The information provided on this questionnaire serves two functions:

1. To determine if your facility is in need of a Significant Industrial User (SIU) Industrial User Pretreatment Permit (IUP) for the discharge of wastewater to the Publicly Owned Treatment Works (POTW) sanitary sewer system.

2. If a SIU IUP is required, this survey shall serve as the application for that IUP and the information will be used to issue the IUP.

PLEASE REFER TO THE GUIDANCE FOR COMPLETING THE INDUSTRIAL USER SURVEY/APPLICATION INSTRUCTIONS, AVAILABLE AT: http://portal.ncdenr.org/web/wq/swp/ps/pret/permwrite

STATUS of APPLICANT / APPLICATION - PLEASE CHECK ONE

[ ] New Permit for Proposed Discharge

Anticipated Date of initial process wastewater discharge \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ] Existing Unpermitted Discharge

[ ] Permit Renewal for Existing SIU Permit, existing non-SIU permit, or other written permission from POTW.

**Note** If this application requests a greater amount of wastewater discharge [flow], a greater amount of pollutant discharge or a discharge of different pollutants than specified in the last wastewater permit application for this facility, or any other significant changes, please indicate this as needed in the applicable Questions, especially Questions A8 and E7.

Note to Signing Official: In accordance with Title 40 of the Code of Federal Regulations Part 403.14, information and data provided in this questionnaire which identifies the content, volume, and frequency of discharge shall be available to the public without restriction. Requests for confidential treatment of other Information shall be governed by procedures specified in 40 CFR Part 2.

This is to be signed by the Authorized Representative of your firm, as defined in 40 CFR Part 403.12 (l) and {YOUR SUO CITATION}, after adequate completion of this form and review of the information by the signing representative.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  I, |  | (print name),  |  | (print title), |

 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 submitted is, to the best of my knowledge and belief, accurate and complete. I am an authorized representative of the user and am authorized to execute this certification on behalf of the user. I am aware that there are significant penalties for submitting false information in violation of this certification, including the possibility of fines and/or imprisonment.

I also certify that I have completed the necessary notification as required by the POTW to document my qualification as an Authorized Representative as set forth in 40 CFR Part 403.12 (l) and {YOUR SUO CITATION}.

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Date | Signature of Representative(Seal, if applicable) |

Please return this survey to:

{POTW Address}

**SECTION A – GENERAL INFORMATION**

1. For the production or manufacturing facility for which this application is being completed:

|  |  |
| --- | --- |
| **Facility name** |  |
| **Physical address** |  |
| **Mailing address (if different)** |  |
| **General Telephone Number** |  |
| **General Fax Number** |  |
| **Website** |  |

2. If applicable, general information about the corporate office, parent company, etc. [ ] N/A

|  |  |
| --- | --- |
| **Company name** |  |
| **Physical address** |  |
| **Mailing address (if different)** |  |
| **General Telephone Number** |  |
| **General Fax Number** |  |
| **Website** |  |

3. Primary Authorized Representative authorized to represent this firm in official dealings with the Publicly Owned Treatment Works (POTW).

|  |  |
| --- | --- |
| **Name** |  |
| **Title** |  |
| **Telephone/Cell/Fax** |  |
| **Email** |  |
| **Primary work location:** | **\_\_\_Facility \_\_\_Corporate Office \_\_\_\_Other – List address here:** |

4. Alternate Authorized Contact for when the Primary Authorized Representative is not available.

|  |  |
| --- | --- |
| **Name** |  |
| **Title** |  |
| **Telephone/Cell/Fax** |  |
| **Email** |  |
| **Primary work location:** | **\_\_\_Facility \_\_\_Corporate Office \_\_\_\_Other – List address here:** |

5. On-Site Contact. If neither person identified in items 3 and 4 above are located at the production or manufacturing facility for which this application is being completed provide an on-site contact person available to answer questions regarding statements made on this survey as well as conduct a walkthrough of the facility:

|  |  |
| --- | --- |
| **Name** |  |
| **Title** |  |
| **Telephone/Cell/Fax** |  |
| **Email** |  |

**SECTION A – GENERAL INFORMATION - continued**

6. Identify the general type of manufacturing, production and/or service(s) conducted at the site (i.e. electroplating, printing, painting, food processing, warehousing, meat packing, machine shop, etc.).

Greater detail to be provided in question A. 7.

7. Provide a detailed narrative description of the manufacturing/production process(es) and/or service activities identified in question A. 6. and conducted at the facility identified in question A. 1.

1. Are any process changes or expansions planned during the next five years? [ ] Yes [ ] No

If yes, describe the nature of the planned changes or expansions. As needed, clarify if answers to other application questions are for before or after the change/expansion. If the facility has an existing permit, indicate if these changes could or will result in the facility requesting changes to their existing permit.

1. List the Standard Industrial Classification Number(s) (SIC #) or North American Industry Classification System (NAICS) codes for your facility. If listing more than one code, indicate the percentage of production.

|  |  |  |  |
| --- | --- | --- | --- |
| **SIC/NAICS code:** |  |  |  |
| **Percentage of production** |  |  |  |

1. In what month and year were the facility’s operation(s) at this location (as specified in A. 7. above) established and under what name?

|  |  |  |
| --- | --- | --- |
| **Facility Name** | **Month** | **Year** |
|  |  |  |

1. Has your facility undergone any changes in licensed ownership since the date noted in question A. 10?

[ ] Yes [ ] No If yes, complete table.

|  |  |  |
| --- | --- | --- |
| **Facility Name** | **Month** | **Year** |
|  |  |  |
|  |  |  |
|  |  |  |

**Section B – Flow Diagram/Schematics, Site Layout, and Pretreatment System Flow Diagram**

[ See the Guidance Document for Completing the Industrial User Wastewater Survey and Discharge Permit Application available at: http://portal.ncdenr.org/web/wq/swp/ps/pret/permwrite]

**PRODUCTION/PROCESS SCHEMATIC FLOW DIAGRAM (REQUIRED)**

**Section B – Flow Diagram/Schematics, Site Layout, and Pretreatment System Flow Diagram**

[ See the Guidance Document for Completing the Industrial User Wastewater Survey and Discharge Permit Application available at: http://portal.ncdenr.org/web/wq/swp/ps/pret/permwrite]

**PLANT SITE LAYOUT (REQUIRED)**

**Section B – Flow Diagram/Schematics, Site Layout, and Pretreatment System Flow Diagram**

[ See the Guidance Document for Completing the Industrial User Wastewater Survey and Discharge Permit Application available at: http://portal.ncdenr.org/web/wq/swp/ps/pret/permwrite]

**WASTEWATER PRETREATMENT SYSTEM FLOW DIAGRAM (IF APPLICABLE)**

**SECTION C – FACILITY OPERATION CHARACTERISTICS**

**Office/Administrative Staff**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** | **Sunday** |
| # Employees |  |  |  |  |  |  |  |
| Start/End Time |  |  |  |  |  |  |  |

**Production Staff**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** | **Sunday** |
| 1st Shift | # Employees |  |  |  |  |  |  |  |
|  | Start Time |  |  |  |  |  |  |  |
|  | End Time |  |  |  |  |  |  |  |
| 2nd Shift | # Employees |  |  |  |  |  |  |  |
|  | Start Time |  |  |  |  |  |  |  |
|  | End Time |  |  |  |  |  |  |  |
| 3rd Shift | # Employees |  |  |  |  |  |  |  |
|  | Start Time |  |  |  |  |  |  |  |
|  | EndTime |  |  |  |  |  |  |  |

**Shift Activities**

|  |  |  |
| --- | --- | --- |
|  | **SHIFT** | **DESCRIPTION OF SHIFT ACTIVITIES** |
| Monday | 1st |  |
|  | 2nd |  |
|  | 3rd |  |
| Tuesday | 1st |  |
|  | 2nd |  |
|  | 3rd |  |
| Wednesday | 1st |  |
|  | 2nd |  |
|  | 3rd |  |
| Thursday | 1st |  |
|  | 2nd |  |
|  | 3rd |  |
| Friday | 1st |  |
|  | 2nd |  |
|  | 3rd |  |
| Saturday | 1st |  |
|  | 2nd |  |
|  | 3rd |  |
| Sunday | 1st |  |
|  | 2nd |  |
|  | 3rd |  |

**SECTION D – PROCESS INFORMATION**

**NOTE:** The following information must be completed for each product line. Please make copies of this page if necessary.

Information revealed in this section may be held confidential and proprietary under 40 CFR 403.14 at the request of the Industrial User and the approval of the POTW. T**he request for confidentiality must be made at the time of the initial submission of the application.** Should such a request be made and accepted in compliance with {YOUR SUO CITATION}, these page(s) will be removed before review by any non-regulatory personnel.

1. Principal product(s) produced:

2. Raw materials and process additives used:

3. Maximum and average production rate of this particular product line (please specify units being reported):

|  |  |  |
| --- | --- | --- |
| **Average Production Rate** | **Maximum Production Rate** | **Units** |
|  |  |  |

4. The production process is [ ] Batch [ ] Continuous

If batch, please enter the average number of batches per 24 hours. [ ]

If both, please enter % or production

[ %] Batch [ %] Continuous

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 5. | Days and hours of operation for this product line: From: |  | to |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 6. | Days and Hours of discharge for this product line: From: |  | to |  |

7. Is production subject to seasonal variation? [ ] Yes [ ] No

If yes, briefly describe the seasonal production cycles:

**SECTION E – WATER USE AND WASTEWATER DISCHARGE INFORMATION**

1. Please indicate source(s) of water used at your facility:

|  |  |  |
| --- | --- | --- |
| **Source Type** | **Check One** | **If yes,…** |
| Well | [ ] Yes [ ] No | How many are there? |  |
|  |  | How many are in use at this time? |  |
| City | [ ] Yes [ ] No | List all Account numbers: |  |
|  |  |  |
| Surface Water | [ ] Yes [ ] No | Identify the source: |  |
| Other | [ ] Yes [ ] No | Explain: |  |

2. Does this facility provide any treatment to the incoming water to improve the water quality prior to its use in the facility, (i.e. deionization, reverse osmosis, ultra filtration, pH adjustment, etc.)? [ ] Yes [ ] No

If yes, complete table.

|  |  |  |
| --- | --- | --- |
| **Treatment Process** | **Chemicals Used** | **Wastewater Generated and Volume (gpd)** |
|  |  |  |
|  |  |  |
|  |  |  |

3. This facility uses water for the following:

(Please record “n/a” if the application/use does not apply to the operations at your facility.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Application /Use** | **Detailed Description of Applicable Operation(s) and/or Equipment** | **Maximum****Volume Used****(gallons/day)** | **Average****Volume Used****(gallons/day)** | **[E]stimated or****[M]easured**  |
| Process |  |  |  | [ ] E [ ] M |
| Water Into Product |  |  |  | [ ] E [ ] M |
| Process Related Facility/Equipment Washdown\* |  |  |  | [ ] E [ ] M |
| Process Contact Cooling or Warming Water |  |  |  | [ ] E [ ] M |
| Process Related Air-Pollution Control Unit |  |  |  | [ ] E [ ] M |
| Process Related Employee Showers |  |  |  | [ ] E [ ] M |
| Lab |  |  |  | [ ] E [ ] M |
| Maintenance Shop |  |  |  | [ ] E [ ] M |
| Boilers (Please specify if live and/or dry steam is used.) |  |  |  | [ ] E [ ] M |
| Backwash Water |  |  |  | [ ] E [ ] M |
| Pump Sealant Water |  |  |  | [ ] E [ ] M |
| General Facility/Equipment Washdown\* |  |  |  | [ ] E [ ] M |
| Other non-contact water uses: boilers; non-contact cooling/warming water, general air conditioning, cooling towers, chillers, HVAC, etc. |  |  |  | [ ] E [ ] M |
| Domestic (e.g. restroom(s), non-process related employee showers, cafeteria, kitchen, breakroom etc.) |  |  |  | [ ] E [ ] M |
| Other, please describe |  |  |  | [ ] E [ ] M |
| Total |  |  |  |  |

\*Please document clean up schedules in Shift activities in Section C.

**SECTION E – WATER USE AND WASTEWATER DISCHARGE INFORMATION (continued)**

4. The facility generates wastewater from the following areas and that water is discharged where

If the source of wastewater discharged does not exist at your facility record “n/a”. If there is no discharge from the applicable source, record “no discharge”.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Source of Wastewater** | **Wastewater is Discharged****To Where** | **Pretreated?** | **Volume Discharged****(gallons/day)** | **Estimated (E) or****Measured (M)** |
| a. Process |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| b. Water Into Product |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| c . Process Related Facility/Equipment Washdown\* |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Process Contact Cooling or Warming Water
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Process Related Air-Pollution Control Unit
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Process Related Employee Showers
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Lab
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Maintenance Shop
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Backwash Water
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Pump Sealant Water
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. General Facility/Equipment Washdown\*
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Other non-contact water uses: boilers; non-contact cooling/warming water, general air conditioning, cooling towers, chillers, HVAC, etc.
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Domestic (e.g. restroom(s), non-process related employee showers, cafeteria, kitchen, breakroom etc.)
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Groundwater/Remediated Groundwater
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Storm Water Runoff
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Tank Bottoms
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Other, please specify
 |  | [ ] yes [ ] no |  | [ ] E [ ] M |
| 1. Total Discharged to POTW
 |  |  |  |  |

\*Please document clean up schedules in Shift activities in Section C.

5. Identify the daily maximum flow limit requested. Please explain any differences between the requested flow limit and actual flows listed in E. 4.

|  |  |
| --- | --- |
| **Requested Daily Maximum Flow Limit, gpd:** |  |
| **Requested Monthly Average Flow Limit, gpd:** |  |
| **Explanation:** |  |

**SECTION F – CHEMICALS, POLLUTANTS, WASTES**

1. Complete Checklist for Priority, Conventional, Non-Conventional, and Other Pollutants.

**All chemicals require that TWO columns are checked**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Chemical Name** | Chemical Abstract Number**[CAS#]** | **Present** at Facility | **Absent** at Facility | **Present** in Discharge to POTW | **Absent** in Discharge to POTW | **Concentration in Discharge**,  (mg/l) |
| **Acid Extractable Organic Compounds (EPA Method 625)** |
| 2-Chlorophenol | 95-57-8 |  |  |  |  |  |
| 2,4-Dichlorophenol | 120-83-2 |  |  |  |  |  |
| 2,4-Dimethylphenol | 105-67-9 |  |  |  |  |  |
| 2,4-Dinitrophenol | 51-28-5 |  |  |  |  |  |
| 2-Methyl-4,6-dinitrophenol | 534-52-1 |  |  |  |  |  |
| 4-Chloro-3-methylphenol | 59-50-7 |  |  |  |  |  |
| 2-Nitrophenol | 88-75-5 |  |  |  |  |  |
| 4-Nitrophenol | 100-02-7 |  |  |  |  |  |
| Pentachlorophenol | 87-86-5 |  |  |  |  |  |
| Phenol | 108-95-2 |  |  |  |  |  |
| 2,4,6-Trichlorophenol | 88-06-2 |  |  |  |  |  |
| **Base Neutral Organic Compounds (EPA Method 625)** |
| 1,2,4-Trichlorobenzene | 120-82-1 |  |  |  |  |  |
| 1,2-Dichlorobenzene | 95-50-1 |  |  |  |  |  |
| 1,2-Diphenylhydrazine | 122-66-7 |  |  |  |  |  |
| 1,3-Dichlorobenzene | 541-73-1 |  |  |  |  |  |
| 1,4-Dichlorobenzene | 106-46-7 |  |  |  |  |  |
| 2,4-Dinitrotoluene | 121-14-2 |  |  |  |  |  |
| 2,6-Dinitrotoluene | 606-20-2 |  |  |  |  |  |
| 2-Chloronaphthalene | 91-58-7 |  |  |  |  |  |
| 3,3-Dichlorobenzidine | 91-94-1 |  |  |  |  |  |
| 4-Bromophenyl phenyl ether | 101-55-3 |  |  |  |  |  |
| 4-Chlorophenyl phenyl ether | 7005-72-3 |  |  |  |  |  |
| Acenaphthene | 83-32-9 |  |  |  |  |  |
| Acenaphthylene | 208-96-8 |  |  |  |  |  |
| Anthracene | 120-12-7 |  |  |  |  |  |
| Benzidine | 92-87-5 |  |  |  |  |  |
| Benzo (a) anthracene | 56-55-3 |  |  |  |  |  |
| Benzo (a) pyrene | 50-32-8 |  |  |  |  |  |
| Benzo (b) fluoranthene | 205-99-2 |  |  |  |  |  |
| Benzo (ghi) perylene | 191-24-2 |  |  |  |  |  |
| Benzo (k) fluoranthene | 207-08-9 |  |  |  |  |  |
| Bis (2-chloroethoxy) methane | 111-91-1 |  |  |  |  |  |
| Bis (2-chloroethyl) ether | 111-44-4 |  |  |  |  |  |
| Bis (2-chloroisopropyl) ether | 102-60-1 |  |  |  |  |  |
| Bis (2-ethylhexyl) phthalate [DEHP] | 117-81-7 |  |  |  |  |  |
| Butyl benzyl phthalate [BBP] | 85-68-7 |  |  |  |  |  |
| Chrysene | 218-01-9 |  |  |  |  |  |
| Di-n-butyl phthalate [DBP] | 84-74-2 |  |  |  |  |  |
| Di-n-octyl phthalate [DOP] | 117-84-0 |  |  |  |  |  |

**SECTION F – CHEMICALS, POLLUTANTS, WASTES (continued)**

**All chemicals require that TWO columns are checked**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Chemical Name** | Chemical Abstract Number**[CAS#]** | **Present** at Facility | **Absent** at Facility | **Present** in Discharge to POTW | **Absent** in Discharge to POTW | **Concentration in Discharge**,  (mg/l) |
| **Base Neutral Organic Compounds (continued)** |
| Dibenzo (a,h) anthracene | 53-70-3 |  |  |  |  |  |
| Diethyl phthalate [DEP] | 84-66-2 |  |  |  |  |  |
| Dimethyl phthalate [DMP] | 131-11-3 |  |  |  |  |  |
| Fluoranthene | 206-44-0 |  |  |  |  |  |
| Fluorene | 86-73-7 |  |  |  |  |  |
| Hexachlorobenzene | 118-74-1 |  |  |  |  |  |
| Hexachlorobutadiene | 87-68-3 |  |  |  |  |  |
| Hexachlorocyclopentadiene | 77-47-4 |  |  |  |  |  |
| Hexachloroethane | 67-72-1 |  |  |  |  |  |
| Indeno (1,2,3-cd) pyrene | 193-39-5 |  |  |  |  |  |
| Isophorone | 78-59-1 |  |  |  |  |  |
| N-nitroso-di-n-propylamine | 621-64-7 |  |  |  |  |  |
| N-nitrosodimethylamine | 62-75-9 |  |  |  |  |  |
| N-nitrosodiphenylamine | 86-30-6 |  |  |  |  |  |
| Naphthalene | 91-20-3 |  |  |  |  |  |
| Nitrobenzene | 98-95-3 |  |  |  |  |  |
| Phenanthrene | 85-01-8 |  |  |  |  |  |
| Pyrene | 129-00-0 |  |  |  |  |  |
| **Metals** |
| Aluminum |  |  |  |  |  |  |
| Antimony | 7440-36-0 |  |  |  |  |  |
| Arsenic | 7440-38-2 |  |  |  |  |  |
| Beryllium | 7440-41-7 |  |  |  |  |  |
| Cadmium | 7440-43-9 |  |  |  |  |  |
| Chromium | 7440-47-3 |  |  |  |  |  |
| Copper | 7440-50-8 |  |  |  |  |  |
| Lead | 7439-92-1 |  |  |  |  |  |
| Mercury | 7439-97-6 |  |  |  |  |  |
| Molybdenum | 7439-98-7 |  |  |  |  |  |
| Nickel | 7440-02-0 |  |  |  |  |  |
| Selenium | 7782-49-2 |  |  |  |  |  |
| Silver | 7440-22-4 |  |  |  |  |  |
| Thallium | 7440-28-0 |  |  |  |  |  |
| Zinc | 7440-66-6 |  |  |  |  |  |
| **Other Inorganic Pollutants** |  |  |  |  |  |  |
| Barium | 7440-39-3 |  |  |  |  |  |
| Chloride |  |  |  |  |  |  |
| Cyanide | 57-12-5 |  |  |  |  |  |
| Fluoride |  |  |  |  |  |  |

**SECTION E – SECTION F – CHEMICALS, POLLUTANTS, WASTES (continued)**

**All chemicals require that TWO columns are checked**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Chemical Name** | Chemical Abstract Number**[CAS#]** | **Present** at Facility | **Absent** at Facility | **Present** in Discharge to POTW | **Absent** in Discharge to POTW | **Concentration in Discharge**,  (mg/l) |
| **Purgeable Volatile Organic Compounds [VOCs] (EPA Method 624)** |
| 1,1,1-Trichloroethane | 71-55-6 |  |  |  |  |  |
| 1,1,2,2-Tetrachloroethane | 79-34-5 |  |  |  |  |  |
| 1,1,2-Trichloroethane | 79-00-5 |  |  |  |  |  |
| 1,1-Dichloroethane | 75-34-3 |  |  |  |  |  |
| 1,1-Dichloroethylene | 75-35-4 |  |  |  |  |  |
| 1,2-Dichloroethane | 107-06-2 |  |  |  |  |  |
| 1,2-Dichloropropane | 78-87-5 |  |  |  |  |  |
| 2-Chloroethyl vinyl ether | 110-75-8 |  |  |  |  |  |
| Acrolein | 107-02-8 |  |  |  |  |  |
| Acrylonitrile | 107-13-1 |  |  |  |  |  |
| Benzene | 71-43-2 |  |  |  |  |  |
| Bromodichloromethane | 75-27-4 |  |  |  |  |  |
| Bromoform | 75-25-2 |  |  |  |  |  |
| Bromomethane | 74-83-9 |  |  |  |  |  |
| Carbon tetrachloride | 56-23-5 |  |  |  |  |  |
| Chlorobenzene | 108-90-7 |  |  |  |  |  |
| Chloroethane | 75-00-3 |  |  |  |  |  |
| Chloroform | 67-66-3 |  |  |  |  |  |
| Chloromethane | 74-87-3 |  |  |  |  |  |
| Cis 1,3-Dichloropropene |  |  |  |  |  |  |
| Dibromochloromethane | 594-18-3 |  |  |  |  |  |
| Ethylbenzene | 100-41-4 |  |  |  |  |  |
| Methylene chloride | 75-09-2 |  |  |  |  |  |
| Tetrachloroethylene | 127-18-4 |  |  |  |  |  |
| Toluene | 108-88-3 |  |  |  |  |  |
| Trans 1,3-Dichloropropene |  |  |  |  |  |  |
| Trans-1,2-Dichloroethylene | 156-60-5 |  |  |  |  |  |
| Trichloroethylene | 79-01-6 |  |  |  |  |  |
| Trichlorofluoromethane |  |  |  |  |  |  |
| Vinyl chloride | 75-01-4 |  |  |  |  |  |
| **Other Pollutants of Concern** |
| Xylene |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| BOD |  |  |  |  |  |  |
| TSS |  |  |  |  |  |  |
| Ammonia |  |  |  |  |  |  |
| Total Phosphorus |  |  |  |  |  |  |
| Total Nitrogen |  |  |  |  |  |  |
| Oil & Grease |  |  |  |  |  |  |
| range of Ph |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

**SECTION F – CHEMICALS, POLLUTANTS, WASTES (continued)**

2. If any wastewater analyses have been performed on the wastewater discharge(s) from your facilities, please attach to this survey a copy of the lab report, chain of custodies and location of where the samples were taken for the most recent sampling date. **Do not attach analyses performed by the POTW or analytical data already delivered to the POTW.**

3. Does your facility complete a Toxic Release Inventory? [ ] Yes [ ] No

 If yes, most recent copy attached \_\_\_\_\_\_\_ OR POTW already has \_\_\_\_\_\_\_\_

4. Please list boiler and cooling tower treatment additives or MSD sheets and dosage rates for each.

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Boiler or Cooling Unit** | **Treatment Additive Name** | **Purpose of Additive** | **Dosage, with units** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

5. Do you have any storage tank(s) at your facility? [ ] Yes [ ] No If yes, complete the chart below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Tank ID** | **[I]nside or [O]utside** | **[A]bove or [B]elow** **Ground** | **Volume****(in gallons)** | **Contents** | **Associated with [P]rocess; [W]astewater treatment; [G]roundwater remediation;**  | **Spill Containment Devices** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

6. Are any liquid wastes or sludges (i.e. acids, alkalies, heavy metal sludges, inks, dyes, oil, grease, organic compounds, paints, pesticides, plating wastes, pretreatment sludges, solvents, thinners, waste product, etc.) from this firm disposed of by means other than discharge to the sewer system? [ ] Yes [ ] No

If yes , please complete the following:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Nature of hauled****Waste and date****Last hauled** | **Waste hauler’s name,** **EPA ID# and address** | **Treatment Facility’s****Name, EPA ID# and****address** | **Disposal facility’s****Name, EPA ID# and****Address** | **Est. Gallons or****Pounds per****Year hauled off** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

7. Is this facility a small quantity, large quantity, or conditionally exempt Hazardous Waste Generator?

[ ] Small Quantity [ ] Large Quantity [ ] Conditionally Exempt [ ] Not Applicable

|  |  |
| --- | --- |
| **Facility’s EPA Hazardous Waste Generator ID#:** |  |
| **Waste Codes:** |  |

**SECTION G – WASTEWATER TREATMENT, FLOW, AND SAMPLING EQUIPMENT**

1. Is the wastewater generated by this facility treated prior to discharge to the POTW? [ ] Yes [ ] No

If yes, please complete the chart below. If a particular pretreatment unit only treats part of the wastewater, indicate this below and in the diagram required by Section B.

|  |  |  |  |
| --- | --- | --- | --- |
| **Pretreatment Unit** | [**Y**]es [**N**]o | **Additional Information** | **Chemicals Used** |
| Activated Carbon |  |  |  |
| Air Stripping |  |  |  |
| Biological Treatment |  | \_\_\_\_\_\_Activated Sludge\_\_\_\_\_\_Rotating Biological Contactor (RBC)\_\_\_\_\_\_Trickling Filter\_\_\_\_\_\_Sequencing Batch Reactor (SBR)\_\_\_\_\_\_Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Chemical Precipitation |  |  |  |
| Chlorination, for disinfection |  |  |  |
| Cyanide Destruction |  |  |  |
| Defoaming Agents |  |  |  |
| Dissolved Air Floatation (DAF) |  | list all individual units of DAF here\_\_\_\_\_\_equalization\_\_\_\_\_\_pH adjustment\_\_\_\_\_\_chemical precipitation\_\_\_\_\_\_Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Flow equalization, aerated |  | Size(gallons) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Before\_\_\_\_\_\_ After \_\_\_\_\_\_\_ Pretreatment |  |
| Flow equalization, not aerated |  | Size(gallons) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Before\_\_\_\_\_\_ After \_\_\_\_\_\_\_ Pretreatment |  |
| Grease and Oil Removal for employee cafeteria, kitchen, breakroom, etc. |  | \_\_\_\_\_\_Grease Trap, Size \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Oil Water Separator\_\_\_\_\_\_Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Grease and Oil Removal for food manufacturing process wastewater |  | \_\_\_\_\_\_Grease Trap, Size \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Oil Water Separator\_\_\_\_\_\_Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Grease and Oil Removal for non-food manufacturing process wastewater |  | \_\_\_\_\_\_ Grease Trap, Size \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Oil Water Separator\_\_\_\_\_\_ Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Heat Reclamation/Exchange |  |  |  |
| Ion Exchange (for wastewater treatment) |  |  |  |
| Neutralization, pH adjustment |  |  |  |
| Ozonation |  |  |  |
| Reverse Osmosis (for wastewater treatment) |  |  |  |
| Septic Tank |  |  |  |
| Silver Recovery |  |  |  |
| Solids Separation, Clarification, Dewatering, Removal, etc. |  | \_\_\_\_\_\_Belt Press \_\_\_\_\_\_\_ Centrifugation \_\_\_\_\_\_Clarification \_\_\_\_\_\_\_ Cyclone\_\_\_\_\_\_Filter Press \_\_\_\_\_\_\_ Filtration\_\_\_\_\_\_Flocculation \_\_\_\_\_\_\_ Grit Removal\_\_\_\_\_\_Microfiltration\_\_\_\_\_\_Nanofiltration \_\_\_\_\_\_\_ Screening\_\_\_\_\_\_Sedimentation \_\_\_\_\_\_\_ Septic Tank\_\_\_\_\_\_Ultrafiltration\_\_\_\_\_\_Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  |
| Solvent Separation |  |  |  |
| Spill protection |  |  |  |

**SECTION G – WASTEWATER TREATMENT, FLOW, AND SAMPLING EQUIPMENT (continued)**

2. Describe wastewater flow measuring methods and/or equipment. If applicable, list the meter’s current interval, flow volume, pulse frequency and reporting units:

3. List procedures employed to ensure the accuracy of flow measurement method/equipment.

|  |  |
| --- | --- |
| **Frequency of Cleaning:** |  |
| **Calibration method:** |  |
| **calibration performed by:** |  |
| **Training/credentials of calibration staff:** |  |
| **Date of most recent calibration:** |  |
| **Copy of Calibration Certificate** | **POTW already has \_\_\_\_\_ OR Copy attached \_\_\_\_\_\_** |

4. Describe the sampling method and associated equipment utilized at the facility. Identify staff or contract lab responsible for sampling. Describe sampling technician training.

|  |  |
| --- | --- |
| **Sampling Equipment/Method:** |  |
| **Sampling staff:** |  |
| **Training/credentials of sampling staff:** |  |

**SECTION H – CATEGORICAL STATUS**

1. Check any products listed below that are manufactured or activities that are performed at this facility:

[ ]40 CFR 467 Aluminum Forming [ ]40 CFR 432 Meat Products

[ ]40 CFR 427 Asbestos Manufacturing [ ]40 CFR 433 Metal Finishing

[ ]40 CFR 461 Battery Manufacturing [ ]40 CFR 464 Metal Molding & Casting

[ ]40 CFR 431 Builders Paper & Board Mills [ ]40 CFR 436 Mineral Mining & Processing

[ ]40 CFR 407 Canned & Preserved Fruits & Veg. [ ]40 CFR 471 Nonferrous Metal, Form & Powders

[ ]40 CFR 408 Canned & Preserved Seafood [ ]40 CFR 421 Nonferrous Metals Manufacturing

[ ]40 CFR 458 Carbon Black Manufacturing [ ]40 CFR 414 OCPSF

[ ]40 CFR 411 Cement Manufacturing [ ]40 CFR 435 Oil & Gas Extraction

[ ]40 CFR 437 Centralized Waste Treatment [ ]40 CFR 440 Ore Mining & Dressing

[ ]40 CFR 434 Coal Mining [ ]40 CFR 446 Paint Formulating

[ ]40 CFR 465 Coil Coating [ ]40 CFR 443 Paving & Roofing Materials Mfg.

[ ]40 CFR 468 Copper Forming [ ]40 CFR 455 Pesticide Manufacturing

[ ]40 CFR 405 Dairy Products Processing [ ]40 CFR 419 Petroleum Refining

[ ]40 CFR 469 Electrical, Electronics Components [ ]40 CFR 439 Pharmaceutical Manufacturing

[ ]40 CFR 413 Electroplating [ ]40 CFR 422 Phosphate Manufacturing

[ ]40 CFR 457 Explosives Manufacturing [ ]40 CFR 459 Photographic Supplies

[ ]40 CFR 412 Feedlots [ ]40 CFR 463 Plastics Molding & Forming

[ ]40 CFR 424 Ferroalloy Manufacturing [ ]40 CFR 466 Porcelain Enameling

[ ]40 CFR 418 Fertilizer Manufacturing [ ]40 CFR 430 Pulp, Paper, & Paperboard

[ ]40 CFR 464 Foundries, Metal Mold & Casting [ ]40 CFR 428 Rubber Manufacturing

[ ]40 CFR 426 Glass Manufacturing [ ]40 CFR 417 Soap & Detergent Manufacturing

[ ]40 CFR 406 Grain Mills [ ]40 CFR 423 Steam Electric Power Generation

[ ]40 CFR 454 Gum & Wood Chemical Manufacturing

[ ]40 CFR 460 Hospitals [ ]40 CFR 409 Sugar Processing

[ ]40 CFR 447 Ink Formulating [ ]40 CFR 410 Textile Mills

[ ]40 CFR 415 Inorganic Chemical Manufacturing [ ]40 CFR 429 Timber Products Processing

[ ]40 CFR 420 Iron & Steel Manufacturing [ ]40 CFR 442 Transportation Equipment Cleaning

[ ]40 CFR 425 Leather Tanning & Finishing [ ] OTHER \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**If any are checked, continue with Questions 2 and 3 of this Section**

Otherwise, check here \_\_\_\_ and skip to next Section.

**SECTION H – CATEGORICAL STATUS - continued**

2. Is there a discharge from any of the above checked categorical operations to the POTW? [ ] Yes [ ] No

If Yes, complete table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Process operation name** | **40 CFR, subpart, operations, etc** | **40 CFR New Source Date** | **Date initial process start-up** | **Date(s) major change \*** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

\* Date(s) of commencement of construction of any major upgrades, updates, refits, or reinstallations of the operation since the start-up date.

From the above, is this facility a [ ] New Source [ ] Existing Source [ ] Unknown

3. Are there any “dilution” wastestreams that flow through the current/proposed monitoring point?

Yes [ ] No [ ]

If Yes, ensure these wastestreams are clearly identified as such in question E,4.

**SECTION I – SLUG/SPILL PREVENTION and WASTE MINIMIZATION**

1. Enter employees responsible for notifying the POTW in the event of a spill, bypass, pretreatment facility upset, or other unusual discharge or problem and employees authorized to close down production if needed, along with information about training and procedures.

If information is formalized in a Plan of some kind, list Plan Number and page #.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Notification of POTW** | **Plan Name, page #** | **Authority to close down production** | **Plan Name, page #** |
| Designated Employee(s) |  |  |  |  |
| Training of those employees |  |  |  |  |
| Procedures |  |  |  |  |
| How other staff know when and how to contact designated individuals? |  |  |  |  |

2. Does the facility have measures, equipment, and/or plans to protect the POTW and/or sanitary sewer in the event of accidental spills, slugs, or other inappropriate discharges)? [ ] Yes [ ] No

If yes, complete table.

For measures that are formalized in a Plan of some kind (eg., Spill Prevention Control and Countermeasure Plan, Spill/Slug Control Plan, Toxic Organic Management Plan), list Plan Number and page #.

Note: the POTW may request copies of the identified plans.

|  |  |
| --- | --- |
| **Measures to protect POTW and/or sanitary sewer**  | **Plan Name and page #s, if applicable** |
|  |  |
|  |  |
|  |  |
|  |  |

3. Does your company have a pollution prevention/waste minimization/recycling/reuse program established, or have had a pollution prevention or other waste minimization audit conducted? [ ] Yes [ ] No

If yes, complete Table.

|  |  |  |
| --- | --- | --- |
| **Name of Plan/Audit** | **Most recent copy attached** | **POTW already has copy** |
|  |  |  |
|  |  |  |
|  |  |  |

4. Please check “current”, “projected” or “N/A” for all codes below relating to your facility’s wastewater discharge.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N/A | Current | Projected | Code | Description |
| [ ] | [ ] | [ ] | W13 | Improved maintenance scheduling, record keeping, or procedures |
| [ ] | [ ] | [ ] | W14 | Changed production schedule to minimize equipment and feedstock changeovers |
| [ ] | [ ] | [ ] | W19 | Other changes in operating practices (please explain) |  |
|  |  |  |  |  |
| [ ] | [ ] | [ ] | W21 | Instituted procedures to insure that materials do not stay in inventory beyond shelf life |
| [ ] | [ ] | [ ] | W22 | Began to test outdated material – continue to use if still effective |
| [ ] | [ ] | [ ] | W23 | Eliminated shelf-life requirements for stable materials |
| [ ] | [ ] | [ ] | W24 | Instituted better labeling procedures |
| [ ] | [ ] | [ ] | W25 | Instituted clearinghouse to exchange materials that would otherwise be discarded |
| [ ] | [ ] | [ ] | W29 | Other changes in inventory control (please explain) |  |
|  |  |  |  |  |
| [ ] | [ ] | [ ] | W31 | Improved storage or stacking procedures |
| [ ] | [ ] | [ ] | W32 | Improved procedures for loading, unloading and transfer operations |
| [ ] | [ ] | [ ] | W33 | Installed overflow alarms, and/or automatic shutoff valves |
| [ ] | [ ] | [ ] | W34 | Installed secondary containment |
| [ ] | [ ] | [ ] | W35 | Installed vapor recovery systems |
| [ ] | [ ] | [ ] | W36 | Implemented inspections or monitoring program of potential spill or leak sources |
| [ ] | [ ] | [ ] | W39 | Other spill and leak prevention (please explain) |  |
|  |  |  |  |  |
| [ ] | [ ] | [ ] | W41 | Increased purity of raw materials |
| [ ] | [ ] | [ ] | W42 | Substituted raw materials |
| [ ]

|  |  |
| --- | --- |
|  |  |

 | [ ] | [ ] | W49 | Other raw materials modifications (please explain) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| [ ] | [ ] | [ ] | W51 | Instituted recirculation within a process |
| [ ] | [ ] | [ ] | W52 | Modified equipment, layout, and/or piping |
| [ ] | [ ] | [ ] | W53 | Use of different process catalyst |
| [ ] | [ ] | [ ] | W54 | Instituted better controls on operating bulk containers to minimize discarding of empty containers |
| [ ] | [ ] | [ ] | W55 | Change from small volume containers to bulk containers to minimize discarding of empty containers |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N/A | Current | Projected | Code | Description |
| [ ] | [ ] | [ ] | W58 | Other process modifications (please explain) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| [ ] | [ ] | [ ] | W59 | Modified stripping/cleaning equipment |
| [ ] | [ ] | [ ] | W60 | Changed to mechanical stripping/cleaning devices (from solvents or other materials) |
| [ ] | [ ] | [ ] | W61 | Changed to aqueous cleaners (from solvents or other materials) |
| [ ] | [ ] | [ ] | W62 | Reduced the number of solvents used to make waste more amendable to recycling |
| [ ] | [ ] | [ ] | W63 | Modified containment procedures for cleaning units |
| [ ] | [ ] | [ ] | W64 | Improved draining procedures |
| [ ] | [ ] | [ ] | W66 | Modified or installed rinse systems |
| [ ] | [ ] | [ ] | W67 | Improved rinse equipment design |
| [ ] | [ ] | [ ] | W68 | Improved rinse equipment operation |
| [ ] | [ ] | [ ] | W71 | Other cleaning and degreasing operation (please explain) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| [ ] | [ ] | [ ] | W72 | Modified spray systems or equipment |
| [ ] | [ ] | [ ] | W73 | Substituted coating materials used |
| [ ] | [ ] | [ ] | W74 | Improved application techniques |
| [ ] | [ ] | [ ] | W75 | Changed from spray to other system |
| [ ] | [ ] | [ ] | W78 | Other surface preparation and finishing (please explain) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| [ ] | [ ] | [ ] | W81 | Changed product specifications |
| [ ] | [ ] | [ ] | W82 | Modified design or composition of product |
| [ ] | [ ] | [ ] | W83 | Modified packaging |
| [ ] | [ ] | [ ] | W89 | Other product modifications (please explain) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| [ ] | [ ] | [ ] | W99 | Other (please explain) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**SECTION J – OTHER PERMITS**

1. List all environmental control permits currently managed for or by this facility. Examples: air, National Pollutant Discharge Elimination System (NPDES), Industrial User Permits (IUP), Resources Conservation and Recovery Act (RCRA), groundwater, storm water, general, non-discharge, and septic tank. Be prepared to provide the POTW with copies of identified permits and related records.

|  |  |  |
| --- | --- | --- |
| **Permit Type** | **Permit Number** | **Issuing Agency** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. With regard to the parent company and all subsidiaries, list all wastewater discharge permits issued to cover similar operations to those at this facility. Examples: National Pollutant Discharge Elimination System (NPDES), Industrial User Permits (IUP), groundwater, general, non-discharge, and septic tank. Be prepared to provide the POTW with copies of identified permits and related records.

|  |  |  |  |
| --- | --- | --- | --- |
| **Facility and Location** | **Permit Type** | **Permit Number** | **Issuing Agency** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

1. With regard to the parent company and all subsidiaries, list all environmental permits applied for in the United States where issuance was denied OR the permit was terminated prior to the expiration date. Examples: air, NPDES, IUP, RCRA, groundwater storm water, general, non-discharge, and septic tank. Be prepared to provide the POTW with copies of identified permits and related records.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Permit Type** | **Issuing Agency** | **Date** | **Facility Name and Location** | **Reason for Denial/Termination** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |