

## IOWA DNR: NPDES FORM 3 FOR INDUSTRIAL FACILITIES FACILITIES THAT DISCHARGE PROCESS WASTEWATER (EXISTING)

Permit Number \_\_\_\_\_ Facility Name \_\_\_\_\_

## 1. Sources of Pollution

For each outfall, provide descriptions of:

- 1. The route of flow to the first named stream.
- 2. All operations contributing wastewater to the discharge including process wastewater, cooling water, stormwater, etc.
- 3. The monthly average and daily maximum flow contributed by each operation.
- 4. The frequency and duration of the discharge from each operation except stormwater.

| Outfall No.        |         | Route of Flow: |            |      |           |             |           |
|--------------------|---------|----------------|------------|------|-----------|-------------|-----------|
| Latitude:          | Degrees |                | Minutes    |      | Seco      | onds        |           |
| Longitude: Degrees |         |                | Minutes    |      | Seco      |             |           |
| Operation          |         |                | Flow (MGD) |      | Free      | Duration    |           |
| Operation          |         |                | Avg.       | Max. | Days/week | Months/year | (in days) |
|                    |         |                |            |      |           |             |           |
|                    |         |                |            |      |           |             |           |
|                    |         |                |            |      |           |             |           |
|                    |         |                |            |      |           |             |           |
|                    |         |                |            |      |           |             |           |

| Outfall No. |         | Route of Flow: |       |      |       |                       |          |           |
|-------------|---------|----------------|-------|------|-------|-----------------------|----------|-----------|
| Latitude:   | Degrees | Minut          |       | utes |       |                       | onds     |           |
| Longitude:  | Degrees |                | Minut |      |       | Seco                  | onds     |           |
| Operation   |         | tion           |       | Flow | (MGD) | Frec                  | Duration |           |
|             |         | uon            | A     |      | Max.  | Days/week Months/year |          | (in days) |
|             |         |                |       |      |       |                       |          |           |
|             |         |                |       |      |       |                       |          |           |
|             |         |                |       |      |       |                       |          |           |
|             |         |                |       |      |       |                       |          |           |
|             |         |                |       |      |       |                       |          |           |

Outfall No. Route of Flow: Minutes \_\_\_\_\_ Seconds \_\_\_\_\_ Latitude: Degrees Minutes Seconds Longitude: Degrees Flow (MGD) Frequency Duration Operation Days/week Months/year (in days) Avg. Max.



## 2. Production

- A. Is this facility subject to a federal effluent guideline in 40 CFR Subchapter N? (see Table 1 of instructions) Yes No Unknown If yes, list 40 CFR part number, if known
- B. If you answered "yes" to 2.A., are the applicable effluent guidelines expressed in terms of production? (See Table 1 of instructions).
  - Yes No Not applicable
- C. If you answered "yes" to 2.B, list the quantity or quantities that represent your actual production. Attach additional sheets if necessary.

| Operational Process | Quantity per Day | Units |
|---------------------|------------------|-------|
|                     |                  |       |
|                     |                  |       |
|                     |                  |       |

## 3. Treatment System

Briefly describe any wastewater treatment system(s) currently used or planned to be used at this outfall.

## 4. Effluent Characteristics

Refer to Table 2 of the instructions. List any of the pollutants shown in Table 2 that you know or have reason to believe may be discharged, from any outfall. For each pollutant you list, briefly describe the reasons you believe it to be present. Report any analytical data from the facility's' outfalls. Attach additional sheets if necessary.

| Pollutants | Basson for Brosonso in Discharge | Concentrat | tion (mg/L) | Outfall | Certified Lab. |  |
|------------|----------------------------------|------------|-------------|---------|----------------|--|
|            | Reason for Presence in Discharge | Average    | Maximum     | Outian  | No.            |  |
|            |                                  |            |             |         |                |  |
|            |                                  |            |             |         |                |  |
|            |                                  |            |             |         |                |  |
|            |                                  |            |             |         |                |  |

## 5. Chemical Additives

If you add any chemicals that may be present in the discharge, complete the following table. Additives may include boiler water treatments, cooling tower treatments, water treatment products, etc. You <u>must</u> include a copy of the safety data sheet (SDS).

| Manufacturer | Product Name | Estimated Discharge<br>Concentration | LC50* | SDS Included? |
|--------------|--------------|--------------------------------------|-------|---------------|
|              |              |                                      |       |               |
|              |              |                                      |       |               |
|              |              |                                      |       |               |
|              |              |                                      |       |               |

\*This is the LC50 for the most sensitive warm-water fish or plankton. Attach additional sheets if necessary.

## 6. Toxicity Test Data

Have any biological tests for acute or chronic toxicity been conducted on any of your discharges in the past three years?

If yes, attach additional sheets describing the test(s), their purpose(s) and the result(s).



#### 7. Effluent Data

Complete Parts A – H (Pages 3 -14) for each outfall that discharges process wastewater.

## Part A. <u>All applicants must</u> provide the results of <u>at least one</u> analysis for every row in these tables.

- If you only have one analysis result, place it the Maximum Daily Value column
- If the laboratory reported non-detect for a parameter, report the concentration as "<" the detection limit. (e.g. < 0.5 mg/L)
- The first 5 pollutants require 24-hour composite samples and analysis by a certified laboratory.
- Temperature and pH must be grab samples and do not need to be analyzed by a certified laboratory.

| Pollutant                       | Maximum Daily<br>Concentration | Long Term Average<br>Concentration<br>(if available) | Number of<br>Analyses | Units | Certified<br>Laboratory<br>Number | Reporting Level<br>ML/MDL |
|---------------------------------|--------------------------------|--|-----------------------|-------|-----------------------------------|---------------------------|
| Biochemical Oxygen Demand (BOD) |                                |  |                       |       |                                   |                           |
| Chemical Oxygen Demand (COD)    |                                |  |                       |       |                                   |                           |
| Total Organic Carbon (TOC)      |                                |  |                       |       |                                   |                           |
| Total Suspended Solids (TSS)    |                                |  |                       |       |                                   |                           |
| Ammonia (as N)                  |                                |  |                       |       |                                   |                           |

| Parameter                       | Minimum Daily<br>Value | Long Term Average Value<br>(if available) | Maximum Daily<br>Value | Number of Analyses | Units                      |
|---------------------------------|------------------------|---|------------------------|--------------------|----------------------------|
| Flow                            |                        |   |                        |                    | million gallons per<br>day |
| Temperature (October - March)   |                        |   |                        |                    | degrees Fahrenheit         |
| Temperature (April – September) |                        |   |                        |                    | degrees Fahrenheit         |
| рН                              |                        |   |                        |                    | Standard Units             |



## Part B. All applicants must complete this part.

- For each pollutant, you must mark "X" in either the "Believed Present" column or the "Believed Absent" column.
- You must mark "believed present" for any pollutant limited directly or expressly in an effluent limitations guideline.
- For each pollutant believed present, provide quantitative data.
- Collect grab samples for TRC, *E. coli*, and oil and grease, if believed present.
- All other pollutants in Part B must be 24-hour composite samples.

|  | Mark "X"            |                    | Maximum Daily | Long Term Average               | Number of |       | Certified            | Reporting       |
|--|---------------------|--------------------|---------------|---------------------------------|-----------|-------|----------------------|-----------------|
| Pollutant                                | Believed<br>Present | Believed<br>Absent | Concentration | Concentration<br>(if available) | Analyses  | Units | Laboratory<br>Number | Level<br>ML/MDL |
| Bromide                                  |                     |                    |               |                                 |           |       |                      |                 |
| Chlorine, Total Residual* 1              |                     |                    |               |                                 |           |       |                      |                 |
| Color                                    |                     |                    |               |                                 |           |       |                      |                 |
| Escherichia coli (E. coli)* <sup>2</sup> |                     |                    |               |                                 |           |       |                      |                 |
| Fluoride                                 |                     |                    |               |                                 |           |       |                      |                 |
| Nitrate-Nitrite (as N)                   |                     |                    |               |                                 |           |       |                      |                 |
| Nitrogen Total Organic (as N)            |                     |                    |               |                                 |           |       |                      |                 |
| Oil and Grease*                          |                     |                    |               |                                 |           |       |                      |                 |
| Phosphorus, Total (as P)                 |                     |                    |               |                                 |           |       |                      |                 |
| RADIOACTIVITY                            |                     |                    |               |                                 |           |       |                      |                 |
| Alpha, Total                             |                     |                    |               |                                 |           |       |                      |                 |
| Beta, Total                              |                     |                    |               |                                 |           |       |                      |                 |
| Radium, Total                            |                     |                    |               |                                 |           |       |                      |                 |
| Radium 226, Total                        |                     |                    |               |                                 |           |       |                      |                 |
| Sulfate (as SO4)                         |                     |                    |               |                                 |           |       |                      |                 |
| Sulfide (as S)                           |                     |                    |               |                                 |           |       |                      |                 |
| Sulfite (as SO3)                         |                     |                    |               |                                 |           |       |                      |                 |
| Surfactants                              |                     |                    |               |                                 |           |       |                      |                 |
| Aluminum, Total                          |                     |                    |               |                                 |           |       |                      |                 |

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|                   | Mar                 | k "X"              | Maximum Daily | Long Term Average               | Number of |       | Certified            | Reporting       |
|-------------------|---------------------|--------------------|---------------|---------------------------------|-----------|-------|----------------------|-----------------|
| Pollutant         | Believed<br>Present | Believed<br>Absent | Concentration | Concentration<br>(if available) | Analyses  | Units | Laboratory<br>Number | Level<br>ML/MDL |
| Barium, Total     |                     |                    |               |                                 |           |       |                      |                 |
| Boron, Total      |                     |                    |               |                                 |           |       |                      |                 |
| Cobalt, Total     |                     |                    |               |                                 |           |       |                      |                 |
| Iron, Total       |                     |                    |               |                                 |           |       |                      |                 |
| Magnesium, Total  |                     |                    |               |                                 |           |       |                      |                 |
| Molybdenum, Total |                     |                    |               |                                 |           |       |                      |                 |
| Manganese, Total  |                     |                    |               |                                 |           |       |                      |                 |
| Tin, Total        |                     |                    |               |                                 |           |       |                      |                 |
| Titanium, Total   |                     |                    |               |                                 |           |       |                      |                 |
| Chloride (as Cl)  |                     |                    |               |                                 |           |       |                      |                 |

<sup>1</sup> Mark TRC believed present if you use municipal water or add chlorine to your water.

<sup>2</sup>Only mark *E. coli* believed present if you have sanitary waste in your discharge or bacteria limits in your permit.

\* You must take grab samples for these pollutants.



## Part C [Metals, Cyanide, and Total Phenols Fraction]

- Industry categories with an "X" in the "Metals, etc." column of Table 1 in the instructions are required to test for all pollutants in Part C. If you are required to test, mark "testing required" and provide the results of at least one analysis for each pollutant.
- For all other industry categories, review each row and mark either "Believed Absent" or "Believed Present."
- If you mark "Believed Present", you must submit the results of at least one analysis unless you meet an exemption (see instructions).
- Cyanide and total phenols must be grab samples.
- All other pollutants in Part C must be 24-hour composite samples.

|                  |                     | Mark "X"            |                    |                                | Long-term Average               |                       |       | Certified             | Reporting       |
|------------------|---------------------|---------------------|--------------------|--------------------------------|---------------------------------|-----------------------|-------|-----------------------|-----------------|
| Pollutant        | Testing<br>Required | Believed<br>Present | Believed<br>Absent | Maximum Daily<br>Concentration | Concentration (if<br>available) | Number of<br>Analyses | Units | Laborator<br>y Number | Level<br>ML/MDL |
| Antimony, Total  |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Arsenic, Total   |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Beryllium, Total |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Cadmium, Total   |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Chromium, Total  |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Copper, Total    |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Lead, Total      |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Mercury, Total   |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Nickel, Total    |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Selenium, Total  |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Silver, Total    |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Thallium, Total  |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Zinc, Total      |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Cyanide, Total*  |                     |                     |                    |                                |                                 |                       |       |                       |                 |
| Phenols, Total*  |                     |                     |                    |                                |                                 |                       |       |                       |                 |

\* You must take grab samples for these pollutants.



#### Part D [Volatile Organics Fraction]

- Industry categories with an "X" in the "Volatile" column of Table 1 in the instructions are required to test for all pollutants in Part D. If you are required to test, mark "testing required" and provide the results of at least one analysis for each pollutant.
- For all other industry categories, review each row and mark either "Believed Absent" or "Believed Present."
- If you mark "Believed Present", you must submit results of at least one analysis unless you meet an exemption (see instructions).
- All samples must be grab samples. All pollutants must be analyzed by a certified laboratory.

|                           |          | Mark "X" |          | Maximum Daily | Long-term Average | Number of | of Certified |            | Reporting |
|---------------------------|----------|----------|----------|---------------|-------------------|-----------|--------------|------------|-----------|
| Pollutant                 | Testing  | Believed | Believed | Concentration | Concentration     | Analyses  | Units        | Laboratory | Level     |
|                           | Required | Present  | Absent   |               | (if available)    | ,         |              | Number     | ML/MDL    |
| Acrolein*                 |          |          |          |               |                   |           |              |            |           |
| Acrylonitrile*            |          |          |          |               |                   |           |              |            |           |
| Benzene*                  |          |          |          |               |                   |           |              |            |           |
| Bromoform*                |          |          |          |               |                   |           |              |            |           |
| Carbon Tetrachloride*     |          |          |          |               |                   |           |              |            |           |
| Chlorobenzene*            |          |          |          |               |                   |           |              |            |           |
| Chlorodibromomethane*     |          |          |          |               |                   |           |              |            |           |
| Chloroethane*             |          |          |          |               |                   |           |              |            |           |
| 2-Chloroethylvinyl Ether* |          |          |          |               |                   |           |              |            |           |
| Chloroform*               |          |          |          |               |                   |           |              |            |           |
| Dichlorobromomethane*     |          |          |          |               |                   |           |              |            |           |
| 1,1-Dichloroethane*       |          |          |          |               |                   |           |              |            |           |
| 1,2-Dichloroethane*       |          |          |          |               |                   |           |              |            |           |
| 1,1-Dichloroethylene*     |          |          |          |               |                   |           |              |            |           |
| 1,2-Dichloropropane*      |          |          |          |               |                   |           |              |            |           |
| 1,3-Dichloropropylene*    |          |          |          |               |                   |           |              |            |           |
| Ethylbenzene*             |          |          |          |               |                   |           |              |            |           |
| Methyl Bromide*           |          |          |          |               |                   |           |              |            |           |
| Methyl Chloride*          |          |          |          |               |                   |           |              |            |           |

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|                             | Mark "X" |          |          | Maximum Daily | Long-term Average               | Number of |       | Certified            | Reporting       |
|-----------------------------|----------|----------|----------|---------------|---------------------------------|-----------|-------|----------------------|-----------------|
| Pollutant                   | Testing  | Believed | Believed | Concentration | Concentration<br>(if available) | Analyses  | Units | Laboratory<br>Number | Level<br>ML/MDL |
|                             | Required | Present  | Absent   |               |                                 |           |       | Number               |                 |
| Methylene Chloride*         |          |          |          |               |                                 |           |       |                      |                 |
| 1,1,2,2-Tetrachloroethane*  |          |          |          |               |                                 |           |       |                      |                 |
| Tetrachloroethylene*        |          |          |          |               |                                 |           |       |                      |                 |
| Toluene*                    |          |          |          |               |                                 |           |       |                      |                 |
| 1,2-trans-Dichloroethylene* |          |          |          |               |                                 |           |       |                      |                 |
| 1,1,1-Trichloroethane*      |          |          |          |               |                                 |           |       |                      |                 |
| 1,1,2-Trichloroethane*      |          |          |          |               |                                 |           |       |                      |                 |
| Trichloroethylene*          |          |          |          |               |                                 |           |       |                      |                 |
| Vinyl Chloride*             |          |          |          |               |                                 |           |       |                      |                 |

\* You must take grab samples for these pollutants.



#### Part E [Acid Fraction]

- Industry categories with an "X" in the "Acid" column of Table 1 in the instructions are required to test for all pollutants in Part E. If you are required to test, mark "testing required" and provide the results of at least one analysis for each pollutant.
- For all other industry categories, review each row and mark either "Believed Absent" or "Believed Present."
- For each pollutant Believed Present, provide quantitative data or an explanation of its presence in your discharge.
- If you mark "Believed Present", you must submit results of at least one analysis unless you meet an exemption (see instructions).
- All samples must be 24-hour composite samples. All pollutants must be analyzed by a certified laboratory.

|                       |                     | Mark "X"            |                    |                                | Long-Term                                  |                       |       | Certified            | Reporting       |
|-----------------------|---------------------|---------------------|--------------------|--------------------------------|--|-----------------------|-------|----------------------|-----------------|
| Pollutant             | Testing<br>Required | Believed<br>Present | Believed<br>Absent | Maximum Daily<br>Concentration | Average<br>Concentration<br>(if available) | Number of<br>Analyses | Units | Laboratory<br>Number | Level<br>ML/MDL |
| 2-Chlorophenol        |                     |                     |                    |                                |  |                       |       |                      |                 |
| 2,4-Dichlorophenol    |                     |                     |                    |                                |  |                       |       |                      |                 |
| 2,4-Dimethylphenol    |                     |                     |                    |                                |  |                       |       |                      |                 |
| 4,6-Dinitro-O-Cresol  |                     |                     |                    |                                |  |                       |       |                      |                 |
| 2,4-Dinitro-phenol    |                     |                     |                    |                                |  |                       |       |                      |                 |
| 2-Nitrophenol         |                     |                     |                    |                                |  |                       |       |                      |                 |
| 4-Nitrophenol         |                     |                     |                    |                                |  |                       |       |                      |                 |
| P-Chloro-M- Cresol    |                     |                     |                    |                                |  |                       |       |                      |                 |
| Pentachlorophenol     |                     |                     |                    |                                |  |                       |       |                      |                 |
| Phenol                |                     |                     |                    |                                |  |                       |       |                      |                 |
| 2,4,6-Trichlorophenol |                     |                     |                    |                                |  |                       |       |                      |                 |



#### Part F [Base/Neutral Fraction]

- Industry categories with an "X" in the "Base/Neutral" column of Table 1 in the instructions are required to test for all pollutants in Part F. If you are required to test, mark "Testing Required" and provide the results of at least one analysis for each pollutant.
- For all other industry categories, review each row and mark either "Believed Absent" or "Believed Present."
- For each pollutant Believed Present, provide quantitative data or an explanation of its presence in your discharge (attach additional sheets if necessary).
- If you mark "Believed Present", you must submit results of at least one analysis unless you meet an exemption (see instructions).
- All samples must be 24-hour composite samples. All pollutants must be analyzed by a certified laboratory.

|                                  |                     | Mark "X"            |                    | Maximum Daily | Long Term Average            | Number of |       | Certified            | Reporting       |
|----------------------------------|---------------------|---------------------|--------------------|---------------|------------------------------|-----------|-------|----------------------|-----------------|
| Pollutant                        | Testing<br>Required | Believed<br>Present | Believed<br>Absent | Concentration | Concentration (if available) | Analyses  | Units | Laboratory<br>Number | Level<br>ML/MDL |
| Acenaphthene                     |                     |                     |                    |               |                              |           |       |                      |                 |
| Acenaphthylene                   |                     |                     |                    |               |                              |           |       |                      |                 |
| Anthracene                       |                     |                     |                    |               |                              |           |       |                      |                 |
| Benzidine                        |                     |                     |                    |               |                              |           |       |                      |                 |
| Benzo (a) Anthracene             |                     |                     |                    |               |                              |           |       |                      |                 |
| Benzo (a) Pyrene                 |                     |                     |                    |               |                              |           |       |                      |                 |
| 3,4-Benzo- fluoranthene          |                     |                     |                    |               |                              |           |       |                      |                 |
| Benzo (ghi) Perylene             |                     |                     |                    |               |                              |           |       |                      |                 |
| Benzo (k) Fuoranthene            |                     |                     |                    |               |                              |           |       |                      |                 |
| Bis (2-Chlorethoxy)<br>Methane   |                     |                     |                    |               |                              |           |       |                      |                 |
| Bis (2-Chloroethyl Ether)        |                     |                     |                    |               |                              |           |       |                      |                 |
| Bis (2-Chloroisopropyl)<br>Ether |                     |                     |                    |               |                              |           |       |                      |                 |
| Bis (2-ethyl- hexyl) Phthalate   |                     |                     |                    |               |                              |           |       |                      |                 |
| 4-Bromo- phenyl Phenyl<br>Ether  |                     |                     |                    |               |                              |           |       |                      |                 |
| Butyl Benzyl Phthalate           |                     |                     |                    |               |                              |           |       |                      |                 |
| 2-Chloronaphthalene              |                     |                     |                    |               |                              |           |       |                      |                 |

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| Chrysene<br>Dibenzo (a,h) Anthracene<br>1,2-Dichlorobenzene<br>1,3-Dichlorobenzene<br>3,3'-Dichlorobenzidine<br>3,3'-Dichlorobenzidine<br>Diethyl Phthalate<br>Dimethyl Phthalate<br>Din-N-Butyl Phthalate<br>2,4-Dinitrotoluene<br>2,6-Dinitrotoluene<br>Di-N-Octyl Phthalate<br>1,2-Diphenylhydrazine<br>Fluoranthene<br>Fluorene<br>Hexachlorobenzene |                     | Mark "X"            |                    | Maximum Dailu                  | Long Term Average Number of Certified |                       | Certified | Reporting            |                 |
|--|---------------------|---------------------|--------------------|--------------------------------|---------------------------------------|-----------------------|-----------|----------------------|-----------------|
| Pollutant  | Testing<br>Required | Believed<br>Present | Believed<br>Absent | Maximum Daily<br>Concentration | Concentration (if available)          | Number of<br>Analyses | Units     | Laboratory<br>Number | Level<br>ML/MDL |
| 4-Chlorophenyl Phenyl Ether  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Chrysene   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Dibenzo (a,h) Anthracene   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| 1,2-Dichlorobenzene  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| 1,3-Dichlorobenzene  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| 1,4-Dichlorobenzene  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| 3,3'-Dichlorobenzidine   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Diethyl Phthalate  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Dimethyl Phthalate   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Di-N-Butyl Phthalate   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| 2,4-Dinitrotoluene   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| 2,6-Dinitrotoluene   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Di-N-Octyl Phthalate   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| 1,2-Diphenylhydrazine  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Fluoranthene   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Fluorene   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Hexachlorobenzene  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Hexachlorobutadiene  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Hexachlorocyclopentadiene  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Hexachloroethane   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Indeno(1,2,3-cd)Pyrene   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Isophorone   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Naphthalene  |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| Nitrobenzene   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| N-Nitrosodimethylamine   |                     |                     |                    |                                |                                       |                       |           |                      |                 |
| N -Nitrosodi-N-Propylamine   |                     |                     |                    |                                |                                       |                       |           |                      |                 |

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| Pollutant              |                     | Mark "X"            |                    | Maximum Daily | Long Term Average | Number of |       | Certified            | Reporting       |
|------------------------|---------------------|---------------------|--------------------|---------------|-------------------|-----------|-------|----------------------|-----------------|
|                        | Testing<br>Required | Believed<br>Present | Believed<br>Absent | Concentration | Concentration     |           | Units | Laboratory<br>Number | Level<br>ML/MDL |
| N-Nitrosodiphenylamine |                     |                     |                    |               |                   |           |       |                      |                 |
| Phenanthrene           |                     |                     |                    |               |                   |           |       |                      |                 |
| Pyrene                 |                     |                     |                    |               |                   |           |       |                      |                 |
| 1,2,4-Trichlorobenzene |                     |                     |                    |               |                   |           |       |                      |                 |



## Part G [Pesticide Fraction]

- Industry categories with an "X" in the "Pesticide" column of Table 1 in the instructions are required to test for all pollutants in Part D. If you are required to test, mark "Testing Required" and provide the results of at least one analysis for each pollutant.
- For all other industry categories, review each row and mark either "Believed Absent" or "Believed Present."
- If you mark "Believed Present", you must submit results of at least one analysis unless you meet an exemption.
- If you only have one analysis result, place it the Maximum Daily Value column.
- All samples must be grab samples. All pollutants must be analyzed by a certified laboratory.

|                    |          | Mark "X" |          | Maximum Daily | Long Term Average | Number of |       | Certified  | Reporting |
|--------------------|----------|----------|----------|---------------|-------------------|-----------|-------|------------|-----------|
| Pollutant          | Testing  | Believed | Believed | Concentration | Concentration     | Analyses  | Units | Laboratory | Level     |
|                    | Required | Present  | Absent   |               | (if available)    |           |       | Number     | ML/MDL    |
| Aldrin             |          |          |          |               |                   |           |       |            |           |
| alpha-BHC          |          |          |          |               |                   |           |       |            |           |
| beta-BHC           |          |          |          |               |                   |           |       |            |           |
| gamma-BHC          |          |          |          |               |                   |           |       |            |           |
| delta BHC          |          |          |          |               |                   |           |       |            |           |
| Chlordane          |          |          |          |               |                   |           |       |            |           |
| 4,4'-DDT           |          |          |          |               |                   |           |       |            |           |
| 4,4'-DDE           |          |          |          |               |                   |           |       |            |           |
| 4,4'-DDD           |          |          |          |               |                   |           |       |            |           |
| Dieldrin           |          |          |          |               |                   |           |       |            |           |
| Alpha-Endosulfan   |          |          |          |               |                   |           |       |            |           |
| Beta-Endosulfan    |          |          |          |               |                   |           |       |            |           |
| Endosulfan Sulfate |          |          |          |               |                   |           |       |            |           |
| Endrin             |          |          |          |               |                   |           |       |            |           |
| Endrin Aldehyde    |          |          |          |               |                   |           |       |            |           |
| Heptachlor         |          |          |          |               |                   |           |       |            |           |
| Heptachlor Epoxide |          |          |          |               |                   |           |       |            |           |
| PCB-1242           |          |          |          |               |                   |           |       |            |           |
| PCB-1254           |          |          |          |               |                   |           |       |            |           |

PNR

|           |                     | Mark "X"            |                    | Maximum Daily | Long Term Average               | Number of |       | Certified            | Reporting       |
|-----------|---------------------|---------------------|--------------------|---------------|---------------------------------|-----------|-------|----------------------|-----------------|
| Pollutant | Testing<br>Required | Believed<br>Present | Believed<br>Absent | Concentration | Concentration<br>(if available) | Analyses  | Units | Laboratory<br>Number | Level<br>ML/MDL |
| PCB-1221  |                     |                     |                    |               |                                 |           |       |                      |                 |
| PCB-1232  |                     |                     |                    |               |                                 |           |       |                      |                 |
| PCB-1248  |                     |                     |                    |               |                                 |           |       |                      |                 |
| PCB-1260  |                     |                     |                    |               |                                 |           |       |                      |                 |
| PCB-1016  |                     |                     |                    |               |                                 |           |       |                      |                 |
| Toxaphene |                     |                     |                    |               |                                 |           |       |                      |                 |



#### Part H [Dioxin]

- If you use or manufacture certain chemicals (see list below), mark "Testing Required" for dioxin.
- If you do not use chemicals in the list, mark "Believed Absent" or "Believed Present".
- If you mark "Testing Required" or "Believed Present" you must perform a screening analysis for dioxins using gas chromatography with an electron capture detector.
- Describe the results of the analysis in the space provided.

|                                      |                     | Mark "X"            |                    |                                      |
|--------------------------------------|---------------------|---------------------|--------------------|--------------------------------------|
| Pollutant                            | Testing<br>Required | Believed<br>Present | Believed<br>Absent | Describe screening analysis results. |
| 2,3,7,8-Tetra-chlorodibenzo-p-dioxin |                     |                     |                    |                                      |

You <u>must</u> mark "Testing Required" for dioxin if you use or manufacture one or more of the following compounds:

| Compound Name   | Other name(s)    | CAS Number |
|---|------------------|------------|
| 2,4,5-trichlorophenoxy acetic acid                      | 2,4,5-T          | 93-76-5    |
| 2-(2,4,5-trichlorophenoxy) propanoic acid               | Silvex; 2,4,5-TP | 93-72-1    |
| 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate | Erbon            | 136-25-4   |
| O,O-dimethyl O-(2,4,5-trichlorophenyl) phosphorothioate | Ronnel           | 299-84-3   |
| 2,4,5-trichlorophenol                                   | ТСР              | 95-95-4    |
| hexachlorophene   | НСР              | 70-30-4    |



# FORM 3 INSTRUCTIONS DO NOT SUBMIT – FOR APPLICANT USE ONLY

## 1. Sources of Pollution

- List the route of flow from the outfall to the first named stream, e.g. "discharge pipe to unnamed stream to Des Moines River".
- List all sources of wastewater discharged through each outfall.
- Operations may be described in general terms (for example, "dye-making reactor" or "distillation tower").
- You may estimate the flow contributed by each source if no data are available.
- For stormwater discharges, you may estimate the average flow. You must indicate the rainfall event upon which the estimate is based and the method of estimation. Attach additional sheets if necessary.

## 2. Production

- A. Industries with effluent limit guidelines (ELGs) are shown in Table 1 of these instructions. A guideline applies to your facility if your industry is listed in the table and you have process wastewater.
- B. An effluent guideline is expressed in terms of production if the limitation is expressed as mass of pollutant per operational parameter. For example, "pounds BOD per cubic foot of logs from which bark is removed." Industries with production-based limits are indicated in Table 1.
- C. Complete this item only if you checked "yes" for Item 2.B. Report quantities in the units of measurement used in the applicable effluent guideline. Production figures must be based on actual daily production and not on design capacity or future operation. More information on ELGs can be found at <a href="https://www.epa.gov/eg/industrial-effluent-guidelines">https://www.epa.gov/eg/industrial-effluent-guidelines</a>.

## 3. Treatment System

Self-explanatory.

## 4. Effluent Characteristics

- Refer to Table 2 of these instructions. List any of the pollutants shown in Table 2 that you know or have reason to believe are discharged, or may be discharged, from any outfall.
- For each pollutant you list, briefly describe the reasons you believe it to be present.
- Report any analytical data available. Attach additional sheets if necessary

## 5. Chemical Additives

- If you add any chemicals, please complete the table
- Additives may include boiler water treatments, cooling tower treatments, water treatment products, etc.
- Values for LC<sub>50</sub> can usually be found in the "Ecological Information" section of an SDS.
- You <u>must</u> also include a copy of the safety data sheet (SDS).

## 6. Toxicity Test Data

- Select "yes" if any biological tests for acute or chronic toxicity have been conducted on any of your discharges in the past three years. An example is Whole Effluent Toxicity, or WET testing.
- If yes, attach additional sheets describing the test(s), their purpose(s) and the result(s). Attach additional sheets if necessary.

## 7. Effluent Data

- Complete 7.A-H for each outfall discharging process wastewater.
- Copy pages 3-14 of Form 3 if needed, or download from <a href="https://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting">https://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting</a>.
- These items require you to collect and report data on the pollutants discharged for each of your process water outfalls.



- Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part.
- The following general instructions apply to the entire item.

You may need to sample and test for pollutants that are not in your current permit.

#### **General Instructions**

#### Reporting

- All levels must be reported as concentration.
- Use the following abbreviations in the columns headed "Units": ppm parts per million; mg/l milligrams per liter; ppb - parts per billion; μg/l - micrograms per liter; lbs – pounds.
- If you measure only one daily value, complete only the "Maximum Daily Concentration" columns and insert "1" into the "Number of Analyses" column.
- You may be required to conduct additional analyses to further characterize your discharges.
- For composite samples, the daily value is the average concentration found in a composite sample taken over the operating hours of the facility during a 24-hour period.
- For grab samples, the daily value is the arithmetic or flow-weighted average concentration found in a series of at least four grab samples taken over the operating hours of the facility during a 24-hour period.
- You also must determine the average of all values within the last year and report the concentration under the "Long Term Average Values" columns and the total number of daily values under the "Number of Analyses" columns.
- All samples that are representative of your effluent and less than 4 ½ years old must be included when determining long term averages and maximum daily values.

#### Sampling

- The collection of samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater.
- You must follow any specific requirements contained in the applicable analytical methods for sample containers, sample preservation, holding times, the collection of duplicate samples, etc.
- You should sample at a time that is representative of your normal operation, with all processes which contribute wastewater in normal operation, and with your treatment system operating properly with no system upsets.
- You must collect samples during dry weather when the discharge is not influenced by storm water runoff.
- You must collect samples from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit, or at any site adequate for the collection of a representative sample.
- You must collect grab samples for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, the volatile organics fraction of the GC/MS, and *Escherichia coli* (E. coli).
- You must collect 24-hour composite samples for all other pollutants.
- If you have an impoundment or holding pond with a retention period of greater than 24 hours, you must take at least one grab sample.
- **Grab sample**: a representative, discrete portion of the sewage, industrial waste, other waste, surface water, or groundwater taken without regard to flow rate.
- **24-Hour Composite sample:** A sample made by collecting a minimum of 6 grab samples taken 4 hours apart and combined in proportion to the flow rate at the time each grab sample was collected. (Generally, grab samples should be collected at 8 am, 12 pm (noon), 4 pm, 8 pm, 12 am (midnight), and 4 am on weekdays (Monday Friday) unless local conditions indicate another more appropriate time for sample collection).

## Analysis

- You must use test methods promulgated in 40 CFR Part 136; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge.
- All analyses must be conducted with sufficiently sensitive methods.



• If you have two or more substantially identical outfalls, you may request permission to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. You must request permission before submitting your permit application.

## Intake Data

- Certain facilities may be eligible for net effluent limitations for one or more pollutants. If you withdraw water from a waterway and discharge it to the same stream, you may be eligible.
- If you believe you may be eligible for net effluent limitations for one or more pollutants and wish to demonstrate your eligibility, you must report the results of at least one analysis of your raw water for the pollutant(s).

#### Non-Detects

- If a pollutant is not detected in the sample, put a less-than sign (<) in the Maximum Daily Concentration column. For example, if the lab reports "<0.10 mg/L", for ammonia (as N), you would place "<" in the Concentration column and "0.10" in the "Reporting Level ML/MDL" column.
- Put the detection or reporting level in the last column.
- Do not calculate a mass.

#### **Reporting Levels**

- Provide the method detection limit (MDL), minimum level (ML), or other designated method endpoint reflecting the precision of the analytical method used.
- Because the endpoint of the method has also been reported along with the test results, the permit writer will be able to determine if the data are in the "non-detect" or "below quantitation" range.

#### 7.A

- All applicants must complete 7.A for all outfalls that contain process wastewater.
- The Director may be able to waive requirements for one or more pollutants. Waivers must be granted in writing prior to your submission of the application.
- Use composite samples for all pollutants except for pH and temperature.
- The Maximum Daily Value is the greatest concentration measured in any one sample for any day of the month.
- The Long Term Average Value is the average of all representative samples taken in the past year.
- The Maximum 30-Day Value is the greatest average of any 30 days within the past year.

#### 7.B

- All applicants must complete 7.B for all outfalls that contain process wastewater.
- If a pollutant is limited in an effluent limitations guideline, you must report quantitative data for that pollutant.
  - Pollutants may be limited directly, for example, 30 mg/L TSS.
  - Pollutants may be limited indirectly but expressly, such as use of TSS to control the discharge of iron and aluminum.
- For other pollutants, mark either "Believed Present" or "Believed Absent."
  - For pollutants that are believed present, you must provide quantitative data or explain their presence in your discharge.
  - Use composite samples for all pollutants in 7.B except *E. coli,* total residual chlorine, and oil and grease.

## 7.C - G

- Table 1 lists the 34 primary industry categories in the left-hand column.
- These industries are <u>required</u> to test for Metals, Cyanide, and Total Phenols (7.C).
- These industries may also be <u>required</u> to test for other GC/MS fractions as indicated by an "X" in Table 1.
- If you a required to test for a pollutant, mark "Testing Required." You <u>must</u> report at least one analysis result for that pollutant.



- If you are not required to test for a pollutant, mark either "Believed Present" or "Believed Absent."
- If you mark "Believed Present", you <u>must submit results of at least one analysis</u> unless you qualify for a small business exemption.

# 7.H

- Refer to the list on page 14 of Form 3.
- If your facility manufactures or uses any of the chemicals in the list on page 14, mark "Testing Required."
- If your facility does not manufacture or use any of the chemicals in the list on page 14, mark either "Believed Present" or "Believed Absent" based on your knowledge of the facility and its effluent.
- If you marked "Testing Required" or "Believed Present", you must have a screening analysis for dioxin performed.

# Small Business Exemption

If you are a "small business," you are exempt from the reporting requirements for the organic toxic pollutants listed in Part V-C. There are two ways in which you can qualify as a "small business":

- i. If your facility is a coal mine, and if your probable total annual production is less than 100,000 tons per year, you may submit past production data or estimated future production (such as a schedule of estimated total production under 30 CFR 795.14(c)) instead of conducting analyses for the organic toxic pollutants.
- ii. If your facility is not a coal mine, and if your gross total annual sales for the most recent three years average less than \$100,000 per year (in second quarter 1980 dollars), you may submit sales data for those years instead of conducting analyses for the organic toxic pollutants.

| 40 CFR         | · · · · · · · · · · · · · · · · · · ·                            | Production         |                       | GC/I              | MS Fract      | tions                     |                    |
|----------------|--|--------------------|-----------------------|-------------------|---------------|---------------------------|--------------------|
| Part<br>Number | Industry Category  | Based<br>Guideline | Metals,<br>etc. (7.C) | Volatile<br>(7.D) | Acid<br>(7.E) | Base/<br>Neutral<br>(7.F) | Pesticide<br>(7.G) |
| 456            | Adhesives and sealants   |                    | Х                     | Х                 | Х             | Х                         | —                  |
| 467            | Aluminum forming   | Yes                | Х                     | Х                 | Х             | Х                         | —                  |
| 444            | Auto and other laundries   |                    | Х                     | Х                 | Х             | Х                         | Х                  |
| 461            | Battery manufacturing  | Yes                | Х                     | Х                 |               | Х                         |                    |
| 465            | Coil coating   |                    | Х                     | Х                 | Х             | Х                         |                    |
| 468            | Copper forming   |                    | Х                     | Х                 | Х             | Х                         |                    |
| 469            | Electrical and electronic components                             |                    | Х                     | Х                 | Х             | Х                         | Х                  |
| 413            | Electroplating   |                    | Х                     | Х                 | Х             | Х                         |                    |
| 457            | Explosives manufacturing   |                    | Х                     |                   | Х             | Х                         |                    |
| 433            | Metal finishing  |                    | Х                     | Х                 | Х             | Х                         |                    |
| 464            | Metal molding and casting  | Yes                | Х                     | Х                 | Х             | Х                         | _                  |
| 454            | Gum and wood chemical manufacturing<br>(Except subparts D and F) |                    | х                     | х                 | х             |                           |                    |
|                | Subpart D - tall oil rosin                                       |                    | Х                     | Х                 | Х             | Х                         |                    |
|                | Subpart F - rosin-based derivatives                              |                    | Х                     | Х                 | Х             | Х                         |                    |
| 415            | Inorganic chemicals manufacturing                                |                    | Х                     | Х                 | Х             | Х                         |                    |
| 420            | Iron and steel manufacturing                                     | Yes                | Х                     | Х                 | Х             | Х                         |                    |
| 425            | Leather tanning and finishing                                    | Yes                | Х                     | Х                 | Х             | Х                         |                    |

# **TABLE 1: Effluent Limitation Guidelines Industries and Required Testing** (All industries in this table are subject to an effluent limitation guideline)



| 40 CFR         |  | Production         |                       | GC/               | MS Frac       | tions                     |                    |
|----------------|--|--------------------|-----------------------|-------------------|---------------|---------------------------|--------------------|
| Part<br>Number | Industry Category                                | Based<br>Guideline | Metals,<br>etc. (7.C) | Volatile<br>(7.D) | Acid<br>(7.E) | Base/<br>Neutral<br>(7.F) | Pesticide<br>(7.G) |
| 471            | Nonferrous metals forming                        |                    | Х                     | Х                 | Х             | Х                         | Х                  |
| 440            | Ore mining and dressing                          |                    | Х                     |                   | Х             | —                         |                    |
| 414            | Organic chemicals, plastics and synthetic fibers |                    | х                     | х                 | х             | х                         | х                  |
| 447            | Paint formulating                                |                    | Х                     | Х                 | Х             | Х                         |                    |
| 446            | Ink formulating                                  |                    | Х                     | Х                 | Х             | Х                         |                    |
| 455            | Pesticide chemicals                              | Yes                | Х                     | Х                 | Х             | Х                         | Х                  |
| 419            | Petroleum refining                               |                    | Х                     | Х                 | —             |                           |                    |
| 439            | Pharmaceutical preparations                      |                    | Х                     | Х                 | Х             | Х                         |                    |
| 459            | Photographic equipment and supplies              |                    | Х                     | Х                 | Х             | Х                         |                    |
| 463            | Plastics molding and forming                     |                    | Х                     | Х                 | _             |                           |                    |
| 448            | Printing and publishing                          |                    | Х                     | Х                 | Х             | Х                         | Х                  |
| 430            | Pulp, paper and paperboard                       |                    | Х                     |                   |               |                           |                    |
| 428            | Rubber processing                                |                    | Х                     | Х                 | Х             | Х                         |                    |
| 417            | Soap and detergent manufacturing                 |                    | Х                     | Х                 | Х             | Х                         |                    |
| 423            | Steam electric power plants                      | Yes                | Х                     | Х                 | Х             |                           |                    |
| 410            | Textile mills (except Subpart C)                 |                    | Х                     | Х                 | Х             | Х                         |                    |
| 429            | Timber products processing                       |                    | Х                     | Х                 | Х             | 0                         | Х                  |
|                | Subpart A  |                    | Х                     | 0                 | Х             | 0                         | 0                  |
|                | Subparts B, C, D, R                              |                    | Х                     | 0                 | Х             | 0                         | 0                  |
|                | Subpart E  |                    | Х                     | Х                 | Х             | 0                         | Х                  |
|                | Subparts F, G, H, I, K                           |                    | Х                     | Х                 | Х             | 0                         | 0                  |
|                | Subparts L, M, N, O, P                           |                    | Х                     | Х                 | Х             | 0                         | 0                  |
|                | Subparts J, U                                    |                    | Х                     | Х                 | Х             | Х                         | 0                  |
|                | Subparts Q, S, T                                 |                    | Х                     | Х                 | Х             | 0                         | Х                  |
| X = Testing    | g required —= Testing not requ                   | iired              | O = Tes               | sting requir      | ed only       | if believed               | present            |



#### **TABLE 2 - HAZARDOUS SUBSTANCES**

- 1. Acetaldehyde
- 2. Allyl alcohol
- 3. Allyl chloride
- 4. Amyl acetate
- 5. Aniline
- 6. Asbestos
- 7. Benzonitrile
- 8. Benzoyl chloride
- 9. Butylacetate
- 10. Butylamine
- 11. Captan
- 12. Carbaryl
- 13. Carbofuran
- 14. Carbon disulfide
- 15. Chlorpyrifos
- 16. Coumaphos
- 17. Cresol
- 18. Crotonaldehyde
- 19. Cyclohexane
- 20. 2,4-D acid (2,4-Dichlorophenoxyacetic acid)
- 21. Diazanon
- 22. Dicamba
- 23. Dichlobenil
- 24. Dichlone
- 25. 2,2-Dichloropropionic acid
- 26. Dichlorvos
- 27. Diethylamine
- 28. Dimethylamine
- 29. Dinitrobenzene
- 30. Diquat
- 31. Disulfoton
- 32. Diuron
- 33. Epichlorohydrin
- 34. Ethion
- 35. Ethylenediamine
- 36. Ethylene dibromide
- 37. Formaldehyde
- 38. Furfural
- 39. Guthion
- 40. Isoprene
- 41. Isopropanolamine dodecylbenzenesulfonate

- 42. Kelthane
- 43. Kepone
- 44. Malathion
- 45. Mercaptodimethur
- 46. Methoxychlor
- 47. Methyl mercaptan
- 48. Methyl methacrylate
- 49. Methyl parathion
- 50. Mevinphos
- 51. Mexacarbate
- 52. Monoethylamine
- 53. Monomethylamine
- 54. Naled
- 55. Napthenic acid
- 56. Nitrotoluene
- 57. Parathion
- 58. Phenolsulfate
- 59. Phosgene
- 60. Propargite
- 61. Propylene oxide
- 62. Pyrethrins
- 63. Quinoline
- 64. Resorcinol
- 65. Strontium
- 66. Strychnine
- 67. Styrene
- 68. 2,4,5-T acid (2,4,5-Trichlorophenoxyacetic acid)
- 69. 2,4,5-TP acid (2,4,5-Trichlorophenoxy propanoic acid)
- 70. TDE (Tetrachlorodiphenyl ethane)
- 71. Trichlorofan
- 72. Triethanolamine dodecylbenzenesulfonate
- 73. Triethylamine
- 74. Trimethylamine
- 75. Uranium
- 76. Vanadium
- 77. Vinyl acetate
- 78. Xylene
- 79. Xylenol
- 80. Zirconium