INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

105 South Meridian Street
P.O. Box 6015
Indianapolis 46206-6015
Telephone 317/232-8603

January 25, 1990

VIA CERTIFIED MAIL P 730 175 569

Mr.Brian Derry
General Manager
Mt. Vernon Manufacturing Department
General Electric Company
Highway 69 South
Mt. Vernon, Indiana 47620

Re: 327 IAC Article 3 Construction Permit
Application
Plans and Specifications for
Phenol Plant Wastewater
Lift Station and Hold Tank
General Electric Company
Permit Approval No. 1897
Mt. Vernon, Indiana

Dear Mr. Derry:

The application, plans and specifications, and supporting documents for the above-referenced project have been reviewed and processed in accordance with rules adopted under 327 IAC Article 3. Enclosed is the Construction Permit (Approval No. 1897), which applies to the construction of the above-referenced proposed water pollution treatment/control facility to be located at Highway 69 South in Mt. Vernon, Indiana.

Please review the enclosed permit carefully and become familiar with its terms and conditions. In addition, it is imperative that the applicant, consulting architect/engineer (A/E), inspector, and contractor are aware of these terms, conditions, reporting and testing requirements.

It should be noted that any person affected or aggrieved by the agency's decision in authorizing the construction of the above-referenced facility may, within eighteen (18) days from date of mailing, appeal by filing a request with the Commissioner of the Indiana Department of Environmental Management for an adjudicatory hearing in accordance with IC 4-21.5-3-7 and IC 13-7-10-2.5. The procedure for appeal is outlined in more detail in Part III of the attached construction permit. Pursuant to IC 4-21.5-3-5(d), the appointed Administrative Law Judge will provide parties who request review with notice of pre-hearing conferences, preliminary hearings, hearings, stays or orders disposing of all proceedings. Non-parties may receive such notices without intervening in the proceeding by providing the agency with a written request which describes the subject of the notice requested with reasonable particularity, and is delivered to the agency at least seven (7) days prior to the date that notice is given.

Plans and specifications were prepared by John Brown E & C, Inc., and submitted for review on December 6, 1989.

Any technical/engineering questions concerning this permit may be addressed to Mr. Levy Soliven of our staff at AC 317/232-8658. Legal questions or questions concerning appeal procedures should be addressed to Mr. Ihor Boyko, Office of Legal Counsel, at 317/232-8515.

Sincerely,

Charles B. Bardonner
Assistant Commissioner
Office of Water Management

LS/bja

Project No. I-1352

Enclosures

cc: Posey County Health Department
John Brown E & C, Inc.
Jackson L. Higgins
William M. Cox
Joe Straw
Jerry E. Boller
Yvonne Grabert
Bill Loehr
Tim Rutherford
Martin R. Redman
Joe Murphy
Dick Grogg
Cecil Waters
Harry Logan
Dr. Howard Dunn
Jack Harris
Larry Easley
Wayne E. Rafferty

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AUTHORIZATION FOR CONSTRUCTION OF
WATER POLLUTION TREATMENT/CONTROL FACILITY
UNDER 327 IAC ARTICLE 3

DECISION OF APPROVAL

General Electric Company, in accordance with the provisions of IC 13-7-10 and 327 IAC Article 3 is authorized, only upon the effective date of this permit, to construct the water pollution treatment/control facility located at Highway 69 South in Mt. Vernon, Indiana. The permittee is required to comply with requirements set forth in Parts I, II and III hereof.

NOTICE OF EFFECTIVE DATE
CONSTRUCTION PROHIBITED UNTIL EFFECTIVE DATE OF PERMIT

Pursuant to IC 13-7-10-2.5(b), IC 4-21.5-3-5(f), and IC 4-21.5-3-5(h), this permit shall become effective on February 12, 1990. Commencement of construction is prohibited until the effective date of the permit. If a petition for review and a petition for stay of effectiveness are filed before the effective date of the permit, any part of the permit within the scope of the petition for stay is stayed an additional fifteen (15) days from the effective date of this permit. The portions of the permit for which a petition for stay has been filed will take effect at the expiration of the additional fifteen (15) day period, unless or until an Administrative Law Judge stays the permit in whole or in part.

NOTICE OF EXPIRATION DATE

This permit and the authorization to construct this water pollution treatment/control facility shall expire at midnight February 1, 1991. In order to receive authorization to construct beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management at least sixty (60) days prior to the expiration date.

Signed this 25th day of January, 1990 for the Indiana Department of Environmental Management.

Charles B. Bardonner
Assistant Commissioner
Office of Water Management

WATER POLLUTION TREATMENT/CONTROL FACILITY DESCRIPTION

Currently, process wastewater, contaminated rain water run-off, washdowns, and spills from within the curbed areas of the Phenol Plant are discharged to an API separator for cumene recovery. The water underflow from the API separator is discharged to a 1.8 million gallon lined impoundment basin. Water collected in the impoundment basin is pumped at a controlled rate to a sewer that discharges into the North Lift Station (Utility Lift Station). Effluent from the North Lift Station is discharged to either the Wastewater Impoundment Basin or the Central Lift Station from which it is pumped to the company's Wastewater Treatment Plant. The Phenol Impoundment Basin also serves to hold any major cumene or phenol spills and prevent the chemicals from discharging to the Wastewater Treatment Plant.

It is proposed to install a lift station, a one million gallon holding tank (wastewater impoundment tank), a 1.1 million lined containment dike, a 250-gallon retention tank, related pumps and piping. The lift station will consist of five pumps. Under normal operation, the two 200 gpm process water pumps will pump the water underflow from the API separator into the holding tank. During storm event or fire situation, three 7,500 gpm pumps are available to pump the storm water run-off or contaminated fire water into the holding tank. Effluent from the holding tank will be discharged at a controlled rate to a process sewer leading to the existing North Lift Station, thence to the company's Wastewater Treatment Plant. The 250-gallon retention tank will be used to collect any cumene that accumulate in the holding tank. The effluent from the retention tank will be pumped into the API separator for recovery.

The existing Phenol Impoundment Basin will be closed in accordance with applicable Indiana Solid Waste Rules.

CONDITIONS AND LIMITATIONS TO THE AUTHORIZATION FOR CONSTRUCTION OF WATER POLLUTION TREATMENT/CONTROL FACILITY

During the period beginning on the effective date of this permit and extending until the expiration date, the permittee is authorized to construct the above described water pollution treatment/control facility. Such construction shall conform to all provisions of State Rule 327 IAC Article 3 and the following specific provisions:

PART I

SPECIFIC CONDITIONS AND LIMITATIONS TO THE CONSTRUCTION PERMIT

Unless specific authorization is otherwise provided under the permit, the permittee shall comply with the following conditions:

1. All local permits shall be obtained before construction is begun on this project.

2. If pollution or nuisance conditions are created, immediate corrective action will be taken by the permittee.

3. Additional treatment facilities will be installed if the proposed facilities fail to provide adequate control or if necessary for compliance with more stringent federal or state pretreatment standards or requirements promulgated subsequent to the date of this approval.

4. The company shall notify the Department of Environmental Management of the date of completion of the proposed project.

Failure to meet guidelines as set forth in the above conditions could be subject to enforcement proceedings as provided by 327 IAC 3-5-3.

PART II

GENERAL CONDITIONS

1. No significant or material changes in the scope of the plans or construction of this project shall be made unless the following provisions are met:

   a. Request for permit modification is made 60 days in advance of the proposed significant or material changes in the scope of the plans or construction;

   b. Submit a detailed statement of such proposed changes;

   c. Submit revised plans and specifications including a revised design summary; and

   d. Obtain a revised construction permit from this agency.

2. This permit may be modified, suspended, or revoked for cause including, but not limited to the following:

   a. Violation of any term or conditions of this permit;

   b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts.

3. Nothing herein shall be construed as guaranteeing that the proposed water pollution treatment/control facility shall meet standards, limitations or requirements of this or any other agency of state or federal government, as this agency has no direct control over the actual construction and/or operation of the proposed project.

PART III

APPEALS PROCEDURE

Anyone wishing to challenge this agency's decision for authorizing the construction of this facility may do so, provided that a petition for administrative review is filed as required by IC 4-21.5-3-7. The petition must be submitted within eighteen (18) days of the date of mailing of this permit notification. The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by this decision, or otherwise entitled to review by law. Additionally, IC 13-7-10-2.5 requires that your petition include:

1. The name and address of the person making the request;

2. The interest of the person making the request;

3. Identification of any persons represented by the person making the request;

4. The reasons, with particularity, for the request;

5. The issues, with particularity, proposed for consideration at the hearing; and

6. Identification of the permit terms and conditions which, in the judgement of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing permits of the type granted or denied by the Assistant Commissioner's action.

7. Pursuant to IC 4-21.5-3-1(f), any document serving as a petition for review or review and stay must be filed with Kathy Prosser, Technical Secretary of the Water Pollution Control Board. Filing of such a document is complete on the earliest of the following dates:

   A. the date on which the petition is delivered to the Office of the Technical Secretary of the Water Pollution Control Board, located at 105 South Meridian Street, Fifth Floor, Indianapolis, Indiana 46225;

   B. the date of the postmark on the envelope containing the petition, if the petition is mailed by United States mail; or

C. the date on which the petition is deposited with a private carrier, as shown by a receipt issued by the carrier, if the petition is sent by private carrier.

Summary
327 IAC Article 3 Construction Permit
General Electric Company
Phenol Plant
Mt. Vernon, Indiana

Project Name: Phenol Impoundment Basin Closure Project (Phenol Plant Wastewater Lift Station and Hold Tank)

Type of Wastes: Storm water run-off, process wastewater and fire water

Engineer: John Brown E & C, Inc.
1511 N. Main St.
Mt. Vernon, Indiana 47620

Receiving Stream

1. Name: Ohio River

2. Stream Uses: Full contact recreational and aquatic life

3. 7-day, (1) 10-year low flow: 13,000 CFS

Receiving STP

1. Name: General Electric Company

2. Present Hydraulic Loading: 6.3 MGD

3. Design Capacity: 7.2 MGD avg., 8.65 MGD daily max.

Remarks

1. Description of Present Situation:

Currently, process wastewater, contaminated rain water run-off, washdowns, and spills from within the curbed areas of the Phenol Plant are discharged to an API separator for cumene recovery. The water underflow from the API separator is discharged to a 1.8 million gallon lined impoundment basin. Water collected in the impoundment basin is pumped at a controlled rate to an adjacent sewer that discharges into the North Lift Station (Utility Lift Station). Effluent from the North Lift Station is discharged to either the Wastewater Impoundment Basin or the Central Lift Station from which it is pumped to the company's Wastewater Treatment Plant.

The Phenol Impoundment Basin also serves to hold any major cumene of phenol spills and prevent the chemicals from discharging to the Wastewater Treatment Plant. In an emergency, it is possible to discharge up to 160,000 gallons of cumene from the hydrolyzer-splitter to the Phenol Impoundment Basin. This cumene can presently be recovered and recycled to the Phenol Plant.

2. Description of the Proposed Facilities

Installation of a lift station, a one million gallon holding tank (wastewater impoundment tank), a 1.1 million gallon lined containment dike, a 250-gallon retention tank, related pumps and piping. The lift station will consist of five pumps. Under normal operation, the two 200 gpm process water pumps will pump the water underflow from the API separator into the holding tank. During storm event or fire situation, three 7,500 pumps are available to pump the storm water run-off or contaminated fire water into the holding tank. Effluent from the holding tank will be discharged at a controlled rate to a process sewer leading to the existing North Lift Station, thence to the company's Wastewater Treatment Plant. The 250-gallon retention tank will be used to collect any cumene that might accumulate in the holding tank. The effluent from the retention tank will be pumped into the API separator for recovery.

The existing Phenol Impoundment Basin will be closed in accordance with applicable Indiana Solid Waste Rules.

The details of the treatment/control system are as follows:

I. Design Data

A. Flow

1. Peak: 18,000 GPM (includes fire water and process wastes)

2. Daily Maximum: 5,000 GPM (includes 100-yr 1-hour rainfall and process wastes)

3. Daily Average: 120-180 GPM (only process wastes)

B. Design/Influent Wastewater Characteristics (for period 01 January 89 to 31 July 89)

		Min.	Max.	Avg.
1.	TOC (mg/l)	1,970	13,473	5,275
2.	Phenols (mg/l)	80	5,100	428
3.	pH (s.u)	9.7	12.3	--
4.	Flow (mgd)	0.036	0.254	0.170

II. Proposed Treatment/Control

A. Phenol Plant Lift Station

1. Location: West of API Separator

2. Type of Pumps:

Process Pumps: Horizontal, self-priming centrifugal
Storm Water Pumps: Vertical turbine

3. Number of Pumps: Five (5) total

Process Pumps: Two (2)
Storm Water Pumps: Three (3)

4. Constant or Variable Speed:

Process Water Pumps: Constant
Storm Water Pumps: Constant

5. Capacity of Pumps:

Process Water Pumps: 200 GPM
Storm Water Pumps: 7,500 GPM

6. RPM and TDH:

Process Water Pumps: 1,150 RPM and 80' TDH
Storm Water Pumps: 1,185 RPM 120' TDH

7. Volume of Wet Well:

24,300 Ft^3, (181,700 Gallons) from empty to high level
(two feet from top of concrete)

8. Detention Time in the Wet Well: 10.0 Minutes @ peak flow

9. Gate Valve and Check Valve in the Discharge Line:

Process Water Pumps: Yes
Storm Water Pumps: Yes

10. Gate Valve on Suction Line:

    Process Water Pumps: No
    Storm Water Pumps: N/A

11. Ventilation: Conservation vent with flame arrestor

12. Standby Power: No, the three storm water pumps are diesel driven. Only one pump (7,500 GPM) is required to meet the removal of the 100-year rainfall event of 5,000 GPM. Two pumps are on standby in the event of a pump failure

13. Alarm: Alarm on high and low level

14. Bypass or Overflow: No bypass or overflow

15. Under normal operation, the two (2) 200 gpm process water pumps will pump the water underflow from the API separator into the proposed wastewater impoundment tank. During storm event and/or fire situation, three (3) storm water pumps will be used to pump the storm water runoff and/or contaminated fire water to the holding tank (wastewater impoundment tank)

B. Sewer From Lift Station

1. Type of Sewer (Force Main) Material - Carbon Steel

2. Diameter and Length of Force Main -

    Process Water: 6" and 400 ft
    Storm Water: 24" and 400 ft

3. Stream, Highway and Railroad Crossing - N/A

4. Water Main Protection - N/A. Route is independent of any water main

C. Wastewater Impoundment Tank (Holding Tank)

1. Number of units: One

2. Dimensions of unit: 66' Dia. x 40'-6" Height

3. Capacity of unit: 133,690 Ft^3 (1,000,000 gallons) from empty to high level (2 feet of freeboard)

4. Detention time: 55.6 Minutes @ peak flow

5. Ventilation: Yes, conservation vent with flame arrestor

6. Alarm: Alarm on high level

7. The wastewater impoundment tank will be designed to operate as a simple decanter. The bottom water level will be drawn-off at a controlled rate to the sewer. A series of valves will permit draw-off of any cumene that might accumulate in the tank. This cumene is collected in a 250-gallon retention tank and be returned to the API separator for recovery. The tanks will be surrounded by a 1.1 million gallon earthen dike and the area within the dike wall will be lined with a HDPE liner. Inside the dike is a sump pump which will pump any water back to the wastewater impoundment tank

8. Bypass or overflow: Tank will overflow to the dike area

9. Effluent from the wastewater impoundment tank will be discharged at a controlled rate to a process sewer leading to the North Lift Station and routed on to the company's Wastewater Treatment Plant

D. Sewer From Wastewater Impoundment Tank

1. Type of Sewer Material: Ductile iron

2. Diameter and Length of Force Main: 8" and 250'

3. Stream Highway and Railroad Crossing: N/A

4. Water Main Protection: N/A. Route is independent of any water main

III. Recommendations--That the 327 IAC Article 3 Construction Permit application be approved with the following conditions:

A. All local permits shall be obtained before construction is begun on this project.

B. If pollution or nuisance conditions are created, immediate corrective action will be taken by the permittee.

C. Additional treatment facilities will be installed if the proposed facilities fail to provide adequate control or if necessary for compliance with more stringent federal or state pretreatment standards or requirements promulgated subsequent to the date of this approval.

D. The company shall notify the Department of Environmental Management of the date of completion of the proposed project.