

POSTMARKED

JUN 29 2018

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Emerald Kalama Chemical, LLC
1296 Third Street NW
Kalama, WA 98625-9799
360-673-2550

Ecology W2R-Ind

Ecology W2R-Ind

CERTIFIED MAIL

June 29, 2018

Mr. Greg Gould
Washington Department of Ecology
Industrial Section
Waste 2 Resources Program
PO Box 47600
Olympia, WA 98504-7706

INDUSTRIAL SECTION

Init. _____ Date _____

In compliance NAR

Action pending / taken

Parameter(s) / Comments _____

Docket # _____

Follow up by: (circle)
phone letter nov order penalty

Facility:	Emerald	
Year:	2018	Left <input checked="" type="checkbox"/> Right <input checked="" type="checkbox"/>
Air	Corr	
Water	Reports	
NPDES	Permit	<input checked="" type="checkbox"/>
WET-TOX	Inf	
DWRCRA	Eng	
Cleanup	Sub	
SW		
HWP2		

RE: Request for Additional Information Regarding Emerald Kalama Chemical, LLC's Permit Renewal Application – NPDES Permit No. WA0000281

Dear Mr. Gould:

This letter is in response to the request for additional information regarding our NPDES permit application you originally sent on January 17, 2018.

Item 6) in your letter requests wastewater treatment plant flow information from the past three years. The requested information is below and based off of data from January 1, 2015 to December 31, 2017.

- a) Average BIOX Effluent: 0.226 MGD
- b) Average Groundwater Remediation Flow: 0.083 MGD
- c) Average Un-contaminated Stormwater Flow: 0.024 MGD
- d) Average Process Wastewater Flow: 0.119 MGD
- e) Average Metal-Bearing Stream Flow:
 - Total Chromium: Not likely present in process streams
 - Total Copper: 0.010 MGD
 - Total Cyanide: Not likely present in process streams
 - Total Lead: Not likely present in process streams
 - Total Nickel: 0.015 MGD
 - Total Zinc: 0.010 MGD

Included in this letter are an updated NPDES Application Form 1, Forms 2C, Form 2C Supplemental, and Form 2F. A footnote document has been included to provide additional information on sample collection location, date, and type of sample. Additionally, we have included updated production data and wastewater plant flow diagrams and maps.

As per your request, an electronic copy of discharge monitoring report (DMR) data will be e-mailed to you separately.

If you have any questions or comments regarding this report or any other matters, please feel free to contact me at 360-673-0305.

Sincerely,

A handwritten signature in black ink, appearing to be 'POyer', with a long horizontal line extending to the right.

Phil Oyer
Environmental Manager

cc: Records Library

Disclaimer

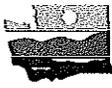
This is an updated WORD document that allows you to type your information directly into the form, print it, and save the completed form.

This form is not password protected. Use F11 to navigate through fields.

Instructions:

1. Type in your information
2. Save file electronically
3. Print the completed form
4. Sign and date the printed copy
5. Mail it and an electronic copy to the directed Ecology contact.





DEPARTMENT OF
ECOLOGY
State of Washington

United States
Environmental Protection
Agency

Office of
Enforcement
Washington, D.C 20460

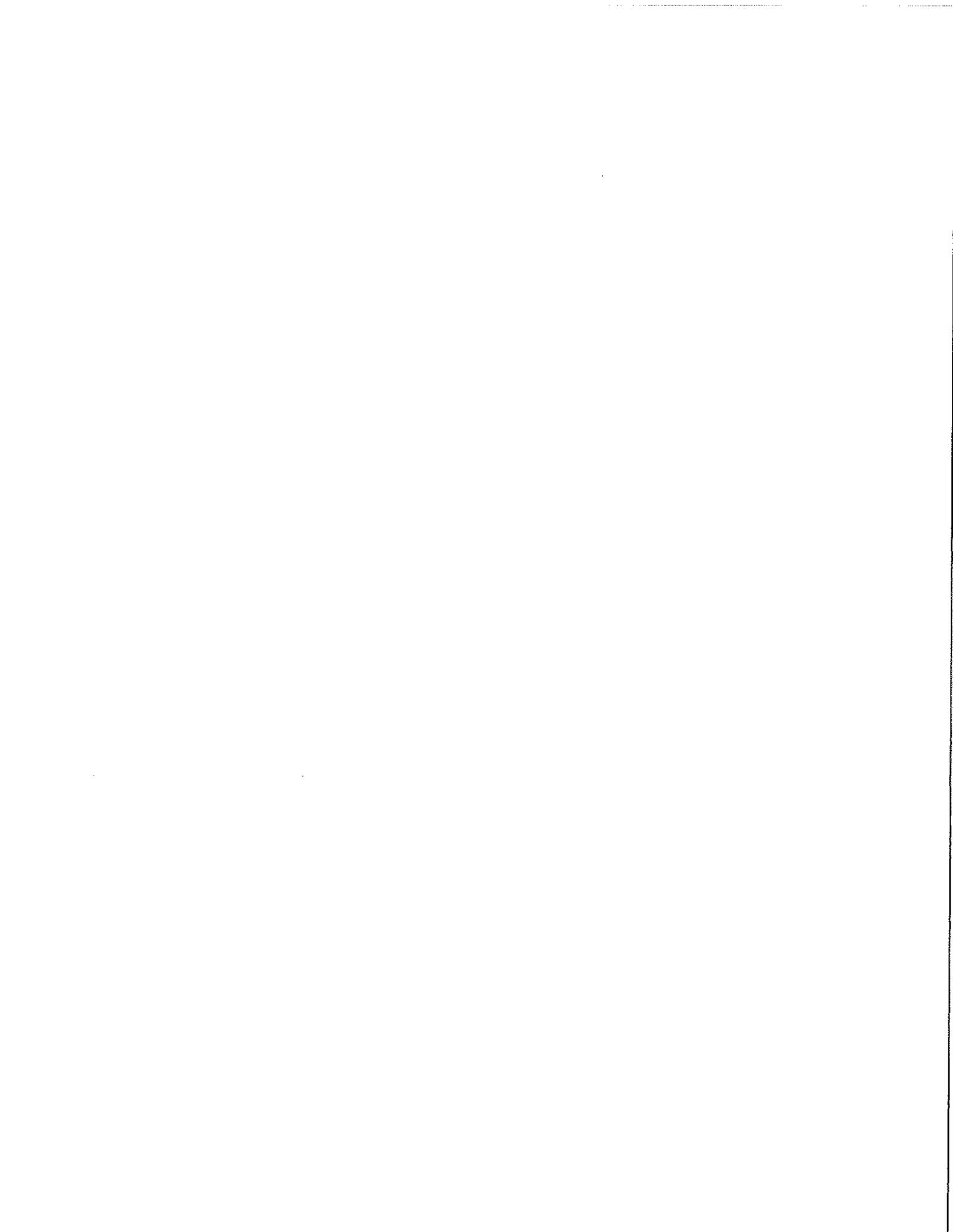
EPA Form 3510-1
Ecology Form #ECY 070-429
Ecology Revision 04/2015

Permits Division

Application Form 1 – General Information

Consolidated Permits Program

This form must be completed by all persons applying for a permit under EPA's Consolidated Permits Program. See the general instructions to Form 1 to determine which other application forms you will need.



DESCRIPTION OF CONSOLIDATED PERMIT APPLICATION FORMS	FORM 1 PACKAGE TABLE OF CONTENTS
<p>The Consolidated Permit Application Forms are:</p> <p>Form 1 - General Information (<i>Included in this part</i>);</p> <p>Form 2 - Discharges to Surface Water (<i>NPDES Permits</i>):</p> <p>2A. Publicly Owned Treatment Works,</p> <p>2B. Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities,</p> <p>2C. Existing Manufacturing, Commercial, Mining, and Silvicultural Operations,</p> <p>2D. New Manufacturing, Commercial, Mining, and Silvicultural Operations,</p> <p>2F. Application for Permit to Discharge Storm Water Associated with Industrial Activity;</p> <p>Form 3 - Hazardous Waste Application Form</p> <p>Form 4 - Underground Injection of Fluids.</p>	<p>Section A. General Instructions</p> <p>Section B. Instructions for Form 1</p> <p>Section C. Activities Which do Not Require Permits</p> <p>Section D. Glossary</p> <p>Form 1</p> <p>If you are submitting this form to the Washington State Department of Ecology, please submit it electronically (email or disk) in addition to the signed hard copy.</p>

SECTION A - GENERAL INSTRUCTIONS

Who Must Apply

With the exceptions described in Section C of these instructions, Federal laws prohibit you from conducting any of the following activities without a permit.

NPDES (National Pollutant Discharge Elimination System Under the Clean Water Act, 33 U.S.C. 1251). Discharge of pollutants into the waters of the United States.

RCRA (Resource Conservation and Recovery Act, 42 U.S.C. 6901). Treatment, storage, or disposal of hazardous wastes.

UIC (Underground Injection Control Under the Safe Drinking Water Act, 42 U.S.C. 300f). Injection of fluids underground by gravity flow or pumping.

PSD (Prevention of Significant Deterioration Under the Clean Air Act, 72 U.S.C. 7401). Emission of an air pollutant by a new or modified facility in or near an area which has attained the National Ambient Air Quality Standards for that pollutant.

Each of the above permit programs is operated in any particular State by either the United States Environmental Protection Agency (EPA) or by an approved State agency. You must use this application form to apply for a permit for those programs administered by EPA. For those programs administered by approved States, contact the State environmental agency for the proper forms.

If you have any questions about whether you need a permit under any of the above programs, or if you need information as to whether a particular program is administered by EPA or a State agency, or if you need to obtain application forms, contact your EPA Regional office (*see address opposite column*).

Upon your request, and based upon information supplied by you, Ecology will determine whether you are required to obtain a permit for a particular facility. Be sure to contact Ecology if you have a question, because Federal and State laws provide that you may be heavily penalized if you do not apply for a permit when a permit is required.

Form 1 of the EPA consolidated application forms collects general information applying to all programs. You must fill out Form 1 regardless of which permit you are applying for. In addition, you must fill out one of the supplementary forms (Forms 2 - 5) for each permit needed under each of the above programs. Item II of Form 1 will guide you to the appropriate supplementary forms.

You should note that there are certain exclusions to the permit requirements listed above. The exclusions are described in detail in Section C of these instructions. If your activities are excluded from permit requirements then you do not need to complete and return any forms.

NOTE: Certain activities not listed above also are subject to EPA administered environmental permit requirements. These include permits for ocean dumping, dredged or fill material discharging, and certain types of air emissions. Contact your EPA Regional office for further information.

EPA REGION 10 (Federal and Tribal Facilities)

Permit Contact (M/S 521),
 U.S. Environmental Protection Agency
 1200 6th Avenue, Seattle, WA 98101
 (206) 442-7176
 FTS 399-7176.
 Alaska, Idaho, Oregon, and Washington.

Where to File

The application forms should be mailed to the appropriate Ecology Regional Office. See:
<http://www.ecy.wa.gov/directory.html>

When to File

Because of statutory requirements, the deadlines for filing applications vary according to the type of facility you operate, the type of permit you need and if your current permit specifies reapplication dates. The minimum deadlines are provided in Table 1.

Table 1. Filing Dates for Permits¹

FORM (permit)	WHEN TO FILE
2A(NPDES)	180 days before your present NPDES permit expires.
2B(NPDES)	180 days before your present NPDES permit expires, or 180 days prior to start-up if you are a new facility.
2C(NPDES)	180 days before your present NPDES permit expires.
2D(NPDES)	180 days prior to startup.
2F (NPDES)	180 days prior to startup.
3(Hazardous Waste)	Existing facility: Six months following publication of regulations listing hazardous wastes. New facility: 180 days before commencing physical construction.
(UIC)	A reasonable time prior to construction for new wells; as directed by the Director for existing wells

¹ Please note that some of these forms are not yet available for use and are listed as "Reserved" at the beginning of these instructions. Contact your EPA Regional office for information on current application requirements and forms.

²Ecology recommends new facilities submit application at least one year before commencing operation. Application to renew an existing permit is usually required one year before expiration.

Federal regulations provide that you may not begin to construct a new source in the NPDES program, a new hazardous waste management facility, a new injection well, or a facility covered by the PSD program before the issuance of a permit under the applicable program. Please note that if you are required to obtain a permit before beginning construction, as described above, you may need to submit your permit application well in advance of an applicable deadline listed in Table 2.

Fees

Ecology charges a fee for applications for new individual wastewater discharge permits.

Availability of Information to the Public

Information contained in these application forms will, upon request, be made available to the public for inspection and copying. However, you may request confidential treatment for certain information which you submit on certain supplementary forms. The specific instructions for each supplementary form state what information on the form, if any, may be claimed as confidential and what procedures govern the claim. No information on Forms 1 and 2A through 2D may be claimed as confidential.

Completion of Forms

Unless otherwise specified in instructions to the forms, each item in each form must be answered. To indicate that each item has been considered, enter "NA," for not applicable, if a particular item does not fit the circumstances or characteristics of your facility or activity.

If you have previously submitted information to EPA or to an approved state agency which answers a question, you may either repeat the information in the space provided or attach a copy of the previous submission. Some items in the form require narrative explanation. If more space is necessary to answer a question, attach a separate sheet entitled "Additional Information."

Financial Assistance for Pollution Control

There are a number of direct loans, loan guarantees, and grants available to firms and communities for pollution control expenditures. These are provided by the Small Business Administration, the Economic Development Administration, the Farmers Home Administration, and the Department of Housing and Urban Development. EPA Region 10 office has an economic assistance coordinator who can provide you with additional information. EPA's construction grants program under Title II of the Clean Water Act is an additional source of assistance to publicly owned treatment works. Contact your EPA Region 10 office for details.

SECTION B - FORM 1 LINE-BY-LINE INSTRUCTIONS

This form must be completed by all applicants.

Item I

Space is provided at the upper right hand corner of Form 1 for insertion of your Identification Number. If you have an existing wastewater discharge permit, enter the permit number here. If your facility does not currently have a wastewater discharge permit, leave this item blank.

Item II

Answer each question to determine which supplementary forms you need to fill out. Be sure to check the glossary in Section D of these instructions for the legal definitions of the **bold faced words**. Check Section C of these instructions to determine whether your activity is excluded from permit requirements.

If you answer "no" to every question, then you do not need a permit, and you do not need to complete and return any of these forms.

If you answer "yes" to any question, then you must complete and file the supplementary form by the deadline listed in Table 1 along with this form. (*The applicable form number follows each question and is enclosed in parentheses.*) You need not submit a supplementary form if you already have a permit under the appropriate federal program, unless your permit is due to expire and you wish to renew your permit.

Questions (I) and (J) of Item II refer to major new or modified sources subject to Prevention of Significant Deterioration (PSD) requirements under the Clean Air Act. For the purpose of the PSD program, major sources are defined as: (A) Sources listed in Table 3 which have the potential to emit 100 tons or more per year emissions; and (B) All other sources with the potential to emit 250 tons or more per year. See Section C of these instructions for discussion of exclusions of certain modified sources.

Table 2. 28 Industrial Categories Listed in Section 169(1) of the Clean Air Act of 1977

Fossil fuel-fired steam generators of more than 250 million BTU per hour heat input;
Coal cleaning plants (*with thermal dryers*);
Kraft pulp mills;
Portland cement plants;
Primary zinc smelters;
Iron and steel mill plants;
Primary aluminum ore reduction plants;
Primary copper smelters;
Municipal incinerators capable of charging more than 250 tons of refuse per day;
Hydrofluoric acid plants;
Nitric acid plants;
Sulfuric acid plants;
Petroleum refineries;
Lime plants;
Phosphate rock processing plants;
Coke oven batteries;
Sulfur recovery plants;
Carbon black plants (*furnace process*);
Primary lead smelters;
Fuel conversion plants;
Sintering plants;
Secondary metal production plants;
Chemical process plants;
Fossil fuel boilers (*or combination thereof*) totaling more than 250 million BTU per hour heat input.
Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

Taconite ore processing plants;
Glass fiber processing plants; and
Charcoal production plants.

Item III

Enter the facility's official or legal name. Do not use a colloquial name.

Item IV

Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by reviewing offices if necessary.

Item V

Give the complete mailing address of the office where correspondence should be sent. This office is not the address used to designate the location of the facility.

Item VI

Give the address or location of the facility identified in Item III of this form. If the facility lacks a street name or route number, give the most accurate alternative geographic information (e.g. section number or quarter section number from the county records or at the intersection of Rts 425 and 22.)

Give the latitude and longitude using NAD83 (GCS North America 1983) or WGS84 datum reference. Use degree decimal format to 4 decimal places (e.g. N47.0123)

Item VII

List, in descending order of significance, the four 4-digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the discharge, air emissions, or hazardous wastes.

SIC code numbers are descriptions which may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, which is available from the Government Printing Office, Washington, D.C. Use the current edition of the manual. See the website <http://www.naics.com/search.htm> for more information.

The Department of Licensing issues you a **UBI number** (Unified Business Identifier) with your business license. The Washington State Departments of Revenue, Licensing, Employment Security, Labor and Industry, and the Office of the Secretary of State use this number to identify your business. You can identify your UBI number at the following Department of Revenue website: <http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/>

Item VIII-A

Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity which operates the facility described in this application. This may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. Do not use a colloquial name.

Item VIII-B

Indicate whether the entity which operates the facility also owns it by marking the appropriate box.

SECTION B - FORM 1 LINE-BY-LINE INSTRUCTIONS (continued)

Item VIII-C

Enter the appropriate letter to indicate the legal status of the operator of the facility. Indicate "public" for a facility solely owned by local government(s) such as a city, town, county, parish, etc.

Items VIII-D-H

Enter the telephone number and address of the operator identified in Item VIII-A.

Item IX

Indicate whether the facility is located on Indian Lands.

Item X

Give the number of each presently effective permit issued to the facility for each program or, if you have previously filed an application but have not yet received a permit, give the number of the application, if any. Fill in the unshaded area only. If you have more than one currently effective permit for your facility under a particular permit program, you may list additional permit numbers on a separate sheet of paper. List any relevant environmental Federal (*e.g., permits under the Ocean Dumping Act, Section 404 of the Clean Water Act or the Surface Mining control and Reclamation Act*), State (*e.g., State permits for new air emission sources in nonattainment areas under Part D of the Clean Air Act or State permits under Section 404 of the Clean Water Act*), or local permits or applications under "other."

Item XI

Provide a topographic map or maps of the area extending at least one mile beyond the property boundaries of the facility, which clearly show the following:

- The legal boundaries of the facility;
- The location and serial number of each of your existing and proposed intake and discharge structures;
- All hazardous waste management facilities;
- Each well where you inject fluids underground; and
- All springs and surface water bodies in the area, plus all drinking water wells within 1/4 mile of the facility which are identified in the public record or otherwise known to you.

If an intake or discharge structure, hazardous waste disposal site, or injection well associated with the facility is located more than one mile from the plant, include it on the map, if possible. If not, attach additional sheets describing the location of the structure, disposal site, or well, and identify the U.S. Geological Survey (*or other*) map corresponding to the location.

On each map, include the map scale, a meridian arrow showing north, and latitude and longitude to 4 decimal places. On all maps of rivers, show the direction of the current, and in tidal waters, show the direction of the ebb and flow tides. Use a 7-1/2 minute series map published by the U.S. Geological Survey, which may be obtained through the U.S. Geological Survey Offices listed below. If a 7-1/2 minute series map has not been published for your facility site, then you may use a 15 minute series map from the U.S. Geological Survey. If neither a 7-1/2 nor 15 minute series map has been published for your facility site, use a plat map or other appropriate map, including all the requested information; in this case, briefly describe land uses in the map area (*e.g., residential, commercial*).

You may trace your map from a geological survey chart, or other map meeting the above specifications. If you do, your map should bear a note showing the number or title of the map or chart it was traced from. Include the names of nearby towns, water bodies, and other prominent points. An example of an acceptable location map is shown in Figure 1-1 of these instructions. (*NOTE: Figure 1-1 is provided for purposes of illustration only, and does not represent any actual facility.*)

USGS OFFICE

AREA SERVED

Eastern Mapping Center National Cartographic Information Center U.S.G.S. 536 National Center Reston, VA 22092 Phone No. (703) 860-6336	AL, CT., DE., D.C., FL, GA, IN, KY, ME, MD, MA, NH, NJ, NY, NC, SC, OH, PA, Puerto Rico, RI, TN, VT, VA, WV, and U.S. Virgin Islands.
Mid Continent Mapping Center National Cartographic Information Center U.S.G.S. 1400 Independence Road Rolla, MO. 65401 Phone No. (314) 341-0851	AR, IL, IA, KS, LA, MI, MN, MS, MO, ND, NE, OK, SD, and WI
Rocky Mountain Mapping Center National Cartographic Information Center U.S.G.S. Stop 504, Box 25046 Federal Center Denver, CO 80225 Phone No. (303) 234-2326	AK, CO, MT, NM, TX, UT, and WY
Western Mapping Center National Cartographic Information Center U.S.G.S. 345 Middlefield Road Menlo Park, CA 94025 Phone No. (415) 323-8111	AZ, CA, HI, ID, NV, OR, WA, American Samoa, Guam, and Trust Territories

Item XII

Briefly describe the nature of your business (*e.g., products produced or services provided*).

Item XIII

Federal statues authorize severe penalties for submitting false information on this application form.

18 U.S.C. Section 1001 provides that "Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both."

Section 309(c)(2) of the Clean Water Act and Section 113(c)(2) of the Clean Air Act each provide that "Any person knowingly makes any false statement, representation, or certification in any application, . . . shall upon conviction, be punished by a fine of no more than \$10,000 or by imprisonment for not more than six months, or both."

In addition, Section 3008(d)(3) of the Resource Conservation and Recovery Act provides for a fine up to \$25,000 per day or imprisonment up to one year, or both, for a first conviction for making a false statement in any application under the Act, and for double these penalties upon subsequent convictions.

FEDERAL REGULATIONS REQUIRE THIS APPLICATION TO BE SIGNED AS FOLLOWS:

- A. For a corporation, by a principal executive officer of at least the level of vice president. However, if the only activity in Item II which is marked "yes" is Question G, the officer may authorize a person having responsibility for the overall operations of the well or well field to sign the certification. In that case, the authorization must be written and submitted to the permitting authority;
- B. For partnership or sole proprietorship, by a general partner or the proprietor, respectively; or For a municipality, state, Federal, or other public facility, by either a principal executive officer or ranking elected official (e.g. mayor).
- C. For a municipality, state, Federal, or other public facility, by either a principal executive officer or ranking elected official.

SECTION C - ACTIVITIES WHICH DO NOT REQUIRE PERMITS

I. National Pollutant Discharge Elimination System Permits Under the Clean Water Act. You are not required to obtain a NPDES permit if your discharge is in one of the following categories, as provided by the Clean Water Act (CWA) and by the NPDES regulations (40 CFR Parts 122-125). However, under Section 510 of CWA a discharge exempt from the federal NPDES requirements may still be regulated by a state authority; contact Ecology to determine whether you need a state permit.

A. DREDGED OR FILL MATERIAL. Discharges of dredged or fill material into waters of the United States do not need NPDES permits if the dredging or filling is authorized by a permit issued by the U.S. Army Corps of Engineers or an EPA approved state under Section 404 of CWA.

B. DISCHARGES INTO PUBLICLY OWNED TREATMENT WORKS (POTW). The introduction of sewage, industrial wastes, or other pollutants into a POTW does not need an NPDES permit but may require a state permit. You must comply with all applicable pretreatment standards promulgated under Section 307(b) of CWA, which may be included in the permit issued to the POTW. If you have a plan or an agreement to switch to a POTW in the future, this does not relieve you of the obligation to apply for and receive an NPDES permit until you have stopped discharging pollutants into waters of the United States.

(NOTE: Dischargers into privately owned treatment works do not have to apply for or obtain NPDES permits except as otherwise required by the EPA Regional Administrator but may require a state discharge permit. The owner or operator of the treatment works itself, however, must apply for a permit and identify all users in its application. Users so identified will receive public notice of actions taken on the permit for the treatment works.)

C. DISCHARGES FROM AGRICULTURAL AND SILVICULTURAL ACTIVITIES. Most discharges from agricultural and silvicultural activities to waters of the United States do not require NPDES permits. These include runoff from orchards, cultivated crops, pastures, range lands, and forest lands. However, the discharges listed below do require NPDES permits. Definitions of the terms listed below are contained in the Glossary section of these instructions.

1. Discharges from Concentrated Animal Feeding Operations. (See Glossary for definitions of "animal feeding operations" and "concentrated animal feeding operations." Only the latter require permits.)

2. Discharges from Concentrated Aquatic Animal Production Facilities. (See Glossary for size cutoffs.)

II. Hazardous Waste Permits Under the Resource Conservation and Recovery Act. You may be excluded from the requirement to obtain a permit under this program if you fall into one of the following categories:

Generators who accumulate their own hazardous waste on-site for less than 90 days as provided in 40 CFR 262.34;

Farmers who dispose of hazardous waste pesticide from their own use as provided in 40 CFR 262.51;

Certain persons treating, storing, or disposing of small quantities of hazardous waste as provided in 40 CFR 261.4 or 261.5; and

Owners and operators of totally enclosed treatment facilities as defined in 40 CFR 20.10.

Check with your EPA or Ecology Regional office for details. Please note that even if you are excluded from permit requirements, you may be required by Federal regulations to handle your waste in a particular manner.

III. Underground Injection Control Permits Under the Safe Drinking Water Act. You are not required to obtain an NPDES permit under this program if you:

Inject into existing wells used to enhance recovery of oil and gas or to store hydrocarbons (*note, however, that these underground injections are regulated by Federal and state rules*); or

Inject into or above a stratum which contains, within 1/4 mile of the well bore, an underground source of drinking water (*unless your injection is the type identified in Item II-H, for which you do need a permit*). However, you must notify EPA of your injection and submit certain required information on forms supplied by the Agency, and your operation may be phased out if you are a generator of hazardous wastes or a hazardous waste management facility which uses wells or septic tanks to dispose of hazardous waste.

IV. Prevention of significant Deterioration Permits Under the Clean Air Act. The PSD program applies to newly constructed or modified facilities (*both of which are referred to as "new sources"*) which increase air emissions. The Clean Air Act Amendments of 1977 exclude small new sources of air emissions from the PSD review program. Any new source in an industrial category listed in Table 2 of these instructions whose potential to emit is less than 100 tons per year is not required to get a PSD permit. In addition, any new source in an industrial category not listed in Table 2 whose potential to emit is less than 250 tons per year is exempted from the PSD requirements.

3. Discharges associated with approved Aquaculture Projects.

4. Discharges from Silvicultural Point Sources. (See Glossary for the definition of "silvicultural point source.") Nonpoint source silvicultural activities are excluded from NPDES permit requirements. However, some of these activities, such as stream crossings for roads, may involve point source discharges of dredged or fill material which may require a Section 404 permit. See 33 CFR 209.120.

D. DISCHARGES IN COMPLIANCE WITH AN ON-SCENE COORDINATOR'S INSTRUCTIONS.

Modified sources which increase their net emissions (*the difference between the total emission increases and total emission decreases at the source*) less than the significant amount set forth in EPA regulations are also exempt from PSD requirements. Contact your EPA Regional office for further information.

SECTION D - GLOSSARY

NOTE: This Glossary includes terms used in the instructions and in Forms 1, 2B, 2C, and 3. Additional terms will be included in the future when other forms are developed to reflect the requirements of other parts of the Consolidated Permits Program. If you have any questions concerning the meaning of any of these terms, please contact your EPA Regional office.

ALiquot means a sample of specified volume used to make up a total composite sample.

ANIMAL FEEDING OPERATION means a lot or facility (*other than an aquatic animal production facility*) where the following conditions are met:

A. Animals (*other than aquatic animals*) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period; and

B. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation if the adjoin each other or if they use a common area or system for the disposal of wastes.

ANIMAL UNIT means a unit of measurement for any animal feeding operation calculated by adding the following numbers: The number of slaughter and feeder cattle multiplied by 1.0; Plus the number of mature dairy cattle multiplied by 1.4; Plus the number of swine weighing over 25 kilograms (*approximately 55 pounds*) multiplied by 0.4; Plus the number of sheep multiplied by 0.1; Plus the number of horses multiplied by 2.0.

APPLICATION means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in approved States, including any approved modifications or revisions. For RCRA, "application" also means "Application, Part B."

APPLICATION, PART A means that part of the Consolidated Permit Applications forms which a RCRA permit applicant must complete to qualify for interim status under Section 3005(e) of RCRA and for consideration for a permit. Part A consists of Form 1 (*General Information*) and Form 3 (*Hazardous Waste Application Form*).

APPLICATION, PART B means that part of the application which a RCRA permit applicant must complete to be issued a permit. (NOTE: EPA is not developing a specific form for Part B of the permit application, but an instruction booklet explaining what information must be supplied is available from the EPA Regional office.)

growth attributable to the discharge of pollutants and be harvested within a defined geographic area.

AQUIFER means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

AREA OF REVIEW means the area surrounding an injection well which is described according to the criteria set forth in 40 CFR Section 146.06.

AREA PERMIT means a UIC permit applicable to all or certain wells within a geographic area, rather than to a specified well, under 40 CFR Section 122.37.

ATTAINMENT AREA means, for any air pollutant, an area which has been designated under Section 107 of the Clean Air Act as having ambient air quality levels better than any national primary or secondary ambient air quality standard for that pollutant. Standards have been set for sulfur oxides, particulate matter, nitrogen dioxide, carbon monoxide, ozone, lead, and hydrocarbons. For purposes of the Glossary, "attainment area" also refers to "unclassifiable area," which means for any pollutants, an area designated under Section 107 as unclassifiable with respect to that pollutant due to insufficient information.

BEST MANAGEMENT PRACTICES (BMP) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMP's include treatment requirements, operation procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BIOLOGICAL MONITORING TEST means any test which includes the use of aquatic algal, invertebrate, or vertebrate species to measure acute or chronic toxicity, and any biological or chemical measure of bioaccumulation.

BYPASS means the intentional diversion of wastes from any portion of a treatment facility.

CONCENTRATED ANIMAL FEEDING OPERATION means an animal feeding operation which meets the criteria set forth in either (A) or (B) below or which the Director designates as such on a case-by-case basis:

A. More than the numbers of animals specified in any of the following categories are confined:

APPROVED PROGRAM or APPROVED STATE means a State program which has been approved or authorized by EPA under 40 CFR Part 123.

AQUACULTURE PROJECT means a defined managed water area which uses discharges of pollutants into that designated area for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals.

"Designated area" means the portions of waters of the United States within which the applicant plans to confine the cultivated species, using a method of plan or operation (*including, but not limited to, physical confinement*) which, on the basis of reliable scientific evidence, is expected to ensure the specific individual organisms comprising an aquaculture crop will enjoy increased

8. 30,000 laying hens or broilers (*if the facility has a liquid manure handling system*),

9. 5,000 ducks, or

10. 1,000 animal units; or

B. More than the following numbers and types of animals are confined:

1. 300 slaughter or feeder cattle

2. 200 mature dairy cattle (*whether milked or dry cows*),

3. 750 swine each weighing over 25 kilograms (*approximately 55 pounds*),

4. 150 horses

5. 3,000 sheep or lambs,

6. 16,500 turkeys,

7. 30,000 laying hens or broilers (*if the facility has continuous overflow watering*),

8. 9,000 laying hens or broilers (*if the facility has a liquid manure handling system*),

9. 1,500 ducks, or

10. 300 animal units; AND

Either one of the following conditions are met: Pollutants are discharged into waters of the United States through a manmade, ditch flushing system or other similar manmade device ("*manmade*" means *constructed by man and used for the purpose of transporting wastes*); or Pollutants are discharged directly into waters of the United States which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

Provided, however, that no animal feeding operation is a concentrated animal feeding operation as defined above if such animal feeding operation discharges only in the event of a 25 year, 24 hour storm event.

CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY means a hatchery, fish farm, or other facility which contains, grows or holds aquatic animals in either of the following categories, or which the Director designates as such on a case-by-case basis:

A. Cold water fish species or other cold water aquatic animals including, but not limited to, the Salmonidae family of fish (*e.g., trout and salmon*) in ponds, raceways or other similar structures which discharge at least 30 days per year but does not include:

1. 1,000 slaughter or feeder cattle,
2. 700 mature dairy cattle (*whether milked or dry cows*),
3. 2500 swine each weighing over 25 kilograms (*approximately 55 pounds*),
4. 500 horses,
5. 10,000 sheep or lambs,
6. 55,000 turkeys,
7. 100,000 laying hens or broilers (*if the facility has a continuous overflow watering*),

B. Warm water fish species or other warm water aquatic animals including, but not limited to, the Ameiuridae, Cetrachidae, and Cyprinidae families of fish (*e.g., respectively, catfish, sunfish, and minnows*) in ponds, raceways, or other similar structures which discharge at least 30 days per year, but does not include:

1. Closed ponds which discharge only during periods of excess runoff; or
2. Facilities which produce less than 45,454 harvest weight kilograms (*approximately 100,000 pounds*) of aquatic animals per year.

CONTACT COOLING WATER means water used to reduce temperature which comes into contact with a raw material, intermediate product, waste product other than heat, or finished product.

CONTAINER means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

CONTIGUOUS ZONE means the entire zone established by the United States under article 24 of the convention of the Territorial Sea and the Contiguous Zone.

COOLING WATER INTAKE STRUCTURE means the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the United States.

CWA means the Clean Water Act (*formerly referred to the Federal Water Pollution Control Act*) pub. L. 92-500, as amended by Pub. L. 95-217 and Pub. L. 95-576, 33 U.S.C. 1251 *et seq.*

DIKE means any embankment or ridge of either natural or manmade materials used to prevent the movement of liquids, sludges, solids, or other materials.

DIRECT DISCHARGE means the discharge of a pollutant as defined below.

DIRECTOR means the EPA Regional Administrator or the State Director as the context requires.

DISCHARGE (OF A POLLUTANT) means:

- A. Any addition of any pollutant or combination of pollutants to waters of the United States from any point source; or
- B. Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes discharges into waters of the United States from: Surface runoff which is collected or channeled by man; Discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to POTW's; and Discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This

SECTION D - GLOSSARY (continued)

EFFLUENT LIMITATION means any restriction imposed by the Director on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

EFFLUENT LIMITATION GUIDELINE means a regulation published by the Administrator under Section 304(b) of the Clean Water Act to adopt or revise effluent limitations.

ENVIRONMENTAL PROTECTION AGENCY (EPA) means the United States Environmental Protection Agency.

EPA IDENTIFICATION NUMBER means the number assigned by EPA to each generator, transporter, and facility.

EXEMPTED AQUIFER means an aquifer or its portion that meets the criteria in the definition of USDW, but which has been exempted according to the procedures in 40 CFR Section 122.35(b).

EXISTING SOURCE or **EXISTING DISCHARGER** (*in the NPDES program*) means any source which is not a new source or a new discharger

EXISTING INJECTION WELL means an injection well other than a new injection well.

FACILITY means any HWM facility, UIC underground injection well, NPDES point source, PSD stationary source, or any other facility or activity (*including land or appurtenances thereto*) that is subject to regulation under the RCRA, UIC, NPDES, or PSD programs.

FLUID means material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.

GENERATOR means any person by site, whose act or process produces hazardous waste identified or listed in 40 CFR Part 261.

GROUNDWATER means water below the land surface in a zone of saturation.

HAZARDOUS SUBSTANCE means any of the substances designated under 40 CFR Part 116 pursuant to Section 311 of CWA. (*NOTE: These substances are listed in Table 2c-4 of the instructions to Form 2C.*)

HAZARDOUS WASTE means a hazardous waste as defined in 40 CFR Section 261.3 published May 19, 1980.

HAZARDOUS WASTE MANAGEMENT FACILITY (HWM facility) means all contiguous land, structures, appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous wastes. A facility may consist of several treatment, storage, or disposal operational units (*for example, one or more landfills, surface impoundments, or combinations of them*).

IN OPERATION means a facility which is treating, storing, or disposing of hazardous waste.

INCINERATOR (*in the RCRA program*) means an enclosed device using controlled flame combustion, the primary purpose of which is to thermally break down hazardous waste. Examples of incinerators are rotary kiln, fluidized bed, and liquid injection incinerators.

INDIRECT DISCHARGER means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

INJECTION WELL means a well into which fluids are being injected.

INTERIM AUTHORIZATION means approval by EPA of a State hazardous waste program which has met the requirements of Section 3006(c) of RCRA and applicable requirements of 40 CFR Part 124, Subparts A, B, and F.

LANDFILL means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

LAND TREATMENT FACILITY (*in the RCRA program*) means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.

LISTED STATE means a State listed by the Administrator under Section 1422 of SDWA as needing a State UIC program.

MGD means millions of gallons per day.

MUNICIPALITY means a city, village, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA. The term includes an approved program.

NEW DISCHARGER means any building, structure, facility, or installation: (A) From which there is or may be a new or additional discharge of pollutants at a site at which on October 18, 1972, it had never discharged pollutants; (B) Which has never received a finally effective NPDES permit for discharges at the site; and (C) Which is not a "new source." This definition includes an indirect discharger which commences discharging into waters of the United States. It also includes any existing mobile point source, such as an offshore oil drilling rig, seafood processing vessel, or aggregate plant that begins discharging at a location for which it does not have an existing permit.

NEW HWM FACILITY means a Hazardous Waste Management facility which began operation or for which construction commenced after October 21, 1976.

NEW INJECTION WELL means a well which begins injection after a UIC program for the State in which the well is located is approved.

NEW SOURCE (*in the NPDES program*) means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

A. After promulgation of standards of performance under Section 306 of CWA which are applicable to such source; or

SECTION D - GLOSSARY (continued)

<p>B. After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.</p> <p>EXISTING INJECTION WELL means an injection well other than a new injection well.</p> <p>FACILITY means any HWM facility, UIC underground injection well, NPDES point source, PSD stationary source, or any other facility or activity (<i>including land or appurtenances thereto</i>) that is subject to regulation under the RCRA, UIC, NPDES, or PSD programs.</p> <p>FLUID means material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.</p> <p>GENERATOR means any person by site, whose act or process produces hazardous waste identified or listed in 40 CFR Part 261.</p> <p>GROUNDWATER means water below the land surface in a zone of saturation.</p> <p>HAZARDOUS SUBSTANCE means any of the substances designated under 40 CFR Part 116 pursuant to Section 311 of CWA. (<i>NOTE: These substances are listed in Table 2c-4 of the instructions to Form 2C</i>).</p> <p>HAZARDOUS WASTE means a hazardous waste as defined in 40 CFR Section 261.3 published May 19, 1980.</p> <p>HAZARDOUS WASTE MANAGEMENT FACILITY (<i>HWM facility</i>) means all contiguous land, structures, appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous wastes. A facility may consist of several treatment, storage, or disposal operational units (<i>for example, one or more landfills, surface impoundments, or combinations of them</i>).</p> <p>IN OPERATION means a facility which is treating, storing, or disposing of hazardous waste.</p> <p>INCINERATOR (<i>in the RCRA program</i>) means an enclosed device using controlled flame combustion, the primary purpose of which is to thermally break down hazardous waste. Examples of incinerators are rotary kiln, fluidized bed, and liquid injection incinerators.</p> <p>INDIRECT DISCHARGER means a non-domestic discharger introducing pollutants to a publicly owned treatment works.</p> <p>INJECTION WELL means a well into which fluids are being injected.</p> <p>INTERIM AUTHORIZATION means approval by EPA of a State hazardous waste program which has met the requirements of Section 3006(c) of RCRA and applicable requirements of 40 CFR Part 124, Subparts A, B, and F.</p> <p>LANDFILL means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.</p>	<p>LAND TREATMENT FACILITY (<i>in the RCRA program</i>) means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure.</p> <p>LISTED STATE means a State listed by the Administrator under Section 1422 of SDWA as needing a State UIC program.</p> <p>MGD means millions of gallons per day.</p> <p>MUNICIPALITY means a city, village, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of CWA.</p> <p>NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (<i>NPDES</i>) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA. The term includes an approved program.</p> <p>NEW DISCHARGER means any building, structure, facility, or installation: (A) From which there is or may be a new or additional discharge of pollutants at a site at which on October 18, 1972, it had never discharged pollutants; (B) Which has never received a finally effective NPDES permit for discharges at the site; and (C) Which is not a "new source." This definition includes an indirect discharger which commences discharging into waters of the United States. It also includes any existing mobile point source, such as an offshore oil drilling rig, seafood processing vessel, or aggregate plant that begins discharging at a location for which it does not have an existing permit.</p> <p>NEW HWM FACILITY means a Hazardous Waste Management facility which began operation or for which construction commenced after October 21, 1976.</p> <p>NEW INJECTION WELL means a well which begins injection after a UIC program for the State in which the well is located is approved.</p> <p>NEW SOURCE (<i>in the NPDES program</i>) means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:</p> <p>A/ After promulgation of standards of performance under Section 306 of CWA which are applicable to such source; or</p> <p>B/ After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.</p> <p>NON-CONTACT COOLING WATER means water used to reduce temperature which does not come into direct contact with any raw material, intermediate product, waste product (<i>other than heat</i>), or finished product.</p> <p>OFF-SITE means any site which is not "on-site."</p>
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SECTION D - GLOSSARY (continued)

ON-SITE means on the same or geographically contiguous property which may be divided by public or private right(s)-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right(s)-of-way. Non-contiguous properties owned by the same person, but connected by a right-of-way which the person controls and to which the public does not have access, is also considered on-site property

OPEN BURNING means the combustion of any material without the following characteristics:

- A. Control of combustion air to maintain adequate temperature for efficient combustion;
- B. Containment of the combustion-reaction in an enclosed device to provide sufficient residence the time and mixing for complete combustion; and
- C. Control of emission of the gaseous combustion products.

(See also "incinerator" and "thermal treatment")

OPERATOR means the person responsible for the overall operation of a facility.

OUTFALL means a point source.

OWNER means the person who owns a facility or part of a facility.

PERMIT means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR Parts 122, 123, and 124.

PHYSICAL CONSTRUCTION (*in the RCRA program*) means excavation, movement of earth, erection of forms or structures, or similar activity to prepare a HWM facility to accept hazardous waste.

PILE means any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage.

POLLUTANT means dredge spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewer sludge, munitions, chemical waste, biological materials, radioactive materials (*except those regulated under the Atomic Energy Act of 1954, as amended [42 U.S.C. Section 2011 et seq.]*), heat, wrecked or discarded equipment, rocks, sand, cellar dirt and industrial, municipal, and agriculture waste discharge into water. It does not mean:

Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

(NOTE: Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials. Examples of materials not covered include radium and accelerator produced isotopes. See *Train v. Colorado Public Interest Research Group, Inc.*, 426 U.S. 1 [1976].)

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) means the national permitting program under 40 CFR 52.21 to prevent emissions of certain pollutants regulated under the Clean Air Act from significantly deteriorating air quality in attainment areas.

PRIMARY INDUSTRY CATEGORY means any industry category listed in the NRDC Settlement Agreement (*Natural Resources Defense Council v. Train*, 8 ERC 2120 [D.D.C. 1976], modified 12 ERC 1833 [D.D.C. 1979]).

PRIVATELY OWNED TREATMENT WORKS means any device or system which is: (A) Used to treat waste from any facility whose operator is not the operator of the treatment works; and (B) Not a POTW.

PROCESS WASTEWATER means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

PUBLICLY OWNED TREATMENT WORKS or POTW means any device or system used in the treatment (*including recycling and reclamation*) of municipal sewage or industrial wastes of a liquid nature which is owned by a state or municipality. This definition includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

RENT means use of another's property in return for regular payment.

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (*Pub. L. 94-580, as amended by Pub. L. 95-609, 42 U.S.C. Section 6901 et seq.*).

ROCK CRUSHING AND GRAVEL WASHING FACILITIES are facilities which process crushed and broken stone, gravel, and riprap (*see 40 CFR Part 436, Subpart B, and the effluent limitations guidelines for these facilities*).

SDWA means the Safe Drinking Water Act (*Pub. L. 95-523, as amended by Pub. L. 95-1900, 42 U.S.C. Section 300ff et seq.*).

SECONDARY INDUSTRY CATEGORY means any industry category which is not a primary industry category.

SECTION D - GLOSSARY (continued)

SEWAGE FROM VESSELS means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated under Section 312 of CWA, except that with respect to commercial vessels on the Great Lakes this term includes graywater. For the purpose of this definition, "graywater" means galley, bath, and shower water.

SEWAGE SLUDGE means the solids, residues, and precipitate separated from or created in sewage by the unit processes of a POTW. "Sewage" as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff, that are discharged to or otherwise enter a publicly owned treatment works.

SILVICULTURAL POINT SOURCE means any discernable, confined, and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. This term does not include nonpoint source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff. However, some of these activities (such as stream crossing for roads) may involve point source discharges of dredged or fill material which may require a CWA Section 404 permit. "Log sorting and log storage facilities" are facilities whose discharges result from the holding of unprocessed wood, e.g., logs or roundwood with bark or after removal of bark in self-contained bodies of water (*mill ponds or log ponds*) or stored on land where water is applied intentionally on the logs (*wet decking*). (See 40 CFR Part 429, Subpart J, and the effluent limitations guidelines for these facilities).

STATE means any of the 50 States, the district of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands (except in the case of RCRA), and the Commonwealth of the Northern Mariana Islands (except in the case of CWA).

STATIONARY SOURCE (in the PSD program) means any building, structure, facility, or installation which emits or may emit any air pollutant regulated under the Clean Air Act. "Building, structure, facility, or installation" means any grouping of pollutant-emitting activities which are located on one or more contiguous or adjacent properties and which are owned or operated by the same person (or by person under common control).

STORAGE (in the RCRA program) means the holding of hazardous waste for a temporary period at the end of which the hazardous waste is treated, disposed, or stored elsewhere.

STORM WATER RUNOFF means water discharged as a result of rain, snow, or other precipitation.

SURFACE IMPOUNDMENT or IMPOUNDMENT means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

TOXIC POLLUTANT means any pollutant listed as toxic under Section 307(a)(1) of CWA.

TANK (in the RCRA program) means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

THERMAL TREATMENT (in the RCRA program) means the treatment of hazardous waste in a device which uses elevated temperature as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning").

TOTALLY ENCLOSED TREATMENT FACILITY (in the RCRA program) means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

TOXIC POLLUTANT means any pollutant listed as toxic under Section 307(a)(1) of CWA.

TRANSPORTER (in the RCRA program) means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

TREATMENT (in the RCRA program) means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

UNDERGROUND INJECTION means well injection.

UNDERGROUND SOURCE OF DRINKING WATER or USDW means an aquifer or its portion which is not an exempted aquifer and:

- A. Which supplies drinking water for human consumption; or
- B. In which the ground water contains fewer than 10,000 mg/l total dissolved solids.

UPSET means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

WATERS OF THE UNITED STATES means:

- A. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- B. All interstate waters, including interstate wetlands;

C. All other waters such as intrastate lakes, rivers, streams (*including intermittent streams*), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds, the use degradation, or destruction of which would or could affect interstate or foreign commerce including any such waters:

1. Which are or could be used by interstate or foreign travelers for recreational or other purposes,
2. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce,
3. Which are used or could be used for industrial purposes by industries in interstate commerce;

D. All impoundments of waters otherwise defined as waters of the United States under this definition;

E. Tributaries of waters identified in paragraphs (A) - (D) above; The territorial sea; and

F. Wetlands adjacent to waters (*other than waters that are themselves wetlands*) identified in paragraphs (A) - (F) of this definition.

Waste treatment systems, including treatment ponds or lagoons designated to meet requirement of CWA (*other than cooling ponds as defined in 40 CFR Section 423.11(m) which also meet the criteria of this definition*) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (*such as a disposal area in wetlands*) nor resulted from the impoundments of waters of the United States.

WELL INJECTION or UNDERGROUND INJECTION means the subsurface emplacement of fluids through a bored, drilled, or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

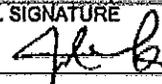
WETLANDS means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

TRANSPORTER (*in the RCRA program*) means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

FORM 1 GENERAL	 U.S. ENVIRONMENTAL PROTECTION AGENCY/ECOLOGY GENERAL INFORMATION <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>	1. Current permit I.D.		T/A	C
		WA0000281		14	15
II. POLLUTANT CHARACTERISTICS					
INSTRUCTIONS: Complete A through J to determine whether you need to submit a NPDES permit application forms to Ecology. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.					
	MARK "X"			MARK "X"	
	YES	NO	FORM ATTACHED	YES	NO
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)	<input type="checkbox"/>
C. Is this facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C) Does this facility operate a cooling water intake structure? (FORM 2C Supplemental)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	D. Is this proposal facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)	<input type="checkbox"/>
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	<input type="checkbox"/>
G. Do you or will you inject at this facility any produced water other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	<input type="checkbox"/>
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	<input type="checkbox"/>
III. NAME OF FACILITY					
C 1	Emerald Kalama Chemical, LLC				
IV. FACILITY CONTACT					
A. NAME & TITLE (last, first, & title)			B. PHONE (area code & no.)		
C 2	Phil Oyer, Environmental Manager		360	673	2550
B. EMAIL ADDRESS			C. Does the facility have or can it obtain broadband internet access?		
C 2	phil.oyer@emeraldmaterials.com		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
V. FACILITY MAILING ADDRESS					
A. STREET OR P.O. BOX					
C 3	1296 NW 3 rd Street				
B. CITY OR TOWN			C. STATE	D. ZIP CODE	
C 4	Kalama		WA	98625	
VI. FACILITY LOCATION					
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER					
C 5	1296 NW 3 rd Street				
B. COUNTY NAME					
Cowlitz					
C. CITY OR TOWN			D. STATE	E. ZIP CODE	F. COUNTY CODE
C 6	Kalama		WA	98625	
C 7	D. LATITUDE/LONGITUDE (NAD 83 DATUM)				
LATITUDE AS DECIMAL DEGREES - N4 46.021010					
LONGITUDE AS DECIMAL DEGREES - W1 122.856973					

CONTINUED FROM THE FRONT

VII. SIC, NAICS CODES (In order of priority) AND UBI NUMBER (Place additional on an attachment)			
SIC FIRST		SIC SECOND	
C 7	2869 (specify) Industrial Organic Chemicals	7	(specify)
EQUIVALENT NAICS FIRST		EQUIVALENT NAICS SECOND	
C 7	325199 (specify) All Other Basic Organic Chemical Manufacturing	7	(specify)
UBI NUMBER:			
VIII. OPERATOR INFORMATION			
A. NAME Emerald Kalama Chemical, LLC			B. Is the name listed in Item VIII-A also the owner? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify): F = FEDERAL S = STATE P = PRIVATE		M = PUBLIC (other than federal or state) O = OTHER (specify)	D. PHONE (area code & no.) 360 673 2550
E. STREET OR PO BOX 1296 NW 3 rd Street			
F. CITY OR TOWN Kalama		G. STATE WA	H. ZIP CODE 98625
			I. INDIAN LAND (Is the facility located on Indian lands?) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
X. EXISTING ENVIRONMENTAL PERMITS			
A. NPDES (Discharges to Surface Water)		D. PSD (Air Emissions from Proposed Sources)	
RC 19	WA0000281	RC 19	
B. UIC (Underground Injection of Fluids)		E. OTHER (specify)	
RC 19	UIC Site 12117	RC 19	SW99-10-R1A
C. RCRA (Hazardous Wastes)		E. OTHER (specify)	
RC 19	WADO92899574	RC 19	
XI. MAP			
Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.			
XII. NATURE OF BUSINESS (provide a brief description)			
Emerald Kalama Chemical, LLC operates an organic chemical manufacturing plant located adjacent to the Columbia River at Kalama, Washington. The facility produces benzoic acid, benzaldehyde, sodium benzoate, potassium benzoate, benzyl alcohol, cinnamic aldehyde, hexyl cinnamic aldehyde, amyl cinnamic aldehyde, methyl cinnamic aldehyde, cinnamic alcohol, linear aldehydes (hexanal, octanal, decanal), 3-phenyl propanol, and multiple plasticizer products. Food, flavor, fragrance, pharmaceutical, and industrial manufacturers use the chemical compounds produced at the facility.			
XIII. CERTIFICATION (see instructions)			
I certify, under penalty of law, that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.			
A. NAME & OFFICIAL TITLE (type or print) Jarrod Kama Director of ESC		B. SIGNATURE 	C. DATE SIGNED 6/29/18

To ask about the availability of this document in a version for the visually impaired, call the Water Quality Program at 360-407-6600, Relay Service 711, or TTY 877-833-6341.

Disclaimer

This is an updated PDF document that allows you to type your information directly into the form, print it, and save the completed form.

Note: This form can be viewed and saved only using Adobe Acrobat Reader version 7.0 or higher, or if you have the full Adobe Professional version.

Instructions:

1. Type in your information
2. Save file (if desired)
3. Print the completed form
4. Sign and date the printed copy
5. Mail it to the directed contact.

United States
Environmental Protection
Agency

Office of
Enforcement
Washington, DC 20460

EPA Form 3510-2C
Revised August 1990
Previous editions
are obsolete



Permits Division

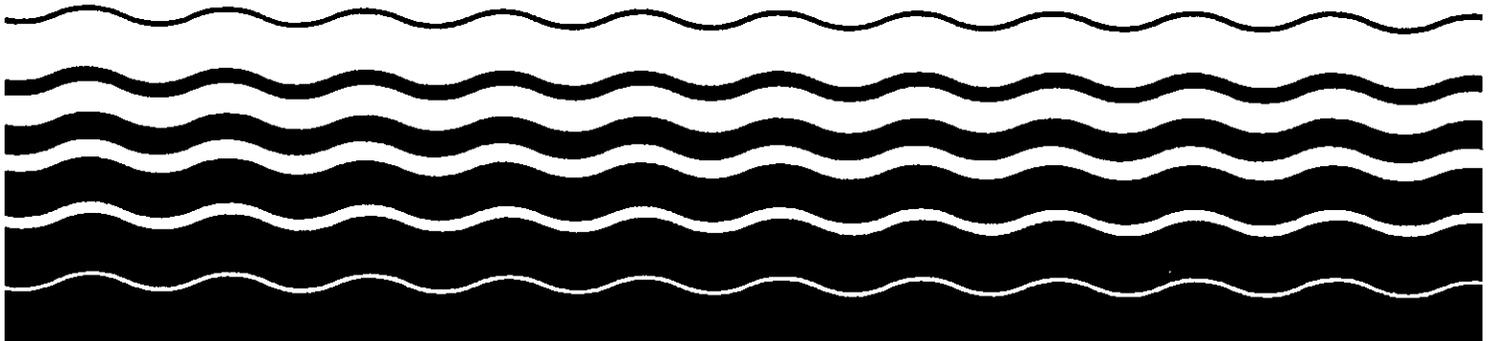
Application Form 2C – Wastewater Discharge Information

Consolidated Permits Program

This form must be completed by all persons applying for an EPA permit to discharge wastewater (*existing manufacturing, commercial, mining, and silvicultural operations*).



Printed on recycled paper



Paperwork Reduction Act Notice

The public reporting burden for this collection of information is estimated to average 33 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information to the Chief, Information Policy Branch (PM-223), US Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked **Attention: Desk Officer for EPA.**



INSTRUCTIONS – FORM 2c
Application for Permit to Discharge Wastewater
EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL OPERATIONS

This form must be completed by all applicants who check "yes" to item II-C in Form 1.

Public Availability of Submitted Information.

Your application will not be considered complete unless you answer every question on this form and on Form 1. If an item does not apply to you, enter "NA" (*for not applicable*) to show that you considered the question.

You may not claim as confidential any information required by this form or Form 1, whether the information is reported on the forms or in an attachment. This information will be made available to the public upon request.

Any information you submit to EPA which goes beyond that required by this form or Form 1 you may claim as confidential, but claims for information which is effluent data will be denied. If you do not assert a claim of confidentiality at the time of submitting the information, EPA may make the information public without further notice to you. Claims of confidentiality will be handled in accordance with EPA's business confidentiality regulations at 40 CFR Part 2.

Definitions

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

EPA ID Number

Fill in your EPA Identification Number at the top of each page of Form 2c. You may copy this number directly from item I of Form 1.

Item I

You may use the map you provided for item XI of Form 1 to determine the latitude and longitude of each of your outfalls and the name of the receiving water.

Item II-A

The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and stormwater runoff. You may group similar operations into a single unit, labeled to correspond to the more detailed listing in item II-B. The water balance should show average flows. Show all significant losses of water to products, atmosphere, and discharge. You should use actual measurements whenever available; otherwise use your best estimate. An example of an acceptable line drawing appears in Figure 2c-1 to these instructions.

Item II-B

List all sources of wastewater to 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, but you must indicate the rainfall event upon which the estimate is based and the method of estimation. For each treatment unit, indicate its size, flow rate, and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order and you should select the proper code from Table 2c-1 to fill in column 3-b for each treatment unit. Insert "XX" into column 3-b if no code corresponds to a treatment unit you list. If you are applying for a permit for a privately owned treatment works, you must also identify all of your contributors in an attached listing.

Item II-C

A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities. A discharge is seasonal if it occurs only during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharges. Base your answers on actual data whenever available; otherwise, provide your best estimate. Report the highest daily value for flow rate and total volume in the

"Maximum Daily" columns (*columns 4-a-2 and 4-b-2*). Report the average of all daily values measured during days when discharge occurred within the last year in the "Long Term Average" columns (*columns 4-a-1 and 4-b-1*).

Item III-A

All effluent guidelines promulgated by EPA appear in the Federal Register and are published annually in 40 CFR Subchapter N. A guideline applies to you if you have any operations contributing process wastewater in any subcategory covered by a BPT, BCT, or BAT guideline. If you are unsure whether you are covered by a promulgated effluent guideline, check with your EPA Regional office (*Table 1 in the Form 1 instructions*). You must check "yes" if an applicable effluent guideline has been promulgated, even if the guideline limitations are being contested in court. If you believe that a promulgated effluent guideline has been remanded for reconsideration by a court and does not apply to your operations, you may check "no."

Item III-B

An effluent guideline is expressed in terms of production (*or other measure of operation*) if the limitation is expressed as mass of pollutant per operational parameter; for example, "pounds of BOD per cubic foot of logs from which bark is removed," or "pounds of TSS per megawatt hour of electrical energy consumed by smelting furnace." An example of a guideline not expressed in terms of a measure of operation is one which limits the concentration of pollutants.

Item III-C

This item must be completed only if you checked "yes" to item III-B. The production information requested here is necessary to apply effluent guidelines to your facility and you cannot claim it as confidential. However, you do not have to indicate how the reported information was calculated. Report quantities in the units of measurement used in the applicable effluent guideline. The production figures provided must be based on actual daily production and not on design capacity or on predictions of future operations. To obtain alternate limits under 40 CFR 122.45(b)(2)(ii), you must define your maximum production capability and demonstrate to the Director that your actual production is substantially below maximum production capability and that there is a reasonable potential for an increase above actual production during the duration of the permit.

Item IV-A

If you check "yes" to this question, complete all parts of the chart, or attach a copy of any previous submission you have made to EPA containing same information.

Item IV-B

You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

Item V-A, B, C, and D

The items require you to collect and report data on the pollutants discharged for each of your 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.

General Instructions

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C require you to report analytical data in two ways. For some pollutants, you may be required to mark "X" in the "Testing Required" column (*column 2-a, Part C*), and test (*sample and analyze*) and report the levels of the pollutants in your discharge whether or not you expect them to be present in your discharge. For all others, you must mark "X" in either the "Believe Present" column or the "Believe Absent" column (*columns 2-a or 2-b, Part B, and columns 2-b or 2-c, Part C*) based on your best estimate, and test for those which you believe to be present. (*See specific instructions on the form and below for Parts A through D.*) Base your determination that a pollutant is present in or absent from your discharge on your

Item V-A, B, C, and D (continued)

knowledge of your raw materials, maintenance chemicals, intermediate and final products and byproducts, and any previous analyses known to you of your effluent or similar effluent. (For example, if you manufacture pesticides, you should expect those pesticides to be present in contaminated stormwater runoff.) If you would expect a pollutant to be present solely as a result of its presence in your intake water, you must mark "Believe Present" but you are not required to analyze for that pollutant. Instead, mark an 'X' in the "Intake" column.

- A. Reporting.** All levels must be reported as concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages V-1 to V-9 if the separate sheets contain all the required information in a format which is consistent with pages V-1 to V-9 in spacing and in identification of pollutants and columns. (For example, the data system used in your GC/MS analysis may be able to print data in the proper format.) Use the following abbreviations in the columns headed "Units" (column 3, Part A, and column 4, Parts B and C).

Concentration	Mass
ppm.....parts per million	lbs.....pounds
mg/l...milligrams per liter	ton.....tons (English tons)
ppb.....parts per billion	mg.....milligrams
ug/l...micrograms per liter	g.....grams
	kg.....kilograms
	T.....tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless:

- (1) An applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or
- (2) All approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium); or
- (3) The permitting authority has determined that in establishing case-by-case limitations it is necessary to express the limitations on the metal in dissolved, valent, or total form to carry out the provisions of the CWA.

If you measure only one daily value, complete only the "Maximum Daily Values" columns and insert '1' into the "Number of Analyses" column (columns 2-a and 2-d, Part A, and column 3-a, 3-d, Parts B and C). The permitting authority may require you to conduct additional analyses to further characterize your discharges. For composite samples, the daily value is the total mass or 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 total mass or 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.

If you measure more than one daily value for a pollutant and those values are representative of your wastestream, you must report them. You must describe your method of testing and data analysis. You also must determine the average of all values within the last year and report the concentration and mass under the "Long Term Average Values" columns (column 2-c, Part A, and column 3-c, Parts B and C), and the total number of daily values under the "Number of Analyses" columns (column 2-d, Part A, and columns 3-d, Parts B and C). Also, determine the average of all daily values taken during each calendar month, and report the highest average under the "Maximum 30-day Values" columns (column 2-c, Part A, and column 3-b, Parts B and C).

B. Sampling: The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater. You may contact your EPA or State permitting authority for detailed guidance on sampling techniques and for answers to specific questions. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding

times, the collection of duplicate samples, etc. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes which contribute wastewater in normal operation, and with your treatment system operating properly with no system upsets. Samples should be collected 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.

For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples must be used. For all other pollutants 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period of greater than 24 hours. For stormwater discharges a minimum of one to four grab samples may be taken, depending on the duration of the discharge. One grab must be taken in the first hour (or less) of discharge, with one additional grab (up to a minimum of four) taken in each succeeding hour of discharge for discharges lasting four or more hours. The Director may waive composite sampling for any outfall for which you demonstrate that use of an automatic sampler is infeasible and that a minimum of four grab samples will be representative of your discharge.

Grab and composite samples are defined as follows:

Grab sample: An individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

Composite sample: A combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24 hour period. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. For GC/MS Volatile Organic Analysis (VOA), aliquots must be combined in the laboratory immediately before analysis. Four (4) (rather than eight) aliquots or grab samples should be collected for VOA. These four samples should be collected during actual hours of discharge over a 24-hour period and need not be flow proportioned. Only one analysis is required.

The Agency is currently reviewing sampling requirements in light of recent research on testing methods. Upon completion of its review, the Agency plans to propose changes to the sampling requirements.

Data from samples taken in the past may be used, provided that:

All data requirements are met;

Sampling was done no more than three years before submission; and

All data are representative of the present discharge.

Among the factors which would cause the data to be unrepresentative are significant changes in production level, changes in raw materials, processes, or final products, and changes in wastewater treatment. When the Agency promulgates new analytical methods in 40 CFR Part 136, EPA will provide information as to when you should use the new methods to generate data on your discharges. Of course, the Director may request additional information, including current quantitative data, if she or he determines it to be necessary to assess your discharges.

C. 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 provided that you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical outfalls, you may request permission from your permitting authority to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the

Item V-A, B, C, and D (continued)

permitting authority, on a separate sheet attached to the application form, identify which outfall you did test, and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

D. Reporting of Intake Data: You are not required to report data under the "Intake" columns unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water. NPDES regulations allow net limitations only in certain circumstances. To demonstrate your eligibility, under the "Intake" columns report the average of the results of analyses on your intake water (if your water is treated before use, test the water after it is treated), and discuss the requirements for a net limitation with your permitting authority.

Part V-A

Part V-A must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff. However, at your request, the Director may waive the requirement to test for one or more of these pollutants, upon a determination that available information is adequate to support issuance of the permit with less stringent reporting requirements for these pollutants. You also may request a waiver for one or more of these pollutants for your category or subcategory from the Director, Office of Water Enforcement and Permits. See discussion in General Instructions to item V for definitions of the columns in Part A. The "Long Term Average Values" column (column 2-c) and "Maximum 30-day Values" column (column 2-b) are not compulsory but should be filled out if data are available.

Use composite samples for all pollutants in this Part, except use grab samples for pH and temperature. See discussion in General Instructions to Item V for definitions of the columns in Part A. The "Long Term Average Values" column (column 2-c) and "Maximum 30-Day Values" column (column 2-b) are not compulsory but should be filled out if data are available.

Part V-B

Part V-B must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff. You must report quantitative data if the pollutant(s) in question is limited in an effluent limitations guideline either directly, or indirectly but expressly through limitation on an indicator (e.g., use of TSS as an indicator to control the discharge of iron and aluminum). For other discharged pollutants you must provide quantitative data or explain their presence in your discharge. EPA will consider requests to the Director of the Office of Water Enforcement and Permits to eliminate the requirement to test for pollutants for an industrial category or subcategory. Your request must be supported by data representative of the industrial category or subcategory in question. The data must demonstrate that individual testing for each applicant is unnecessary, because the facilities in the category or subcategory discharge substantially identical levels of the pollutant or discharge the pollutant uniformly at sufficiently low levels. Use composite samples for all pollutants you analyze for in this part, except use grab samples for residual chlorine, oil and grease, and fecal coliform. The "Long Term Average Values" column (column 3-c) and "Maximum 30-day Values" column (column 3-b) are not compulsory but should be filled out if data are available.

Part V-C

Table 2c-2 lists the 34 "primary" industry categories in the left-hand column. For each outfall, if any of your processes which contribute wastewater falls into one of those categories, you must mark "X" in "Testing Required" column (column 2-a) and test for (1) all of the toxic metals, cyanide, and total phenols, and (2) the organic toxic pollutants contained in Table 2c-2 as applicable to your category, unless you qualify as a small business (see below). The organic toxic pollutants are listed by GC/MS fractions on pages V-4 to V-9 in Part V-C. For example, the Organic Chemicals Industry has an asterisk in all four fractions; therefore, applicants in this category must test for all organic toxic pollutants in Part V-C. The inclusion of total phenols in Part V-C is not intended to classify total phenols as a toxic pollutant. If you are applying for a permit for a privately owned

treatment works, determine your testing requirements on the basis of the industry categories of your contributors. When you determine which industry category you are in to find your testing requirements, you are not determining your category for any other purpose and you are not giving up your right to challenge your inclusion in that category (for example, for deciding whether an effluent guideline is applicable) before your permit is issued. For all other cases (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), you must mark "X" in either the "Believed Present" column (column 2-b) or the "Believed Absent" column (column 2-c) for each pollutant. For every pollutant you know or have reason to believe is present in your discharge in concentrations of 10 ppb or greater, you must report quantitative data. For acrolein, acrylonitrile, 2, 4 dinitrophenol, and 2-methyl-4, 6 dinitrophenol, where you expect these four pollutants to be discharged in concentrations of 100 ppb or greater, you must report quantitative data. For every pollutant expected to be discharged in concentrations less than the thresholds specified above, you must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged. At your request the Director, Office of Water Enforcement and Permits, may waive the requirement to test for pollutants for an industrial category or subcategory. Your request must be supported by data representatives of the industrial category or subcategory in question. The data must demonstrate that individual testing for each applicant is unnecessary, because the facilities in question discharge substantially identical levels of the pollutant, or discharge the pollutant uniformly at sufficiently low levels. If you qualify as a small business (see below) you are exempt from testing for the organic toxic pollutants, listed on pages V-4 to V-9 in Part C. For pollutants in intake water, see discussion in General Instructions to this item. The "Long Term Average Values" column (column 3-c) and "Maximum 30-day Values" column (column 3-b) are not compulsory but should be filled out if data are available. You are required to mark "Testing Required" for dioxin if you use or manufacture one of the following compounds:

- (a) 2,4,5-trichlorophenoxy acetic acid, (2,4,5-T);
- (b) 2-(2,4,5-trichlorophenoxy) propanoic acid, (Silvex, 2,4,5-TP)
- (c) 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate, (Erbon);
- (d) 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate, (Ronnel);
- (e) 2,4,5,-trichlorophenol, (TCP); or
- (f) hexachlorophene, (HCP).

If you mark "Testing Required" or "Believed Present," you must perform a screening analysis for dioxins, using gas chromatography with an electron capture detector. A TCDD standard for quantitation is not required. Describe the results of this analysis in the space provided; for example, "no measurable baseline deflection at the retention time of TCDD" or "a measurable peak within the tolerances of the retention time of TCDD." The permitting authority may require you to perform a quantitative analysis if you report a positive result. The Effluent Guidelines Division of EPA has collected and analyzed samples from some plants for the pollutants listed in Part C in the course of its BAT guidelines development program. If your effluents are sampled and analyzed as part of this program in the last three years, you may use these data to answer Part C provided that the permitting authority approves, and provided that no process change or change in raw materials or operating practices has occurred since the samples were taken that would make the analyses unrepresentative of your current discharge.

Small Business Exemption: If you qualify as a "small business," you are exempt from the reporting requirements for the organic toxic pollutants, listed on pages V-4 to V-9 in Part C. There are two ways in which you can qualify as a "small business." 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. 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

FORM 2c – INSTRUCTIONS (continued)

Item V-A, B, C, and D (continued)

dollars), you may submit sales data for those years instead of conducting analyses for the organic toxic pollutants. The production or sales data must be for the facility which is the source of the discharge. The data should not be limited to production or sales for the process or processes which contribute to the discharge, unless those are the only processes at your facility. For sales data, in situations involving intracorporate transfer of goods and services, the transfer price per unit should approximate market prices for those goods and services as closely as possible. Sales figures for years after 1980 should be indexed to the second quarter of 1980 by using the gross national product price deflator (second quarter of 1980=100). This index is available in *National Income and Product Accounts of the United States* (Department of Commerce, Bureau of Economic Analysis).

Part V-D

List any pollutants in Table 2c-3 that you believe to be present and explain why you believe them to be present. No analysis is required, but if you have analytical data, you must report it.

Note: Under 40 CFR 117.12(a)(2), certain discharges of hazardous substances (listed in Table 2c-4 of these instructions) may be exempted from the requirements of section 311 of CWA, which establishes reporting requirements, civil penalties and liability for cleanup costs for spills of oil and hazardous substances. A discharge of a particular substance may be exempted if the origin, source, and amount of the discharged substances are identified in the NDPEs permit application or in the permit, if the permit contains a requirement for treatment of the discharge, and if the treatment is in place. To apply for an exclusion of the discharge of any hazardous substance from the requirements of section 311, attach additional sheets of paper to your form, setting forth the following information:

1. The substance and the amount of each substance which may be discharged.
2. The origin and source of the discharge of the substance.
3. The treatment which is to be provided for the discharge by:
 - a. An onsite treatment system separate from any treatment system treating your normal discharge;
 - b. A treatment system designed to treat your normal discharge and which is additionally capable of treating the amount of the substance identified under paragraph 1 above; or
 - c. Any combination of the above.

See 40 CFR §117.12(a)(2) and (c) published on August 29, 1979, in 44 FR 50766, or contact your Regional Office (Table 1 on Form 1, Instructions), for further information on exclusions from section 311.

Item VI

This requirement applies to current use or manufacture of a toxic pollutant as an intermediate or final product or byproduct. The Director may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each toxic pollutant and the Director has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

Item VII

Self explanatory. The permitting authority may ask you to provide additional details after your application is received.

Item IX

The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(2) of the Clean Water Act provides that "Any person who knowingly makes any false statement, representation, or certification in any application, ... shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than six months, or by both."

40 CFR Part 122.22 requires the certification to be signed as follows:

(A) For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25,000,000 (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegation of authority to responsible corporate officers identified in §122.22(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate position under §122.22(a)(1)(ii) rather than to specific individuals.

(B) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(C) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal Agency includes (i) the chief executive officer of the Agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the Agency (e.g., Regional Administrators of EPA). Applications for Group II stormwater dischargers may be signed by a duly authorized representative (as defined in 40 CFR 122.22(b)) of the individuals identified above.

CODES FOR TREATMENT UNITS

PHYSICAL TREATMENT PROCESSES

1-A	Ammonia Stripping	1-M	Grit Removal
1-B	Dialysis	1-N	Microstraining
1-C	Diatomaceous Earth Filtration	1-O	Mixing
1-D	Distillation	1-P	Moving Bed Filters
1-E	Electrodialysis	1-Q	Multimedia Filtration
1-F	Evaporation	1-R	Rapid Sand Filtration
1-G	Flocculation	1-S	Reverse Osmosis (<i>Hyperfiltration</i>)
1-H	Flotation	1-T	Screening
1-I	Foam Fractionation	1-U	Sedimentation (<i>Settling</i>)
1-J	Freezing	1-V	Slow Sand Filtration
1-K	Gas-Phase Separation	1-W	Solvent Extraction
1-L	Grinding (<i>Comminutors</i>)	1-X	Sorption

CHEMICAL TREATMENT PROCESSES

2-A	Carbon Adsorption	2-G	Disinfection (<i>Ozone</i>)
2-B	Chemical Oxidation	2-H	Disinfection (<i>Other</i>)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (<i>Chlorine</i>)	2-L	Reduction

BIOLOGICAL TREATMENT PROCESSES

3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filtration

OTHER PROCESSES

4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection

SLUDGE TREATMENT AND DISPOSAL PROCESSES

5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

TESTING REQUIREMENTS FOR ORGANIC TOXIC POLLUTANTS INDUSTRY CATEGORY*

INDUSTRY CATEGORY	GC/MS FRACTION ¹			
	Volatile	Acid	Base/Neutral	Pesticide
Adhesives and sealants.....	X	X	X	-
Aluminum forming.....	X	X	X	-
Auto and other laundries.....	X	X	X	X
Battery manufacturing.....	X	-	X	-
Coal mining.....	X	X	X	X
Coil coating.....	X	X	X	-
Copper forming.....	X	X	X	-
Electric and electronic compounds.....	X	X	X	X
Electroplating.....	X	X	X	-
Explosives manufacturing.....	-	X	X	-
Foundries.....	X	X	X	-
Gum and wood chemicals.....	X	X	X	X
Inorganic chemicals manufacturing.....	X	X	X	-
Iron and steel manufacturing.....	X	X	X	-
Leather tanning and finishing.....	X	X	X	X
Mechanical products manufacturing.....	X	X	X	-
Nonferrous metals manufacturing.....	X	X	X	X
Ore mining.....	X	X	X	X
Organic chemicals manufacturing.....	X	X	X	X
Paint and ink formulation.....	X	X	X	X
Pesticides.....	X	X	X	X
Petroleum refining.....	X	X	X	X
Pharmaceutical preparations.....	X	X	X	-
Photographic equipment and supplies.....	X	X	X	X
Plastic and synthetic materials manufacturing.....	X	X	X	X
Plastic processing.....	X	-	-	-
Porcelain enameling.....	X	-	X	X
Printing and publishing.....	X	X	X	X
Pulp and paperboard mills.....	X	X	X	X
Rubber processing.....	X	X	X	-
Soap and detergent manufacturing.....	X	X	X	-
Steam electric power plants.....	X	X	X	-
Textile mills.....	X	X	X	X
Timber products processing.....	X	X	X	X

*See note at conclusion of 40 CFR Part 122, Appendix D (1983) for explanation of effect of suspensions on testing requirements for primary industry categories.

¹The pollutants in each fraction are listed in Item V-C.

X = Testing required.

- = Testing not required.

**TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES
REQUIRED TO BE IDENTIFIED BY APPLICANTS IF EXPECTED TO BE PRESENT**

TOXIC POLLUTANT	HAZARDOUS SUBSTANCES	HAZARDOUS SUBSTANCES
Asbestos	Dichlorvos	Naled
	Diethyl amine	Napthenic acid
HAZARDOUS SUBSTANCES	Dimethyl amine	Nitrotoluene
	Dinitrobenzene	Parathion
Acetaldehyde	Diquat	Phenolsulfonate
Allyl alcohol	Disulfoton	Phosgene
Allyl chloride	Diuron	Propargite
Amyl acetate	Epichlorohydrin	Propylene oxide
Aniline	Ethion	Pyrethrins
Benzonitrile	Ethylene diamine	Quinoline
Benzyl chloride	Ethylene dibromide	Resorcinol
Butyl acetate	Formaldehyde	Strontium
Butylamine	Furfural	Strychnine
Captan	Guthion	Styrene
Carbaryl	Isoprene	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
Carbofuran	Isopropanolamine	TDE (Tetrachlorodiphenyl ethane)
Carbon disulfide	Kelthane	2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
Chlorpyrifos	Kepone	Trichlorofon
Coumaphos	Malathion	Triethanolamine
Cresol	Mercaptodimethur	Triethylamine
Crotonaldehyde	Methoxychlor	Trimethylamine
Cyclohexane	Methyl mercaptan	Uranium
2,4-D (2,4-Dichlorophenoxyacetic acid)	Methyl methacrylate	Vanadium
Diazinon	Methyl parathion	Vinyl acetate
Dicamba	Mevinphos	Xylene
Dichlobenil	Mexacarbate	Xylenol
Dichlone	Monoethyl amine	Zirconium
2,2-Dichloropropionic acid	Monomethyl amine	

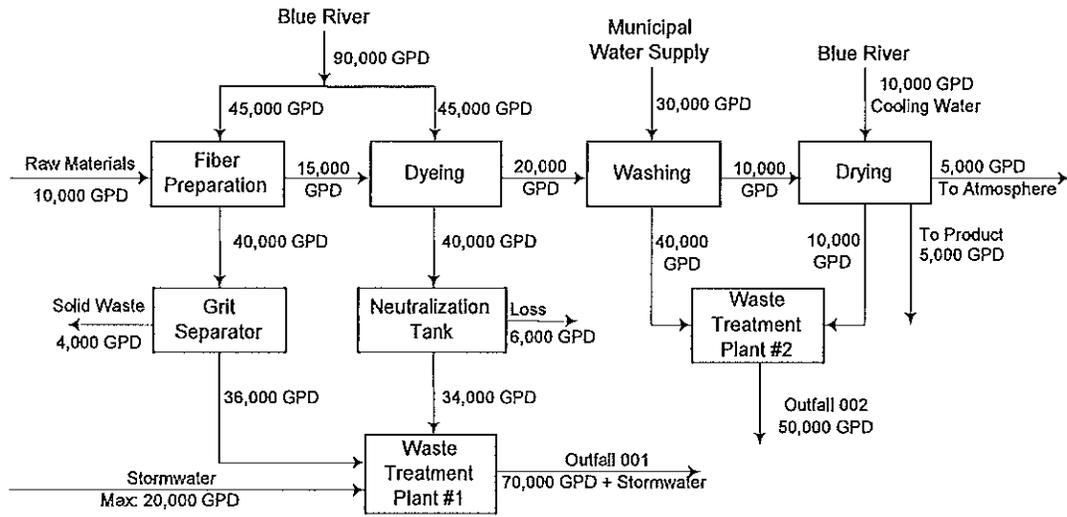
HAZARDOUS SUBSTANCES

1. Acetaldehyde	74. Carbaryl	145. Formaldehyde
2. Acetic acid	75. Carbofuran	146. Formic acid
3. Acetic anhydride	76. Carbon disulfide	147. Fumaric acid
4. Acetone cyanohydrin	77. Carbon tetrachloride	148. Furfural
5. Acetyl bromide	78. Chlordane	149. Guthion
6. Acetyl chloride	79. Chlorine	150. Heptachlor
7. Acrolein	80. Chlorobenzene	151. Hexachlorocyclopentadiene
8. Acrylonitrile	81. Chloroform	152. Hydrochloric acid
9. Adipic acid	82. Chloropyrifos	153. Hydrofluoric acid
10. Aldrin	83. Chlorosulfonic acid	154. Hydrogen cyanide
11. Allyl alcohol	84. Chromic acetate	155. Hydrogen sulfide
12. Allyl chloride	85. Chromic acid	156. Isoprene
13. Aluminum sulfate	86. Chromic sulfate	157. Isopropanolamine
14. Ammonia	87. Chromous chloride	dodecylbenzenesulfonate
15. Ammonium acetate	88. Cobaltous bromide	158. Kelthane
16. Ammonium benzoate	89. Cobaltous formate	159. Kepone
17. Ammonium bicarbonate	90. Cobaltous sulfamate	160. Lead acetate
18. Ammonium bichromate	91. Coumaphos	161. Lead arsenate
19. Ammonium bifluoride	92. Cresol	162. Lead chloride
20. Ammonium bisulfite	93. Crotonaldehyde	163. Lead fluoborate
21. Ammonium carbamate	94. Cupric acetate	164. Lead flourite
22. Ammonium carbonate	95. Cupric acetoarsenite	165. Lead iodide
23. Ammonium chloride	96. Cupric chloride	166. Lead nitrate
24. Ammonium chromate	97. Cupric nitrate	167. Lead stearate
25. Ammonium citrate	98. Cupric oxalate	168. Lead sulfate
26. Ammonium fluoroborate	99. Cupric sulfate	169. Lead sulfide
27. Ammonium fluoride	100. Cupric sulfate ammoniated	170. Lead thiocyanate
28. Ammonium hydroxide	101. Cupric tartrate	171. Lindane
29. Ammonium oxalate	102. Cyanogen chloride	172. Lithium chromate
30. Ammonium silicofluoride	103. Cyclohexane	173. Malathion
31. Ammonium sulfamate	104. 2,4-D acid (2,4- Dichlorophenoxyacetic acid)	174. Maleic acid
32. Ammonium sulfide	105. 2,4-D esters (2,4- Dichlorophenoxyacetic acid esters)	175. Maleic anhydride
33. Ammonium sulfite	106. DDT	176. Mercaptodimethur
34. Ammonium tartrate	107. Diazinon	177. Mercuric cyanide
35. Ammonium thiocyanate	108. Dicamba	178. Mercuric nitrate
36. Ammonium thiosulfate	109. Dichlobenil	179. Mercuric sulfate
37. Amyl acetate	110. Dichlone	180. Mercuric thiocyanate
38. Aniline	111. Dichlorobenzene	181. Mercurous nitrate
39. Antimony pentachloride	112. Dichloropropane	182. Methoxychlor
40. Antimony potassium tartrate	113. Dichloropropene	183. Methyl mercaptan
41. Antimony tribromide	114. Dichloropropene-dichloropropane mix	184. Methyl methacrylate
42. Antimony trichloride	115. 2,2-Dichloropropionic acid	185. Methyl parathion
43. Antimony trifluoride	116. Dichlorvos	186. Mevinphos
44. Antimony trioxide	117. Dieldrin	187. Mexacarbate
45. Arsenic disulfide	118. Diethylamine	188. Monoethylamine
46. Arsenic pentoxide	119. Dimethylamine	189. Monomethylamine
47. Arsenic trichloride	120. Dinitrobenzene	190. Naled
48. Arsenic trioxide	121. Dinitrophenol	191. Naphthalene
49. Arsenic trisulfide	122. Dinitrotoluene	192. Naphthenic acid
50. Barium cyanide	123. Diquat	193. Nickel ammonium sulfate
51. Benzene	124. Disulfoton	194. Nickel chloride
52. Benzoic acid	125. Diuron	195. Nickel hydroxide
53. Benzointrile	126. Dodecylbenzenesulfonic acid	196. Nickel nitrate
54. Benzoyl chloride	127. Endosulfan	197. Nickel sulfate
55. Benzyl chloride	128. Endrin	198. Nitric acid
56. Beryllium chloride	129. Epichlorohydrin	199. Nitrobenzene
57. Beryllium fluoride	130. Ethion	200. Nitrogen dioxide
58. Beryllium nitrate	131. Ethylbenzene	201. Nitrophenol
59. Butylacetate	132. Ethylenediamine	202. Nitrotoluene
60. n-Butylphthalate	133. Ethylene dibromide	203. Paraformaldehyde
61. Butylamine	134. Ethylene dichloride	204. Parathion
62. Butyric acid	135. Ethylene diaminetetracetic acid (EDTA)	205. Pentachlorophenol
63. Cadmium acetate	136. Ferric ammonium citrate	206. Phenol
64. Cadmium bromide	137. Ferric ammonium oxalate	207. Phosgene
65. Cadmium chloride	138. Ferric chloride	208. Phosphoric acid
66. Calcium arsenate	139. Ferric fluoride	209. Phosphorus
67. Calcium arsenite	140. Ferric nitrate	210. Phosphorus oxychloride
68. Calcium carbide	141. Ferric sulfate	211. Phosphorus pentasulfide
69. Calcium chromate	142. Ferrous ammonium sulfate	212. Phosphorus trichloride
70. Calcium cyanide	143. Ferrous chloride	213. Polychlorinated biphenyls (PCB)
71. Calcium dodecylbenzenesulfonate	144. Ferrous sulfate	214. Potassium arsenate
72. Calcium hypochlorite		215. Potassium arsenite
73. Captan		216. Potassium bichromate

HAZARDOUS SUBSTANCES

217. Potassium chromate	247. Sodium selenite	270. Trimethylamine
218. Potassium cyanide	248. Strontium chromate	271. Uranyl acetate
219. Potassium hydroxide	249. Strychnine	272. Uranyl nitrate
220. Potassium permanganate	250. Styrene	273. Vanadium pentoxide
221. Propargite	251. Sulfuric acid	274. Vanadyl sulfate
222. Propionic acid	252. Sulfur monochloride	275. Vinyl acetate
223. Propionic anhydride	253. 2,4,5-T acid (2,4,5-Trichlorophenoxyacetic acid)	276. Vinylidene chloride
224. Propylene oxide	254. 2,4,5-T amines (2,4,5-Trichlorophenoxy acetic acid amines)	277. Xylene
225. Pyrethrins	255. 2,4,5-T esters (2,4,5-Trichlorophenoxy acetic acid esters)	278. Xylenol
226. Quinoline	256. 2,4,5-T salts (2,4,5-Trichlorophenoxy acetic acid salts)	279. Zinc acetate
227. Resorcinol	257. 2,4,5-TP acid (2,4,5-Trichlorophenoxy propanoic acid)	280. Zinc ammonium chloride
228. Selenium oxide	258. 2,4,5-TP acid esters (2,4,5-Trichlorophenoxy propanoic acid esters)	281. Zinc borate
229. Silver nitrate	259. TDE (Tetrachlorodiphenyl ethane)	282. Zinc bromide
230. Sodium	260. Tetraethyl lead	283. Zinc carbonate
231. Sodium arsenate	261. Tetraethyl pyrophosphate	284. Zinc chloride
232. Sodium arsenite	262. Thallium sulfate	285. Zinc cyanide
233. Sodium bichromate	263. Toluene	286. Zinc fluoride
234. Sodium bifluoride	264. Toxaphene	287. Zinc formate
235. Sodium bisulfite	265. Trichlorofon	288. Zinc hydrosulfite
236. Sodium chromate	266. Trichloroethylene	289. Zinc nitrate
237. Sodium cyanide	267. Trichlorophenol	290. Zinc phenolsulfonate
238. Sodium dodecylbenzenesulfonate	268. Triethanolamine	291. Zinc phosphide
239. Sodium fluoride	269. Triethylamine	292. Zinc silicofluoride
240. Sodium hydrosulfide		293. Zinc sulfate
241. Sodium hydroxide		294. Zirconium nitrate
242. Sodium hypochlorite		295. Zirconium potassium fluoride
243. Sodium methylate		296. Zirconium sulfate
244. Sodium nitrite		297. Zirconium tetrachloride
245. Sodium phosphate (dibasic)		
246. Sodium phosphate (tribasic)		

LINE DRAWING



Schematic of Water Flow
Brown Mills, Inc.
City, County, State

Figure 2C-1

EPA I.D. NUMBER (copy from Item 1 of Form 1)
WA0000281

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

Please print or type in the unshaded areas only.

FORM 2C NPDES  **U.S. ENVIRONMENTAL PROTECTION AGENCY**
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

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

A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	46.00	1.00	18.00	122.00	51.00	41.00	To Columbia River
002	46.00	1.00	18.00	122.00	51.00	38.00	To Outfall 001
003	46.00	1.00	24.00	122.00	51.00	17.00	To Wetlands

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

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

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

1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1
	See Site Map (3-002-000)			
	See BIOX Plant flow schematic (0-017-050)			
001 & 002	COOLING WATER & PROCESS WASTEWATER			
	Cooling Water		From Cooling Towers	
	Treated Process Wastewater		Activated Sludge, Anaerobic Treatment, Preaeration, Discharge to Surface Water	3-A 3-C 3-E 4-A
	Contaminated Stormwater from Process		Activated Sludge, Anaerobic Treatment, Preaeration, Discharge to Surface Water	3-A 3-C 3-E 4-A
003	Uncontaminated Stormwater	Variable		

OFFICIAL USE ONLY (effluent guidelines sub-categories)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?
 YES (complete the following table) NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				C. DURATION (in days)
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		B. TOTAL VOLUME (specify with units)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?
 YES (complete Item III-B) NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?
 YES (complete Item III-C) NO (go to Section IV)

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

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	
See Attachment 1 for Production Rates			

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.
 YES (complete the following table) NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

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

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

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

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

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?
 YES (list all such pollutants below) NO (go to Item VI-B)

Empty space for listing pollutants.

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

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

YES (Identify the test(s) and describe their purposes below) NO (go to Section VIII)

Biological toxicity testing was performed in July 2012 and February 2013. Testing consisted of acute and chronic bioassays using Ceriodaphnia dubia and Pimephales promelas as the test species for both test dates. See Attachment 2 for a summary of the results.

VIII. CONTRACT ANALYSIS INFORMATION

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

YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below) NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
ALS Environmental Services	1317 South 13th Avenue Kelso, WA 98626	360-577-7222	Table V Pollutants, Dioxin
Northwestern Aquatic Sciences	3814 Yaquina Bay Road P.O. Box 1437 Newport, OR 97165	541-265-7225	Acute and Chronic Toxicity Testing
Specialty Analytical	9011 SE Jannsen Road Clackamas, OR 97015	503-607-1331	Table V Pollutants, Pesticides

IX. CERTIFICATION

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

A. NAME & OFFICIAL TITLE (type or print)	B. PHONE NO. (area code & no.)
Jarrod Kocin Director of GSC	(360) 673-2550
C. SIGNATURE	D. DATE SIGNED
	6/29/18

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

EPA ID. NUMBER (copy from Item 1 of Form 1)
WA0000281

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

OUTFALL NO.
001

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	See 002											
b. Chemical Oxygen Demand (COD)	See 002											
c. Total Organic Carbon (TOC)	See 002											
d. Total Suspended Solids (TSS)	See 002											
e. Ammonia (as N)	See 002											
f. Flow	VALUE	14.5	VALUE	14.3	VALUE	13.2	Fcmt. 4	MGD		VALUE		
g. Temperature (winter)	VALUE	20.4	VALUE	16.4	VALUE	14.6	Fcmt. 4	°C		VALUE		
h. Temperature (summer)	VALUE	34.6	VALUE	32.5	VALUE	30.2	Fcmt. 4	°C		VALUE		
i. pH	MINIMUM See 002		MAXIMUM		MINIMUM			STANDARD UNITS				

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

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)				
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION (if available)	(2) MASS	c. LONG TERM AVRG. VALUE (1) CONCENTRATION (if available)	(2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)													
b. Chlorine, Total Residual													
c. Color													
d. Fecal Coliform													
e. Fluoride (16964-48-8)													
f. Nitrate-Nitrite (as N)													

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)					
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1)	(2) MASS CONCENTRATION	b. MAXIMUM 30 DAY VALUE (1) (if available)	(2) MASS CONCENTRATION	c. LONG TERM AVRG. VALUE (1) (if available)	(2) MASS CONCENTRATION	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)	(2) MASS CONCENTRATION	b. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N)														
h. Oil and Grease														
i. Phosphorus (as P), Total (7723-14-0)														
j. Radioactivity														
(1) Alpha, Total														
(2) Beta, Total														
(3) Radium, Total														
(4) Radium 226, Total														
k. Sulfate (as SO ₄) (14808-79-8)														
l. Sulfide (as S)														
m. Sulfite (as SO ₃) (14265-45-3)														
n. Surfactants														
o. Aluminum, Total (7429-90-5)														
p. Barium, Total (7440-39-3)														
q. Boron, Total (7440-42-8)														
r. Cobalt, Total (7440-48-4)														
s. Iron, Total (7439-89-6)														
t. Magnesium, Total (7439-95-4)														
u. Molybdenum, Total (7439-95-7)														
v. Manganese, Total (7439-96-5)														
w. Tin, Total (7440-31-5)														
x. Titanium, Total (7440-32-6)														

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

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT			4. UNITS		5. INTAKE (optional)											
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE		c. LONG TERM AVRG. VALUE (if available)											
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES				
METALS, CYANIDE, AND TOTAL PHENOLS																			
1M. Arsenic, Total (7440-38-2)																			
2M. Beryllium, Total (7440-41-7)																			
3M. Cadmium, Total (7440-43-9)																			
4M. Chromium, Total (7440-47-3)																			
5M. Copper, Total (7440-50-8)																			
6M. Lead, Total (7439-92-1)																			
7M. Mercury, Total (7439-97-6)																			
8M. Nickel, Total (7440-02-0)																			
9M. Selenium, Total (782-49-2)																			
10M. Silver, Total (7440-22-4)																			
11M. Thallium, Total (7440-28-0)																			
12M. Zinc, Total (7440-66-6)																			
13M. Cyanide, Total (57-12-5)																			
14M. Phenols, Total																			
DIOXIN																			
2,3,7,8-tetra-chlorodibenzo-P-dioxin (1784-01-6)																			
DESCRIBE RESULTS																			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1)	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) (if available)	(2) MASS	c. LONG TERM AVRG. VALUE (1) (if available)	(2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)															
2V. Acrylonitrile (107-13-1)															
3V. Benzene (71-43-2)															
4V. Bis (Chloromethyl) Ether (542-88-1)															
5V. Bromoform (75-25-2)															
6V. Carbon Tetrachloride (56-23-5)															
7V. Chlorobenzene (108-90-7)															
8V. Chlorobromomethane (124-48-1)															
9V. Chloroethane (75-00-3)															
10V. 2-Chloroethylmethyl Ether (110-75-8)															
11V. Chloroform (67-66-3)															
12V. Dichlorobromomethane (75-27-4)															
13V. Dichlorodifluoromethane (75-71-8)															
14V. 1,1-Dichloroethane (75-34-3)															
15V. 1,2-Dichloroethane (107-06-2)															
16V. 1,1-Dichloroethylene (75-35-4)															
17V. 1,2-Dichloropropane (78-87-5)															
18V. 1,3-Dichloropropylene (542-75-6)															
19V. Ethylbenzene (100-41-4)															
20V. Methyl Bromide (74-83-9)															
21V. Methyl Chloride (74-87-3)															

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
GCMS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)															
23V. 1,1,2,2-Tetrachloroethane (79-34-5)															
24V. Tetrachloro-ethylene (127-18-4)															
25V. Toluene (108-88-3)															
26V. 1,2-Trans-Dichloroethylene (156-60-5)															
27V. 1,1,1-Trichloro-ethane (71-55-5)															
28V. 1,1,2-Trichloro-ethane (79-00-5)															
29V. Trichloro-ethylene (79-01-6)															
30V. Trichloro-fluoromethane (75-69-4)															
31V. Vinyl Chloride (75-01-4)															
GCMS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)															
2A. 2,4-Dichloro-phenol (120-83-2)															
3A. 2,4-Dimethyl-phenol (105-67-9)															
4A. 4,6-Dihydro-O-Cresol (534-52-1)															
5A. 2,4-Dihydro-phenol (51-28-5)															
6A. 2-Nitrophenol (98-75-5)															
7A. 4-Nitrophenol (100-02-7)															
8A. p-Chloro-M-Cresol (59-50-7)															
9A. Pentachloro-phenol (87-86-5)															
10A. Phenol (108-95-2)															
11A. 2,4,6-Trichloro-phenol (88-05-2)															

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT				4. UNITS		5. INTAKE (optional)						
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1)		b. MAXIMUM 30 DAY VALUE (if available) (1)		c. LONG TERM AVRG. VALUE (if available) (1)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)		b. NO. OF ANALYSES	
				(2) MASS	CONCENTRATION	(2) MASS	CONCENTRATION	(2) MASS	CONCENTRATION				(2) MASS			
GC/MS FRACTION - BASENEUTRAL COMPOUNDS																
1B. Acenaphthene (83-32-9)																
2B. Acenaphthylene (202-86-8)																
3B. Anthracene (120-12-7)																
4B. Benzidine (92-87-5)																
5B. Benzo (a) Anthracene (56-55-9)																
6B. Benzo (a) Pyrene (50-32-8)																
7B. 3,4-Benzofluoranthene (205-99-2)																
8B. Benzo (ghi) Fluoranthene (207-08-9)																
9B. Benzo (k) Fluoranthene (207-08-9)																
10B. Bis (2-Chloroethoxy) Methane (111-91-1)																
11B. Bis (2-Chloroethoxy) Ether (111-44-4)																
12B. Bis (2-Chloroisopropoxy) Ether (102-80-1)																
13B. Bis (2-Ethylhexoxy) Phthalate (117-81-7)																
14B. 4-Bromophenyl Phenyl Ether (101-55-3)																
15B. Butyl Benzyl Phthalate (85-68-7)																
16B. 2-Chloronaphthalene (91-58-7)																
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)																
18B. Chrysene (218-01-9)																
19B. Dibenz (a,h) Anthracene (53-70-3)																
20B. 1,2-Dichlorobenzene (95-50-1)																
21B. 1,3-Dichlorobenzene (541-73-1)																

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" a. TESTING REQUIRED b. BELIEVED PRESENT c. BELIEVED ABSENT	3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
		a. MAXIMUM DAILY VALUE (1)		b. MAXIMUM 30 DAY VALUE (1) (if available)		c. LONG TERM AVG. VALUE (1) (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)		b. NO. OF ANALYSES
		(2) MASS	CONCENTRATION	(2) MASS	CONCENTRATION	(2) MASS	CONCENTRATION				(2) MASS		
228. 1,4-Dichlorobenzene (106-46-7)													
238. 3,3-Dichlorobenzidine (91-94-1)													
248. Diethyl Phthalate (84-66-2)													
258. Dimethyl Phthalate (131-41-3)													
268. Di-N-Butyl Phthalate (84-74-2)													
278. 2,4-Dinitrotoluene (121-14-2)													
288. 2,6-Dinitrotoluene (608-20-2)													
298. Di-N-Octyl Phthalate (117-84-0)													
308. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)													
318. Fluoranthene (206-44-0)													
328. Fluorene (86-73-7)													
338. Hexachlorobenzene (119-74-1)													
348. Hexachlorobutadiene (87-68-3)													
358. Hexachlorocyclopentadiene (77-47-4)													
368. Hexachloroethane (67-72-1)													
378. Lindene (1,2,3-cd) Pyrene (193-99-5)													
388. Isophorone (78-59-1)													
398. Naphthalene (91-20-3)													
408. Nitrobenzene (98-95-3)													
418. N-Nitrosodimethylamine (62-75-9)													
428. N-Nitrosodi-N-Propylamine (621-64-7)													

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1)	(2) MASS	b. MAXIMUM 30 DAY VALUE (1)	(2) MASS	c. LONG TERM AVRG. VALUE (1)	(2) MASS	d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)	(2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION - PESTICIDES															
43B. N,N-Di- sodiumphenylamine (86-30-6)															
44B. Phenanthrene (85-01-8)															
45B. Pyrene (129-00-0)															
46B. 1,2,4-Tr- chlorobenzene (120-82-1)															
1P. Aldrin (309-00-2)															
2P. α-BHC (319-84-6)															
3P. β-BHC (319-85-7)															
4P. γ-BHC (58-89-9)															
5P. δ-BHC (319-86-8)															
6P. Chlordane (57-74-9)															
7P. 4,4-DDT (50-29-3)															
8P. 4,4-DDE (72-55-9)															
9P. 4,4-DDD (72-54-8)															
10P. Dieldrin (60-57-1)															
11P. α-Erosulfan (115-29-7)															
12P. β-Erosulfan (115-29-7)															
13P. Endosulfan Sulfate (103-47-8)															
14P. Endrin (72-20-8)															
15P. Endrin Aldehyde (7421-93-4)															
16P. Heptachlor (76-44-8)															

CONTINUED FROM PAGE V-8

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

OUTFALL NUMBER

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)	
	a. TESTING REQUIRED	b. BELIEVED PRESENT	a. MAXIMUM DAILY VALUE (1)	b. MAXIMUM 30 DAY VALUE (1) (if available)	c. LONG TERM AVRG. VALUE (1) (if available)	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)	b. NO. OF ANALYSES		
17P. Heptachlor Epoxide (1024-57-3)												
18P. PCB-1242 (53469-21-9)												
19P. PCB-1254 (11097-69-1)												
20P. PCB-1221 (11044-28-2)												
21P. PCB-1232 (11741-16-5)												
22P. PCB-1248 (12672-29-6)												
23P. PCB-1260 (11096-82-5)												
24P. PCB-1016 (12674-11-2)												
25P. Toxaphene (8001-35-2)												

EPA Form 3510-2C (3-90)

PAGE V-9

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

EPA I.D. NUMBER (copy from Item 1 of Form 1)
WA2000281

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

OUTFALL NO.
002

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

1. POLLUTANT	2. EFFLUENT						3. UNITS <i>(specify if blank)</i>		4. INTAKE <i>(optional)</i>			
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	17	43	8	25	5	14	Ftnt. 1	mg/L	lb/day			
b. Chemical Oxygen Demand (COD)	34.5	99.6					Ftnt. 2	mg/L	lb/day			
c. Total Organic Carbon (TOC)	10.2	29.4					Ftnt. 2	mg/L	lb/day			
d. Total Suspended Solids (TSS)	66	158	23	55	9	25	Ftnt. 1	mg/L	lb/day			
e. Ammonia (as N)	0.026 J	0.075 J					Ftnt. 2	mg/L	lb/day			
f. Flow	VALUE	0.477	VALUE	0.398	VALUE	0.348	Ftnt. 4	MGD	VALUE			
g. Temperature <i>(water)</i>	VALUE	See 001	VALUE		VALUE			°C	VALUE			
h. Temperature <i>(summer)</i>	VALUE	See 001	VALUE		VALUE			°C	VALUE			
i. pH	MINIMUM	8.0	MAXIMUM	8.3	MINIMUM	7.7	MAXIMUM	8.0	Ftnt. 4	STANDARD UNITS		

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

1. POLLUTANT AND CAS NO. <i>(if available)</i>	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE <i>(optional)</i>		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		a. LONG TERM AVERAGE VALUE	b. NO. OF ANALYSES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	
a. Bromide (24939-87-9)	X		0.19	0.55					Ftnt. 6	mg/L	lb/d
b. Chlorine, Total Residual	X		0.023 J	0.060 J					Ftnt. 3	mg/L	lb/d
c. Color	X		45.0						Ftnt. 6	color	units
d. Fecal Coliform		X									
e. Fluoride (16984-48-8)	X		0.44 J	1.27 J					Ftnt. 6	mg/L	lb/d
f. Nitrate-Nitrite (as N)	X		0.21	0.61					Ftnt. 3	mg/L	lb/d

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS	5. INTAKE (optional)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION (if available)	c. LONG TERM AVRG. VALUE (1) CONCENTRATION (if available)	d. NO. OF ANALYSES		a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION
g. Nitrogen, Total Organic (as N)	X		2.06			Pcnt. 3	mg/L	Lb/d		
h. Oil and Grease	X		0.8*			Pcnt. 5	mg/L	Lb/d		
i. Phosphorus (as P), Total (7723-140)	X		0.603			Pcnt. 3	mg/L	Lb/d		
j. Radioactivity										
(1) Alpha, Total		X								
(2) Beta, Total		X								
(3) Radium, Total		X								
(4) Radium 226, Total		X								
k. Sulfate (as SO ₄) (74808-79-6)	X		5.65			Pcnt. 3	mg/L	Lb/d		
l. Sulfide (as S)	X		0.4*			Pcnt. 3	mg/L	Lb/d		
m. Sulfite (as SO ₃) (14255-45-3)	X		0.3*			Pcnt. 3	mg/L	Lb/d		
n. Surfactants		X								
o. Aluminum, Total (7429-90-5)	X		12			Pcnt. 3	ug/L	Lb/d		
p. Barium, Total (7440-39-3)	X		5.7			Pcnt. 3	ug/L	Lb/d		
q. Boron, Total (7440-42-8)	X		16 J			Pcnt. 3	ug/L	Lb/d		
r. Cobalt, Total (7440-48-4)	X		79.0			Pcnt. 3	ug/L	Lb/d		
s. Iron, Total (7439-89-6)	X		68			Pcnt. 3	ug/L	Lb/d		
t. Magnesium, Total (7439-95-4)	X		6730			Pcnt. 3	ug/L	Lb/d		
u. Molybdenum, Total (7439-98-7)	X		4.3			Pcnt. 3	ug/L	Lb/d		
v. Manganese, Total (7439-96-5)	X		17.1			Pcnt. 3	ug/L	Lb/d		
w. Tin, Total (7440-31-5)	X		8 J			Pcnt. 3	ug/L	Lb/d		
x. Titanium, Total (7440-32-6)	X		1.7 J			Pcnt. 3	ug/L	Lb/d		

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

1. POLLUTANT AND CAS NUMBER (if available)	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT		4. UNITS		5. INTAKE (optional)											
				a. MAXIMUM DAILY VALUE (1)	(2) MASS CONCENTRATION	b. MAXIMUM 30 DAY VALUE (1) (if available)	(2) MASS CONCENTRATION	c. LONG TERM AVG. VALUE (1) (if available)	(2) MASS CONCENTRATION	d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES				
METALS, CYANIDE, AND TOTAL PHENOLS																			
1M. Anthrany, Total (7440-36-0)	X			7 J	0.018J														
2M. Arsenic, Total (7440-38-2)	X			6*	<0.016														
3M. Beryllium, Total (7440-41-7)	X			0.5*	<0.001														
4M. Cadmium, Total (7440-43-9)	X			0.6*	<0.002														
5M. Chromium, Total (7440-47-3)	X			0.9*	<0.002														
6M. Copper, Total (7440-50-8)	X			5.4	0.017	5.4	0.017	3.7	0.011										
7M. Lead, Total (7439-92-1)	X			6 J	0.016J														
8M. Mercury, Total (7439-97-6)	X			0.20 J	<0.001														
9M. Nickel, Total (7440-02-0)	X			19.3	0.053	19.3	0.053	13.9	0.043										
10M. Selenium, Total (7782-49-2)	X			9*	<0.024														
11M. Silver, Total (7440-22-4)	X			2*	<0.005														
12M. Thallium, Total (7440-28-0)	X			4*	<0.010														
13M. Zinc, Total (7440-66-6)	X			15.0	0.045	15.0	0.045	8.4	0.026										
14M. Cyanide, Total (57-12-5)	X			0.0009 J	0.002J														
15M. Phenols, Total	X			0.018	0.047														
DIOXIN																			
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1784-01-5)										X									
DESCRIBE RESULTS																			
Test Results: Non Detect, Detection Limit: 1.84 pg/L																			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE <i>(optional)</i>					
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION		b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION <i>(if available)</i>		c. LONG TERM AVRG. VALUE (1) CONCENTRATION <i>(if available)</i>		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(2) MASS	(2) MASS	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION				(2) MASS		
1V. Acrolein (107-02-8)	X			0.98*	<0.003					Ft. 9	ug/L	Lb/d			
2V. Acrylonitrile (107-13-1)	X			0.12*	<0.001					Ft. 9	ug/L	Lb/d			
3V. Benzene (71-43-2)	X			0.031*	<0.001					Ft. 9	ug/L	Lb/d			
4V. Bis (Chloro- methyl) Ether (542-88-1)	X			1.98*	<0.006					Ft. 8	ug/L	Lb/d			
5V. Bromoform (75-25-2)	X			0.17*	<0.001					Ft. 5	ug/L	Lb/d			
6V. Carbon Tetrachloride (56-23-5)	X			0.06*	<0.001					Ft. 9	ug/L	Lb/d			
7V. Chlorobenzene (108-90-7)	X			0.031*	<0.001					Ft. 9	ug/L	Lb/d			
8V. Chlorod- bromoethane (12448-1-1)	X			0.081*	<0.001					Ft. 5	ug/L	Lb/d			
9V. Chloroethane (75-00-3)	X			0.054*	<0.001					Ft. 9	ug/L	Lb/d			
10V. 2-Chloro- ethylvinyl Ether (110-75-8)	X			0.12*	<0.001					Ft. 5	ug/L	Lb/d			
11V. Chloroform (67-66-3)	X			0.036 J	0.001J					Ft. 9	ug/L	Lb/d			
12V. Dichloro- bromoethane (75-27-4)	X			0.038*	<0.001					Ft. 5	ug/L	Lb/d			
13V. Dichloro- difluoromethane (75-71-8)	X			1.0*	<0.003					Ft. 8	ug/L	Lb/d			
14V. 1,1-Dichloro- ethane (75-34-3)	X			0.025*	<0.001					Ft. 5	ug/L	Lb/d			
15V. 1,2-Dichloro- ethane (107-06-2)	X			0.070 J	0.001J					Ft. 9	ug/L	Lb/d			
16V. 1,1-Dichloro- ethylene (75-35-4)	X			0.039*	<0.001					Ft. 9	ug/L	Lb/d			
17V. 1,2-Dichloro- propane (78-87-5)	X			0.044*	<0.001					Ft. 9	ug/L	Lb/d			
18V. 1,3-Dichloro- propylene (542-75-6)	X			0.045*	<0.001					Ft. 9	ug/L	Lb/d			
19V. Ethylbenzene (100-41-4)	X			0.030*	<0.001					Ft. 9	ug/L	Lb/d			
20V. Methyl Bromide (74-83-9)	X			0.034*	<0.001					Ft. 5	ug/L	Lb/d			
21V. Methyl Chloride (74-87-3)	X			0.030*	<0.001					Ft. 9	ug/L	Lb/d			

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1)	(2) MASS	(1)	(2) MASS	(1)	(2) MASS				(1)	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	X			0.060*	<0.001					Ft. 9	ug/L	1b/d			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			0.063*	<0.001					Ft. 5	ug/L	1b/d			
24V. Tetrachloroethylene (127-18-4)	X			0.032*	<0.001					Ft. 9	ug/L	1b/d			
25V. Toluene (108-98-3)	X			0.032*	<0.001					Ft. 9	ug/L	1b/d			
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			0.032*	<0.001					Ft. 9	ug/L	1b/d			
27V. 1,1,1-Trichloroethane (71-55-8)	X			0.044*	<0.001					Ft. 9	ug/L	1b/d			
28V. 1,1,2-Trichloroethane (79-00-5)	X			0.045*	<0.001					Ft. 9	ug/L	1b/d			
29V. Trichloroethylene (79-01-6)	X			0.044*	<0.001					Ft. 9	ug/L	1b/d			
30V. Trichloro-fluoroethane (75-69-4)	X			1.0*	<0.003					Ft. 8	ug/L	1b/d			
31V. Vinyl Chloride (75-01-4)	X			0.031*	<0.001					Ft. 9	ug/L	1b/d			
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			0.42*	<0.001					Ft. 9	ug/L	1b/d			
2A. 2,4-Dichlorophenol (120-83-2)	X			0.29*	<0.001					Ft. 9	ug/L	1b/d			
3A. 2,4-Dimethylphenol (105-67-9)	X			1.1*	<0.002					Ft. 9	ug/L	1b/d			
4A. 4-β-Dinitro-O-Cresol (534-52-1)	X			2.3*	<0.004					Ft. 9	ug/L	1b/d			
5A. 2,4-Dinitrophenol (51-28-5)	X			1.0*	<0.002					Ft. 9	ug/L	1b/d			
6A. 2-Nitrophenol (88-75-5)	X			0.35*	<0.001					Ft. 9	ug/L	1b/d			
7A. 4-Nitrophenol (100-02-7)	X			2.3*	<0.004					Ft. 9	ug/L	1b/d			
8A. P-Chloro-M-Cresol (59-50-7)	X			0.59*	<0.002					Ft. 6	ug/L	1b/d			
9A. Pentachlorophenol (87-86-5)	X			0.47*	<0.001					Ft. 6	ug/L	1b/d			
10A. Phenol (108-95-2)	X			1.5 J	0.002J					Ft. 9	ug/L	1b/d			
11A. 2,4,6-Trichlorophenol (85-05-2)	X			0.24*	<0.001					Ft. 6	ug/L	1b/d			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED (if available)	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (85-52-9)	X			0.27*	<0.001					Pt. 9	ug/L	1b/d			
2B. Acenaphthylene (208-96-6)	X			0.29*	<0.001					Pt. 9	ug/L	1b/d			
3B. Anthracene (120-12-7)	X			0.33*	<0.001					Pt. 9	ug/L	1b/d			
4B. Benzidine (92-87-5)	X			36*	<0.1					Pt. 6	ug/L	1b/d			
5B. Benzo (a) Anthracene (56-55-3)	X			0.25*	<0.001					Pt. 9	ug/L	1b/d			
6B. Benzo (a) Pyrene (50-32-8)	X			0.37*	<0.001					Pt. 9	ug/L	1b/d			
7B. 3,4-Benzofluoranthene (205-99-2)	X			0.27*	<0.001					Pt. 9	ug/L	1b/d			
8B. Benzo (ghi) Perylene (191-24-2)	X			0.5*	<0.002					Pt. 6	ug/L	1b/d			
9B. Benzo (k) Fluoranthene (207-08-9)	X			0.32*	<0.001					Pt. 9	ug/L	1b/d			
10B. Bis (2-Chloroethyl) Methane (111-91-1)	X			0.38*	<0.001					Pt. 6	ug/L	1b/d			
11B. Bis (2-Chloroethyl) Ether (111-44-4)	X			0.46*	<0.001					Pt. 6	ug/L	1b/d			
12B. Bis (2-Chloroisopropyl) Ether (102-80-1)	X			0.44*	<0.001					Pt. 6	ug/L	1b/d			
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	X			1.5 J	0.003J					Pt. 10	ug/L	1b/d			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			0.43*	<0.001					Pt. 6	ug/L	1b/d			
15B. Butyl Benzyl Phthalate (85-68-7)	X			0.68*	<0.002					Pt. 6	ug/L	1b/d			
16B. 2-Chloronaphthalene (91-58-7)	X			0.53*	<0.002					Pt. 6	ug/L	1b/d			
17B. 4-Chlorophenyl Phenyl Ether (7005-12-3)	X			0.32*	<0.001					Pt. 6	ug/L	1b/d			
18B. Chrysene (218-01-9)	X			0.40*	<0.001					Pt. 9	ug/L	1b/d			
19B. Dibenzo (a,h) Anthracene (53-70-3)	X			0.50*	<0.002					Pt. 6	ug/L	1b/d			
20B. 1,2-Dichlorobenzene (95-50-1)	X			0.086*	<0.001					Pt. 9	ug/L	1b/d			
21B. 1,3-Dichlorobenzene (541-73-1)	X			0.071*	<0.001					Pt. 9	ug/L	1b/d			

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1)	(2) MASS	b. MAXIMUM 30 DAY VALUE (1) (if available)	(2) MASS	c. LONG TERM AVRG. VALUE (1) (if available)	(2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)	(2) MASS	b. NO. OF ANALYSES
228. 1,4-Dichloro-benzene (106-46-7)	X			0.073*	<0.001					Pt. 9	ug/L	lb/d			
238. 3,3-Dichloro-benzidine (91-94-1)	X			0.59*	<0.002					Pt. 6	ug/L	lb/d			
248. Diethyl Phthalate (84-66-2)	X			0.33*	<0.001					Pt. 9	ug/L	lb/d			
258. Dimethyl Phthalate (131-11-3)	X			0.71*	<0.002					Pt. 9	ug/L	lb/d			
268. Di-N-Butyl Phthalate (84-42)	X			0.46*	<0.002					Pt. 9	ug/L	lb/d			
278. 2,4-Dinitro-toluene (121-14-2)	X			0.26*	<0.001					Pt. 9	ug/L	lb/d			
288. 2,6-Dinitro-toluene (606-20-2)	X			0.27*	<0.001					Pt. 9	ug/L	lb/d			
298. Di-N-Octyl Phthalate (117-84-0)	X			0.47*	<0.001					Pt. 6	ug/L	lb/d			
308. 1,2-Dibenzoyl-hydrazine (as Azobenzene) (122-86-7)	X			0.29*	<0.001					Pt. 6	ug/L	lb/d			
318. Fluoranthene (206-44-0)	X			0.45*	<0.001					Pt. 9	ug/L	lb/d			
328. Fluorene (86-73-7)	X			0.23*	<0.001					Pt. 10	ug/L	lb/d			
338. Hexachloro-benzene (118-74-1)	X			0.27*	<0.001					Pt. 9	ug/L	lb/d			
348. Hexachloro-butadiene (87-86-3)	X			0.22*	<0.001					Pt. 9	ug/L	lb/d			
358. Hexachloro-cyclopentadiene (77-47-4)	X			0.71*	<0.002					Pt. 6	ug/L	lb/d			
368. Hexachloro-ethane (67-72-1)	X			0.26*	<0.001					Pt. 9	ug/L	lb/d			
378. Indeno (1,2,3-cd) Pyrene (183-39-5)	X			0.55*	<0.002					Pt. 6	ug/L	lb/d			
388. Isophorone (78-59-1)	X			0.43*	<0.001					Pt. 6	ug/L	lb/d			
398. Naphthalene (91-20-3)	X			0.31*	<0.001					Pt. 10	ug/L	lb/d			
408. Nitrobenzene (98-95-3)	X			0.36*	<0.001					Pt. 9	ug/L	lb/d			
418. N-Nitro-sodiumethylamine (62-75-9)	X			2.1*	<0.006					Pt. 6	ug/L	lb/d			
428. N-Nitrosodi-N-Propylamine (62-164-7)	X			0.63*	<0.002					Pt. 6	ug/L	lb/d			

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1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE <i>(optional)</i>					
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE <i>(if available)</i>		c. LONG TERM AVRG. VALUE <i>(if available)</i>		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			0.42*	<0.001					Pt. 6	ug/L	1b/d			
44B. Phenanthrene (85-01-8)	X			0.24*	<0.001					Pt. 9	ug/L	1b/d			
45B. Pyrene (129-00-0)	X			0.47*	<0.001					Pt. 9	ug/L	1b/d			
46B. 1,2,4-Trichlorobenzene (120-82-1)	X			0.32*	<0.001					Pt. 9	ug/L	1b/d			
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
2P. α-BHC (319-84-6)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
3P. β-BHC (319-85-7)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
4P. γ-BHC (58-89-9)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
5P. δ-BHC (319-86-8)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
6P. Chlordane (57-74-9)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
7P. 4,4'-DDE (50-29-3)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
8P. 4,4'-DDE (72-55-9)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
9P. 4,4'-DDD (72-54-8)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
10P. Dieldrin (60-57-1)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
11P. α-Endosulfan (115-29-7)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
12P. β-Endosulfan (115-29-7)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
13P. Endosulfan Sulfate (1031-07-9)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
14P. Endrin (72-20-6)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
15P. Endrin Alderlyde (7421-93-4)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			
16P. Heptachlor (76-44-8)	X			0.005*	<0.001					Pt. 7	ug/L	1b/d			

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
WA0000281	002

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"	3. EFFLUENT			4. UNITS		5. INTAKE (optional)		
		a. MAXIMUM DAILY VALUE (1)	b. MAXIMUM 30 DAY VALUE (1)	c. LONG TERM AVRG. VALUE (1)	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1)	b. NO. OF ANALYSES	
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	(2) MASS	(2) MASS	(2) MASS		(2) MASS	
TP, Heptachlor Epoxide (1024-57-2)	X			0.005*	<0.001		ug/L	1b/d	
18P, PCB-1242 (53469-21-9)	X			0.010*	<0.001		ug/L	1b/d	
19P, PCB-1254 (11097-69-1)	X			0.010*	<0.001		ug/L	1b/d	
20P, PCB-1221 (11104-28-2)	X			0.010*	<0.001		ug/L	1b/d	
21P, PCB-1232 (11141-16-5)	X			0.010*	<0.001		ug/L	1b/d	
22P, PCB-1248 (12672-29-6)	X			0.010*	<0.001		ug/L	1b/d	
23P, PCB-1260 (11096-82-5)	X			0.010*	<0.001		ug/L	1b/d	
24P, PCB-1016 (12674-11-2)	X			0.010*	<0.001		ug/L	1b/d	
25P, Toxaphene (8001-35-2)	X			0.195*	<0.001		ug/L	1b/d	



EPA Form 2-C Supplemental Cooling Water Intake Structures

CWA §316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. EPA has promulgated rules for new facilities at 40 CFR 125 Subpart I and for existing facilities at 40 CFR 125 Subpart J. This form requests information from applicants using EPA Form 2-C to determine applicability of CWA 316(b) requirements and inform applicants of additional application requirements that may apply to the facility.

Facility Name: Emerald Kalama Chemical, LLC

NPDES Permit Number: WA0000281

SECTION A. APPLICABILITY

Yes No Is there a cooling water intake associated with this facility? Cooling water intake means a structure withdrawing cooling water, for contact or noncontact cooling, from a surface water source. Withdrawal from groundwater or a public water system is not applicable. If No, STOP.

1. What is the design intake flow (in gallons per day)? 21,974,000 gpd
2. What percentage of the flow is used exclusively for cooling? 100%
3. What is the maximum intake velocity? 0.38 ft/sec at low river level
4. Describe the cooling water system (e.g., once-through, closed-cycle). Once-through non-contact system
5. Name the surface water body from which cooling water is withdrawn. Columbia River
6. Provide latitude/longitude of the cooling water intake(s) (NAD83/WGS84). 46.02139, -122.86111
To ensure accurate locations provide at least 5 significant digits.
7. Describe the configuration of the intake(s) (e.g., dimensions, screen type). See JARPA – Water Intake and Outfall Line Maintenance
If as-built plans and specifications are available, please provide.
8. When was the intake(s) installed, including any major modifications? January, 24, 2017
9. When was the intake(s) last inspected? If regular inspections are scheduled, provide frequency. Screens are inspected daily
10. Have there been any studies to determine the impact of the intake(s) on aquatic organisms (e.g., impingement/entrainment studies). Yes No
If yes, please provide

See JARPA – Water Intake and Outfall Line Maintenance

SECTION B. APPLICATION REQUIREMENTS

CWA §316(b) requirements apply to all industrial NPDES permitted facilities with cooling water intake structures. EPA has promulgated best technology available (BTA) effluent guidelines for facilities meeting certain thresholds:

- Design intake flow greater than two million gallons per day.
- Greater than 25 percent of the water withdrawn is used for cooling purposes.

Submittal requirements for facilities subject to BTA effluent guidelines:

- New facilities must submit information specified in 40 CFR 122.21(r) and 40 CFR 125.86.
- Existing facilities must submit information specified in 40 CFR 122.21(r) and 40 CFR 125.95.

Facilities subject to BTA guidelines are encouraged to contact Ecology early in the application process. Ecology may consider this application administratively incomplete until the required information is received.

Submittal requirements for existing facilities and new facilities below BTA thresholds:

- Ecology will evaluate the information submitted with this form and may request additional information to assess the need for requirements under 40 CFR 125.90(b) or 40 CFR 125.80(c).

Attachment 1
Average Daily Production
Emerald Kalama Chemical, LLC. 2015
(confidential business information)

a. quantity per day	b. units	c. chemical compound	affected outfall
458	lb/day	3-Phenyl Propanol	002
1,663	lb/day	Benzene	002
361,736	lb/day	Benzoic Acid	002
81,171	lb/day	Benzaldehyde	002
32,198	lb/day	Benzyl Alcohol	002
147,432	lb/day	Sodium/Potassium benzoate	002
197,871	lb/day	Plasticizers	002
1,213	lb/day	Cinnamic Alcohol	002
9,040	lb/day	Cinnamic Aldehyde	002
3,105	lb/day	Amyl Cinnamic Aldehyde	002
49,777	lb/day	Hexyl Cinnamic Aldehyde	002
10,251	lb/day	Benzyl Benzoate	002
423	lb/day	Methyl Cinnamic Aldehyde	002
405	lb/day	PICA	002
315	lb/day	Methyl Benzoate	002
38,554	lb/day	C6/C8/C10 Aldehydes	002

935,154	TOTAL PRODUCTION
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NOTES:

Attachment 1
Average Daily Production
Emerald Kalama Chemical, LLC. 2016
(confidential business information)

a. quantity per day	b. units	c. chemical compound	affected outfall
140	lb/day	3-Phenyl Propanol	002
2,371	lb/day	Benzene	002
377,335	lb/day	Benzoic Acid	002
76,645	lb/day	Benzaldehyde	002
29,933	lb/day	Benzyl Alcohol	002
160,660	lb/day	Sodium/Potassium benzoate	002
169,150	lb/day	Plasticizers	002
3,111	lb/day	Cinnamic Alcohol	002
10,815	lb/day	Cinnamic Aldehyde	002
3,212	lb/day	Amyl Cinnamic Aldehyde	002
49,852	lb/day	Hexyl Cinnamic Aldehyde	002
9,375	lb/day	Benzyl Benzoate	002
0	lb/day	Methyl Cinnamic Aldehyde	002
199	lb/day	PICA	002
0	lb/day	Methyl Benzoate	002
37,412	lb/day	C6/C8/C10 Aldehydes	002

930,070	TOTAL PRODUCTION
----------------	-------------------------

NOTES:

**Attachment 1
Average Daily Production
Emerald Kalama Chemical, LLC. 2017
(confidential business information)**

a. quantity per day	b. units	c. chemical compound	affected outfall
932	lb/day	3-Phenyl Propanol	002
1,812	lb/day	Benzene	002
350,811	lb/day	Benzoic Acid	002
69,318	lb/day	Benzaldehyde	002
42,756	lb/day	Benzyl Alcohol	002
155,522	lb/day	Sodium/Potassium benzoate	002
201,979	lb/day	Plasticizers	002
1,632	lb/day	Cinnamic Alcohol	002
8,675	lb/day	Cinnamic Aldehyde	002
2,008	lb/day	Amyl Cinnamic Aldehyde	002
44,887	lb/day	Hexyl Cinnamic Aldehyde	002
15,102	lb/day	Benzyl Benzoate	002
0	lb/day	Methyl Cinnamic Aldehyde	002
411	lb/day	PICA	002
625	lb/day	Methyl Benzoate	002
5,078	lb/day	C6/C8/C10 Aldehydes	002

900,616	TOTAL PRODUCTION
----------------	-------------------------

NOTES:

Attachment 2
Biological Toxicity Testing Data
Emerald Kalama Chemical, LLC

Below is a summary of toxicity test results conducted in July 2012 and February 2013

Acute *Ceriodaphnia dubia* toxicity test results

Evaluation	<i>C. dubia</i> survival (100% effluent)	
	July 2012	February 2013
NOEL	100	100
LOEL	>100	>100
LC50	>100	>100
Reference toxicant	Acceptable	Acceptable

Acute *Pimephales promelas* toxicity test results

Evaluation	<i>P. promelas</i> survival (100% effluent)	
	July 2012	February 2013
NOEL	100	100
LOEL	>100	>100
LC50	>100	>100
Reference toxicant	Acceptable	Acceptable

*Although acute effects were observed at the ACEC (12% effluent), these results were considered anomalous based on 1) the absence of a dose-response relationship in the preceding test treatments within the acute toxicity test, and 2) results were not corroborated during the chronic exposure.

Chronic *Ceriodaphnia dubia* toxicity test results

Evaluation	Survival (% effluent)		Reproduction (% effluent)	
	July 2012	February 2013	July 2012	February 2013
NOEL (%)	100	100	100	100
LOEL (%)	>100	>100	>100	>100
LC50 (%)	>100	>100	>100	>100
Reference Toxicant	Acceptable	Acceptable	Acceptable	Acceptable

Chronic *Pimephales promelas* toxicity test results

Evaluation	7 day survival (% effluent)		Growth (% effluent)	
	July 2012	February 2013	July 2012	February 2013
NOEC (%)	100	100	100	100
LOEL (%)	>100	>100	>100	>100
LC50 (%)	>100	>100	>100	>100
Reference Toxicant	Acceptable	Acceptable	Acceptable	Acceptable

OUTFALL 001 AND OUTFALL 002
TABLE V FOOTNOTES

Column "a" and "b" in Tables V-A, V-B, and V-C contain the referenced footnote listed below:

* - Indicates that the analyte was not detected to the limit of detection indicated.

J - Indicates the result is an estimated value.

Column "d" in Tables V-A, V-B, and V-C contain the referenced footnotes listed below:

¹Data is based on November 2016 to November 2017 operating data from Outfall 002 where measurements were made per permit requirement.

²Concentration values based on analysis of an effluent grab sample collected 6/27/16. Mass discharge values based on a flow of 0.324 MGD for 6/27/16.

³Concentration values based on analysis of an effluent composite sample poured 6/27/18 from the previous 24-hour time frame. Mass discharge values are based on a flow of 0.315 MGD for 6/26/18.

⁴Data is based on continuous measurement from November 2016 through November 2017.

⁵Data is based on the analysis of an effluent grab sample collected 6/24/16. Mass discharge values based on a flow of 0.327 MGD for 6/24/16.

⁶Data is based on the analysis of an effluent composite sample collected 6/24/16 from the previous 24-hour time frame. Mass discharge values are based on a flow of 0.346 MGD for 6/23/16.

⁷Data is based on the analysis of an effluent composite sample collected 6/6/18 from the previous 24-hour time frame. Mass discharge values are based on a flow of 0.345 MGD for 6/5/18.

⁸Data is based on the analysis of an effluent composite sample collected 6/12/18 from the previous 24-hour time frame. Mass discharge values are based on a flow of 0.359 MGD for 6/11/18.

⁹Data is based on the analysis of an effluent grab sample collected 8/25/16. Mass discharge values based on a flow of 0.184 MGD for 8/25/16.

¹⁰Data is based on the analysis of an effluent composite sample collected 8/25/16 from the previous 24-hour time frame. Mass discharge values are based on a flow of 0.235 MGD for 8/24/16.

Disclaimer

This is an updated PDF document that allows you to type your information directly into the form, print it, and save the completed form.

Note: This form can be viewed and saved only using Adobe Acrobat Reader version 7.0 or higher, or if you have the full Adobe Professional version.

Instructions:

1. Type in your information
2. Save file (if desired)
3. Print the completed form
4. Sign and date the printed copy
5. Mail it to the directed contact.

INDUSTRIAL SECTION

Init. _____	Date _____
<input type="checkbox"/> In compliance NAR <input type="checkbox"/> Action pending / taken	
Parameter(s) / Comments	
Docket # _____	
Follow up by: (circle)	
phone	letter
nov	order
penalty	

Facility: Emerald	
Year: 2018	Lot: Right
Air	Corr
Water	Reports
NPDES	Permit
WET-TOX	Enf
DWIRCRA	Eng
Cleanup	Sub
SW	
HWP2	

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JUN 29 2018

Ecology W2R-Ind

Please print or type in the unshaded areas only.

FORM
2F
NPDES



U.S. Environmental Protection Agency
Washington, DC 20460

**Application for Permit to Discharge Storm Water
Discharges Associated with Industrial Activity**

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

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

A. Outfall Number (/ls)	B. Latitude			C. Longitude			D. Receiving Water (name)
001	46.00	1.00	18.00	122.00	51.00	41.00	Columbia River
002	46.00	1.00	18.00	122.00	51.00	38.00	Outfall 001
003	46.00	1.00	24.00	122.00	51.00	17.00	Wetlands

II. Improvements

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

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
Not Applicable					

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (provide units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
002	Approximately 500,000 square feet	Approximately 500,000 square feet	003	Approximately 105,600 square feet	Approximately 105,600 square feet

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Contaminated or potentially contaminated stormwater that falls within the process areas is treated as process wastewater in the on-site wastewater treatment plant (NPDES Permit No. WA0000281) and is discharged through Outfall 002.

Uncontaminated stormwater from the containment basin for tanks T-70 and T-71 typically is pumped to the on-site wastewater treatment plant, treated along with process wastewater, and is discharged through Outfall 002. Uncontaminated stormwater can be discharged through Outfall 003 into an adjacent wetland area. The last discharge through Outfall 003 occurred in January 2002.

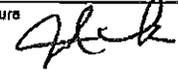
Stormwater discharged through Outfall 003 is required to be tested prior to discharge according to section S2 of the current NPDES permit.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
003	Structural and non-structural control measures for stormwater are outlined in the facility's existing Stormwater Pollution Prevention Plan (SWPPP).	3-E, 3-A, 3-C, 4-A

V. Nonstormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that if nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title (type or print) Jarrod Kevin Director of GSC	Signature 	Date Signed 6/29/18
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B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

No discharge through Outfall 003 has occurred since January 2002. No recent testing data is available.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

There is no history of significant leaks or spills within the T-70 and T-71 containment basins.

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis - Is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

- Yes (list all such pollutants below) No (go to Section IX)

VIII. Biological Toxicity Testing Data

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

- Yes (list all such pollutants below) No (go to Section IX)

IX. Contract Analysis Information

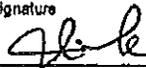
Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

- Yes (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below) No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed

X. Certification

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

A. Name & Official Title (Type Or Print) Jarrod Keen Director of BSC	B. Area Code and Phone No. 360-673-2550
C. Signature 	D. Date Signed 6/29/18

Instructions – Form 2F
Application for Permit to Discharge Storm Water
Associated with Industrial Activity

Who Must File Form 2F

Form 2F must be completed by operators of facilities which discharge storm water associated with industrial activity or by operators of storm water discharges that EPA is evaluating for designation as a significant contributor of pollutants to waters of the United States, or as contributing to a violation of a water quality standard.

Operators of discharges which are composed entirely of storm water must complete Form 2F (EPA Form 3510-2F) in conjunction with Form 1 (EPA Form 3510-1).

Operators of discharges of storm water which are combined with process wastewater (process wastewater is water that comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, waste product, or wastewater) must complete and submit Form 2F, Form 1, and Form 2C (EPA Form 3510-2C).

Operators of discharges of storm water which are combined with nonprocess wastewater (nonprocess wastewater includes noncontact cooling water and sanitary wastes which are not regulated by effluent guidelines or a new source performance standard, except discharges by educational, medical, or commercial chemical laboratories) must complete Form 1, Form 2F, and Form 2E (EPA Form 3510 2E).

Operators of new sources or new discharges of storm water associated with industrial activity which will be combined with other nonstormwater new sources or new discharges must submit Form 1, Form 2F, and Form 2D (EPA Form 3510-2D).

Where to File Applications

The application forms should be sent to the EPA Regional Office which covers the State in which the facility is located. Form 2F must be used only when applying for permits in States where the NPDES permits program is administered by EPA. For facilities located in States which are approved to administer the NPDES permits program, the State environmental agency should be contacted for proper permit application forms and instructions.

Information on whether a particular program is administered by EPA or by a State agency can be obtained from your EPA Regional Office. Form 1, Table 1 of the "General Instructions" lists the addresses of EPA Regional Offices and the States within the jurisdiction of each Office.

Completeness

Your application will not be considered complete unless you answer every question on this form and on Form 1. If an item does not apply to you, enter "NA" (for not applicable) to show that you considered the question.

Public Availability of Submitted Information

You may not claim as confidential any information required by this form or Form 1, whether the information is reported on the forms or in an attachment. Section 402(j) of the Clean Water Act requires that all permit applications will be available to the public. This information will be made available to the public upon request.

Any information you submit to EPA which goes beyond that required by this form, Form 1, or Form 2C you may claim as confidential, but claims for information which are effluent data will be denied.

If you do not assert a claim of confidentiality at the time of submitting the information, EPA may make the information public without further notice to you. Claims of confidentiality will be handled in accordance with EPA's business confidentiality regulations at 40 CFR Part 2.

Definitions

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

EPA ID Number

Fill in your EPA Identification Number at the top of each odd numbered page of Form 2F. You may copy this number directly from item I of Form 1.

Item I

You may use the map you provided for item XI of Form 1 to determine the latitude and longitude of each of your outfalls and the name of the receiving water.

Item 11-A

If you check "yes" to this question, complete all parts of the chart, or attach a copy of any previous submission you have made to EPA containing the same information.

Item 11-B

You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

Item III

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including:

each of its drainage and discharge structures;

the drainage area of each storm water outfall;

paved areas and building within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied;

each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste for less than 90 days under 40 CFR 262.34);

each well where fluids from the facility are injected underground; and

springs, and other surface water bodies which receive storm water discharges from the facility;

Item IV-A

For each outfall, provide an estimate of the area drained by the outfall which is covered by impervious surfaces. For the purpose of this application, impervious surfaces are surfaces where storm water runs off at rates that are significantly higher than background rates (e.g., predevelopment levels) and include paved areas, building roofs, parking lots, and roadways. Include an estimate of the total area (including all impervious and pervious areas) drained by each outfall. The site map required under item III can be used to estimate the total area drained by each outfall.

Item IV-B

Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored, or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of these materials; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied. Significant materials should be identified by chemical name, form (e.g., powder, liquid, etc.), and type of container or treatment unit. Indicate any materials treated, stored, or disposed of together. "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101 (14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

Item IV-C

For each outfall, structural controls include structures which enclose material handling or storage areas, covering materials, berms, dikes, or diversion ditches around manufacturing, production, storage or treatment units, retention ponds, etc. Nonstructural controls include practices such as spill prevention plans, employee training, visual inspections, preventive maintenance, and housekeeping measures that are used to prevent or minimize the potential for releases of pollutants.

Item V

Provide a certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by an NPDES permit. Tests for such non-storm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. Part B must include a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test. All non-storm water discharges must be identified in a Form 2C or Form 2E which must accompany this application (see beginning of instructions under section titled "Who Must File Form 2F" for a description of when Form 2C and Form 2E must be submitted).

Item VI

Provide a description of existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years.

Item VII-A, B, and C

These items require you to collect and report data on the pollutants discharged for each of your 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.

General Instructions

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C require you to report analytical data in two ways. For some pollutants addressed in Parts B and C, if you know or have reason to know that the pollutant is present in your discharge, you may be required to list the pollutant and test (sample and analyze) and report the levels of the pollutants in your discharge. For all other pollutants addressed in Parts B and C, you must list the pollutant if you know or have reason to know that the pollutant is present in the discharge, and either report quantitative data for the pollutant or briefly describe the reasons the pollutant is expected to be discharged. (See specific instructions on the form and below for Parts A through C.) Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, material management practices, maintenance chemicals, history of spills and releases, intermediate and final products and byproducts, and any previous analyses known to you of your effluent or similar effluent.

- A. Sampling:** The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater or storm water discharges. You may contact EPA or your State permitting authority for detailed guidance on sampling techniques and for answers to specific questions. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative, to the extent feasible, of your treatment system operating properly with no system upsets. Samples should be collected 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.

For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples taken during the first 30 minutes (or as soon thereafter as practicable) of the discharge must be used (you are not required to analyze a flow-weighted composite for these parameters). For all other pollutants both a grab sample collected during the first 30 minutes (or as soon thereafter as practicable) of the discharge and a flow-weighted composite sample must be analyzed. However, a minimum of one grab sample may be taken for effluents from holding ponds or other impoundments with a retention period of greater than 24 hours.

All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area.

A grab sample shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable), and a flow-weighted composite shall be taken for the entire event or for the first three hours of the event.

Grab and composite samples are defined as follows:

Grab sample: An individual sample of at least 100 milliliters collected during the first thirty minutes (or as soon thereafter as practicable) of the discharge. This sample is to be analyzed separately from the composite sample.

Flow-weighted Composite sample: A flow-weighted composite sample may be taken with a continuous sampler that proportions the amount of sample collected with the flow rate or as a combination of a minimum of three sample aliquots taken in each hour of discharge for the entire event or for the first three hours of the event, with each aliquot being at least 100 milliliters and collected with a minimum period of fifteen minutes between aliquot collections. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. Where GC/MS Volatile Organic Analysis (VOA) is required, aliquots must be combined in the laboratory immediately before analysis. Only one analysis for the composite sample is required.

Data from samples taken in the past may be used, provided that:

All data requirements are met;

Sampling was done no more than three years before submission; and

All data are representative of the present discharge.

Among the factors which would cause the data to be unrepresentative are significant changes in production level, changes in raw materials, processes, or final products, and changes in storm water treatment. When the Agency promulgates new analytical methods in 40 CFR Part 136, EPA will provide information as to when you should use the new methods to generate data on your discharges. Of course, the Director may request additional information, including current quantitative data, if they determine it to be necessary to assess your discharges. The Director may allow or establish appropriate site-specific sampling procedures or requirements including sampling locations, the season in which the sampling takes place, the minimum duration between the previous measurable storm event and the storm event sampled, the minimum or maximum level of precipitation required for an appropriate storm event, the form of precipitation sampled (snow melt or rainfall), protocols for collecting samples under 40 CFR Part 136, and additional time for submitting data on a case-by-case basis.

- B. Reporting:** All levels must be reported as concentration and mass (note: grab samples are reported in terms of concentration). You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages VII-1 and VII-2 if the separate sheets contain all the required information in a format which is constant with pages VII-1 and VII-2 in spacing and identification of pollutants and columns. Use the following abbreviations in the columns headed "Units."

Concentration		Mass	
ppm	parts per million	lbs	pounds
mg/l	milligrams per liter	ton	tons (English tons)
ppb	parts per billion	mg	milligrams
ug/l	micrograms per liter	g	grams
kg	kilograms	T	tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless:

- (1) An applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or
- (2) All approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium); or
- (3) The permitting authority has determined that in establishing case-by-case limitations it is necessary to express the limitations on the metal in dissolved, valent, or total form to carry out the provisions of the CWA. If you measure only one grab sample and one flow-weighted composite

sample for a given outfall, complete only the "Maximum Values" columns and insert "1" into the "Number of Storm Events Sampled" column. The permitting authority may require you to conduct additional analyses to further characterize your discharges.

If you measure more than one value for a grab sample or a flow-weighted composite sample for a given outfall and those values are representative of your discharge, you must report them. You must describe your method of testing and data analysis. You also must determine the average of all values within the last year and report the concentration and mass under the "Average Values" columns, and the total number of storm events sampled under the "Number of Storm Events Sampled" columns.

- C. 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 provided that you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical outfalls, you may request permission from your permitting authority to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the permitting authority, on a separate sheet attached to the application form, identify which outfall you did test, and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

Part VII-A

Part VII-A must be completed by all applicants for all outfalls who must complete Form 2F.

Analyze a grab sample collected during the first thirty minutes (or as soon thereafter as practicable) of the discharge and flow-weighted composite samples for all pollutants in this Part, and report the results except use only grab samples for pH and oil and grease. See discussion in General Instructions to Item VII for definitions of grab sample collected during the first thirty minutes of discharge and flow-weighted composite sample. The "Average Values" column is not compulsory but should be filled out if data are available.

Part VII B

List all pollutants that are limited in an effluent guideline which the facility is subject to (see 40 CFR Subchapter N to determine which pollutants are limited in effluent guidelines) or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See discussion in General instructions to item VII for definitions of grab sample collected during the first thirty minutes (or as soon thereafter as practicable) of discharge and flow-weighted composite sample. The "Average Values" column is not compulsory but should be filled out if data are available.

Analyze a grab sample collected during the first thirty minutes of the discharge and flow-weighted composite samples for all pollutants in this Part, and report the results, except as provided in the General Instructions.

Part VII-C

Part VII-C must be completed by all applicants for all outfalls which discharge storm water associated with industrial activity, or that EPA is evaluating for designation as a significant contributor of pollutants to waters of the United States, or as contributing to a violation of a water quality standard. Use both a grab sample and a composite sample for all pollutants you analyze for in this part except use grab samples for residual chlorine and fecal coliform. The "Average Values" column is not compulsory but should be filled out if data are available. Part C requires you to address the pollutants in Table 2F-2, 2F-3, and 2F-4 for each outfall. Pollutants in each of these Tables are addressed differently.

Table 2F-2: For each outfall, list all pollutants in Table 2F-2 that you know or have reason to believe are discharged (except pollutants previously listed in Part VII-B). If a pollutant is limited in an effluent guideline limitation which the facility is subject to, the pollutant must be analyzed and reported in Part VII-B. If a pollutant in Table 2F-2 is indirectly limited by an effluent guideline limitation through an indicator (e.g., use of TSS as an indicator to control the discharge of iron and aluminum), you must analyze for it and report the data in Part VII-B. For other pollutants listed in Table 2F-2 (those not limited directly or indirectly by an effluent limitation guideline), that you know or have reason to believe are discharged, you must either report quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

Table 2F-3: For each outfall, list all pollutants in Table 2F-3 that you know or have reason to believe are discharged. For every pollutant in Table 2F-3 expected to be discharged in concentrations of 10 ppb or greater, you must submit quantitative data. For acrolein, acrylonitrile, 2,4 dinitrophenol, and 2-methyl-4,6 dinitrophenol, you must submit quantitative data if any of these four pollutants is expected to be discharged in concentrations of 100 ppb or greater. For every pollutant expected to be discharged in concentrations less than 10 ppb (or 100 ppb for the four pollutants listed above), then you must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

Small Business Exemption - If you are a "small business," you are exempt from the reporting requirements for the organic toxic pollutants listed in Table 2F-3. There are two ways in which you can qualify as a small business". 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. 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. The production or sales data must be for the facility which is the source of the discharge. The data should not be limited to production or sales for the process or processes which contribute to the discharge, unless those are the only processes at your facility. For sales data, in situations involving intracorporate transfer of goods and services, the transfer price per unit should approximate market prices for those goods and services as closely as possible. Sales figures for years after 1980 should be indexed to the second quarter of 1980 by using the gross national product price deflator (second quarter of 1980=100). This index is available in National Income and Product Accounts of the United States (Department of Commerce, Bureau of Economic Analysis).

Table 2F-4: For each outfall, list any pollutant in Table 2F-4 that you know or believe to be present in the discharge and explain why you believe it to be present. No analysis is required, but if you have analytical data, you must report them. Note: Under 40 CFR 117.12(a)(2), certain discharges of hazardous substances (listed at 40 CFR 177.21 or 40 CFR 302.4) may be exempted from the requirements of section 311 of CWA, which establishes reporting requirements, civil penalties, and liability for cleanup costs for spills of oil and hazardous substances. A discharge of a particular substance may be exempted if the origin, source, and amount of the discharged substances are identified in the NPDES permit application or in the permit, if the permit contains a requirement for treatment of the discharge, and if the treatment is in place. To apply for an exclusion of the discharge of any hazardous substance from the requirements of section 311, attach additional sheets of paper to your form, setting forth the following information:

1. The substance and the amount of each substance which may be discharged.
2. The origin and source of the discharge of the substance.
3. The treatment which is to be provided for the discharge by;
 - a. An onsite treatment system separate from any treatment system treating your normal discharge;
 - b. A treatment system designed to treat your normal discharge and which is additionally capable of treating the amount of the substance identified under paragraph 1 above; or
 - c. Any combination of the above.

See 40 CFR 117.12(a)(2) and (c), published on August 29, 1979, in 44 FR 50766, or contact your Regional Office (Table I on Form 1, Instructions), for further information on exclusions from section 311.

Part VII-D

If sampling is conducted during more than one storm event, you only need to report the information requested in Part VII-D for the storm event(s) which resulted in any maximum pollutant concentration reported in Part VII-A, VII-B, or VII-C.

Provide flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, the method of flow measurement, or estimation. Provide the data and duration of the storm event(s) sampled, rainfall measurements, or estimates of the storm event which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event.

Part VII-E

List any toxic pollutant listed in Tables 2F-2, 2F-3, or 2F-4 which you currently use or manufacture as an intermediate or final product or byproduct. In addition, if you know or have reason to believe that 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) is discharged or if you use or manufacture 2,4,5-trichlorophenoxy acetic acid (2,4,5,-T); 2-(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5,-TP); 2-(2,4,5-trichlorophenoxy) ethyl, 2,2-dichloropropionate (Erbon); 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate (Ronnel); 2,4,5-trichlorophenol (TCP); or hexachlorophene (HCP); then list TCDD. The Director may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each toxic pollutant and the Director has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

Item VIII

Self explanatory. The permitting authority may ask you to provide additional details after your application is received.

Item X

The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(4) of the Clean Water Act provides that "Any person who knowingly makes any false material statement, representation, or certification in any application, . . . shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than 2 years, or by both. If a conviction of such person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both." 40 CFR Part 122.22 requires the certification to be signed as follows:

(A) For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (i) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25,000,000 (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: EPA does not require specific assignments or delegation of authority to responsible corporate officers identified in 122.22(a)(1)(i) The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate position under 122.22(a)(1)(ii) rather than to specific individuals.

(B) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(C) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

**Table 2F-1
Codes for Treatment Units**

Physical Treatment Processes

1-A	Ammonia Stripping	1-M	Grit Removal
1-B	Dialysis	1-N	Microstraining
1-C	Diatomaceous Earth Filtration	1-O	Mixing
1-D	Distillation	1-P	Moving Bed Filters
1-E	Electrodialysis	1-Q	Multimedia Filtration
1-F	Evaporation	1-R	Rapid Sand Filtration
1-G	Flocculation	1-S	Reverse Osmosis (Hyperfiltration)
1-H	Flotation	1-T	Screening
1-1	Foam Fractionation	1-U	Sedimentation (Setting)
1-J	Freezing	1-V	Slow Sand Filtration
1-K	Gas-Phase Separation	1-W	Solvent Extraction
1-L	Grinding (Comminutors)	1-X	Sorption

Chemical Treatment Processes

2-A	Carbon Adsorption	2-G	Disinfection (Ozone)
2-B	Chemical Oxidation	2-H	Disinfection (Other)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (Chlorine)	2-L	Reduction

Biological Treatment Processes

3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filtration

Other Processes

4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection

Sludge Treatment and Disposal Processes

5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

Table 2F-2

Conventional and Nonconventional Pollutants

Bromide
Chlorine, Total Residual
Color
Fecal Coliform
Fluoride
Nitrate-Nitrite
Nitrogen, Total Organic
Oil and Grease
Phosphorus, Total
Radioactivity
Sulfate
Sulfite
Surfactants
Aluminum, Total
Barium, Total
Boron, Total
Cobalt Total
Iron, Total
Magnesium, Total
Molybdenum, Total
Manganese, Total
Tin, Total
Titanium, Total

Table 2F-3

Toxic Pollutants

Toxic Pollutants and Total Phenol

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

GC/MS Fraction Volatiles Compounds

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
Methylene Chloride

1,1,2,2-Tetrachloroethane
Tetrachloroethylene
Toluene
1,2-Trans-Dichloroethylene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Vinyl Chloride

Acid Compounds

2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-O-Cresol

2,4-Dinitrophenol
2-Nitrophenol
4-Nitrophenol
p-Chloro-M-Cresol

Pentachlorophenol
Phenol
2,4,6-Trichlorophenol
2-methyl-4,6 dinitrophenol

Base/Neutral

Acenaphthene
Acenaphthylene
Anthracene
Benzidine
Benzo(a)anthracene
Benzo(a)pyrene
3,4-Benzofluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
4-Bromophenyl Phenyl Ether
Butylbenzyl Phthalate

2-Chloronaphthalene
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-Octylphthalate
1,2-Diphenylhydrazine (as Azobenzene)

Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene
N-Nitrosodimethylamine
N-Nitrosodi-N-Propylamine
N-Nitrosodiphenylamine
Phenanthrene
Pyrene
1,2,4-Trichlorobenzene

Pesticides

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
PCB-1221
PCB-1232
PCB-1248
PGB-1260
PCB-1016
Toxaphene

Table 2F-4

Hazardous Substances

Toxic Pollutant

Asbestos

Hazardous Substances

Acetaldehyde
 Allyl alcohol
 Allyl chloride
 Amyl acetate
 Aniline
 Benzotrile
 Benzyl chloride
 Butyl acetate
 Butylamine
 Carbaryl
 Carbofuran
 Carbon disulfide
 Chlorpyrifos
 Coumaphos

Cresol
 Crotonaldehyde

Cyclohexane
 2,4-D (2,4-Dichlorophenoxyacetic acid)
 Diazinon
 Dicamba
 Dichlobenil
 Diclone
 2,2-Dichloropropionic acid
 Dichlorvos
 Diethyl amine
 Dimethyl amine

Dinitrobenzene
 Diquat
 Disulfoton
 Diuron
 Epichlorohydrin
 Ethion
 Ethylene diamine
 Ethylene dibromide
 Formaldehyde
 Furfural
 Guthion
 Isoprene
 Isopropanolamine
 Kelthane

Kepone
 Malathion

Mercaptodimethur
 Methoxychlor

Methyl mercaptan
 Methyl methacrylate
 Methyl parathion
 Mevinphos
 Mexacarbate
 Monoethyl amine
 Monomethyl amine
 Naled

Napthenic acid
 Nitrotoluene
 Parathion
 Phenolsulfonate
 Phosgene
 Propargite
 Propylene oxide
 Pyrethrins
 Quinoline
 Resorcinol
 Stronthium
 Strychnine
 Styrene
 2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
 TDE (Tetrachlorodiphenyl ethane)
 2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
 Trichlorofan
 Triethylamine
 Trimethylamine
 Uranium
 Vanadium
 Vinyl acetate
 Xylene
 Xylenol
 Zirconium