NPDES PERMIT RENEWAL APPLICATION

Georgia-Pacific LLC
Crossett Paper Operations
NPDES Permit #AR0001210

May 4, 2015

Georgia-Pacific LLC
Consumer Products

Crossett Paper Operations
100 Mill Supply Rd.
P.O. Box 3333
Crossett, AR 71635
(870) 567-8000
(870) 364-9076 fax
www.gp.com

May 4, 2015

Arkansas Department of Environmental Quality
Permits Branch – Water Division
5301 Northshore Drive
North Little Rock, AR 72118-5317

Attn: Ms. Loretta Reiber, P.E.

Subject: Georgia-Pacific LLC
NPDES Permit No. AR0001210
AFIN 02-00013
Application for Renewal

Ms. Reiber:

Georgia-Pacific LLC (GP) is submitting the renewal application as required for our NPDES Permit No. AR0001210. Additionally, we make the following requests for the permit once drafted:

Chlorophenolics, Chloroform, TCDD and TCDF monitoring (Part I, Section A of current permit:

- The frequency of monitoring for chloroform at Outfalls 101, 102 and 103 in the current permit is once every two months, while the monitoring for chlorophenolics at the same outfall is once every three months. We are requesting a reduction of the chlorophenolics and chloroform sampling frequency to once every six months to coordinate all required sampling on the same schedule. A summary of the data for the last two years is included for chloroform. During this same time period, there have been no detections for any of the chlorophenolics.
- Likewise, we are also requesting a reduction of 2,3,7,8 TCDD and 2,3,7,8 TCDF to once every six months at Outfalls 101, 102 and 103. There have been no detections of 2,3,7,8 TCDD or 2,3,7,8 TCDF during the last permit term.
- We request a permit condition be included in the renewed permit reflecting an option to exercise chloroform certification in lieu of monitoring for chloroform in accordance with 40 CFR 430.02(f). Submittal of the required information in 430.02(f) and approval of the information by ADEQ would replace the monitoring requirements for chloroform.

Dieldrin monitoring (Part I, Section A of current permit):

- Dieldrin limits were included in the last permit based on a single sampling detection data point in the last permit application. During the term of the current permit, we have had no quantifiable detections for dieldrin. GP does not use dieldrin in any raw materials for our process or otherwise at our site. We request the removal of dieldrin permit limits from the future permit.

SMS 002 - 24 hour Composite Samples (Part I, Section A of current permit):

- The sample type for several parameters for SMS 002 is listed as "24 hour composite". We request that this term be clarified to be a "24 hour time composite". Flow proportional sampling at Mossy Lake with a rectangular weir gate is not feasible due to the remoteness of the location and its risk of flooding and submergence of the flow measurement structure.

Mercury Minimization Plan (Part II.20 of current permit):

The Mercury Minimization program with the City of Crossett has been very successful as evidenced by the annual progress reports submitted. We request the developmental requirements for this condition be eliminated in the future permit, and the submittal of annual activity reports be the only retained requirement.

Priority Pollutant Scan

In addition, we did detect bis (2-ethylhexyl) phthalate both at Outfall 001(at a concentration of 25 ug/L) and SMS 002 (at a concentration of 190 ug/L). This is a common lab contaminant and would not be expected to be present in our effluent. We intend to conduct additional sampling and report results to you as soon as possible.

We appreciate the efforts of the ADEQ in processing this permit renewal. Should you have any questions about these comments, please contact Rachel Johnson at (870) 567-8170.

Sincerely,

Gary Kaiser

Gary Kaiser
Vice President, Georgia-Pacific LLC
100 Mill Supply Road
Crossett, AR 71635

NPDES Permit
Renewal Application
for
Georgia-Pacific LLC
Crossett Paper
Operations
NPDES Permit
#AR0001210

May 4, 2015

Arkansas Department of Environmental Quality
NPDES PERMIT APPLICATION
FORM 1

INSTRUCTIONS:

1. This form should be **typed or printed in ink**. If insufficient space is available to address any item please continue on an attached sheet of paper.

2. Please complete the following Section(s). If a Section is not required, please check the Not Applicable (N/A) box at the top of the Section.

Sections	A	B	C	D	E	F	G	H	I
POTW	X	X	X	X					X
Industrial User	X	X	X	X	X	X	X		X
Construction Permit Only	X	X	*	X				X	X
Modification	X	X	X	X	X	*	*	X	X
All Other Applicants	X	X	X	X	X				X

* As necessary

3. If you need help on SIC or NAICS go to www.osha.gov/oshstats/sicser.html

4. If you have any questions about this form you may call NPDES Section at 501-682-0622 or go to www.adeq.state.ar.us/water. You may also contact :

Department	Information in Regard to	Telephone #
Arkansas Department of Health	Water Supply	501-661-2623

5. The following EPA Forms in addition to Form 1 is required for processing your application:

Form 2A - Municipal Dischargers
Form 2B - Concentrated Animal Feeding Operations
Form 2C - Existing Manufacturing, Commercial, Mining, and Silvicultural Operations
Form 2D - New Sources and New Dischargers Application for Permit to Discharge Process Wastewater
Form 2E - Facilities Which Do Not Discharge Process Wastewater (i.e. Domestic, Non contact cooling water)
Form 2F - Application for Permit to Discharge Storm Water Discharges Associated With Industrial Activity

6. Where to Submit

Return the completed form by mail to:

Arkansas Department of Environmental Quality
Permits Branch, Water Division
5301 Northshore Drive
North Little Rock, AR 72118

Or by email to:

Water.Permit.Application@adeq.state.ar.us

NPDES PERMIT APPLICATION

FORM 1

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION
5301 Northshore Drive
North Little Rock, AR 72118-5317
www.adeq.state.ar.us/water

PURPOSE OF THIS APPLICATION

- ☐ INITIAL PERMIT APPLICATION FOR NEW FACILITY
- ☐ INITIAL PERMIT APPLICATION FOR EXISTING FACILITY
- ☐ MODIFICATION OF EXISTING PERMIT
- ☒ REISSUANCE (RENEWAL) OF EXISTING PERMIT
- ☐ MODIFICATION AND CONSTRUCTION OF EXISTING PERMIT
- ☐ CONSTRUCTION PERMIT

SECTION A- GENERAL INFORMATION

1. Legal Applicant Name (who has ultimate decision making responsibility over the operation of a facility or activity):

   Georgia-Pacific LLC

   Note: The legal name of the applicant must be identical to the name listed with the Arkansas Secretary of State.

2. Operator Type: Private ☒ State ☐ Federal ☐ Partnership ☐ Corporation ☐ Other ☐

   State of Incorporation: _____

3. Facility Name: Georgia-Pacific LLC, Crossett Paper Operations

4. Is the legal applicant identified in number 1 above, the owner of the facility? ☒ Yes ☐ No

5. NPDES Permit Number (If Applicable): AR0001210

6. NPDES General Permit Number (If Applicable): ARG(Not Applicable)

7. NPDES General Storm Water Permit Number (If Applicable): ARR00A776

8. Permit Numbers and/or names of any permits issued by ADEQ or EPA for an activity located in Arkansas that is presently held by the applicant or its parent or subsidiary corporation which are not listed above:

Permit Name	Permit Number	Held by
Please see attached list		

9. Give driving directions to the wastewater treatment plant with respect to known landmarks:

   Going west on Highway 82 from the papermill, go approximately 1 mile before turning left onto Texas Avenue. Go approximately 2 miles and turn right. Proceed approximately 1 mile, turn right towards the primary clarifier.

10. Facility Physical Location: (Attach a map with location marked; street, route no. or other specific identifier)

    Street: 100 Mill Supply Road

    City: Crossett County: Ashley State: AR Zip: 71635

Georgia-Pacific Crossett Complex

Operating Permits

Form 1, Section A, Item 8

Permit Name	Permit Number	Held by
Operating Air Permit	597-AOP-R16	Georgia-Pacific LLC
Hazardous Waste	ARD035466648	Georgia-Pacific LLC
Solid Waste Disposal Facility	270-S3N-R2	Georgia-Pacific LLC
Solid Waste Disposal Facility	292-S3N	Georgia-Pacific LLC
General Stormwater Permit	ARR00A776	Georgia-Pacific LLC
Potable Water (AR DOH)	N0028	Georgia-Pacific LLC
Operating Air Permit	736-AOP-R9	Georgia-Pacific LLC (Plywood/Studmill)
Hazardous Waste	ARD980621262	Georgia-Pacific LLC (Plywood/Studmill)
General Storm Water Permit	ARR00A178	Georgia-Pacific LLC (Plywood/Studmill)
Operating Air Permit	1177-AOP-R12	Georgia-Pacific Chemicals LLC
Hazardous Waste	ARD980621239	Georgia-Pacific Chemicals LLC

11. Facility Mailing Address for permit, DMR, and Invoice (Street or Post Office Box):

Name: Sarah M Ross Title: Environmental Manager

Street: 100 Mill Supply Road P.O. Box 3333

City: Crossett State: AR Zip: 71635

E-mail address*: sarah.ross@gapac.com Fax: 870-364-9076

* Is emailing all documents (permit, letters, DMRs, invoices, etc.) acceptable to the applicant? ☒ Yes ☐ No

12. Neighboring States Within 20 Miles of the permitted facility (Check all that apply):

Oklahoma ☐ Missouri ☐ Tennessee ☐ Louisiana ☒ Texas ☐ Mississippi ☐

13. Indicate applicable Standard Industrial Classification (SIC) Codes and NAICS codes for primary processes

2621, 2436, 2821, 2439 SIC Facility Activity under this SIC or NAICS:

322121, 321212, 325211, 321213 NAICS

14. Design Flow: 100 MGD Highest Monthly Average of the last two years Flow: 52.1 MGD

15. Is Outfall equipped with a diffuser? ☐ Yes ☒ No

16. Responsible Official (as described on the last page of this application):

Name: Gary W. Kaiser Title: VP-MFG

Address: 100 Mill Supply Road Phone Number: (870) 567-8310

E-mail Address: gary.kaiser@gapac.com

City: Crossett State: AR Zip: 71635

17. Cognizant Official (Duly Authorized Representative of responsible official as describe on the last page of this application):

Name: NA Title:

Address: Phone Number:

E-mail Address:

City: State: Zip:

18. Name, address and telephone number of active consulting engineer firm (If none, so state):

Contact Name: None

Company Name: None

Address: Phone Number:

E-mail Address:

City: State: Zip:

19. Wastewater Operator Information

Wastewater Operator Name: Rachel Johnson License number: 008956

Class of municipal wastewater operator: I ☐ II ☐ III ☐ IV ☐

Class of industrial wastewater operator: Basic ☐ Advanced ☒

SECTION B: FACILITY AND OUTFALL INFORMATION

1. Facility Location (All information must be based on **front door (Gate)** location of the facility):

Lat: 33 ° 08 ' 30 " Long: 91 ° 58 ' 12 " County: Ashley Nearest Town: Crossett

2. **Outfall** Location (The location of the end of the pipe Discharge point.):

Outfall No. 001:

Latitude: 33 ° 06 ' 45 " Longitude: 92 ° 02 ' 17 "

Where is the collection point? within the parshall flume

Name of Receiving Stream (i.e. an unnamed tributary of Mill Creek, thence into Mill Creek; thence into Arkansas River):

Into the upper reaches of Mossy Lake, thence into Coffee Creek, thence into the Ouachita River

Outfall No. SMS 002:

Latitude: 33 ° 02 ' 00 " Longitude: 92 ° 04 ' 24 "

Where is the collection point? within the weir discharge structure

Name of Receiving Stream (i.e. an unnamed tributary of Mill Creek, thence into Mill Creek; thence into Arkansas River):

Coffee Creek to the Ouachita River (Note: this is classified as a Stream Monitoring Station)

3. **Monitoring** Location (If the monitoring is conducted at a location different than the above **Outfall** location):

Outfall No. 101:

Lat: 33 ° 08 ' 29 " Long: 91 ° 58 ' 28 "

Outfall No. 102:

Lat: 33 ° 08 ' 29 " Long: 91 ° 58 ' 28 "

Outfall No. 103:

Lat: 33 ° 08 ' 29 " Long: 91 ° 58 ' 28 "

4. Type of Treatment system (Included all components of treatment system and Attach the process flow diagram):

Primary treatment by clarifier and settling basins. Equalization by a surge basin. Chemical additions for odor control and nutrients. Biological treatment by an aerated stabilization basin (ASB) and Polishing Pond (Mossy Lake).

5. Do you have, or plan to have, **AUTOMATIC** sampling equipment or **CONTINUOUS** wastewater flow metering equipment at this facility?

Current:	Flow Metering	☒	Yes	Type: Continuous	☐	No	☐	N/A	☐
	Sampling Equipment	☒	Yes	Type: Automatic	☐	No	☐	N/A	☐
Planned:	Flow Metering	☐	Yes	Type:	☐	No	☐	N/A	☒
	Sampling Equipment	☐	Yes	Type:	☐	No	☐	N/A	☒

If **YES**, please indicate the present or future location of this equipment on the sewer schematic and describe the equipment below:

The automatic sampling equipment and continuous flow metering equipment are located at Outfalls 001 and SMS 002.

If **NO**, please describe the method and location of flow measurement below:

6. Is the proposed or existing facility located above the 100-year flood level? ☐ Yes ☒ No

NOTE: FEMA Map must be included with this application. Maps can be ordered at www.fema.gov .

If "No", what measures are (or will be) used to protect the facility? Storm water in immediate production areas is routed to the WWTP, storm water in outlying areas is routed to separate storm water ditches in order to protect the WWTP

7. Population for Municipal and Domestic Sewer Systems: NA

8. Backup Power Generation for Treatment Plants

Are there any permanent backup generators? Yes ☐ No ☒

If Yes, How many? _____ Total Horespower (hp)? _____

If No, Please explain? The facility generates 70% of all power required for mill operations and treatment plant needs. The remaining 30% is purchased from Entergy.

SECTION C – WASTE STORAGE AND DISPOSAL INFORMATION

1. Sludge Disposal Method (Check as many as are applicable):

☒ **Landfill**

Landfill Site Name North Landfill ADEQ Solid Waste Permit No. 292-S3N

☐ **Land Application:** ADEQ State Permit No. _____

☐ **Septic tank** Arkansas Department of Health Permit No.: _____

☐ **Distribution and Marketing**: Facility receiving sludge:

Name: _____ Address: _____

City: _____ State: _____ Zip: _____ Phone: _____

Rail: ☐ Pipe: ☐ Other: _____

☐ **Subsurface Disposal** (Lagooning):

Location of lagoon _____ How old is the lagoon? _____

Surface area of lagoon: _____ Acre Depth: _____ ft Does lagoon have a liner? ☐ Yes ☐ No

☐ **Incineration:** Location of incinerator _____

☐ **Remains in Treatment Lagoon(s):**

How old is the lagoon(s)? _____ Has sludge depth been measured? ☐ Yes ☐ No

If Yes, Date measured? _____ Sludge Depth? _____ ft If No, When will it be measured? _____

Has sludge ever been removed? Yes ☐ No ☐ If Yes, When was it removed? _____

☒ **Other** (Provide complete description): Closure material for the former sludge pond.

SECTION D - WATER SUPPLY

Water Sources (check as many as are applicable):

☒ **Private Well** - Distance from Discharge point: ☐ Within 5 miles ☒ Within 50 miles

☒ **Municipal Water Utility** (Specify City): Crossett

Distance from Discharge point: ☐ Within 5 miles ☒ Within 50 miles

☒ **Surface Water-** Name of Surface Water Source: Lake GP/Saline river

Distance from Discharge point: ☐ ☐☐Within 5 miles ☒ Within 50 miles

Lat: 33 ° 15 ' 075 " Long: 92 ° 02 ' 554 "

☐ **Other** (Specify): _____

Distance from Discharge point: ☐ ☐☐Within 5 miles ☐ Within 50 miles

NOT APPLICABLE (N/A): ☐

SECTION E: FINANCIAL ASSURANCE AND DISCLOSURE STATEMENT

1. Arkansas Code Annotated § 8-4-203provides for financial assurance requirements for permitting non-municipal domestic sewage treatment systems. Arkansas Code 8-4-203 (b)(1)(A)(i) – "The department shall not issue, modify, or renew a National Pollutant Discharge Elimination System permit or state permit for a non-municipal domestic sewage treatment works without the permit applicant first demonstrating to the department its financial ability to cover the estimated costs of operating and maintaining the non-municipal domestic sewage treatment works for a minimum period of five (5) years."

   The applicant must provide a detailed estimate of the operation and maintenance (O&M) costs for the facility for a five year period. Once the O&M estimate is approved, the applicant must provide **financial assurance** in order to show that the facility is able to cover the costs of operating and maintaining the treatment system for the next five years.

   The minimal financial assurance may be demonstrated to the department by using the following as outlined in Arkansas Code 8-4-203(b)(2):

   A. Obtaining insurance that specifically covers operation and maintenance costs
   B. Obtaining a letter of credit;
   C. Obtaining a surety/performance bond;
   D. Obtaining a trust fund or an escrow account; or
   E. Using a combination of insurance, letter of credit, surety bond, trust fund, or escrow account.

2. Disclosure Statement:

   Arkansas Code Annotated Section 8-1-106 requires that all applicants for any type of permit or transfer of any permit, license, certification or operational authority issued by the Arkansas Department of Environmental Quality (ADEQ) file a Disclosure Statement with their application. The filing of a Disclosure Statement is mandatory. No application can be considered administratively complete without a completed Disclosure Statement. The form may be obtained from the ADEQ web site at:

   http://www.adeq.state.ar.us/disclosure_stmt.pdf

NOT APPLICABLE (N/A): ☐

SECTION F – INDUSTRIAL ACTIVITY

1. Does an effluent guideline limitation promulgated by EPA (Link to a Listing of the 40 CFR Effluent Limit Guidelines) under Section 304 of the Clean Water Act (CWA) apply to your facility?

   YES ☒ (Answer questions 2 and 3) NO ☐

2. What Part of 40 CFR? 430, 429, 414 and 454

3. What Subpart(s)? 430 Subpart B, 429 Subparts B,C&K, 414 Subparts E&F, and 454 Subpart D

4. Give a brief description of all operations at this facility including primary products or services (attach additional sheets if necessary):

   The Georgia-Pacific Complex consists of a Kraft Pulp and Papermill, which produces tissue paper, and paperboard, Plywood and Stud mills, and a Chemical Plant, which manufactures phenol and urea formaldehyde resins and tall oil products. For a more detailed description please see the attachments.

5. Production: (projected for new facilities)

Product(s) Manufactured	Last 12 Months		Highest Production Year of Last 5 Years	
	lbs/day*		lbs/day*	
(Brand name)	Highest Month	Days of Operation	Monthly Average	Days of Operation
See 2C pg 2 of 4 Section 3.C.1.				

* These units could be off-lbs, lbs quenched, lbs cleaned/etched/rinsed, lbs poured, lbs extruded, etc.

NOT APPLICABLE (N/A): ☐

SECTION G - WASTEWATER DISCHARGE INFORMATION

Facilities that checked "Yes" in question 1 of Section F are considered Categorical Industrial Users and should skip to question 2.

1. **For Non-Categorical Users Only**: List average wastewater discharge, maximum discharge, and type of discharge (batch, continuous, or both), for each plant process. Include the reference number from the process flow schematic (reference Figure 1) that corresponds to each process. [New facilities should provide estimates for each discharge.]

No.	Process Description	Average Flow (GPD)	Maximum Flow (GPD)	Type of Discharge (batch, continuous, none)
	NA			

If batch discharge occurs or will occur, indicate: [New facilities may estimate.]

Number of batch discharges: _____ per day Average discharge per batch: (GPD)

Time of batch discharges _____ (days of week) at _____ (hours of day)

Flow rate: _____ gallons/minute Percent of total discharge: _____

Answer questions 2, 3, 4, and 5 only if you are subject to Categorical Standards.

2. For Categorical Users: Provide the wastewater discharge flows for each of your processes or proposed processes. Include the reference number from the process flow schematic (reference Figure 1) that corresponds to each process. [Note: 1) New facilities should provide estimates for each discharge and 2) Facilities should denote whether the flow was measured or estimated.]

No.	Regulated Process	Average Flow (GPD)	Maximum Flow (GPD)	Type of Discharge (batch, continuous, none)
P1	Pulp and Paper	14,500,000	26,200,000	Continuous
P2	Pulp, Paper and Recovery	8,300,000	15,600,000	Continuous
P3	Chemical, Plywood, Stud mill, Utilities, and Bleach	15,300,000	42,700,000	Continuous

No.	Unregulated Process	Average Flow (GPD)	Maximum Flow (GPD)	Type of Discharge (batch, continuous, none)
	NA			

No.	Dilution (e.g., Cooling Water)	Average Flow (GPD)	Maximum Flow (GPD)	Type of Discharge (batch, continuous, none)
	NA			

If batch discharge occurs or will occur, indicate: [New facilities may estimate.]

Number of batch discharges: _____ per day Average discharge per batch: (GPD)

Time of batch discharges _____ (days of week) at _____ (hours of day)

Flow rate: _____ gallons/minute Percent of total discharge: _____

3. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Current:	Flow Metering	☒	Yes	Type: Continuous	☐	No	☐	N/A	☐
	Sampling Equipment	☒	Yes	Type: Automatic	☐	No	☐	N/A	☐
Planned:	Flow Metering	☐	Yes	Type: _____	☐	No	☐	N/A	☐
	Sampling Equipment	☐	Yes	Type: _____	☐	No	☐	N/A	☐

If yes, please indicate the present or future location of this equipment on the sewer schematic and describe the equipment below:

The automatic sampling equipment and continuous flow metering equipment are located at Outfalls 001 and SMS 002.

4. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics?

☐ Yes ☒ No (If no, skip Question 5)

5. Briefly describe these changes and their effects on the wastewater volume and characteristics:

NOT APPLICABLE (N/A): ☒

SECTION H -TECHNICAL INFORMATION

Technical information to support this application shall be furnished in appropriate detail to understand the project. Information in this Part is required for obtaining a **construction permit** or for **modification** of the treatment system.

1. Describe the treatment system. Include the types of control equipment to be installed along with their methods of operation and control efficiency.

   Not applicable

2. One set of construction plans and specifications, approved (Signed and stamped) by a **Professional Engineer** (PE) registered in **Arkansas**, must be submitted as follows:

   a. The plans must show flow rates in addition to pertinent dimensions so that detention times, overflow rates, and loadings per acre, etc. can be calculated.
   b. Specifications and complete design calculations.
   c. All treated wastewater discharges should have a flow measuring device such as a weir or Parshall flume installed. Where there is a significant difference between the flow rates of the raw and treated wastewater, a flow measuring device should be provided both before and after treatment.

3. If this application includes a construction permit disturbing five or more acres, a storm water construction permit must be obtained by submitting a notice of intent (NOI) to ADEQ.

SECTION I: SIGNATORY REQUIREMENTS

gnizant Official (Duly Authorized Representative)

40 CFR 122.22(b) states that all reports required by the permit, or other information requested by the Director, shall be signed by the applicant (or person authorized by the applicant) or by a duly authorized representative of that person. A person is duly authorized representative only if:

(1) the authorization is made in writing by the applicant (or person authorized by the applicant);
(2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity responsibility, or an individual or position having overall responsibility for environmental matters for the company.

The applicant hereby designates the following person as a Cognizant Official, or duly authorized representative, for signing reports, etc., including Discharge Monitoring Reports (DMR) required by the permit, and other information requested by the Director:

Signature of Cognizant Official: _____ Date: _____

Printed name of Cognizant Official: _____

Official title of Cognizant Official: _____ Telephone Number: _____

Responsible Official

The information contained in this form must be certified by a ***responsible official*** as defined in the "signatory requirements for permit applications" (40 CFR 122.22).

Responsible official is defined as follows:

Corporation, a principal officer of at least the level of vice president
rtnership, a general partner
Sole proprietorship: the proprietor
Municipal, state, federal, or other public facility: principal executive officer, or ranking elected official.

_____ *(Initial)* "I certify that the cognizant official designated above is qualified to act as a duly authorized representative under the provisions of 40 CFR 122.22(b)." NOTE: If no duly authorized representative is designated in this section, the Department considers the applicant to be the responsible official for the facility and only reports, etc., signed by the applicant will be accepted by the Department.

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_____ *(Initial)* "I certify that, if this facility is a corporation, it is registered with the Secretary of State in Arkansas. Please provide the full name of the corporation if different than that listed in Section A above."

"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. I further certify under penalty of law that all analyses reported as less than detectable in this application or attachments thereto were performed using the EPA approved test method having the lowest detection limit for the substance tested."

Signature of Responsible Official: Gary Kaiser Date: 5-4-15

Printed name of Responsible Official: Gary W. Kaiser

Official title of Responsible Official: Vice President of Manufacturing Telephone Number: (870) 567-8310

I certify that Georgia-Pacific LLC is a Delaware limited liability company and is registered with the Secretary of State in Arkansas.

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
DISCLOSURE STATEMENT

Instructions for the Completion of this Document:

A. Individuals, firms or other legal entities with no changes to an ADEQ Disclosure Statement, complete items 1 through 5 and 18.

B. Individuals who never submitted an ADEQ Disclosure Statement, complete items 1 through 4, 6, 7, and 16 through 18.

C. Firms or other legal entities who never submitted an ADEQ Disclosure Statement, complete 1 through 4, and 6 through 18.

If Not Submitting by ePortal, Mail Original to:
ADEQ
DISCLOSURE STATEMENT
[*List Proper Division(s)*]
5301 Northshore Drive
North Little Rock, AR 72118-5317

1. APPLICANT: (Full Name)
Georgia-Pacific LLC

2. MAILING ADDRESS (Number and Street, P.O.Box Or Rural Route) :
100 Mill Supply Road, P.O. Box 3333

3. CITY, STATE, AND ZIPCODE:
Crossett, AR 71635

4a. Applicant Type:
☐ Individual ☑ Corporate or Other Entity

4b. Reason for Submission:
☑ Permit ☐ License ☐ Certification ☐ Operational Authority
☐ New Application ☐ Modification ☑ Renewal Application (If no changes from previous disclosure statement, complete number 5 and 18.)

4c. Division:
☐ Air ☑ Water ☐ Hazardous Waste ☐ Regulated Storage Tank ☐ Mining ☐ Solid Waste

5. Declaration of No Changes:
The violation history, experience and credentials, involvement in current or pending environmental lawsuits, civil and criminal, have not changed since the last Disclosure Statement that was filed with ADEQ on N/A - updated information provided on this form.

6. Describe the experience and credentials of the Applicant, including the receipt of any past or present permits, licenses, certifications or operational authorization relating to environmental regulation. (Attach additional pages, if necessary.)

The facility employs a staff of environmental professionals to oversee regulatory compliance at the mill. Four employees maintain a current Industrial Wastewater License. The current Environmental Manager is a registered professional engineer (P.E.) with over 9 years of experience working in the paper industry.

Georgia-Pacific's Crossett Paper Mill currently operates under a number of environmental permits, including the NPDES permit which is currently being renewed, a Title V air permit, two landfill permits and stormwater registrations. All of these permits are listed in the NPDES Permit renewal application.

7. List and explain all civil or criminal legal actions by government agencies involving environmental protection laws or regulations against the Applicant * in the last ten (10) years including:

1. **Administrative enforcement actions resulting in the imposition of sanctions;**
2. **Permit or license revocations or denials issued by any state or federal authority;**
3. **Actions that have resulted in a finding or a settlement of a violation; and**
4. **Pending actions.**

(Attach additional pages, if necessary.)

Georgia-Pacific LLC is a global company with approximately 200 direct and indirect subsidiary companies. Georgia-Pacific LLC and its affiliated companies have approximately 200 manufacturing and associated facilities. These facilities have environmental permits and/or are subject to numerous environmental requirements. During the past 10 years, some of GP's facilities have been or are subject to some form of enforcement action. Applicant can provide information regarding such actions, unrelated to the Crossett Complex, if requested by ADEQ.

Enforcement actions specifically related to the Crossett Paper Mill and other operations at GP's Crossett Complex include:

- On or about June 9, 2007, the Crossett Paper Mill entered into 2 related Consent Administrative Orders (LIS:07-058 and LIS:07-059) with ADEQ.
- On or about December 13, 2010, GP's Crossett Plywood and Studmill entered into Consent Administrative Order LIS:10-209 with ADEQ.
- On or about January 13, 2011, the Crossett Paper Mill and US EPA Region 6 entered into CAA-06-2010-3501.
- On or about March 28, 2011, the Crossett Paper Mill entered into a Consent Administrative Order LIS:11-060 with ADEQ.

Additionally, the Crossett Paper Mill, as well as GP's other operations in Crossett, have been subject to recent inspections by Arkansas DEQ and the US EPA. GP is currently in discussions with EPA to resolve findings arising from those inspections.

*** Firms or other legal entities shall also include this information for all persons and legal entities identified in sections 8-16 of this Disclosure Statement.**

8. List all officers of the Applicant. (Add additional pages, if necessary.)

NAME: See attachment TITLE:
STREET:
CITY, STATE, ZIP:

NAME: TITLE:
STREET:
CITY, STATE, ZIP:

NAME: TITLE:
STREET:
CITY, STATE, ZIP:

9. List all directors of the Applicant. (Add additional pages, if necessary.)

NAME: Not applicable TITLE:
STREET:
CITY, STATE, ZIP:

NAME: TITLE:
STREET:
CITY, STATE, ZIP:

NAME: TITLE:
STREET:
CITY, STATE, ZIP:

10. List all partners of the Applicant. (Add additional pages, if necessary.)

NAME: Not applicable TITLE:
STREET:
CITY, STATE, ZIP:

NAME: TITLE:
STREET:
CITY, STATE, ZIP:

NAME: TITLE:
STREET:
CITY, STATE, ZIP:

11. List all persons employed by the Applicant in a supervisory capacity or with authority over operations of the facility subject to this application.

NAME: Gary Kaiser TITLE: Vice -President, Manufacturing
STREET: 100 Paper Mill Road
CITY, STATE, ZIP: Crossett, AR 71635

NAME: Sarah Ross TITLE: Environmental Manager
STREET: 100 Paper Mill Road
CITY, STATE, ZIP: Crossett, AR 71635

NAME: Rachel Johnson TITLE: Environmental Engineer
STREET: 100 Paper Mill Road
CITY, STATE, ZIP: Crossett, AR 71635

12. List all persons or legal entities, who own or control more than five percent (5%) of the Applicant's debt or equity.

NAME: See attached TITLE: _____

STREET: _____

CITY, STATE, ZIP: _____

NAME: _____ TITLE: _____

STREET: _____

CITY, STATE, ZIP: _____

NAME: _____ TITLE: _____

STREET: _____

CITY, STATE, ZIP: _____

13. List all legal entities, in which the Applicant holds a debt or equity interest of more than five percent (5%).

NAME: See response to #15 below. TITLE: _____

STREET: _____

CITY, STATE, ZIP: _____

NAME: _____ TITLE: _____

STREET: _____

CITY, STATE, ZIP: _____

NAME: _____ TITLE: _____

STREET: _____

CITY, STATE, ZIP: _____

14. List any parent company of the Applicant. Describe the parent company's ongoing organizational relationship with the Applicant.

NAME: Georgia-Pacific Holdings, LLC

STREET: 133 Peachtree Street NE

CITY, STATE, ZIP: Atlanta, GA 30303

Organizational Relationship:

Owns 100% of Georgia-Pacific LLC

15. List any subsidiary of the Applicant. Describe the subsidiary's ongoing organizational relationship with the Applicant.

NAME: _____

STREET: _____

CITY, STATE, ZIP: _____

Organizational Relationship:

Georgia-Pacific LLC is a global company with approximately 200 direct and indirect subsidiary companies. It is not feasible to provide such information in this statement. Georgia-Pacific will provide specific information relevant to its Crossett operations upon request.

16. List any person who is not now in compliance or has a history of noncompliance with the environmental laws or regulations of this state or any other jurisdiction and who through relationship by blood or marriage or through any other relationship could be reasonably expected to significantly influence the Applicant in a manner which could adversely affect the environment.

NAME: See attached. TITLE: _____

STREET: _____

CITY, STATE, ZIP: _____

NAME: _____ TITLE: _____

STREET: _____

CITY, STATE, ZIP: _____

17. List all federal environmental agencies and any other environmental agencies outside this state that have or have had regulatory responsibility over the Applicant.

Applicant Georgia-Pacific LLC is subject to the regulatory authority of the US Environmental Protection Agency and, where wetlands may be implicated, the US Army Corps of Engineers. Additionally, Applicant and its affiliates have operations across the United States and are subject to the regulatory authority of many state environmental agencies. Given the size and longevity of Applicant, its predecessors and affiliated companies, there may be other regulatory agencies, inside or outside of the US, with responsibility over various Georgia-Pacific operations.

18. VERIFICATION AND ACKNOWLEDGEMENT

The Applicant agrees to provide any other information the director of the Arkansas Department of Environmental Quality may require at any time to comply with the provisions of the Disclosure Law and any regulations promulgated thereto. The Applicant further agrees to provide the Arkansas Department of Environmental Quality with any changes, modifications, deletions, additions or amendments to any part of this Disclosure Statement as they occur by filing an amended Disclosure Statement.

DELIBERATE FALSIFICATION OR OMISSION OF RELEVANT INFORMATION FROM DISCLOSURE STATEMENTS SHALL BE GROUNDS FOR CIVIL OR CRIMINAL ENFORCEMENT ACTION OR ADMINISTRATIVE DENIAL OF A PERMIT, LICENSE, CERTIFICATION OR OPERATIONAL AUTHORIZATION.

COMPLETE THIS SECTION ONLY IF SUBMITTING OTHER THAN BY EPORTAL:

I, Gary Kaiser **, 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 fines and imprisonment for knowing violation.**

APPLICANT SIGNATURE: Gary Kaiser

TITLE: Vice President, Manufacturing

DATE: May 1, 2015

Arkansas Disclosure Statement
Georgia-Pacific LLC -Crossett Paper Operations
NPDES Permit No. AR0001210

8. Officers of Georgia-Pacific LLC

Jones, Wesley	Executive Vice President
Berryman, Timothy J.	Assistant Treasurer
DeLorenzo, Mark V.	Assistant Treasurer
Silverman, Lisa R.	Assistant Treasurer
Mingledorff, Ann F.	Assistant Secretary
Ragsdale, George T.	Assistant Secretary
Cason, Christine M.	Assistant Secretary
Price, Gary L.	Vice President - Taxes
Walters, Kathleen A.	Executive Vice President - Consumer Products Group
Fischer, Christian	Executive Vice President - Packaging
Brehm, Julie A.	Senior Vice President - Human Resources
Darland, Tye G.	Senior Vice President - General Counsel and Secretary
Park, David G.	Senior Vice President - Strategy and Business Development
Robison, Randal K.	Senior Vice President - Chief Information Officer
Woolson, Tyler L.	Senior Vice President and Chief Financial Officer
Adams, Ashley J.	Assistant Secretary
Luetters, Mark E.	Executive vice President - Building Products
Tyler, Walter	Senior Vice President - Health and Safety
Kruljac, Michael V.	Assistant Secretary
Gorman, Richard M.	Assistant Treasurer - Taxes
Stagmeier, John H.	Assistant Treasurer - Taxes
Tompkins, Michael D.	Vice President - Building Products
Champion, Bryant T.	Senior Vice President - Environmental
Knigge, Diana M.	Senior Vice President - Compliance and Ethics
Zito, Ashley H.	Assistant Secretary
Andrews, Katelyn	Assistant Secretary
Shirk, Gerald A.	Treasurer and Vice President - Real Estate
Cline, Debra S.	Assistant Secretary
Weidman, Sheila	Senior Vice President - Communications, Government and Public Affairs
Patin II, Joseph P.	Assistant Treasurer - Taxes
Adams, Michael E.	Senior Vice President - Supply and Trading, Fiber and Energy
Martin, Joseph R.	Assistant Secretary
Berry, Mark D.	Assistant Secretary
Waldrep, Marvin L.	Assistant Secretary
Hannan, James B.	President and Chief Executive Officer
Paugh, Brent H.	Senior Vice President - Gypsum

12. Georgia-Pacific LLC's parent company is Georgia-Pacific Holdings, LLC. Georgia-Pacific LLC's outstanding debt consists mainly of bonds and other indebtedness that do not trade on public markets. Therefore, GP has only limited information on the holders of its debt and cannot readily confirm ownership percentage.

16. We are not aware of any noncompliance by an employee, relative, spouse, or other relationship that could be reasonable expected to significantly influence the Applicant in a manner which would adversely affect the environment.

ADEQ

ARKANSAS
Department of Environmental Quality

Application Form PPS

Priority Pollutant Scan Information

E:NEWMAIN:FORMS:FORM PP
Revised 12/0

ATTENTION

AClean@ Sampling Techniques

Water quality (WQ) standards (Based on aquatic toxicity and human health criteria) for many of the heavy metals are Aat@ analytical methods= detection levels (MDL).

It is recognized that **unclean** sampling and lab techniques can and do **cause** contamination sometimes causing measurements to be Aseen@ as **violations** of the WQ standards. Therefore, the permittee must recognize the **importance** of **eliminating** contamination.

For personnel responsible for collecting samples in answer to effluent monitoring requirements, the Department recommends following sample collection and handling in accordance with EPA=s **Method 1669: Sampling Ambient Water for Determination of Trace Metals at EPA Water Quality Criteria Levels** as closely as possible and as economically feasible. A copy of Method 1669 is available upon request.

Please convey to your contract testing laboratory the extreme importance of proper sampling techniques associated with analytical testing for heavy metals. Some of the techniques may be considered too expensive to justify implementation but it could be in the best interest of your facility to **submit the PPS Form by using common sense AClean@ Sampling Techniques.**

GENERAL INSTRUCTION

1. **Generation of a form similar to the PPS form is prohibited without expressed written permission of ADEQ, Discharge Permits Section, Water Division.**

2. All major facilities, all categorical industries, or any facility that believes there are priority pollutant(s) present in their discharge, must submit the Form PPS.

3. All facilities must monitor for **metals** and **cyanide**.

4. Testing requirements for categorical industries are listed in Attachment 1.

5. If one of the EPA approved test methods (40 CFR Part 136) is used the method detection level (MDL) **must be as low as Minimum Quantification Levels** (**MQL**). MQLs are based on EPA Region 6 guidance dated April 10, 2006: "MQL = 3.3 X MDL"

6. All the units must be expressed in µg/l (Micro grams per liter).

7. **All the results less than Used Method Detection Level Achieved are reported as ND (Not Detected).**

8. The data requested for the priority pollutant scan in the enclosures shall be submitted with copies of the laboratory results, MDLs and MQLs. Certification that QA/QC procedures were implemented must be submitted with the requested information.

9. All analyses must be performed at the minimum level of sensitivity. The analyses must demonstrate that an acceptable calibration point as low as MQL was used. Test procedures must conform to approved EPA methodology listed in 40 CFR Part 136.

ATTACHMENT 1

TESTING REQUIREMENTS FOR ORGANIC TOXIC POLLUTANTS INDUSTRY CATEGORY

INDUSTRY CATEGORY	Volatile	Acid	Base/Neutral	Pesticide
Adhesives & Sealants ..	X	X	X	-
Aluminum Forming	X	X	X	-
Auto & 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 & Electronic Compounds	X	X	X	X
Electroplating	X	X	X	-
Explosives Manufacturing	-	X	X	-
Foundries	X	X	X	-
Gum & Wood Chemicals	X	X	X	X
Inorganic Chemicals Manufacturing	X	X	X	-
Iron & Steel Manufacturing	X	X	X	-
Leather Tanning & 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 & Ink Formulation	X	X	X	X
Pesticides	X	X	X	X
Petroleum Refining	X	X	X	X
Pharmaceutical Preparations	X	X	X	-
Photographic Equipment & Supplies	X	X	X	X
Plastic & Synthetic Materials Manufacturing	X	X	X	X
Plastic Processing	X	-	-	-
Porcelain Enameling	X	-	X	X
Printing & Publishing	X	X	X	X
Pulp & Paperboard Mills	X	X	X	X
Rubber Processing	X	X	X	-
Soap & 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

X Testing required.
- Testing not required.

ARKANSAS Department of Environmental Quality
PPS REQUIREMENTS

1. Name of facility:

   Georgia-Pacific LLC, Crossett Paper Operations

2. Name, address and telephone number of laboratory:

PPS w/o TCDD	TCDD
American Interplex	SGS Analytical Perspectives
8600 Kanis Road	5500 Business Drive
Little Rock, AR 72204	Wilmington, NC 28405
(501) 224-5060	(910) 350-1903

3. Is the lab certified by the State of Arkansas? Yes _X___ No ___

4. What are the certification dates?

   Issued data 02/28/2014 Expire date 02/28/2015

5. Is the laboratory certified for all the parameters?

   YES __X__ No ____ (Explain)

   _____

   _____

6. Date and time of samples collected:

   10/21/14, 10:54 am

7. Date and time samples were received in the laboratory:

   10/21/14, 15:55 pm

8. Sample location (Outfall No.):

   Outfall 001

9. Samples collected by:

   Name Rachel Johnson/Danny Rice

   Title Environmental Engineer/Environmental Specialist

   Telephone 870-567-8170

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

Gary W. Kaiser
Printed Name of person signing

Vice-President of Manufacturing
Title

Gary Kaiser
Signature

5-4-15
Date signed

List all attachments to this form:

NA

METALS AND CYANIDE	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
1. Antimony (Total), Recoverable	ND	EPA 200.8	60	60
2. Arsenic (Total), Recoverable	1.9	EPA 200.8	0.5	0.5
3. Beryllium (Total), Recoverable	ND	EPA 200.8	0.5	0.5
4. Cadmium (Total), Recoverable	ND	EPA 200.8	0.5	0.5
5. Chromium (Total), Recoverable	ND	EPA 200.8	10	10
7. Chromium (6+), Dissolved	ND	SM 3500-Cr B	10	10
8. Copper (Total), Recoverable	21	EPA 200.8	0.5	0.5
9. Lead (Total), Recoverable	ND	EPA 200.8	0.5	0.5
10. Mercury (Total), Recoverable	0.0030	EPA 245.1	0.005	0.005
12. Nickel (Total), Recoverable	11	EPA 200.8	0.5	0.5
13. Selenium (Total), Recoverable	ND	EPA 200.8	5	5
14. Silver (Total), Recoverable	ND	EPA 200.8	0.5	0.5
15. Thallium (Total), Recoverable	ND	EPA 200.8	0.5	0.5
16. Zinc (Total), Recoverable	26	EPA 200.8	20	20
129. Phenols, Total Recoverable	13	EPA 420.1	5	5
17. Cyanide (Total), Recoverable	ND	SM 4500-CN C,E	10	10

DIOXIN	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
18. 2,3,7,8-Tetrachloro-debenzo-p-dioxin (TCDD)	ND	1613	0.000010	0.00001

VOLATILE COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
19. Acrolein	ND	EPA 624	50	50
20. Acrylonitrile	ND	EPA 624	20	20
21. Benzene	ND	EPA 624	10	10
22. Bromoform	ND	EPA 624	10	10
23. Carbon Tetrachloride	ND	EPA 624	2.0	2
24. Chlorobenzene	ND	EPA 624	10	10
25. Chlorodibromomethane	ND	EPA 624	10	10
26. Chloroethane	ND	EPA 624	50	50
27. 2-Chloroethyl vinyl ether	ND	EPA 624	10	10
28. Chloroform	ND	EPA 624	10	10
29. Dichlorobromomethane	ND	EPA 624	10	10
30. 1,1-Dichloroethane	ND	EPA 624	10	10
31. 1,2-Dichloroethane	ND	EPA 624	10	10
32. 1,1-Dichloroethylene	ND	EPA 624	10	10
33. 1,2-Dichloropropane	ND	EPA 624	10	10
34. 1,3-Dichloropropylene	ND	EPA 624	10	10
35. Ethylbenzene	ND	EPA 624	10	10
36. Methyl Bromide [Bromomethane]	ND	EPA 624	50	50
37. Methyl Chloride [Chloromethane]	ND	EPA 624	50	50
38. Methylene Chloride	ND	EPA 624	20	20
39. 1,1,2,2-Tetrachloroethane	ND	EPA 624	10	10
40. Tetrachloroethylene	ND	EPA 624	10	10
41. Toluene	ND	EPA 624	10	10
42. 1,2-trans-Dichloroethylene	ND	EPA 624	10	10
43. 1,1,1-Trichloroethane	ND	EPA 624	10	10
44. 1,1,2-Trichloroethane	ND	EPA 624	10	10
45. Trichloroethylene	ND	EPA 624	10	10
46. Vinyl Chloride	ND	EPA 624	10	10

ACID COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
47. 2-Chlorophenol	ND	EPA 625	10	10
48. 2,4-Dichlorophenol	ND	EPA 625	10	10
49. 2,4-Dimethylphenol	ND	EPA 625	10	10
50. 4,6-Dinitro-o-Cresol [2 methyl 4,6-dinitrophenol	ND	EPA 625	50	50
51. 2,4-Dinitrophenol	ND	EPA 625	50	50
52. 2-Nitrophenol	ND	EPA 625	20	20
53. 4-Nitrophenol	ND	EPA 625	50	50
54. P-Chloro-m-Cresol [4 chloro-3-methylphenol]	ND	EPA 625	10	10
55. Pentachlorophenol	ND	EPA 625	5.0	5
56. Phenol	ND	EPA 625	10	10
57. 2,4,6-Trichlorophenol	ND	EPA 625	10	10

BASE/NEUTRAL COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
58. Acenaphthene	ND	EPA 625	10	10
59. Acenaphthylene	ND	EPA 625	10	10
60. Anthracene	ND	EPA 625	10	10
61. Benzidine	ND	EPA 625	50	50
62. Benzo(a)anthracene	ND	EPA 625	5.0	5
63. Benzo(a)pyrene	ND	EPA 625	5.0	5
64. 3,4-Benzofluoranthene	ND	EPA 625	10	10
65. Benzo(ghi)perylene	ND	EPA 625	20	20
66. Benzo(k)fluoranthene	ND	EPA 625	5.0	5
67. Bis(2-chloroethoxy) methane	ND	EPA 625	10	10
68. Bis(2-chloroethyl) ether	ND	EPA 625	10	10
69. Bis(2-chloroisopropyl) ether	ND	EPA 625	10	10
70. Bis(2-ethylhexyl) phthalate	25	EPA 625	10	10
71. 4-Bromophenyl phenyl ether	ND	EPA 625	10	10
72. Butyl benzyl phthalate	ND	EPA 625	10	10
73. 2-Chloronapthalene	ND	EPA 625	10	10
74. 4-Chlorophenyl phenyl ether	ND	EPA 625	10	10
75. Chrysene	ND	EPA 625	5.0	5
76. Dibenzo (a,h) anthracene	ND	EPA 625	5.0	5
77. 1,2-Dichlorobenzene	ND	EPA 624	10	10
78. 1,3-Dichlorobenzene	ND	EPA 624	10	10
79. 1,4-Dichlorobenzene	ND	EPA 624	10	10
80. 3,3'-Dichlorobenzidine	ND	EPA 625	5.0	5
81. Diethyl Phthalate	ND	EPA 625	10	10
82. Dimethyl Phthalate	ND	EPA 625	10	10
83. Di-n-Butyl Phthalate	ND	EPA 625	10	10
84. 2,4-Dinitrotoluene	ND	EPA 625	10	10
85. 2,6-Dinitrotoluene	ND	EPA 625	10	10
86. Di-n-octyl Phthalate	ND	EPA 625	10	10

BASE/NEUTRAL COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
87. 1,2-Diphenylhydrazine	ND	EPA 625	20	20
89. Fluorene	ND	EPA 625	10	10
90. Hexachlorobenzene	ND	EPA 625	5.0	5
91. Hexachlorobutadiene	ND	EPA 625	10	10
92. Hexachlorocyclopentadiene	ND	EPA 625	10	10
93. Hexachloroethane	ND	EPA 625	20	20
94. Indeno (1,2,3-cd) pyrene (2,3-o-phenylene pyrene)	ND	EPA 625	5.0	5
95. Isophorone	ND	EPA 625	10	10
96. Naphthalene	ND	EPA 625	10	10
97. Nitrobenzene	ND	EPA 625	10	10
98. N-nitrosodimethylamine	ND	EPA 625	50	50
99. N-nitrosodi-n-propylamine	ND	EPA 625	20	20
100. N-nitrosodiphenylamine	ND	EPA 625	20	20
101. Phenanthrene	ND	EPA 625	10	10
102. Pyrene	ND	EPA 625	10	10
103. 1,2,4-Trichlorobenzene	ND	EPA 625	10	10

PESTICIDES	LABORATORY ANALYSIS			REQUIRED MQL (µg/1)
	RESULTS (µg/1)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/1)	
104. Aldrin	ND	EPA 608	0.010	0.01
105. Alpha-BHC	ND	EPA 608	0.050	0.05
106. Beta-BHC	ND	EPA 608	0.050	0.05
107. Gamma-BHC	ND	EPA 608	0.050	0.05
108. Delta-BHC	ND	EPA 608	0.050	0.05
109. Chlordane	ND	EPA 608	0.20	0.2
110. 4,4'-DDT	ND	EPA 608	0.020	0.02
111. 4,4'-DDE (p,p-DDX)	ND	EPA 608	0.10	0.1
112. 4,4'-DDD 9(p,p-TDE)	ND	EPA 608	0.10	0.1
113. Dieldrin	ND	EPA 608	0.020	0.02
114. Alpha-endosulfan	ND	EPA 608	0.010	0.01
115. Beta-endosulfan	ND	EPA 608	0.020	0.02
116. Endosulfan sulfate	ND	EPA 608	0.10	0.1
117. Endrin	ND	EPA 608	0.020	0.02
118. Endrin aldehyde	ND	EPA 608	0.10	0.1
119. Heptachlor	ND	EPA 608	0.010	0.01
120. Heptachlor epoxide (BHC-hexachlorocyclohexane)	ND	EPA 608	0.010	0.01
130. Chlorpyrifos	ND	EPA 608	0.070	0.07
121. PCB-1242	ND	EPA 608	0.20	0.2
122. PCB-1254	ND	EPA 608	0.20	0.2
123. PCB-1221	ND	EPA 608	0.20	0.2
124. PCB-1232	ND	EPA 608	0.20	0.2
125. PCB-1248	ND	EPA 608	0.20	0.2
126. PCB-1260	ND	EPA 608	0.20	0.2
127. PCB-1016	ND	EPA 608	0.20	0.2
128. Toxaphene	ND	EPA 608	0.30	0.3

ARKANSAS Department of Environmental Quality
PPS REQUIREMENTS

1. Name of facility:

   Georgia-Pacific LLC, Crossett Paper Operations

2. Name, address and telephone number of laboratory:

PPS w/o TCDD	TCDD
American Interplex	SGS Analytical Perspectives
8600 Kanis Road	5500 Business Drive
Little Rock, AR 72204	Wilmington, NC 28405
(501) 224-5060	(910) 350-1903

3. Is the lab certified by the State of Arkansas? Yes _X___ No ___

4. What are the certification dates?

   Issued data 02/28/2014 Expire date 02/28/2015

5. Is the laboratory certified for all the parameters?

   YES __X__ No ____ (Explain)

   _____

   _____

6. Date and time of samples collected:

   10/21/14, 9:28 am

7. Date and time samples were received in the laboratory:

   10/21/14, 15:55 pm

8. Sample location (Outfall No.):

   SMS 002

9. Samples collected by:

   Name Rachel Johnson/Danny Rice

   Title Environmental Engineer/Environmental Specialist

   Telephone 870-567-8170

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

Gary W. Kaiser
Printed Name of person signing

Vice-President of Manufacturing
Title

Gary Kaiser
Signature

5-4-15
Date signed

List all attachments to this form:

NA

METALS AND CYANIDE	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
1. Antimony (Total), Recoverable	ND	EPA 200.8	60	60
2. Arsenic (Total), Recoverable	1.7	EPA 200.8	0.5	0.5
3. Beryllium (Total), Recoverable	ND	EPA 200.8	0.5	0.5
4. Cadmium (Total), Recoverable	ND	EPA 200.8	0.5	0.5
5. Chromium (Total), Recoverable	ND	EPA 200.8	10	10
7. Chromium (6+), Dissolved	ND	SM 3500-Cr B	10	10
8. Copper (Total), Recoverable	18	EPA 200.8	0.5	0.5
9. Lead (Total), Recoverable	ND	EPA 200.8	0.5	0.5
10. Mercury (Total), Recoverable	0.009	EPA 245.1	0.005	0.005
12. Nickel (Total), Recoverable	9.2	EPA 200.8	0.5	0.5
13. Selenium (Total), Recoverable	ND	EPA 200.8	5	5
14. Silver (Total), Recoverable	ND	EPA 200.8	0.5	0.5
15. Thallium (Total), Recoverable	ND	EPA 200.8	0.5	0.5
16. Zinc (Total), Recoverable	20	EPA 200.8	20	20
129. Phenols, Total Recoverable	17	EPA 420.1	5	5
17. Cyanide (Total), Recoverable	ND	SM 4500-CN C,E	10	10

DIOXIN	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
18. 2,3,7,8-Tetrachloro-debenzo-p-dioxin (TCDD)	ND	1613	0.000010	0.00001

VOLATILE COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
19. Acrolein	ND	EPA 624	50	50
20. Acrylonitrile	ND	EPA 624	20	20
21. Benzene	ND	EPA 624	10	10
22. Bromoform	ND	EPA 624	10	10
23. Carbon Tetrachloride	ND	EPA 624	2.0	2
24. Chlorobenzene	ND	EPA 624	10	10
25. Chlorodibromomethane	ND	EPA 624	10	10
26. Chloroethane	ND	EPA 624	50	50
27. 2-Chloroethyl vinyl ether	ND	EPA 624	10	10
28. Chloroform	ND	EPA 624	10	10
29. Dichlorobromomethane	ND	EPA 624	10	10
30. 1,1-Dichloroethane	ND	EPA 624	10	10
31. 1,2-Dichloroethane	ND	EPA 624	10	10
32. 1,1-Dichloroethylene	ND	EPA 624	10	10
33. 1,2-Dichloropropane	ND	EPA 624	10	10
34. 1,3-Dichloropropylene	ND	EPA 624	10	10
35. Ethylbenzene	ND	EPA 624	10	10
36. Methyl Bromide [Bromomethane]	ND	EPA 624	50	50
37. Methyl Chloride [Chloromethane]	ND	EPA 624	50	50
38. Methylene Chloride	ND	EPA 624	20	20
39. 1,1,2,2-Tetrachloroethane	ND	EPA 624	10	10
40. Tetrachloroethylene	ND	EPA 624	10	10
41. Toluene	ND	EPA 624	10	10
42. 1,2-trans-Dichloroethylene	ND	EPA 624	10	10
43. 1,1,1-Trichloroethane	ND	EPA 624	10	10
44. 1,1,2-Trichloroethane	ND	EPA 624	10	10
45. Trichloroethylene	ND	EPA 624	10	10
46. Vinyl Chloride	ND	EPA 624	10	10

ACID COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
47. 2-Chlorophenol	ND	EPA 625	10	10
48. 2,4-Dichlorophenol	ND	EPA 625	10	10
49. 2,4-Dimethylphenol	ND	EPA 625	10	10
50. 4,6-Dinitro-o-Cresol [2 methyl 4,6-dinitrophenol	ND	EPA 625	50	50
51. 2,4-Dinitrophenol	ND	EPA 625	50	50
52. 2-Nitrophenol	ND	EPA 625	20	20
53. 4-Nitrophenol	ND	EPA 625	50	50
54. P-Chloro-m-Cresol [4 chloro-3-methylphenol]	ND	EPA 625	10	10
55. Pentachlorophenol	ND	EPA 625	5.0	5
56. Phenol	ND	EPA 625	10	10
57. 2,4,6-Trichlorophenol	ND	EPA 625	10	10

BASE/NEUTRAL COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
58. Acenaphthene	ND	EPA 625	10	10
59. Acenaphthylene	ND	EPA 625	10	10
60. Anthracene	ND	EPA 625	10	10
61. Benzidine	ND	EPA 625	50	50
62. Benzo(a)anthracene	ND	EPA 625	5.0	5
63. Benzo(a)pyrene	ND	EPA 625	5.0	5
64. 3,4-Benzofluoranthene	ND	EPA 625	10	10
65. Benzo(ghi)perylene	ND	EPA 625	20	20
66. Benzo(k)fluoranthene	ND	EPA 625	5.0	5
67. Bis(2-chloroethoxy) methane	ND	EPA 625	10	10
68. Bis(2-chloroethyl) ether	ND	EPA 625	10	10
69. Bis(2-chloroisopropyl) ether	ND	EPA 625	10	10
70. Bis(2-ethylhexyl) phthalate	190	EPA 625	50	10
71. 4-Bromophenyl phenyl ether	ND	EPA 625	10	10
72. Butyl benzyl phthalate	ND	EPA 625	10	10
73. 2-Chloronapthalene	ND	EPA 625	10	10
74. 4-Chlorophenyl phenyl ether	ND	EPA 625	10	10
75. Chrysene	ND	EPA 625	5.0	5
76. Dibenzo (a,h) anthracene	ND	EPA 625	5.0	5
77. 1,2-Dichlorobenzene	ND	EPA 624	10	10
78. 1,3-Dichlorobenzene	ND	EPA 624	10	10
79. 1,4-Dichlorobenzene	ND	EPA 624	10	10
80. 3,3'-Dichlorobenzidine	ND	EPA 625	5.0	5
81. Diethyl Phthalate	ND	EPA 625	10	10
82. Dimethyl Phthalate	ND	EPA 625	10	10
83. Di-n-Butyl Phthalate	ND	EPA 625	10	10
84. 2,4-Dinitrotoluene	ND	EPA 625	10	10
85. 2,6-Dinitrotoluene	ND	EPA 625	10	10
86. Di-n-octyl Phthalate	ND	EPA 625	10	10

BASE/NEUTRAL COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
87. 1,2-Diphenylhydrazine	ND	EPA 625	20	20
89. Fluorene	ND	EPA 625	10	10
90. Hexachlorobenzene	ND	EPA 625	5.0	5
91. Hexachlorobutadiene	ND	EPA 625	10	10
92. Hexachlorocyclopentadiene	ND	EPA 625	10	10
93. Hexachloroethane	ND	EPA 625	20	20
94. Indeno (1,2,3-cd) pyrene (2,3-o-phenylene pyrene)	ND	EPA 625	5.0	5
95. Isophorone	ND	EPA 625	10	10
96. Naphthalene	ND	EPA 625	10	10
97. Nitrobenzene	ND	EPA 625	10	10
98. N-nitrosodimethylamine	ND	EPA 625	50	50
99. N-nitrosodi-n-propylamine	ND	EPA 625	20	20
100. N-nitrosodiphenylamine	ND	EPA 625	20	20
101. Phenanthrene	ND	EPA 625	10	10
102. Pyrene	ND	EPA 625	10	10
103. 1,2,4-Trichlorobenzene	ND	EPA 625	10	10

PESTICIDES	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
104. Aldrin	ND	EPA 608	0.010	0.01
105. Alpha-BHC	ND	EPA 608	0.050	0.05
106. Beta-BHC	ND	EPA 608	0.050	0.05
107. Gamma-BHC	ND	EPA 608	0.050	0.05
108. Delta-BHC	ND	EPA 608	0.050	0.05
109. Chlordane	ND	EPA 608	0.20	0.2
110. 4,4'-DDT	ND	EPA 608	0.020	0.02
111. 4,4'-DDE (p,p-DDX)	ND	EPA 608	0.10	0.1
112. 4,4'-DDD 9(p,p-TDE)	ND	EPA 608	0.10	0.1
113. Dieldrin	ND	EPA 608	0.020	0.02
114. Alpha-endosulfan	ND	EPA 608	0.010	0.01
115. Beta-endosulfan	ND	EPA 608	0.020	0.02
116. Endosulfan sulfate	ND	EPA 608	0.10	0.1
117. Endrin	ND	EPA 608	0.020	0.02
118. Endrin aldehyde	ND	EPA 608	0.10	0.1
119. Heptachlor	ND	EPA 608	0.010	0.01
120. Heptachlor epoxide (BHC-hexachlorocyclohexane)	ND	EPA 608	0.010	0.01
130. Chlorpyrifos	ND	EPA 608	0.070	0.07
121. PCB-1242	ND	EPA 608	0.20	0.2
122. PCB-1254	ND	EPA 608	0.20	0.2
123. PCB-1221	ND	EPA 608	0.20	0.2
124. PCB-1232	ND	EPA 608	0.20	0.2
125. PCB-1248	ND	EPA 608	0.20	0.2
126. PCB-1260	ND	EPA 608	0.20	0.2
127. PCB-1016	ND	EPA 608	0.20	0.2
128. Toxaphene	ND	EPA 608	0.30	0.3

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

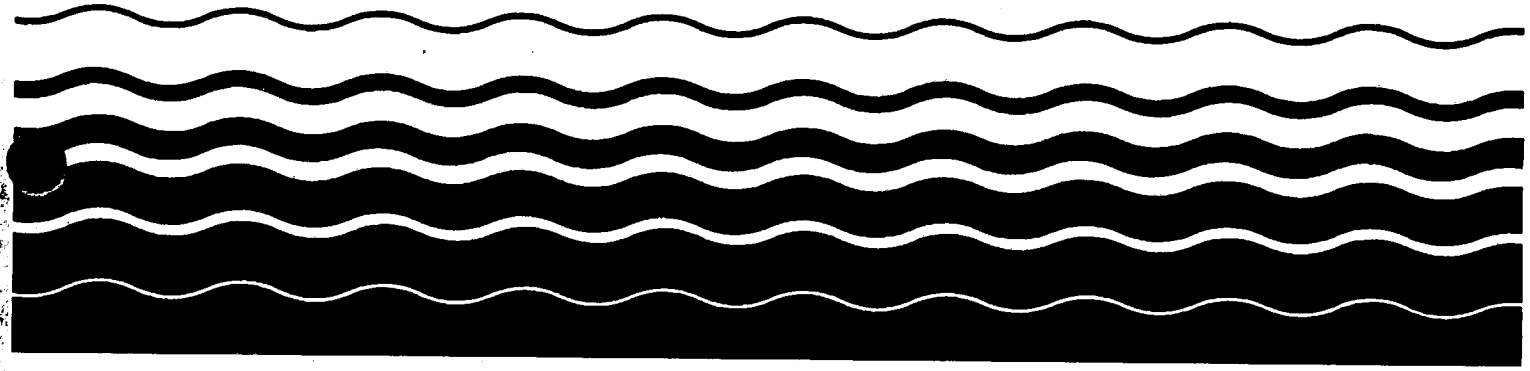
Permits Division

EPA

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)*.



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 date 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-I to V-9 if the separate sheets contain all the required information in a format which is consistent with pages V-I 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 analyse 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 lefthand 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 (I) 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 chromotography 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*

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

CHEMICAL TREATMENT PROCESSES

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

BIOLOGICAL TREATMENT PROCESSES

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

OTHER PROCESSES

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

SLUDGE TREATMENT AND DISPOSAL PROCESSES

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

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.
[1]The 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

Asbestos

HAZARDOUS SUBSTANCES

Acetaldehyde
Allyl alcohol
Allyl chloride
Amyl acetate
Aniline
Benzonitrile
Benzyl chloride
Butyl acetate
Butylamine
Captan
Carbaryl
Carbofuran
Carbon disulfide
Chlorpyrifos
Coumaphos
Cresol
Crotonaldehyde
Cyclohexane
2,4-D (2,4-Dichlorophenoxyacetic acid)
Diazinon
Dicamba
Dichlobenil
Dichlone
2,2-Dichloropropionic acid

HAZARDOUS SUBSTANCES

Dichlorvos
Diethyl amine
Dimethyl amine
Dintrobenzene
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

HAZARDOUS SUBSTANCES

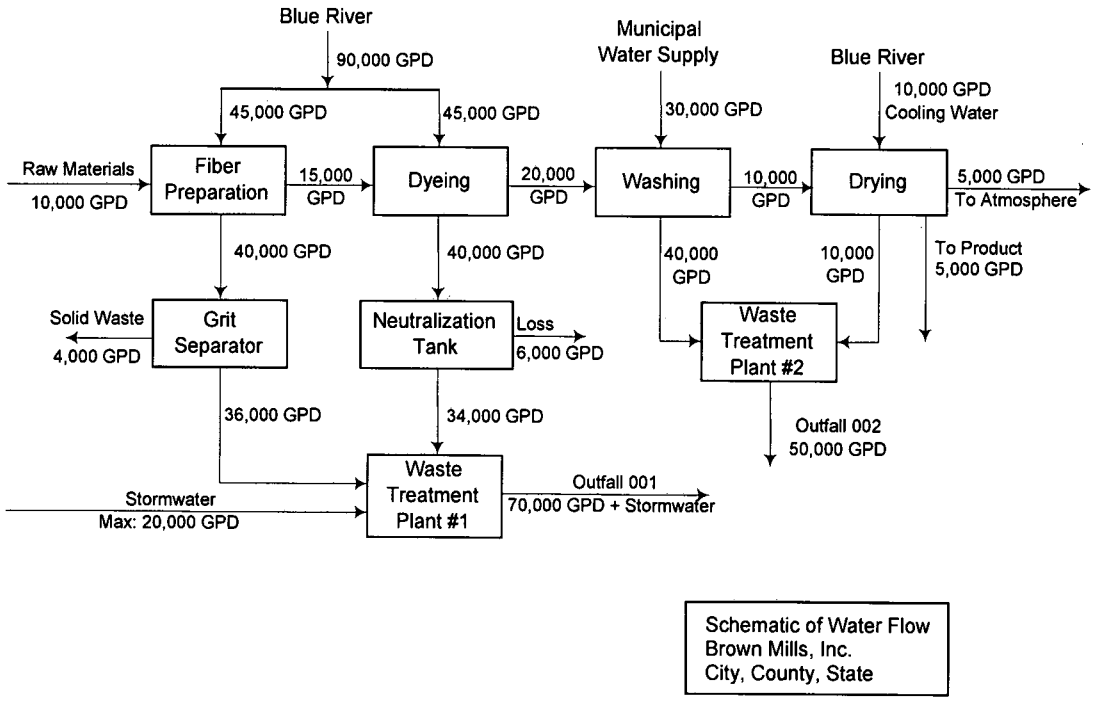
Naled
Napthenic acid
Nitrotoluene
Parathion
Phenolsulfonate
Phosgene
Propargite
Propylene oxide
Pyrethrins
Quinoline
Resorcinol
Strontium
Strychnine
Styrene
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
TDE (Tetrachlorodiphenyl ethane)
2,4,5-TP [2-(2,4,5-Trichlorophenoxy) propanoic acid]
Trichlorofon
Triethanolamine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

HAZARDOUS SUBSTANCES

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

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

LINE DRAWING



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

Figure 2C-1

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
ARD035466648

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

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	33.00	6.00	45.00	92.00	2.00	17.00	Ouachita River via Outfall 002
SMS 002	33.00	2.00	0.00	92.00	4.00	24.00	Ouachita River

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

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

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

1. OUTFALL 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	
001 & SMS002	1) Paper Operations*	36.2 MGD	Screening	1T	
	- #2&#3 Board Machines		Chemical oxidation and/or precipitation	2B	2C
	- #4,5,6,7&8 Tissue Machines		Primary Clarifier	1U	
			Settling for ash removal	1U	
	- Pulp Mill		Equalization		
	- Bleach Plant		Periodic pH adjustment	2K	
	- Recovery Area		Aerated lagoon with solids settling and dredged	3B	1U
	- Utilities Area		solids basin	5T	
	- Mill Sanitary		Sludge dewatering - dewatered sludge, ash,	5R	5Q
	- Landfill Leachate		sand and dredged pond solids are used as fill		
	2) Building Products		material in an ADEQ approved sludge pond		
	- Plywood		closure, disposed in the mill's landfill or		
	- Studmill		used in another ADEQ approved beneficial manner		
	2) Chemical Plant	0.5 MGD			
	- Urea&Phenol Formaldehyde Resins				
	- Formaldehyde Production				
	- Tall Oil Fractionizaion				
	3) Site Stormwater	1.4 MGD			
	4) City of Crossett (POTW)	1.0 MGD			
	* See the Process Description for				
	more details of the operations				
	contributing wastewater				

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

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 a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	2. AFFECTED OUTFALLS (*list outfall numbers*)
419	Machine Dried TPD	1) Bleached Papergrade Kraft (40 CFR 430.20)	001 and 002
1,221	Machine Dried TPD	Fine Paper	
693	Machine Dried TPD	Paperboard	
1.6	mm sqft/day 3/8"basis	Tissue	
133,000	Board Ft/day	2) Plywood (40 CFR 429.40)	
		3) Studmill (40 CFR 429.120)	
17	Tons/Day	4) Chemical Plant (40 CFR 414.50, 414.60, 454.40)	
122	Tons/Day	Spray Dry Resin	
46	Tons/Day	Formaldehyde, 50%	
352	Tons/Day	Urea-Formaldehyde Concentrate	
57	Tons/Day	Tall Oil Fractionation	
122	Tons/Day	Rosin Size/Derivatives	
70	Tons/Day	Phenol Formaldehyde Resin	
249	Tons/Day	Urea Formaldehyde Resin	
		Wet Strength Resin	

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 a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE 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

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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
Methyl Mercaptan Carbon disulfide	Reduced sulfur compounds may be present due to water scrubbing of air emission streams or losses of pulping liquor or condensates.		
Acetaldehyde	Present in condensates		
Formaldehyde	Resin Manufacturing		
Epichlorohydrin	Wet Strength Production		

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*)

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*)

Chronic and acute toxicity testing is conducted every two months as required by the current NPDES permit #AR0001210.

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*)
American Interplex	8600 Kanis Road Little Rock, AR 72204	(501) 224-5060	All in Item V Parts B &C except those listed below
Analytical Perspectives	5500 Business Drive Wilmington, NC 28405	(910) 350-1903	Dioxin
Test America	5102 LaRoche Avenue Savannah, GA 31404	(912) 354-7858	Zinc, Copper, Dieldrin, Mercury, Total Phosphorus, and Nitrate (as N)

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.*)
Gary W. Kaiser	(870) 567-8310
C. SIGNATURE	**D. DATE SIGNED**
Gary Kaiser	5-4-15

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*): ARD035466648

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 a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	78.5	33702	48.1	16859	27.9	9751	470	mg/L	lb/d			
b. Chemical Oxygen Demand (*COD*)	290	97,470	NA	NA	NA	NA	1	mg/L				
c. Total Organic Carbon (*TOC*)	479.1	352,306	NA	NA	151.2	53,336	1094	mg/L	lb/d			
d. Total Suspended Solids (*TSS*)	103	46384	57	21267	31.6	11084	470	mg/L	lb/d			
e. Ammonia (*as N*)	0.66	222	NA	NA	NA	NA	1	mg/L	lb/d			
f. Flow	VALUE 126.4		VALUE 52.1		VALUE 42.2		1096		MGD	VALUE		
g. Temperature (*winter*)	VALUE Ambient		VALUE Ambient		VALUE NA			°C		VALUE		
h. Temperature (*summer*)	VALUE Ambient		VALUE Ambient		VALUE NA			°C		VALUE		
i. pH	MINIMUM 7.1	MAXIMUM 8.1	MINIMUM 7.5	MAXIMUM 7.8			470	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" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X		0.50	168					1	mg/L	lb/d			
b. Chlorine, Total Residual		X	ND						36	mg/L				
c. Color	X		250						1	PCU	NA			
d. Fecal Coliform	X		12						1	/100ml				
e. Fluoride (16984-48-8)	X		0.23	77.3					1	mg/L	lb/d			
f. Nitrate-Nitrite (*as N*)	X		ND						1	mg/L				

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		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	
g. Nitrogen, Total Organic (*as N*)	X		4.0	1,344					1	mg/L	lb/d			
h. Oil and Grease		X	ND						1	mg/L				
i. Phosphorus (as P), Total (7723-14-0)	X		2.7	909.7			1.3	470.3	52	mg/L	lb/d			
j. Radioactivity														
(1) Alpha, Total	X		1.14						1	pCi/L				
(2) Beta, Total	X		13.4						1	pCi/L				
(3) Radium, Total	X		1.28						1	pCi/L				
(4) Radium 226, Total	X		0.857						1	pCi/L				
k. Sulfate (*as SO_4*) (14808-79-8)	X		330	110,914					1	mg/L	lb/d			
l. Sulfide (*as S*)	X		0.15	50.4					1	mg/L	lb/d			
m. Sulfite (*as SO_3*) (14265-45-3)		X	ND						1	mg/L				
n. Surfactants		X	ND						1	mg/L				
o. Aluminum, Total (7429-90-5)	X		1100	370					1	ug/L	lb/d			
p. Barium, Total (7440-39-3)	X		350	118					1	ug/L	lb/d			
q. Boron, Total (7440-42-8)		X	ND						1	ug/L				
r. Cobalt, Total (7440-48-4)		X	ND						1	ug/L				
s. Iron, Total (7439-89-6)	X		3500	1322.3			2040	718.7	27	ug/L	lb/d			
t. Magnesium, Total (7439-95-4)	X		10000	3,361					1	ug/L	lb/d			
u. Molybdenum, Total (7439-98-7)		X	ND						1	ug/L				
v. Manganese, Total (7439-96-5)	X		2200	739					1	ug/L	lb/d			
w. Tin, Total (7440-31-5)		X	ND						1	ug/L				
x. Titanium, Total (7440-32-6)	X		7.6	2.55					1	ug/L	lb/d			

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
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CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of 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 (*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	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	ND						1	ug/L				
2M. Arsenic, Total (7440-38-2)	X	X		1.9	0.64					1	ug/L	lb/d			
3M. Beryllium, Total (7440-41-7)	X		X	ND						1	ug/L				
4M. Cadmium, Total (7440-43-9)	X		X	ND						1	ug/L				
5M. Chromium, Total (7440-47-3)	X		X	ND						1	ug/L				
6M. Copper, Total (7440-50-8)	X	X		16.0	6.8			6.4	2.3	36	ug/L	lb/d			
7M. Lead, Total (7439-92-1)	X		X	ND						1	ug/L				
8M. Mercury, Total (7439-97-6)	X	X		6.8	0.0030			2.7	0.001	12	ng/L	lb/d			
9M. Nickel, Total (7440-02-0)	X	X		11	3.70					1	ug/L	lb/d			
10M. Selenium, Total (7782-49-2)	X		X	ND						1	ug/L				
11M. Silver, Total (7440-22-4)	X		X	ND						1	ug/L				
12M. Thallium, Total (7440-28-0)	X		X	ND						1	ug/L				
13M. Zinc, Total (7440-66-6)	X	X		540	225.2			47.0	52.3	51	ug/L	lb/d			
14M. Cyanide, Total (57-12-5)	X		X	ND						1	ug/L				
15M. Phenols, Total	X	X		13	4.37					1	ug/L	lb/d			
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)	X		X	DESCRIBE RESULTS Non-Detect											

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		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 – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	ND						1	ug/L				
2V. Acrylonitrile (107-13-1)	X		X	ND						1	ug/L				
3V. Benzene (71-43-2)	X		X	ND						1	ug/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)	X		X	ND						1	ug/L				
5V. Bromoform (75-25-2)	X		X	ND						1	ug/L				
6V. Carbon Tetrachloride (56-23-5)	X		X	ND						1	ug/L				
7V. Chlorobenzene (108-90-7)	X		X	ND						1	ug/L				
8V. Chlorodibromomethane (124-48-1)	X		X	ND						1	ug/L				
9V. Chloroethane (75-00-3)	X		X	ND						1	ug/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	ND						1	ug/L				
11V. Chloroform (67-66-3)	X		X	ND						1	ug/L				
12V. Dichlorobromomethane (75-27-4)	X		X	ND						1	ug/L				
13V. Dichlorodifluoromethane (75-71-8)	X		X	ND						1	ug/L				
14V. 1,1-Dichloroethane (75-34-3)	X		X	ND						1	ug/L				
15V. 1,2-Dichloroethane (107-06-2)	X		X	ND						1	ug/L				
16V. 1,1-Dichloroethylene (75-35-4)	X		X	ND						1	ug/L				
17V. 1,2-Dichloropropane (78-87-5)	X		X	ND						1	ug/L				
18V. 1,3-Dichloropropylene (542-75-6)	X		X	ND						1	ug/L				
19V. Ethylbenzene (100-41-4)	X		X	ND						1	ug/L				
20V. Methyl Bromide (74-83-9)	X		X	ND						1	ug/L				
21V. Methyl Chloride (74-87-3)	X		X	ND						1	ug/L				

CONTINUED FROM PAGE V-4

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) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	ND						1	ug/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	ND						1	ug/L				
24V. Tetrachloroethylene (127-18-4)	X		X	ND						1	ug/L				
25V. Toluene (108-88-3)	X		X	ND						1	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	ND						1	ug/L				
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	ND						1	ug/L				
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	ND						1	ug/L				
29V Trichloroethylene (79-01-6)	X		X	ND						1	ug/L				
30V. Trichlorofluoromethane (75-69-4)	X		X	ND						1	ug/L				
31V. Vinyl Chloride (75-01-4)	X		X	ND						1	ug/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	ND						1	ug/L				
2A. 2,4-Dichlorophenol (120-83-2)	X		X	ND						1	ug/L				
3A. 2,4-Dimethylphenol (105-67-9)	X		X	ND						1	ug/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	ND						1	ug/L				
5A. 2,4-Dinitrophenol (51-28-5)	X		X	ND						1	ug/L				
6A. 2-Nitrophenol (88-75-5)	X		X	ND						1	ug/L				
7A. 4-Nitrophenol (100-02-7)	X		X	ND						1	ug/L				
8A. P-Chloro-M-Cresol (59-50-7)	X		X	ND						1	ug/L				
9A. Pentachlorophenol (87-86-5)	X		X	ND						1	ug/L				
10A. Phenol (108-95-2)	X		X	ND						1	ug/L				
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	ND						1	ug/L				

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		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 (83-32-9)	X		X	ND						1	ug/L				
2B. Acenaphtylene (208-96-8)	X		X	ND						1	ug/L				
3B. Anthracene (120-12-7)	X		X	ND						1	ug/L				
4B. Benzidine (92-87-5)	X		X	ND						1	ug/L				
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	ND						1	ug/L				
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	ND						1	ug/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	ND						1	ug/L				
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	ND						1	ug/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	ND						1	ug/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	ND						1	ug/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	ND						1	ug/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	ND						1	ug/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X	X		25	8.4					1	ug/L	lb/d			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	ND						1	ug/L				
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	ND						1	ug/L				
16B. 2-Chloro-naphthalene (91-58-7)	X		X	ND						1	ug/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	ND						1	ug/L				
18B. Chrysene (218-01-9)	X		X	ND						1	ug/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	ND						1	ug/L				
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	ND						1	ug/L				
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	ND						1	ug/L				

CONTINUED FROM PAGE V-6

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) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X		X	ND						1	ug/L				
23B. 3,3-Dichlorobenzidine (91-94-1)	X		X	ND						1	ug/L				
24B. Diethyl Phthalate (84-66-2)	X		X	ND						1	ug/L				
25B. Dimethyl Phthalate (131 -11-3)	X		X	ND						1	ug/L				
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	ND						1	ug/L				
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	ND						1	ug/L				
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	ND						1	ug/L				
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	ND						1	ug/L				
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	X		X	ND						1	ug/L				
31B. Fluoranthene (206-44-0)	X		X	ND						1	ug/L				
32B. Fluorene (86-73-7)	X		X	ND						1	ug/L				
33B. Hexachlorobenzene (118-74-1)	X		X	ND						1	ug/L				
34B. Hexachlorobutadiene (87-68-3)	X		X	ND						1	ug/L				
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	ND						1	ug/L				
36B Hexachloroethane (67-72-1)	X		X	ND						1	ug/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	ND						1	ug/L				
38B. Isophorone (78-59-1)	X		X	ND						1	ug/L				
39B. Naphthalene (91-20-3)	X		X	ND						1	ug/L				
40B. Nitrobenzene (98-95-3)	X		X	ND						1	ug/L				
41B. N-Nitrosodimethylamine (62-75-9)	X		X	ND						1	ug/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	ND						1	ug/L				

CONTINUE ON REVERSE

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		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 (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)	X		X	ND						1	ug/L				
44B. Phenanthrene (85-01-8)	X		X	ND						1	ug/L				
45B. Pyrene (129-00-0)	X		X	ND						1	ug/L				
46B. 1,2,4-Trichlorobenzene (120-82-1)	X		X	ND						1	ug/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X		X	ND						1	ug/L				
2P. α-BHC (319-84-6)	X		X	ND						1	ug/L				
3P. β-BHC (319-85-7)	X		X	ND						1	ug/L				
4P. γ-BHC (58-89-9)	X		X	ND						1	ug/L				
5P. δ-BHC (319-86-8)	X		X	ND						1	ug/L				
6P. Chlordane (57-74-9)	X		X	ND						1	ug/L				
7P. 4,4'-DDT (50-29-3)	X		X	ND						1	ug/L				
8P. 4,4'-DDE (72-55-9)	X		X	ND						1	ug/L				
9P. 4,4'-DDD (72-54-8)	X		X	ND						1	ug/L				
10P. Dieldrin (60-57-1)	X		X	ND						1	ug/L				
11P. α-Enosulfan (115-29-7)	X		X	ND						1	ug/L				
12P. β-Endosulfan (115-29-7)	X		X	ND						1	ug/L				
13P. Endosulfan Sulfate (1031-07-8)	X		X	ND						1	ug/L				
14P. Endrin (72-20-8)	X		X	ND						1	ug/L				
15P. Endrin Aldehyde (7421-93-4)	X		X	ND						1	ug/L				
16P. Heptachlor (76-44-8)	X		X	ND						1	ug/L				

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
ARD035466648	001

CONTINUED FROM PAGE V-8

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) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X		X	ND						1	ug/L				
18P. PCB-1242 (53469-21-9)	X		X	ND						1	ug/L				
19P. PCB-1254 (11097-69-1)	X		X	ND						1	ug/L				
20P. PCB-1221 (11104-28-2)	X		X	ND						1	ug/L				
21P. PCB-1232 (11141-16-5)	X		X	ND						1	ug/L				
22P. PCB-1248 (12672-29-6)	X		X	ND						1	ug/L				
23P. PCB-1260 (11096-82-5)	X		X	ND						1	ug/L				
24P. PCB-1016 (12674-11-2)	X		X	ND						1	ug/L				
25P. Toxaphene (8001-35-2)	X		X	ND						1	ug/L				

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

OUTFALL NO.
SMS 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 a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	25.4	8,575	20.5	6,495	13.7	4,440	244	mg/L	lb/d			
b. Chemical Oxygen Demand (*COD*)	220	84,584	NA	NA	NA	NA	1	mg/L	lb/d			
c. Total Organic Carbon (*TOC*)	260.6	113,249	NA	NA	100.5	33,534	236	mg/L	lb/d			
d. Total Suspended Solids (*TSS*)	33	12,383	25	7,512	14.0	4,413	244	mg/L	lb/d			
e. Ammonia (*as N*)	1.4	538	NA	NA	NA	NA	NA	mg/L	lb/d			
f. Flow	VALUE 95		VALUE 66.2		VALUE 40.7		566		MGD	VALUE		
g. Temperature (*winter*)	VALUE Ambient		VALUE Ambient		VALUE NA			°C		VALUE		
h. Temperature (*summer*)	VALUE Ambient		VALUE Ambient		VALUE NA			°C		VALUE		
i. pH	MINIMUM 7.1	MAXIMUM 8.1	MINIMUM 7.5	MAXIMUM 7.8			244	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" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X		0.48	185					1	mg/L	lb/d			
b. Chlorine, Total Residual		X	0						1	mg/L				
c. Color	X		250						1	PCU				
d. Fecal Coliform	X		13						1	/100ml				
e. Fluoride (16984-48-8)	X		0.24	92.3					1	mg/L	lb/d			
f. Nitrate-Nitrite (*as N*)	X		ND						1	mg/L				

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		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	
g. Nitrogen, Total Organic (*as N*)	X		1.4	538					1	mg/L	lb/d			
h. Oil and Grease		X	ND						1	mg/L				
i. Phosphorus (as P), Total (7723-14-0)	X		1.6	477			1.12	344	21	mg/L	lb/d			
j. Radioactivity														
(1) Alpha, Total	X		0.392						1	pCi/L				
(2) Beta, Total	X		16.6						1	pCi/L				
(3) Radium, Total	X		0.317						1	pCi/L				
(4) Radium 226, Total	X		0.925						1	pCi/L				
k. Sulfate (*as SO_4*) (14808-79-8)	X		300	115,342					1	mg/L	lb/d			
l. Sulfide (*as S*)	X		0.17	65.4					1	mg/L	lb/d			
m. Sulfite (*as SO_3*) (14265-45-3)		X	ND						1	mg/L				
n. Surfactants		X	ND						1	mg/L				
o. Aluminum, Total (7429-90-5)	X		700	269					1	ug/L	lb/d			
p. Barium, Total (7440-39-3)	X		280	108					1	ug/L	lb/d			
q. Boron, Total (7440-42-8)		X	ND						1	ug/L				
r. Cobalt, Total (7440-48-4)		X	ND						1	ug/L				
s. Iron, Total (7439-89-6)	X		890						1	ug/L	lb/d			
t. Magnesium, Total (7439-95-4)	X		9900						1	ug/L	lb/d			
u. Molybdenum, Total (7439-98-7)		X	ND						1	ug/L				
v. Manganese, Total (7439-96-5)	X		1900						1	ug/L	lb/d			
w. Tin, Total (7440-31-5)		X	ND						1	ug/L				
x. Titanium, Total (7440-32-6)	X		6.2						1	ug/L	lb/d			

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
ARD035466648	SMS 002

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of 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 (*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	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	ND						1	ug/L				
2M. Arsenic, Total (7440-38-2)	X	X		1.7						1	ug/L				
3M. Beryllium, Total (7440-41-7)	X		X	ND						1	ug/L				
4M. Cadmium, Total (7440-43-9)	X		X	ND						1	ug/L				
5M. Chromium, Total (7440-47-3)	X		X	ND						1	ug/L				
6M. Copper, Total (7440-50-8)	X	X		7.9	4.5			2.8	1.0	21	ug/L				
7M. Lead, Total (7439-92-1)	X		X	ND						1	ug/L				
8M. Mercury, Total (7439-97-6)	X		X	ND						1	ng/L				
9M. Nickel, Total (7440-02-0)	X	X		9.2						1	ug/L				
10M. Selenium, Total (7782-49-2)	X		X	ND						1	ug/L				
11M. Silver, Total (7440-22-4)	X		X	ND						1	ug/L				
12M. Thallium, Total (7440-28-0)	X		X	ND						1	ug/L				
13M. Zinc, Total (7440-66-6)	X	X		300	124			97.4	31.9	21	ug/L	lb/d			
14M. Cyanide, Total (57-12-5)	X		X	ND						1	ug/L				
15M. Phenols, Total	X	X		17						1	ug/L				
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)	X		X	DESCRIBE RESULTS Non-Detect											

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		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 – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	ND						1	ug/L				
2V. Acrylonitrile (107-13-1)	X		X	ND						1	ug/L				
3V. Benzene (71-43-2)	X		X	ND						1	ug/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)	X		X	ND						1	ug/L				
5V. Bromoform (75-25-2)	X		X	ND						1	ug/L				
6V. Carbon Tetrachloride (56-23-5)	X		X	ND						1	ug/L				
7V. Chlorobenzene (108-90-7)	X		X	ND						1	ug/L				
8V. Chlorodibromomethane (124-48-1)	X		X	ND						1	ug/L				
9V. Chloroethane (75-00-3)	X		X	ND						1	ug/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	ND						1	ug/L				
11V. Chloroform (67-66-3)	X		X	ND						1	ug/L				
12V. Dichlorobromomethane (75-27-4)	X		X	ND						1	ug/L				
13V. Dichlorodifluoromethane (75-71-8)	X		X	ND						1	ug/L				
14V. 1,1-Dichloroethane (75-34-3)	X		X	ND						1	ug/L				
15V. 1,2-Dichloroethane (107-06-2)	X		X	ND						1	ug/L				
16V. 1,1-Dichloroethylene (75-35-4)	X		X	ND						1	ug/L				
17V. 1,2-Dichloropropane (78-87-5)	X		X	ND						1	ug/L				
18V. 1,3-Dichloropropylene (542-75-6)	X		X	ND						1	ug/L				
19V. Ethylbenzene (100-41-4)	X		X	ND						1	ug/L				
20V. Methyl Bromide (74-83-9)	X		X	ND						1	ug/L				
21V. Methyl Chloride (74-87-3)	X		X	ND						1	ug/L				

CONTINUED FROM PAGE V-4

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) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	ND						1	ug/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	ND						1	ug/L				
24V. Tetrachloroethylene (127-18-4)	X		X	ND						1	ug/L				
25V. Toluene (108-88-3)	X		X	ND						1	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	ND						1	ug/L				
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	ND						1	ug/L				
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	ND						1	ug/L				
29V Trichloroethylene (79-01-6)	X		X	ND						1	ug/L				
30V. Trichlorofluoromethane (75-69-4)	X		X	ND						1	ug/L				
31V. Vinyl Chloride (75-01-4)	X		X	ND						1	ug/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	ND						1	ug/L				
2A. 2,4-Dichlorophenol (120-83-2)	X		X	ND						1	ug/L				
3A. 2,4-Dimethylphenol (105-67-9)	X		X	ND						1	ug/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	ND						1	ug/L				
5A. 2,4-Dinitrophenol (51-28-5)	X		X	ND						1	ug/L				
6A. 2-Nitrophenol (88-75-5)	X		X	ND						1	ug/L				
7A. 4-Nitrophenol (100-02-7)	X		X	ND						1	ug/L				
8A. P-Chloro-M-Cresol (59-50-7)	X		X	ND						1	ug/L				
9A. Pentachlorophenol (87-86-5)	X		X	ND						1	ug/L				
10A. Phenol (108-95-2)	X		X	ND						1	ug/L				
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	ND						1	ug/L				

CONTINUE ON REVERSE

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		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 (83-32-9)	X		X	ND						1	ug/L				
2B. Acenaphtylene (208-96-8)	X		X	ND						1	ug/L				
3B. Anthracene (120-12-7)	X		X	ND						1	ug/L				
4B. Benzidine (92-87-5)	X		X	ND						1	ug/L				
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	ND						1	ug/L				
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	ND						1	ug/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	ND						1	ug/L				
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	ND						1	ug/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	ND						1	ug/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	ND						1	ug/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	ND						1	ug/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	ND						1	ug/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	190						1	ug/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	ND						1	ug/L				
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	ND						1	ug/L				
16B. 2-Chloro-naphthalene (91-58-7)	X		X	ND						1	ug/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	ND						1	ug/L				
18B. Chrysene (218-01-9)	X		X	ND						1	ug/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	ND						1	ug/L				
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	ND						1	ug/L				
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	ND						1	ug/L				

CONTINUED FROM PAGE V-6

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) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X		X	ND						1	ug/L				
23B. 3,3-Dichlorobenzidine (91-94-1)	X		X	ND						1	ug/L				
24B. Diethyl Phthalate (84-66-2)	X		X	ND						1	ug/L				
25B. Dimethyl Phthalate (131 -11-3)	X		X	ND						1	ug/L				
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	ND						1	ug/L				
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	ND						1	ug/L				
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	ND						1	ug/L				
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	ND						1	ug/L				
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	X		X	ND						1	ug/L				
31B. Fluoranthene (206-44-0)	X		X	ND						1	ug/L				
32B. Fluorene (86-73-7)	X		X	ND						1	ug/L				
33B. Hexachlorobenzene (118-74-1)	X		X	ND						1	ug/L				
34B. Hexachlorobutadiene (87-68-3)	X		X	ND						1	ug/L				
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	ND						1	ug/L				
36B Hexachloroethane (67-72-1)	X		X	ND						1	ug/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	ND						1	ug/L				
38B. Isophorone (78-59-1)	X		X	ND						1	ug/L				
39B. Naphthalene (91-20-3)	X		X	ND						1	ug/L				
40B. Nitrobenzene (98-95-3)	X		X	ND						1	ug/L				
41B. N-Nitrosodimethylamine (62-75-9)	X		X	ND						1	ug/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	ND						1	ug/L				

CONTINUE ON REVERSE

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		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 (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)	X		X	ND						1	ug/L				
44B. Phenanthrene (85-01-8)	X		X	ND						1	ug/L				
45B. Pyrene (129-00-0)	X		X	ND						1	ug/L				
46B. 1,2,4-Trichlorobenzene (120-82-1)	X		X	ND						1	ug/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X		X	ND						1	ug/L				
2P. α-BHC (319-84-6)	X		X	ND						1	ug/L				
3P. β-BHC (319-85-7)	X		X	ND						1	ug/L				
4P. γ-BHC (58-89-9)	X		X	ND						1	ug/L				
5P. δ-BHC (319-86-8)	X		X	ND						1	ug/L				
6P. Chlordane (57-74-9)	X		X	ND						1	ug/L				
7P. 4,4'-DDT (50-29-3)	X		X	ND						1	ug/L				
8P. 4,4'-DDE (72-55-9)	X		X	ND						1	ug/L				
9P. 4,4'-DDD (72-54-8)	X		X	ND						1	ug/L				
10P. Dieldrin (60-57-1)	X		X	ND						1	ug/L				
11P. α-Enosulfan (115-29-7)	X		X	ND						1	ug/L				
12P. β-Endosulfan (115-29-7)	X		X	ND						1	ug/L				
13P. Endosulfan Sulfate (1031-07-8)	X		X	ND						1	ug/L				
14P. Endrin (72-20-8)	X		X	ND						1	ug/L				
15P. Endrin Aldehyde (7421-93-4)	X		X	ND						1	ug/L				
16P. Heptachlor (76-44-8)	X		X	ND						1	ug/L				

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
ARD035466648	SMS 002

CONTINUED FROM PAGE V-8

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) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X		X	ND						1	ug/L				
18P. PCB-1242 (53469-21-9)	X		X	ND						1	ug/L				
19P. PCB-1254 (11097-69-1)	X		X	ND						1	ug/L				
20P. PCB-1221 (11104-28-2)	X		X	ND						1	ug/L				
21P. PCB-1232 (11141-16-5)	X		X	ND						1	ug/L				
22P. PCB-1248 (12672-29-6)	X		X	ND						1	ug/L				
23P. PCB-1260 (11096-82-5)	X		X	ND						1	ug/L				
24P. PCB-1016 (12674-11-2)	X		X	ND						1	ug/L				
25P. Toxaphene (8001-35-2)	X		X	ND						1	ug/L				

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.

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

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 (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
001	33.00	6.00	45.00	92.00	2.00	17.00	Ouachita River via Outfall 002
SMS 002	33.00	2.00	0.00	92.00	4.00	24.00	Ouachita River

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.
NA					

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 of 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.

Continue on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious 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)*
001	250 Acres	5000	SMS 002	0	Greater than 10,000 acres

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.

Most chemical storage areas are provided with secondary containment. Additionally, many chemicals are stored inside buildings or warehouses. On the manufacturing facility site chemical storage areas drain to the process sewers and these sewers are comingled with process wastewater discharge. The process sewers are routed to the wastewater treatment system and no sampling of segregated storm water is possible.

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
001 & SMS 002	See page 1 of Form 2C	

V. Nonstormwater Discharges

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

Name and Official Title *(type or print)*	Signature	Date Signed
Gary W. Kaiser	Gary Kaiser	5-4-15

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.

See Form 2C

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.

No significant leaks or spills of toxic or hazardous pollutants in the last three years at the Crossett Complex.

Continued from Page 2

EPA ID Number *(copy from Item 1 of Form 1)*

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*)

Chronic and acute toxicity testing is conducted every two months as required by the current NPDES permit #AR0001210.

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
Environ	201 Summit View Dr., Suite 300, Brentwood, TN 37027	(615) 377-4775	Acute and Chronic toxicity analysis

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*)	B. Area Code and Phone No.
Gary W. Kaiser, Vice President	(870) 567-8310
C. Signature	D. Date Signed
Gary Kaiser	5-4-15

EPA ID Number (*copy from Item 1 of Form 1*)

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

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.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	See Form 2C.	N/A				
Biological Oxygen Demand (BOD5)						
Chemical Oxygen Demand (COD)						
Total Suspended Solids (TSS)						
Total Nitrogen						
Total Phosphorus						
pH	Minimum	Maximum	Minimum	Maximum		

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to 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 the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
See Form 2C	Stormwater is	discharged to	facility	WWTP.		

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
	See Form 2C					

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
		See Form 2C.			

7. Provide a description of the method of flow measurement or estimate.

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/1	milligrams per liter	ton	tons (English tons)
ppb	parts per billion	mg	milligrams
ug/1	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 NPIDES 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 V11-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-trichlorphenyl) 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	1-0	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	5-0	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-0	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	Copper, Total	Silver, Total
Arsenic, Total	Lead, Total	Thallium, Total
Beryllium, Total	Mercury, Total	Zinc, Total
Cadmium, Total	Nickel, Total	Cyanide, Total
Chromium, Total	Selenium, Total	Phenols, Total

GC/MS Fraction Volatiles Compounds

Acrolein	Dichlorobromomethane	1,1,2,2,-Tetrachloroethane
Acrylonitrile	1,1-Dichloroethane	Tetrachloroethylene
Benzene	1,2-Dichloroethane	Toluene
Bromoform	1,1-Dichloroethylene	1,2-Trans-Dichloroethylene
Carbon Tetrachloride	1,2-Dichloropropane	1,1,1-Trichloroethane
Chlorobenzene	1.3-Dichloropropylene	1,1,2-Trichloroethane
Chlorodibromomethane	Ethylbenzene	Trichloroethylene
Chloroethane	Methyl Bromide	Vinyl Chloride
2-Chloroethylvinyl Ether	Methyl Chloride	
Chloroform	Methylene Chloride	

Acid Compounds

2-Chlorophenol	2,4-Dinitrophenol	Pentachlorophenol
2,4-Dichlorophenol	2-Nitrophenol	Phenol
2,4-Dimethylphenol	4-Nitrophenol	2,4,6-Trichlorophenol
4,6-Dinitro-O-Cresol	p-Chloro-M-Cresol	2-methyl-4,6 dinitrophenol

Base/Neutral

Acenaphthene	2-Chloronaphthalene	Fluroranthene
Acenaphthylene	4-Chlorophenyl Phenyl Ether	Fluorene
Anthracene	Chrysene	Hexachlorobenzene
Benzidine	Dibenzo(a,h)anthracene	Hexachlorobutadiene
Benzo(a)anthracene	1,2-Dichlorobenzene	Hexachloroethane
Benzo(a)pyrene	1,3-Dichlorobenzene	Indeno(1,2,3-cd)pyrene
3,4-Benzofluoranthene	1,4-Dichlorobenzene	Isophorone
Benzo(ghi)perylene	3,3'-Dichlorobenzidine	Napthalene
Benzo(k)fluoranthene	Diethyl Phthalate	Nitrobenzene
Bis(2-chloroethoxy)methane	Dimethyl Phthalate	N-Nitrosodimethylamine
Bis(2-chloroethyl)ether	Di-N-Butyl Phthalate	N-Nitrosodi-N-Propylamine
Bis(2-chloroisopropyl)ether	2,4-Dinitrotoluene	N-Nitrosodiphenylamine
Bis(2-ethylyhexyl)phthalate	2,6-Dinitrotoluene	Phenanthrene
4-Bromophenyl Phenyl Ether	Di-N-Octyphthalate	Pyrene
Butylbenzyl Phthalate	1,2-Diphenylhydrazine (as Azobenzene)	1,2,4-Trichlorobenzene

Pesticides

Aldrin	Dieldrin	PCB-1254
Alpha-BHC	Alpha-Endosulfan	PCB-1221
Beta-BHC	Beta-Endosulfan	PCB-1232
Gamma-BHC	Endosulfan Sulfate	PCB-1248
Delta-BHC	Endrin	PGB-1260
Chlordane	Endrin Aldehyde	PCB-1016
4,4'-DDT	Heptachlor	Toxaphene
4,4'-DDE	Heptachlor Epoxide	
4,4'-DDD	PCB-1242	

Table 2F-4

Hazardous Substances

Toxic Pollutant

Asbestos

Hazardous Substances

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

Cresol
Crotonaldehyde

Cyclohexane
2,4-D (2,4-Dichlorophenoxyacetic acid)
Diazinon
Dicamba
Dichlobenil
Dichlone
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

Georgia-Pacific LLC Crossett Complex

This section identifies the processes associated with Georgia-Pacific LLC's manufacturing complex located in Crossett, Arkansas. The complex is made up of three distinct operations: a pulp and paper mill, a plywood plant/stud mill and a chemical plant. The pulp and paper mill also has an associated extrusion plant that applies a coating to bleached board. All three of these operations have the potential to operate twenty-four (24) hours per day, seven (7) days per week, and fifty-two (52) weeks per year.

Paper Operations Process Description

Chips are received at the facility by truck and rail. Upon unloading, the chips are pneumatically blown to the distribution tower and are then dropped onto the chip piles. Round logs are also received at the facility. After storage, the logs are transported to the debarking drums for bark removal. The debarked logs are fed to the chipper and the produced chips are then conveyed to the chip piles. The chips from the chip piles are screened prior to entering the chip silos. Rejected chips from the screening are burned in the facility's combination boilers. The removed bark is pneumatically sent to bark piles for storage and eventual use in the facility's boilers.

The chips from the silos are conveyed to the Mill's batch digesters. The function of the digesters is to cook the chips using white liquor and steam from the boilers. In the digestion process, these raw materials are combined and cooked at a set pressure and temperature until the desired pulp quality is obtained. At the end of each "cook", the blow valves at the bottom of the digesters are opened, with the resulting pressure forcing the pulp mass through a blow line into blow tanks.

The blow tanks are at atmospheric pressure and the contents of the digesters enter the blow tanks tangentially at the top. When the chips hit the lower pressure in the tank, the liquor and water flash, blowing the chips apart to produce the pulp fibers. The vapors from the blow tanks are sent to the blow heat condensing system, where non-condensable gases (NCGs) are removed. The steam vapors are condensed in the accumulator. The accumulator water is sent to the stripper and returned to the washers as clean condensate. Knots (e.g. undercooked wood chips, irregularly shaped or overly thick pieces of wood, etc.) are removed with the use of vibrating knotters/screens, pressed and trucked to the chip pile for repulping.

The pulp is washed to remove spent cooking chemicals. In the washers, the wash water and pulp move in counter current directions. The washed pulp is passed through screening and cleaning stages which remove debris from the stock. After screening, the pulp passes through the decker system, which thickens the pulp for storage in high density storage chests.

The unbleached Kraft pulp is taken from the high density storage chests for further processing in the bleach plant. The bleaching process removes the remaining lignin and color from the unbleached pulp. Bleaching is performed in several stages using chlorine dioxide, caustic soda, oxygen, and hydrogen peroxide.

Recovery describes the set of operations that recovers the spent cooking chemicals for reuse in the digesters. The recovery process utilizes a multi-effect evaporator to concentrate weak black liquor. The concentrated black liquor is burned in the Mill's recovery furnace producing steam

and energy. The spent chemicals leave the recovery furnace from the bottom in a molten form and enter the smelt dissolving tanks. In the smelt dissolving tanks, molten inorganic salts react with weak wash water to form green liquor. This green liquor is then treated with slaked lime to form white liquor. The white liquor is then ready for use as the main cooking liquor in the digesters.

Paper products are currently manufactured on various paper machines and paper extruding machines. The paper machines include board and tissue machines. Each machine has its own stock preparation, head box, wire section, press section, dryer sections, coater section, calendar stacks, reel, and drum winder. One board machine is capable of producing fine paper.

Tissue and towel converting includes the operations involved with converting large parent rolls of tissue/towel from the machines into finished product. This includes rewinding onto smaller sized rolls, folding, printing, cutting, packaging, and shipping.

Bleached board from the bleached board machines is sent across US highway 82 by rail to the extrusion plant. The extruding machines utilize board from the board paper machines and from outside board customers and apply a polymer coating. Rolls of board are loaded onto an unwind stand before passing through a calendar stack, where they are subjected to burners which flame seal the board. An extruded poly sheet is then pressed together with the board.

Crossett Paper Operations utilizes four fossil fuel-fired steam generating units and a recovery furnace to provide steam and power to the pulp and paper manufacturing process. Two of the boilers (9A and 10A) utilize wet scrubbers that discharge to the sewer. The recovery furnace utilizes a wet electrostatic precipitator that also discharges to the sewer. Other devices such as the smelt dissolving tank and lime kiln also have wet scrubbers that discharge to the sewer.

Paper Operations Water Treatment

Approximately 45 million gallons of water is used daily to operate the mill. The majority of this water comes from the Saline River via GP Lake. Water is pumped from the Saline River into GP Lake. GP Lake provides a ready reservoir of fresh water for the mill as needed. Water is then pumped several miles from the lake to Cemetery Pond at the mill site. From Cemetery Pond, water is drawn as needed into the water treatment plant for treatment. Polyaluminum chloride, polymer, and chlorine dioxide are used to treat the water, and pH of the water is also adjusted. Water filter backwash and sludge is either recycled to the head of the water treatment plant or sewered. Treated water is then used in the various mill operations.

A portion of the water used by mill operations is also supplied from several groundwater wells. The water is treated with polyphosphate and chlorine dioxide or chlorine gas for disinfection and used within the Paper Mill for potable water uses and cooling water.

Plywood Facility Process Description

The Plywood Facility receives logs for processing into plywood. This facility consist of two plywood plants under one roof, both of which produce plywood panels. To begin, incoming logs

are unloaded in the Logyard debarking area. The log debarkers remove the bark from the logs before the logs are sent to the cutoff saws. The bark is mechanically conveyed to the bark shredder where it is shredded before being conveyed to the fuel bin. The cutoff saws trim the raw debarked logs to the desired length. The logs are sent to either Plant 1 or Plant 2 for processing. The trimmed-off ends of the logs are sent to the lilypad chippers where they are chipped before being sent to the fuel bin for transfer to the boilers. The shaker screen, which is also located between the plants, receives chips from the core chippers, the roundup chippers, and the veneer chippers. Oversized chips are sent to the rechipper and then back to the shaker screen. The green chips are shipped off site via rail car or trucks and the throughs are pneumatically conveyed to the fuel bin. The sized logs proceed to the soaking vats for conditioning. After soaking in the vats, the logs are mechanically conveyed to the green end processes, which include the lathes and the veneer clippers. The Green veneer is then dried in the veneer dryers. Dry veneer is transferred to the Gluelines where the plywood is laid up and glue is applied to the veneer. After glueing, the panels are pressed at the Presses. After pressing, the panels are finished by the skinner saws, spec saws or sanders.

In the dryers, the veneer is dried using steam that is generated by the wood-fired boilers. The woodfired boilers combust the wood residuals generated by both Plants 1 and 2. Ash associated with the burning of wood fuel is collected by venturi scrubbers and sluiced to the P3 process sewer, where it is conveyed to the ash settling basins in the wastewater treatment facility. Vat water and other process and non-process waters may also be directed to the sewer periodically. This is allowed for an existing timber products complex as described in the original issuance of the Timber Products Effluent Guidelines (39 FR 13943).

The Plywood operation has been curtailed since October of 2011.

Studmill Facility Process Description

Cores from offsite sources are unloaded in the woodyard. Low quality cores are shipped offsite. The cores of higher quality proceed to the sawing and sizing process where both ends of the cores are trimmed to the desired length, and the cores are cut according to product specifications. Wood residuals and sawdust from this operation are mechanically conveyed to the chipper, which chips the wood residuals into smaller pieces. These pieces are then conveyed to a shaker screen. The throughs from the screen are shipped offsite while the fines are mechanically conveyed to the boiler. The green lumber proceeds to either the high temperature kiln or the conventional kiln. The kilns, which are indirectly heated using steam generated from the boiler at the plywood facility, dry the wood to the desired moisture content. The roughcut dry lumber is planed before being sent to the retrim saw or the rip and chop saws, which trim the wood to customer specifications. The planer shavings generated by the planer are pneumatically conveyed to the dry residuals surge bin via cyclone. The dry residuals in the surge bin are pneumatically conveyed to truck loading via cyclone and then shipped offsite. Some lumber may be sent to edge sealing operations where the ends are spray painted and stenciled with the Georgia-Pacific logo. Studs may be stored prior to being shipped offsite.

The Studmill operation has been curtailed since October of 2011.

Georgia-Pacific LLC Crossett Complex

Chemical Plant Process Description

The Crossett chemical complex contains a Resins facility consisting of manufacturing plants for the production of formaldehyde, urea formaldehyde concentrate, liquid resins, and spray dried resins. The complex also has a Tall Oil facility consisting of a tall oil distillation unit, a rosin size plant, and a rosin derivatives and pastilles plant. The chemical complex has an extensive system of pipes, concrete impoundments, trenches, sumps, and containment structures used to convey wastewater produced by various processes and maintenance activities, storm water that falls within process areas, storm water that falls outside of process areas, along with the sanitary sewer. At the Resins facility, these streams flow from the point of generation through a variety of conveyances to the P3 sewer for treatment in the adjacent paper mill's wastewater treatment system. At the Tall Oil facility, process streams and wastewater/storm water collected in various collection sumps flow through an oil-water separator and odor control system before discharging to the P3 sewer for treatment in the paper mill's wastewater treatment system. The complex's sanitary sewer discharges directly to the P3 sewer.

Wastewater Treatment

Wastewater from the Crossett Complex is collected in the mill in three sewers: the P1, P2 and P3 sewers. The P2 sewer discharges to the P1 sewer prior to leaving the mill site. Certain chemical pretreatments for pH adjustment or controlling conditions that could produce odors may be practiced on the mill site. These odor control systems include but may not be limited to a peroxide/organic iron catalyst system; iron salts and/or oxygen injected into the wastewater. The P1 and P3 sewers then are piped by gravity approximately one mile to the wastewater treatment area.

In the primary clarifier area, pH adjustment may be accomplished on either the P1 or P3 sewer with the addition of caustic. Additionally, several odor control systems may be used to control conditions that could potentially produce odorous emissions from the primary clarifier area. These systems include but may not be limited to a peroxide/organic iron catalyst system; iron salts and/or oxygen injected into the wastewater.

The P1 sewer combines wastewater from the paper machines, pulping operations, recovery, and woodyard operations and then flows to the primary clarifier to settle a large majority of settable solids. Sludge from the clarifier is pumped to a dewatering operation, and the sludge is dewatered on dewatering machines. Filtrate from the dewatering operation is returned to the sewer downstream of the clarifier. Dewatered sludge taken to the sludge pond reclamation area for closure of a former sludge pond. Once the closure is complete, sludge will be disposed in the mill's north landfill or utilized in an approved beneficial reuse manner. In the event of a maintenance outage, a high solids loading or high storm water flow to the primary clarifier, wastewater may be routed around the primary clarifier directly to the ash basins as a sole means of primary solids treatment and removal.

Clarified water from the primary clarifier combines with the P3 sewer and then flows by gravity to the two ash settling basins via a manmade channel. The wastewater in the P3 sewer includes

boiler scrubber water from the Complex power boilers. One ash basin is in service at a time while the other ash basin is being dredged for solids removal. In the ash basins, ash is settled and mechanically removed to the side of the basin. Ash is allowed to dewater and then trucked to the sludge pond reclamation area for closure. Once the sludge pond reclamation area closure is complete, ash will be disposed in the mill's north landfill or utilized in an approved beneficial reuse manner.

The surge basin is used to control hydraulic and organic loads to increase the efficiency of biological treatment in the aerated stabilization basin. Gates on the discharge structure from the surge basin control the outlet flow. After the surge basin, a nutrient solution containing nitrogen and phosphorus may be added to provide sufficient nutrients for proper degradation of organic wastes. Acid may also be added before and after the surge basin to adjust pH prior to biological treatment. The treated wastewater from the City of Crossett's wastewater ponds also discharges into the manmade channel downstream of the surge basin. This wastewater flows via the manmade open channel into the aerated stabilization basin.

A presettling basin (not yet installed) will allow for residual solids removal prior to the aeration basin at the downstream end of the manmade channel. Wastewater entering the aerated stabilization basin is treated by aerating the wastewater to supply adequate oxygen for proper aerobic biological degradation of wastes. Additional aeration capacity is in place; thus, it is not necessary to operate all of the aerators at all times in order to supply sufficient oxygen for adequate treatment. In order to optimize aeration, new aerators of more energy efficient designs are also presently being evaluated for installation and replacement of the existing aeration system. After aerated biological treatment, biological solids are allowed to settle in a quiescent zone. Polymer or iron salts may be added to assist with settling. Settled solids in the ASB system are dredged to a contiguous section of the aeration basin (the dredged spoils area) for solids dewatering and eventual trucking to the sludge pond reclamation area for closure of that area. Once the sludge reclamation area is closed, the dewatered dredged solids will be disposed in the mill's north landfill or utilized in an approved beneficial reuse manner.

Wastewater exiting the aeration stabilization basin is treated with defoamer and then discharges through Outfall 001 where the treated wastewater is sampled and the flow measured in a Parshall flume. Treated wastewater from the flume enters an earthen manmade channel, and eventually flows to the upper reaches of Mossy Lake, then flows to the Ouachita River via Coffee Creek.

At the exit of Mossy Lake, flow is regulated by a flow control structure. During unflooded periods as described in the permit, this point (SMS 002) is sampled for the parameters specified in the permit. Due to turbulent conditions from the discharge of Mossy Lake into the channel downstream, a small amount of defoamer may be added to prevent foam formation in Coffee Creek and the Ouachita River.

The mill wastewater and storm water falling in the process areas of the mill are collected in various sewers in the mill and flow by gravity to the treatment system. In addition to the normal process and nonprocess wastewaters collected, the mill may discharge wastewaters resulting from essential maintenance, regularly scheduled maintenance, during startup and shutdown, and

from incidental spills and releases (whether anticipated or unanticipated) from anywhere in the permitted facility. These wastewaters are amenable to treatment as provided in the treatment system, and will not impact effluent limitations. Sanitary wastewater in the mill complex is also treated in a number of septic tanks or aerobic treatment units. These are discharged into the various mill sewers for additional treatment in the mill wastewater treatment system.

On-Site Landfill

GP transports wastes generated at Crossett Paper Operations to one of two active landfills, the East Landfill and the North Landfill. The East Landfill is permitted to operate as a Class 3N (Non-Commercial) landfill and accepts only construction debris. The North Landfill, which began operation on September 1998, is permitted as an industrial landfill to accept general waste from the three manufacturing entities that make up the GP Crossett Complex. Leachate associated with the North and East landfills is collected and conveyed to the GP Complex wastewater treatment plant where it is treated prior to discharging it to the Ouachita River. No municipal waste is disposed of in either landfill.

Miscellaneous Activities

Product Stewardship wastewaters associated with other GP chemical or building product facilities may be periodically shipped to the GP's Crossett complex for treatment in its wastewater treatment system. All waters received would be "characteristically like" the pollutants in the wastewater already being generated and treated at the GP complex. The current permit contains a condition that requires ADEQ approval prior to potential treatment.

Process Materials and Chemicals
Georgia-Pacific LLC
Crossett, Arkansas

Paper Mill Process materials

- Logs and chips
- Bark and Hog fuel
- Pulp/stock
- Black liquor
- White liquor
- Green liquor
- Green liquor dregs
- Lime mud
- Turpentine
- Soap/Tall oil
- Pulping Condensates
- Slaker grits
- Bolier ash

Plywood Plant Process Materials

- Logs
- Bark/Hog Fuel
- Green wood chips/lumber/sawdust/shavings
- Boiler ash/slag

Chemical Plant Process Materials

- Crude tall oil and fractionates
- Formaldehyde, urea-formaldehyde concentrate
- Tall oil rosin size and esters
- Urea-formaldehyde, phenol-formaldehyde, and polyamide resins

Specific chemicals used at the Pulp and Paper mill

- sodium hydroxide
- sulfuric acid
- chlorine dioxide
- sodium chlorate
- methanol
- alum
- hydrogen peroxide
- sodium hydrosulfide
- salt cake (sodium sulfate)
- sodium thiosulfate
- sodium bisulfite
- phosphoric acid
- urea ammonia nitrate

(Plywood)
potassium hydroxide

Process Materials and Chemicals
Georgia-Pacific LLC
Crossett, Arkansas

(Chemical)

adipic, formic, fumaric, and toluene sulfonic acids
aliphatic amide
antioxidants
aqueous ammonia
biphenyl, terphenyl, quaterphenyl and diphenyl oxides
diethylenetriamine
epichlorohydrin
ethylene glycol
gamma-aminopropyltriethoxysilane
glycerine
lithium and ferrous iodides
organic salts
pentaerythritol
phenol
potassium hydroxide
maleic anhydride
sodium hypochlorite
urea

General classes of chemicals used at the mill

- Polymers
- Retention aids
- Slimicides
- Emulsifiers
- Defoamers
- Sizing agents
- Lubricating oils and greases
- Fuels (e.g., gasoline, diesel, No.6 Fuel Oil, coal)
- Inks and dyes

Note:
This is not meant to be an all inclusive list of every chemical used at the mill. However, it does outline the primary chemicals used that may contribute to wastewater loads to the treatment system.

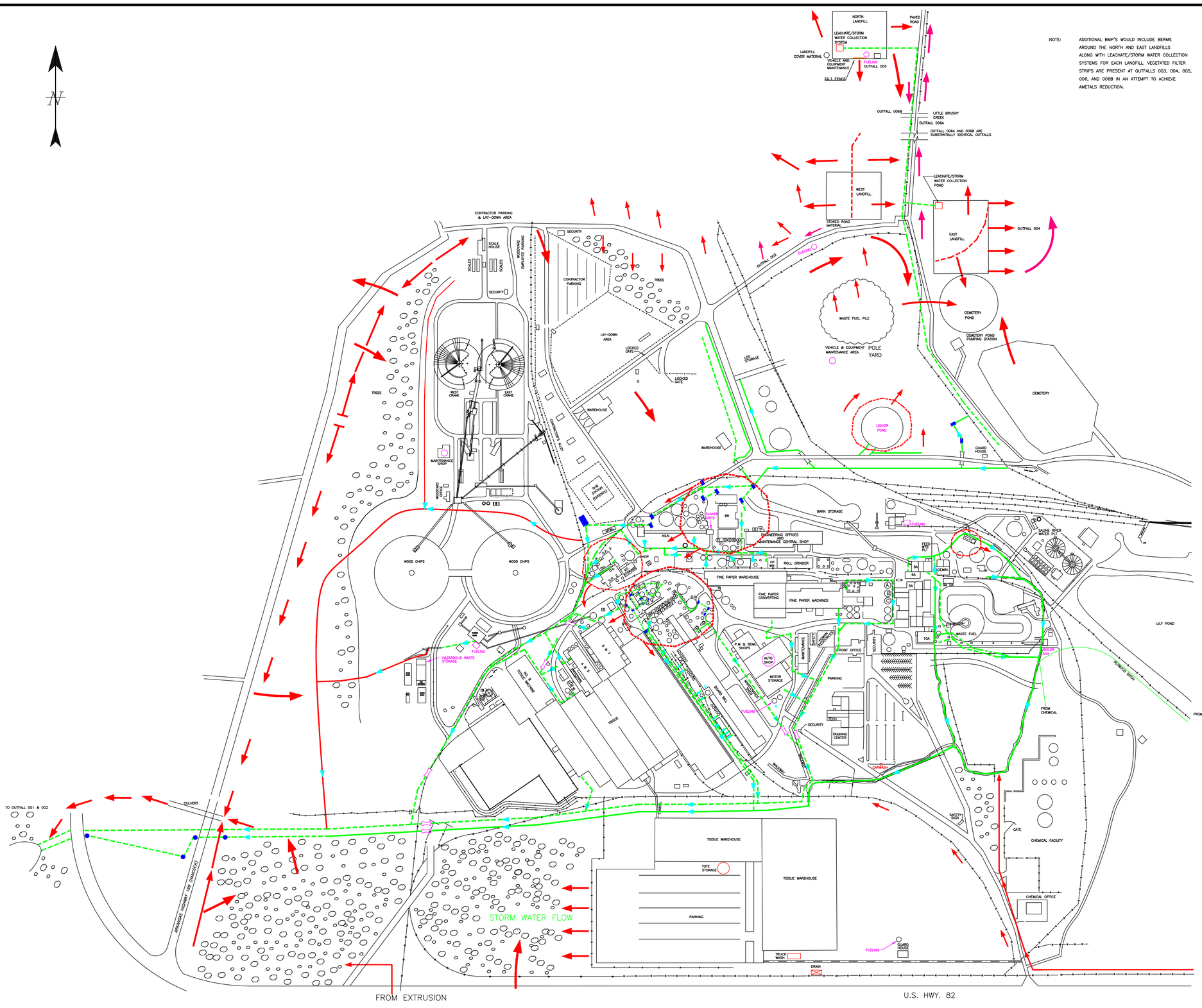
Biocide Certification

In accordance with the requirements of 40 CFR 430.24(d), I hereby certify that the Georgia-Pacific LLC facility, Crossett Paper Operations, does not utilize trichlorphenolic-containing or pentachlorophenolic-containing biocides in our process operations.

Gary Kainer
Signature

5-4-15
Date

Vice President
Title of Responsible Corporate Official



NOTE: ADDITIONAL BMP'S WOULD INCLUDE BERMS AROUND THE NORTH AND EAST LANDFILLS ALONG WITH LEACHATE/STORM WATER COLLECTION SYSTEMS FOR EACH LANDFILL. VEGETATED FILTER STRIPS ARE PRESENT AT OUTFALLS 003, 004, 005, 006, AND 006B IN AN ATTEMPT TO ACHIEVE AMETALS REDUCTION.

LEGEND

- JUNCTION BOX
- MANHOLE
- OPEN DITCH PROCESS WASTEWATER *
- UNDERGROUND SEWER
- PARSHALL FLUME
- LOCATION OF HISTORICAL SPILLS
- VEHICLE AND EQUIPMENT MAINTENANCE AREAS
- DRAINAGE LIMITS
- STORM WATER FLOW
- SILT FENCE
- STORM WATER DITCHES

THIS DRAWING IS NOT TO SCALE

PROCESS WASTEWATERS ARE AS DESCRIBED IN THE NPDES PERMIT APPLICATION.

ROLLOFF DUMPSTERS & LUGGER BUCKETS ARE USED FOR WASTE COLLECTION THROUGHOUT THE FACILITY. RUNOFF FROM THESE AREAS WOULD BE DISCHARGED TO THE WASTE WATER TREATEMENT PLANT.

FOR A COMPLETE DRAWING OF ALL CHEMICAL STORAGE TANKS PLEASE SEE DRAWING D01-C-066 ADDITIONALLY TOTES AND DRUMS ARE STORED OUTSIDE IN PROCESS SEWER DRAINAGE AREAS. FOR ALL OIL STORAGE AREAS PLEASE REFER TO THE SPCC DRAWING.

REV.	DATE	DESCRIPTION	BY	CHK'D	APP'D

NOTES:
1.
2.
3.
4.
5.
6.

REFERENCE DRAWINGS:
1. E-01-C-144 BMP SEWER AND TANK PLAN
2. D-01-C-066 1995 API STORAGE TANK INSPECTIONS
3.
4.
5.
6.

REV.	REF. NO.	DATE	BY	CHK'D	APP'D	VER.
4		5/15	AG	RJ		

REVISION DESCRIPTION

Georgia-Pacific
CROSSETT - PAPER
CROSSETT, ARKANSAS

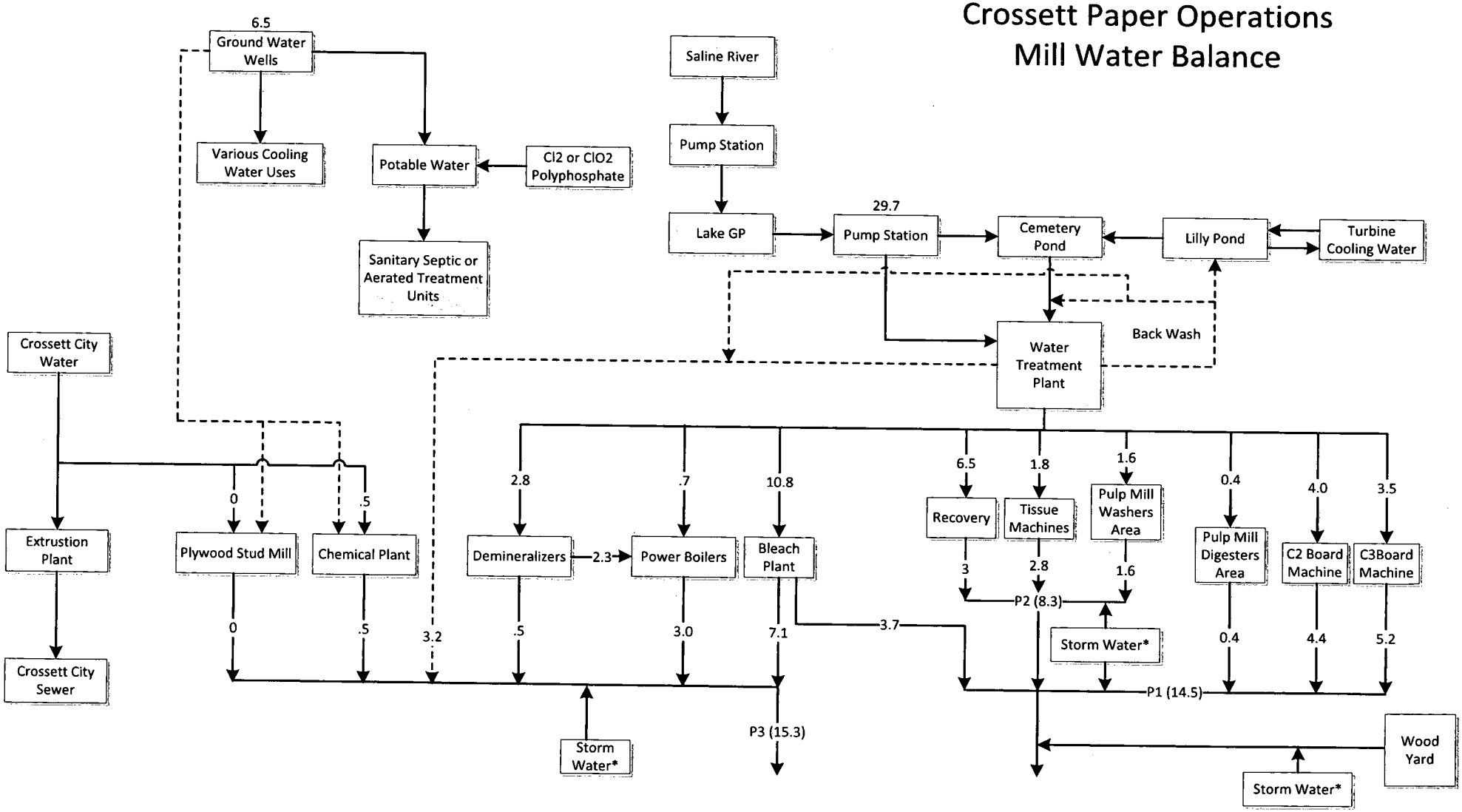
CONSULTANT/VENDOR:

DATE 12/1/98	TAG NO.:
SCALE N.T.S.	REF. NO.:
DRAWN J.G.S.	PROJ. NO.:
CHECKED	CAD FILENAME E01C155
APPROVED	

TITLE:
CROSSETT PAPER OPERATIONS
STORM WATER DRAINAGE

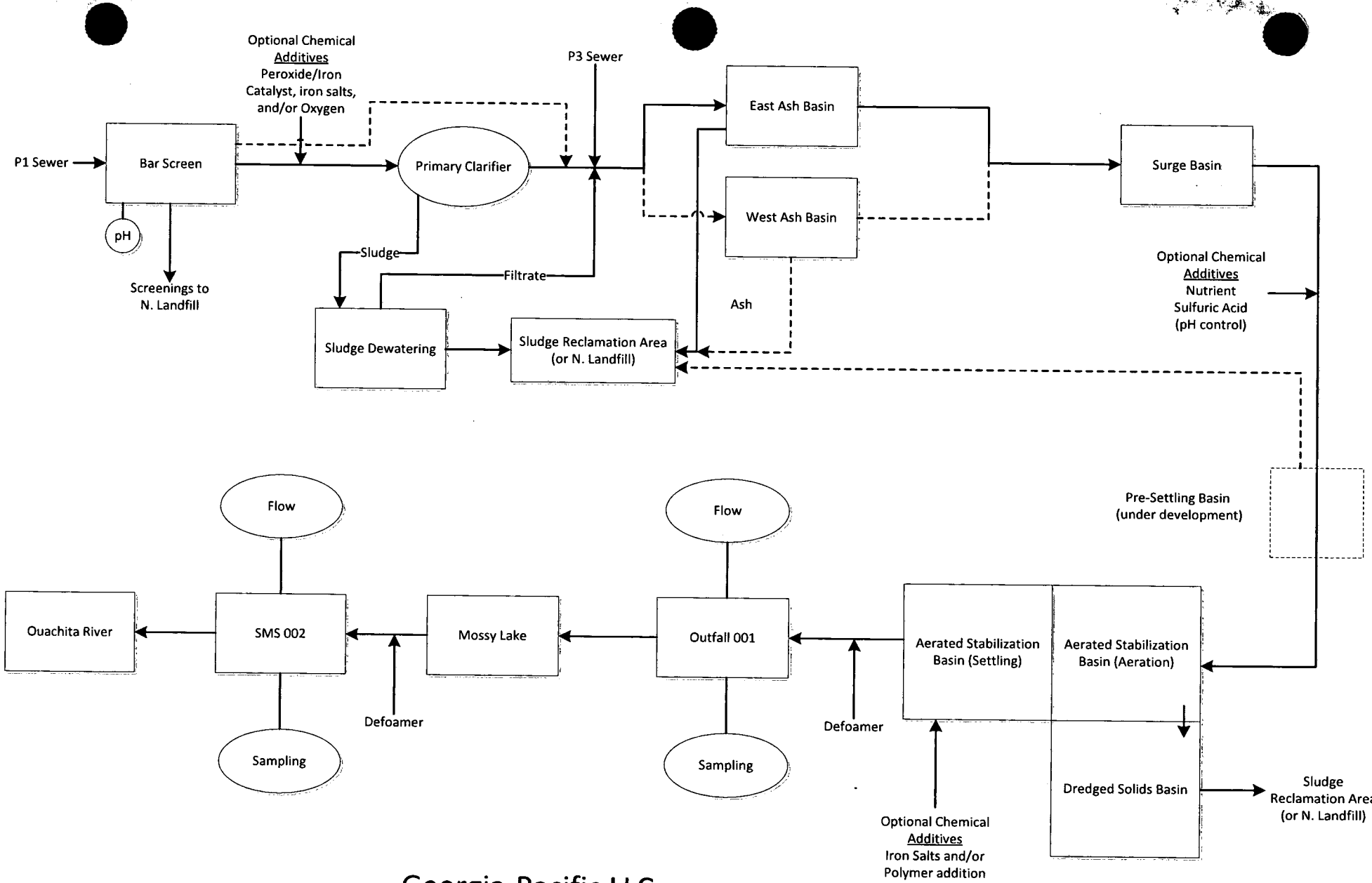
DRAWING NUMBER:	SHEET	REV.
E-01-C-155	1 OF 1	4

Georgia-Pacific LLC
Crossett Paper Operations
Mill Water Balance



All numbers are in millions of gallons per day (MGD)

*= Storm water collectively is 1.4 MGD



Georgia-Pacific LLC
Crossett Paper Operations
Waste Water Treatment Schematic

Storm Water Calculation

Georgia-Pacific Crossett Paper Operations
NPDES Permit No. AR0001210

Average annual precipitation for Crossett, AR	56.88 inches per year
Site area drainage to the wastewater treatment system	
• P1/P2/Woodyard Sewer	183.4 acres
• P3 Sewer	181.5 acres
Runoff coefficient for overall site [1]	0.9
Calculated runoff per year to wastewater treatment system	
• P1/P2/Woodyard Sewer	255 MG
• P3 Sewer	252 MG
• Total	507 MG
Calculated daily average contribution to wastewater treatment system	**1.4 MGD**

(Note: Above value used on page 1 of Form 2C)

[1] Runoff coefficient based on the midpoint of range for an industrial area (0.5 – 0.9) as outlined in *Applied Hydrology*, Chow et al., 1999, Second edition.

Total Mill

Off-Machine Production

Total Mill Off-Machine Production

	2010			2011			2012			2013			2014		
	Total Off-Machine-Production			Total Off-Machine-Production			Total Off-Machine-Production			Total Off-Machine-Production			Total Off-Machine-Production		
	Tons		TPD	Tons		TPD	Tons		TPD	Tons		TPD	Tons		TPD
Feb	52,674		2,110	59,198		2,365	58,750		2,235	58,565		2,216	45,106		1,783
Mar	61,555		2,206	62,759		2,308	61,510		2,164	64,238		2,215	51,566		1,837
Apr	62,712		2,243	65,445		2,348	58,569		2,086	61,875		2,169	53,089		1,845
May	65,000		2,291	54,268		2,317	47,510		2,032	50,580		2,245	41,442		1,797
Jun	48,261		2,302	62,927		2,350	61,066		2,224	61,582		2,248	52,709		1,847
Jul	67,031		2,348	65,488		2,299	64,413		2,248	62,696		2,228	52,308		1,832
Aug	65,307		2,346	61,999		2,313	62,140		2,152	65,508		2,243	47,909		1,884
Sep	62,912		2,353	61,003		2,321	58,889		2,148	52,600		2,109	48,771		1,733
Oct	62,431		2,361	57,078		2,316	63,120		2,166	60,815		2,161	48,205		1,762
Nov	60,865		2,322	63,671		2,301	56,703		2,167	45,225		1,711	47,758		1,697
Dec	62,515		2,253	61,991		2,293	62,309		2,155	46,754		1,721	48,582		1,700
Average		-	**2,285**		-	**2,321**		-	**2,162**			**2,115**			**1,793**

Unbleached Production

for

Chloroform and AOX

Effluent Limitation Guidelines

Unbleached Pulp Production - Air Dried Short Ton

	2010			2011			2012			2013			2014		
	Tons	Days	TPD	Tons	Days	TPD	Tons	Days	TPD	Tons	Days	TPD	Tons	Days	TPD
	Line 2 - Softwood			**Line 2 - Softwood**			**Line 2 - Softwood**			**Line 2 - Softwood**			**Line 2 - Softwood**		
Jan	15,139	31	488	14,960	31	483	15,799	31	510	15,780	31	509	13,128	31	423
Feb	14,253	28	509	13,980	28	499	15,277	29	527	14,887	28	532	11,547	28	412
Mar	15,326	31	494	14,209	31	458	16,068	31	518	15,670	31	505	14,955	31	482
Apr	14,406	30	480	16,306	30	544	15,302	30	510	14,861	30	495	14,132	30	471
May	16,825	31	543	12,698	24	529	11,750	24	490	12,927	24	539	10,285	22.5	457
Jun	11,640	23	506	14,171	30	472	15,993	30	533	15,834	30	528	16,118	30	537
Jul	16,929	31	546	13,861	31	447	17,190	31	555	16,577	31	535	16,871	31	544
Aug	17,013	31	549	14,135	31	456	17,528	31	565	17,273	31	557	13,271	31	428
Sep	15,717	30	524	13,769	30	459	14,972	30	499	13,482	30	449	15,522	30	517
Oct	15,749	31	508	13,084	31	422	16,773	31	541	17,092	31	551	14,675	31	473
Nov	14,225	30	474	15,235	30	508	13,943	30	465	12,899	30	430	15,158	30	505
Dec	15,653	31	505	15,411	31	497	16,485	31	532	14,471	31	467	15,813	31	510
	182,875	**358**	**511**	**171,819**	**358**	**480**	**187,080**	**359**	**521**	**181,753**	**358**	**508**	**171,475**	**356.5**	**481**
	Line 1A - Hardwood			**Line 1A - Hardwood**			**Line 1A - Hardwood**			**Line 1A - Hardwood**			**Line 1A - Hardwood**		
Jan	13,477	31	435	19,074	31	615	18,107	31	584	17,526	31	565	14,861	31	479
Feb	12,799	28	457	17,774	28	635	17,045	29	588	16,710	28	597	13,831	28	494
Mar	17,313	31	558	18,970	31	612	17,136	31	553	18,745	31	605	16,076	31	519
Apr	19,054	30	635	18,385	30	613	15,949	30	532	17,861	30	595	15,569	30	519
May	19,216	31	620	15,497	24	646	12,799	24	533	14,598	24	608	11,289	22.5	502
Jun	13,244	23	576	18,153	30	605	16,525	30	551	18,201	30	607	15,184	30	506
Jul	19,439	31	627	19,918	31	643	17,597	31	568	18,808	31	607	14,412	31	465
Aug	18,440	31	595	18,018	31	581	17,967	31	580	18,366	31	592	14,391	31	464
Sep	17,583	30	586	17,797	30	593	16,858	30	562	15,136	30	505	14,789	30	493
Oct	17,998	31	581	17,136	31	553	18,338	31	592	17,435	31	562	13,643	31	440
Nov	18,105	30	604	18,933	30	631	16,418	30	547	13,277	30	443	13,784	30	459
Dec	18,493	31	597	18,133	31	585	17,528	31	565	12,997	31	419	13,452	31	434
	205,159	**358**	**573**	**217,784**	**358**	**608**	**202,265**	**359**	**563**	**199,657**	**358**	**558**	**171,278**	**356.5**	**480**
	Line 1B - Hardwood			**Line 1B - Hardwood**			**Line 1B - Hardwood**			**Line 1B - Hardwood**			**Line 1B - Hardwood**		
Jan	13,477	31	435	19,074	31	615	18,107	31	584	17,526	31	565	14,861	31	479
Feb	12,799	28	457	17,774	28	635	17,045	29	588	16,710	28	597	13,831	28	494
Mar	17,313	31	558	18,970	31	612	17,136	31	553	18,745	31	605	16,076	31	519
Apr	19,054	30	635	18,385	30	613	15,949	30	532	17,861	30	595	15,569	30	519
May	19,216	31	620	15,497	24	646	12,799	24	533	14,598	24	608	11,289	22.5	502
Jun	13,244	23	576	18,153	30	605	16,525	30	551	18,201	30	607	15,184	30	506
Jul	19,439	31	627	19,918	31	643	17,597	31	568	18,808	31	607	14,412	31	465
Aug	18,440	31	595	18,018	31	581	17,967	31	580	18,366	31	592	14,391	31	464
Sep	17,583	30	586	17,797	30	593	16,858	30	562	15,136	30	505	14,789	30	493
Oct	17,998	31	581	17,136	31	553	18,338	31	592	17,435	31	562	13,643	31	440
Nov	18,105	30	604	18,933	30	631	16,418	30	547	13,277	30	443	13,784	30	459
Dec	18,493	31	597	18,133	31	585	17,528	31	565	12,997	31	419	13,452	31	434
	205,159	**358**	**573**	**217,784**	**358**	**608**	**202,265**	**359**	**563**	**199,657**	**358**	**558**	**171,278**	**356.5**	**480**
	Total Unbleached Production			Total Unbleached Production			Total Unbleached Production			Total Unbleached Production			Total Unbleached Production		
Jan	42,092	31	1,358	53,108	31	1,713	52,013	31	1,678	50,831	31	1,640	42,849	31	1,382
Feb	39,851	28	1,423	49,527	28	1,769	49,367	29	1,702	48,306	28	1,725	39,208	28	1,400
Mar	49,952	31	1,611	52,148	31	1,682	50,339	31	1,624	53,159	31	1,715	47,107	31	1,520
Apr	52,513	30	1,750	53,076	30	1,769	47,199	30	1,573	50,583	30	1,686	45,269	30	1,509
May	55,256	31	1,782	43,691	24	1,820	37,348	24	1,556	42,122	24	1,755	32,862	22.5	1,461
Jun	38,128	23	1,658	50,476	30	1,683	49,043	30	1,635	52,236	30	1,741	46,486	30	1,550
Jul	55,806	31	1,800	53,697	31	1,732	52,383	31	1,690	54,192	31	1,748	45,695	31	1,474
Aug	53,893	31	1,738	50,170	31	1,618	53,462	31	1,725	54,005	31	1,742	42,052	31	1,357
Sep	50,883	30	1,696	49,362	30	1,645	48,687	30	1,623	43,754	30	1,458	45,099	30	1,503
Oct	51,744	31	1,669	47,356	31	1,528	53,449	31	1,724	51,961	31	1,676	41,960	31	1,354
Nov	50,435	30	1,681	53,100	30	1,770	46,778	30	1,559	39,452	30	1,315	42,726	30	1,424
Dec	52,639	31	1,698	51,676	31	1,667	51,541	31	1,663	40,465	31	1,305	42,717	31	1,378
	593,192	**358**	**1,657**	**607,387**	**358**	**1,697**	**591,609**	**359**	**1,648**	**581,066**	**358**	**1,623**	**514,030**	**356.5**	**1,442**

For Chloroform:

Highest 12 month period for Line 2	**(July 2012-June 2013)**	522 TPD
Highest 12 month period for Line 1A	**(August 2010-July 2011)**	611 TPD
Highest 12 month period for Line 1B	**(August 2010-July 2011)**	611 TPD

For AOX:

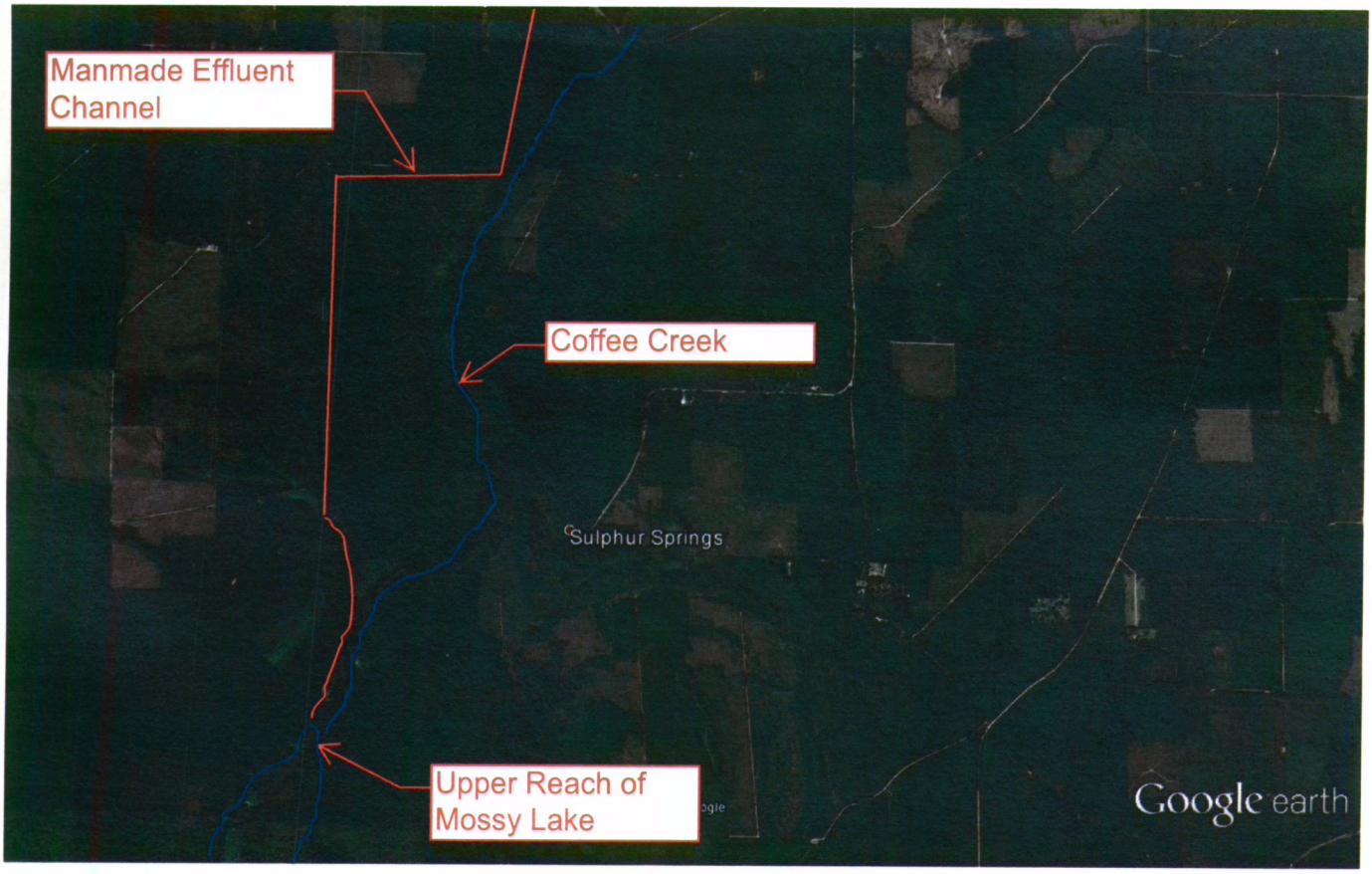
Total of highest Consecutive 12 months for all bleach lines:	1,744 TPD

Chloroform Analysis

Internal Outfall 101			Internal Outfall 102			Internal Outfall 103		
Date			Date			Date		
1/13/2013	Loading (lb/d)	0.5200	1/13/2013	Loading (lb/d)	0.7867	1/13/2013	Loading (lb/d)	1.2777
	Concentration (mg/L)	0.0228		Concentration (mg/L)	0.0184		Concentration (mg/L)	0.0381
3/3/2013	Loading (lb/d)	0.5347	3/3/2013	Loading (lb/d)	0.5722	3/3/2013	Loading (lb/d)	1.0070
	Concentration (mg/L)	0.0237		Concentration (mg/L)	0.0146		Concentration (mg/L)	0.0285
5/6/2013	Loading (lb/d)	0.8194	5/6/2013	Loading (lb/d)	1.1135	5/6/2013	Loading (lb/d)	1.3802
	Concentration (mg/L)	0.0330		Concentration (mg/L)	0.0248		Concentration (mg/L)	0.0390
7/7/2013	Loading (lb/d)	0.5912	7/7/2013	Loading (lb/d)	1.5018	7/7/2013	Loading (lb/d)	1.0182
	Concentration (mg/L)	0.0205		Concentration (mg/L)	0.0352		Concentration (mg/L)	0.0213
9/1/2013	Loading (lb/d)	0.4632	9/1/2013	Loading (lb/d)	0.7447	9/1/2013	Loading (lb/d)	1.4373
	Concentration (mg/L)	0.0194		Concentration (mg/L)	0.0179		Concentration (mg/L)	0.0392
11/3/2013	Loading (lb/d)	0.3417	11/3/2013	Loading (lb/d)	0.4178	11/3/2013	Loading (lb/d)	2.0688
	Concentration (mg/L)	0.0144		Concentration (mg/L)	0.0102		Concentration (mg/L)	0.0540
1/25/2014	Loading (lb/d)	0.4380	1/25/2014	Loading (lb/d)	0.9901	1/25/2014	Loading (lb/d)	1.5860
	Concentration (mg/L)	0.0192		Concentration (mg/L)	0.0274		Concentration (mg/L)	0.0413
3/16/2014	Loading (lb/d)	0.4753	3/16/2014	Loading (lb/d)	1.3209	3/16/2014	Loading (lb/d)	1.3730
	Concentration (mg/L)	0.0207		Concentration (mg/L)	0.0312		Concentration (mg/L)	0.0397
5/26/2014	Loading (lb/d)	0.6106	5/26/2014	Loading (lb/d)	1.1009	5/26/2014	Loading (lb/d)	1.7370
	Concentration (mg/L)	0.0250		Concentration (mg/L)	0.0231		Concentration (mg/L)	0.0466
7/20/2014	Loading (lb/d)	0.8355	7/20/2014	Loading (lb/d)	1.2764	7/20/2014	Loading (lb/d)	1.8390
	Concentration (mg/L)	0.0348		Concentration (mg/L)	0.0284		Concentration (mg/L)	0.0518
9/28/2014	Loading (lb/d)	0.4308	9/28/2014	Loading (lb/d)	1.0014	9/28/2014	Loading (lb/d)	1.6813
	Concentration (mg/L)	0.0180		Concentration (mg/L)	0.0233		Concentration (mg/L)	0.0467
11/2/2014	Loading (lb/d)	0.3578	11/2/2014	Loading (lb/d)	0.7538	11/2/2014	Loading (lb/d)	1.5004
	Concentration (mg/L)	0.0144		Concentration (mg/L)	0.0184		Concentration (mg/L)	0.0411
1/11/2015	Loading (lb/d)	0.3680	1/11/2015	Loading (lb/d)	0.9117	1/11/2015	Loading (lb/d)	1.3196
	Concentration (mg/L)	0.0151		Concentration (mg/L)	0.0216		Concentration (mg/L)	0.0425
3/1/2015	Loading (lb/d)	0.3419	3/1/2015	Loading (lb/d)	0.8230	3/1/2015	Loading (lb/d)	1.7921
	Concentration (mg/L)	0.0154		Concentration (mg/L)	0.0183		Concentration (mg/L)	0.0492

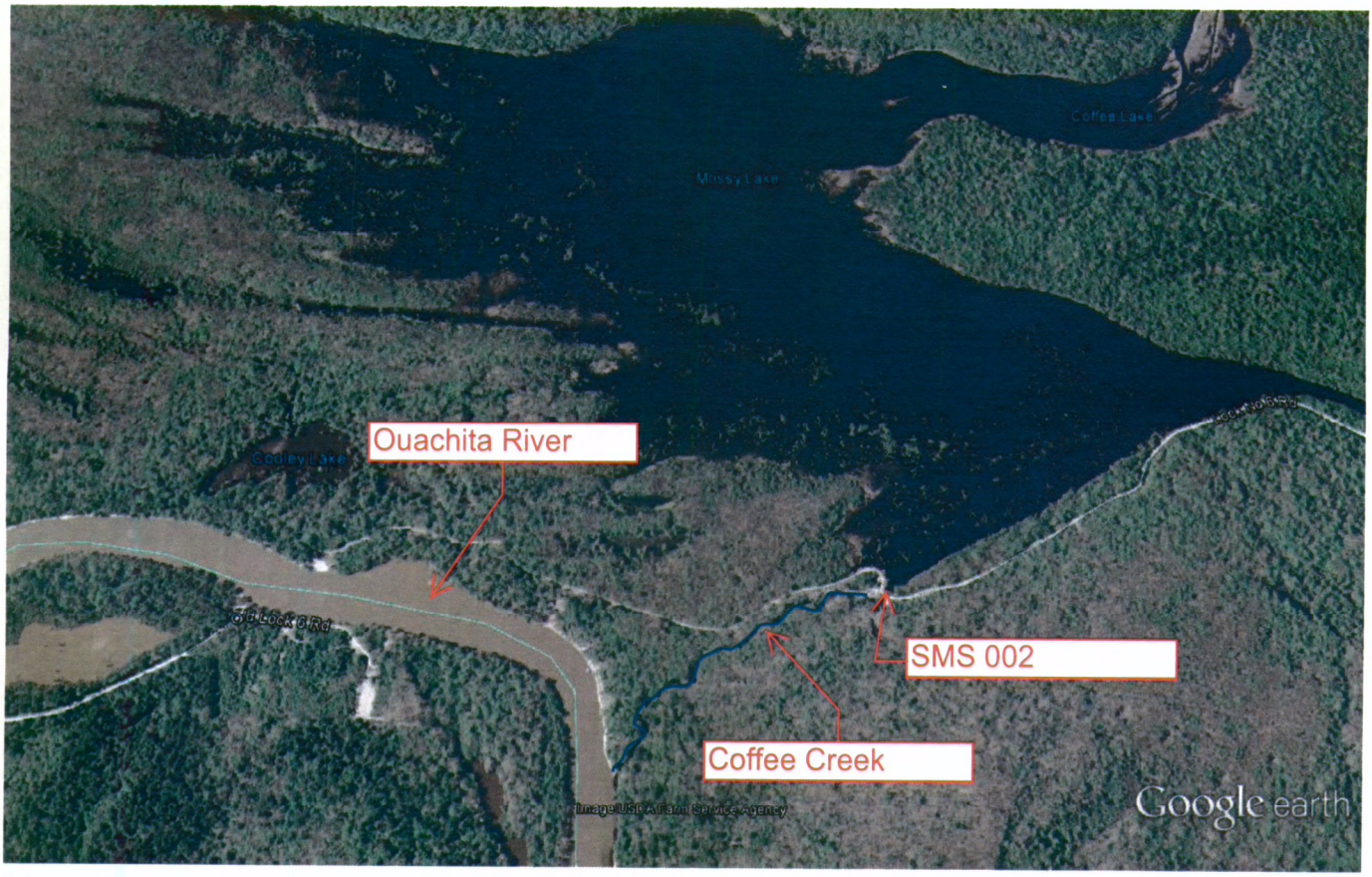
Average Loading	**0.5092 lbs/d**	**0.9511 lbs/d**	**1.5013 lbs/d**
Permit Limit	**4.78 lbs/d**	**4.78 lbs/d**	**4.81 lbs/d**
Percent of Permit Limit	**10.7%**	**19.9%**	**31.2%**


= Manmade Effluent Channel
= Waste Water Treatment Boundary
= Coffee Creek
= City of Crossett's Waste Water Ponds
P1 Sewer
P3 Sewer
Primary Clarifier
Sludge Pond Reclamation Area
Ash Settling Basin
Surge Basin
ASB Spoils Basin
Presettling Basin Area
Aeration Stabilization Basin
Mill Pond
Outfall 001
9



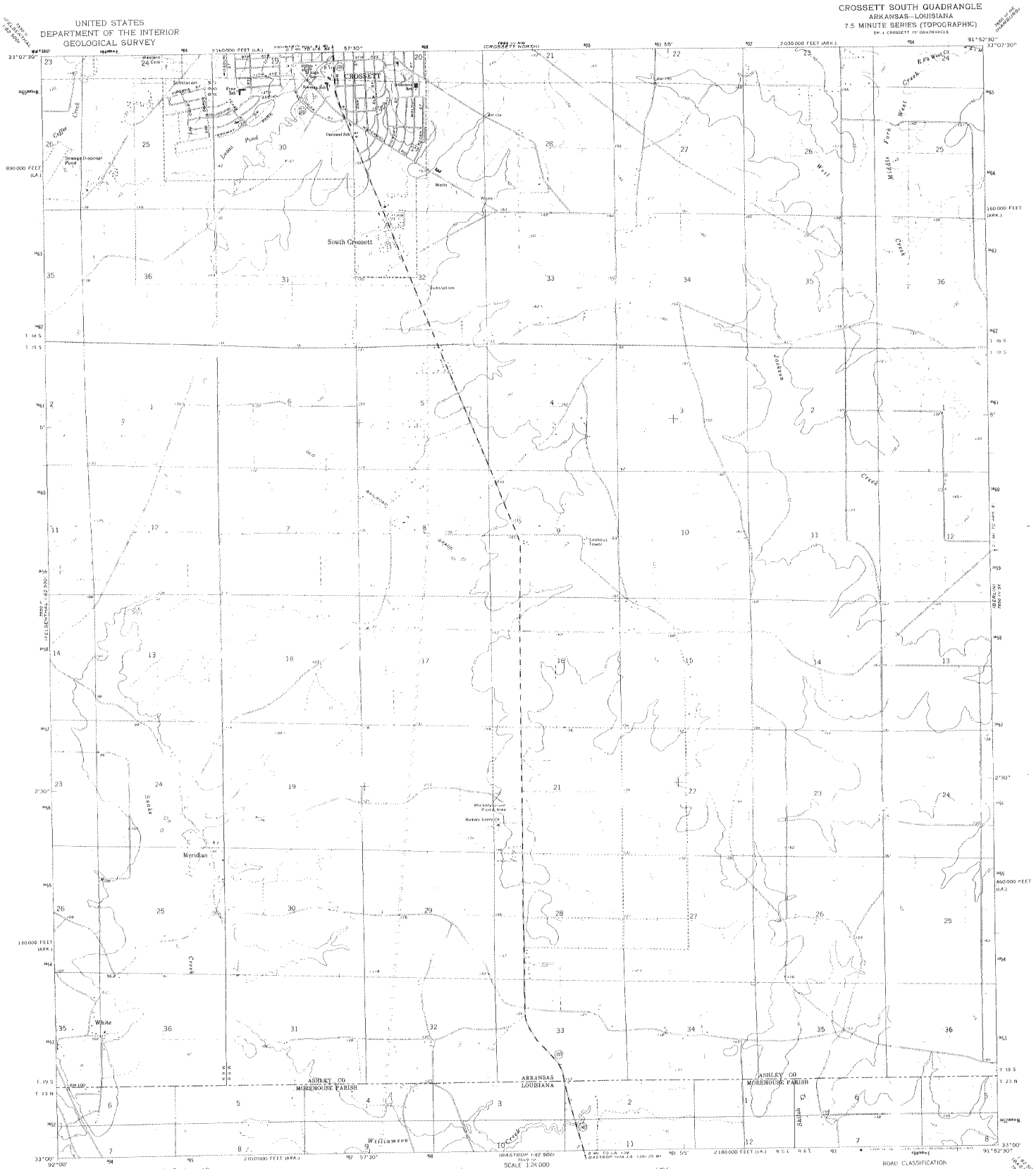
Google earth

miles 3
km 5



Google earth

miles 1
km 1



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1972. Field checked 1973

Projection: Arkansas coordinate system, south zone (Lambert conformal conic)
10,000-foot grid ticks based on Arkansas coordinate system, south zone, and Louisiana coordinate system, north zone
1000-meter Universal Transverse Mercator grid ticks, zone 15, shown in blue. 1927 North American datum

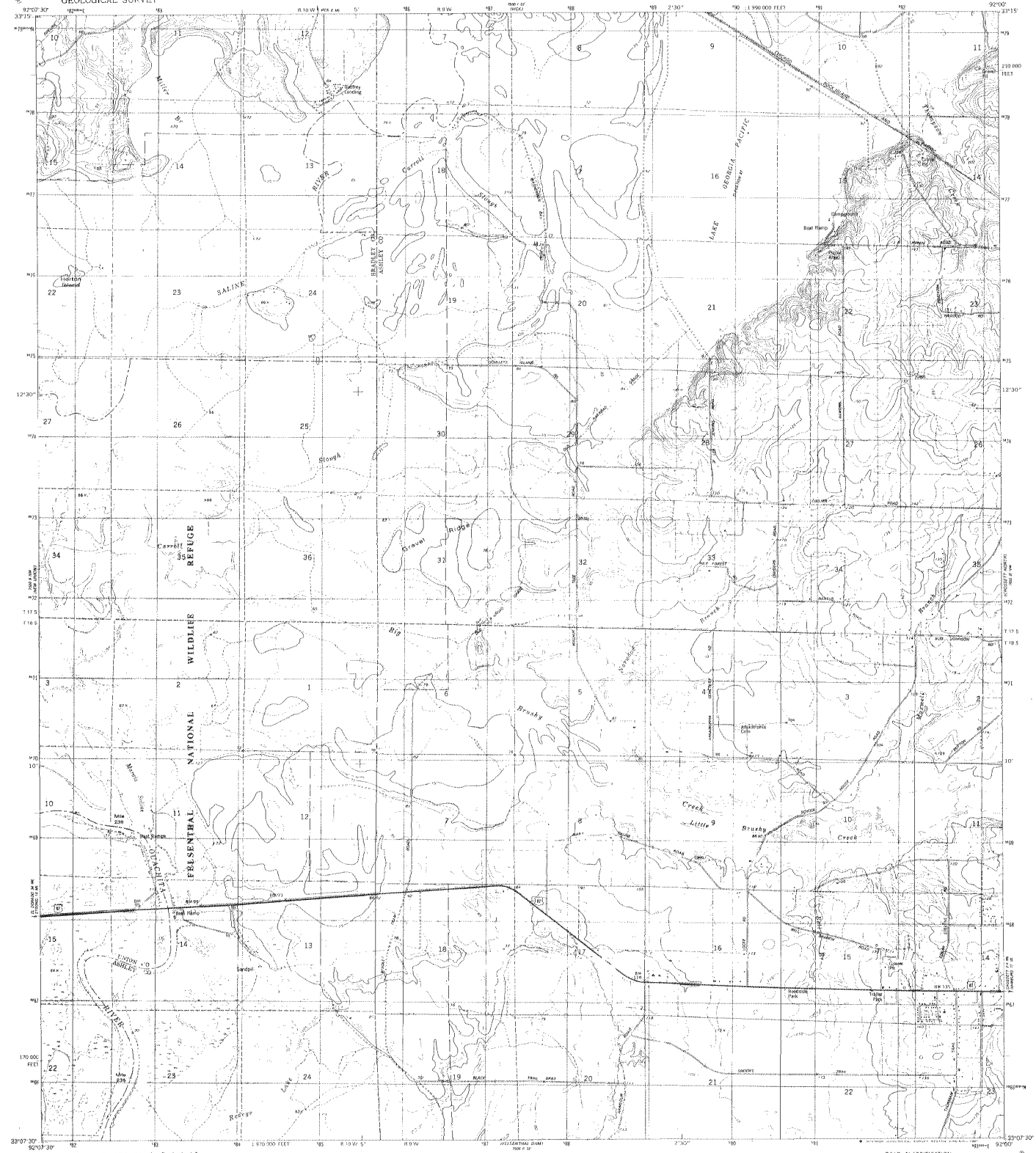
Red tint indicates area in which only landmark buildings are shown

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204
AND STATE OF LOUISIANA, DEPARTMENT OF PUBLIC WORKS, BATON ROUGE, LOUISIANA 70804
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

MARAIS SALINE QUADRANGLE
ARKANSAS
7.5 MINUTE SERIES (TOPOGRAPHIC)
NEW FELSENTHAL 15' QUADRANGLE



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1976. Field checked 1977. Map edited 1983

Projection and 10,000-foot grid ticks: Arkansas coordinate system, south zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid, zone 15
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 12 meters south and 13 meters east as shown by dashed corner ticks

There may be private landings within the boundaries of the National or State reservations shown on this map

Blue hatching indicates areas to be submerged at elevation 65
Areas covered by dashed light-blue pattern are subject to controlled inundation

SCALE 1:24 000

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

1° W GRID AND 1981 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ARKANSAS
QUADRANGLE LOCATION

ROAD CLASSIFICATION

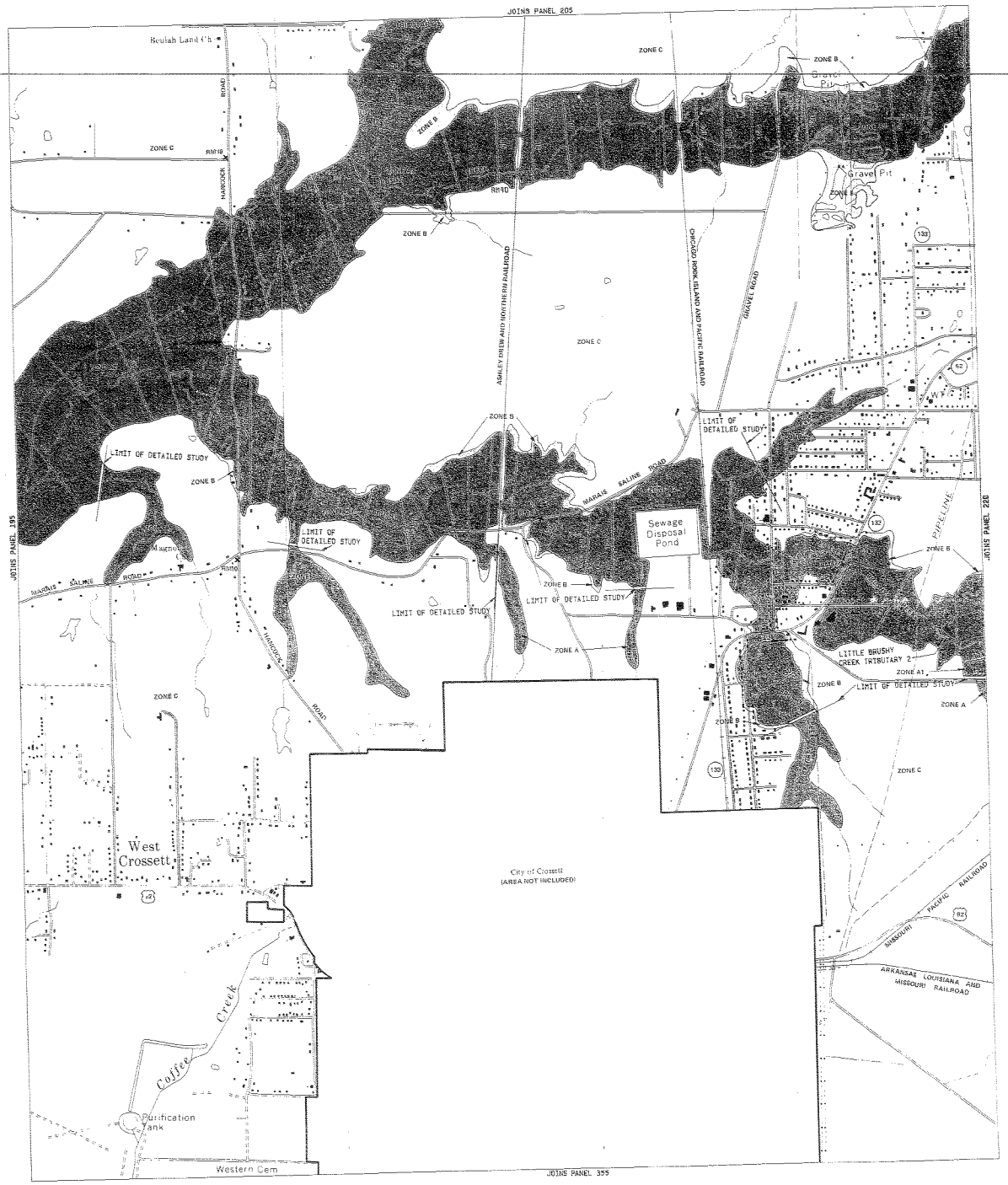
Primary highway, hard surface — Light-duty road, hard or improved surface
Secondary highway, hard surface — Unimproved road
Interstate Route — U.S. Route — State Route

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

MARAIS SALINE, ARK.
NE/4 FELSENTHAL 15' QUADRANGLE
N3307.5—W9200/7.5

1981

DMA 7550 0 NE—SERIES V894



KEY TO MAP

100-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
500-Year Flood Boundary
Base Flood Elevation Line With Elevation in Feet**
Base Flood Elevation in Feet Where Uniform Within Zone**
Zone D Boundary
River Mile

ZONE B
ZONE B

513
(EL 987)
RM1.6

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
ASS	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

See Index Map for Elevation Reference Mark Description

INITIAL IDENTIFICATION:
NOVEMBER 10, 1977

FLOOD INSURANCE RATE MAP EFFECTIVE:
NOVEMBER 17, 1982

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

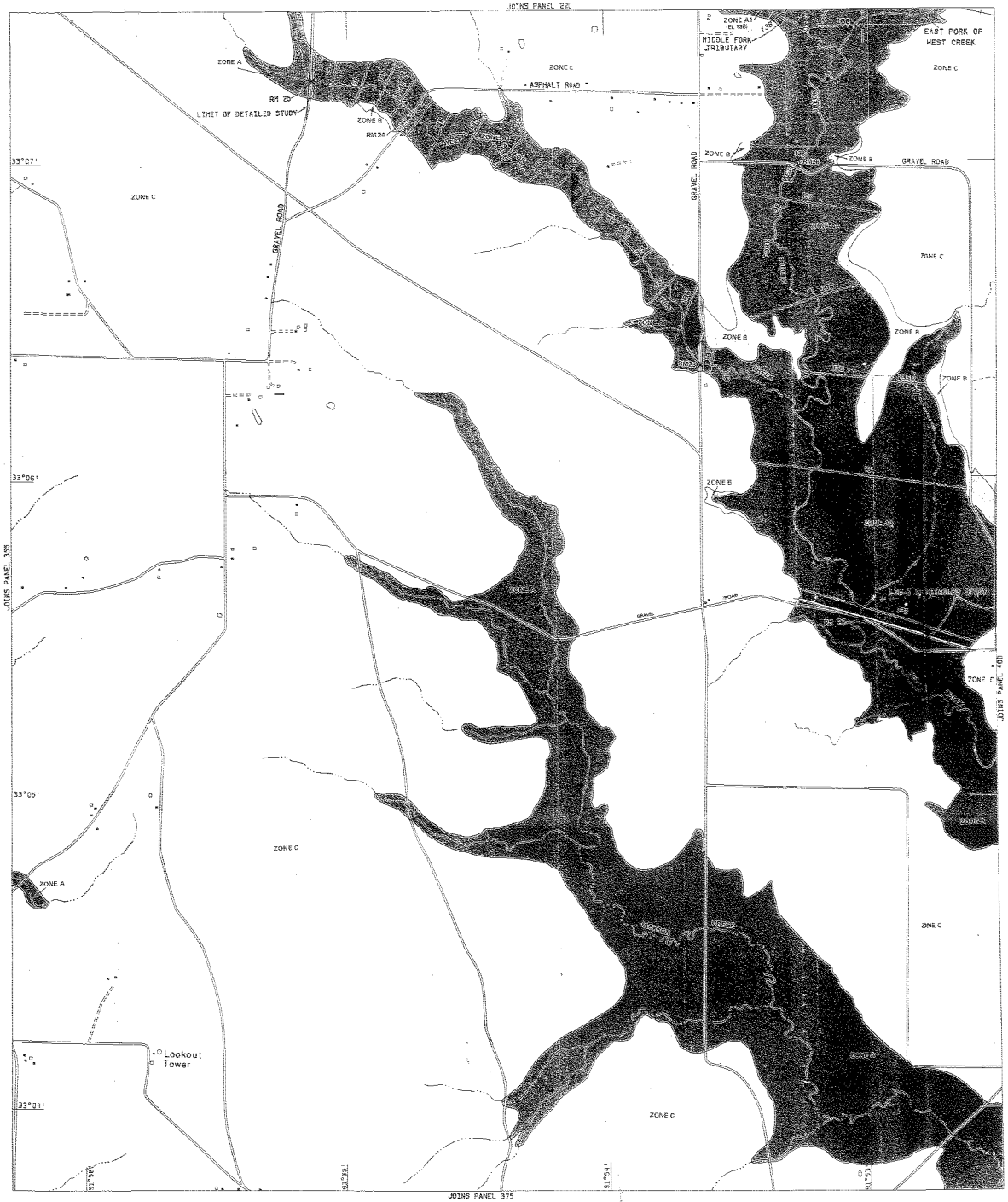
FIRM
FLOOD INSURANCE RATE MAP

ASHLEY COUNTY, ARKANSAS
(UNINCORPORATED AREAS)

PANEL 215 OF 450

COMMUNITY-PANEL NUMBER
050003 0215 B
EFFECTIVE DATE:
NOVEMBER 17, 1982

Federal Emergency Management Agency



KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
300-Year Flood Boundary
Base Flood Elevation Line With Elevation in Feet**
Base Flood Elevation in Feet Where Uniform Within Zone**
Elevation Reference Mark
Zone D Boundary
River Mile

ZONE B
ZONE A
ZONE B

513
(EL 987)
RM7x
•M1.8

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

See Index Map for Elevation Reference Mark Description

INITIAL IDENTIFICATION:
NOVEMBER 15, 1977

FLOOD INSURANCE RATE MAP EFFECTIVE:
NOVEMBER 17, 1982

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

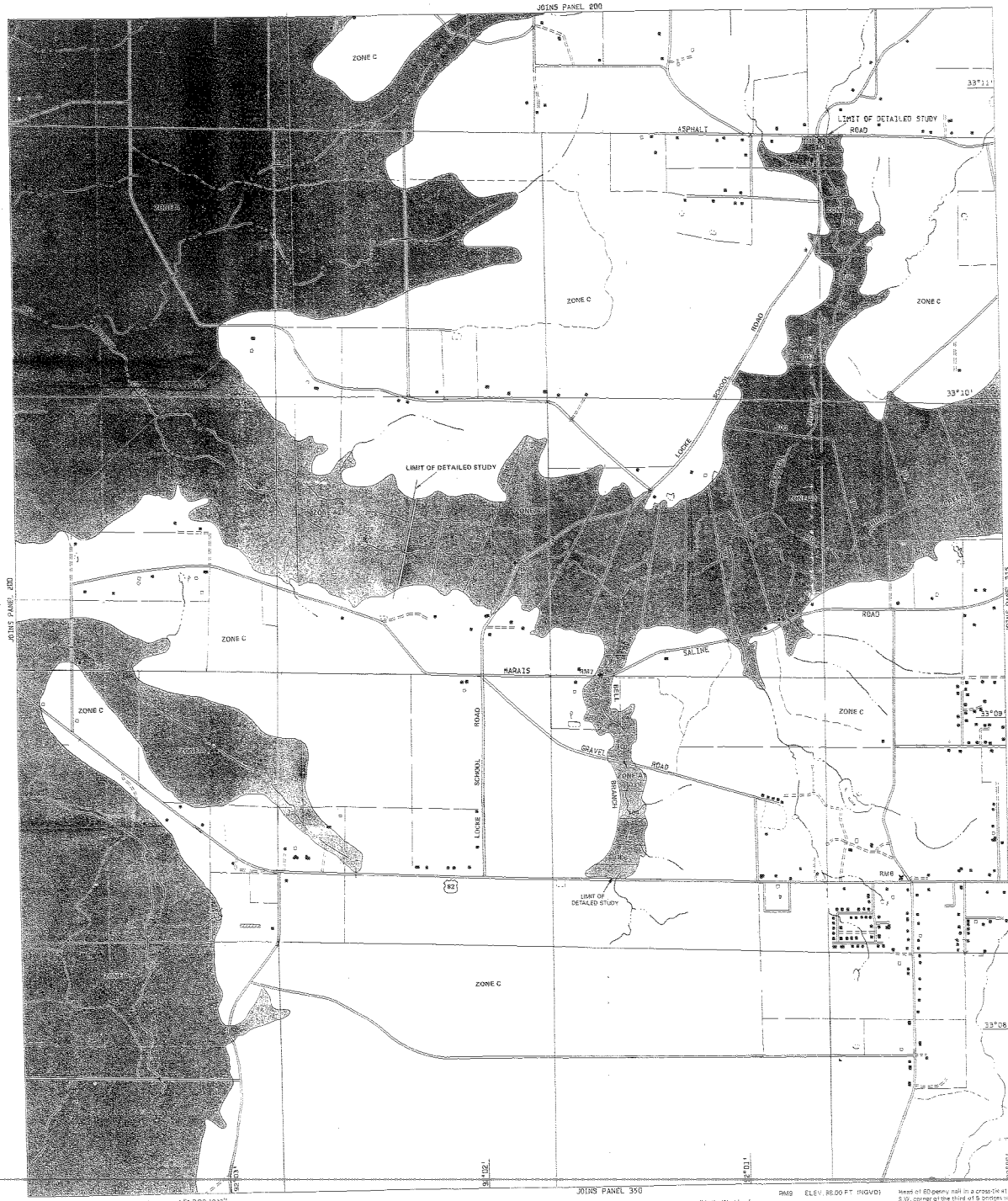
ASHLEY COUNTY, ARKANSAS
(UNINCORPORATED AREAS)

PANEL 360 OF 450

COMMUNITY-PANEL NUMBER
050003 0360 B

EFFECTIVE DATE:
NOVEMBER 17, 1982

Federal Emergency Management Agency



RM8 ELEV. 134.62 FT. (NGVD) — A standard tablet stamped "T RRS 1972" located 2.8 mi. W. along U.S. Highway 82 from the junction of Highway 82 and Main St. in Crossett, being 125' N.N.W. (along road) and 28' W. of a crossroad; about 1' W. of a N.-S. fence and a witness post.

RM7 ELEV. 95.68 FT. (NGVD) — Head of 60-penny nail in the N.E. corner of a wooden bridge where Marais Saline Road crosses Bell Branch near its mouth.

RM8 ELEV. 111.83 FT. (NGVD) — Head of 60-penny nail in the W. side of a utility pole located approx. 60' E. of Locke School Road and 75' SW. of Maxwell Branch where an E.-W. road crosses it at the upper limit of detailed study.

RM9 ELEV. 88.00 FT. (NGVD) — Head of 60-penny nail in a cross-tie at the S.W. corner of the third of 5 bridges where Locke School Road crosses Big Brushy Creek approx. 2000 below the mouth of Bell Branch.

ELEVATION REFERENCE MARKS

KEY TO MAP

100-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
ZONE B
ZONE B
100-Year Flood Boundary
500-Year Flood Boundary
Base Flood Elevation Line With Elevation in Feet**
513
Base Flood Elevation in Feet Where Uniform Within Zone**
(EL 987)
Elevation Reference Mark
RM7×
Zone D Boundary
River Mile
•M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panel, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
NOVEMBER 18, 1977

FLOOD INSURANCE RATE MAP EFFECTIVE:
NOVEMBER 17, 1982

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

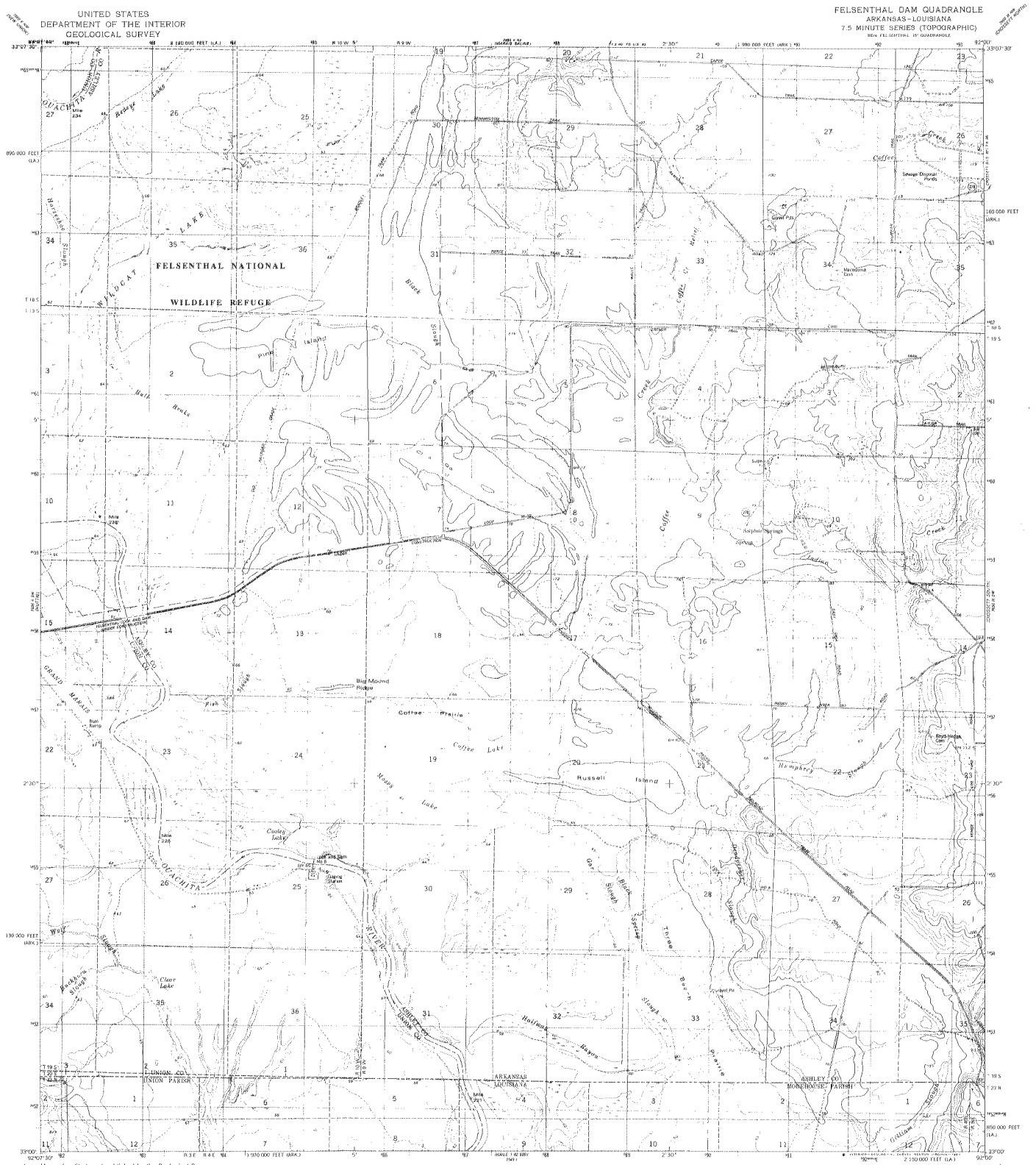
ASHLEY COUNTY, ARKANSAS
(UNINCORPORATED AREAS)

PANEL 195 OF 450

COMMUNITY-PANEL NUMBER
050003 0195 B

EFFECTIVE DATE:
NOVEMBER 17, 1982

Federal Emergency Management Agency



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1976. Field checked 1977. Map edited 1981

Projection: Arkansas coordinate system, south zone (Lambert conformal conic)
10,000-foot grid ticks based on Arkansas coordinate system, south zone and Louisiana coordinate system, north zone
1000-meter Universal Transverse Mercator grid, zone 15
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 11 meters south and 13 meters east as shown by dashed corner ticks

There may be private inholdings within the boundaries of the National or State reservations shown on this map

UTM GRID AND 1981 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092.
ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204
AND STATE OF LOUISIANA, DEPARTMENT OF PUBLIC WORKS, BATON ROUGE, LOUISIANA 70804
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

Blue hatching indicates areas to be submerged at elevation 65
Areas covered by dashed light blue pattern are subject to controlled inundation

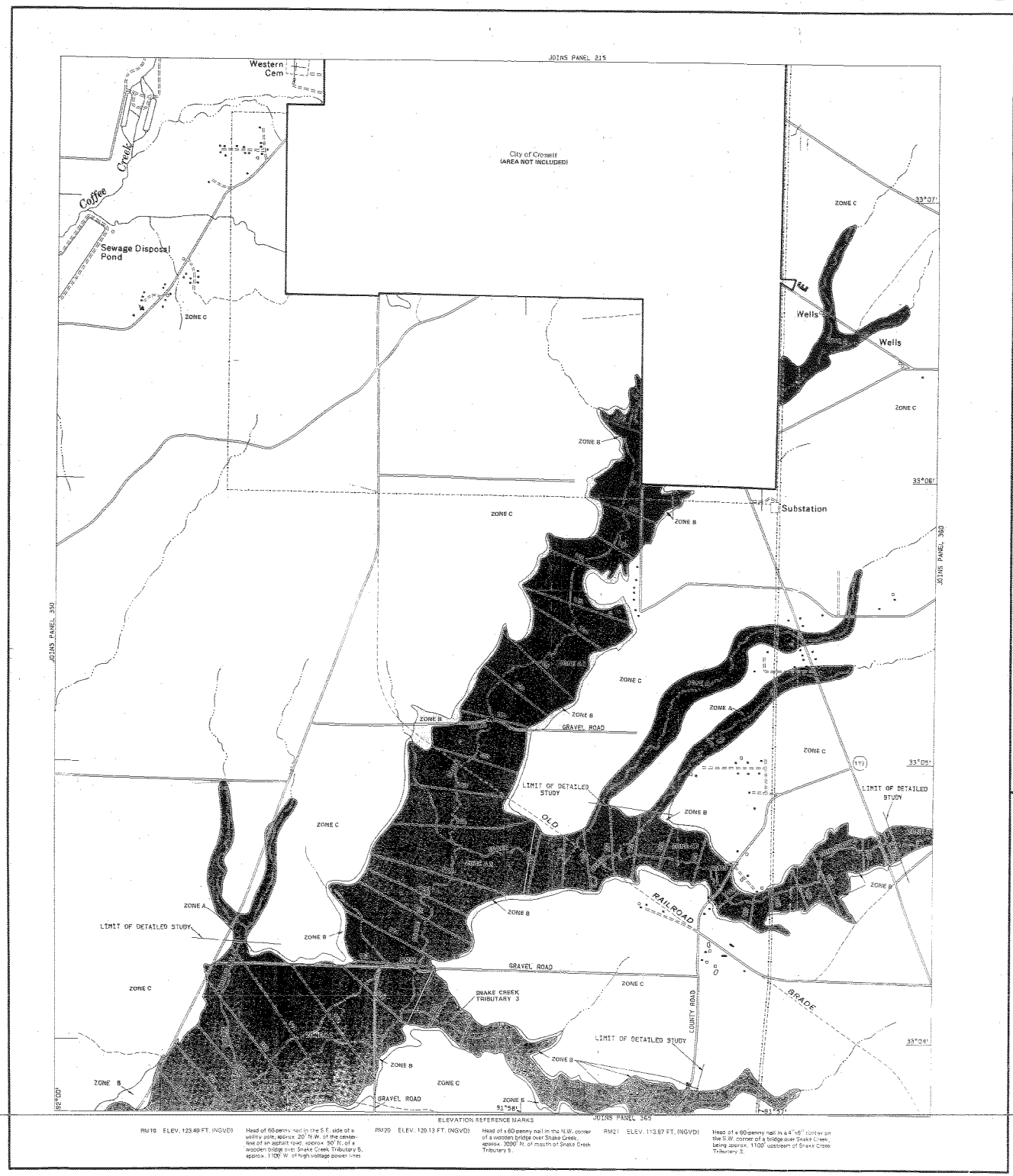
Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

ROAD CLASSIFICATION

Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route
U.S. Route
State Route

FELSENTHAL DAM, ARK.-LA.
N3300-W9200/7.5
1981

DMA 7290 II SE-SERIES V884



KEY TO MAP

100-Year Flood Boundary
500-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
500-Year Flood Boundary
Base Flood Elevation Line With Elevation in Feet**
Base Flood Elevation in Feet Where Uniform Within Zone**
Elevation Reference Mark
Zone D Boundary
River Mile
Approximate 100-Year Flood Boundary

ZONE B
ZONE C
ZONE B
513
(EL 987)
RM7×
×M1.5
ZONE A

**Reference to the National Geodetic Vertical Datum of 1929

UNDEVELOPED COASTAL BARRIERS†

Identified 1983 | Identified 1990 | Otherwise Protected Areas

†Coastal barrier areas are normally located within or adjacent to special flood hazard areas.

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths of less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The corresponding map repository should be consulted for more detailed data on BFEs, and for any information on floodway delineations, prior to use of this map for property purchase or construction purposes.

Areas of special flood hazard (100-year flood) include Zones A, A1-30, AE, AH, AO, A99, V, V1-30 and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those established by the National Weather Service for hurricane evacuation planning.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For adjoining map panels see separately printed Map Index.

INITIAL IDENTIFICATION:
NOVEMBER 15, 1977
FLOOD HAZARD BOUNDARY MAP REVISION:

FLOOD INSURANCE RATE MAP EFFECTIVE:
NOVEMBER 17, 1982
FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE DATE shown on this map to determine when revised or new zones apply to structures in the zones where elevations or elevations have been established.
To obtain more information about flood insurance available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
1"=2000' 0 2000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

ASHLEY COUNTY, ARKANSAS
(UNINCORPORATED AREAS)

PANEL 355 OF 450
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
050003 0355 B

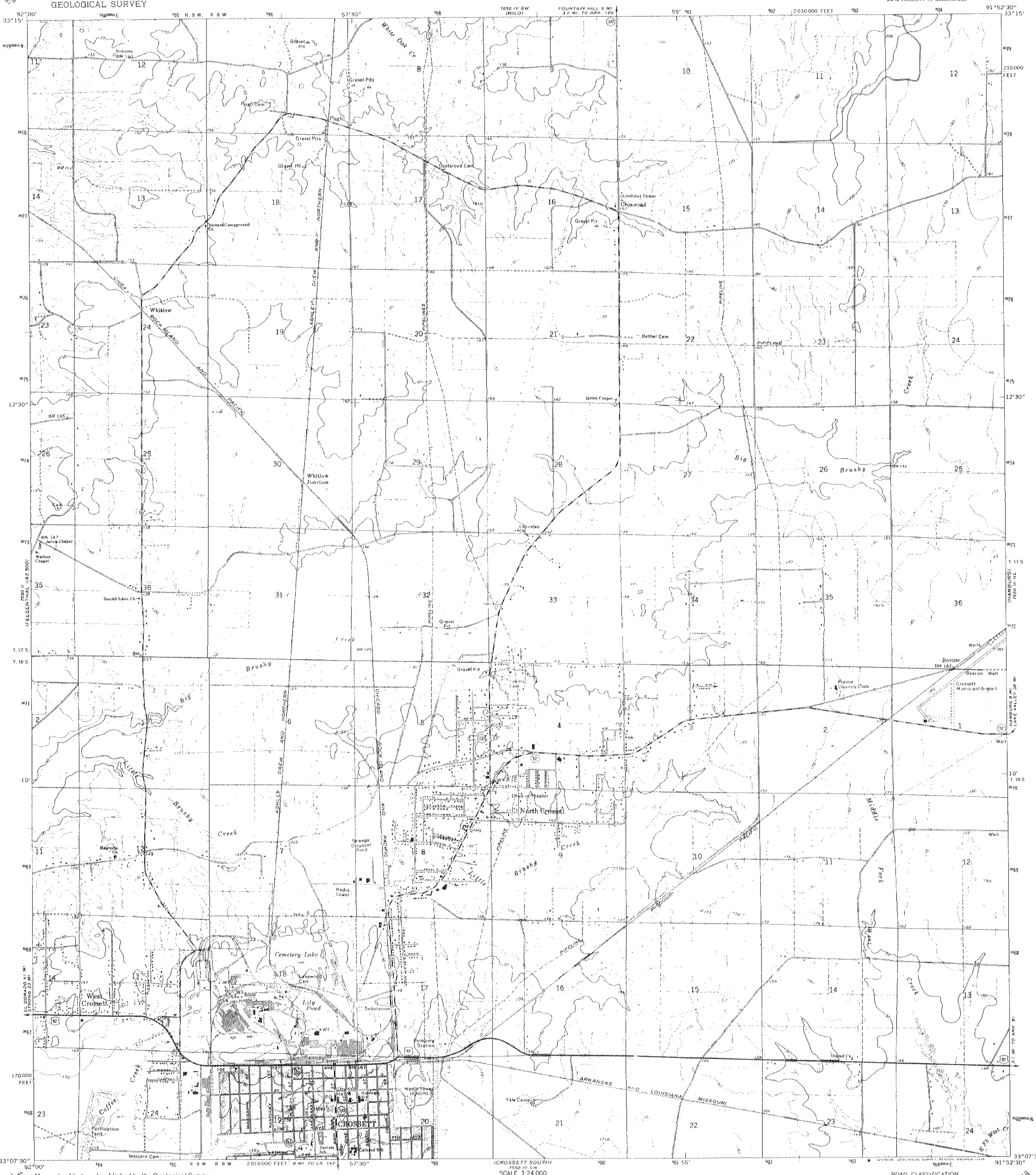
EFFECTIVE DATE:
NOVEMBER 17, 1982

Federal Emergency Management Agency

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CROSSETT NORTH QUADRANGLE

ARKANSAS–LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1972. Field checked 1973

Projection and 10,000-foot grid ticks: Arkansas coordinate system, south zone (Lambert conformal conic)
1000-metre Universal Transverse Mercator grid ticks, zone 15, shown in blue. 1927 North American datum

Red tint indicates area in which only landmark buildings are shown

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND BY THE ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72201
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

ROAD CLASSIFICATION

Primary highway, hard surface — Light-duty road, hard or improved surface

Secondary highway, hard surface — Unimproved road

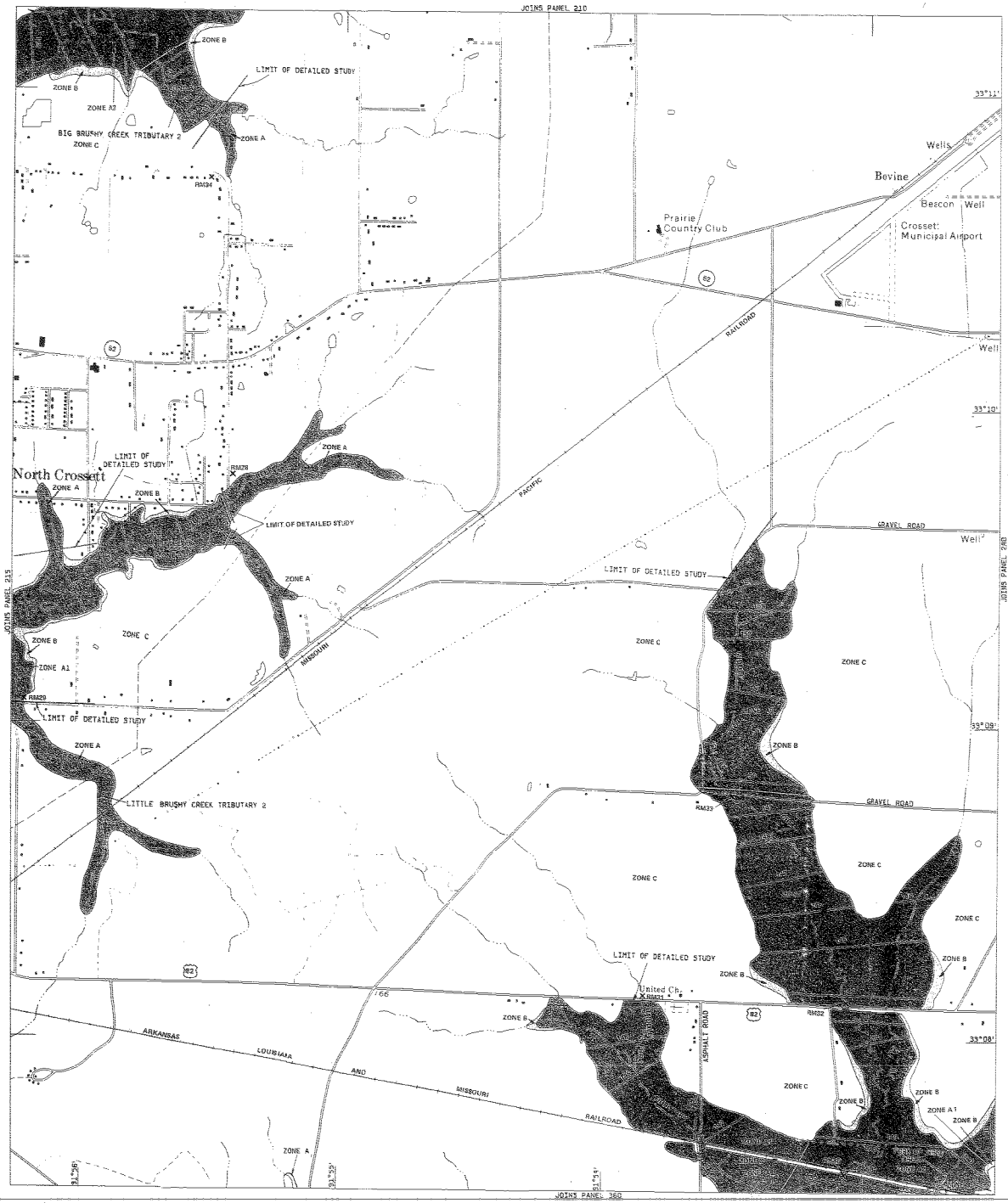
Interstate Route — U. S. Route — State Route

CROSSETT NORTH, ARK.

NW/4 CROSSETT 15' QUADRANGLE
N3307.5—W9152.5/7.5

1973

AMS 7650 III NW—SERIES V884



KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
300-Year Flood Boundary
Base Flood Elevation Line With Elevation In Feet**
Base Flood Elevation In Feet Where Uniform Within Zone**
Elevation Reference Mark
Zone D Boundary
River Mile

ZONE B
ZONE B

573
(EL 987)
RM7x
•M11.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For obtaining map panels, see separately printed Index To Map Panels.

See Index Map for Elevation Reference Mark Descriptions
See Index Map for Elevation Reference Mark Descriptions

INITIAL IDENTIFICATION:
NOVEMBER 15, 1977

FLOOD INSURANCE RATE MAP EFFECTIVE:
NOVEMBER 17, 1982

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

ASHLEY COUNTY, ARKANSAS
(UNINCORPORATED AREAS)

PANEL 220 OF 450

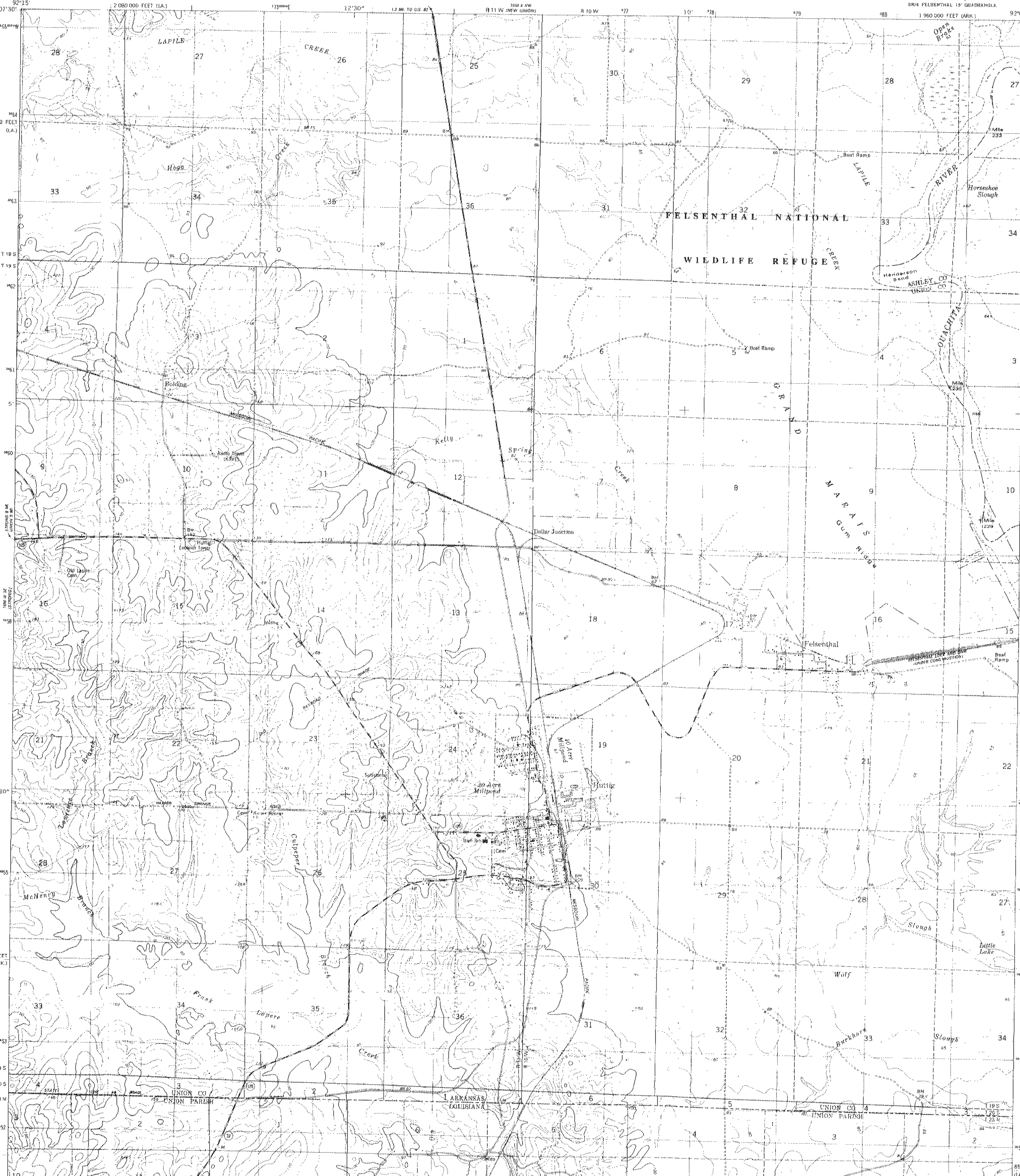
COMMUNITY-PANEL NUMBER
050003 0220 B

EFFECTIVE DATE:
NOVEMBER 17, 1982

Federal Emergency Management Agency

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HUTTIG QUADRANGLE
ARKANSAS–LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)
SW/4 FELSENTHAL 15' QUADRANGLE



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1976. Field checked 1977. Map edited 1981

Projection: Arkansas coordinate system, south zone (Lambert conformal conic)
10,000-foot grid ticks based on Arkansas coordinate system, south zone and Louisiana coordinate system, north zone
1000-meter Universal Transverse Mercator grid, zone 15
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 11 meters south and 13 meters east as shown by dashed corner ticks

There may be private inholdings within the boundaries of the National or State reservations shown on this map

UTM GRID AND 1981 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092,
ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204,
AND STATE OF LOUISIANA, DEPARTMENT OF PUBLIC WORKS, BATON ROUGE LOUISIANA 70804
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

Blue hatching indicates areas to be submerged at elevation 65
Areas covered by dashed light-blue pattern are subject to controlled inundation

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

Interstate Route | U S Route | State Route

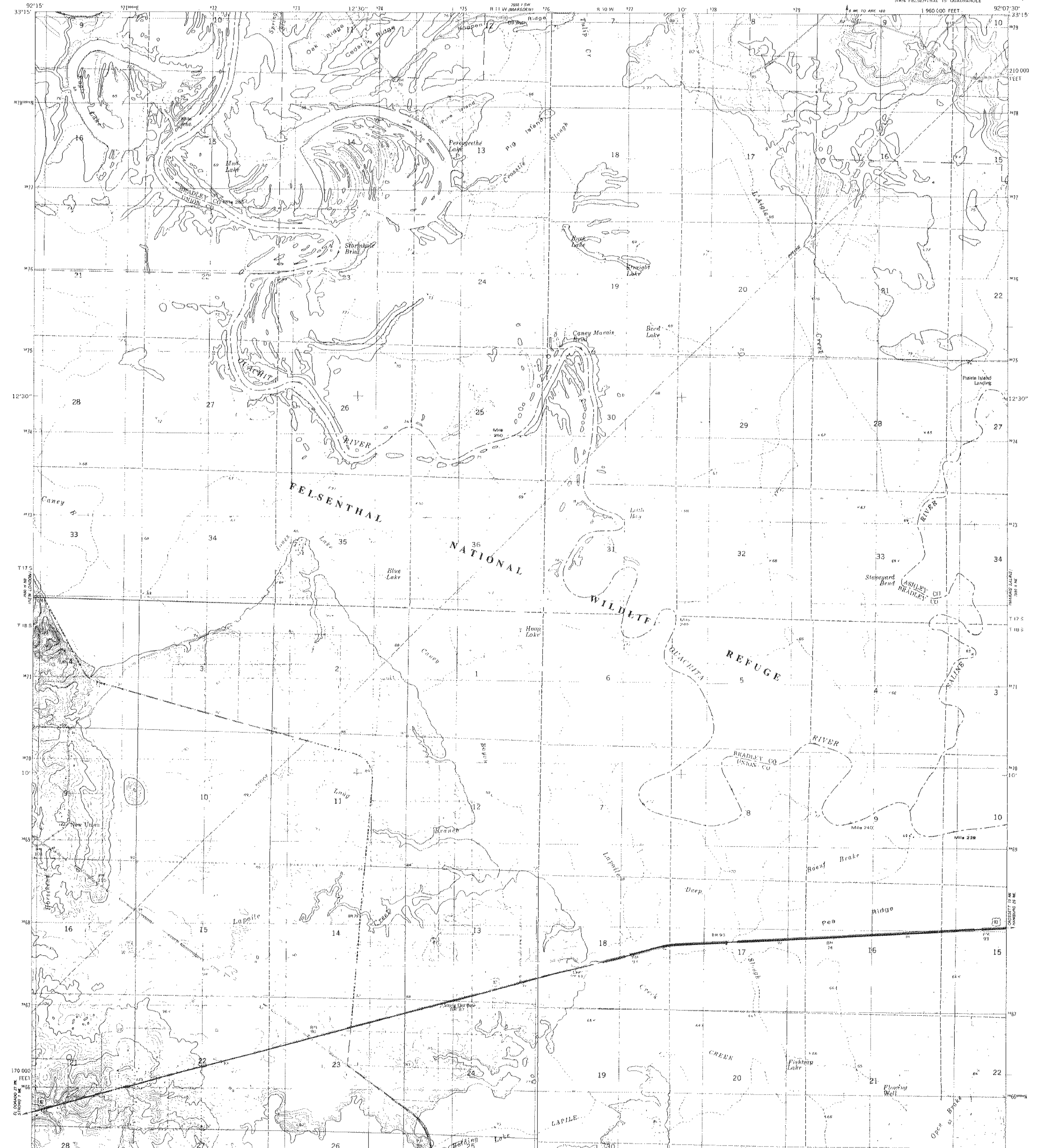
HUTTIG, ARK.–LA.
SW/4 FELSENTHAL 15' QUADRANGLE
N3300–W9207.5/7.5

1981

DMA 7550 II SW–SERIES V884

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

NEW UNION QUADRANGLE
ARKANSAS
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial photographs taken 1976. Field checked 1977. Map edited 1981

Projection and 10,000-foot grid ticks: Arkansas coordinate system, south zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid, zone 15
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 11 meters south and 14 meters east as shown by dashed corner ticks

There may be private inholdings within the boundaries of the National or State reservations shown on this map

Blue hatching indicates area to be submerged at elevation 65
Areas covered by dashed light-blue pattern are subject to controlled inundation

UTM GRID AND 1981 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND ARKANSAS GEOLOGICAL COMMISSION, LITTLE ROCK, ARKANSAS 72204
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

ROAD CLASSIFICATION

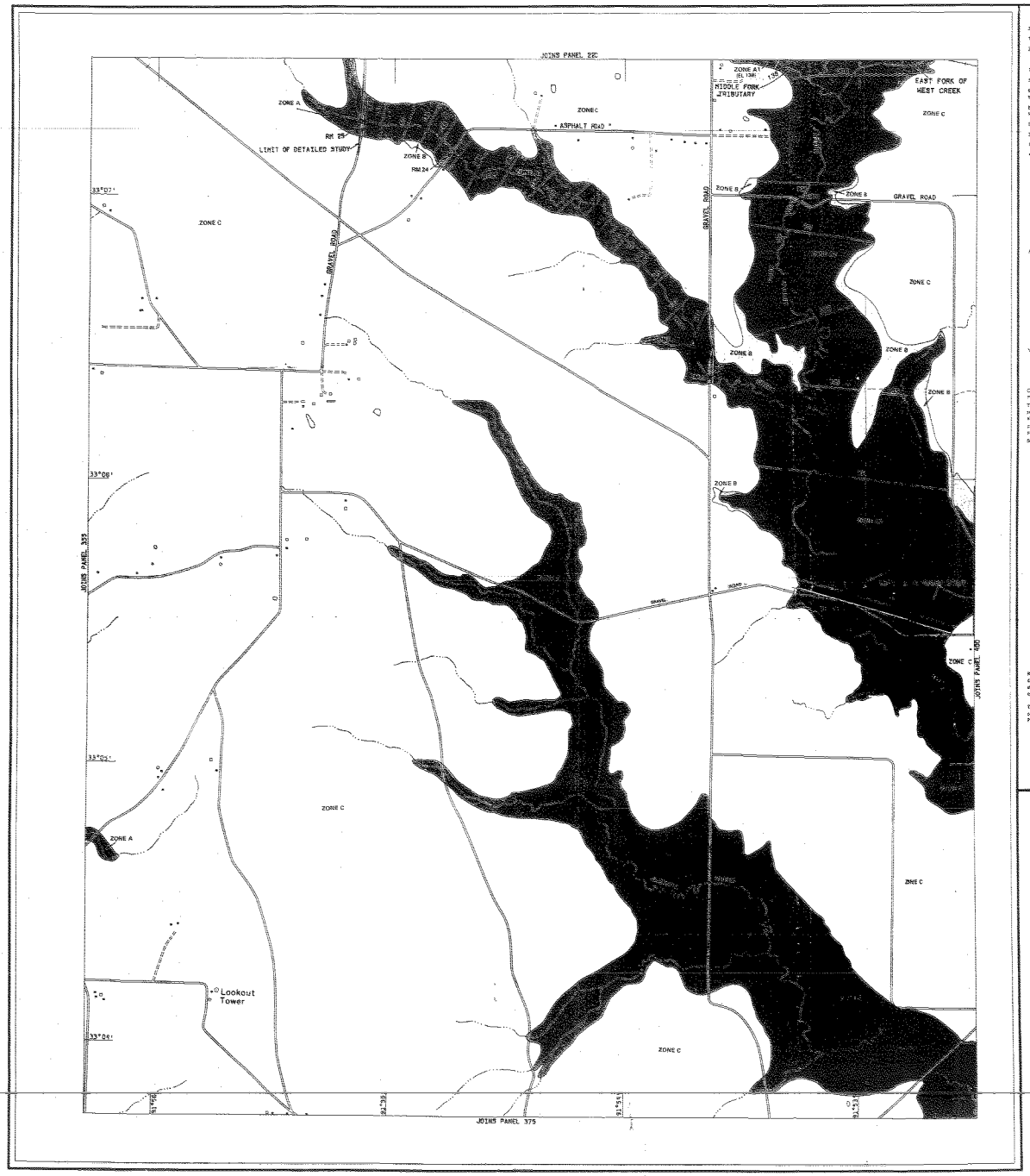
Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road

Interstate Route · U. S. Route · State Route

NEW UNION, ARK.
NW/4 FELSENTHAL 15' QUADRANGLE
N3307.5—W9207.5/7.5

1981

DMA 7550 II NW—SERIES V884



KEY TO MAP

200-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
ZONE B
ZONE C
100-Year Flood Boundary
500-Year Flood Boundary
Base Flood Elevation Line With Elevation In Feet**
512
Base Flood Elevation in Feet Where Uniform Within Zone**
(EL 987)
Elevation Reference Mark
RM7 x
Zone D Boundary
+581.8

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
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C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

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For adjoining map panels, see separately printed Index To Map Panels.

See Index Map for Elevation Reference Mark Descriptions

INITIAL IDENTIFICATION:
NOVEMBER 15, 1977

FLOOD INSURANCE RATE MAP EFFECTIVE:
NOVEMBER 17, 1982

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

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APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

ASHLEY COUNTY, ARKANSAS
(UNINCORPORATED AREAS)

PANEL 368 OF 450

COMMUNITY-PANEL NUMBER
050003 0368 B

EFFECTIVE DATE:
NOVEMBER 17, 1982

Federal Emergency Management Agency