

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM AND THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT

In accordance with the provisions of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. 1251 et seq.),

Helena Industries, Inc.
101 Martin Luther King Drive
West Helena, AR 72390

is authorized to discharge from a facility located at

approximately 1 mile west of downtown West Helena and SE intersection of Highway 49B and Highway 49, in Section 2, Township 2 South, Range 4 East in Phillips County, Arkansas.

Latitude: 34° 33' 06"; Longitude: 90° 39' 20"

to receiving waters named:

an unnamed ditch then to Lick Creek, then to the White River in Segment 4A of the White River Basin.

The outfall is located at the following coordinates:

Outfall 001: Latitude: 34° 33' 13"; Longitude: 90° 39' 20"

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

Response to comments is attached to this permit.

This permit became effective on October 1, 2004

This minor modification (Name change) permit shall become effective on December 20, 2005.

This permit is issued on December 20, 2005.

This permit and the authorization to discharge shall expire at midnight, September 30, 2009.

Martin Maner, P.E.
Chief, Water Division
Arkansas Department of Environmental Quality

**PART I
PERMIT REQUIREMENTS**

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001-stormwater runoff

During the period beginning on effective date and lasting until date of expiration, the permittee is authorized to discharge from outfall serial number 001 - **stormwater runoff**. Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Flow ¹	N/A	N/A	Report	Report	Daily	Instantaneous
Chemical Oxygen Demand (COD) ^{2,3}	N/A	N/A	50	75	Once/month	Grab
Oil and Grease (O&G) ²	N/A	N/A	10	15	Once/quarter	Grab
pH ²	N/A	N/A	<u>Minimum</u> 6 s.u.	<u>Maximum</u> 9 s.u.	Once/quarter	Grab
Acute Biomonitoring ^{2,6}	N/A	N/A	N/A	N/A	Once/quarter	24-hr composite
<u>Pimephales promelas (Acute)</u> ^{2,4} Pass/Fail Lethality (24-Hr NOEC) TEM6C Survival (24-Hr NOEC) TOM6C Coefficient of Variation (24-Hr NOEC) TQM6C			<u>24-hr Minimum</u> Report (Pass=0/Fail=1) Report % Report %		Once/quarter Once/quarter Once/quarter	24-hr composite 24-hr composite 24-hr composite
<u>Daphnia pulex (Acute)</u> ^{2,4} Pass/Fail Lethality (24-Hr NOEC) TEM3D Survival (24-Hr NOEC) TOM3D Coefficient of Variation (24-Hr NOEC) TQM3D			<u>24-hr Minimum</u> Report (Pass=0/Fail=1) Report % Report %		Once/quarter Once/quarter Once/quarter	24-hr composite 24-hr composite 24-hr composite

1. Report monthly average and daily maximum as MGD.
2. See Condition **4**.
3. See Condition **5**.
4. See Condition No. **2** of Part III (Biomonitoring Requirements).

There shall be no discharge of distinctly visible solids, scum or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits or sludge banks. No visible sheen (Sheen means an iridescent appearance on the surface of the water).

Samples taken in compliance with the monitoring requirements specified above shall be taken at the outfall 001.

SECTION B. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Compliance is required on the effective date of the permit.

PART II STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Water Act and the Arkansas Water and Air Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. **Any values reported in the required Discharge Monitoring Report which are in excess of an effluent limitation specified in Part I shall constitute evidence of violation of such effluent limitation and of this permit.**

2. Penalties for Violations of Permit Conditions

The Arkansas Water and Air Pollution Control Act provides that any person who violates any provisions of a permit issued under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year, or a fine of not more than ten thousand dollars (\$10,000) or by both such fine and imprisonment for each day of such violation. Any person who violates any provision of a permit issued under the Act may also be subject to civil penalty in such amount as the court shall find appropriate, not to exceed ten thousand dollars (\$10,000) for each day of such violation. The fact that any such violation may constitute a misdemeanor shall not be a bar to the maintenance of such civil action.

3. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to the following:

- a. Violation of any terms or conditions of this permit; or
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

- c. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- d. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
- e. Failure of the permittee to comply with the provisions of APCEC Regulation No. 9 (Permit fees) as required by condition II A.10 herein.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

4. Toxic Pollutants

Notwithstanding Part II. A.3., if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Regulation No. 2, as amended, (regulation establishing water quality standards for surface waters of the State of Arkansas) or Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitations on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standards or prohibition and the permittee so notified.

The permittee shall comply with effluent standards or prohibitions established under Regulation No. 2 (Arkansas Water Quality Standards), as amended, or Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Civil and Criminal Liability

Except as provided in permit conditions on “Bypassing” (Part II.B.4.a.), and “Upsets” (Part II.B.5.b), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statutes or regulations which defeats the regulatory purposes of the permit may be subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

8. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

9. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Permit Fees

The permittee shall comply with all applicable permit fee requirements for wastewater discharge permits as described in APCEC Regulation No. 9 (Regulation for the Fee System for Environmental Permits). Failure to promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR 122.64 and 124.5 (d), as adopted in APCEC Regulation No. 6 and the provisions of APCEC Regulation No. 8.

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

- a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
- b. The permittee shall provide an adequate operating staff which is duly qualified to carryout operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

2. Need to Halt or Reduce not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power for the treatment facility is reduced, is lost, or alternate power supply fails.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, or the water receiving the discharge.

4. Bypass of Treatment Facilities

a. **Bypass not exceeding limitation.** The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B 4.b.and 4 c.

b. Notice

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in part II.D.6 (24-hour notice).

c. Prohibition of bypass

(1) Bypass is prohibited and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal or preventive maintenance; and

(c) The permittee submitted notices as required by Part II.B.4.b.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part II.B.4.c(1).

5. Upset Conditions

- a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology base permit effluent limitations if the requirements of Part II.B.5.b of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- b. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
- (1) An upset occurred and that the permittee can identify the specific cause(s) of the upset.
 - (2) The permitted facility was at the time being properly operated.
 - (3) The permittee submitted notice of the upset as required by Part II.D.6.: and
 - (4) The permittee complied with any remedial measures required by Part II.B.3.
- c. Burden or proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State. Written approval for such disposal must be obtained from the ADEQ.

7. Power Failure

The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators, or retention of inadequately treated effluent.

SECTION C: MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director. Intermittent discharges shall be monitored.

2. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than +/- 10% from true discharge rates throughout the range of expected discharge volumes and shall be installed at the monitoring point of the discharge.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals frequent enough to insure accuracy of measurements and shall insure that both calibration and maintenance activities will be conducted. An adequate analytical quality control program, including the analysis of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory. At a minimum, spikes and duplicate samples are to be analyzed on 10% of the samples.

4. Penalties for Tampering

The Arkansas Water and Air Pollution Control Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under the Act shall be guilty of a misdemeanor and upon conviction thereof shall be subject to imprisonment for not more than one (1) year or a fine of not more than ten thousand dollars (\$10,000) or by both such fine and imprisonment.

5. Reporting of Monitoring Results

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form (EPA No. 3320-1). Permittees are required to use preprinted DMR forms provided by ADEQ, unless specific written authorization to use other reporting forms is obtained from ADEQ. Monitoring results obtained during the previous calendar month shall be summarized and reported on a DMR form postmarked no later than the 25th day of the month, following the completed reporting period to begin on the effective date of the permit. Duplicate copies of DMR's signed and certified as required by Part II.d.11 and all other reports required by Part II.D. (Reporting Requirements), shall be submitted to the Director at the following address:

NPDES Enforcement Section
Water Division
Arkansas Department of Environmental Quality
8001 National Drive
P.O. Box 8913
Little Rock, AR 72219-8913

If permittee uses outside laboratory facilities for sampling and/or analysis, the name and address of the contract laboratory shall be included on the DMR.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated on the DMR.

7. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

8. Record Contents

Records and monitoring information shall include:

- a. The date, exact place, time and methods of sampling or measurements, and preservatives used, if any;
- b. The individuals(s) who performed the sampling or measurements;
- c. The date(s) analyses were formed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The measurements and results of such analyses.

9. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
- d. Sample, inspect or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice and provide plans and specification to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility. Notice is required only when:

For Industrial Dischargers

- a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b).
- b. The alternation or addition could significantly change the nature or increase the quality of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40CRF Part 122.42 (a)(1).

For POTW Dischargers:

- a. Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that cause violation of the effluent limitations specified herein.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

The permit is nontransferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. Monitoring Reports

Monitoring results shall be reported at the intervals and in the form specified in Part II.C.5. (Reporting). Discharge Monitoring Reports must be submitted even when no discharge occurs during the reporting period.

5. **Compliance Schedule**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

6. **Twenty-four Hour Report**

a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:

- (1) a description of the noncompliance and its cause;
- (2) the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- (3) steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance.

b. The following shall be included as information which must be reported within 24 hours:

- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
- (2) Any upset which exceeds any effluent limitation in the permit and
- (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part III of the permit to be reported within 24 hours.

c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

7. **Other Noncompliance**

The permittee shall report all instances of noncompliance not reported under Part II.D.4,5 and 6, at the time monitoring reports are submitted. The reports shall contain the information listed at Part II.D.6.

8. **Changes in Discharge of Toxic Substances for Industrial Dischargers**

The permittee shall notify the Director as soon as he/she knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, in a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(2)48 FR 14153, April 1983, as amended at 49 FR 38046, September 26, 1984).

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit if that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(2)(48 FR 14153, April 1, 1983, as amended at 49 FR 38046, September 26, 1984).

9. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit. Information shall be submitted in the form, manner and time frame requested by the Director.

10. Duty to reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The complete application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated in APCEC Regulation No. 6.

11. Signatory Requirements

All applications, reports or information submitted to the Director shall be signed and certified

a. All permit applications shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer 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 operation facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

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

(3) 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.

b. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above.
- (2) The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- (3) The written authorization is submitted to the Director.

c. Certification. Any person signing a document under this section shall make the following 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.”

12. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2 and Regulation 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department of Pollution and Ecology. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits and effluent data shall not be considered confidential.

13. Penalties for Falsification of Reports

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained under this permit shall be subject to civil penalties specified in Part II.A.2. and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

PART III OTHER CONDITIONS

1. In accordance with 40 CFR Part 122.62 (a) (2), the permit may be modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance.

2. ACUTE BIOMONITORING REQUIREMENTS

a. SCOPE, FREQUENCY AND METHODOLOGY

(1) The provisions of this section are applicable to discharges authorized in Part I.A above for whole effluent toxicity.

(2) The permittee shall test the effluent for toxicity in accordance with the provisions in this section. This testing will determine if an effluent sample adversely affects the survival of the test organism. Failure of a biomonitoring test IS NOT a violation of the permit. The permittee shall submit the results of these tests on the appropriate Discharge Monitoring Report (DMR) for the reporting period.

(3) The permittee shall implement all toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with the EPA manual, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", EPA/600/4-90/027, or the latest update thereof. The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

(4) The permittee shall utilize the *Pimephales promelas* (Fathead minnow) acute static renewal 24-hour toxicity test. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test. The permittee shall conduct the Fathead minnow toxicity test at a frequency of once per quarter.

(5) The permittee shall utilize the *Daphnia pulex* acute static renewal 24-hour toxicity test. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test. The permittee shall conduct the *Daphnia pulex* toxicity test at a frequency of once per quarter.

(6) The permittee shall use % effluent dilution concentration in addition to a control (0% effluent) in each toxicity test. The low-flow effluent concentration (critical dilution) is defined as 62% effluent.

b. REQUIRED TOXICITY TESTING CONDITIONS

(1) Samples

The permittee shall collect grab samples for test initiation and 24-hour renewal in accordance with Section 8 of EPA/600/4-90/027.

(2) Dilution Water

The synthetic dilution water (control) shall have a pH, hardness and alkalinity similar to that of the receiving water, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water. Section 7 of EPA/600/4-90/027 provides additional instructions.

(3) Statistical Interpretation

For the Fathead minnow and *Daphnia pulex* survival test, the statistical analyses used shall be in accordance with the methods for determining Pass/Fail for Single-Concentration Tests as described in the EPA manual, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", EPA/600/4-90/027, or the most recent update thereof.

c. PERSISTENT LETHALITY

If the test results show the effluent to be toxic (ie. failure at 62% effluent) for two consecutive quarterly toxicity tests the next quarterly test shall be a multiple dilution test and include the following dilution series 82%, 62%, 47%, 35% and 26% effluent, to indicate the magnitude of toxicity present in the effluent. If the effluent is toxic at the critical dilution of 62% the permittee shall make appropriate modifications to assist in identifying the source(s) of toxicity and review the storm water pollution prevention plan to reduce or eliminate the toxicity of their storm water. If toxicity persists, the Department will meet with the permittee to discuss further actions. In all cases, any discharge must demonstrate a lack of toxic effects, as measured by the provisions stipulated above.

d. REPORTING

(1) The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", EPA/600/4-90/027, for every valid or invalid toxicity test initiated, whether carried to completion or not and shall submit full reports to the Department for review.

(2) All test results shall be reported on "Summary Reports" provided by the Department and submitted with the Discharge Monitoring Reports (DMR).

3. Storm Water Pollution Prevention Plan Requirements

A. General

- (1) If your facility already has a storm water pollution prevention plan (SWPPP) in place, then you shall continue the implementation of this SWPPP. If you do not have a SWPPP, then you shall prepare a SWPPP for your facility within 60 days of the effective starting date of this permit. Your SWPPP must be prepared in accordance with good engineering practices. Your SWPPP must:
 - (a) Identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from your facility;
 - (b) Describe and ensure implementation of practices which you will use to reduce the pollutants in storm water discharges from the facility; and
 - (c) Assure compliance with the terms and conditions of this permit.
- (2) No Exposure Exclusions, as allowed by 40 CFR 122.26(g), can be obtained for the storm water discharges from the facility as long as all of the required conditions for applicability can be certified. These required conditions can be found in the federal regulation. The No Exposure Exclusion application form can be obtained from the Storm Water section of the ADEQ. Application for this exclusion must be made on the form obtained from the ADEQ.

B. Contents of Plan

- (1) **Pollution Prevention Team**
 - (a) You must identify the staff individual(s) (by name or title) that comprise the facility's storm water Pollution Prevention Team. Your Pollution Prevention Team is responsible for assisting the facility/plant manager in developing, implementing, maintaining and revising the facility's SWPPP. Responsibilities of each staff individual on the team must be listed.
- (2) **Site Description**
 - (a) Your SWPPP must include the following:
 - i. *Activities at Facility.* Description of the nature of the industrial activity(ies) at your facility;

- ii. *General Location Map.* A general location map (e.g., U.S.G.S. quadrangle, or other map) with enough detail to identify the location of your facility and the receiving waters within one mile of the facility;
- iii. A legible site map identifying the following:
 - (a) Directions of storm water flow (e.g., use arrows to show which ways storm water will flow);
 - (b) Locations of all existing structural BMPs;
 - (c) Locations of all surface water bodies;
 - (d) Locations of potential pollutant sources identified under Section B(4)(a) of this Part and where significant materials are exposed to precipitation;
 - (e) Location where major spills or leaks identified under Section B(5) of this Part have occurred;
 - (f) Locations of the following activities where such activities are exposed to precipitation: fueling stations, vehicle and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage or disposal of wastes, and liquid storage tanks;
 - (g) Locations of storm water outfalls and an approximate outline of the area draining to each outfall;
 - (h) Location and description of non-storm water discharges;
 - (i) Locations of the following activities where such activities are exposed to precipitation: processing and storage areas; access roads, rail cars and tracks; the location of transfer of substance in bulk; and machinery;
 - (j) Location and source of runoff from adjacent property containing significant quantities of pollutants of concern to the facility (an evaluation of how the quality of the runoff impacts your storm water discharges may be included).

(3) **Receiving Waters and Wetlands**

- (a) You must provide the name of the nearest receiving water(s), including intermittent streams, dry sloughs, arroyos and the areal extent and description of wetland or other special aquatic sites that may receive discharges from your facility.

(4) **Summary of Potential Pollutant Source**

- (a) You must identify each separate area at your facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading/unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. For each separate area identified, the description must include:
- i. *Activities in Area.* A list of the activities (e.g., material storage, equipment fueling and cleaning, cutting steel beams); and
 - ii. *Pollutants.* A list of the associated pollutant(s) or pollutant parameter(s) (e.g., crankcase oil, iron, biochemical oxygen demand, pH, etc.) for each activity. The pollutant list must include all significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of three (3) years before being covered under this permit and the present.

(5) **Spills and Leaks**

- (a) You must clearly identify areas where potential spills and leaks, which can contribute pollutants to storm water discharges, can occur, and their accompanying drainage points. For areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility to be covered under this permit, you must provide a list of significant spills and leaks of toxic or hazardous pollutants that occurred during the three (3) year period prior to the starting date of this permit. Your list must be updated if significant spills or leaks occur in exposed areas of your facility during the time you are covered by the permit.
- (b) Significant spills and leaks include, but are not limited to releases of oil or hazardous substances in excess of quantities that are

reportable under CWA 311 (see 40 CFR 110.10 AND 40 CFR 117.21) or section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Significant spills may also include releases of oil or hazardous substances that are not in excess of reporting requirements.

(6) **Sampling Data**

- (a) You must provide a summary of existing storm water discharge sampling data taken at your facility. All storm water sampling data collected during the term of this permit must also be summarized and included in this part of the SWPPP.

(7) **Storm Water Controls**

- (a) Description of Existing and Planned BMPs. Describe the type and location of existing non-structural and structural best management practices (BMPs) selected for each of the areas where industrial materials or activities are exposed to storm water. All the areas identified in Section B(4)(a) of this Part should have a BMP(s) identified for the areas discharges. For areas where BMPs are not currently in place, describe appropriate BMPs that you will use to control pollutants in storm water discharges. Selection of BMPs should take into consideration:
- i. The quantity and nature of the pollutants, and their potential to impact the water quality of receiving waters;
 - ii. Opportunities to combine the dual purposes of water quality protection and local flood control benefits (including physical impacts of high flows on streams - e.g., bank erosion, impairment of aquatic habitat, etc.);
 - iii. Opportunities to offset the impact impervious areas of the facility on ground water recharge and base flows in local streams (taking into account the potential for ground water contamination.)
- (b) BMP Types to be Considered. The following types of structural, non-structural, and other BMPs must be considered for implementation at your facility. Describe how each is, or will be, implemented. This requirement may have been fulfilled with area-specific BMPs identified under Section B(7)(a) of this Part, in which case the previous descriptions are sufficient. However, many of the following BMPs may be more generalized or non site-specific and therefore not previously considered. If you determine

that any of these BMPs are not appropriate for your facility, you must include an explanation of why they are not appropriate. The BMP examples listed below are not intended to be an exclusive list of BMPs that you may use. You are encouraged to keep abreast of new BMPs or new applications of existing BMPs to find the most cost effective means of permit compliance for your facility. If BMPs are being used or planned at the facility which are not listed here (e.g., replacing a chemical with a less toxic alternative, adopting a new or innovative BMP, etc.), include descriptions of them in this section of the SWPPP.

(c) Non-Structural BMPs

- i. *Good Housekeeping:* You must keep all exposed areas of the facility in a clean, orderly manner where such exposed areas could contribute pollutants to storm water discharges. Common problem areas include: around trash containers, storage areas and loading docks. Measures must also include: a schedule for regular pickup and disposal of garbage and waste materials; routine inspections for leaks and conditions of drums, tanks and containers.
- ii. *Minimizing Exposure:* Where practicable, industrial materials and activities should be protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff.
- iii. *Preventive Maintenance:* You must have a preventive maintenance program which includes timely inspection and maintenance of storm water management devices, (e.g., cleaning oil/water separators, catch basins) as well as inspecting, testing, maintaining and repairing facility equipment and systems to avoid breakdowns or failures that may result in discharges of pollutants to surface waters.
- iv. *Spill Prevention and Response Procedures:* You must describe the procedures which will be followed for cleaning up spills or leaks. Those procedures, and necessary spill response equipment, must be made available to those employees that may cause or detect a spill or leak. Where appropriate, you must explain existing or planned material handling procedures, storage requirements, secondary containment, and equipment (e.g., diversion valves), which are intended to minimize spills or leaks at the facility. Measures for cleaning up hazardous material spills or leaks

must be consistent with applicable RCRA regulations at 40 CFR Part 264 and 40 CFR Part 265.

- v. *Routine Facility Inspections:* In addition to or as part of the comprehensive site evaluation required under Section G of this Part, you must have qualified facility personnel inspect all areas of the facility where industrial materials or activities are exposed to storm water. The inspections must include an evaluation of existing storm water BMPs. Your SWPPP must identify how often these inspections will be conducted. You must correct any deficiencies you find as soon as practicable, but no later than 14 days from the date of the inspection. You must document in your SWPPP the results of your inspections and the corrective actions you took in response to any deficiencies or opportunities for improvement that you identify.
- vi. *Employee Training:* You must describe the storm water employee training program for the facility. The description should include the topics to be covered, such as spill response, good housekeeping, and material management practices, and must identify periodic dates (e.g., every 6 months during the months of July and January) for such training. You must provide employee training for all employees that work in areas where industrial materials or activities are exposed to storm water, and for employees that are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance people). The employee training should inform them of the components and goals of your SWPPP.

(d) Structural BMPs

- i. *Sediment and Erosion Control:* You must identify the areas at your facility which, due to topography, land disturbance (e.g., construction), or other factors, have a potential for significant soil erosion. You must describe the structural, vegetative, and/or stabilization BMPs that you will be implementing to limit erosion.
- ii. *Management of Runoff:* You must describe the traditional storm water management practices (permanent structural BMPs other than those which control the generation or source(s) of pollutants) that currently exist or that are planned for your facility. These types of BMPs typically are used to divert, infiltrate, reuse, or otherwise reduce

pollutants in storm water discharges from the site. Factors to consider when you are selecting appropriate BMPs should include: 1) the industrial materials and activities that are exposed to storm water, and the associated pollutant potential of those materials and activities; and 2) the beneficial and potential detrimental effects on surface water quality, ground water quality, receiving water base flow (dry weather stream flow), and physical integrity of receiving waters. Structural measures should be placed on upland soils, avoiding wetlands and flood plains, if possible. Structural BMPs may require a separate permit under section 404 of the CWA before installation begins.

- iii. *Example BMPs:* BMPs you could use include but are not limited to: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices).

(e) Other Controls

- i. No solid materials, including floatable debris, may be discharged to waters of the United States, except as authorized by a permit issued under section 404 of the CWA. Off-site vehicle tracking of raw, final, or waste materials or sediments, and the generation of dust must be minimized. Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas must be minimized. Velocity dissipation devices must be placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).

C. Maintenance

- (1) All BMPs you identify in your SWPPP must be maintained in effective operating condition. If site inspections required by Section B(7)(c)(v) of this Part identify BMPs that are not operating effectively, maintenance must be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable.

In the case of non-structural BMPs, the effectiveness of the BMP must be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

D. Non-Storm Water Discharges

(1) Certification of Non-Storm Water Discharges

- (a) Your SWPPP must include a certification that all discharges (i.e., outfalls) have been tested or evaluated for the presence of non-storm water. The certification must be signed in accordance with Part II Section D.11 of the individual permit, and include:
- i. The date of any testing and/or evaluation;
 - ii. Identification of potential significant sources of non-storm water at the site;
 - iii. A description of the results of any test and/or evaluation for the presence of non-storm water discharges;
 - iv. A description of the evaluation criteria or testing method used; and
 - v. A list of the outfalls or onsite drainage points that were directly observed during the test.
 - vi. If you are unable to provide the certification required (testing for non-storm water discharges), you must notify the Director 180 days after the effective starting date of this permit to be covered by this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification must describe:
 - vii. The reason(s) why certification was not possible;
 - viii. The procedure of any test attempted;
 - ix. The results of such test or other relevant observations; and
 - x. Potential sources of non-storm water discharges to the storm sewer.
 - xi. A copy of the notification must be included in the SWPPP at the facility. Non-storm water discharges to waters of the United States which are not authorized by an NPDES permit are unlawful, and must be terminated.

E. Allowable Non-storm Water Discharges

- (1) Certain sources of non-storm water are allowable under this permit. In order for these discharges to be allowed, your SWPPP must include:
 - (a) An identification of each allowable non-storm water source;
 - (b) The location where it is likely to be discharged; and
 - (c) Descriptions of appropriate BMPs for each source.
 - (d) Except for flows from fire fighting activities, you must identify in your SWPPP all sources of allowable non-storm water that are discharged under the authority of this permit.
 - (e) If you include mist blown from cooling towers amongst your allowable non-storm water discharges, you must specifically evaluate the potential for the discharges to be contaminated by chemicals used in the cooling tower and determined that the levels of such chemicals in the discharges would not cause or contribute to a violation of an applicable water quality standard after implementation of the BMPs you have selected to control such discharges.

F. Comprehensive Site Compliance Evaluation**(1) Frequency and Inspectors**

- (a) You must conduct facility inspections at least once a year. The inspections must be done by qualified personnel provided by you. The qualified personnel you use may be either your own employees or outside consultants that you have hired, provided they are knowledgeable and possess the skills to assess conditions at your facility that could impact storm water quality and assess the effectiveness of the BMPs you have chosen to use to control the quality of your storm water discharges. If you decide to conduct more frequent inspections, your SWPPP must specify the frequency of inspections.

(2) Scope of the Compliance Evaluation

- (a) Your inspections must include all areas where industrial materials or activities are exposed to storm water, as identified in Section B(4)(a) of this Part, and areas where spills and leaks have occurred within the past 3 years. Inspectors should look for: a) industrial materials, residue, or trash on the ground that could contaminate or be washed away in storm water; b) leaks or spills from industrial

equipment, drums, barrels, tanks, or similar containers; c) offsite tracking of industrial materials or sediment where vehicles enter or exit the site; d) tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas; and e) for evidence of, or the potential for, pollutants entering the drainage system. Storm water BMPs identified in your SWPPP must be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they must be inspected to see whether BMPs are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations must be inspected if possible.

(3) Follow-up Actions

- (a) Based on the results of the inspections, you must modify your SWPPP as necessary (e.g., show additional controls on the map required by Section B(2)(a)(iii) of this Part and revise the description of controls required by Section B(7)(a) of this Part to include additional or modified BMPs designed to correct the problems identified. You must complete revisions to the SWPPP within 14 calendar days following the inspection. If existing BMPs need to be modified or if additional BMPs are necessary, implementation must be completed before the next anticipated storm event. If implementation before the next anticipated storm event is impracticable, they must be implemented as soon as practicable.

(4) Compliance Evaluation Report

- (a) You must insure a report summarizing the scope of the inspection, name(s) of personnel making the inspection, the date(s) of the inspection, and major observations relating to the implementation of the SWPPP is completed and retained as part of the SWPPP for at least three years from the date permit coverage expires or is terminated. Major observations should include: the location(s) of discharges of pollutants from the site; and location(s) of BMPs that need to be maintained; location(s) where additional BMPs are needed that did not exist at the time of inspection. You must retain a record of actions taken in accordance with Part II Section C.7 (Retention of Records) of this permit as part of the storm water pollution prevention plan for at least three years from the date that permit coverage expires or is terminated. The inspection reports must identify any incidents of non-compliance. Where an inspection report does not identify any incidents of non-compliance, the report must contain a certification that the facility

is in compliance with the storm water pollution prevention plan and this permit. Both the inspection report and any reports of follow-up actions must be signed in accordance with Part II Section D (Reporting Requirements) of this permit.

(5) **Credit As a Routine Facility Inspection**

- (a) Where compliance evaluation schedules overlap with inspections required under Section B(7)(c)(v) of this Part, your annual compliance evaluation may also be used as one of the Section B(7)(c)(v) of this Part , routine inspections.

G. Maintaining Updated SWPPP

- (1) You must amend the storm water pollution prevention plan whenever:
- (a) There is a change in design, construction, operation, or maintenance at your facility which has a significant effect on the discharge, or potential for discharge, of pollutants from your facility;
- (b) During inspections or investigations by you or by local, State, Tribal or Federal officials it is determined the SWPPP is ineffective in eliminating or significantly minimizing pollutants from sources identified under Section B(4) of this Part, or is otherwise not achieving the general objectives of controlling pollutants in discharges from your facility.

H. Signature, Plan Review and Making Plans Available

- (1) You must sign your SWPPP in accordance with Part II Section D.11, and retain the plan on-site at the facility covered by this permit (see Part II Section C.7 for records retention requirements).
- (2) You must keep a copy of the SWPPP on-site or locally available to the Director for review at the time of an on-site inspection. You must make your SWPPP available upon request to the Director, a State, Tribal or local agency approving storm water management plans, or the operator of a municipal separate storm sewer receiving discharge from the site. Also, in the interest of public involvement, EPA encourages you to make your SWPPPs available to the public for viewing during normal business hours.
- (3) The Director may notify you at any time that your SWPPP does not meet one or more of the minimum requirements of this permit. The notification will identify provisions of this permit which are not being met, as well as the required modifications. Within thirty (30) calendar days of receipt of

such notification, you must make the required changes to the SWPPP and submit to the Director a written certification that the requested changes have been made.

- (4) You must make the SWPPP available to the USFWS or NMFS upon request.

I. Additional Requirements for Storm Water Discharges Associated With Industrial Activity From Facilities Subject to EPCRA Section 313 Reporting Requirements.

- (1) Potential pollutant sources for which you have reporting requirements under EPCRA 313 must be identified in your summary of potential pollutant sources as per Section B(4) of this Part. Note this additional requirement only applies to you if you are subject to reporting requirements under EPCRA 313.

4. RAIN EVENT SAMPLING:

- a. Samples must be collected during the first hour of the first discharge of the monitoring period during normal business hours. If the collection of a grab sample collected as defined above is impracticable, a grab sample can be taken during the first hour of the second discharge event, and the discharger shall submit with the monitoring report a description of why a grab sample during the first discharge was impracticable.

When a discharger is unable to collect samples due to adverse climatic condition, the discharge must submit in lieu of sampling data a description of why samples could not be collected, including available documentation of the event. Adverse climatic conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.), or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.). The permittee is precluded from exercising this waiver more than once during a two year period.

- b. The permittee must install and maintain a rain gauge and keep a daily log of rainfall occurring during the standard business hours. (for the purpose of clarification: the intent of this condition is to log the amount of rainfall occurring during the standard business hours regardless of the length of the rain event (i. e. the permittee is not required to monitor and report any storm events which occur outside the standard business hours).

5. MONITORING FREQUENCY REDUCTION

The permittee may apply for a testing frequency reduction upon the successful completion of six consecutive tests where COD levels are below permit limitations. If granted, the monitoring frequency for this parameter may be reduced to no less than once per quarter without need for a major permit modification.

CERTIFICATION - The permittee must certify in writing that this pollutant has not been detected in any analysis. Upon review and acceptance of this information the Department will issue a letter of confirmation of the monitoring frequency reduction.

6. REOPENER CLAUSE

When a facility effectively demonstrates conformance with the effluent limitations (12 consecutive sampling periods for COD, four consecutive sampling periods for O&G and pH) and/or successfully passes four consecutive Biomonitoring tests, the facility may request that all conditions of this permit are reevaluated. If the Department concludes that there is justification for modification of this permit limitations/conditions/requirements, this permit will be modified. Until such time as this major modification is finalized, this permit will continue in effect.

PART IV DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act shall apply to this permit and are incorporated herein by reference. Additional definitions of words or phrases used in this permit are as follows:

1. **“Act”** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **“Administrator”** means the Administrator of the U.S. Environmental Protection Agency.
3. **“Applicable effluent standards and limitations”** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
4. **“Applicable water quality standards”** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303 (a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under regulation No. 2, as amended, (regulation establishing water quality standards for surface waters of the State of Arkansas.)
5. **“Bypass”** means the intentional diversion of waste streams from any portion of a treatment facility.
6. **“Daily Discharge”** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the “daily discharge” is calculated as the total mass of pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the “daily discharge” is calculated as the average measurement of the pollutant over the sampling day. “Daily discharge” determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the “daily discharge” determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during that sampling day.
7. **“Daily Average” (also known as monthly average)** discharge limitations means the highest allowable average of “daily discharges(s)” over a calendar month, calculated as the sum of all “daily discharges(s)” measured during a calendar month divided by the number of “daily discharges(s)” measured during that month. When the permit establishes daily average concentration effluent limitations or conditions, the daily average concentration means the arithmetic average (weighted by flow) of all “daily discharges(s)” of concentration determined during the calendar month where C= daily concentration, F=daily flow and n=number of daily samples; daily average discharge=

$$\frac{C_1F_1 + C_2F_2 + \dots + C_nF_n}{F_1 + F_2 + \dots + F_n}$$

For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.

8. **“Daily Maximum”** discharge limitation means the highest allowable “daily discharge” during the calendar month. For Fecal Coliform Bacteria (FCB) report the daily maximum as a 7-day geometric mean in colonies per 100 ml.

9. **“Department”** means the Arkansas Department of Environmental Quality (ADEQ).

10. **“Director”** means the Administrator of the U.S. Environmental Protection Agency and/or the Director of the Arkansas Department of Environmental Quality.

11. **“Grab sample”** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.

12. **“Industrial User”** means a nondomestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly-owned treatment works.

13. **“National Pollutant Discharge Elimination System”** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the Clean Water Act.

14. **“POTW”** means a Publicly Owned Treatment Works.

15. **“Severe property damage”** means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in products.

16. **“APCEC”** means the Arkansas Pollution Control and Ecology Commission.

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

18. **“7-day average”** discharge limitation, other than for fecal coliform bacteria, is the highest allowable arithmetic means of the values for all effluent samples collected during the calendar week. The 7-day average for fecal coliform bacteria is the geometric mean of the values of all effluent samples collected during the calendar week. The DMR should report the highest 7-day average obtained during the calendar month. For reporting purposes, the 7-day average values should be reported as occurring in the month in which the Saturday of the calendar week falls in.

19. **“30-day average”**, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.

20. **“24-hour composite sample”** consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.

21. **“12-hour composite sample”** consists of 12 effluent portions, collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.

22. **“6-hour composite sample”** consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

23. **“3-hour composite sample”** consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

24. **“Treatment works”** means any devices and systems used in storage, treatment, recycling, and reclamation of municipal sewage and industrial wastes, of a liquid nature to implement section 201 of the Act, or necessary to recycle reuse water at the most economic cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities, and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.

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

26. **“Fecal Coliform Bacteria”**, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads.

27. **“Dissolved oxygen”**, shall be defined as follows:

a. When limited in the permit as a monthly minimum, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month;

b. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.

28. **The term “MGD”** shall mean million gallons per day.

29. **The term “mg/l”** shall mean milligrams per liter or parts million (ppm).

30. **The term “µg/l”** shall mean micrograms per liter or parts per billion (ppb).

31. **The term “cfs”** shall mean cubic feet per second.

32. **The term “ppm”** shall mean part per million.

33. **The term “s.u.”** shall mean standard units.

34. **Monitoring and Reporting :**

When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is Monthly or more frequently, the Discharge Monitoring Report shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the Discharge Monitoring report shall be submitted by the 25th of the month following the monitoring period end date.

MONTHLY:

is defined as a calendar month or any portion of a calendar month for monitoring requirement frequency of Once/month or more frequently.

QUARTERLY:

(1) is defined as a fixed calendar quarter or any part of the fixed calendar quarter for a non-seasonal effluent characteristic with a measurement frequency of Once/quarter. Fixed calendar quarters are: January through March, April through June, July through September, and October through December; or

(2) is defined as a fixed three month period (or any part of the fixed three month period) of or dependent upon the seasons specified in the permit for a seasonal effluent characteristic with a monitoring requirement frequency of Once/quarter that does not coincide with the fixed calendar quarter Seasonal calendar quarters May through July, August through October, November through January, and February through April.

SEMI-ANNUAL:

is defined as the fixed time periods January through June, and July through December (or any portion thereof) for an effluent characteristic with a measurement frequency of Once/6 months or Twice/year.

ANNUAL or YEARLY:

is defined as a fixed calendar year or any portion of the fixed calendar year for an effluent characteristic or parameter with a measurement frequency of Once/year. A calendar year is January through December, or any portion thereof.

Final Statement of Basis

for renewal of final NPDES Permit Number AR0022756 to discharge to Waters of the State

1. PERMITTING AUTHORITY.

The issuing office is:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT.

The applicant is:

Helena Chemical Company
Highway 49 Bypass
P.O. Box 2338
West Helena, AR 72390

3. PREPARED BY.

The permit was prepared by:

Marysia Jastrzebski, P.E.
NPDES Branch, Water Division

4. DATE PREPARED.

The permit was prepared on July 20, 2004..

5. PREVIOUS PERMIT ACTIVITY.

Effective Date: October 1, 1998.
Expiration Date: September 30, 2003.

The permittee submitted a permit renewal application on 08/18/2003. It is proposed that the current NPDES permit be reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

The outfall is located at the following coordinates:

Latitude: 34° 33' 13" Longitude: 90° 39' 20"

The receiving waters named:

an unnamed ditch then to Lick Creek, then to the White River in Segment 4A of the White River Basin. The receiving stream is a Water of the State classified for secondary contact recreation, raw water source for public, industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

7. **303d List and Endangered Species Considerations**



A. **303d List**

The receiving stream is not listed on the 303d list. Therefore; no permit action is needed.

B. **Endangered Species:**

No comments were received from the U.S. Fish and Wildlife Service (USF&WS). Therefore; no permit action is needed. The drafted permit and Statement of Basis will be sent to the USF&WS for their review.

8. **OUTFALL AND TREATMENT PROCESS DESCRIPTION.**

The following is a description of the facility described in the application:

Average Flow: varies(stormwater) MGD

Type of treatment: no treatment is provided.

Discharge Description: stormwater runoff.

9. **APPLICANT ACTIVITY.**

The applicant's activities are the operation of an agricultural chemical formulator.

10. **SEWAGE SLUDGE PRACTICES.**

No sludge disposal authorized under this permit.

11. **PERMIT CONDITIONS.**

The Arkansas Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in the application. Permit requirements are based on NPDES regulations (40 CFR Parts 122, 124, and Subchapter N) and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et. seq.).

a. **Final Effluent Limitations**

Outfall 001-stormwater runoff

i. **Conventional and/or Toxic Pollutants**

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Flow	N/A	N/A	Report	Report	Daily	Instantaneous
Daily rainfall, in inches	N/A	N/A	Report	Report	Daily	Report
Chemical Oxygen Demand (COD)	N/A	N/A	50	75	Once/month	Grab
Oil and Grease (O&G)	N/A	N/A	10	15	Once/quarter	Grab
pH	N/A	N/A	<u>Minimum</u> 6 s.u.	<u>Maximum</u> 9 s.u.	Once/quarter	Grab
Acute Biomonitoring	N/A	N/A	N/A	N/A	Once/quarter	24-hr composite
<u>Pimephales promelas (Acute)</u> Pass/Fail Lethality (24-Hr NOEC) TEM6C Survival (24-Hr NOEC) TOM6C Coefficient of Variation (24-Hr NOEC) TQM6C			<u>48-hr Minimum</u> Report (Pass=0/Fail=1) Report % Report %		Once/quarter Once/quarter Once/quarter	24-hr composite 24-hr composite 24-hr composite
<u>Daphnia pulex (Acute)</u> Pass/Fail Lethality (24-Hr NOEC) TEM3D Survival (24-Hr NOEC) TOM3D Coefficient of Variation (24-Hr NOEC) TQM3D			<u>48-hr Minimum</u> Report (Pass=0/Fail=1) Report % Report %		Once/quarter Once/quarter Once/quarter	24-hr composite 24-hr composite 24-hr composite

ii. **Solids, Foam, and Free Oil:** There shall be no discharge of distinctly visible solids, scum or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits or sludge banks. No visible sheen (Sheen means an iridescent appearance on the surface of the water).

12. BASIS FOR PERMIT CONDITIONS.

The following is an explanation of the derivation of the conditions of the final permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons suggesting the tentative decisions as required under 40 CFR 124.7 (48 FR 1413, April 1, 1983).

General:

The previous permit established two discharge scenarios: discharges of dry weather flows of non-process wastewater (air compressor condensate) and discharges of wet weather flows including additional stormwater runoff.

Based on the submitted application all dry weather flows will be rerouted to the City of West Helena and the only discharge will occur as result of the stormwater events. Therefore, the renewed permit will address only wet weather flows.

The permittee is required to install and maintain a rain gauge. Daily measurements must be taken and recorded in a daily log. This information shall be submitted as an attachment to the Discharge Monitoring Report (DMR).

Samples must be collected during the first hour of the first discharge of the monitoring period occurring during the normal operating hours.

A. **Technology-Based versus Water Quality-Based Effluent Limitations and Conditions**

Following regulations promulgated at 40 CFR Part 122.44 (1) (2) (ii), the final permit limits are based on either technology-based effluent limits pursuant to 40 CFR Part 122.44 (a) or on State water quality standards and requirements pursuant to 40 CFR Part 122.44 (d), whichever are more stringent.

B. **Technology-Based Effluent Limitations and/or Conditions**

(1) **General Comments**

Regulations promulgated at 40 CFR Part 122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on effluent limitations guidelines where applicable, on Best Professional Judgment (BPJ) in the absence of guidelines, or on a combination of the two.

(2) **Applicable Effluent Limitations Guidelines or Best Professional Judgment of the Permit Writer**

Final effluent limitations and sample type and frequency for Chemical Oxygen Demand (COD) are continued from the previous permit. However, the permittee may apply for a testing frequency reduction upon the successful completion of the first six consecutive

months of testing for COD with levels below permit limitations. If granted, the monitoring frequency for this parameter may be reduced to no less than once quarter without need for permit modification (see Condition 6a of Part III of proposed permit).

(3) **Stormwater runoff**

Effluent limitations guidelines have not been promulgated for discharges of this sort. Therefore, under the authority of Section 402 (a) (1) of the Clean Water Act and State laws, the State has developed a permit on a case-by-case basis. Stormwater pollution prevention plan requirements are included.

C. **State Water Quality Numerical Standards Based Limitations**

(1) **Conventional and Non-Conventional Pollutants**

Final effluent limitations for pH and Oil and Grease are based on Chapter 5, Sections 2.504, and 2.510 of Regulation No. 2 as amended, respectively. These limitations are continued from the previous permit.

D. **Toxics Pollutants-Priority Pollutant Scan (PPS)**

(1) **General Comments**

Effluent limitations and/or conditions established in the final permit are in compliance with the Arkansas Water Quality Standards and the applicable Water Quality Management Plan.

(2) **Post Third Round Policy and Strategy**

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited...". To insure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations by Toxic Pollutants"(49 FR 9016-9019,3/9/84). In support of the national policy, Region 6 adopted the "Policy for post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. The Regional policy and strategy are designed to insure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in non-conformance with the provisions of 40 CFR Part 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

(3) **Implementation**

The State of Arkansas is currently implementing EPA's Post Third-Round Policy in conformance with the EPA Regional strategy. The 5-year NPDES permits contain

technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, or where there are no applicable technology-based limits, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards from the Regulation No. 2 are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

(4) **Priority Pollutant Scan**

Priority Pollutant Scan was not required for this minor facility. However, ADEQ has reviewed and evaluated the last three years of the Discharge Monitoring Reports and the specific levels of the following pollutants which were included in the previous permit: Arsenic, Toxaphene, DDT(& Metabolites), Endrin and Zinc.

The concentration of each one of these pollutants after mixing with the receiving stream was compared to the applicable water quality standards as established in the Arkansas Water Quality Standards, Reg. No. 2 and with the aquatic toxicity, human health, and drinking water criteria obtained from the "Quality Criteria for Water, 1986 (Gold Book)". The following expression was used to calculate the pollutant instream waste concentration (IWC):

$$IWC = ((C_e \times Q_e) + (C_b \times Q_b)) / (Q_e + Q_b)$$

where:

IWC = instream concentration of pollutant after mixing with receiving stream (F g/l)

C_e = pollutant concentration in effluent (F g/l)

Q_e = effluent flow of facility (cfs)

C_b = background concentration of pollutant in receiving stream (F g/l)

Q_b = background flow of receiving stream (cfs)

The following values were used in the IWC calculations:

C_e = varies with pollutant. Based on the DMR data for the reporting period from June 2001 through November 2003. The geometric mean of a group of data points (less than 20 data points) was multiplied by a factor of 2.13. This factor is based on EPA's Region VI procedure (See attachment IV of Continuing Planning Process (CPP)) to extrapolate limited data sets to better evaluate the potential toxicity for higher effluent concentrations to exceed water quality standards. This procedure employs a statistical approach which yields an estimate of a selected upper percentile value (the 95th percentile) of an effluent data set which would be expected to exceed 95% of effluent concentrations in a discharge. If 20 or more data points during the last two years are available, do not multiply by 2.13, but instead use the maximum reported values.

$Q_c = 0.16 \text{ MGD} = 0.248 \text{ cfs}$, continued from the previous permit and based on the analysis performed by the permittee after the 0.5 inches storm event that occurred at the facility on September 22, 1992.

$C_b = 0 \text{ } \mu\text{g/l}$

$Q_b =$ (See below):

a. Aquatic Toxicity

Chronic Toxicity: Flow = 1.491 cfs, for comparison with chronic aquatic toxicity. This flow is **67** percent of wet weather flow for the receiving stream as calculated in the 1998 Statement of Basis. The background flow of 2.225 cfs is based on calculations made to estimate instream critical flows in the receiving stream during a 0.5 inch rainfall event using actual flow measurements made by permittee after September 22, 1992 rain event.

Acute Toxicity: Flow = 0.734 cfs, for comparison with acute aquatic toxicity. This flow is **33** percent of the wet weather flow for the receiving stream using the event discussed above.

b. Bioaccumulation

(a) Flow = 2.225 cfs, for comparison with bioaccumulation criteria. Using the event discussed above.

c. Drinking Water

(a) Flow = 2.225 cfs, for comparison with drinking water criteria. This flow is wet weather flow.



The following values were used to determine limits for the pollutants:

Hardness = 81 mg/l, based on attachment VI of CPP.

pH = 7.7 s.u., based on compliance data from "Arkansas Water Quality Inventory Report", utilizing ADEQ accumulated data for = StationWHI 36.

(5) Conversion of Dissolved Metals Criteria for Aquatic Life to Total Recoverable Metal

Zinc criteria established in Regulation No. 2 for aquatic life protection are based on dissolved metals concentrations and hardness values (See Page 6 of **Attachment 1**). However, Federal Regulations cited at 40 CFR 122.45(c) require that effluent limitations for metals in NPDES permits be expressed as total recoverable (See Pages 1 and 6 of

Attachment 1). Therefore, a dissolved to the total recoverable metal conversion must be implemented. This involves determining a linear partition coefficient for the metal of concern and using this coefficient to determine the fraction of metal dissolved, so that the dissolved metal ambient criteria may be translated to a total effluent limit. The formula for converting dissolved metals to total recoverable metals for streams and lakes are provided in **Attachment 2** and Region 6 Implementation Guidance for Arkansas Water Quality Standards promulgated at 40 CFR 131.36.

(6) Results of the comparison of the submitted information with the appropriate water quality standards and criteria

Three pollutants which were included in the previous permit (Toxaphene, Zinc, and Arsenic) were determined to be present in the effluent at levels greater than or equal to the Minimum Quantification Level(MQL) for each pollutant as reported by the permittee.



Pollutant	Concentration Reported, µg/l	MQL, µg/l
Toxaphene	0 µg/l *	5.0
DDT & Metabolites	0 **	0.1
Endrin	0 ***	0.1
Zinc	386.2 µg/l ****	20
Arsenic	33.56 µg/l *****	10

* Based on the DMR data for June 2003 through November 2003, there are 10 “no detects”, one < 0.24 µg/l (February 2003) and one <0.24 µg/l (June 2003). It is the Best Professional Judgment of the permit writer that the February 2003 and June 2003 data are not considered since the reported value is below the MQL of 5.0 µg/l. Therefore, based on the available information, zero is to be entered as the concentration reported.

** Based on the DMR data for June 2001 through November 2003, there are 10 “no detects”, one 0.15 µg/l (December 2002) and one 0.02 µg/l (June 2003). The permittee submitted information on January 18, 2003 indicating that the December 2002 sample results were skewed due to chemical interference by other materials in the sample. Therefore, this data point is not going to be used in the further analysis. Additionally, it is the Best Professional Judgment of the permit writer that the June 2003 datum is not considered since the reported value is below the MQL of 0.1 µg/l. Therefore, based on the available information, zero is to be entered as the concentration reported.

*** Based on the DMR data for June 2003 through November 2003, there are 10 “no detects”, one < 0.05 µg/l (February 2003) and one 0.058 µg/l (June 2003). Since both reported values are below the MQL level of 0.1 µg/l, zero will be entered as value reported.

**** Geometric mean of the following data set: 170, 300, 200, 350, 250, 200, 300, 500, 590, 1100, 640 and 990 $\mu\text{g/l}$ is 386.20 $\mu\text{g/l}$.

***** Geometric mean of the following data set: 50, 110, 14, 50, 5.1, 33, 14, 18, 100, 50, 50, and 50 is 33.56 $\mu\text{g/l}$.

ADEQ has determined from the information submitted by the permittee that there is not a reasonable potential for the discharge to cause an instream excursion above the chronic and acute numeric standards as specified in the Arkansas Water Quality Standards, Reg. No. 2 (See **Attachment 1.**)

Zinc

The previous permit included effluent limitations for Zinc since it was determined that there was a potential of violation of the Arkansas Water Quality Standards, Reg. No. 2. Based on the submitted Discharge Monitoring Reports, it does not appear that this pollutant has a potential to violate the Arkansas Water Quality Standards. Therefore, these limitations are not continued in the proposed permit. Based on 40 CFR 122.44 (l) this elimination of limitations does not constitute backsliding since new information is available which was not available at the time the previous permit was issued and this information would constitute cause for permit modification or revocation and reissuance under 40 CFR 122.62

Toxaphene, Endrin and DDT(& Metabolites)

The previous permit included effluent limitations for these pollutants since it was determined that there was a potential of violation of the Arkansas Water Quality Standards, Reg. No. 2. Based on the submitted Discharge Monitoring Reports, it does not seem that these pollutants are present in the stormwater runoff from this facility. Therefore, these limitations are not continued in the proposed permit. Based on 40 CFR 122.44 (l) this elimination of limitations does not constitute backsliding since new information is available which was not available at the time the previous permit was issued and this information would constitute cause for permit modification or revocation and reissuance under 40 CFR 122.62.

Arsenic

The previous permit included a requirement for monitoring and reporting for Arsenic since it was determined that there was a potential of violation of the federal bioaccumulation criterion. This requirement is not continued in the proposed permit since no state water quality standard has been established for this parameter.

E. Final Limitations

The following effluent limitations or "report" requirements were placed in the permit based on the more stringent of the technology-based, water quality-based or previous NPDES permit limitations:

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous NPDES Permit		Final Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
COD	N/A	N/A	50	75	50	75	50	75
O & G	10	15	N/A	N/A	10	15	10	15
pH	6-9 s.u.		N/A		6-9 s.u.		6-9 s.u.	

F. Biomonitoring

Section 101(a)(3) of the Clean Water Act states that ".....it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." In addition, ADEQ is required under 40 CFR Part 122.44(d)(1), adopted by reference in Regulation 6, to include conditions as necessary to achieve water quality standards as established under Section 303 of the Clean Water Act. Arkansas has established a narrative criteria which states "toxic materials shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant or aquatic life or to interfere with the normal propagation, growth and survival of aquatic biota."

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. It is the national policy of EPA to use bioassays as a measure of toxicity to allow evaluation of the effects of a discharge upon a receiving water (49 Federal Register 9016-9019, March 9, 1984). EPA Region 6 and the State of Arkansas are now implementing the Post Third Round Policy and Strategy established on September 9, 1992.

Biomonitoring of the effluent is thereby required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

TOXICITY TESTS

FREQUENCY

Acute Biomonitoring

Once/quarter

Requirements for measurement frequency are based on Appendix D of CPP.

Acute biomonitoring is required because only stormwater is being discharged from this facility.

The calculations for dilution used for acute biomonitoring are as follows:

$$\text{Critical Dilution (Cd)} = (\text{Qd} / (\text{Qd} + 0.67 \times 0.1 \times \text{Critical Flow})) \times 100\%$$

Where:

Qd = Facility's flow estimate calculated by permittee after a 0.5 inch rainfall event (0.248 cfs)

Critical Flow = Receiving stream flow estimate calculated by permittee after a 0.5 inch rainfall event (2.225 cfs)

$Q_b = \text{Background flow} = 0.1 \times 0.67 \times \text{Critical Flow} = 0.1 \times 0.67 \times 2.225 \text{ cfs} = 0.149 \text{ cfs}$

$CD = (0.24 / (0.24 + 0.149)) \times 100 = 62\%$

Toxicity tests shall be performed in accordance with protocols described in "Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms", EPA/600/4-90/027. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are **83 %, 62%, 47%, 35%, and 27%** (See **Attachment I** of CPP). The low-flow effluent concentration (critical dilution) is defined as **62 %** effluent. The requirement for acute biomonitoring tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species are representative of organisms indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be reported according to EPA/600/4-90/027 and shall be submitted as an attachment to the Discharge Monitoring Report (DMR).

This permit may be reopened to require further biomonitoring studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if biomonitoring data submitted to the Department shows toxicity in the permittee's discharge. Modification or revocation of this permit is subject to the provisions of 40 CFR 122.62, as adopted by reference in ADEQ Regulation No. 6. Increased or intensified toxicity testing may also be required in accordance with Section 308 of the Clean Water Act and Section 8-4-201 of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

Administrative Records

The following information summarized toxicity test submitted by the permittee during the term of the current permit at outfall **001** (See **Attachment 5**.)

G. Sample Type and Sampling Frequency

Regulations promulgated at 40 CFR 122.44(i)(1) require permit to establish monitoring requirements which assure compliance with permit limitations. Requirements for sample type and sampling frequency are discussed below:

- a. Flow – sample type and frequency are continued from the previous permit.
- b. Oil and Grease and pH - sample type is continued but measurement frequency is changed from once per month to once per quarter based on the EPA's procedures for Performance Based Monitoring Frequency Reduction.
- c. COD– both, sample type and frequency of once per month are continued. This pollutant have been considered for monitoring reduction but it was determined to be ineligible since permit violations have occurred during the past year. See Conditions 5a and 5b for potential frequency reduction for this parameter.
- d. Biomonitoring frequency of once per quarter is continued. However, based on Paragraph 5 of Condition 2 of Part III of the permit- the permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for one or both test species, with no lethal effects demonstrated at or below the critical dilution.

H. Changes from the previously issued permit:

1. Outfall 001A is deleted.
2. Schedule of compliance and interim limitations for Outfall 001B are deleted.
3. Monitoring and Reporting requirements for arsenic are removed.
5. Permit limitations for Toxaphene, DDT, Endrin and Zinc are deleted.
4. Monitoring frequencies for Oil and Grease and pH are reduced from once per month to once per quarter.
5. Chronic Biomonitoring is replaced with Acute Biomonitoring. Critical Dilution and Dilution Series are revised.
6. Rainfall recording and reporting are required.
7. Wet weather sampling requirement is modified.
8. Part III- Other Conditions is revised.

13. SCHEDULE OF COMPLIANCE.

Compliance with final effluent limitations is required by the following schedule:

Compliance is required on the effective date of the permit.

14. OPERATION AND MONITORING.

The applicant is at all times required to properly operate and maintain the treatment facility; to monitor the discharge on a regular basis; and report the results monthly. The monitoring results will be available to the public.

15. SOURCES.

The following sources were used to final the permit:

- A. NPDES application No. AR0022756 received 08/18/2003.
- B. Arkansas Water Quality Management Plan(WQMP).
- C. Regulation No. 2.
- D. Regulation No. 6.
- E. 40 CFR 122, 125.
- F. NPDES permit file AR0022756.
- G. Discharge Monitoring Reports (DMRs).
- H. Continuing Planning Process (CPP).
- I. Technical Support Document For Water Quality-based Toxic Control.
- J. Region 6 Implementation Guidance for Arkansas Water Quality Standards promulgated at 40 CFR 131.36.
- K. E-mail dated December 4, 2003 from Katherine Terry to Jastrzebski.
- L. E-mail dated December 22, 2003 from Anthony Arnold to Jastrzebski.
- M. E-mail dated January 6, 2004, from Owen to Jastrzebski.
- N. E-mail dated January 9, 2004, from Clem to Jastrzebski.
- O. EPA's Policy on the Performance Based Monitoring Frequency Reduction.

16. NPDES POINT OF CONTACT.

For additional information, contact:

Marysia Jastrzebski, P.E.
NPDES Branch, Water Division
Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913
Telephone: (501) 682-0622

Attachment 1

[PPS]

Attachment 2

Linear Partition Coefficients for Priority Metals in Streams and Lakes*

METAL	STREAMS		LAKES	
	K _{po}	a	K _{po}	a
Arsenic	0.48 X 10 ⁶	-0.73	0.48 X 10 ⁶	-0.73
Cadmium	4.00 X 10 ⁶	-1.13	3.52 X 10 ⁶	-0.92
Chromium**	3.36 X 10 ⁶	-0.93	2.17 X 10 ⁶	-0.27
Copper	1.04 X 10 ⁶	-0.74	2.85 X 10 ⁶	-0.9
Lead***	2.80 X 10 ⁶	-0.8	2.04 X 10 ⁶	-0.53
Mercury	2.90 X 10 ⁶	-1.14	1.97 X 10 ⁶	-1.17
Nickel	0.49 X 10 ⁶	-0.57	2.21 X 10 ⁶	-0.76
Silver****	2.40 X 10 ⁶	-1.03	2.40 X 10 ⁶	-1.03
Zinc	1.25 X 10 ⁶	-0.7	3.34 X 10 ⁶	-0.68

$$K_p = K_{po} \times TSS^a$$

K_p = Linear Partition Coefficient

TSS = Total Suspended Solids (mg/l)-(See **Attachment 3**)

K_{po} = found from table

a = found from table

$$C/C_t = 1/(1 + (K_p \times TSS \times 10^{-6})) \quad C/C_t = \text{Fraction of Metal Dissolved}$$

* Delos, C. G., W. L. Richardson, J. V. DePinto, R. B., Ambrose, P. W. Rogers, K. Rygwelski, J. P. St. John, W. J. Shaughnessey, T. A. Faha, W. N. Christie. Technical Guidance for Performing Waste Load Allocations, Book II: Streams and Rivers. Chapter 3: Toxic Substances, for the U. S. Environmental Protection Agency. (EPA-440/4-84-022).

** Linear partition coefficient shall not apply to the Chromium VI numerical criterion. The approved analytical method for Chromium VI measures only the dissolved form. Therefore, permit limits for Chromium VI shall be expressed in the dissolved form. See 40 CFR 122.45(c)(3).

*** Reference page 18 of EPA memo dated March 3, 1992, from Margaret J. Stasikowski (WH-586) to Water management Division Directors, Region I-IX.

**** Texas Environmental Advisory Council, 1994

Attachment 3

TOTAL SUSPENDED SOLIDS(15th PERCENTILE) BY RECEIVING STREAM AND ECOREGION

For direct discharges to the Arkansas, Red, Ouachita, White, and St. Francis Rivers use the following mean values:

TSS(15th percentile)		
Receiving Stream	TSS	Unit
Arkansas River:		
Ft. Smith to Dardanelle Dam	12.0	mg/l
Dardanelle Dam to Terry L&D	10.5	mg/l
Terry L&D to L&D #5	8.3	mg/l
L&D #5 to Mouth	9.0	mg/l
Red River	33	mg/l
Ouachita River:		
above Caddo River	2.0	mg/l
below Caddo River	5.5	mg/l
White River:		
above Beaver Lake	2.5	mg/l
Bull Shoals to Black River	3.3	mg/l
Black River to Mouth	18.5	mg/l
St. Francis River	18	mg/l

For all other discharges use the following ecoregion TSS:

TSS (15th percentile)		
Ecoregion	TSS	Unit
Ouachita	2	mg/l
Gulf Coastal	5.5	mg/l
Delta	8	mg/l
Ozark Highlands	2.5	mg/l
Boston Mountains	1.3	mg/l
Arkansas River Valley	3	mg/l

Attachment 4

Calculations

Attachment 5

**BIOMONITORING FREQUENCY RECOMMENDATION
AND RATIONALE FOR ADDITIONAL REQUIREMENTS**

Permit Number: **AR0022756**

Facility Name: **Helena Chemical**

Previous Critical Dilution: **14.26%**

Date of Review: **1-9-04**

Proposed Critical Dilution: **62%**

Name of Reviewer: **Clem**

Number of Test Performed during previous 5 years by Species:

***Pimephales promelas* (Fathead minnow) : 15**

***Ceriodaphnia dubia* (water flea): 16**

Failed Test Dates during previous 5 years by Species:

***Pimephales promelas* (Fathead minnow) :**

Lethal

Sublethal

12-99

12-99

6-00

6-00

5-01

11-00

3-03

5-01

3-03

***Ceriodaphnia dubia* (water flea):**

Lethal

Sublethal

6-00

2-00

11-00

6-00

5-00

11-00

5-00

2-01

3-03

Previous TRE Activities: None

Frequency Recommendation by Species:

***Pimephales promelas* (Fathead minnow) : four/year**

***Daphnia pulex* (water flea): four/year**

Additional Requirements (including WET Limits) Rationale/Comments Concerning Permitting:

Rationale: According to the EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies: "All major dischargers, and those minor dischargers specifically identified by EPA or the State permitting authority (based on available information on a case-by case basis) as posing a significant unaddressed toxic risk, will be required to perform Whole Effluent Toxicity testing at a frequency of once per quarter for the vertebrate and invertebrate tests species for the first year of a new or reissued permit."



ARKANSAS
Department of Environmental Quality

**RESPONSE TO COMMENTS
FINAL PERMIT DECISION**

This is our response to comments received on the subject draft permit in accordance with regulations promulgated at 40 CFR Part 124.17.

Permit No. : AR0022756
Applicant : Helena Industries, Inc.
Prepared by : Marysia Jastrzebski, P. E.
Permit Action : Final permit decision and response to comments received on the draft permit publicly noticed on April 9, 2004.
Date Prepared : December 21, 2005

The following comments have been received on the draft permit.

Letters from Mr. John Killion, Plant Manager to Jastrzebski dated May 13, 2004 and June 15, 2004.

The final permit has been modified based on comments submitted in letters dated May 13, 2004, June 15, 2004, and August 10, 2004, issues discussed during two meetings on June 15, 2004 and August 25, 2004, and several phone calls and e-mails between Jastrzebski and Mr. Killion, Plant Manager.

I. Response to issues raised

ISSUE #1

The permittee requested that Biomonitoring requirements be eliminated or reduced to once per year and that all limitations be replaced by benchmark concentrations.

Rationale:

“The chemical and biomonitoring requirements and limitations of the previous permit were based on the inclusion of process wastewater in the discharge. Since the proposed permit allows storm water discharge only, the requirement with respect to biomonitoring should be eliminated in its entirety.

Short of elimination of Biomonitoring in its entirety, we (*the permittee*) feel that the Biomonitoring requirements should be consistent with the intent of the Arkansas General Water Industrial Permit, which includes acute Biomonitoring as an annual requirement for certain facilities. As with other parameters for which monitoring is required by the general permit, there is no numerical limit above which an exceedance is a permit violation; rather, there is a “numerical benchmark”, which if exceeded, triggers the permittee to review and improve the facility’s stormwater pollution prevention plan(SWPPP).

Furthermore, we (*the permittee*) requested that all numerical (limits) in the proposed permit be redefined as benchmark concentrations as described in EPA’s MSGP document. “(from letter from John Killion to Jastrzebski dated May 13, 2004).

Additionally, in its letter dated June 15, 2004, Mr Killion requested that the following language be added to the permit: “ the failure of the Biomonitoring will not be a violation of the permit”, that shorter version of the biomonitoring language be included in the permit and that the critical dilution be reduced from the current 62% to 11.4% by eliminating the 10% dilution factor.

RESPONSE #1

The Department partially agrees. Special condition has been added to Part III of the permit, which will allow the permittee to request that all permit conditions be reevaluated after completion of one year of testing. Additionally, shorter version of the Biomonitoring language has replaced the “long” version from the draft permit and 24-hour instead of 48-hour acute test is required. However, critical dilution has remained as proposed. It is also important to note that the failure of the Biomonitoring test IS NOT a violation of the permit. Under Condition 2c. of Part III, only if two consecutive tests show the effluent to be toxic and the third test with dilution series show toxicity at the critical dilution, appropriate modifications to the stormwater pollution prevention plan are required so toxicity is eliminated. If toxicity persists, the Department will meet with the permittee to discuss further action.

Rationale:

The Department acknowledges that there may be a change in the characteristics of the effluent since the compressor cooling water has been redirected to the City of West Helena and the only waste stream approved in the proposed permit is the stormwater.

Specifically, the chronic Biomonitoring has been replaced with the more appropriate acute Biomonitoring in the recognition of the fact that the discharge will occur only during the wet weather conditions. However, it is this Department’s position that removing the Biomonitoring requirements at this time would be premature and not correct. As summarized in Attachment 5 of the Statement of Basis, the permittee has a long history of failed Biomonitoring tests with both lethal and sublethal effects.

The source of these toxicity problems is not known. There is no data available to conclude that the compressor cooling was responsible for these toxic effects, and,

therefore, the permittee must continue testing to prove that the remaining wastestream (stormwater) does not show any potential to violate the Arkansas Water Quality Standards. The special condition has been added to Part III of the permit, which will allow the permittee to request that all permit conditions are reevaluated after completion of one year of testing (four Biomonitoring test results, and twelve datapoints for COD must be submitted). If a facility demonstrates conformance with the effluent limitations contained in the permit and passes all Biomonitoring tests during the first year of sampling, the facility may request that the Department reevaluates this permit and, through a major modification, incorporates all necessary changes. Until such time as the permit is modified, the facility must continue to sample in accordance with Part I of the permit. If, on the other hand, the Department concludes that the changes are not guaranteed, the permittee will be notified of this decision by letter.

Furthermore, all numerical limits must remain as limitations since benchmark concentrations are not appropriate for the individual permit and they are used only in the general stormwater permits.

ISSUE #2

The permittee requested that a requirement for automatic flow meter be replaced by the following language:

“ The facility shall provide the date and duration of the storm event sampled, and estimate of the amount of rainfall, the number of days since the last measurable rain event, and the total volume discharged at that outfall”.

Rationale:

“The language as proposed in the draft permit is consistent with flow requirements for continuous process or non-stormwater discharges to surface waters. For a discharge consisting entirely of stormwater discharge, this requirement is unnecessary. Instead, the suggested language is taken from the ADEQ Stormwater Permit “(from letter from John Killion to Jastrzebski dated May 13, 2004)

RESPONSE #2

The Department disagrees. The draft permit has continued conditions for a flow measurement from the current permit. A primary device with an automatic sampler was not required in the current permit, nor it is required in the draft or final renewed permit.

The weir method is considered to be acceptable method of flow measurement under the renewed permit. Please also review Part II, Section C, Condition 2 for more details.

Additionally, according to Mr. Killian’s letter dated June 15, 2004, an evaluation of the existing weir is to be conducted to ensure that the existing weir is capable of measuring high stormwater flows.

ISSUE #3

The permittee requested that the effluent limitations for Toxaphene be removed and all language pertaining to Toxaphene throughout the permit modified accordingly.

Rationale:

“All Toxaphene data reported on the previous DMRs reviewed for the development of the proposed permit was less than the MQL and an incorrect MQL of 0.10 µg/l was used in the Statement of Basis for Toxaphene.” (from letter from John Killion to Jastrzebski dated May 13, 2004).

RESPONSE #3

The Department agrees. The effluent limitations and all language pertaining to Toxaphene have been deleted from the permit. Additionally, the Statement of Basis has been revised.

ISSUE #4

The permittee requests that the second paragraph of Condition #4. Rain Event Sampling, which reads:

“Samples shall be collected during the first hour of the first discharge occurring during the standard operating hours during the sampling period”

be revised to read:

“Grab samples must be collected during the first hour of a representative storm occurring during the normal business hours during the monitoring period. A representative storm is defined as a storm that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.10 inch) storm event that produces sufficient duration.”

The Statement of Basis and the footnote #3 in Section A. in Part I. Permit Requirements, should be modified accordingly.

Rationale:

The permittee requested that “the phrase “first discharge of the monitoring period” be modified to allow sampling flexibility as the intent is to collect samples from the representative storm event during each monitoring period. The requirement to collect samples from a first discharge of the monitoring period may not be practical. Furthermore, requiring sampling during the first discharge of the monitoring period could create unsafe condition due to adverse weather conditions (freezing conditions, high winds, lightning, etc.)” (from letter from John Killion to Jastrzebski dated May 13, 2004).

RESPONSE #4

The Department disagrees. The condition will remain as proposed. However, the following condition has been included in Part III of the final permit:

“If the collection of a grab sample collected as defined by the Condition # 4 of Part III is impracticable, a grab sample can be taken during the first hour of the second discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first discharge was impracticable”.

Additionally, the following condition has been added addressing the issue of unsafe conditions as brought up by the permittee. This Condition is consistent with Part II of the General permit ARR000000:

“ When a discharger is unable to collect samples due to adverse climatic condition, the discharge must submit in lieu of sampling data a description of why samples could not collected, including available documentation of the event. Adverse climatic conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornades, electrical storms, etc.), or otherwise make the collection of a sample impracticable(drought, extended frozen conditions, etc.). The permittee is precluded from exercising this waiver more than once during a two year period.”

Also, in response to August 10, 2004, letter requesting that this condition *“Samples shall be collected during the first hour of the first discharge occurring during the standard operating hours during the sampling period”* better define or qualify the rainfall event, the following explanation is offered for the purpose of clarification: It is irrelevant what kind of rain event causes the discharge as long as there is discharge over the weir.

ISSUE #5

The permittee requested that the first paragraph of Condition #4 of Part III of the draft permit which reads:

“The permittee must install and maintain a rain gauge and keep a daily log of rainfall occurring during the standard operating hours.”

be revised to read:

“The permittee must install and maintain a rain gauge that is capable of measuring the rainfall on a daily basis”.

Rationale:

“The term “daily log” suggests manual record keeping of rainfall is required on a daily basis and that record keeping is required during normal business hours, which is not considered practical. For example, how would the permittee record a rain event that started during standard business hours and continued past standard business hours. As written, the permit would require the permittee to keep up a “daily log” and keep the

records current on a daily basis. For example, if the permittee did not record zero (0) rainfall on a dry weather day, this could be considered a violation of the permit.” (from letter from John Killion to Jastrzebski dated May 13, 2004).

RESPONSE #5

The Department disagrees. However, the following explanation is offered for the purpose of clarification: the intent of this condition is to log the amount of rainfall occurring during the standard business hours regardless of the length of the rain event (i. e. the permittee is not required to monitor and report and storm events which occur outside the standard business hours).

ISSUE #6

The permittee requested that “six consecutive months” be changed to “six consecutive tests” in Condition 5a of Part III of the draft permit and that the requirement that the frequency reduction be based on the first six tests of the permit period be eliminated.

RESPONSE #6

The Department agrees. Condition 5 of Part III will read as follows:

“... the permittee may apply for a testing frequency reduction upon successful completion of six consecutive tests where COD levels are below the permit limits.”

ISSUE #7

The permittee requested that the term “treatment facility” is deleted as no treatment is provided for stormwater runoff.

RESPONSE #7

The Department agrees.

ISSUE #8

There were some additional comments submitted in Mr. Killion’s letter dated August 10, 2004. Since these comments were submitted outside our PN period no response will be provided in this formal Response to Comments. However, the Department would like to offer the following two points:

- the “waters of the state” are defined in the Arkansas Water and Air Pollution Control Act (Act 472 of 1949) as “all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other waterbodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of the state”.

- A requirement for sample type for Flow (Permit, Page 1 of Part 1A) has been changed from “Estimate” to “Instantaneous”.