Trichlorobenzene (129-82-1)               |         |         | X                          |                            |               |         |                                |                 |
| GC/MS FRACTION - PESTICIDES                         |         |         |                            |                            |               |         |                                |                 |
| 1P Alar (309-85-2)                                  |         |         | X                          |                            |               |         |                                |                 |
| 2P d-BHC (310-84-8)                                 |         |         | X                          |                            |               |         |                                |                 |
| 2P $\beta$ -BHC (310-85-7)                          |         |         | X                          |                            |               |         |                                |                 |
| 4P $\gamma$ -BHC (68-88-6)                          |         |         | X                          |                            |               |         |                                |                 |
| 8P $\delta$ -BHC (310-86-8)                         |         |         | X                          |                            |               |         |                                |                 |
| 8P Chlordane (87-74-8)                              |         |         | X                          |                            |               |         |                                |                 |
| 7P 4,4'-DDT (50-29-3)                               |         |         | X                          |                            |               |         |                                |                 |
| 8P 4,4'-DDE (173-88-8)                              |         |         | X                          |                            |               |         |                                |                 |
| 8P 4,4'-DDD (173-84-8)                              |         |         | X                          |                            |               |         |                                |                 |
| 10P Dieldrin (60-87-1)                              |         |         | X                          |                            |               |         |                                |                 |
| 11P d-Endosulfan (110-20-7)                         |         |         | X                          |                            |               |         |                                |                 |
| 12P $\beta$ -Endosulfan (110-20-7)                  |         |         | X                          |                            |               |         |                                |                 |
| 13P Endosulfan Sulfate (1033-87-8)                  |         |         | X                          |                            |               |         |                                |                 |
| 14P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 15P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 16P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 17P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 18P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 19P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 20P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 21P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 22P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 23P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 24P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 25P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 26P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 27P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 28P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 29P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 30P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 31P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 32P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 33P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 34P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 35P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 36P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 37P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 38P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 39P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 40P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 41P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 42P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 43P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 44P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 45P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 46P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 47P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 48P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 49P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 50P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 51P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 52P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 53P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 54P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 55P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 56P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 57P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 58P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 59P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 60P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 61P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 62P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 63P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 64P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 65P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 66P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 67P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 68P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 69P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 70P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 71P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 72P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 73P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 74P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 75P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 76P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 77P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 78P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 79P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 80P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 81P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 82P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 83P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 84P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 85P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 86P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 87P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 88P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 89P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 90P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 91P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 92P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 93P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 94P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 95P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 96P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 97P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 98P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 99P Endrin (172-20-8)                               |         |         | X                          |                            |               |         |                                |                 |
| 100P Endrin (172-20-8)                              |         |         | X                          |                            |               |         |                                |                 |



EPA ID NUMBER from Form 1 of Part II: OUTFALL NUMBER

464

NJ0025411

CONTINUED FROM PAGE V-3

| 1. POLLUTANT AND CAS NUMBER (if available) | 2. MARKER |     |     | 3. EFFLUENT         |                       |                      | 4. UNITS      |               |               | 5. STATE (optional) |               |               |
|--|-----------|-----|-----|---------------------|-----------------------|----------------------|---------------|---------------|---------------|---------------------|---------------|---------------|
|  | LOC       | SEC | CON | MAXIMUM DAILY VALUE | MAXIMUM MONTHLY VALUE | MAXIMUM YEARLY VALUE | CONCENTRATION | CONCENTRATION | CONCENTRATION | CONCENTRATION       | CONCENTRATION | CONCENTRATION |
| OCAMS FRACTION - PESTICIDES (continued)    |           |     |     |                     |                       |                      |               |               |               |                     |               |               |
| 17P. Heptachlor Epoxide<br>(102-67-3)      |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |
| 18P. PCB 1242<br>(83400-21-0)              |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |
| 18P. PCB 1254<br>(11007-00-1)              |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |
| 20P. PCB 1221<br>(11166-30-2)              |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |
| 21P. PCB 1228<br>(11161-10-0)              |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |
| 22P. PCB 1248<br>(12072-20-0)              |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |
| 22P. PCB 1260<br>(11000-02-0)              |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |
| 24P. PCB 1010<br>(12074-11-2)              |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |
| 26P. Toxaphene<br>(5001-35-2)              |           |     | X   |                     |                       |                      |               |               |               |                     |               |               |

**HOPE CREEK GENERATING STATION  
NJPDES PERMIT NJ0025411 RENEWAL  
PERMIT SUMMARY TABLE**

**DSN 464  
PERIMETER DRAIN  
SHEET 1 OF 1**

| PARAMETER              | EXISTING PERMIT       |                      |               | FILES                  | SWQS               | DRBC               | PERMIT RECOMMENDATIONS |           |      |       |
|------------------------|-----------------------|----------------------|---------------|------------------------|--------------------|--------------------|------------------------|-----------|------|-------|
|                        | LIMIT                 | FREQUENCY            | TYPE          |                        |                    |                    | LIMIT                  | FREQUENCY | TYPE | NOTES |
| FLOW (MGD)             | N/A                   | MONTHLY <sub>1</sub> |               | 0.235 AVG<br>0.820 MAX | N/A                | N/A                | DELETE                 |           |      | 4     |
| pH RANGE<br>(S.U.)     | 6.0 MIN<br>9.0 MAX    | MONTHLY <sub>1</sub> | GRAB          | 6.0 MIN<br>9.0 MAX     | 6.5 MIN<br>8.5 MAX | 6.5 MIN<br>8.5 MAX | DELETE                 |           |      | 4     |
| PETROLEUM HC<br>(MG/L) | 15                    | MONTHLY <sub>2</sub> | MULTI<br>GRAB | .74 AVG<br>14.2 MAX    | N/A                | N/A                | DELETE                 |           |      | 4     |
| TOC (MG/L)             | N/A                   | N/A                  | N/A           | 19.04 AVG<br>86 MAX    | N/A                | N/A                | DELETE                 |           |      | 4     |
| TSS (MG/L)             | 30, 45 AVG<br>100 MAX | MONTHLY <sub>1</sub> | GRAB          | 96.95 AVG<br>1040 MAX  | N/A                | N/A                | DELETE                 |           |      | 4     |

EXPLANATION OF EXISTING PERMIT REFERENCE NOTES

1. During a discharge event (Part III-B/C, page 4 of 9).
2. During the first precipitation event of the month which causes a discharge during working hours and which is preceded by a minimum dry period of 72 hours. The permittee shall take samples 15, 30 and 45 minutes after the onset of the discharge. The permittee shall analyze each sample individually and report a maximum value for the samples (Part III-B/C, page 4 of 9).
3. TSS shall not exceed 45 mg/l as a 7-day average (Part III-BC, page 4 of 9).

EXPLANATION OF NOTES

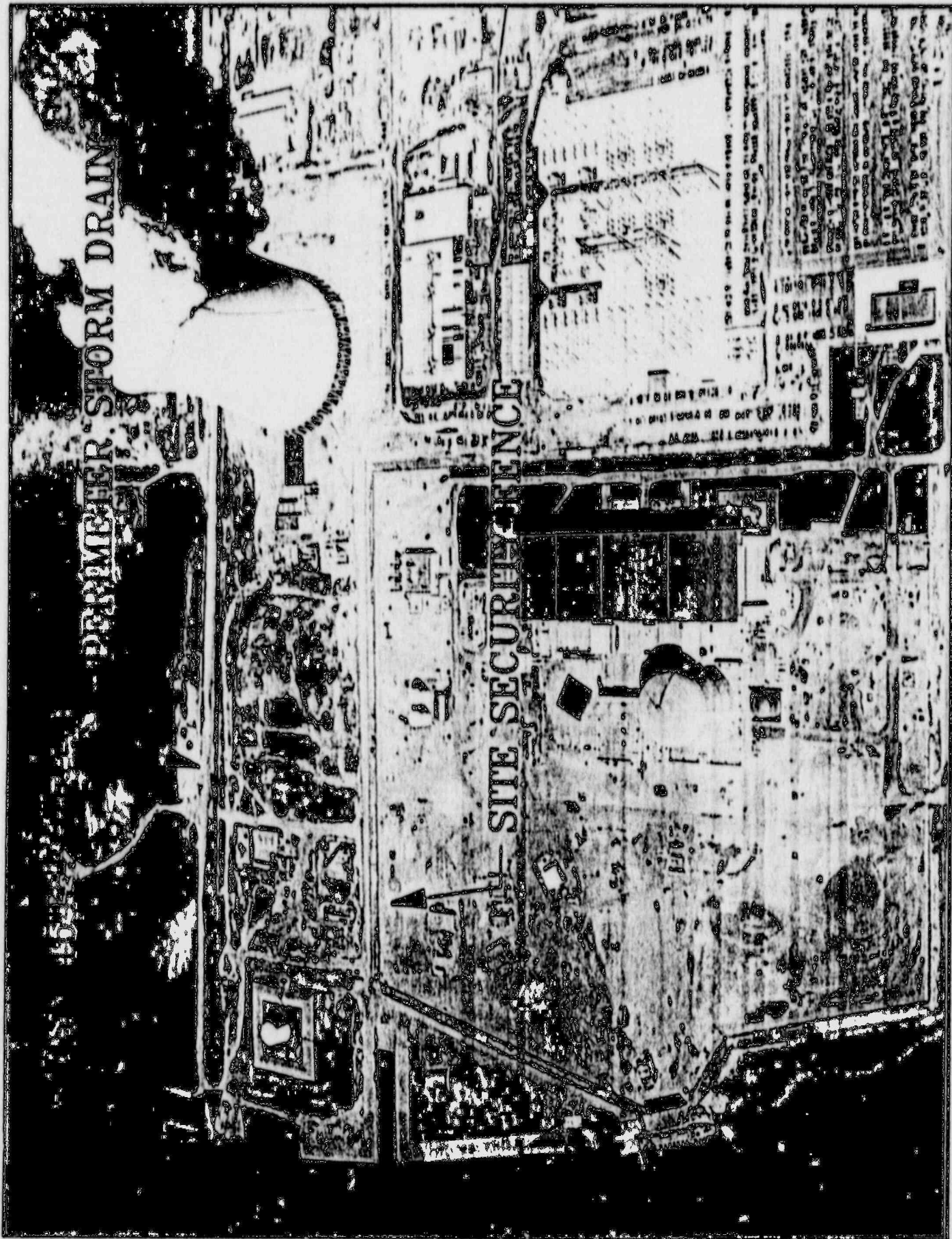
4. The Perimeter Storm Drain runoff, DSN 464, is a drainage channel which accepts storm water runoff from areas external to the facility. Stormwater falling on areas within the Hope Creek Protected Area is drained through DSN 462A and DSN 463A. The Perimeter Storm Drain is located at the North end of the site, beyond the Hope Creek Security Fence as can be seen on the enclosed photograph. The areas of the Sewage Treatment Plant, Low Volume and Oily Waste System and the Cooling Tower drain storm water runoff through the North Storm Drain, DSN 462A.

Since the discharge from DSN 464 is not associated with any industrial activity, the permittee requests deletion of monitoring requirements and limitations.



PERIMETER STORM DRAIN

SITE SECURITY FENCE



HOPE CREEK GENERATING STATION  
NJPDES PERMIT NJ0025411

PART IV - B/C

The permittee requests the following changes to Part IV-B/C:

1. Section E, paragraph 2 should be modified to read as follows:
  - a. The permittee is required by federal regulations and the Nuclear Regulatory Commission License to maintain radiation protection standards and handle radioactive waste in accordance with those regulations and documents.
  - b. All radioactive wastes not regulated by the Nuclear Regulatory Commission shall be collected, removed, and disposed of in accordance with N.J.A.C. 7:28-11.1 et. seq.
  - c. The permittee shall comply with all regulations set forth in N.J.S.A. 26:2D-1 et. seq. in regard to radiation protection.
2. Section I modify the existing wording to say:

"The permittee is licensed by the Nuclear Regulatory Commission and responsible to that agency for compliance with radiological effluent limitations, monitoring requirements, and other licensing conditions."

**MAPS, FIGURES, AND PHOTOGRAPHS**  
**CONTENTS**

**Site Location Map**

**U.S.G.S. Topographic Map Depicting One-Mile Radius**

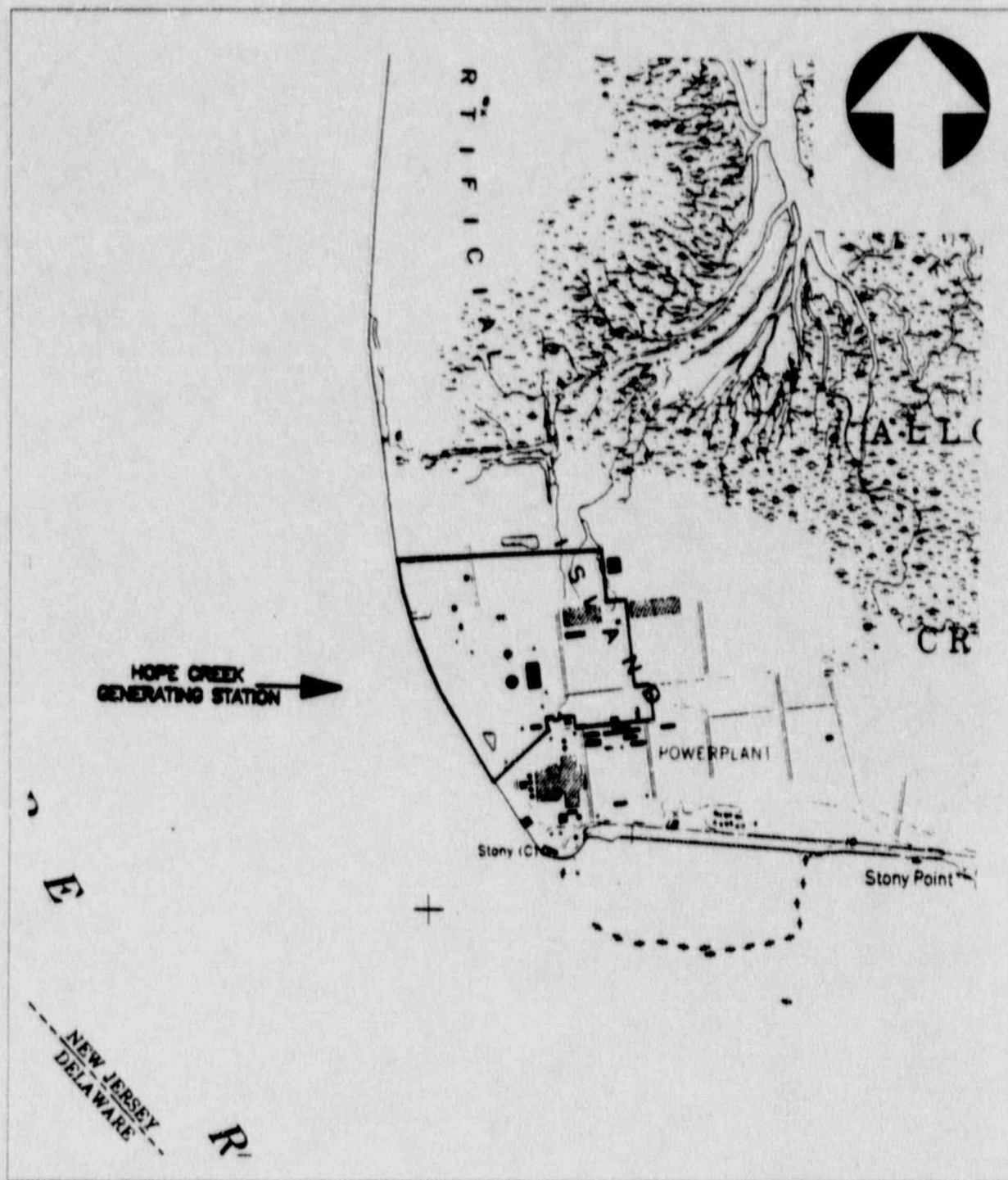
**Reduced Size General Site Map**

**General Site Map**

**Schematic Of Water Flow**

**Photograph Showing Permitted Discharge Outfall Locations**





U. S. GEOLOGICAL SURVEY  
 TOPOGRAPHIC MAP  
 "TAYLOR'S BRIDGE, DEL-NJ" QUADRANGLE  
 SCALE 1:24000


HOPE CREEK GENERATING STATION  
 SITE LOCATION MAP  
 NJPDES PERMIT NO. NJ0025411

MARCH 1990



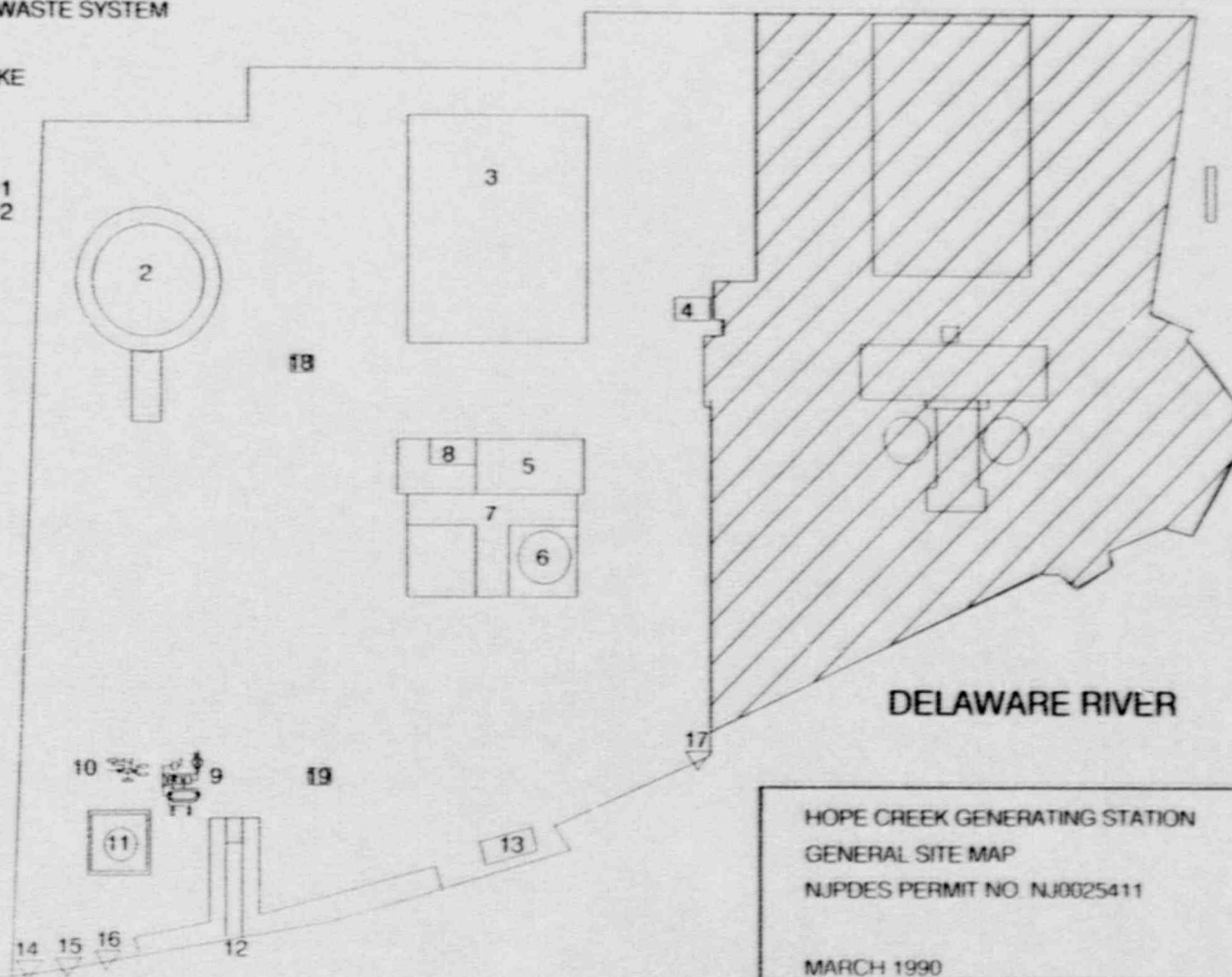
# LEGEND

- 1 HAZARDOUS WASTE TRANSFER AREA
- 2 COOLING TOWER
- 3 500 KV SWITCHYARD
- 4 GUARD HOUSE
- 5 TURBINE BUILDING
- 6 REACTOR BUILDING
- 7 AUXILIARY BUILDING
- 8 ADMIN FACILITY AND STOREROOM
- 9 SEWAGE TREATMENT PLANT
- 10 LOW VOLUME & OILY WASTE SYSTEM
- 11 MAIN FUEL OIL TANK
- 12 BARGE SLIP
- 13 SERVICE WATER INTAKE
- 14 OUTFALL DSN 464
- 15 OUTFALL DSN 461A
- 16 OUTFALL DSN 462A
- 17 OUTFALL DSN 463A
- 18 PRODUCTION WELL #1
- 19 PRODUCTION WELL #2

 SALEM GEN STATION

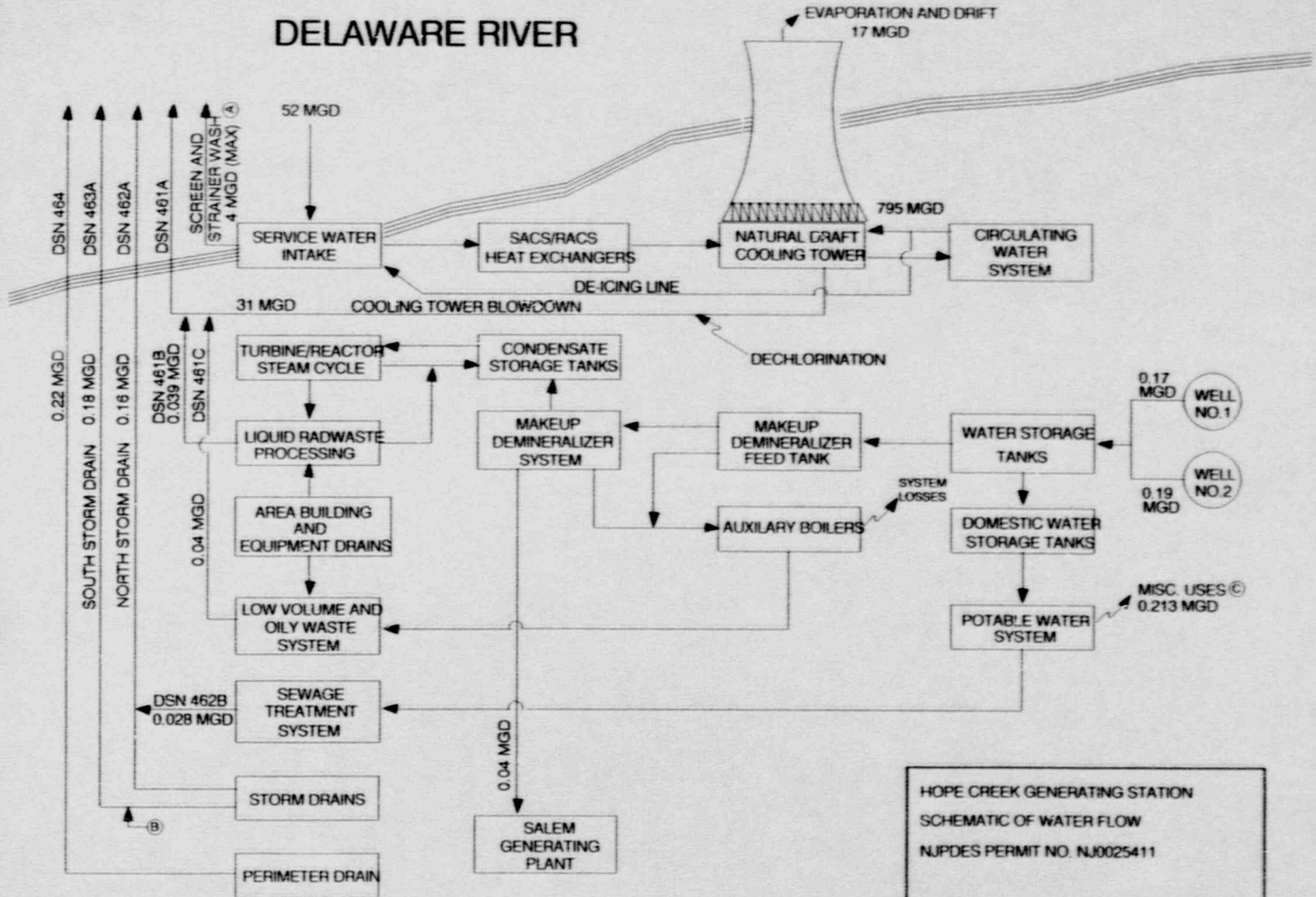


SECOND SUN



HOPE CREEK GENERATING STATION  
 GENERAL SITE MAP  
 NJPDES PERMIT NO. NJ0025411  
 MARCH 1990

# DELAWARE RIVER



NOTE: ALL REPORTED FLOW VALUES ARE DAILY AVERAGES UNLESS STATED OTHERWISE STATED

HOPE CREEK GENERATING STATION  
SCHEMATIC OF WATER FLOW  
NJPD&S PERMIT NO. NJ0025411

MARCH 1990

## EXPLANATION OF NOTES

### SCHEMATIC OF WATER FLOW DIAGRAM

- ① Screen wash water is used to remove impinged fish and debris from the traveling screens. The wash water also provides augmentation flow to a sluiceway for returning fish and debris to the river. Also service water sump pump discharge returns leaks and drains within service water structure to the Delaware River.
- ② Sodium hypochlorite facility drain. Primarily collected stormwater, controlled with valves and tested for residual chlorine prior to discharge.
- ③ Miscellaneous uses of potable water include: drinking water, fire protection system usage, evaporation, miscellaneous cleaning, leakage, etc.

**ONE-MILE RADIUS MAP  
HOPE CREEK GENERATING STATION  
NJPDES PERMIT NO. NJ0025411**

**LEGEND**

- 1 HAZARDOUS WASTE TRANSFER AREA
- 2 COOLING TOWER
- 3 500 KV SWITCHYARD
- 4 GUARD HOUSE
- 5 TURBINE BUILDING
- 6 REACTOR BUILDING
- 7 AUXILIARY BUILDING
- 8 ADMINISTRATION FACILITY AND STOREROOM
- 9 LIFT STATIONS (2)
- 10 CIRCULATING WATER PUMP STRUCTURE
- 12 OIL HOLDING TANK
- 13 OIL SLUDGE TANK
- 15 FUEL OIL STORAGE TANK
- 18 BARGE SLIP
- 19 SERVICE WATER INTAKE STRUCTURE

**PERMITTED OUTFALLS**

|                                | NO.  | LATITUDE  | LONGITUDE |
|--------------------------------|------|-----------|-----------|
| 11 SEWAGE TREATMENT FACILITY   | 462B | 39°28'15" | 75°32'30" |
| 14 OIL WATER SEPARATOR         | 461C | 39°28'15" | 75°32'30" |
| 16 COOLING TOWER BLOWDOWN PIPE | 461A | 39°28'15" | 75°32'30" |
| 17 NORTH STORM DRAIN           | 462A | 39°28'15" | 75°32'30" |
| 20 SOUTH STORM DRAIN           | 463A | 39°28'00" | 75°32'30" |
| 39 PERIMETER STORM DRAIN       | 464  | 39°28'15" | 75°32'30" |

**HOPE CREEK WELLS**

**PRODUCTION - ○**

- 26 PW-4
- 27 HC-2
- 28 HC-1

**OBSERVATION - ⊙**

- 36 OW-D
- 37 OW-F
- 38 OW-1

**SALEM WELLS**

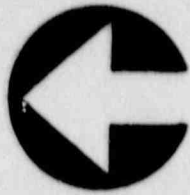
**PRODUCTION - ○**

- 21 PW-5
- 22 PW-1
- 23 PW-3
- 24 PW-6
- 25 PW-2

**OBSERVATION - ⊙**

- 29 OW-H (NOT SHOWN)
- 30 OW-G
- 31 OW-A
- 32 OW-S1
- 33 OW-S2
- 34 OW-6
- 35 OW-C





LOWER

ALLOWANCE

CREEK

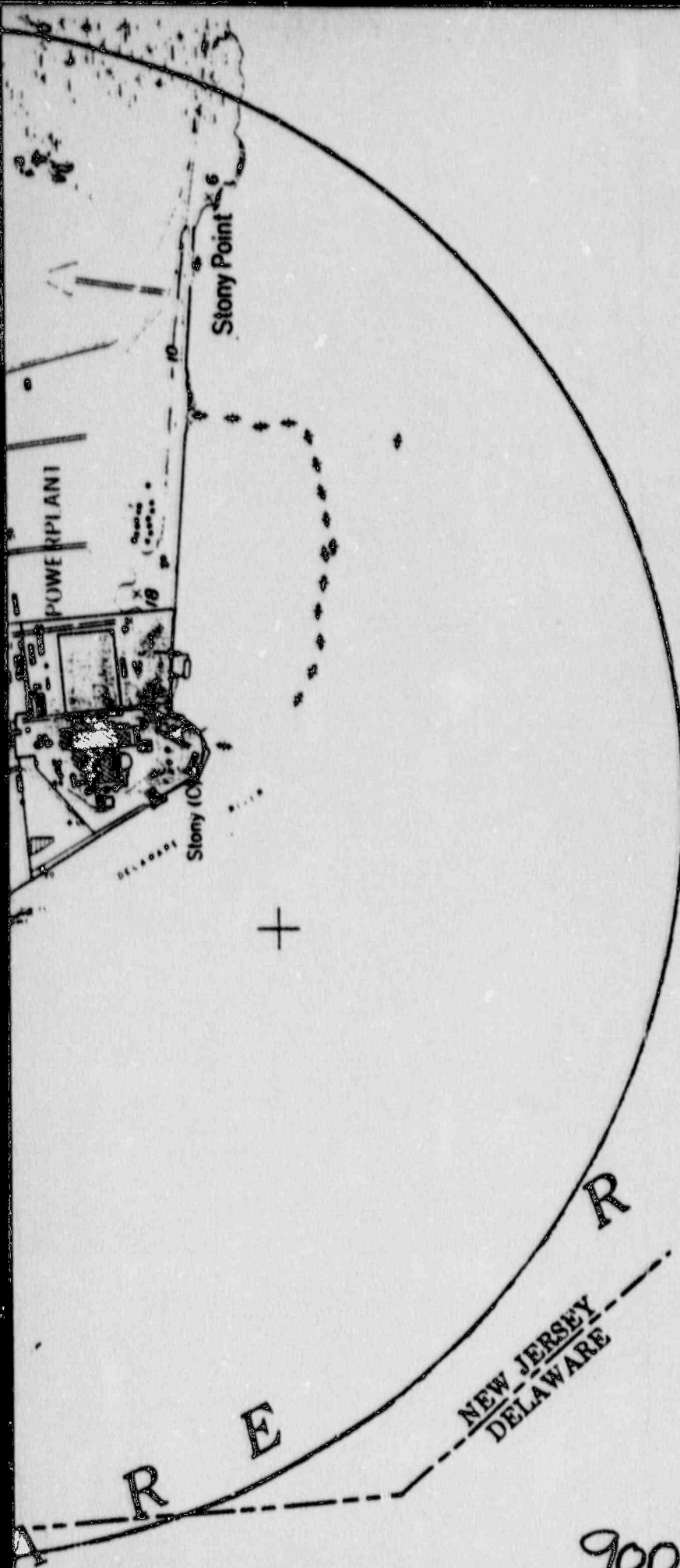
Piles

Ranges

ARTIFICIAL

HOPE CREEK  
GENERATING STATION

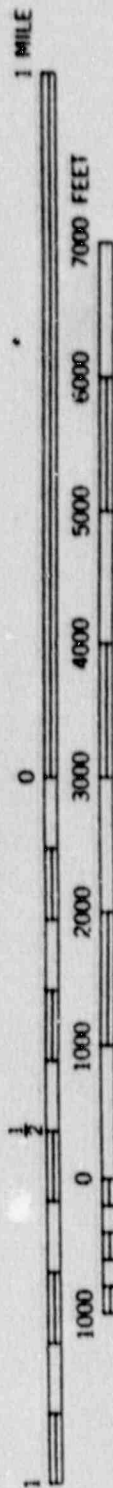
SALEM CO  
CASTLE CO



ONE-MILE RADIUS MAP  
 HOPE CREEK GENERATING STATION  
 NJPDES PERMIT NO. NJ0025411

SI  
 APERTURE  
 CARD  
 Also Available On  
 Aperture Card

SCALE



U.S. GEOLOGICAL SURVEY  
 TOPOGRAPHIC MAP  
 "TAYLOR'S BRIDGE, DEL-NJ" QUADRANGLE



9004110058-01



LOWER

ALLOWANCE

CREEK

Piles

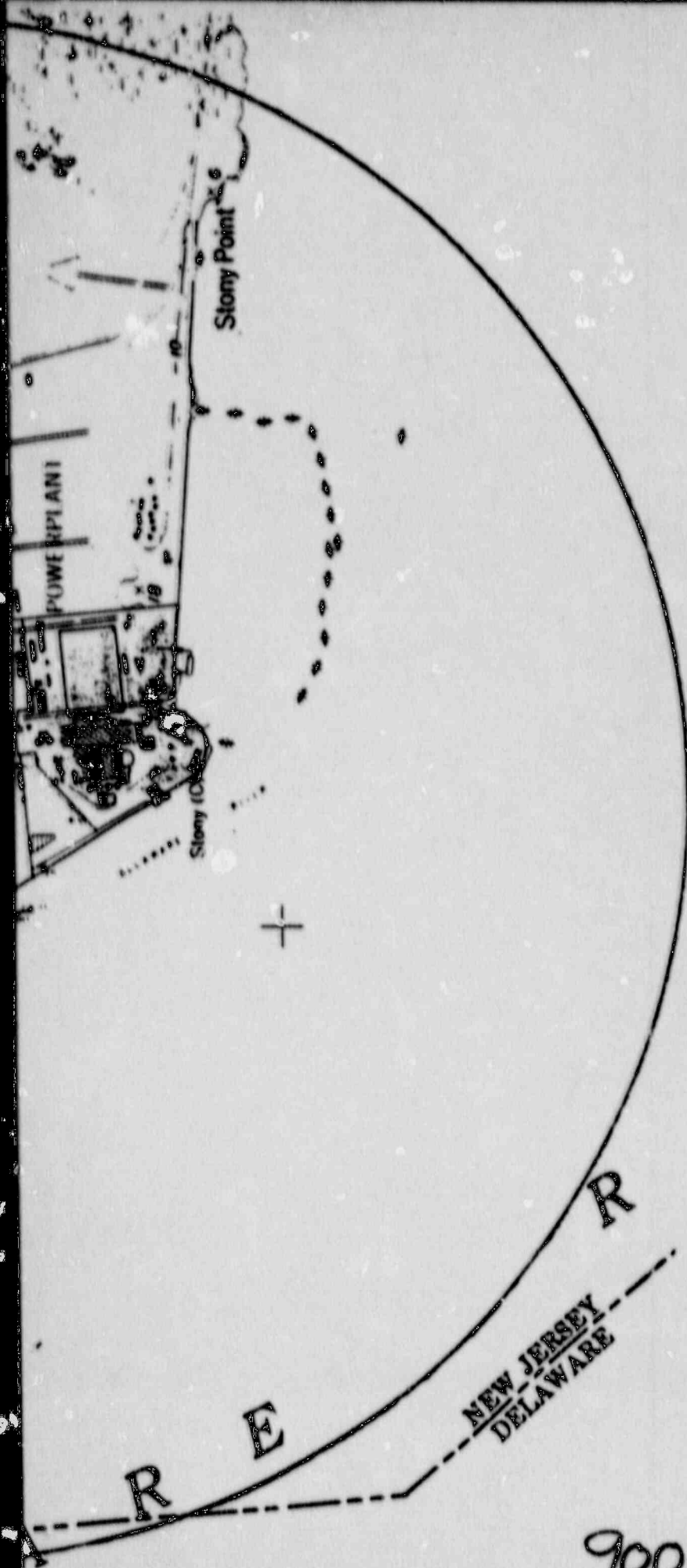
Ranges

ARTIFICIAL

HOPE CREEK  
GENERATING STATION

SALEM CO  
CASTLE CO

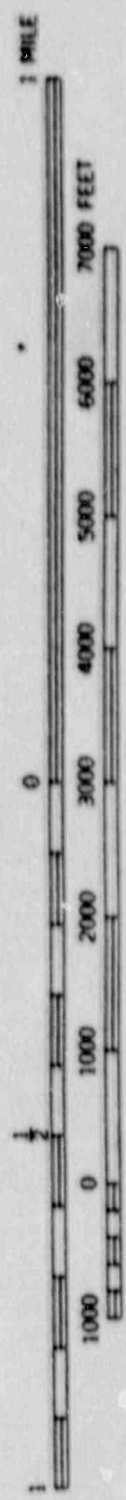




ONE-MILE RADIUS MAP  
HOPE CREEK GENERATING STATION  
NJPDES PERMIT NO. NJ0025411

SI  
APERTURE  
CARD  
Also Available On  
Aperture Card

SCALE



U.S. GEOLOGICAL SURVEY  
TOPOGRAPHIC MAP  
"TAYLOR'S BRIDGE, DEL-NJ" QUADRANGLE

9004110058-01



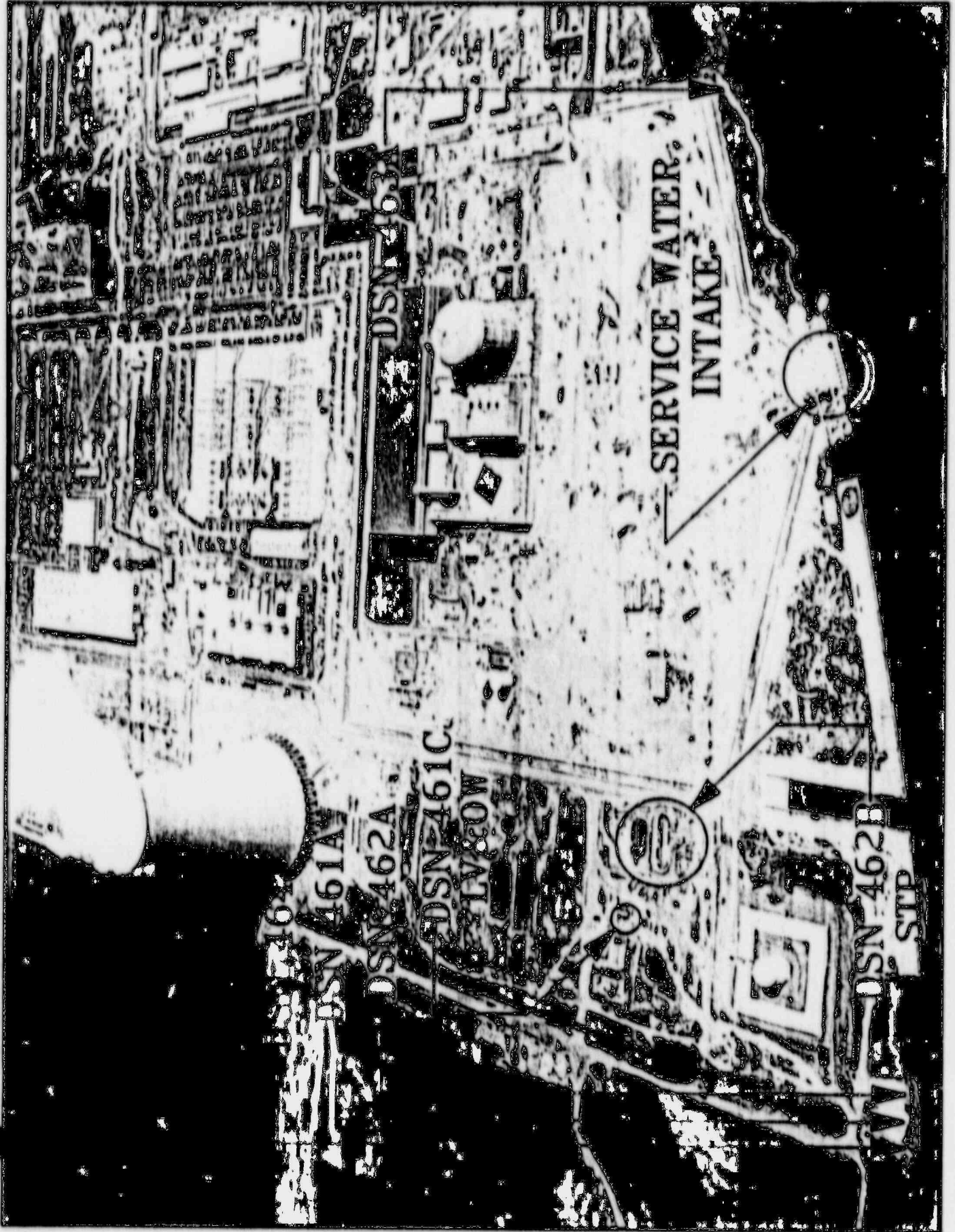
# **OVERSIZE DOCUMENT PAGE PULLED**

## **SEE APERTURE CARDS**

**NUMBER OF OVERSIZE PAGES FILMED ON APERTURE CARDS**

1

**APERTURE CARD/HARD COPY AVAILABLE FROM  
RECORDS AND REPORTS MANAGEMENT BRANCH**



DSN 461A

DSN 462A

DSN 461C

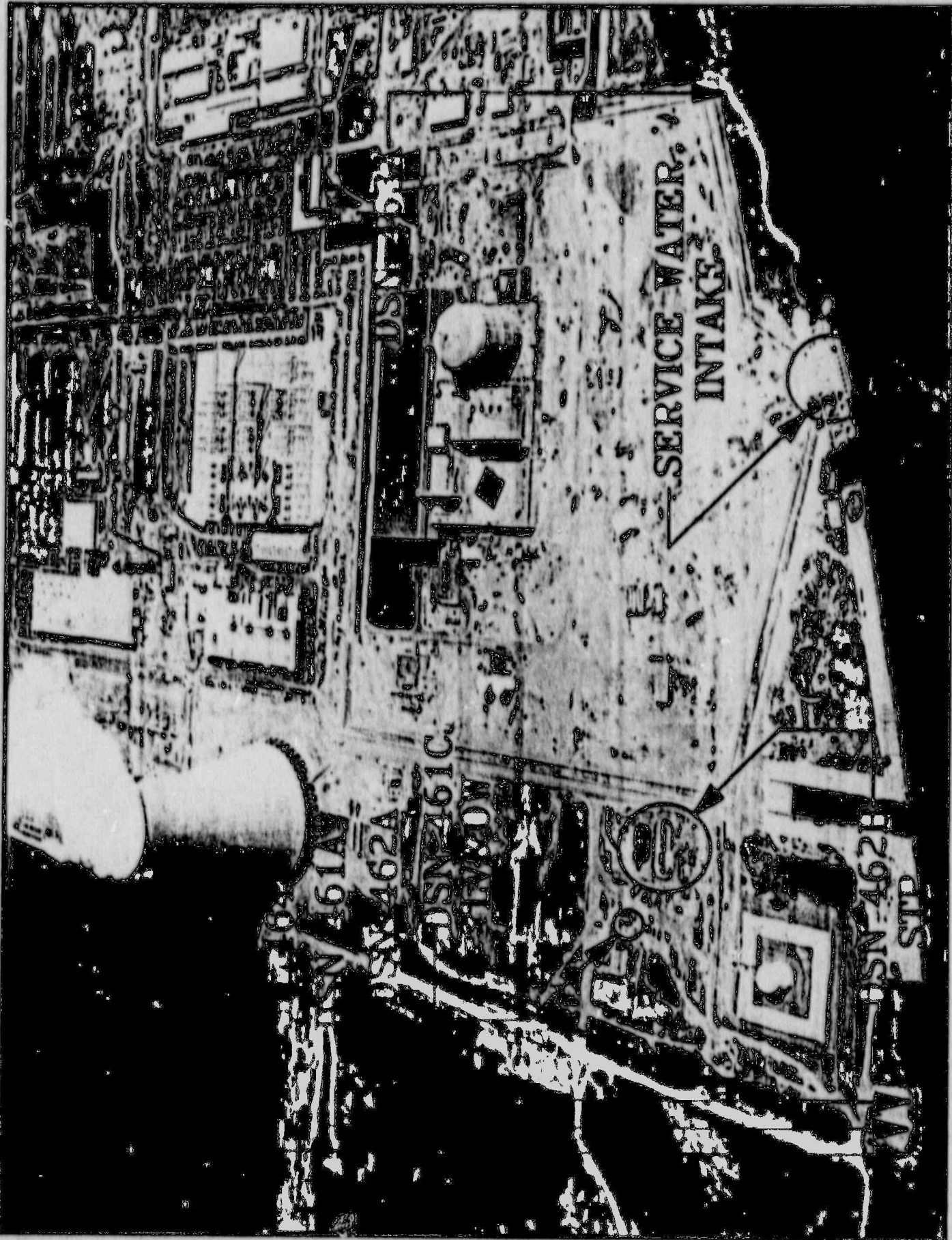
LV&OW

DSN 463

SERVICE WATER  
INTAKE

DSN 462B

STP





# **OVERSIZE DOCUMENT PAGE PULLED**

## **SEE APERTURE CARDS**

**NUMBER OF OVERSIZE PAGES FILMED ON APERTURE CARDS** 1

**APERTURE CARD/HARD COPY AVAILABLE FROM  
RECORDS AND REPORTS MANAGEMENT BRANCH**