WASTEWATER REGULATIONS FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS, UNDERGROUND INJECTION CONTROL (UIC) PERMITS, STATE PERMITS, WATER QUALITY BASED EFFLUENT LIMITATIONS AND WATER QUALITY CERTIFICATION

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CHAPTER ONE - WASTEWATER PERMIT REGULATIONS

I. GENERAL REQUIREMENTS

A. Definitions of Terms

The applicable definitions set forth in 40 CFR 122, 123, 124, 125, 144, 146, 403 and 503 and all amendments and additions thereto are incorporated herein and adopted by reference and shall be considered valid in this regulation, unless a term is otherwise defined herein. In addition, the following definitions are applicable.

1. "Affected Discharger" is an existing permitted wastewater discharger, or a proposed wastewater discharger, which has either a pending permit application or a permit or is included in a State Revolving Fund ("SRF") Facilities Plan.

2. "Allowable Loading" or "available assimilative capacity" is that portion of the loading capacity of a water body that is available for allocating to a point source discharger(s) through regulation by the Department. It is the difference between the loading capacity and the total loading of pollutants from other sources, such as background, nonpoint sources, and exempt sources.

3. "Ambient water quality" means the physical, chemical and biological characteristics of waters of the State.

4. "Applicant" means a person applying to the Permit Board for an individual State permit, coverage under a State general permit, UIC permit, individual NPDES permit or coverage under an NPDES general permit to discharge wastes or other fluids into the waters of the State, or to operate a treatment works.

5. "Application" means either:

(a) The uniform NPDES or UIC application form, current at the time application is made, ,
(b) A Notice of Intent form for coverage under an NPDES general permit, or a State general permit, or
(c) A State permit application form.

6. "Approved methods" means sampling and laboratory testing methods approved by the Department, as specified in Chapter Two of these regulations.

7. "Assimilative capacity" means the capacity of a body of water or soil-plant system to receive wastewater effluent or sludge without violating the provisions of the State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters and these regulations.

8. "Background" shall mean the condition of waters in the absence of the activity or discharge under consideration based on the best scientific information available to the Department.

9. “Bypass” is defined in in 40 CFR 122.41(m), as amended.

10. "Bulk storage" means storage of petroleum products, materials and/or liquids with chronic or acute potential for pollution impact on waters of the State at a facility with an above ground storage capacity of more than 1320 gallons or any single container with a capacity greater than 660 gallons.

11. "Calibrated and/or verified models" are models whose reaction rates and inputs are significantly based on actual measurements using data from surveys on the receiving water body. Verified models are calibrated to one set of field data and confirmed by comparison to at least one additional set of field data taken under different physical circumstances.

12. "Certificate of Coverage" A document issued by the Permit Board or its designee granting coverage under an existing general permit.

13. "Code" or "Miss. Code Ann." means the Mississippi Code of 1972.

14. "Commission" means the Mississippi Commission on Environmental Quality.

15. "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 units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily average" is calculated as the average measurement of the discharge of the pollutant over the day.

16. "Daily maximum" means the highest "daily discharge" over a calendar month.

17. "Department" means the Mississippi Department of Environmental Quality.

18. "Dystrophic waters" means receiving water bodies whose natural background conditions do not meet one or more of the State's water quality criteria.

19. "Effluent standards and limitations" means all State or Federal effluent standards and limitations on quantities, rates, and concentrations of chemical, physical, biological and other constituents to which a waste or wastewater discharge may be subject under the Federal Act or the State law, including but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, pretreatment standards and schedules of compliance.

20. "Effluent channel" means a man-made discernible confined and discrete conveyance which is used for transporting treated wastewater to a receiving stream or other body of water; provided that such channel has characteristics as follows:

(a) is contained entirely on property owned (or controlled by easement) by the discharger (to be demonstrated by the discharger),
(b) does not contain natural waters except when such waters occur in direct response to rainfall events by overland runoff, and
(c) is so constructed or modified to minimize the migration of fish into said channel.
Effluent channels shall be identified by the Commission and designated on a case-by-case basis prior to permit issuance.

21. "Effluent" unless otherwise provided, means treated wastewater flowing out of the treatment facilities.

22. "Empirical model" means a mathematical formulation whose various reaction rates and input parameters are determined through empirical formulations based on literature reviews. The simplest empirical model is a dilution model.

23. "Ephemeral streams" normally are natural watercourses, including natural watercourses that have been modified by channelization or man-made drainage ditches, that, without the influence of point source discharges, flow only in direct response to precipitation or irrigation return water discharge in the immediate vicinity and whose channels are normally above the groundwater table. These streams may contain a transient population of aquatic life during the portion of the year when there is a suitable habitat for fish survival. Normally, aquatic habitat in these streams is not adequate to support a reproductive cycle for fish and other aquatic life. Wetlands are excluded from this classification.

24. "Estuary" means a semi-enclosed naturally existing coastal body of water which has a free connection with the open sea and within which the chloride concentration at the surface is equal to or greater than 1,500 milligrams per liter.

25. "Executive Director" means the Executive Director of the Department of Environmental Quality.

26. "Fact sheet" means a description of a facility or activity, available to the public, prepared by the Commission staff pursuant to the guidelines, which includes, but is not limited to, information on the location of the discharge, rate or frequency of the discharge, components of the discharge, proposed requirements of the Permit Board regarding the discharge, the location and identification of uses of the receiving waters, water quality standards and procedures for formulation of final requirements on the discharge by the Permit Board.

27. "Feasible alternatives" are those alternatives that are available and capable of being carried out after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

28. "Federal Act" means the Federal Clean Water Act, or the Safe Drinking Water Act, whichever is applicable; and the applicable regulations promulgated under those statutes.

29. “Hazardous Substances” are defined in 40 CFR 116.4, as amended.

30. "Instream" means the resulting condition in the water body after mixing with the wastewater(s) at the appropriate critical flow/mixing condition.

31. "Interference" The definition of "interference" set forth in 40 CFR 403.3(i) is incorporated herein and adopted by reference.

32. "Load Allocation (LA)" means the portion of a receiving water's loading capacity attributed to or assigned to nonpoint sources (NPS) or background sources of a pollutant.

33. "Loading capacity" Loading capacity and Total Maximum Daily Load are equivalent terms.

34. "Losing flow stream" is a stream which is recharging groundwater.

35. "Mailing list" means a list of persons requesting notification and information on public hearings, permits, and other matters and forms.

36. "Major facility" means any NPDES "facility or activity" classified as such by the Regional Administrator (or his/her designee) in conjunction with the Executive Director.

37. "Man -induced conditions which cannot be controlled or abated" are conditions that have been influenced by human activities, and have the characteristics as follows:

(a) would remain after removal of all point sources,
(b) would remain after imposition of best management practices for non-point sources, and
(c) cannot be restored or abated by physical alteration of the water body; or there is no reasonable relationship between the economic, social and environmental costs and the benefits of restoration or physical alteration.

38. "Management agency" means an area-wide waste treatment management agency designated by the governor pursuant to Section 208(a) of the Federal Clean Water Act.

39. “Maximum Monthly Average” means the highest “monthly average” over a monitoring period.

40. “Maximum Weekly Average” means the highest “weekly average” over a monitoring period.

41. “Minimum Quantitation Level (MQL)” – is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all of the method-specified calculations, sample weights, volumes, and processing steps have been followed, and also allowing for matrix interference.

42. "Mitigation" means the following (in order of preference):

(a) avoiding the impact altogether by not taking a certain action or part of an action;
(b) minimizing impacts by limiting the degree of magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
(c) rectifying the impacts by repairing, rehabilitating, or restoring the affected environment;
(d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
(e) compensating for the impact by replacing, enhancing, or providing substitute resources or environments.

Mitigation for individual actions may include a combination of the above measures.

43. "Monthly average" means the average of "daily discharges" over 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 the month . The monthly average for fecal coliform bacteria is the geometric mean of "daily discharges" measured during the calendar month. In computing the geometric mean for fecal coliform bacteria, the value one (1) shall be substituted for sample results of zero.

44. "NPDES form" means any issued permit or any uniform national form prescribed for use by the Commission in the NPDES Program and prescribed in regulations promulgated by the Administrator of EPA, including an NPDES application and a reporting form.

45. "NPDES permit" means an individual or general permit issued by the Permit Board pursuant to regulations adopted by the Commission and/or Permit Board under Miss. Code Ann. §§ 49-17-17 and 49-17-29 for discharges into State waters.

46. "Natural background" means the condition of waters in the absence of man-induced alterations based on the best scientific information available to the Department. The establishment of natural background for an altered water body may be based upon a similar unaltered water body or on historical pre-alteration data.

47. "Non-compliance list" means a list of dischargers, prepared by the Executive Director pursuant to this regulation and the guidelines for transmittal to the Regional Administrator (or his/her designee), who fail or refuse to comply with a condition in an NPDES, Pretreatment or UIC permit issued pursuant to State law.

48. "Notice of Intent (NOI) form" means a form used to request coverage under an issued NPDES general permit or an issued State general permit.

49. "NPDES general permit" means an NPDES permit written to cover a specified category of similar discharges within a specified geographical or political boundary as described in 40 CFR 122.28(a).

50. "Office Head" means the Head of the Office of Pollution Control of the Department of Environmental Quality.

51. "Permit Board" means the Permit Board of the Department of Environmental Quality established pursuant to Miss. Code Ann. § 49-17-28.

52. "Pass Through" means a discharge which exits a publicly owned treatment works ("POTW") into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, causes a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) and/or causes a violation of Water Quality Standards.

53. "Person" means the State or other agency or institution thereof, any municipality, county, political subdivision, public or private corporation, individual, partnership, association, or other entity, and includes any officer or governing or managing body of any municipality, county, political subdivision, public or private corporation, or the United States or any officer or employee thereof.

54. "Pollution" means such contamination, or other alteration of the physical, chemical, or biological properties, of any waters of the State, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance or leak into any waters of the State, unless in compliance with a valid permit issued by the Permit Board.

55. "POTW" means a publicly owned treatment works.

56. "Pretreatment New Source" The definition of "new source" set forth in 40 CFR 403.3(k) is incorporated herein and adopted by reference.

57. "Primary industrial facility" means any industry category listed in the NRDC settlement agreement (Natural Resources Defense Council et. al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D.D.C. 1979)); also listed in appendix A of 40 CFR 122, which is incorporated herein and adopted by reference.

58. "Pretreatment system" means any process used to reduce the amount of pollutants in wastewater before discharging the wastewater into a publicly owned treatment works or privately owned treatment works treating non-domestic wastewater.

59. "Publicly Owned Treatment Works" is a waste treatment facility owned and/or operated by a public body or a privately owned treatment works which accepts discharges which would otherwise be subject to Federal Pretreatment Requirements.

60. "Quarterly average" means the average of "daily discharges" over a three-month period, calculated as the sum of all "daily discharges" measured during the quarter divided by the number of "daily discharges" measured during the quarter. The quarterly average for fecal coliform bacteria is the geometric mean of "daily discharges" measured during the quarter. In

computing the geometric mean for fecal coliform bacteria, the value one (1) shall be substituted for sample results of zero.

61. "Quarterly maximum" means the highest "daily discharge" measured over a three-month period.

62. "Reporting form" means the uniform NPDES or UIC reporting form, including subsequent additions, revisions or modifications thereof, promulgated by the Administrator of EPA and prescribed by the Commission for use in administering these regulations, or a State form prescribed by the Commission for use in administering these regulations, for reporting data and information to the Permit Board by a permittee on monitoring and other conditions of permits.

63. “Sewerage Works” means pipelines or conduits, pumping stations, and force mains, and other structures, devices, appurtenances and facilities used for collecting or conducting wastes to an ultimate point for treatment or disposal.

64. "State general permit" means a state permit written to cover a specified category of similar facilities within a specified geographical or political boundary.

65. "State permit" means an individual or general permit issued by the Permit Board pursuant to regulations adopted by the Commission and/or Permit Board under Miss. Code Ann. §§ 49-17-17 and 49-17-29 for the operation of a treatment works from which no discharge occurs, for discharges into State waters where an NPDES or UIC permit may not be applicable, or for discharges to a publicly owned treatment works where a pretreatment system is utilized.

66. “Submitted” means the document is postmarked on or before the applicable deadline, except as otherwise specified.

67. "Technology based effluent limitation (TBEL)" means a minimum waste treatment requirement, established by the Department, based on treatment technology. The minimum treatment requirements may be set at levels more stringent than that which is necessary to meet water quality standards of the receiving water body as set out specifically in other sections of these regulations. TBELs shall be federal effluent guidelines if promulgated, otherwise TBELs shall be established in accordance with 40 CFR 125 subpart A, which is incorporated herein and adopted by reference.

68. "The State law" means the Mississippi Air and Water Pollution Control Law, specifically Miss. Code Ann. §§ 49-17-1 through 49-17-43, and any subsequent amendments thereto.

69. "Total Maximum Daily Load" or "TMDL" means the calculated maximum permissible pollutant loading to a water body at which water quality standards can be maintained. It is the sum of wasteload allocations (WLAs) and load allocations (LAs) for any given pollutant plus a margin of safety in a watershed.

70. “Toxic Pollutants” means any pollutant listed as toxic under Section 307(a)(1) or, in the case of “sludge use or disposal practices”, any pollutant identified in regulations implementing Section 405(d) of the Clean Water Act.

71. "Trade secret" means information concerning the whole or any portion or phase of any manufacturing proprietary process or method, not patented, which is secret, used or useful in compounding goods having a commercial value, and the secrecy of which the owner has taken reasonable measures to prevent from becoming available to persons other than those selected by the owner to have access thereto for limited purposes. It shall not be construed for purpose of this regulation to include any information relative to the quantity and character of waste products or their constituents discharged or sought to be discharged into waters of this State, or into any publicly owned treatment works.

72. "Treatment works" means any plant or other works, used for the purpose of treating, stabilizing, or holding wastes.

73. "UIC form" means any issued permit or any uniform national form used by the Permit Board developed for use in the UIC Program and prescribed in regulations promulgated by the Administrator of EPA including a UIC application and a reporting form.

74. "UIC permit" means a permit issued by the Permit Board to a person pursuant to regulations adopted by the Commission and/or Permit Board under Miss. Code Ann. §§ 49-17-17 and 49-17-29 for discharges into underground waters of the State.

75. "UIC Program" means the Underground Injection Control program established by the Federal Safe Drinking Water Act.

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

77. "Vessel" means any contrivance used or capable of being used for navigation upon water, whether or not capable of self propulsion, including foreign and domestic vessels engaged in commerce upon the waters of this State, passenger or other cargo carrying vessels, privately owned recreational watercraft or any other floating craft.

78. "Waste" means sewage, industrial wastes, oil field wastes, and all other liquid, gaseous, solid, radioactive, or other substances which may pollute or tend to pollute any waters of the State.

79. "Wasteload allocation (WLA)" means the portion of a receiving water's loading capacity attributed to or assigned to point sources of a pollutant.

80. "Water Quality Management Plans" For the purpose of these regulations, Water Quality Management Plans are those plans developed pursuant to Section 208 of the Federal Clean Water Act.

81. "Water Quality Standards" The criteria and requirements set forth in State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters. Water quality standards are standards composed of designated present and future most beneficial uses (classification of waters), the numerical and narrative criteria applied to the specific water uses or classification, and the Mississippi antidegradation policy.

82. "Water quality based effluent limitation (WQBEL)" means an effluent limitation, which may be more stringent than a technology based effluent limitation, determined as necessary by the Department to ensure that water quality standards in a receiving body of water will not be violated.

83. "Water quality criteria" are elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports the present and future most beneficial uses.

84. "Waters of the State" means all waters within the jurisdiction of this State, including all streams, lakes, ponds, wetlands, impounding reservoirs, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, situated wholly or partly within or bordering upon the State, and such coastal waters as are within the jurisdiction of the State, except lakes, ponds, or other surface waters which are wholly landlocked and privately owned, and which are not regulated under the Federal Clean Water Act (33 U.S.C.1251, et seq.).

85. "Weekly average" means the average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. The weekly average for fecal coliform bacteria is the geometric mean of all "daily discharges" measured in a calendar week. In computing the geometric mean for fecal coliform bacteria, one (1) shall be substituted for sample results of zero. For self-monitoring purposes, the value to be reported is the single highest weekly average computed during a calendar month.

86. "Yearly average" means the average of "daily discharges" over a calendar year, calculated as the sum of all "daily discharges" measured during the calendar year divided by the number of "daily discharges" measured during the calendar year. The yearly average for fecal coliform bacteria is the geometric mean of "daily discharges" during the calendar year. In computing the geometric mean for fecal coliform bacteria, the value one (1) shall be substituted for sample results of zero.

87. "Yearly maximum" means the highest "daily discharge" measured over a calendar year.

88. "Zone of mixing" or "Mixing Zone" constitutes an area whereby physical mixing of a wastewater effluent with a receiving water body occurs.

B. Applicability and Required Permits

1. Proposed discharges and/or proposed discharges into POTWs and/or proposed facilities from which no discharge occurs.

Any person proposing a discharge of wastes to waters of the State or proposing a treatment works from which no discharge of wastes is designed to occur shall file an application in the case of an individual NPDES, UIC, or State permit, at least 180 days prior to the commencement of the activity or, in the case of NOI for coverage under an issued NPDES general permit or coverage under an issued State general permit, in accordance with a schedule established in such permit. For purposes of NPDES permits (with the exception of Storm Water permits), commencement of activity means commencement of discharge. For purposes of Storm Water NPDES individual or general permits, State permits or UIC permits, commencement of activity means commencement of construction.

2. Existing discharges and/or existing facilities from which no discharge occurs.

(a) Any person discharging into waters of the State or to any publicly owned treatment works or operating a treatment works from which no discharge occurs, shall promptly make application for and obtain from the Permit Board a valid NPDES, UIC, or State permit according to procedures and deadlines set forth in these regulations.

(b) (1) Any person discharging wastes into surface waters of the State shall apply to the Permit Board for an NPDES permit, or for coverage under an NPDES general permit.

(2) Any person discharging wastes or other fluids into underground waters of the State through the use of an injection well shall apply to the Permit Board for a UIC permit, unless otherwise exempted under Section II.B.

(3) Any person operating a treatment works from which no discharge of wastes occurs shall apply to the Permit Board for a State permit or for coverage under a State general permit.

(4) Any person discharging wastes into a publicly owned treatment works and which is subject to Federal pretreatment standards (40 CFR 403), or which, in the opinion of the Permit Board, would cause interference with the proper operation of the publicly owned treatment works, cause violations of water quality standards by passing through the publicly owned treatment works, or cause contamination of sludge which would limit or prevent the proper disposal of the sludge, shall apply to the Permit Board for a State permit.

3. Both existing and proposed discharges and/or existing and proposed facilities from which no discharge occurs shall be subject to the permit application and special NPDES Program requirements contained in 40 CFR 122.21-.37 as of the date the permit is issued, which requirements are incorporated herein and adopted by reference.

C. Permits: Preliminary Determinations and Siting Criteria

1. Preliminary Determinations

(a) (1) The Permit Board shall strive to minimize the number of permits issued by encouraging the consolidation (regionalization) of separate treatment facilities where technically and economically feasible.

(2) When an existing wastewater disposal system is available, no permit shall be issued for a new wastewater treatment facility, unless the permit applicant can demonstrate to the satisfaction of the Permit Board that the wastewater cannot or should not, because of economic or other reasons, be connected to the existing sewage system.

(3) Existing wastewater systems treating municipal or domestic wastes shall cease discharge and connect to a regional, municipal or other available sewage system when such system becomes available. The Permit Board, in its discretion, may exclude non-compatible industrial wastes.

(b) New connections to an existing wastewater collection and treatment system will not be considered unless the existing system is in substantial compliance with permit conditions.

(c) No permit for the construction or operation of a wastewater treatment facility shall be issued unless the applicant can demonstrate to the satisfaction of the Permit Board that a qualified operator will be made available to operate and maintain the facility.

(d) All wastewater treatment facilities must be inaccessible to the general public and be identified as a waste treatment facility by signs posted in a reasonable manner.

(e) The Permit Board may deny a permit if it determines that the discharge from the proposed facility will adversely affect use of the receiving waters, by unreasonably degrading the same, or will adversely affect public health, welfare or the environment. In making this determination, the Permit Board shall consider the actual use and environs of the receiving waters as well as the effect, if any, of the proposed discharge of effluent upon the actual water quality of the receiving waters.

(f) No permit application will be processed unless the applicant controls the real property upon which the facility is located. The applicant may demonstrate control through ownership, lease, eminent domain, easement, license, and/or contract.

(g) It is the responsibility of the applicant/permittee to obtain all other approvals, permits, clearances, easements and/or agreements, for the construction and operation of the facility, which may be required.

(h) The Permit Board, at its discretion, may require that all environmental permits, and all permit modifications which require public notice, be prepared for a common public notice and that no permit and/or permit modification will be acted on individually.

2. Siting Criteria

Unless otherwise provided in these regulations or in a general permit, no permit for a new waste treatment facility, or an expansion to an existing facility, will be issued unless the facility can comply with the following buffer zone requirements. A facility which has previously satisfied buffer zone requirements shall not be required to reestablish compliance with those requirements at the reissuance, modification or transference of the permit or at reconstruction/replacement of the facility, unless the facility proposes expansion.

(a) The treatment works, unless addressed otherwise in this regulation, must be at least 150 feet from property not owned and/or controlled by the applicant except when the property is zoned for commercial or industrial use, or when the property, dwelling, or commercial establishment is used for commercial or industrial use. The Permit Board may exclude from these requirements treatment units for short-term remediation.

(b) Domestic wastewater treatment facilities of 1500 gallons per day (gpd) or less must be installed at least ten (10) feet from adjoining property lines. The Permit Board, at its discretion, may require a buffer zone of greater than 10 feet depending upon the type of treatment and site specific information.

(c) Any facility for the treatment or disposal of animal wastes or the housing of a concentrated and confined animal growing operation (excluding any facility for the housing of broiler pullets, broiler breeders and broilers in a poultry operation that generates dry litter or waste unless such facility has a continuous overflow watering system) must be at least 1000 feet from the nearest non-owned (by the applicant) occupied dwelling or commercial establishment and at least 300 feet from the nearest adjoining property line. Any facility for the housing of broiler pullets, broiler breeders and broilers in a poultry operation that generates dry litter or waste constructed, significantly enlarged or altered after February 24, 1994 (date of adoption of these regulations) must be at least 600 feet from the nearest non-owned (by the applicant) occupied dwelling or commercial establishment and at least 150 feet from the nearest adjoining property line. In the event new treatment facilities are proposed for an existing confined animal operation, the Permit Board will consider requests for exceptions to, or variances from, the buffer zone requirements, and the requirements of Section I.C.2.e., based upon such factors as the relative distances and age of the existing operation.

(d) Land application of animal waste (excluding dry litter waste) must be at least 50 feet from the nearest adjoining property line and at least 300 feet from the nearest non-owned (by the applicant) occupied dwelling. Land application of dry litter waste must be at least 25 feet from the nearest adjoining property line and at least 150 feet from the nearest non-owned (by the applicant) occupied dwelling.

(e) The Permit Board may consider a buffer zone of less than 150 feet for subsurface treated effluent disposal.

(f) In the event the buffer zone requirements specified in Section I.C.2.a. and c. above cannot be met; the Permit Board will consider requests for exceptions to, or variances from, such

requirements upon sufficient proof that affected property owners within the subject buffer zone have had timely and sufficient notice of the proposed facility. The buffer zone requirement may be waived by written permission issued by the affected property owners. Any comments received as a result of such notice shall be considered prior to action upon any request for exceptions to, or variances from, the buffer zone requirements. At all times a minimum 10 foot buffer zone is required. The Permit Board may consider the following factors in deciding whether or not a variance and/or exception should be granted:

(1) whether a person and/or facility moves within the buffer zone of a treatment facility, previously approved by the Permit Board;
(2) the type of land disposal techniques employed, including, but not limited to, subsurface injection of wastes, and the utilization of spray irrigation; and/or
(3) such other factors as the Permit Board deems appropriate.

3. Antidegradation

All applicants for new or expanding NPDES permitted discharges to state waters shall comply with MDEQ's Antidegradation Policy and submit an Antidegradation Report as part of the application or reapplication process in compliance with MDEQ's Antidegradation Implementation Methods in Exhibit E.

II. PERMIT APPLICATIONS

A. Permits: Applications, Filing Procedures and Requirements

1. All applications for permits shall be on forms prescribed by the Commission and/or the Permit Board. In addition to those forms, the Department may require an applicant to provide a summary of its compliance history and/or present evidence of its financial capability and responsibility.

2. A person discharging waste from more than one location shall file a separate application for each discharge location. A single application may be filed for multiple outfalls discharging from a single location, provided the discharge from each outfall is described separately in the application.

3. The application shall be prepared in accordance with the requirements set forth in 40 CFR 122.21-.37, 122.44, 124.3(a) and (d) as of the date the permit application is deemed complete, which are incorporated herein and adopted by reference, and in accordance with Chapter Two of these regulations.

B. Permits: Application Exemptions

A person discharging or proposing to discharge the following types of wastes shall not be required to apply for a permit from the Permit Board pursuant to this regulation:

1. human sewage from vessels;

2. water, gas and other materials injected into a well to facilitate production of oil or gas, or fluids derived in association with oil or gas production and disposal thereof in a well where authorized by the State Supervisor of the Oil and Gas Board (this includes wastes from gas plants which are an integral part of production operations, unless those wastes are classified as hazardous wastes, and wastes generated from enhanced recovery operations and hydrocarbon storage facilities);

3. wastes or other fluids authorized for injection into a Class V well as defined in 40 CFR 144 and 146;

4. storm sewers exempted under 40 CFR 122.26 and not connected to wastewater treatment works, unless a particular storm water discharge has been identified by the Executive Director or the Regional Administrator (or his/her designee) as contributing to a violation of a water quality standard or as a significant contributor of pollutants to the waters of the state;

5. any introduction of pollutants from non point-source agricultural and silvaculture activities, including storm water runoff from orchards, cultivated crops, pastures, range lands and forest lands and return flows from irrigated agriculture. The following facilities are excluded from this exemption: discharges from concentrated animal feeding operations set forth in 40 CFR 122.23 and IV. C. of these regulations, discharges from concentrated aquatic animal production facilities as defined in 40 CFR 122.24, discharges into aquaculture projects as defined in 40 CFR 122.25, discharges from silvaculture point sources as defined in 40 CFR 122.27, and any other facility and/or discharge required by these regulations to obtain a permit;

6. the application of pesticides consistent with all relevant requirements of FIFRA in accordance with 40 CFR 122.3(h), which is incorporated herein and adopted by reference.

C. Permit Applications and Other Forms: Valid Signature

1. An NOI, UIC, individual NPDES permit application form or State permit application form submitted to the Permit Board pursuant to this regulation shall be signed as follows:

(a) for a corporation, by a responsible corporate officer, as defined in 40 CFR 122.22(a)(l);
(b) for a partnership, by a general partner;
(c) for a sole proprietorship, by the proprietor;
(d) for a municipal, state or other public facility, by either a principal executive officer, the mayor, or ranking elected official.

2. All reports required by permits, and other information requested by the Permit Board shall be signed by a person described in Section II.C.1., or by a duly authorized representative of that person. A person is a duly authorized representative when:

(a) the authorization is made in writing by a person described in Section II.C.1.,

(b) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity including, but not limited to, the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may be either a specified individual or position) and,
(c) the written authorization is submitted to the Permit Board.

D. Application Requirements Regarding Toxicity for Existing Discharges

1. Except as provided in II.D.3. below, the following permittees shall submit Whole Effluent Toxicity (WET) test results as part of their application for renewal of their NPDES permits:

(a) all major municipal facilities;
(b) all municipal facilities which receive a discharge from any industry category identified in 40 CFR Part 403, Appendix C as of the date the permit application is deemed complete which is incorporated herein and adopted by reference;
(c) any facility with any historical failure of WET testing;
(d) any facility with WET testing requirements in a current permit;
(e) all industrial and municipal facilities believed to be causing toxicity to the instream aquatic biota, and/or believed to have the potential to discharge toxics in toxic amounts considering factors which follow:

(1) the variability of the pollutants or pollutant parameters in the facility effluent (based on chemical-specific information, the type of treatment facility, and types of industrial contributors);
(2) the dilution of the effluent in the receiving water (ratio of effluent flow to receiving stream flow);
(3) existing controls on point or nonpoint sources, including total maximum daily load calculations for the water body segment and the relative contribution of the POTW;
(4) receiving stream characteristics, including possible or known water quality impairment, receiving stream classification, and whether the facility discharges to a coastal water or a water designated as an outstanding natural resource; and
(5) other considerations (including but not limited to the history of toxic impact and compliance problems of the POTW), which the Permit Board determines could cause or contribute to adverse water quality impacts.

2. The Permit Board may exempt a facility from the application WET testing requirements of Section II.D.1. of this chapter if it satisfies one or more of the conditions that follow:

(a) the Department may delay effluent characterization for whole effluent toxicity for existing facilities that are under a compliance schedule in a permit or administrative order to implement technology-based controls or to achieve compliance with water quality-based effluent limits;

(b) once-through non-contact cooling water without additives;
(c) dewatering of sand or gravel mining operations;
(d) sump pump discharges of uncontaminated groundwater or rainwater only;
(e) construction dewatering only;
(f) discharges from fish hatcheries and other aquaculture;
(g) non-POTW facilities discharging only treated domestic wastewater, unless the Department determines the facility has the potential for toxicity;
(h) is a seafood processor ; or
(i) the Department determines that the facility's discharge does not have the potential to contain toxics in toxic amounts.

3. Facilities required under Section II.D.1. or 2. to conduct toxicity testing shall use Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027), or most recent edition for acute tests and Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Fresh water Organisms, (EPA/600/4-89/001) or most recent edition for chronic tests. Such testing must be conducted subsequent to the most recent NPDES permit reissuance or permit modification under 40 CFR 122.62(a), whichever occurs later.

4. The frequency of whole effluent toxicity testing for an application is defined in Chapter Two of these regulations.

E. Misrepresentation of Information on Application Forms and Other Reports

1. Any person making application for any permit, filing any record, report, or other document pursuant to a regulation of the Commission, shall certify that all information contained in such document is true, based upon information provided by responsible individuals.

2. Any person who knowingly makes any false statement, representation, or certification in any application, record, report, or other documents filed with the Permit Board pursuant to the State law or the rules and regulations pursuant to such law, shall be subject to the penalties provided for in the Code for perjury or false statements.

3. In the event the permittee becomes aware that it failed to submit any relevant facts in a permit application, or in any report to the Department or Permit Board, it shall promptly submit such facts or information.

III. PROCEDURAL ASPECTS OF PERMIT ISSUANCE

A. Permits: Preliminary Determinations, Draft Permits, Certificates of Coverage and Variances

1. When the Executive Director or his/her authorized representative is satisfied that the application is complete, a preliminary determination with regard to the application will be made, including a proposed determination to issue or deny a State, UIC, NPDES permit or coverage under an issued NPDES general permit or under an issued State general permit for the discharge described in the application.

2. If the proposed determination is to grant coverage under an issued NPDES general permit or under an issued State general permit, the Permit Board or its designee shall issue a certificate of coverage to the applicant.

3. If the proposed determination is to issue a State, UIC, or NPDES permit, additional preliminary determinations shall be made as follows:

(a) proposed effluent limitations shall be identified for the constituents proposed to be limited with a supporting rationale (individual storm water permit rationales shall follow the procedures set forth in Section VI.E. of Chapter Two);
(b) a proposed schedule of compliance for meeting the proposed effluent limitations, including interim dates and requirements, if applicable, shall be established (schedules of compliance are impermissible for water quality based limitations, except when new, more stringent standards are adopted); and
(c) a description of any other proposed restrictions or other conditions determined necessary or appropriate by the Executive Director or his/her authorized representative which will significantly affect the discharge.

4. The Executive Director or his/her authorized representative shall prepare a draft permit based upon the preliminary determinations made pursuant to Section III.A.1. and 3. The draft permit shall be mailed to the applicant for comment, except in the case of an NPDES general permit or a State general permit. In the case of an NPDES or UIC permit, the draft permit shall be mailed to the Regional Administrator (or his/her designee) before public notice of the draft NPDES or UIC permit. The Regional Administrator (or his/her designee) may waive his right to comment on draft permits, except for general permits.

5. Any request for variances as defined in 40 CFR 124.62(a) must be submitted pursuant to 40 CFR 124.62(e), which is incorporated herein and adopted by reference.

6. The draft permit requirements contained in 40 CFR 124.6(a), (c), (d), and (e) as of the date the application is deemed complete are incorporated herein and adopted by reference with respect to NPDES permits and UIC permits.

B. Public Notice of Draft Permits and Preliminary Determinations

1. The Executive Director or his/her authorized representative shall prepare a public notice of a draft NPDES or UIC permit, or a State permit as deemed appropriate by the Permit Board. The notice shall be made in accordance with public notice methods contained in 40 CFR, 124.l0(c) and (d) which are incorporated herein and adopted by reference.

2. A copy of the notice shall be available at the Department office in Jackson, MS. Any person may forward a written request for a copy of the notice, which will be mailed to him.

C. Public Notice and Fact Sheets

1. Public Notice: Contents and Information

A public notice of a draft State, UIC, or NPDES permit shall contain the following:

(a) the date of posting or publication of the public notice;
(b) the address and telephone number of the Department office in Jackson;
(c) the name and address of the applicant, except in the case of a draft NPDES general permit or a draft State general permit;
(d) a concise description of the activities and operations which result in the discharge identified in the draft permit;
(e) the name of the receiving waters into which the discharge is being made or is proposed to be made, including the location of the proposed or existing discharge point (in the case of general permits, a description of geographical area and/or allowable receiving waters);
(f) a concise description of the procedures for the formulation of the final determinations;
(g) the address and telephone number of the Department office where additional information on the draft permit, copies of the draft permit and fact sheets may be obtained or any other applicable forms and related documents may be inspected or copied; and
(h) for new or expanding NPDES permitted discharges; a statement concerning antidegradation.

2. Public Notice: Comment Period for Interested Persons

(a) Within thirty (30) days following the date of posting or publication of the public notice pursuant to Section III.B., any interested person may submit in writing his views on the draft permit. The time for public comment may be extended by the Permit Board if the Board determines that an extension of time is necessary or appropriate to facilitate additional public comment.
(b) All views submitted to the Permit Board in writing by interested persons during the comment period shall be retained and considered in the formulation of final determinations on the draft permit by the Permit Board.

3. Fact Sheets on Draft Permits

(a) A fact sheet shall be prepared for every NPDES or UIC permit required to have a fact sheet under 40 CFR 124.8(a).
(b) The Executive Director or his/her designee may prepare a fact sheet for any existing or proposed discharge if he deems the discharge to be of significant importance to warrant additional information for public comment.
(c) A copy of the fact sheet shall be available at the Department office in Jackson, MS. Any person may forward a written request for a copy of the fact sheet, which will be mailed to him.

4. Fact Sheets on Draft Permits: Contents and Information

The fact sheet prepared pursuant to Section III.C.3. shall contain, but is not limited to, the following information:

(a) A brief description of the type of facility or activity which is subject of the draft permit.
(b) A sketch or detailed description of the location of the existing or proposed discharge described in the draft permit. In the case of general permits, a description of geographical areas and/or allowable receiving waters shall be provided.
(c) A brief description of the type and quantity of wastes which are proposed to be treated, discharged, or otherwise disposed.
(d) A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by 40 CFR 124.9 (for EPA-issued permits).
(e) For NPDES draft permits, a concise citation of water quality standards, effluent limitations and mixing zones, if applicable, to be applied to the discharge and the uses for which the receiving waters have been classified.
(f) A complete description of the procedures used by the Permit Board to formulate final determinations on the draft permit and the existing or proposed discharges, including the 30-day comment period on the public notice, procedures for requesting a public hearing on the draft permit pursuant to Section III.G., and other procedures to facilitate public comment and participation in the formulation of final determinations by the Permit Board.
(g) The name and telephone number of a person to contact for further information.

5. Public Notices, Rationales and Fact Sheets: Mailing Lists

(a) Any interested person who desires to receive copies of public notices may request that his name be placed on a mailing list of the Permit Board for the information. The request shall be made in writing to the Department office in Jackson, MS, and shall be renewed in December of each year. Failure to renew the request is just cause for the Permit Board to remove a name from the mailing list.
(b) The written request of any interested person to the Permit Board shall clearly identify the name of the person, the person's address, and the desired documents.

6. Public Notices and Fact Sheets: Notice to Other Governmental Agencies

(a) When an NPDES or UIC permit with an existing or proposed discharge into interstate waters is drafted and the Permit Board determines that the discharge may affect the quality of the waters of any other state, the Executive Director or his/her duly authorized designee shall notify any appropriate state or interstate agency of the discharge and shall transmit to the agency a copy of the public notice. Additional information will be submitted upon request of the state and/or interstate agency.

(b) A state or interstate agency given notice pursuant to Section III.C.6.a. shall have 30 days in which to comment on the existing or proposed discharge and may submit in writing to the Executive Director or the Regional Administrator (or his/her designee) its views and recommendations. The views and recommendations submitted to the Executive Director by another state or interstate agency may be incorporated into the NPDES or UIC permit if determined by the Permit Board to be necessary or appropriate. If the views and recommendations are not incorporated into the NPDES or UIC permit, the Executive Director shall so notify the commenting agency in writing.

(c) Upon the posting of a public notice of a draft permit, the Executive Director or his/her duly authorized designee shall transmit a copy of the notice and fact sheet thereon to all agencies and other entities specified in EPA regulations.

(d) A copy of a public notice or fact sheet, or both, for a draft NPDES or UIC permit shall be sent to any federal, state, or local agency upon written request. The provisions of Section III.C.6.b., with regard to opportunity for comment, shall apply to the federal, state, or local agencies.

D. Draft Permits: Transmittal to Regional Administrator (or his/her designee), Deficiencies, Additional Data Requirements

1. Upon drafting an NPDES or UIC permit, the Executive Director shall transmit a copy thereof and any other applicable related forms to the Regional Administrator (or his/her designee) for his review and comment in accordance with 40 CFR 123.43 and 123.44. Timely written comments submitted to the Executive Director by the Regional Administrator (or his/her designee) outlining any deficiencies or other changes he deems necessary to complete the permit application shall be considered by the Permit Board. The Permit Board will not issue an NPDES permit over the EPA Regional Administrator's (or his/her designee)'s written objection.

2. The Permit Board, in its discretion, or upon request of the Regional Administrator (or his/her designee), may request of an applicant any additional information deemed necessary to complete or correct deficiencies in the application before processing the application or issuing or denying the issuance of a permit. No permit application shall be deemed to be complete and ready for disposition by the Permit Board until all information requested by the Permit Board has been supplied.

3. The Commission may take enforcement action as prescribed by the State law or this regulation against any person who fails to either: (1) file a complete application; (2) correct deficiencies in the application; or (3) submit any additional information requested by the Permit Board.

E. Public Access to Forms and Commission Files and Records

A copy of a permit application, (except for an NPDES general permit or a State general permit), public notice, fact sheet, draft permit and other forms relating thereto, including written public comments not classified as confidential information by the Commission under the provisions of Miss. Code Ann. § 49-17-39 shall be available for public inspection and copying during normal business hours at the Department office in Jackson, MS. Written request must be provided in accordance with policies developed by the Commission and must state, specifically, records proposed for review, date proposed for review, and copying requirements.

F. Protection of Confidential Information

1. Pursuant to Miss. Code Ann. §§49-17-39 and 25-61-1 (The Mississippi Public Records Act of 1983), 40 CFR 123.41, and the Commission's Regulation MCEQ-2, *Regulations Regarding the Review and Reproduction of Public Records,* the Permit Board shall make available to the public all information contained on any form and all public comments on such information. Effluent data and information concerning air or water quality also shall be made available to the public. Information that is determined by the Commission to be trade secrets shall not be disclosed to the public without prior consent of the source of such information. When a claim of confidentiality is made by a person in accordance with the provisions of Miss. Code Ann. §49-17-39 and Regulation MCEQ-2, a recommendation on the questions of confidentiality shall be made by the Commission and forwarded to the Regional Administrator (or his/her designee) of EPA for his concurrence in such determination of confidentiality.

2. A copy of a State, UIC, or NPDES permit application, public notice, fact sheet, draft permit and other forms relating thereto, including written public comment and other reports, files and information relating to the application not classified as confidential information by the Commission pursuant to Section III.F.1., shall be available for public inspection and copying during normal business hours at the office of the Department in Jackson, Mississippi.

3. Upon determination by the Commission that information submitted by a permit applicant is entitled to protection against disclosure as trade secrets, the information shall be so labeled and otherwise handled as confidential. Copies of the information and a notice of the Commission's action shall be forwarded to the Regional Administrator (or his/her designee). In making its determination of the entitlement of information to protection as confidential, the Commission shall follow the procedure set forth in Regulation MCEQ-2.

G. Draft Permits: Public Hearings

1. Determinations and Scheduling

(a) Within the 30-day comment period or other applicable comment period provided after posting or publishing of a public notice pursuant to Section III.B., an applicant, any affected state or interstate agency, the Regional Administrator (or his/her designee) or any other interested person or agency may file a petition with the Permit Board for a public hearing on a draft NPDES or UIC permit. A petition for a public hearing shall indicate the reasons why a hearing is requested, the interest in or relationship of the petitioner to the draft permit or existing or proposed discharge identified therein and shall specifically indicate which portions of the draft permit or NPDES or UIC form or information warrants a public hearing. If the Permit Board determines that a petition states sufficient cause or that there is significant public interest in a draft permit for a public hearing, it may schedule such a hearing.

(b) The hearing may be held in the geographical location of the proposed discharge or, in the discretion of the Permit Board, at another appropriate location, and shall be noticed at least thirty (30) days before the hearing. The notice of public hearing shall be transmitted to the applicant and shall be published in at least one newspaper of general circulation in the geographical area of the existing or proposed discharge identified on the draft permit and shall be mailed to any person or group upon request. Notice shall be mailed to all persons and governmental agencies which received a copy of the notice or the fact sheet for the draft permit.

(c) The Permit Board may hold a single public hearing on related groups of draft permits.

2. Public Hearing Notice Contents

A notice by the Permit Board of a public hearing on a draft permit shall contain in addition to the time and place of the hearing:

(a) The address and telephone number of the Department office in Jackson, MS, and the name of a contact person.

(b) The name and address of the applicant whose draft permit will be considered at the public hearing.

(c) The name of the waters of the State to which a discharge, as identified on the draft permit, is or will be made and a concise description of the location of the discharge point. In the case of general permits, a description of geographical area and/or allowable receiving waters shall be provided.

(d) Reference to the public notice posted and published for the draft permit, including the identification numbers and dates of issuance thereof, if applicable.

(e) A brief statement of the purpose of the public hearing.

(f) The address or addresses of Department offices where interested persons may inspect or obtain copies of a draft permit, fact sheet or other applicable forms or other reports, files or information relating to a draft permit subject to public hearing, which has not been declared confidential by the Commission.

(g) A concise description of the nature of the public hearing and the issues to be heard, with reference to Permit Board rules and procedures to be followed.

H. Permit Board Determinations, Issuance or Denial of Permits.

1. In considering an application for a permit issuance or transfer, the Permit Board may consider the applicant's compliance history, financial capability, financial responsibility, or any other aspect of the applicant's history it deems necessary or appropriate.

2. The Permit Board, in considering the designee's list of denials for coverage under a general permit, shall hear any request for reconsideration at the next appropriate Permit Board meeting following the issuance of the denial.

3. Following review of preliminary determinations or modifications made by the Department pursuant to Section III.B., any comments on the draft permit received by the Executive Director from the Regional Administrator (or his/her designee) pursuant to Section III.D., comments received from the public during the 30-day comment period following public notice of the draft permit as provided by Section III.C., comments received from the applicant pursuant to Section III.A., other applicable recommendations or determinations and review of the public hearing record after any hearing on a draft permit pursuant to Section III.G.1., the Permit Board shall make a determination to issue or deny the permit. The provisions of 40 CFR 124.17 in effect as of the date the permit is issued regarding response to comments are incorporated herein and adopted by reference.

4. Any appeal from the decision of the Permit Board to issue or deny a permit or coverage under an existing permit made pursuant to Section III.H.2. or 3. above, or to a condition of a permit issued, shall be in the form of a request for a formal evidentiary hearing before the Permit Board, in accordance with and subject to Miss. Code Ann. § 49-17-29. All such formal hearings shall be transcribed by a court reporter, and the testimony given shall be under oath.

5. Upon completion of any formal hearing convened pursuant to Section III.H.4. above, the Permit Board shall make a final decision affirming, reversing, or modifying its earlier determination. Any person aggrieved by this final action of the Permit Board may perfect an appeal to the Chancery Court upon the record made at the formal hearing, pursuant to Miss. Code Ann. § 49-17-29.

6. An NPDES or UIC permit issued by the Permit Board pursuant to the State law and this regulation is a permit for the purposes of State law. A State permit issued for pretreatment purposes or for the operation of a treatment works from which no discharge occurs, is not an NPDES or UIC permit.

7. NPDES and UIC permits issued by EPA, for which the State has issued certification, shall have the same force and effect as if they had been issued by the State under this regulation.

I. Final Permits: Transmittal to EPA

The Executive Director or his/her duly authorized representative shall transmit copies of all NPDES and UIC permits issued by the Permit Board pursuant to the State law and this regulation to the Regional Administrator (or his/her designee) immediately following issuance as agreed upon in the State/EPA Memorandum of Agreement (MOA).

IV. TERMS AND CONDITIONS APPLICABLE TO PERMITS

A. All Permits, Unless Otherwise Noted in These Regulations or in Federal Regulations Referenced Herein:

1. Prohibitions

A permit shall not be issued when any of the prohibitions contained in 40 CFR 122.4 as of the date the permit is issued which is incorporated herein and adopted by reference, are applicable.

2. Duty to Comply

The permit conditions applicable to all permits contained in 40 CFR 122.41(a)(l), 144.51 and 144.52 as of the date the permit is issued are incorporated herein and adopted by reference.

3. Permit Conditions and Limitations

The Permit Board shall establish permit conditions and limitations pursuant to 40 CFR 122.43 and 122.44 as of the date the permit is issued, which sections are incorporated herein and adopted by reference. The Permit board shall also require additional or more stringent requirements than promulgated effluent limitations guidelines or standards under Sections 301, 304, 306, 307, 318, and 405 of the Federal Act necessary to:

(a) Achieve water quality standards established under Section 303 of the Federal Act, including State narrative criteria for water quality.

(1) Limitations must control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants) which the Permit Board determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion from any State water quality standard, including State narrative criteria for water quality. The permittee may utilize testing procedures for the analysis of pollutants set forth in 40 CFR 122, 136, 141, 143, 430, 455, 465, and 503 which are incorporated herein and adopted by reference.

(2) When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion from a narrative or numeric criteria within a State water quality standard, the Permit Board shall use procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.

(3) When the Permit Board determines, using the procedures in Section IV.A.3.a.(2), that a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above the allowable ambient concentration of a State numeric criteria

within a State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant.

(4) When the Permit Board determines, using the procedures in Section IV.A.3.a.(2), that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the numeric criterion for whole effluent toxicity, the permit must contain effluent limits for whole effluent toxicity.

(5) Except as provided in this subparagraph, when the Permit Board determines, using the procedures in Section IV.A.3.a.(2), toxicity testing data, or other information, that a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a narrative criterion within an applicable State water quality standard, the permit must contain effluent limits for whole effluent toxicity. Limits on whole effluent toxicity are not necessary where the Permit Board demonstrates in the fact sheet or statement of basis of the NPDES permit, using the procedures in Section IV.A.3.a.(2), that chemical-specific limits for the effluent are sufficient to attain and maintain applicable numeric and narrative State water quality standards.

(6) Where the State has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the Permit Board must establish effluent limits using one or more of the following.

(i) Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the Permit Board demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include; EPA's Water Quality Standards Handbook, 2nd Edition September 1993, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents.

(ii) Establish effluent limits on a case-by-case basis, using EPA's water quality criteria, published under Section 307(a) of the Federal Act, supplemented where necessary by other relevant information.

(iii) Establish effluent limitations on an indicator parameter for the pollutant of concern, provided:

(A) the permit identifies which pollutants are intended to be controlled by the use of the effluent limitation;

(B) the fact sheet required by 40 CFR 124.56 sets forth the basis for the limit, including a finding that compliance with the effluent limit on the indicator parameter will result in controls on the pollutant of concern which are sufficient to attain and maintain applicable water quality standards;

(C) the permit requires all effluent and ambient monitoring necessary to show that during the term of the permit the limit on the indicator

parameter continues to attain and maintain applicable water quality standards; and

(D) the permit contains a reopener clause allowing the Permit Board to modify or revoke and reissue the permit if the limits on the indicator parameter no longer attain and maintain applicable water quality standards.

(7) When developing water quality based effluent limits under this paragraph the Permit Board shall ensure that:

(i) the level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies with all applicable water quality standards; and

(ii) effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.

(b) Attain or maintain a specified water quality through water quality related effluent limits established under section 302 of the Federal Act;

(c) Conform to the conditions of a State certification under section 401 of the Federal Act that meets the requirements of 40 CFR 124.53 when EPA is the permitting authority. If a State certification is stayed by a court of competent jurisdiction or an appropriate State board or agency, EPA shall notify the State that the agency will deem certification waived unless a finally effective State certification is received within sixty days from the date of the notice. If the State does not forward a finally effective certification within the sixty day period, EPA shall include conditions in the permit that may be necessary to meet EPA's obligation under section 301(b)(1)(C) of the Federal Act;

(d) Conform to applicable water quality requirements under Section 401(a)(2) of the Federal Act when the discharge affects a state other than the certifying state;

(e) Incorporate any more stringent limitations, treatment standards, or schedule of compliance requirements established under federal or State law or regulations in accordance with section 301(b)(1)(C) of the Federal Act;

(f) Ensure consistency with the requirements of a Water Quality Management plan approved by EPA under Section 208(b) of the Federal Act;

(g) Incorporate Section 403(c) criteria under part 125, subpart M, for ocean discharges;

(h) Incorporate alternative effluent limitations or standards where warranted by "fundamentally different factors", under 40 CFR part 125, D;

(i) Incorporate any other appropriate requirements, conditions, or limitations (other than effluent limitations) into a new source permit to the extent allowed by the National Environmental Policy Act, 42 U.S.C. 4321 et seq. and Section 511 of the Federal Act, when EPA is the permit issuing authority. (See 40 CFR 122.29(c)).

4. When applicable, a permit issued by the Permit Board shall contain terms and conditions deemed necessary or appropriate by the Permit Board to insure compliance with at least the following effluent standards and limitations:

(a) Effluent limitations for publicly owned treatment works and other discharges, including indirect discharges, when promulgated by the Administrator of EPA pursuant to Sections 204(b), 301, 302, 303, and 307 of the Federal Act, in accordance with and subject to the date of compliance prescribed therein, if the limitations are not in conflict with the State law or the Federal Act.
(b) Standards of performance when promulgated by the Administrator of EPA, for new sources within the categories defined in Section 306 of the Federal Act.
(c) If the permit is for a discharge from a publicly owned treatment works, standards of performance, pretreatment standards or effluent limitations or prohibitions when promulgated by the Administrator of EPA for toxic substances, monitoring and charges pursuant to Sections 204(b), 307, and 308 of the Federal Act. Toxicity screening and limitations shall be established in accordance with Chapter Two of these regulations.
(d) Any other more stringent limitation deemed necessary by the Permit Board to meet applicable water quality standards, treatment standards or schedules of compliance established pursuant to the State law or regulations promulgated pursuant thereto, or necessary to meet other Federal law or regulations enacted or promulgated subsequent to this regulation, or required to meet any applicable water quality standards including applicable requirements necessary to meet Total Maximum Daily Loads established by and incorporated into the State's continuing planning process required pursuant to Section 303 of the Federal Act.
(e) The conditions regarding reissued permits contained in 40 CFR 122.44(l) are incorporated herein and adopted by reference.
(f) The effluent limitations promulgated by EPA pursuant to Sections 301, 302, 303, 306, and 307 of the Federal Act shall become immediately enforceable as if a duly promulgated regulation of the Commission.

5. Consistency with Water Quality Standards

When a State or an NPDES permit issued by the Permit Board contains any effluent standards or limitations set forth in Section IV.A.3. and 4., the Permit Board shall verify that the discharge authorized by the issued permit will not violate applicable water quality standards. When a permit contains additional effluent limitations based upon applicable water quality standards, the Permit Board staff shall prepare a wasteload allocation ensuring that the discharge authorized by the issued permit is consistent with applicable water quality standards, 40 CFR 122.44(a)-(d) (which are incorporated herein and adopted by reference) and Chapter Two of these regulations.

6. Requirements to Comply with Plans

The Permit Board, if it deems necessary, may impose any further requirements under the terms and conditions of a State, UIC, or NPDES permit to comply with an area-wide waste treatment management plan, or amendments thereto, prepared by a management agency pursuant to Section 208(b) of the Federal Act, or a facilities plan prepared in accordance with Title II or Title VI of the Federal Act.

7. Interim Requirements

Prior to promulgation of regulations by the Administrator of EPA relating to applicable effluent standards or limitations or standards of performance set forth in Section IV.A.3., the Permit Board may impose any standard, limitation or condition within the State or NPDES permit to ensure compliance with the State law and the Federal Act.

8. Calculating and Determining Permit Limits

The permit shall contain conditions calculated in accordance with 40 CFR 122.45, which is incorporated herein and adopted by reference. When issuing a State, UIC, or NPDES permit pursuant to the State law and this regulation, the Permit Board shall specify therein, where applicable, average and maximum daily quantitative limitations for the level of wastewater constituents in the authorized discharge in terms of weight and, if appropriate, average or maximum concentration limits.

9. Schedules of Compliance

(a) A person issued a State, UIC, or NPDES permit by the Permit Board pursuant to Section III.H. and who is not in compliance with applicable effluent standards and limitations or other requirements contained therein at the time the permit is issued, shall be required to achieve compliance within a period of time as set forth by the Permit Board, with effluent standards and limitations, with water quality standards, or with specific requirements or conditions set by the Permit Board. The Permit Board shall require compliance with terms and conditions of the permit in the shortest reasonable period of time. For UIC permits, this time shall not exceed three (3) years.

(b) If a time schedule for compliance specified in a State, UIC, or NPDES permit which is established by the Permit Board pursuant to Section IV.A.9.a. above exceeds one year, the time schedule shall provide for interim target dates for compliance with selected terms and conditions of the permit. Each interim target date specified in the permit shall not exceed one year.

(c) A discharger who fails or refuses to comply with either an interim or final date of compliance specified in a State, UIC, or NPDES permit may be deemed by the Commission to be in violation of the permit and may be subject to enforcement action prescribed in the State law or this regulation.

(d) Unless otherwise provided in these regulations, the total length of time for the following to be accomplished shall not exceed three years:

(1) the determination that a particular limit is needed,
(2) the length of a compliance schedule to achieve that limit, and
(3) any instream or other study to determine an alternative limit or water quality criterion.

(e) An NPDES permit may, when appropriate, specify a schedule of compliance leading to compliance with the Federal Act and regulations in accordance with 40 CFR 122.47 which is incorporated herein and adopted by reference.

10. Compliance Schedule Reports by Dischargers

Within 14 days after either an interim or final date of compliance specified in a State, UIC, or NPDES permit, a permittee shall provide the Permit Board with written notice of his compliance or noncompliance with the requirements or conditions specified to be completed by that date. Failure to submit the written notice to the Permit Board shall be considered a violation of the compliance requirements of the permit, for which the Commission may be asked to take enforcement action.

11. Closure Requirements

When issuing a State or NPDES permit pursuant to the State law and this regulation, the Permit Board shall require submittal of a Closure Plan

(a) no later than 90 days prior to abandonment and
(b) within 90 days of decommissioning the treatment works.

The Closure Plan shall address how and when all manufactured products, by- products, raw materials, stored chemicals, and solid and liquid waste and residues will be removed from the premises so that no potential environmental hazard to the waters of the State will be presented.

12. Spill Prevention and Best Management Plans

(a) For facilities which have bulk storage of materials (including but not limited to, all raw, finished and/or waste material), the permit shall contain terms and conditions necessary to prevent the potential release of these materials and storm water contaminated with these materials. Such requirements may include the requirements for a Spill Prevention Control and Countermeasures Plan or a Best Management Plan. For those facilities that have above ground bulk storage not subject to Hazardous Waste Management Regulations or 40 CFR 112 (Oil Pollution Prevention) regulations, secondary containment or equivalent protective measures must be provided for storage of materials and/or liquids with chronic or acute potential for pollution impact on waters of the State regardless of whether it is a raw material, product, waste, or by-product. Secondary containment requirements as found in 40 CFR 112 (for petroleum products), which is incorporated herein and adopted by reference, shall be utilized for these non-petroleum facilities unless an equivalent amount of protection may be provided by measures including trenches or waterways which would conduct any tank releases to a permitted treatment system or sufficient equalization or treatment capacity needed to prevent chronic/acute pollution impact.
(b) Tank Systems with High Potential for Pollution Impact.
The Permit Board may require permits to contain secondary containment or other engineering practices for tank systems with chronic or acute potential for pollution impact on waters of the State.
(c) The Permit Board may require the development of, and approval of, Best Management Practices Plans addressing any activity at a facility which may impact the environment or compliance with the permit.
(d) Notwithstanding anything in this section to the contrary, the Permit Board may require a facility that has above ground storage of liquids and/or materials with the potential to cause

chronic or acute pollution impact on waters of the State (which are not subject to Hazardous Waste Management Regulations or 40 CFR 112 [Oil Pollution Prevention] regulations) to provide either secondary containment or demonstrate an equivalent amount of protection from discharge of pollutants in amounts which have the potential to cause chronic or acute pollution impact if such secondary measures are necessary to protect human health, welfare or the environment.

l3. Compliance with Permit Conditions

All discharges authorized by the permit shall be consistent with the terms and conditions of the permit and the permittee shall make all reasonable efforts to meet any interim or final dates for compliance specified therein.

14. Facility Expansion and/or Modification

Any facility expansion, production increases, process modifications, changes in discharge volume or location or other changes in operations or conditions of the permittee which may result in a new or increased discharge of waste, shall be reported to the Permit Board by submission of a new application for a permit pursuant to Section II.A., or if the discharge does not violate effluent limitations specified in the permit, by submitting to the Permit Board a notice of a new or increased discharge.

15. Reporting Requirements

(a) Planned changes. The permittee shall give notice to the Permit Board as soon as possible of any planned physical alterations or additions, including but not limited to, a change of operation to the permitted facility. Notice is required in the circumstances that follow:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether the facility is a new source in 40 CFR 122.29(b);
(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to either effluent limitations in the permit or notification requirements under 40 CFR 122.42(a)(1); or
(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

(b) Anticipated noncompliance. The permittee shall give advance notice to the Permit Board of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
(c) Monitoring reports. Monitoring results shall be reported at the intervals specified in the permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) and/or forms provided or specified by the Permit Board for reporting results of monitoring of sludge use or disposal practices.

(2) If the permittee monitors any pollutant as prescribed in the permit more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Permit Board.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Permit Board in the permit.

16. Duty to Provide Information

The permittee shall furnish to the Permit Board, within a reasonable time, any information which the Permit Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The permittee shall also furnish to the Permit Board upon request, copies of records required to be kept by the permit.

17. Inspection and Entry

The permittee shall allow any authorized Commission representative to enter upon the permittee's premises at any reasonable time, to have access to and copy any applicable records, to inspect process facilities, treatment works, monitoring methods or equipment or to take samples, as authorized by Section 49-17-29 of the Code. In the event of investigation during an emergency response action, a reasonable time shall be any time of the day or night. Follow-up investigations subsequent to the conclusion of the emergency event shall be conducted at reasonable times.

18. Proper Operation, Maintenance and Replacement

The permittee shall at all times properly operate, maintain, and when necessary, promptly replace all facilities and systems of collection, 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 includes adequate laboratory controls and appropriate quality assurance procedures. Proper replacement includes maintaining an adequate inventory of replacement equipment and parts for prompt replacement when necessary to maintain continuous collection and treatment of wastewater. This provision requires the operation of back-up 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. The Permit Board may require regular reporting of internal operational and maintenance parameters necessary to confirm proper operation of a waste treatment system.

19. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of the permit.

20. Bypass

The terms and conditions regarding bypass contained in 40 CFR 122.41(m) are incorporated herein and adopted by reference.

21. Removed Substances

Solids, sludges, filter backwash, or other residuals removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent such materials from entering state waters and in a manner consistent with the Mississippi Solid Waste Disposal Act, the Federal Resource Conservation and Recovery Act, and the Mississippi Water Pollution Control Act.

22. Power Failure

If electric power is required, in order to maintain compliance with the conditions and prohibitions of the permit, the permittee shall either:

(a) Provide an alternative power source to operate the wastewater control facilities; or, if such alternative power source is not in existence and no date for its implementation appears in the permit,
(b) Halt, reduce, or otherwise control production and/or all wastewater flows upon reduction, loss, or failure of the primary source of power to the wastewater control facilities.

23. Oil and Hazardous Substance Liability

Nothing in a 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 to under Section 311 of the Federal Act or the applicable provisions under Mississippi law pertaining to the transportation, storage, treatment, or spillage of oil or hazardous substances.

24. Civil and Criminal Liability

(a) Any person who violates a term, condition or schedule of compliance contained within the permit or the Mississippi Water Pollution Control Law is subject to the actions defined by law.
(b) Except as provided in permit conditions on "Bypassing" and "Upsets" (Section IV.A.20. and 27.) nothing in a permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

(c) It shall not be the defense of the 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 the permit.

25. Severability

The provisions of a permit are severable. If any provision of a permit, or the application of any provision of a permit to any circumstances, is challenged or held invalid, the validity of the remaining permit provisions and/or portions thereof or their application to other persons or sets of circumstances, shall not be affected thereby.

26. Compliance with Toxic Effluent Standards

The permittee shall comply with any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) established under Section 307(a) of the Federal Act. The permittee shall comply with the applicable provisions of 40 CFR 122.42, which are incorporated herein and adopted by reference.

27. Upsets

Facilities which experience upset conditions shall meet the conditions of 40 CFR 122.41(n), which is incorporated herein and adopted by reference, as follows:

(a) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Section IV.A.27.c. are met. Any determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, shall not constitute a final administrative action subject to judicial review.
(c) 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 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 in 40 CFR 122.41(L)(6)(ii)(B)(24-hour notice of noncompliance); and
(4) the permittee complied with any remedial measures required under 40 CFR 122.41(d) (duty to mitigate).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

28. Monitoring of Discharges Authorized by All Permits: Requirements

(a) The Permit Board may prescribe monitoring requirements for any discharge authorized by a State, UIC, or NPDES permit issued pursuant to this regulation. A State, UIC, or NPDES permit issued pursuant to this regulation may be subject to such monitoring requirements as may be reasonably required by the Permit Board to determine compliance with permit conditions or State Water Quality Criteria. Such monitoring may include the discharge point, instream monitoring, and, include the installation, use, and maintenance of monitoring equipment or methods including, where appropriate, biological monitoring methods. Ambient instream monitoring may be required by the Permit Board to assure that WQBELs are protective of State water quality criteria through consideration of factors, including, but not limited to, the following:

(1) variance to any water quality criteria,
(2) the complexity of the receiving water body,
(3) magnitude and impact or potential impact of the discharge,
(4) amount of available data, and
(5) aquatic life and human health concerns.

The Permit Board will normally require the applicant/permittee to provide the necessary information.

(b) The Regional Administrator (or his/her designee) may require monitoring requirements for reporting and recording of monitoring results contained in 40 CFR 122.48 which are incorporated herein and adopted by reference.

(c) A discharge authorized by an NPDES permit which the Regional Administrator (or his/her designee) by written request to the Executive Director, requires to be monitored or which contains toxic waste constituents for which an effluent standard or limitation has been established by the Administrator of EPA pursuant to Section 307(a) of the Federal Act, shall be monitored by the permittee for any or all of the following:

(1) The measurement of the discharge in gallons per day or other units specified by the Permit Board.
(2) Waste constituents subject to reduction or elimination under the terms and conditions of the permit.
(3) Specific waste constituents which are determined by the Permit Board to have a significant effect on the quality of the water of the State.
(4) Waste or wastewater constituents specified as subject to monitoring by the Administrator of EPA in regulations promulgated pursuant to the Federal Act.
(5) Any other specific waste constituents which the Regional Administrator (or his/her designee) may request in writing to be monitored.

(d) Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(h) of the Federal Water Pollution Control Act, as amended.

(e) Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored wastewater.

(f) The frequency of monitoring of a waste discharge required to be monitored pursuant to this regulation shall be specified in a State, UIC, or NPDES permit when issued, except that the Permit Board at any time may require additional monitoring for purposes of determining compliance by so notifying the permittee in writing.
(g) The requirements regarding the disposal of pollutants into wells, into publicly owned treatment works or by land application contained in 40 CFR 122.50 are incorporated herein and adopted by reference.

29. Monitoring of Discharges Authorized by All Permits: Recording and Reporting

(a) A permittee required to monitor a waste discharge pursuant to Section IV.A.28. shall maintain records of all information obtained from such monitoring, including the date, place and time of sampling; the dates analyses were performed; the person performing the analyses; the analytical techniques, procedures or methods used; and the results of such analyses. All records and results of monitoring activities, including calibration and maintenance records, shall be retained by the permittee a minimum of three (3) years unless otherwise required or extended by the Permit Board, copies of which shall be furnished to the Department upon request. Except for data determined to be confidential under the Mississippi Air and Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department.
(b) The Permit Board may require a permittee to report periodically the results of all required monitoring activities undertaken by the permittee on an appropriate reporting form supplied by the Permit Board. The Permit Board shall notify the permittee of the frequency of reporting. For State permits and NPDES permits, the monitoring frequency shall not be less than once/year and for Pretreatment permits, the frequency shall not be less than twice/year.
(c) Upon written request of the Regional Administrator (or his/her designee), the Executive Director shall transmit any reporting form or other monitoring information required by this regulation.
(d) Any permittee who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required by the Permit Board to be maintained as a condition in a permit, or who alters or falsifies the results obtained by such devices or methods and/or any written report required by or in response to a permit condition, shall be deemed to have violated a permit condition and shall be subject to the penalties provided for a violation of a permit condition pursuant to Section 49-17-43 of the Code.

(e) Twenty-four hour reporting.

(1) 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 a description of the noncompliance and its cause; 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 steps taken or planned to reduce, eliminate, and/or prevent recurrence of the noncompliance.

(2) The following shall be included as information which must be reported within 24 hours under this paragraph.

(a) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(b) Any upset which exceeds any effluent limitation in the permit.
(c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Permit Board in the permit to be reported within 24 hours.

(3) The Executive Director may waive the written report on a case-by-case basis for reports under paragraph (e).(2) of this section if the oral report has been received within 24 hours.

(f) Other noncompliance. The permittee shall report all instances of noncompliance not reported under Section IV.A.29.e., at the time monitoring reports are submitted or within 30 days from the end of the month in which the noncompliance occurs. The reports shall contain the information listed in Section IV.A.29.(e).(1).
(g) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Permit Board, it shall promptly submit such facts or information.

30. Testing Procedures for the Analysis of Pollutants for All Permits

Testing procedures include those set forth in 40 CFR 136 which is incorporated herein and adopted by reference or alternative procedures approved and/or promulgated by EPA.

B. State Permits Issued to a POTW or NPDES Permits Issued to a POTW

A State no discharge permit to a POTW or an NPDES permit for a discharge from a POTW shall contain notification requirements as follows:

1. Any new introduction of waste or wastewater constituents into the treatment works from a source which would be a new source as defined in Section 306 of the Federal Act if the source were discharging waste constituents.

2. Except as to particular categories and classes of point sources or discharges specified by the Permit Board, any new introduction of waste constituents into the treatment works from a source which would be subject to Section 301 of the Federal Act if the source were discharging waste constituents.

3. Any substantial change in volume or character of waste constituents being introduced into such treatment works by a source discharging waste into the treatment works at the time of issuance of a permit.

4. All new requests for

(a) connecting to the POTW's collection system or

(b) direct discharge into the treatment system if the new connection/discharge is for industrial non-sanitary wastewater or for any discharge in excess of 25,000 gpd.

C. General Requirements Applicable to State Permits Issued to Concentrated Animal Operations or NPDES Permits Issued to Concentrated Animal Feeding Operations

As part of the conditions for issuance and reissuance of a wastewater treatment permit for concentrated animal feeding operations, the following shall be applicable:

1. All animal feedlots, Grade A dairies, poultry operations with 9,000 or more birds, swine operations with 10 or more sows or 50 or more swine, which have been constructed, enlarged or significantly altered after August 15, 1979, or any other animal confinement causing pollution of waters of the State or Grade A dairies needing to reapply to the State Health Department for reissuance of a revoked Health Department permit shall obtain a permit pursuant to these regulations.

2. Facilities built before August 15, 1979 are not automatically required to obtain a permit. However, any facility that causes pollution of waters of the state, or places or causes to be placed any wastes in a location where they are likely to cause pollution of any waters of the state or operates a wastewater treatment or disposal system may be required to obtain a permit or coverage under a general permit.

3. All facilities that perform concentrated animal feeding operations that meet the federal regulatory requirements of 40 CFR 122.23 shall submit an application prescribed by the Commission, and shall be issued, upon concurrence by the Permit Board, an NPDES Permit in accordance with 40 CFR 122.23.

4. All facilities that perform concentrated animal feeding operations that do not meet the federal regulatory requirement of 40 CFR Part 122.23 shall submit a treatment design worksheet from the Soil Conservation Service or other approvable waste disposal system design. Said design and request for site inspection shall constitute an application for an animal waste disposal permit or for coverage under a general permit.

5. The Department shall perform a site inspection prior to presenting the application for consideration to the Permit Board or granting coverage under a general permit. The inspection will determine compliance with siting criteria set forth in Section I.C.2.

6. At reissuance, all facilities shall demonstrate that their wastewater treatment facility satisfies the original design capacity.

7. General permits may be developed for concentrated animal operations.

D. State No Discharge Permit Issued to a Domestic Wastewater Treatment Facility with a Capacity of 1500 Gallons per Day or Less or NPDES Permits Issued to a Domestic Wastewater Treatment Facility with a Capacity of 1500 Gallons per Day or Less:

As part of the conditions for issuing and/or reissuing a wastewater treatment permit for domestic wastewater treatment facilities of 1500 gpd or less, the following shall be applicable:

1. Aerobic mechanical treatment plants to be used in this State must meet the current revision of American National Standards Institute/National Sanitation Foundation (ANSI/NSF) International Standard No. 40 requirements for Class I plants and be listed by the Mississippi State Department of Health in accordance with Miss. Code Ann. § 41-67-10, which is incorporated herein and adopted by reference.

2. The following requirements shall be standard conditions for these permits.

(a) All aerobic mechanical plants and subsurface systems must be installed by a professional engineer registered in Mississippi or a person who holds a license from the Mississippi State Department of Health pursuant to Miss. Code Ann. §41-67-25, as amended, which is incorporated herein and adopted by reference.

(b) All aerobic mechanical plants must be adequately inspected at a frequency as specified in the permit, by an individual holding a Mississippi Wastewater Operators Certificate. The owner of the mechanical plant must provide a copy of the inspection report to the State, along with a description of corrective actions taken if such actions were needed. Alternatively, the owner may have such inspections and reports completed by an authorized and trained representative of the mechanical plant manufacturer.

E. Administration of State General Permits and NPDES General Permits

1. Any facility and/or discharger covered or eligible to be covered under a general permit may be required to obtain an individual State or NPDES permit at the discretion of the Permit Board. Any interested person may petition the Permit Board to take action under this paragraph.

2. Any facility and/or discharger covered by a State general permit or an NPDES general permit may request to be excluded from such coverage by applying for an individual State or NPDES permit. The applicability of the general permit is automatically terminated upon issuance of an individual permit.

3. Any facility and/or discharger excluded from coverage under a general permit solely because it is already covered under an individual State or NPDES permit may request that the individual permit be revoked and that it be covered by the general permit. If coverage under the general permit is to be approved, the Permit Board or its designee may revoke the individual permit and issue coverage under the general permit simultaneously.

F. NPDES Permits Only

An NPDES permit shall contain the following:

1. Reopener Clause. The permit shall be modified, or alternately, revoked and reissued, to comply with any applicable effluent standard, limitation or storm water regulation issued or approved under Section 301(b)(2)(C), and (D), 304(b)(2), 307(a)(2), and 402(p) of the Federal Act if the effluent standard, limitation, or regulation so issued or approved:

(a) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
(b) controls any pollutant not limited in the permit.

2. Point Source Discharges: Standards of Performance.

(a) Any new source subject to an NPDES permit which meets the applicable effluent new source standards of performance as required by the Federal Act, the State law or this regulation, shall not be subject to any more stringent standard of performance for any wastewater constituent during a 10-year period beginning on the date of completion of construction or during the period of depreciation or amortization of the facility for the purpose of Sections 167 and 169, or both, of the Internal Revenue Code of 1954, whichever period ends first.
(b) The protection from more stringent standards of performance afforded by subparagraph a. of this section does not apply to conditions based upon water quality standards, or to toxic effluent standards or prohibitions under Section 307(a) of the Federal Act, or to any other toxic pollutants or hazardous substances not controlled by standards of performance.

3. Permit Requirements for NPDES Permits: Criteria Standards.

The criteria standards for NPDES permits found in 40 CFR 125, subparts A, B, D, G, H, I, J, M, N, and 40 CFR 129, 133 are incorporated herein and adopted by reference.

4. The additional conditions applicable to specified categories of NPDES permits contained in 40 CFR 122.42 are incorporated herein and adopted by reference.

G. NPDES Mineral Mining and Processing Permits

As part of the conditions for issuing a wastewater treatment permit for mineral mining and processing, the following shall be applicable:

1. A site inspection shall be performed by the Department to ensure compliance with sighting criteria set forth in Section I.C.2.

2. The applicant shall demonstrate to the Permit Board it has obtained or filed complete applications for necessary storm water permits or coverages and for mining permits (through the Office of Geology). Failure to obtain or submit complete applications for those permits or

coverages shall constitute grounds for denial of the NPDES mineral mining and processing permit.

3. Structural Integrity.

(a) Any lagoon, sedimentation pond, or dredge pit must have an emergency discharge structure installed at least 24 inches above the normal operating fluid level, said discharge structure being at least 24 inches below the lowest point on the top of the containment dike.
(b) Dikes and any other appurtenant structures must be constructed utilizing accepted engineering designs, standards, methodologies and materials. A professional engineer registered in the State of Mississippi shall certify the adequacy of construction.
(c) Dikes shall be maintained in good working order at all times. There shall be no leaks through dikes. Any damaged dike shall be replaced or repaired immediately upon discovering any deficiency. All earthen dikes shall be maintained with adequate cover, such that the effects of erosion are minimized.
(d) The permittee shall develop and maintain a daily inspection log for the facility. This log should include, but not be limited to, the following; condition of all dikes, observance of the area around the dikes to indicate any water pollution problems and the volume of wastewater accumulating within the dike. The date, time and person making the inspection should also be included in this log.

4. Sand and Gravel Permits. Special Conditions.

When a mining activity is adjacent to a stream, a buffer zone shall be maintained between the edge of the mining activity and the highest point of the top bank of the stream. The buffer zone widths shall be the same as those set forth in Section IV.C.3.(a).(1), (2) and (3) of Chapter Three of these regulations. The buffer zone shall not be disturbed by any of the facility's activities.

H. NPDES Animal Waste Permits Only

An NPDES animal waste permit shall contain the following (in addition to the requirements set forth in Section IV.C.):

1. Releases in Excess of the 25-year, 24-hour Storm Event.

Process waste pollutants in the overflow may be discharged to waters of the U.S. whenever rainfall events, either chronic or catastrophic, cause an overflow of process waste water from a facility designed, constructed and operated to contain all process generated waste waters plus the runoff from a 25-year, 24-hour rainfall event for the location of the point source. There shall be no effluent limitations on discharges from detention structures constructed and maintained to contain the 25-year, 24-hour storm event if the discharge is the result of a rainfall event which exceeds the design capacity and proper maintenance is done. Retention structures shall have capacity to contain all process wastewaters plus the 25-year, 24-hour storm event.

2. Proper Operation and Maintenance Requirements.

The facilities covered by the permit are required to document the attainment of all Best Management Practices (BMPs) used to comply with the effluent limitations in the permit. Where applicable, equivalent measures contained in a site specific Animal Waste Management Plan, if prepared by the U.S. Department of Agriculture Soil Conservation Service (NRCS), may be substituted for the Best Management Practices and Pollution Prevention Plan requirements in the permit. Where provisions in the Soil Conservation Service plan are substituted for applicable Best Management Practices or portions of the Pollution Prevention Plan, the Pollution Prevention Plan must refer to the appropriate section of the Soil Conservation Service plan. If the pollution prevention plan contains reference to the Soil Conservation Service plan, a copy of the Soil Conservation Service plan must be kept on site.

3. Best Management Practices.

Animal waste NPDES permits shall contain Best Management Practices (BMPs) at least as stringent as NRCS Manual and all future amendments.

4. Pollution Prevention Plans.

A pollution prevention plan shall be developed for each facility covered by the permit. Pollution prevention plans shall be prepared in accordance with good engineering practices and should include measures necessary to limit pollutants in runoff. The plan shall describe and ensure the implementation of practices which are to be used to assure compliance with the limitations and conditions of the permit. The plan shall identify a specific individual(s) at the facility who is responsible for developing the implementation, maintenance, and revision of the pollution prevention plan. The activities and responsibilities of the pollution prevention personnel should address all aspects of the facility's pollution prevention plan.

(a) Where a Soil Conservation Service plan has been prepared for the facility, the pollution prevention plan may refer to the Soil Conservation Service plan when the Soil Conservation Service plan documentation contains equivalent requirements for the facility.
(b) The plan shall be signed by the owner or other signatory authority and be retained on site. The plan shall be updated as appropriate.

5. Preventive Maintenance.

The plan shall include an appropriate schedule for preventative maintenance. Operators will provide routine maintenance to their control facilities in accordance with a schedule and plan of operation to ensure compliance with the permit. The permittee shall keep a maintenance log documenting that preventative maintenance was done. A preventive maintenance program shall involve inspection and maintenance of all runoff management devices (cleaning separators, catch basins) as well as inspecting and testing facility equipment and containment structures to uncover conditions that could cause break downs or failures resulting in discharges of pollutants to surface waters.

I. Storm Water NPDES General Permits Only

Pursuant to 40 CFR 122.26(c), storm water general permits shall require that a Storm Water Pollution Prevention Plan (SWPPP) be submitted with the Notice of Intent (NOI) for coverage unless otherwise addressed in the general permit. The SWPPP shall include, but not be limited to, the information required by the Storm Water NPDES General Permit.

J. Sewage Sludge Use or Disposal Requirements

The use and disposal of sewage sludge shall be in accordance with 40 CFR 503 - Standards for the Use or Disposal of Sewage Sludge, which are incorporated herein and adopted by reference. In the event the use and/or disposal of sludge involve incineration resulting in air emissions, a permit to construct and/or operate will be required in accordance with the Department Regulation APC-S-2, "Permit Regulation for the Construction and/or Operation of Air Emissions Equipment".

K. UIC Permits

1. The UIC program for Class I, III, IV and V wells in the State of Mississippi was approved by EPA and became effective on September 26, 1983. Unless otherwise required herein, all owners or operators of Class I, III, IV or V wells, all applicants for UIC permits, and the Director of the UIC program shall comply with applicable provisions of 40 CFR 144, 146, 147.1250 subpart Z and 148, which are incorporated herein and adopted by reference, except as follows:

(a) Where federal regulations use the phrase “for EPA administered programs only,” those portions of the federal regulations are not applicable to the Mississippi program and
(b) All regulations applicable to Class II wells are excluded from the aforementioned adoption since EPA has granted to the Mississippi State Oil and Gas Board the authority to regulate Class II wells.

2. Unless otherwise provided herein, the UIC program shall be operated in compliance with the provisions of 40 CFR incorporated by reference in this paragraph.

Classification of Injection Wells

Notwithstanding 40 CFR 144.6 and 146.5, for the purposes of these regulations, injection wells are classified as follows:

(a) Class I.

(1) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation

containing, within five (5) miles of the well bore, an underground source of drinking water.

(2) Other municipal and industrial disposal wells (including radioactive waste disposal wells) which inject fluids beneath the lowermost formation containing, within five (5) miles of the well bore, an underground source of drinking water.

(b) Class II. Wells which inject fluids:

(1) Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection.

(2) For enhanced recovery of oil or natural gas; and

(3) For storage of hydrocarbons which are liquid at standard temperature and pressure. Notwithstanding parts 3.a. and 3.d. of this section, naturally occurring radioactive material (NORM) disposal wells are classified as Class II wells provided they meet the specific requirements of the Mississippi State Oil and Gas Board for such types of injection wells.

(c) Class III. Wells which inject for extraction of minerals including:

(1) Mining of sulfur by the Frasch process;

(2) In-situ production of uranium or other metals. This category includes only in-situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as slopes leaching is included in Class V.

(3) Solution mining of salts or potash.

(d) Class IV.

(1) Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within five (5) miles of the well bore contains an underground source of drinking water.

(2) Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within 5 miles of the well contains an underground source of drinking water.

(3) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under 40 CFR 146.5 (a)(1) or 40 CFR 146.5 (d)(1) or (2) (e.g., wells used to dispose of hazardous waste into or above a formation which contains an aquifer which has been exempted pursuant to 40 CFR 146.04).

(e) Class V. Injection wells not included in Class I, II, III, or IV.

Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. However, if the fluids placed in the ground qualify as a hazardous waste under the Resource Conservation and Recovery Act (RCRA), the well shall be considered either a Class I or Class IV well, not a Class V well. Specific types of Class V injection wells are described in 40 CFR 144.81.

(1) Class I Wells. Prohibition of Commercial Hazardous Waste Injection Wells.

In accordance with Miss. Code Ann. Section 17-17-27, Class I hazardous waste wells are prohibited, except such wells located on the generation site of hazardous waste generated in the production of oil or gas or in a commercial or manufacturing operation. Commercial hazardous waste underground injection wells designed or intended to dispose of multiple, non-homogeneous types of wastes from multiple sources other than the owner of the well are prohibited.

(2) Requirements for a New Class I Well.

(A) No person shall receive a permit for a new Class I well when the waste can be reasonably and adequately disposed by other methods.

(B) Factors to be considered in determining whether underground injection or some other method of disposal should be used shall include, but not necessarily be limited to, the following:

(i) cost; (disposal methods other than injection wells must be used unless unreasonable costs are demonstrated. Marginal costs shall not be a basis for an injection well.);

(ii) treatment reliability;
(iii) effluent quality;
(iv) stream use classification;
(v) indirect environmental impacts (e.g. sludge created, energy used, safety, etc.); and
(vi) any other factor the Permit Board deems appropriate.

(3) A person applying for a new Class I permit shall submit a report providing a basis for the injection well. The report shall include:

(A) a detailed description of the composition of the wastes and the manufacturing process(es) and product(s) producing the wastes;
(B) treatability studies of alternate forms of waste treatment and/or disposal; and,

(C) a detailed explanation of the reasons why each alternative disposal method is considered less satisfactory than the proposed injection well, taking into consideration the factors identified in paragraph b. of this section.

(4) A permittee shall continue to investigate alternative treatment and/or disposal technologies and shall discontinue deep well disposal by a schedule approved by the Department if it is determined that these alternative technologies or other technologies a re feasible and economically practicable.

(5) Area of review of Class I Wells. Notwithstanding 40 CFR 146.6, the area of review for all Class I wells shall not be less than a 2-mile radius around the well bore. The Permit Board may specify a larger area of review based on the calculated cone of influence of the well.

(6) Notwithstanding 40 CFR 146.12, all new Class I wells shall be constructed in accordance with 40 CFR 146.65(c).

(7) Reporting Requirements for Class I Wells.

(A) In addition to the requirements of 40 CFR 144.55, an applicant for a Class I well permit shall identify the location of all known wells within the injection well's area of review which penetrate the injection zone or penetrate to within 300 feet of the top of the injection zone. For such wells which are improperly sealed, completed, or abandoned, the applicant shall submit a corrective action plan as required in 40 CFR 144.55. The plan shall be updated annually, as necessary, to include any improperly sealed, completed, abandoned wells which are identified in the annual report required in part 4.(f)(3) of this section.

(B) In addition to the reporting requirements of 40 CFR 144.51 (1), the permittee shall report orally to the Department within 24 hours of occurrence, the shutdown of any Class I well which requires down holes maintenance or repair. Excluded from this requirement are normal or expected operational shutdowns and maintenance procedures. Oral notification shall be followed by written notification within 5 days of occurrence.

(C) The permittee shall file annually a report on the following information, to the extent that such information is reasonably available.

(i) Locations and depths of newly drilled or newly discovered wells within the area of review which penetrate the injection zone or penetrate to within 300 feet of the top of the injection zone, if such wells were not included in any previously submitted report.

(ii) Tabulation of data on all wells identified pursuant to subparagraph (1) of this paragraph, including a description of each well's type, construction, data drilled, location, depth, record of plugging and/or completion, and any additional information which the Permit Board may require.

(8) No UIC permit issued by the Permit Board shall be deemed to allow the permittee to inject any waste not specifically identified in the permit or any waste in any amount greater than the volume or rate specified in the permit. Additionally, no UIC permit for

the injection of hazardous waste prohibited from land disposal by the federal Resource Conservation and Recovery Act (RCRA) Land Disposal Rules, 40 CFR 148, shall be issued by the Permit Board until and unless the permit applicant first obtains an exemption from the Land Disposal Rules for that hazardous waste from EPA.

(f) Class II Wells.

In accordance with applicable state and federal regulations and statues, the Mississippi State Oil and Gas Board has primacy to administer all matters related to the operation of Class II wells in the state.

(g) Class III Wells.

Permitted Class III wells shall be completed and operated in accordance with standard injection well practices that ensure the protection of USDWs.

(h) Class IV Wells.

(1) The operation of Class IV wells are banned statewide, with the following exception: Notwithstanding the requirements of paragraphs (a) and (b) of 40 CFR 144.23, Class IV injection wells used to inject contaminated ground water that has been treated and is being injected into the same formation from which it was drawn are authorized by rule for the life of the well if such subsurface emplacement of fluids is approved for cleanup of releases under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERLA), 42 U.S.C. 9601-9675, or pursuant to requirements and provisions under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901-6992k or the Mississippi delegated RCRA program.

(2) Owners or operators of Class IV wells shall notify the Department and EPA of their intent to close any such well at least 30 days prior to its closure.

(3) All Class IV wells shall be plugged in a manner acceptable to EPA.

(i) Class V Wells.

(1) In accordance with 40 CFR 144.85:

(A) As of April 5, 2000, the installation of new large-capacity cesspools and new motor vehicle disposal wells are prohibited statewide.

(B) All motor vehicle disposal wells located within delineated Source Water Protection Areas must be closed by January 1, 2005.

(C) All large-capacity cesspools must be closed statewide by April 5, 2005.

(D) All motor vehicle disposal wells (regardless of their location) must be closed statewide by January 1, 2007.

(2) Owners or operators of Class V wells shall notify the Department of their intent to close any such well at least 30 days prior to its closure. Official notification shall consist of submitting a completed Class V Well Pre-closure Notification Form.

(3) All Class V wells shall be closed in accordance with applicable plugging and abandonment requirements contained in the Department's *Surface Water and Groundwater Use and Protection Regulations*. Owners or operators of such wells shall submit a completed Class V Well Decommissioning Form to MDEQ indicating the adherence to proper plugging and abandonment procedures. In addition, the owner or operator must dispose or manage any soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well in accordance with all applicable Federal, State, and local regulations and requirements.

L. State Permits.

The discharge of any wastewater from a facility operating under a State permit to waters of the State shall constitute a violation of the permit, except as provided in Section IV.A.20. and 27., or as authorized under separate permit pursuant to Section 402 of the Federal Act.

M. Pretreatment Permits.

The applicable procedures and requirements set forth in 40 CFR 403 and all amendments thereto are incorporated herein and adopted by reference as applicable to all pretreatment permits except the following:

(a) 40 CFR 403.5(c) and (d)
(b) 40 CFR 403.8
(c) 40 CFR 403.9
(d) 40 CFR 403.11
(e) 40 CFR 403.18

In addition, 40 CFR 403.1(b)(i) is amended to provide as follows:

To pollutants from non-domestic sources covered by Pretreatment Standards which are indirectly discharged into or transported by truck or rail or otherwise introduced into public or privately owned treatment works.

Finally, the term "control authority" and/or "POTW" as used in the aforementioned regulation, shall mean the State of Mississippi.

N. State Permits Issued to Animal Feeding Operations Only

The following requirements shall be standard conditions for the issuance and reissuance of State Animal Waste Permits (in addition to those requirements set forth in Section IV.C.):

1. Wet

(a) The Permit Board shall be notified in advance of the maintenance of any portion of the disposal system which will result in lowering of the efficiency of treatment during such maintenance or in the discharge of untreated waste to any waterway.
(b) The permittee must have all necessary structures and/or equipment to prevent any discharge other than that which is in excess of a 24-hour, 25-year rainfall event. Any discharge other than a discharge in excess of the 24-hour, 25-year rainfall event discharge is a violation of this permit.
(c) The permittee must report once per year on any discharge occurrence. The report must contain date, time, circumstances, and duration of discharge.
(d) The permittee must have completed construction within 12 months of date of issuance of this permit. Failure to submit certification of completion of construction, as designed, may result in revocation of permit.

2. Dry

(a) Dry litter facilities shall have no discharge of process wastewater or contaminated stormwater.
(b) The Permittee shall implement an approvable Comprehensive Nutrient Management Plan.
(c) The Permittee must have completed construction within 12 months of date of issuance of this permit. Failure to submit certification of completion of construction, as designed, may result in revocation of permit.

O. State Mineral Mining and Processing Permits.

State No-Discharge permits shall contain as a minimum, the following requirements:

1. No Discharge of Wastewater to Surface Water. The discharge of any wastewater from the facility to the waters of the State of Mississippi shall constitute a violation of the permit, except as provided in the permit, or as authorized under separate permit pursuant to Section 402 of the Federal Water Pollution Control Act.

2. Structural Integrity.

(a) Any lagoon, sedimentation pond, or dredge pit must have an emergency discharge structure installed at least 24 inches above the normal operating fluid level, said discharge structure being at least 24 inches below the lowest point on the top of the containment dike.
(b) Dikes and any other appurtenant structures must be constructed utilizing accepted engineering designs, standards, methodologies and materials. A professional engineer registered in the State of Mississippi shall certify the adequacy of construction.
(c) Dikes shall be maintained in good working order at all times. There shall be no leaks through dikes, any damaged dike shall be replaced or repaired immediately upon discovering any deficiency, and all earthen dikes shall be maintained with adequate cover, such that the effects of erosion are minimized.

(d) The permittee shall develop and maintain a daily inspection log for this facility. This log should include but not be limited to the following; condition of all dikes, observance of the area around the dikes to indicate any water pollution problems and the volume of wastewater accumulating within the dike. The date, time and person making the inspection should be included in this log.

3. Sand and Gravel Permits Special Conditions.

When a mining activity is adjacent to a stream, a buffer zone shall be maintained between the edge of the mining activity and the highest point of the top bank of the stream. The buffer zone widths shall be the same as those set forth in Section IV.C.3.(a).(1), (2) and (3) of Chapter Three of these regulations. The buffer zone shall not be disturbed by any of the facility's activities.

P. State Permits for the Disposal of Contaminated Milk

All facilities and/or individual(s) needing to dispose of milk that has been classified by the Mississippi State Department of Health as contaminated shall apply for a State permit. As part of the conditions for issuing a waste disposal permit for contaminated milk, the following shall be applicable.

1. A contaminated milk disposal plan developed by the Natural Resources Conservation Service (NRCS) utilizing NRCS Contaminated Milk Disposal Guidelines shall be accepted as an application.

2. The NRCS contaminated milk disposal plan shall become enforceable requirements of the permit.

3. The permittee shall notify the Department prior to each application of contaminated milk. Notification shall consist of verbal communication prior to disposal; followed by written notification within five (5) days.

Q. State Permits for Aerial Applicator Program

1. Any person engaged in aerial application originating at a landing strip (including public and private) within the State for the purpose of chemical aerial application shall apply to the Permit Board for a State permit.

2. Terms and Conditions of State Permits for Aerial Applicators are listed below:

(a) Utilization of any surface impoundment for the purpose of collection, storage, and/or treatment of chemically contaminated wastewater generated from operations at an aerial applicator facility is prohibited.

(b) The discharges of any contaminated hopper low sump wastewater to surface waters or grounds of the facility are prohibited.

(c) The discharge of rinse water employed to remove chemical residue from the hopper, spray booms, empty chemical containers, and any other auxiliary equipment requiring frequent washing for chemical removal is prohibited.
(d) The Permit Board may require that all used and/or empty chemical containers be removed from the premises within a reasonable time.
(e) All empty containers must be triple rinsed prior to disposal in an approved landfill.
(f) All bulk chemical storage tanks are subject to Best Management Plans in accordance with Section IV.A.12.
(g) Any connections from a public water supply to any tanks, sumps, etc., containing pesticides must be made so as to prevent backflow to the potable water system.
(h) The Permit Board may require additional terms and conditions it deems appropriate to prevent pollution and/or protect human health, welfare or the environment.

V. DURATION, REVIEW AND REISSUANCE, TRANSFER, MODIFICATION, TERMINATION, REVOCATION, ENFORCEMENT AND PROPERTY RIGHTS

A. Duration of Permit

1. The duration of an NPDES permit shall be established in accordance with 40 CFR 122.46, which is incorporated herein and adopted by reference. A State permit issued pursuant to the State law and this regulation may be issued for a period not to exceed five years. A UIC permit shall be issued for a term not to exceed ten years. A person who wishes to continue to operate under a permit which expires shall apply for reissuance of a permit pursuant to Section V.C.

2. All State permits which have an unspecified term or a term exceeding five years, shall be reevaluated and may be modified and/or reissued for a period not to exceed five (5) years after the date of modification and/or reissuance. Such State permits may be revoked unless the permittee demonstrates all of the following:

(a) the wastewater treatment facility can treat the amount of waste it was originally designed to treat,
(b) the wastewater treatment facility is not accepting more waste than it was originally designed to treat,
(c) the terms and conditions of the permit meet the current requirements of the Department, and
(d) the facility is in compliance with the permit terms and conditions.

The Permit Board may establish a schedule for reevaluation, modification and/or revocation of these permits.

3. Permits are subject to modification, revocation, and/or reissuance for cause at any time during the life of the permit.

B. Review and Reissuance of State, UIC, or NPDES Permits: Requests and Filing Requirements

1. At least 180 days prior to the expiration date of a State, UIC, or individual NPDES permit issued by the Permit Board pursuant to the State law and this regulation, a permittee who wishes to continue to operate under such permits shall submit an application to the Permit Board for reissuance. The Permit Board may grant permission to submit an application later than this, but no later than the expiration date of the permit. For NPDES general permits and State general permits, the Permit Board will establish in the general permit the schedule for resubmission of a NOI.

2. After receipt of an application for reissuance of a State, UIC, or NPDES permit by a permittee, the Permit Board shall review the application and before reissuing a permit shall be assured that:

(a) The permittee is in compliance with or has substantially complied with the terms, conditions, requirements, and schedules of compliance of the existing permit.
(b) The Permit Board has up-to-date information on the permittee's production levels, waste treatment practices and the nature, contents and frequency of the permittee's discharge.
(c) The discharge is consistent with applicable effluent standards and limitations, water quality standards, and other applicable requirements, including any additions to, revisions or modifications.

3. The Permit Board shall follow the same procedures in reissuing an NPDES or UIC permit as in issuing one.

4. If the applicant submits a timely and complete application or NOI pursuant to subparagraph 1. above, and the Permit Board, through no fault of the applicant, fails to reissue the permit or coverage and/or to act on the application or NOI on or before the expiration date of the existing permit or coverage, the existing permit or coverage shall remain in effect until final action on the permit and/or application or NOI is taken by the Permit Board. The provisions of 40 CFR 122.6(d) are incorporated herein and adopted by reference. In no event shall any permit or coverage remain in effect beyond the expiration date provided in B.6. below.

5. A copy of any NPDES or UIC permit reissued by the Permit Board shall be transmitted to the Regional Administrator (or his/her designee) with any appropriate forms or other applicable information relating thereto as agreed upon in the State/EPA Memorandum of Agreement.

6. An NPDES general permit or state general permit issued by the Permit Board pursuant to this regulation shall continue in effect beyond its expiration date if, at least thirty days prior to the expiration of the general permit, the Department issues a notice of intent to seek reissuance

of the permit (with or without modification) by the Permit Board. The general permit then will remain in effect until the Permit Board takes action on the Department's reissuance request.

C. State, UIC, and NPDES Permits: Transfer, Modification, Termination, or Revocation by the Permit Board

1. The applicable procedures and requirements set forth in the following sections of 40 CFR, Parts 122, 124 and 144 and amendments thereto shall be adopted as a part of this regulation and incorporated herein by reference.

(a) Part 122.61, except 122.61(b), and Part 144.38, except 144.38(b) - Transfer of Permits.
(b) Part 122.62 and Part 144.39 - Modification or Revocation and Reissuance of Permits.
(c) Part 122.63 - Minor Modifications of Permits.
(d) Part 122.64 and Part 144.40 - Termination of Permits.
(e) Part 124.5 - Modification, Revocation and Reissuance, or Termination of Permits.

2. In addition to the requirements provided in 1.a. above, Permit transfers are further regulated as follows:

(a) "Transfer" shall mean any sale, conveyance, or assignment of the rights held by the applicant in any permit issued pursuant to these regulations. Any change of more than 50 percent of the equity ownership of the permit holder over a sustained period which results in a new majority owner shall constitute a transfer. A new majority owner for purposes of this provision shall be an individual, partnership, company, or group of affiliated companies.
(b) A permit issued pursuant to these regulations shall not be transferred except upon approval of the Permit Board.
(c) A permit transfer shall be approved if the applicant for transfer approval can demonstrate to the Permit Board it has the financial resources, operational expertise and environmental compliance history over the last five years to insure compliance with the terms and conditions of the permit transferred except where this conflicts with State law.
(d) The application for approval of the transfer may be combined with an early application for permit renewal.

3. If the permittee requests a modification of a State, UIC, or NPDES permit which will neither cause the original compliance schedule to be extended more than four (4) months, nor cause an increase in the effluent limits, the modification may be immediately granted by the Permit Board. The Regional Administrator (or his/her designee) will be advised of any NPDES or UIC permit modification granted pursuant to this subpart.

4. If the permittee requests a modification of a state, UIC, or NPDES permit which will cause the original compliance schedule to be extended more than four (4) months, or cause effluent limitations to be less stringent prior to the Permit Board granting such modification of an NPDES or UIC permit, the Regional Administrator (or his/her designee) shall be given a reasonable time as agreed between the State and EPA in which to object in writing and any such objections shall be resolved before the modification is granted.

5. Permit Actions. The permit may be modified, revoked and reissued, or terminated for cause. 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.

D. Enforcement

1. A person who violates any provision of these regulations, a term, condition or schedule of compliance contained within a valid State, UIC, or NPDES permit, or the State law is subject to the actions defined in the State law.

2. The Executive Director or his duly authorized designee shall notify the Regional Administrator(or his/her designee) of all violations in accordance with the MOA regarding NPDES or UIC permits and the means by which the Commission proposes to correct or require the correction of such violations in accordance with 40 CFR 123.45.

3. It shall not be the 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 the permit.

E. Property Rights, All Permits

A permit issued by the Permit Board does not convey any property rights in either real or personal property, or 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.

VI. NONCOMPLIANCE LISTS, PLANS AND SPECIFICATIONS: SUBMITTAL REQUIREMENTS, AND SEVERABILITY

A. Noncompliance Lists

The Executive Director shall prepare and submit to the Regional Administrator (or his/her designee) any lists of facilities in noncompliance as defined and required in 40 CFR 123.45.

B. Plans and Specifications: Submittal Requirements

1. Plans and specifications for all proposed municipal and domestic sewage collection systems, including modifications and additions thereto, must be submitted to and approved by the Department prior to beginning construction of the proposed system. With the concurrence of

the Department, small privately owned domestic collection systems (less than 1,500 gpd) may be allowed to submit plans and specifications prepared by a licensed plumber or architect.

2. Except as excluded in Section VI.B.5., plans and specifications for all proposed treatment works must be submitted to the Department for comment prior to beginning construction of the proposed works. In addition, plans and specifications for all proposed treatment works for which a Department administered grant or loan has been made or is to be requested must be approved by the Department prior to commencement of construction.

3. The Department may exempt domestic wastewater facilities with discharges less than 1,500 gpd. Commercial and institutional establishments installing treatment works which

(a) have a design capacity of 1,500 gallons per day or less, and
(b) do not and will not involve a Department administered grant or loan, and
(c) do not require a UIC permit, will normally not be required to submit plans and specifications for the treatment works to the Department.

However, prior to beginning construction, it is required that the Department be advised in writing, of the type and capacity of the system to be constructed, and also the location of the discharge point if applicable.

4. The Department's receipt, comment, or approval of any document does not relieve the project's owner, consulting engineer, contractor, equipment supplier, attorney, or any other party of any liabilities or responsibilities. Department approval of or comment on any document does not establish or convey any liability or responsibility to the Department, nor does such represent any assurances that the project will be able to comply with any permit requirements or otherwise perform as intended by the owner, consulting engineer, contractor, equipment supplier, attorney, or other parties. The permittee is responsible for complying with all conditions of a permit and ensuring that all construction, operation, and maintenance activities achieve such compliance.

5. All equipment, structures, facilities, and/or systems installed in accordance with Section VI.B.1., 2. or 6. shall be maintained and operated in accordance with Section IV.A.18.

6. Except as excluded in Section VI.B.5., not later than 60 days after completion of the project, the owner must, through a letter signed by a professional engineer, certify to the Department that the project has been constructed in accordance with final submitted plans and specifications. Where significant changes to the plans and specification have been made, the professional engineer must submit a list of changes with the certification letter. In addition, as built plans and specifications for all municipal and domestic treatment works, and sewage collection systems, must be submitted to the Department not later than sixty (60) days after completion of the project.

7. All plans and specifications submitted to the Department must be developed by a professional engineer who holds a valid certificate of registration as a professional engineer

issued by the Mississippi State Board of Registration for Professional Engineers and Land Surveyors.

8. The only permits issued by the Permit Board for wastewater discharges are State permits, UIC permits, and NPDES permits. Review and approval of design plans and specifications does not constitute authorization to begin construction, and any permit applicant who commences construction prior to final Permit Board action under Section III.H. builds at his own risk.

9. Plans and specifications shall be developed utilizing fundamental engineering principles and approved engineering practices from acceptable engineering guidance sources including, but not limited to, Recommended Standards for Sewage Works, ("Ten States Standards" and all amendments), text books, manuals of practice, technical publications, or other appropriate publications.

10. Plans and specifications that vary from these engineering sources may be submitted if the Department determines such plans and specifications are properly supported in writing by the consulting engineer. A copy of all plans and specifications shall be maintained by the permittee, owner, or operator, whichever is responsible for operation and maintenance of the constructed facilities.

11. Any proposed significant changes to approved or submitted plans and specifications must be submitted to the Department for approval or comment in accordance with Section VI.B.1. or 2. Approval of or comment on such revised plans and specifications may be secured from the Department either before or after construction is initiated, at the discretion of the owner. If the owner constructs such changes reflected on the plans and specifications prior to securing Department approval or comment, the owner does so at his own risk and may be required by the Department to correct any unacceptable changes and/or deficiencies.

C. Severability

If any provision, section, subsection, sentence, clause or phrase of any of these regulations, or the application of same to any person or set of circumstances is for any reason challenged or held to be invalid or void, the validity of the remaining regulations and/or portions thereof or their application to other persons or sets of circumstances shall not be affected thereby.

CHAPTER TWO - WATER QUALITY BASED EFFLUENT LIMITATIONS

I. BACKGROUND

The purpose of this section is to set forth procedures for the determination of limitations to protect the water quality of the State.

Section 303 of the Federal Act requires the State to develop total maximum daily loads (TMDLs) for pollutants which will ensure the attainment of water quality standards. Load allocations, wasteload allocations and consequent effluent limitations will be developed consistent with the requirements of Section 303 of the Federal Act and all other applicable State statutes.

II. GENERAL REQUIREMENTS

A. Applicability

In addition to any technology based surface water effluent limitations required under the provisions of Chapter One of these regulations, all activities and discharges shall also meet water quality based effluent limitations where necessary to meet water quality standards.

1. A water quality based effluent limitation shall be determined by the Department in accordance with this chapter and shall be based upon the characteristics of discharge, the receiving water characteristics, the criteria and standards of the State's Water Quality Criteria and any other information deemed necessary to protect water quality. The applicant may be required to provide the necessary information. Requests for zones of mixing and any previously approved zones of mixing will be taken into consideration when determining WQBELs. In order for a zone of mixing to be provided for any parameter, the applicant must provide the necessary characteristics of the discharge either prior to or within a reasonable time after the Department has made a request for this information from the applicant.

2. The Permit Board may decide not to specify limits in permits required for the following:

(a) stationary installations created by dredging and/or filling;
(b) stationary installations for the discharge of drainage;
(c) stationary installations for which best management practices are deemed appropriate; or
(d) any other activities the Permit Board deems appropriate.

3. For the activities described in paragraph 2, an applicant shall provide the Permit Board with reasonable assurance that the proposed discharge will comply with water quality standards. Reasonable assurance may be based upon the following:

(a) scientific studies which may include mathematical water quality modeling and/or biological studies; or
(b) proposed use of any pollution control technique which assures compliance with water quality standards.

B. General Technical Guidance

1. The specific pollutants expected to be in a discharge shall be determined from an effluent characterization provided by the applicant which may be submitted in the appropriate permit application. This characterization may include the long term average and daily maximum pollutant concentrations and the ultimate biochemical oxygen demand (BOD_u) for oxygen demanding waste. See Exhibit A to this chapter.

2. An evaluation of the impact of a proposed or continued discharge on the water quality of the receiving water body shall be conducted by the Department for all permit applications. The Department shall review applications to determine whether Technology Based Effluent Limitations ("TBELs") as contained in Commission regulations are sufficient to maintain water quality standards in the receiving water body. If TBELs are sufficient, the permit limits will be based on those criteria. If TBELs are not protective of water quality standards, or if additional information or analyses are determined to be necessary to ensure that the effluent will not violate water quality standards in the receiving water body, Water Quality Based Effluent Limitations ("WQBELs") shall be considered.

3. The establishment of WQBELs does not alleviate the discharger from complying with all other applicable regulations of the Commission or with the requirements of any other Mississippi, federal, or local law.

4. Effluent limitations based upon water quality standards and the provisions of Chapter One of these regulations shall be determined by application of accepted scientific methods. Accepted scientific methods shall be based upon, but not limited to, the following:

(a) analysis of the condition of the receiving water body including reasonably expected ambient water quality and present and future flow conditions; and
(b) consideration of the nature, volume, and frequency of the existing and/or proposed discharge of waste, under which the cumulative impact of discharge is reasonably expected to be a maximum, including any possible known synergistic effects with other pollutants or substances which may be present in the receiving water body .
(c) Nothing in a. or b. above, shall preclude the Department from establishing WQBELs that vary on a seasonal or other basis.

5. Sanitary sewage shall be disinfected in accordance with the requirements set forth in Exhibit "B" to this chapter which is attached hereto and incorporated herein by reference.

6. For determining TBELS, contaminants in intake water shall be handled in accordance with 40 CFR 122.45(g).

7. In all cases, the Department shall be responsible for setting final WLAs, LAs, TMDLs, and permit limits and requirements.

III. WQBEL Process

A. Water Quality Based Effluent Limits

The WQBEL process is a means of determining the available assimilative capacity of a water body and setting WQBELs utilizing appropriate procedures for simulation and prediction of water quality impacts. This process will be used unless the Department determines there are adequate data to support a determination that the receiving water body currently meets water quality standards and will continue to meet water quality standards with the discharge. Computer models utilized include those approved and supported by the Commission and/or EPA. The methodologies used for the WQBEL process are found in Exhibit A to this chapter and in Section VI. of this chapter. In the event the receiving water body's minimum flow value used for allocation purposes is zero, permit limitations shall be modeled with the flow equal to the effluent for conventional pollutants unless otherwise provided in these regulations. The minimum CBOD model input for WQBEL permit limit determination will be equivalent to the estimated background conditions for streams (2.0 CBODu) as indicated in Exhibit A.I.J.2. The permittee may provide the necessary scientific information to support a less stringent limit.

B. Modeling

Unless actual data or circumstances indicate otherwise, computer modeling is suitable for developing effluent limitations in water bodies for the cases that follow:

1. sanitary wastewater having an effluent $CBOD_5$ limitation of 30 mg/l to 45 mg/l and/or an effluent $CBOD_5$ limitation as defined secondary or equivalent secondary requirements;

2. sanitary wastewater having an effluent $CBOD_5$ limitation of less than 30 mg/l but greater than or equal to 2 mg/l;

3. all effluent limits developed because of the threat of, or potential for, water quality impacts due to toxicants;

4. some oxygen demanding wastewaters, other than sanitary wastewater, which are generated by industrial processes.

The State's specific conventional point source water quality modeling and WLA criteria, including specific chlorine and ammonia requirements, are located in Exhibit A to this chapter which is incorporated herein and adopted by reference.

C. Calibration Modeling

Calibration modeling and/or verification modeling and/or a water quality field assessment (including physical, chemical, and/or biological water quality surveys) may be required for the determination of WQBELs because of the consideration of factors as follows: the complexity of the receiving water body, magnitude and impact or potential impact of the discharge, amount of available data, aquatic life and/or human health concerns, and any other factor deemed necessary by the Permit Board to protect water quality. The applicant may be required to provide the necessary information.

D. WQBEL Process Use

The WQBEL process may be utilized to determine new discharge permit limits and to evaluate permit renewals when: a. the Department determines existing water quality data is insufficient to evaluate expected water quality impacts, b. the Department determines the available assimilative capacity of the water body is being completely utilized, either alone or in combination with other discharges (including both point and non point sources), c. the Department determines water quality standards are being violated, or d. when the permittee so chooses (except for the purpose of delaying implementation of a particular permit limit). The Department may reissue permits which contain existing permit requirements if the data are adequate to support that the receiving water body currently meets and will continue to meet water quality standards.

E. WQBELs Apply to Watershed

When a WQBEL process is determined to be necessary, the analysis shall consider and determine WQBELs for the permit applicant considering all affected discharger(s) to the receiving water body, including both point and nonpoint sources.

F. Quality Assurance

When an applicant is developing and/or conducting a verified and/or calibrated model and/or conducting a water quality field assessment in the WQBEL process for submittal to the Department, the applicant shall:

1. Provide the Department a copy of the Quality Management Plant (QMP) for the entity performing the work. The QMP should be consistent with the most current version of EPA's *Requirements for Quality Management Plans*, EPA QA/R-2.

2. Coordinate with the Department to determine the information required, including accepted methods of data collection and analyses, and quality control/quality assurance requirements.

3. Use this information to help develop a Quality Assurance Project Plan (QAPP), or its equivalent. The QAPP must be approved in writing by the Department prior to beginning work.

4. Failure to comply with the QAPP may result in the Department's rejection of some or all of the data.

IV. WATERS DIFFICULT TO MODEL

A. Losing flow streams.

Many losing flow streams can and should be modeled to determine effluent limitations. Such models are only applicable to the point of zero flow.

B. Lakes.

1. Computerized and/or ecological type models may be used, if appropriate and available.

2. For existing discharges, current effluent limits may be appropriate, if ambient water quality data indicate water quality standards are met and no nuisance conditions associated with the discharge exist.

3. Nutrient budget models may be used to determine if nutrient reductions are needed. Nutrient contribution and abatement from both point and nonpoint sources shall be considered.

4. Discharges to embayments and coves shall be evaluated on a case-by-case basis. However, effluent limitations more stringent than TBEL may be required.

5. Diffuser outfalls for discharges to the main body of a lake may be required when needed to eliminate localized water quality impacts.

6. Permit limitations for toxicants shall be determined based upon State, and/or EPA recognized, procedures and best professional judgment in accordance with applicable law.

C. Natural Wetlands

1. In the absence of site specific water quality standards, effluent limitations for discharges to swamps, marshes, bogs, wetlands, etc., shall be determined based upon potential or existing physical, chemical, and biological water quality impacts.

2. Discharges of sanitary or other oxygen demanding wastewater to natural wetland areas must, at a minimum, meet secondary treatment standards.

3. The permittee may be required to monitor biological health of the wetland and the water quality of the receiving wetland (pre and post - permitting).

4. No toxic substances shall be discharged in amounts that violate the State's Water Quality Standards.

5. For industrial discharges, the ultimate oxygen demand of the wastewater shall also be considered when developing permit limitations. Limits equivalent to 30 mg/l BOD_5 or less shall be given to industrial discharges of oxygen demanding wastewater to natural wetlands.

D. Nutrient Enriched Waters.

In case of nutrient enriched waters, data from a water quality field assessment and/or appropriate models shall be used to determine impact and set effluent limitations.

V. SPECIAL CASES

A. Effluent Channels.

1. The standards set forth in the State's Water Quality Standards do not apply to effluent channels.

2. Water in effluent channels shall be maintained at a quality which shall prevent the occurrence of offensive conditions, protect public health, and allow (after mixing) maintenance of all standards applicable to all downstream waters.

B. Ephemeral Streams.

Effluent limits for ephemeral streams shall be established consistent with the State's Water Quality Standards.

1. Discharges from a POTW must, at a minimum, meet secondary treatment requirements. Industrial discharges must at a minimum meet TBELs.

2. Alternative methods may be utilized to determine the potential toxic effect of ammonia.

3. Water in ephemeral streams shall be maintained at a quality which shall prevent the occurrence of offensive conditions, protect public health, and allow (after mixing) maintenance of all standards applicable to all downstream waters.

C. Dystrophic Waters

1. Reasonable alternatives, including but not limited to, no discharge and land application, shall be considered prior to allowing a new discharge or continuation of an existing discharge.

2. Effluent limitations shall be set to allow a degradation of no more than 10% of the background concentration when the background dissolved oxygen is at or below the State's minimum dissolved oxygen criterion.

3. Discharges shall not increase toxicants above background concentrations for those waters whose background exceeds the Water Quality Standards due to natural or irretrievable man-induced conditions.

D. Shellfish Waters.

Waters classified as shellfish waters are generally classified to protect commercially or recreationally harvestable shellfish resources. The Permit Board shall insure that permitted discharges are located and have effluent limits such that impacts or potential impacts on the use of shellfish waters shall be consistent with the National Shellfish Sanitation Program. For areas with existing dischargers that impact shellfish water, other alternatives may be considered.

VI. TOXICITY

A. General

1. Purpose and Scope. The purpose of this section is to set forth a realistic and cost effective procedure to screen, evaluate and reduce toxicity of wastewater discharges. Additionally, the procedures described herein are designed to ensure compliance with the Federal Act.

2. Summary of Procedure. Mississippi uses a three-step approach to toxicity reduction. Step one involves a detailed review of the permit application and any historical bioassay data and the use of specific screening procedures. The purpose of this step is twofold. First of all, the Department identifies the universe of those facilities which have discharges which are potentially toxic instream. The Department screening procedures evaluate a discharge's potential acute, chronic, and human health impact on the receiving stream. Secondly, the Department determines whether the data in an application have been submitted in strict adherence with EPA accepted analytical procedures with all of the appropriate parameters reported.

The second step involves the development of permit limits in accordance with accepted state and national water quality criteria for those facilities exhibiting potential toxicity. Permit limits may take the form of chemical specific and/or whole effluent toxicity based limits.

The third step in the process involves additional testing and actual toxicity reduction for those facilities which fail any whole effluent toxicity requirements included in their permits. Permits addressing whole effluent toxicity have specific language requiring the permittee to perform a Toxicity Reduction Evaluation (TRE) upon non-compliance with the whole effluent toxicity limitations contained in the permit.

B. Applicability

1. Chemical Specific Application Data Requirements.

(a) These procedures apply to the review of industrial and municipal applications for NPDES permits and pretreatment permits for the permittees which follow:

(1) all primary industries (major and minor);
(2) all major facilities; and
(3) all industrial and municipal facilities for which the application review indicate parameters above accepted quantitation levels.

(b) Until such time as the Administrator of EPA promulgates, and the Commission prescribes, an NPDES application form for municipal facilities that addresses section 307(A) toxics, municipalities shall submit as part of their application the appropriate pages from EPA Form 3510-2C. Municipalities shall determine the toxic characteristics of their wastewater by analyzing for the toxic pollutants listed in Table III of Appendix D of 40 CFR 122 which is incorporated herein and adopted by reference. Metal analysis shall be for total recoverable metals. Additionally, municipalities shall analyze for total hardness (mg/l as $CaCO_3$) and any Section 307(A) toxic listed in an industrial user's pretreatment permit for any industrial category identified in 40 CFR 403, Appendix C which is incorporated herein and adopted by reference. Municipalities shall submit two influent and two effluent samples collected each month during the six-month period immediately preceding the application submittal deadline date.

2. Whole Effluent Toxicity Application Data Requirements.

(a) The Whole Effluent Toxicity (WET) test requirements for an application for renewal of applicable NPDES permits are set forth in Section II.D. of Chapter One above.
(b) Permittees required to perform WET tests as part of their application under Section VI.B.2.a. shall conduct at least four WET tests in the year preceding filing of the application. These tests will include two samplings, one during the hot-dry season and one during the cold-wet season. If the receiving water salinity is less than 1,000 mg/l then freshwater testing organisms shall be used. If the Instream Waste Concentration (IWC) at low flow is less than one percent, the permittee shall perform 48-hour, static non-renewal, definitive (a control and five effluent concentrations) acute WET tests at 25°C using *Ceriodaphnia dubia* (invertebrate) that are less than 24 hours old and a 96-hour, static renewal (tests that exceed 48 hours in duration must be renewed), definitive acute WET test at 25°C using *Pimephales promelas* (vertebrate) that are less than 24 hours old. If the IWC at low flow is greater than or equal to one percent, the permittee shall perform chronic WET tests. These shall be definitive static renewal tests at 25°C using *Ceriodaphnia dubia* and *Pimephales promelas*. Acute tests shall be performed in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027), or most recent edition and chronic tests shall be performed in accordance with Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, (EPA/600/4-89/001) or most recent edition. If the receiving water salinity is greater than or equal to 1,000 mg/l, then saltwater organisms shall be used. If the IWC at low flow is less than one percent, the permittee shall

perform 48-hour, static non-renewal, definitive acute WET tests at 25°C using *Americamysis* (invertebrate) that are 1-5 days old and a 96-hour, static renewal, definitive acute WET test at 25°C using *Menidia beryllina*. If the IWC at low flow is greater than or equal to one percent and the receiving water salinity is greater than or equal to 1,000 mg/l, the permittee shall perform short-term chronic WET tests at 25°C using *Americamysis* and *Menidia beryllina*. Acute tests shall be performed in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027), or most recent edition, and chronic tests shall be performed in accordance with Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, (EPA/600/4-87/028), or most recent edition. All of the above mentioned manuals are incorporated herein and adopted by reference. MDEQ will allow a six-month grace period for implementation of tests procedures described in the most recent edition of the methods manuals. During this permit, MDEQ will accept test results derived using either procedure, provided the tests are conducted properly. The Permit Board may also require appropriate tests on a plant species, if it deems necessary to protect human health, welfare, or the environment.

(c) The Permit Board may require WET testing as a condition of a permit application, as a condition of an NPDES permit, or as a condition of a regulatory order. In the case of a permit modification, WET testing may be required after the implementation of the modification. In addition, a modified application may be required for evaluation of toxicity.

C. Application/Determination of Alternative Chemical Specific Limitations

1. The Permit Board shall issue NPDES permits with limits based on total recoverable metals, when appropriate, as specified in 40 CFR 122.45, which is incorporated herein and adopted by reference.

2. Alternative Chemical specific limitations for permits shall be calculated in accordance with the methods set forth below.

(a) The first method is the establishment of a site specific Biological Translator that relates the existing water quality standard to a specific permit limit using the water effects ratio (WER) procedure described in Interim Guidance on Determination and Use of Water Effects Ratios for Metals February 1994 EPA No. 823-B-94-001, Streamlined Water-Effect Ratio Procedure for Discharge of Copper March 2001 EPA No. 822-R-01-005 or the most recent edition.

(b) The second method, applicable to metals, is the development of a Chemical Translator using site specific data to determine the dissolved fraction of the permitted metals. The water quality criterion is then divided by the dissolved fraction to provide a value to be used in the WLA. Two methods are available to the permittee for calculating the dissolved fraction.

(1) The dissolved fraction may be calculated from site specific Total Suspended Solids (TSS) data and partitioning coefficients listed in the Technical Guidance Manual for Performing Wasteload Allocations. Book II: Streams and Rivers. Chapter 3 (EPA-440/4-84-022) which is referenced in the bibliography (Exhibit F to this chapter).

(i) The Linear Partition Coefficient is calculated from Table 5-4 in the Technical Guidance Manual using the following formula:

$$K_p = K_{po} * TSS^a$$

Where:
Kp = Linear Partition Coefficient
Kpo = Regression Coefficient (from table)
TSS = Total Suspended Solids Concentration (site specific 15th percentile)
a = Exponent Constant (from table)

(ii) The Dissolved Fraction is then calculated as follows:

$$\frac{C}{C_T} = \frac{1}{1 + K_p * TSS * 10^{-6}}$$

Where:
C/CT = Dissolved Fraction of metal

(2) Alternately, the permittee may determine the dissolved fraction directly by analyzing paired samples of site water for dissolved and total recoverable metals using EPA's "clean" analytical techniques and sampling procedures. This determination may be made in one of two ways.

(i) Collect four paired samples during the low flow period, defined as no greater than twice the $7Q_{10}$, analyze paired samples of site water for dissolved and total recoverable metals using EPA's "clean " analytical techniques and sampling procedures, take the arithmetic mean of the four analyses, and calculate the dissolved fraction based on the mean values for dissolved and total recoverable metals.

(ii) Collect 20 paired samples on randomly selected dates throughout the year, analyze as described in (2)(i) above, calculate the dissolved fraction for each sampling, and use the 95th percentile highest dissolved fraction.

(3) The permittee is responsible for providing all the site specific data needed for these calculations.

(c) The third method is to assume that there is no difference between the dissolved and total recoverable metals concentrations.

3. If the permittee opts to utilize methods a. and b. listed above, the results from method a. will be applied since it is a more comprehensive procedure compared to the relatively simple calculation of the dissolved fraction.

4. If the permittee does not opt to utilize methods a. or b., method c. shall be applied.

5. The application of any translator derived limitation does not preclude the demonstration of toxicity requirements for other toxicants through the use of WET tests as specified in the permit.

D. Procedures for Chemical Specific Screening

1. Review data submitted with application (e.g. NPDES - 2C, 2D and 2E, Pretreatment - State No Discharge Application)

Identify every toxic parameter in the permit and/or application above quantitation levels [1] and set up a table for each outfall, listing for each parameter the following [2]:

(a) maximum concentration;
(b) maximum 30-day average;
(c) long term average; and
(d) number of samples.

The following calculation conventions shall be utilized when using data reported as non-detect or less than detection:

(1) Non-detect (ND) or less than at the appropriate quantitation levels - use zero
(2) If all data in the permit application are below quantitation levels, the permittee should list the individual non-detect value with the highest detection level reported as the maximum and not calculate an average.

The Department will not consider an application complete if the concentrations required are reported as "N.D." (Not Detected) unless a chemical by chemical listing of the quantitation levels used is provided with the application.

2. Calculate/Determine Permit Limits

Technology/federal guidelines based permit limits are calculated using current facility data and federal guidelines. If existing permit limits are more stringent and are being attained, use existing permit limits.

[1] Where application form data are reported as "less than" (<) compare Minimum Quantitation Levels (MQLs) set forth in Exhibit D to this chapter which is incorporated herein and adopted by reference. MQLs will be utilized in determining the reasonable potential of a given pollutant to violate water quality criteria. If a pollutant is reported as "non-detectable" above the MQLs set forth in Exhibit D, the pollutant will be assumed to be present at that reported level of sensitivity. The Department may accept Quantitation Levels higher than those found in Exhibit D if adequate scientific justification is provided.

[2] Note in some cases parameters limited by the permit may be below the minimum quantitation level.

3. Calculate Appropriate Flows

Appropriate $7Q_{10}$ and annual average flows will be calculated in accordance with the methods found in Techniques for Estimating 7-Day, 10-Year Low-Flow Characteristics for Ungaged Sites on Streams in Mississippi (USGS Report 91-4130), and Low-Flow and Flow-Duration Characteristics of Mississippi Streams (USGS Report 90-4087) or the most recent edition, respectively.

4. Determine IWC for Chronic, Acute, and Human Health Conditions[3]

$$IWC = 100 * \frac{Q_w}{Q_r + Q_w}$$

Where:
IWC = Instream Wastewater Concentration (where facility water supply is not receiving water.)
Q_r[4] = Receiving water flow at appropriate low flow
Q_w = For non-domestic facilities - Maximum 30-day average wastewater flow, if available; Domestic facilities - design flow; Hydrographic control release facilities - appropriate wastewater to stream flow ratio.

5. Develop acute, chronic, and human health tables listing parameters, X_w, X_{wa}, X_{ta}, and appropriate criteria.

$$X_t = \frac{(Q_r * X_r) + (Q_w * X_w)}{Q_r + Q_w}$$

[3] For calculation of all instream waste concentrations, and instream pollutant concentrations for chronic toxicity and human health screening, instantaneous complete mixing will be assumed unless addressed otherwise in the regulations. IWC is expressed in a percentage throughout these regulations. For acute screening in streams and rivers, complete mixing will be assumed if the IWC is greater than or equal to 10%. If the IWC is less than 10%, the Permit Board may evaluate local acute toxic impacts and require application of mixing zones in accordance with the Mississippi Water Quality Standards.

For oceans, bays, estuaries, and lakes, a Mixing Zone evaluation will be completed to determine the appropriate dilution factors for calculating IWC at the edge of the (regulatory) mixing zone and at the edge of the smaller area of discharged-induced mixing zone (ADIM). In the absence of a site specific evaluation, dilution at the edge of the mixing zone will be assumed to be one part effluent to six parts receiving water body. Mixing zones and associated instream calculations shall be performed as described in EPA's "Technical Support Document for Water Quality-Based Toxics Control" (EPA/505/2-90-001) March 1991, which is referenced in the bibliography (Exhibit F to this chapter).

[4] Where Q_r = ($7Q_{10}$ for Acute)
= ($7Q_{10}$ for Chronic)
= (Mean annual flow for Human Health)
If $7Q_{10} = 0$ then $Qr = 7Q_{10}$ for conditions except for human health and then Q_r equals mean annual flow if available.

Where:
IWC = Instream Wastewater Concentration (where facility water supply is not receiving water)
Q_w = maximum 30-day average wastewater flow, if available
Q_r = receiving stream flow
X_r = receiving stream concentration
X_w = historical effluent data
X_{wa} = permit limits from previous permit or from effluent guidelines
X_{ta} = the calculated instream concentration based on existing permit limits or the calculated limit based on current effluent guidelines
X_t = the calculated instream concentration based on historical effluent data from application

If IWC is < one percent, do not develop the chronic table.

If $Q_r = 0$ then $X_t = X_w * IWC/100$

NOTE: To calculate X_{ta} substitute X_{wa} for X_w
X_{wa} = Permit Limit

Where: Number of samples is >12 & $7Q_{10}$ is >0 then;

TABLE	**X_w [5, 6]**	**Q_r**	**X_r [7]**
Acute	Maximum Concentration	$7Q_{10}$	Instream Background Concentration
Chronic	Long Term Average Concentration	$7Q_{10}$	Instream Background Concentration
Human Health	Long Term Average Concentration	Mean Annual	Instream Background Concentration

The appropriate criteria to use in each table are as follows:

IWC	**Acute**	**Chronic**	**Human Health**
>1%	Compare X_t and X_{ta} to Acute Water Quality Criterion Value	Compare X_t and X_{ta} to Chronic Water Quality Criterion Value	TSD
≤1%	Same as above	Do Not Compare	Same as above

[5] from 2C application and/or other appropriate data sources

[6] if number of samples is <12 then Xw = (appropriate concentration * 10). The permittee may request utilization of alternative methods for determining reasonable potential set forth in the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001) or its amendments (TSD), subject to prior Permit Board review and approval of the method's implementation.

[7] if no instream background concentration exists $X_r = 0$

A parameter fails the screen when the appropriate instream concentration or effluent concentration (as per above) exceeds the appropriate criterion.

MDEQ will use the chronic and acute water quality criteria and/or values as described in State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters. If the permittee's discharge evaluation is based on species not found in Mississippi, the permittee may submit an alternative criterion as per the State's Water Quality Standards. However, said criterion shall conform to EPA's accepted procedures / rationale and is subject to both State and EPA approval.

E. **Toxicity Limits**

Chemical specific limits shall be placed in a permittee's permit if any of the parameters evaluated in the toxic screening procedure indicate the reasonable potential for violation of the appropriate criteria (Acute, Chronic, and Human Health). The only exception is when a permittee fails the criteria due only to the application of the variability factor, that is a number of samples less than 12. In the case of the preceding exception, the permittee shall be required to monitor those parameters at a frequency of at least once per month for twelve months with the toxicity screening procedures being reapplied and the permit modified accordingly. The limits for the subject parameters will not be established until the subject data is received.

Toxicity limitations may take two forms; (1) chemical specific numerical limitations placed on the effluent, and/or (2) whole effluent bioassays with whole effluent toxicity (WET) limits. Chemical numerical limits will be calculated by mass balance back to the effluent using the appropriate instream criteria. The Permit Board will consider the utilization of alternative approaches described in EPA's TSD for calculating WQBELs where sufficient supporting documentation is submitted by the applicant. Mixing zones may be utilized in certain circumstances as allowed in the "State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters".

In the absence of WET testing data, WET monitoring will be required upon failure of the acute or chronic chemical specific criteria screening. Failure of WET testing will be a basis for permit WET limitations. Failure will be defined as follows: an acute test that results in an $LC_{50} < 3 *$ IWC, or a chronic test that results in an $IC_{25} <$ IWC. The IC_{25} refers to the Inhibition Concentration 25, which shall be defined as a point estimate of the effluent concentration that would cause a 25% reduction in a non-lethal biological measurement of the test organisms, such as reproduction or growth.

The establishment of a WET limit versus WET monitoring shall be in accordance with 40 CFR 122. 44(d), which is incorporated herein and adopted by reference. If chronic toxicity is indicated, the permit shall limit toxicity by requiring the IC_{25} of the effluent to equal or exceed the IWC. When acute toxicity is indicated, the toxicity limit will take the following form:

Effluent 48-hour $LC_{50} > 3 *$ IWC (not to exceed 100%)

TOXICITY SCREENING MATRIX

IWC	Screening Results			Permit Requirements		
	CSS_A	CSS_C	WET[8]	CS_L	WET_L	WET_M
All	Pass	Pass	Pass	No	No	No
≤1%	Pass	Pass	Fail	No	Yes_A	N/A
	Fail	Pass	Fail	Yes	Yes_A	N/A
	Fail	Pass	Pass	Yes	No	No[8]
>1%	Fail	Fail	Fail	Yes	Yes_C	N/A
	Fail	Fail	Pass	Yes	No	No[8]
	Pass	Fail	Fail	Yes	Yes_C	N/A
	Pass	Fail	Pass	Yes	No	No[8]
	Fail	Pass	Fail	Yes	Yes_C	N/A
	Fail	Pass	Pass	Yes	No	No[8]

Where:
CSS_A = Chemical Specific Screening Acute
CSS_C = Chemical Specific Screening Chronic
WET = Whole Effluent Toxicity Data
CS_L = Chemical Specific Limits= WQS/(IWC/100)
WET_L = Whole Effluent Toxicity Limits W/Monitoring
WET_M = Whole Effluent Toxicity Monitoring Only
Yes_A = Yes/Acute WET Limit = LC_{50} = 3 * IWC
Yes_C = Yes/Chronic WET Limit = IC_{25} = IWC
N/A = Not Applicable
Y_{AM} = Yes, Acute WET Monitoring Only
Y_{CM} = Yes, Chronic Monitoring Only
Pass = Acute: $LC_{50} \geq 3$ * IWC
= Chronic: $IC_{25} \geq$ IWC
Fail = Acute: $LC_{50} < 3$ * IWC
= Chronic IC_{25} < IWC

Human health shall be evaluated in accordance with "USEPA, Technical Support Document". When a parameter violates the human health criteria either for "water and organisms" or "organisms only", as appropriate, numerical limitations shall be placed in the permit.

F. Screening Storm Water Discharges

1. General

(a) Purpose and Scope. The purpose of this section is to set forth procedures used to determine individual storm water permit limits for toxics and conventional parameters. Only

[8] Facilities that are not required to submit WET data at application and/or no WET data exists that fail a chemical specific screen will be required to perform WET monitoring quarterly for twelve months. The WET data will then be applied to the toxicity screening matrix. The permit will be reopened and modified as indicated by the matrix. If the WET data required by this paragraph indicates no toxicity, no further monitoring will be required during the remaining term of the permit.

storm water associated with industrial activity is considered. Process wastewaters are addressed elsewhere in these regulations. The ultimate goal of setting individual storm water permit limits is to reduce pollutants in storm water runoff in order to protect receiving stream water quality.
(b) Methods of Limits Determination. Due to high variability of storm water volume, only concentration limits will be determined by one or a combination of the procedures which follow:

(1) Effluent Limitations Guidelines (ELG);
(2) Water Quality Standards (WQS); and
(3) Best Professional Judgment (BPJ).

(c) Wet Weather Flow for Streams with Gaging Stations. For streams with a gaging station, the $7Q_2$ will be used. The value of the $7Q_2$ is readily available in the USGS Water-Resources Investigations Report 90-4087, Low-Flow and Flow-Duration Characteristics of Mississippi Streams, 1991.

Calculation:

$$Q = Site7Q_2 = Gage7Q_2 * \frac{SWA}{GWA}$$

Where:
SWA = Site Watershed Area
GWA = Gage Watershed Area

(d) Wet Weather Flow for Other Streams and Industrial Sites.
For both small watersheds without gaging data and industrial sites, the stream flow and site runoff will be estimated using the Rational Equation, assuming the average storm event intensity over the entire area. The Rational Equation is:

$$Q = C * I * A$$

Where:
Q = the flow in cfs,
C = the runoff coefficient,
I = the rainfall intensity in inches/hour, and
A = area in acres.

The conversion factor to cfs is slightly less than 1.01 and is generally ignored. Attached to Chapter Two collectively as Exhibit "C" and incorporated herein by reference is a table of runoff coefficients and a map showing average storm event intensity over Mississippi. The area is estimated using GIS software applications.
Calculation:

$$Q = I * ((C_1 * A_1) + (C_2 * A_2) + ...)$$

For large watersheds without an applicable gaging station, Best Professional Judgment (BPJ) will be used.

2. Stormwater Limits Determination

(a) Effluent Limitations Guidelines (ELG)

(1) The Code of Federal Regulation (CFR), Title 40, provides effluent limitations guidelines that address storm water discharges for the following facilities: Cement Manufacturing (40 CFR Part 411); Concentrated Animal Feeding Operations (CAFO) (40 CFR Part 412); Fertilizer Manufacturing (40 CFR Part 418); Petroleum Refining (40 CFR Part 419); Iron and Steel Manufacturing (40 CFR Part 420); Phosphate Manufacturing (40 CFR Part 422); Steam Electric (40 CFR Part 423); Bleached Papergrade Kraft and Soda Subcategory of the Pulp, Paper and Paperboard (40 CFR Part 430);Meat and Poultry Products (40 CFR Part 432); Coal Mining (40 CFR Part 434); Oil and Gas (40 CFR Part 435); Mineral Mining and Processing (40 CFR Part 436); Centralized Waste Treatment Point Source (40 CFR Part 437); Metal Products and Machinery (40 CFR Part 438); Pharmaceutical Manufacturing (40 CFR Part 439); Ore Mining and Dressing (40 CFR Part 440); Transportation Equipment Cleaning (40 CFR Part 442); Asphalt Emission (40 CFR Part 443);.and Concentrated Aquatic Animal Production (40 CFR Part 451). All of the foregoing CFR parts are incorporated herein and adopted by reference.

(2) When limits are given in the CFR, they are generally concentration values in mg/l. These concentration values will be used for the permit limits if protective of human health, welfare, or the environment.

(3) When concentration limits are not given in the CFR, Water Quality Standards and/or best professional judgment will be used to determine the facility's discharge limits.

(b) Water Quality Standards (WQS).

In determining limits for an Individual Storm Water Permit, a distinction is made between conventional pollutants and priority toxic pollutants (i.e., metals, organic chemicals, etc.). For oxygen demanding pollutants the Storm Water Section, after making preliminary determinations for wet weather flows, will request a wasteload allocation determination from the Surface Water Division to establish limits for oxygen demanding pollutants. For toxics, including metals and organic chemicals, MDEQ will calculate limits at wet weather flows in two steps as follows:

(1) Determine stream and facility storm water flow rates:

(i) for streams with a gaging station, determine the site $7Q_2$ stream flow by use of the following equation:

$$Q = Site7Q_2 = Gage7Q_2 * \frac{SWA}{GWA}$$

Where:
SWA = Site Watershed Area
GWA = Gage Watershed Area

(ii) for small watersheds without a gaging station, measure the watershed area using GIS computer software applications. An appropriate runoff coefficient, C, for the entire watershed region is used. The average storm event intensity, I, is used. The stream flow rate is calculated as follows:

$$Q_{WS} = C * I * A_{WS}$$

Where:
Q_{ws} = flow from the watershed in cfs
A_{ws} = Area in acres
I = average storm event intensity in inches per hour
C = appropriate runoff coefficient
WS = watershed

(iii) Storm water flow rate from the industrial site can be estimated by using the procedure set forth in (ii) above. The drainage areas (pervious and impervious) are reported in the application.

$$Q_{Industry} = I * ((C_1 * A_1) + (C_2 * A_2) + ...)$$

(2) Calculate Permit Limits. Using the flows determined under VI.E.2.b. and the Mississippi, or EPA (when there is no State criteria) Water Quality Criteria for Toxic Pollutants, calculate maximum allowable concentrations in the storm water runoff for all parameters of concern . Since the acute water quality criteria are based on 96 hours exposure and the EPA storm water sampling protocol requires first 30 minutes of grab and 3 hours of composite samples during a storm after 72 hours of dry weather, only the acute criterion will be used to establish permit limits. Also, the average storm event duration in Mississippi is about 8 hours.

Calculation:

$$PL = CMC * \frac{Q_I + Q_S}{Q_I}$$

Where:
PL = Permit Limit
CMC = Criteria Maximum Concentration (Acute)
Q_I = Flow from industry
Q_S = Flow from stream

When the model or calculated limit is higher than the maximum concentration reported on the 2F application, the permit will generally only require monitoring.

(c) Best Professional Judgment

When there are no ELG or *WQS* numeric limitations or standards, BPJ will be used to set permit limits or to require Best Management Practices (BMPs) to protect water quality.

G. Determining Compliance with Non-Detect or Below Detection Limitations

It is recognized that the calculated limits for specific chemicals may be below the analytical minimum quantitation level for the pollutant of concern. However, in this case the permit limit will be this calculated value. In such cases, compliance with the permit limits shall be determined as follows:

1. The permit will specify the analytical procedure to be used.

2. The guidelines establishing test procedures for the analysis of pollutants set forth in 40 CFR Part 136 are incorporated herein and adopted by reference and as hereinafter amended. The weblink to 40 CFR Part 136 follows:

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title40/40cfr136_main_02.tpl

3. The MQL is the lowest concentration at which a particular substance can be quantitatively measured, and is defined analytically as the lowest concentration used in the calibration of the measurement system.

4. Any sample result reported as "non-detected" or "less than" the MQL shall be entered as zero.

The following language shall be placed in permits:

> If the results for a given sample analysis are such that any parameter (Other than fecal coliform, enterococci, e coli) is not detected at or above the minimum level for the test method used, a value of zero will be used for that sample in calculating an arithmetic mean value for the parameter. If the resulting calculated arithmetic mean value for that reporting period is zero, the permittee shall report "NODI=B" on the DMR. For fecal coliform and other pollutants that are based on calculating a geometric mean, a value of 1.0 shall be used in calculating the geometric mean. If the resulting fecal coliform mean value is 1.0, the permittee shall report "NODI=B" on the DMR. For each quantitative sample value that is not detectable, the test method used and the minimum level for that method for that parameter shall be attached to and submitted with the DMR. The permittee shall then be considered in compliance with the appropriate effluent limitation and/or reporting requirement.

Permits will specify the appropriate analytical method, based on the appropriate sensitivity. Permittees must then report results based on data containing acceptable calibration points at least as low as the MQL.

H. Bioassay Language/Monitoring

Exhibit "E", which is attached hereto and incorporated herein by reference, represents the standard bioassay language placed in NPDES permits for chronic and acute bioassays, respectively. The fundamentals of the bioassay monitoring requirements are as follows:

1. Duration

Biomonitoring is for the life of the NPDES permit. Assuming compliance with the toxic limits, monitoring is at a frequency of once per quarter for the first twelve months for industrial and municipal permittees and semi-annually thereafter. The sampling frequency during compliance monitoring shall be at least twice per year unless specified otherwise elsewhere in these regulations, and sampling shall be timed to include the seasonal extremes of the year (hot-dry and cold-wet).

2. Species

At least two species (one vertebrate and one invertebrate) must be used.

3. Procedures

Permittee must use the most current EPA accepted procedures. Procedural references are specified in the bioassay language.

4. Non-Compliance

A permitted facility shall be considered in non-compliance when it fails any bioassay subject to a WET limit. Once a permittee fails a WET test, the permittee shall conduct a second WET test. For chronic tests, the second Chronic WET test must be completed within 30 days following completion of the failed test. For acute tests, the second WET test must be completed within two weeks of the completion of the failed test. Results must be submitted to the Department within 2 weeks of test completion. If the permittee fails the second WET test, then the permittee shall submit a preliminary Toxicity Reduction Evaluation Plan (TREP) within 45 days, following completion of the follow-up test, the first step of which shall be increased monitoring to determine the characteristics of the toxicity. If the permittee passes the second WET test, the permittee shall conduct the next WET test at the regularly scheduled frequency in the permit. Repeated failure of the WET tests may result in the Permit Board increasing the frequency of WET testing. The Commission will determine the appropriate enforcement response in accordance with existing enforcement policy.

5. Quality Assurance/Quality Control

A permittee must submit with each WET test result a completed OPC NPDES Whole Effluent Toxicity Testing Report form prescribed by the Commission (included in Exhibit "E").

I. Attaining Compliance with WQBELS

Whenever a new WQBEL is imposed in a permit, the permittee shall have no more than three years in which to achieve compliance with such limitations. A permittee may apply to the Permit Board for a variance from the compliance schedule.

VII. BIBLIOGRAPHY

Exhibit "F" is attached hereto for reference only as a bibliography. The documents contained in the bibliography are not incorporated by reference. The Department may utilize any document duly promulgated through the Federal Administrative Procedures Act and any other document which contains scientifically defensible procedures.

EXHIBIT A - EMPIRICAL WATER BODY MODEL ASSUMPTIONS FOR CONVENTIONAL POLLUTANTS AND CONVENTIONAL WATER QUALITY MODELS

I. EMPIRICAL STREAM, LAKE, and ESTUARY MODEL ASSUMPTIONS FOR CONVENTIONAL POLLUTANTS

A. $7Q_{10}$ Flow Values

1. The $7Q_{10}$ flow in unregulated, natural streams is to be determined from Low-flow and Flow-Duration Characteristics of Mississippi Streams, U.S.G.S., Report 90-4087 (hereinafter "Report 90-4087") or the most recent update of this publication.

2. $7Q_{10}$ value of a gage will be used directly if gaging station is at or near the point of discharge.

3. $7Q_{10}$ flow coefficients ($7Q_{10}$ value in CFS/drainage area in square miles) of a gaging station will be used to calculate a $7Q_{10}$ value for a point discharge if there is a gaging station on the stream or on a nearby stream. An average $7Q_{10}$ flow coefficient may be used if there is more than one nearby gaging station.

4. $7Q_{10}$ flow coefficients can be taken from Report 90-4087 if no gaging station is available. The value will be assumed to be in the middle of the given range.

5. A $7Q_{10}$ flow coefficient of 0.0 cfs will be used for intermittent streams or when the Report 90-4087 lists the $7Q_{10}$ flow coefficient as less than 0.01 cfs per square mile.

6. The annual $7Q_{10}$ flow will be used for seasonal winter allocations, unless data is available to determine seasonal or monthly $7Q_{10}$ flows.

7. Semi-annual, quarterly or monthly $7Q_{10}$ flows with their respective average maximum temperatures may be used to determine various seasonal wasteload allocations.

8. In regulated streams the legally guaranteed minimum flow will be used for allocations unless otherwise provided in these regulations.

9. Spatially distributed flow will be included to account for flow gained at $7Q_{10}$ from sources other than major tributaries.

10. Spatial flow will be calculated between gaging stations if available.

11. Spatial flows will be determined by using $7Q_{10}$ flow coefficients where sufficient gaging stations are not available.

12. Spatial flow will be included at equal increments over the length of a given stream segment.

B. $7Q_2$ Flow Values

The $7Q_2$ flow in unregulated, natural streams will be used in conjunction with the other assumptions contained herein for establishing permit limitations for storm water permits. The $7Q_2$ flow will be determined from Low-Flow and Flow-Duration Characteristics of Mississippi Streams, U.S.G.S., Report 90-4087 or the most recent update of this publication. In cases in which either (1) the data is indefinite or inconclusive, or (2) the 7-day, 2-year minimum flow and/or the 7-day, 10-year minimum flow are inappropriate because of the hydrology of the area, other appropriate State and federal agencies will be consulted in establishing the applicable stream flow.

C. Temperature

The criteria for temperature selection are as follows:

1. For streams for which sufficient temperature data is available, the design temperature will be the average daily maximum temperature for the months of July and August.

2. For streams with insufficient or no temperature data, the following will be assumed:

Stream Size	Annual	Summer (May-Oct)	Winter (Nov-April)
Streams with minimum low flows $\geq$ 300 cfs	30°C	30°C	20°C
Streams with minimum low flows $\geq$ 50 cfs and < 300 cfs	28°C	28°C	20°C
Streams with minimum low flows < 50 cfs	26°C	26°C	20°C

D. Velocity

Time-of-travel measurements will be used when available. Average reach velocity can be determined by completion of a dye tracer study. A minimum velocity of 0.1 fps will be used.

Estimation Procedures:

$$V = 0.127 * Q_{Act}^{0.69} * \frac{S^{0.1}}{Q_{Avg}^{0.24}}$$

$$V = (0.144 * Q_{Act}^{0.4} * S^{0.2}) - 0.19$$

where:

V = velocity in fps
Q_{Act} = $7Q_{10}$ + discharge flow in cfs
S = stream slope in ft./mile
Q_{Avg} = the average stream flow in cfs

E. Depth

Depth will be used if accurate stream depth profiles are available as determined by measurement or available flood plain maps. For larger, slow-moving rivers, depths may also be estimated. In the WASP models, minimum depth will be one-half of the estimated or measured depth.

F. Slope

1. Stream slope determinations will be made from GIS computer software, NHD Plus values, USGS quad maps, or flood plain reports.

2. Stream slope profiles will be analyzed (elevation vs. mile) to determine if the slope changes along the stream length being modeled.

3. Model stream segments will correspond to noticeable stream slope changes.

G. Kd (Carbonaceous Deoxygenation Rate)

1. When usable field data are not available, the stream's Kd rate will be based on both the type of wastewater, type of treatment and/or the instream $CBOD_u$ concentration.

2. The temperature correction equation is:

$$Kd(T) = Kd(20^{\circ}C) * 1.047^{T-20}$$

3. When instream $CBOD_u$ values approach background conditions the Kd rate will be set to 0.15/day and the ratio of Ka/Kd = 2 or Ka = 0.3/day.

4. When actual data are available, the Kd rate will be determined according to the procedures outlined in Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling (Second Edition), EPA/600/3-85/040 or most current version.

5. Kd is assumed equal to Kr (overall rate of $CBOD_u$ removal from the water column) in most model applications.

6. Normally, a laboratory-derived "bottled" $CBOD_u$ decay rate taken from the effluent only (Kl) will not be used in modeling. Typically, an instream decay rate will be used for modeling purposes.

7. Kd = 0.3/day (base e) at 20°C will be used for streams receiving upgraded lagoon effluent (single or multi-cell lagoons upgraded with sand filters, artificial wetlands, etc.).

8. The following clarification can be used in the estimation procedure for Kd, $CBOD_u$ rate.

Type of Treatment	**Instream $CBOD_u$ (mg/l)**	**Instream $CBOD_{5*}$ (mg/l)**	**Kd (base e @ 20°C) (day^{-1})**
Lagoon ($CBOD_5$=30)	> 15	>10	0.6
Lagoon ($CBOD_5$=30)	$\leq$ 15 and > 7	$\leq$ 10 and > 4.7	0.4
Lagoon ($CBOD_5$=30)	$\leq$ 7	$\leq$ 4.7	0.3
Mechanical ($CBOD_5 \leq 30$)	> 7	> 4.7	0.4
Mechanical ($CBOD_5$>10)	$\leq$ 7	$\leq$ 4.7	0.3
Mechanical ($CBOD_5 \leq 10$)	-	-	0.3

Note these values are estimates. If actual data are available, they should be used.

H. Kn (Nitrogenous Deoxygenation Rate)

1. Kn has been found to range from 0.3 to 1.5 per day (at 20°C) in free-flowing streams containing greater than 2 to 3 mg/l of dissolved oxygen. Impounded streams or streams with low DO levels will exhibit Kn 's as low as 0.0 to 0.3 per day.

2. In the absence of measured values, Kn (base e @ 20°C) will be assumed as 0.3 per day for streams with slope less than or equal to 20 ft./mile and 0.5 per day for streams with slope greater than 20 ft./mile. When actual data are available, the Kn rate will be determined according to the procedures outlined in EPA/600/3-85/040.

I. Ka (Reaeration Rate)

1. For small streams in Mississippi the most appropriate formula for calculating the reaeration coefficient is the one developed by E. C. Tsivoglou.

$$Ka = C * S * V$$

Where:
Ka = reaeration rate, 1/day
C = escape coefficient, 1/ft.
S = slope, ft./mile
V = velocity, mile/day

2. Assume escape coefficients recommended for Mississippi.

(a) C = 0.11 for stream flow less than 10 cfs
(b) C = 0.0597 for greater than or equal to 10 cfs to a stream flow less than 280 cfs

3. O'Conner-Dobbins equation may be used for streams with depths greater than 5 feet and where there are adequate stream depth profiles or reasonable estimates available. If stream flow is less than 280 cfs, Tsivoglou escape coefficient values should be considered.

$$Ka = \frac{12.9 * V^{0.5}}{D^{1.5}}$$

where:
V = velocity in ft./sec.
D = depth in ft.
Ka = reaeration rate 1/day (base e @ 20°C).

4. A minimum Ka value of 0.15/day will be used except in the case mentioned under Kd where Ka/Kd is not less than 2.

5. In the WASP model COVAR may be considered.

J. Stream Background Conditions

Assume the following stream background conditions unless data show otherwise.

1. DO = 85% of saturation at assumed stream temperature (table attached)

2. $CBOD_U$ = 2.0 mg/l

3. $CBOD_5$ = 1.33 mg/l

4. $NBOD_U$ = 0.5 mg/l

5. NH_3-N = 0.10 mg/l

L. Photosynthesis / Respiration

1. Input values for P and R (mg/l/day) can be determined in stream studies using the:

(a) Delta Method
(b) Diurnal Curve Method
(c) Light/Dark Bottle Method

2. In the absence of field data, P and R will be assumed to be 0.0 mg/l/day. This assumption will be reevaluated for streams dominated by algae.

M. Sediment Oxygen Demand

1. In the STREAM Model, sediment oxygen demand ("SOD") (mg/l/day) will be assumed to be 0.0. In WASP and other dynamic models, SOD rates may be used to calibrate the model. All values used for SOD rates will be within normal ranges found in the ecoregion being modeled.

2. Where SOD rates have been determined or sludge blankets are known to exist, SOD will be incorporated in models.

3. SOD rates in g/m^2/day will be converted to mg/l/day according to the following equation:

$$SOD = \frac{B(1000 mg/g)}{H(0.3048 meters/ft.) * (1000 liters/meter^3)}$$

where:
S = SOD rate in mg/l/day @ 20°C
B = SOD rate in g/m2/day @ 20°C
H = average reach depth in feet

N. Wastewater Inputs

1. The Department's water quality model, STREAM uses first order kinetics to characterize ultimate CBOD decay. Once effluent limits are set using this model, $CBOD_5$ will be determined for inclusion in the permit.

2. The following ultimate CBOD to $CBOD_5$ ratios will be used when actual data are not available.

Wastewater	Ratio
Sanitary (mechanical secondary)	1.5
Sanitary (advanced)	2.3
Food Processing	3.0
Meat/Poultry Processing	2.5
Pulp/Paper	5.0

Tannery	3.0
Textile	3.0

3. Industries will be encouraged to provide actual ultimate $CBOD_U$ and $NBOD_U$ values for the wastewater under evaluation. The method of choice for determining these values will be the method outlined by NCASI in Ultimate Oxygen Demand (Biochemical), NE87-03.

4. The model uses first order kinetics to characterize oxidizable nitrogen or $NBOD_U$ decay. Wastewater inputs/outputs are NH_3-N (as nitrogen). The value is converted to oxygen demand using the factor 4.57.

O. Disinfection

1. Bacteria allocations for effluents will be assigned so as to meet the State's water quality standards for the designated use of the receiving water. A background coliform concentration of 200#/100 ml will be assumed in fresh water at the low-flow condition, unless site-specific data taken from an upstream site, approved by the Department, during a low-flow event indicates that another background level should be used.

2. Marine waters (recreational salt-waters) will have a background concentration of 35 colonies/100 ml at the low-flow condition, unless site-specific data taken from the water body, approved by the Department, during a low-flow event indicates that another background level should be used.

3. Allocations will be derived according to the following dilution mix equation:

$$C_E = \frac{(C_T * Q_T) - (C_H * Q_H)}{Q_E}$$

where:
C_E = allowable effluent bacteria concentration in colonies /100ml
Q_E = daily average effluent flow in cfs
C_H = headwater bacteria concentration of 200 colonies /100ml
Q_H = headwater flow ($7Q_{10}$) in cfs
C_T = bacteria standard after mixing (usually 200 colonies /100ml May through October or 2000 col/100ml November through April)
Q_T = total stream flow after mixing in cfs

4. Disinfection may be required for hydrograph controlled release (HCR) lagoons.

P. Chlorine Toxicity

Residual chlorine allocations for all municipal and industrial effluents will be developed so as to meet the State's water quality criteria. To properly select the final in-stream target concentration,

the type of receiving water (fresh or estuarine) and the IWC* (instream waste concentration) must be known. Once this information is known, allocations will be determined using the following dilution mix equation:

$$C_E = \frac{(C_T * Q_T) - (C_H * Q_H)}{Q_E}$$

where:
C_E = allowable effluent chlorine concentration in ug/l
Q_E = daily average effluent flow in cfs
C_H = headwater chlorine concentration (usually 0.0 ug/l)
Q_H = headwater flow ($7Q_{10}$) in cfs
C_T = chlorine standard in ug/l (after mixing)

	Acute	**Chronic**
Fresh	19	11
Estuarine	13	7.5

Q_T = total stream flow in cfs (after mixing)

Q. Instream Waste Concentration

The instream waste concentration (IWC) is the resulting percentage of effluent after complete mixing with the receiving water body at the headwater flow appropriate to the allocation procedure, normally the $7Q_{10}$. Acute or chronic pollutant target criteria are selected based on the resulting IWC.

$$IWC = \frac{Q_E}{Q_T} * 100$$

For IWC < 1% use acute criteria; For IWC > 1% use chronic criteria.

R. Ammonia Toxicity

Ammonia must not only be considered due to its effect on dissolved oxygen in a receiving water, but also its toxicity potential. It is recognized that effluent ammonia concentrations may be more restricted due to toxicity than due to oxidation. Consequently, the modeler of conventional pollutants must consider ammonia toxicity.

Ammonia as nitrogen (NH_3-N) allocations for effluents will be developed to meet the water quality criteria given in Quality Criteria for Water, 1986, EPA 440/5-86-001. Generally, ammonia limits will be placed in permits of municipal facilities utilizing lagoon type treatment. To properly select the final in-stream target concentration, the IWC (instream waste concentration) must be known and the warm water target values used. Stream temperature and

pH after mixing must also be known or assumed. For empirical modeling a pH of 7.0 and a stream temperature of 25°C are assumed limitations. Once this information is known, allocations will be determined using the following dilution mix equation:

$$C_E = \frac{(C_T * Q_T) - (C_H * Q_H)}{Q_E}$$

where:

C_E = allowable effluent NH_3 concentration in mg/l
Q_E = daily average effluent flow in cfs
C_H = headwater ammonia concentration of 0.1 mg/l
Q_H = headwater flow ($7Q_{10}$) in cfs
C_T = ammonia criteria in mg/l (after mixing)
Q_T = total stream flow in cfs (after mixing)

Final ammonia allocations will be reported as ammonia nitrogen.

$$NH_3\text{-}N = NH_3 \times 0.822$$

II. CONVENTIONAL WATER QUALITY MODELS

The Department's freshwater quality model is a steady-state modified Streeter-Phelps dissolved oxygen sag model. The model includes the stream's carbonaceous and nitrogenous BOD ultimate demand, the stream's reaeration rate, the net photosynthetic demand and production, and the benthic oxygen demand. The model was developed in 1973 by the staff of the Civil Engineering Department at Mississippi State University. The STREAM model was updated by MSU in 2004 to work in a java and oracle computer environment. The model is used for both empirical and calibration purposes.

For salt water modeling, nutrient modeling, and highly complex hydrology, the Department will use a combination of the Environmental Fluids Dynamic Code EFDC model for the hydrology and the WASP model. Both of these models are supported by EPA and are accessible in the public domain.

The Department may utilize other models and/or documents which are approved by both the Department and EPA, are scientifically defensible and/or have been duly promulgated through the Federal Administrative Procedure Act.

EXHIBIT B - DISINFECTION REQUIREMENTS FOR SANITARY SEWAGE

I. DISCHARGE TO WATERS CLASSIFIED PUBLIC WATER SUPPLY.

Disinfection shall be required regardless of the quantity of receiving water for discharges to or within close proximity, both in distance and travel time, to public water supply waters.

II. DISCHARGES TO WATERS CLASSIFIED RECREATION AND TO WATERS OF OTHER CLASSIFICATIONS WITH KNOWN RECREATIONAL SITES.

Disinfection shall be required regardless of the quantity of receiving water.

III. DISCHARGES TO WATERS CLASSIFIED SHELLFISH HARVESTING.

1. Disinfection shall be required for discharges to or within one tidal cycle of approved or conditionally approved shellfish harvesting areas.

2. Disinfection shall be required for discharges within close proximity to closed shellfish harvesting areas, if, after mixing at the most unfavorable hydrographic and pollutional conditions, the geometric mean concentration of fecal coliform is expected to exceed 14 colonies per 100 ml.

IV. DISCHARGES TO WATERS CLASSIFIED FISH AND WILDLIFE.

1. Disinfection shall be required for discharges to or within close proximity, both in distance and/or travel time, to waters with known recreational sites regardless of the quantity of receiving water.

2. Disinfection shall be required for discharges to or within close proximity to public water supply waters, if, after mixing at the most unfavorable hydrographic and pollutional conditions (normally the $7Q_{10}$ low flow), the geometric mean concentration of fecal coliform is expected to exceed 200 colonies per 100 ml.

3. Disinfection shall be required for discharges to or within close proximity to fish and wildlife waters, if, after mixing at the most unfavorable hydrographic and pollutional conditions

(normally the $7Q_{10}$ low flow), the geometric mean concentration of fecal coliform is expected to exceed 200 colonies per 100 ml during May through October and 2000 colonies per 100 ml from November through April.

V. DISCHARGES TO WATERS CLASSIFIED EPHEMERAL.

Disinfection shall be required where the probability of a public health hazard or other circumstances so warrant.

VI. CONSISTENCY WITH WATER QUALITY STANDARDS

Notwithstanding the above, disinfection requirements for sanitary sewage shall be protective of water quality standards.

EXHIBIT C - VALUES OF RUNOFF COEFFICIENT C

TYPE OF DRAINAGE AREA	RUNOFF COEFFICIENT, C
LAWNS:	
SANDY SOIL, FLAT 2%	0.05-0.10
SANDY SOIL, AVERAGE, 2-7%	0.10-0.15
SANDY SOIL, STEEP, 7%	0.15-0.20
HEAVY SOIL, FLAT, 2%	0.13-0.17
HEAVY SOIL, AVERAGE, 2-7%	0.18-0.22
HEAVY SOIL, STEEP, 7%	0.25-0.35
BUSINESS:	
DOWNTOWN AREAS	0.70-0.95
NEIGHBORHOOD AREAS	0.50-0.70
RESIDENTIAL:	
SINGLE FAMILY AREAS	0.30-0.50
MULTI UNITS, DETACHED	0.40-0.60
MULTI UNITS, ATTACHED	0.60-0.75
SUBURBAN	0.25-0.40
APARTMENT DWELLING AREAS	0.50-0.70
INDUSTRIAL:	
LIGHT AREAS	0.50-0.80
HEAVY AREAS	0.60-0.90
PARKS, CEMETERIES	0.10-0.25
PLAYGROUNDS	0.20-0.35
RAILROAD YARD AREAS	0.20-0.40
UNIMPROVED AREAS	0.10-0.30
STREETS:	
ASPHALTIC	0.70-0.95
CONCRETE	0.80-0.95
BRICK	0.70-0.85
DRIVES AND WALKS	0.75-0.85
ROOFS	0.75-0.95

SOURCE: CHOW, V.T. 1964 Handbook of Applied Hydrology, McGraw Hill, Inc., New York, N.Y.

Calculation of Average Flow Rate:

$$AFR = \frac{[(A * xC * XR_O) + (A_2 * C_2 * R_O) + (A_3 * C_3 * R_O)...]}{T_O}$$

Where:
AFR = Average Flow Rate in cu. ft/min
A = Area in acres
C = Runoff Coefficient
R_x = Runoff for area
T_O = Total Runoff

EXHIBIT D - BIOASSAY REQUIREMENTS

I. Chronic Bioassay Requirements

The Water Quality Standards of Mississippi require that waters shall be free from substances attributable to municipal, industrial, agricultural, or other discharges in concentrations or combinations that are toxic or harmful to humans, animals, or aquatic life (State of Mississippi, Water Quality Criteria for Intrastate, and Coastal Waters, Section II.4., Minimum Conditions Applicable to All Waters (current edition). In accordance with such requirements, an NPDES permit holder is authorized to discharge from outfall(s) only in accordance with the following conditions:

1. The permittee shall submit any existing toxicity data for review by the Mississippi Office of Pollution Control within 30 days of the effective date of this permit.

2. The permittee shall perform 7-day chronic, static renewal, definitive (a control and five effluent concentrations) WET tests in accordance with Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Fresh water Organisms, (EPA/600/4-89/001) or Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, (EPA/600/4-87/028) or the most recent edition.

(a) Dilution water used for these tests shall consist of reagent grade water, defined as distilled or deionized water that does not contain substances which are toxic to the test organisms. For freshwater tests, dilution water shall consist of reagent grade chemicals or mineral water combined to make moderately hard dilution water according to Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/600/4-89/001) or most recent edition[9]. For estuarine testing, dilution water shall consist of synthetic seawater or hyper-saline brine combined to achieve a salinity of 20 parts per thousand according to Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms (EPA/600/4-87/028) or most recent edition. These dilution waters will be deemed acceptable if the control organisms in the toxicity tests meet the minimum EPA criteria for chronic tests.

(b) If the Mississippi Office of Pollution Control determines the receiving waters are freshwater, the permittee shall conduct a *Ceriodaphnia dubia* Survival and Reproduction Test, and a *Pimephales promelas* Larval Survival and Growth Test on serial dilutions of effluent to determine if the discharge from outfall(s) is chronically toxic. Such testing will determine if the water affects the survival, growth, and reproduction of the test organisms. Static renewal tests will be conducted on three 24- hour composite samples of effluent. The first of these composite samples will be used to set up the tests and for the day 1 and day 2 renewals, the second of these composite samples will be used to renew the tests on days 3 and 4, and the third composite sample will be used to renew the tests on days 5 and 6. Not more than 36 hours will elapse

[9] Contact MDEQ Office of Pollution Control Laboratory for information on most recent editions(s) of methods manual

between sampling and the first use of any of the composite samples. The chronic test(s) shall be considered valid only if the acceptability criteria referenced in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, (EPA/600/4-89/001), or the most recent edition, are met. All data shall be statistically analyzed according to the referenced manual.

(c) If the Mississippi Office of Pollution Control determines that the receiving water is estuarine, the permittee shall conduct a *Menidia beryllina* Larval Survival and Growth Test and a *Americamysis* Survival, Growth, and Fecundity Test on serial dilutions of effluent to determine if the discharge from outfall(s) is chronically toxic. Such testing will determine if the water affects the survival, growth, and fecundity of the test organisms. Static renewal tests will be conducted on three 24-hour composite samples of effluent. The first of these composite samples will be used to set up the tests and for the day 1 and day 2 renewals, the second of these composite samples will be used to renew the tests on days 3 and 4, and the third composite sample will be used to renew the tests on days 5 and 6. Not more than 36 hours will elapse between sampling and the first use of any of the composite samples. The chronic test(s) shall be considered valid only if the acceptability criteria referenced in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, (EPA/600/4-87/028) or most recent edition are met. All test data shall be statistically analyzed according to the referenced manual.

(d) A standard reference toxicant quality assurance test (chronic) shall be conducted concurrently with the effluent tests using both species used in the toxicity tests. Alternatively, if a lab conducts monthly QA/QC reference toxicant tests with both species as part of their SOP, these results may be submitted in lieu of the above mentioned concurrent tests results. In either case, the reference toxicant test results must be submitted with the final report as well as on the Mississippi Office of Pollution Control NPDES Whole Effluent Toxicity Testing Report Form.

3. These chronic toxicity tests shall be initiated within 90 days of the date of issuance of the permit to evaluate wastewater toxicity. Such chronic toxicity tests shall be conducted once per quarter for a period of one year following the effective date of the permit. After the first year of monitoring, provided the IC_{25} is greater than or equal to the IWC% the frequency of monitoring will be reduced to once per six months for the life of the permit. Sampling shall be timed to cover the seasonal extremes of the year (hot-dry and cold-wet).

4. If any one chronic toxicity test indicates the IC_{25} is less than the IWC%, the provisions in Section 6 below shall apply, and the permittee shall conduct another chronic toxicity test(s) with the organism(s) that failed. This follow-up test must be completed within 30 days following completion of the failed test. Final chronic toxicity test results shall be in report form as outlined in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or most recent edition. The permittee must also submit a completed Mississippi Office of Pollution Control NPDES Whole Effluent Toxicity Testing Report Form.

5. In the event the permittee passes the additional WET test, the permittee shall resume testing in accordance with the testing schedule set forth in the permit. In the event the permittee

fails the second WET test, the permittee shall submit a Toxicity Reduction Evaluation Plan (TREP) within 45 days following completion of the follow-up test in order to reduce the toxicity of the effluent to safe [10] levels [11]. The first phase of the TREP will include increased monitoring to characterize the toxicity of the effluent.

6. If the IC_{25} of any test is less than the IWC%, then the effluent will be considered unacceptably chronically toxic, and this will constitute a violation of Part I of this permit.

7. In addition to the specific conditions of this permit, the permittee shall comply with all applicable conditions of 40 CFR 122.7 and 40 CFR 122.61 (06-03-93).

II. ACUTE BIOASSAY REQUIREMENTS

The Water Quality Standards of Mississippi require that all waters be free from substances in concentrations or combinations which are harmful to humans, animals, or aquatic life (State of Mississippi, Water Quality Criteria for Intrastate, Interstate and Coastal Waters (current edition). In accordance with such requirements, the permittee is authorized to discharge from outfall(s) only in accordance with the following conditions:

1. The permittee shall submit any existing toxicity data for review by the Mississippi Office of Pollution Control within 30 days of the effective date of this permit.

2. The permittee shall perform static renewal (tests that exceed 48 hours shall be renewed), definitive (a control and five effluent concentrations) toxicity tests at 25°C in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or the most recent edition. Acute toxicity tests will be conducted on 24-hour composite samples of effluent, and tests must be initiated within 36-hours of completion of the sampling period.

(a) If the Mississippi Office of Pollution Control determines the receiving stream is freshwater, the permittee must use both the following test organisms and test durations:

(1) *Pimephales promelas* (< 24-hrs.of age) - 96 hour
(2) *Ceriodaphnia dubia* - 48 hour

(b) If the Mississippi Office of Pollution Control determines the receiving stream is marine or estuarine, the permittee must use both the following test organisms and test durations:

(1) *Menidia beryllina* - 96 hour
(2) *Americamysis* - 48 hour

[10] Safe levels will be determined by WPC-2.
[11] In large rivers, lakes, and estuaries the permittee must provide a schematic map showing isopleths of waste concentrations.

(c) Dilution water used for these tests shall consist of reagent grade water, defined as distilled or deionized water that does not contain substances which are toxic to the test organisms. For freshwater tests, dilution water shall consist of reagent grade chemicals or mineral water combined to make moderately hard dilution water according to Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Fresh water and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or most recent edition. For estuarine testing, dilution water shall consist of synthetic seawater or hyper-saline brine combined to achieve a salinity of 20 parts per thousand according to Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or most recent edition. These dilution waters will be deemed acceptable if the survival of the control organisms in the toxicity tests is 90% or greater.

(d) A standard reference toxicant quality assurance test (acute) shall be conducted concurrently with the effluent tests using both species used in the toxicity tests. Alternatively, if a lab conducts monthly QA/QC reference toxicant tests for both species as part of their SOP, these results may be submitted in lieu of the above mentioned concurrent tests. In either case the reference toxicant test results must be submitted in the final report as well as on the Mississippi Office of Pollution Control NPDES Whole Effluent Toxicity Testing Report Form.

3. The permittee shall conduct the first series of tests specified in Section 2 above within 90 days of the commencement of the discharge. The tests shall be conducted quarterly thereafter for twelve (12) consecutive months, provided that the acute LC_{50} is greater than or equal to the product of 3 times the IWC%. After the first year of testing, the frequency of monitoring will be reduced to once per six months for the life of the permit. Sampling shall be timed to cover the seasonal extremes of the year (hot- dry and cold-wet). The results of these acute toxicity tests shall be reported to the Mississippi Environmental Quality Permit Board on the next quarterly discharge monitoring report. Final acute toxicity test results shall be in report form as outlined in Methods for Measuring the Acute Toxicity of Effluents to Fresh water and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or most recent edition. Along with this report, the permittee must submit a completed Mississippi Office of Pollution Control NPDES Whole Effluent Toxicity Testing Report Form within two weeks following test completion.

4. If either toxicity test results in an LC_{50} value of less than the product of 3 times the IWC%, the permittee shall initiate a second toxicity test within 2 weeks after the completion of the first toxicity test using the organism(s) that failed. The LC_{50} determinations from these tests shall be reported to the Mississippi Environmental Quality Permit Board within two weeks after completion of the test.

(a) In the event that the results of any toxicity test reveals that the LC_{50} of the permittee's effluent is less than the product of 3 times the IWC%, then this finding will constitute a violation of Part I of this permit. In the event the permittee passes the second toxicity test, the permittee shall resume testing in accordance with the testing schedule set forth in the permit. In the event the permittee fails the second WET test, the permittee shall submit a Toxicity Reduction Evaluation Plan (TREP) within 45 days following completion of the follow-up tests to reduce the toxicity of the effluent to safe levels[12]. The first phase of the TREP shall include monitoring to characterize the toxicity of the effluent.

[12] Safe levels will be determined by WPC-2.

(b) In addition to the specific conditions of this permit, the permittee shall comply with all applicable conditions of 40 CFR 122.7 and 40 CFR 122.61 (06-03-93).

III. ACUTE WHOLE EFFLUENT TOXICITY MONITORING REQUIREMENTS

The Water Quality Standards of Mississippi require that all waters be free from substances in concentrations or combinations which are harmful to humans, animals, or aquatic life (State of Mississippi, Water Quality Criteria for Intrastate, Interstate and Coastal Waters (current edition). In accordance with such requirements, the permittee is authorized to discharge from outfall(s) only in accordance with the following conditions:

1. The permittee shall submit any existing toxicity data for review by the Mississippi Office of Pollution Control within 30 days of the effective date of this permit.

2. The permittee shall perform static, non-renewal, definitive (a control and five effluent concentrations) toxicity tests at 25°C in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or the most recent edition. Acute toxicity tests will be conducted on 24-hour composite samples of effluent, and tests must be initiated within 36-hours of completion of the sampling period.

(a) If the Mississippi Office of Pollution Control determines the receiving stream is freshwater, the permittee must use both the following test organisms and test durations:

(1) *Pimephales promelas* (< 24-hrs.of age) - 96 hour
(2) *Ceriodaphnia dubia* - 48 hour

(b) If the Mississippi Office of Pollution Control determines the receiving stream is marine or estuarine, the permittee must use both the following test organisms and test durations:

(1) *Menidia beryllina* - 96 hour
(2) *Americamysis* - 48 hour

(c) Dilution water used for these tests shall consist of reagent grade water, defined as distilled or deionized water that does not contain substances which are toxic to the test organisms. For freshwater tests, dilution water shall consist of reagent grade chemicals or mineral water combined to make moderately hard dilution water according to Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Fresh water and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or most recent edition. For estuarine testing, dilution water shall consist of synthetic seawater or hyper-saline brine combined to achieve a salinity of 20 parts per thousand according to Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or most recent edition. These dilution waters will be deemed acceptable if the survival of the control organisms in the toxicity tests is 90% or greater.

(d) A standard reference toxicant quality assurance test (acute) shall be conducted concurrently with the effluent tests using both species used in the toxicity tests. Alternatively, if a lab conducts monthly QA/QC reference toxicant tests for both species as part of their SOP, these results may be submitted in lieu of the above mentioned concurrent tests. In either case the reference toxicant test results must be submitted in the final report as well as on the Mississippi Office of Pollution Control NPDES Whole Effluent Toxicity Testing Report Form.

3. The permittee shall conduct the first series of tests specified in part 1 above within 90 days of the issuance of the permit. The tests shall be conducted quarterly thereafter for twelve (12) consecutive months. After the first year of testing, the frequency of monitoring will be reduced to once per six months for the life of the permit. Sampling shall be timed to cover the seasonal extremes of the year (hot- dry and cold-wet). The results of these acute toxicity tests shall be reported to the Mississippi Environmental Quality Permit Board on the next quarterly discharge monitoring report. Final acute toxicity test results shall be in report form as outlined in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or most recent edition. Along with this report, the permittee must submit a completed Mississippi Office of Pollution Control NPDES Whole Effluent Toxicity Testing Report Form within two weeks following test completion.

4. In addition to the specific conditions of this permit, the permittee shall comply with all applicable conditions of 40 CFR 122.7 and 40 CFR 122.61 (06-03-93).

IV. CHRONIC WHOLE EFFLUENT TOXICITY MONITORING REQUIREMENTS

The Water Quality Standards of Mississippi require that all waters be free from substances in concentrations or combinations which are harmful to humans, animals, or aquatic life (State of Mississippi, Water Quality Criteria for Intrastate and Coastal Waters, Section II.4, Minimum Conditions Applicable to All Waters (current edition). In accordance with such requirements, the permittee is authorized to discharge from outfall(s) only in accordance with the following conditions:

1. The permittee shall submit any existing toxicity data for review by the Mississippi Office of Pollution Control within 30 days of the effective date of this permit.

2. The permittee shall perform 7-day chronic, static renewal, definitive (a control and five effluent concentrations) WET tests in accordance with Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, (EPA/600/4-89/001) or Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, (EPA/600/4-87/028) or the most recent edition.

(a) Dilution water used for these tests shall consist of reagent grade water, defined as distilled or deionized water that does not contain substances which are toxic to the test organisms. For fresh water tests, dilution water shall consist of reagent grade chemicals or mineral water combined to make moderately hard dilution water according to Short-Term

Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Fresh water Organisms (EPA/600/4-89/001) or most recent edition. For estuarine testing, dilution water shall consist of synthetic seawater or hyper-saline brine combined to achieve a salinity of 20 parts per thousand according to Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms (EPA/600/4-87/028) or most recent edition. These dilution waters will be deemed acceptable if the control organisms in the toxicity tests meet the minimum EPA criteria for chronic tests.

(b) If the Mississippi Office of Pollution Control determines the receiving waters are fresh water, the permittee shall conduct a *Ceriodaphnia dubia* Survival and Reproduction Test, and a *Pimephales promelas* Larval Survival and Growth Test on serial dilutions of effluent to determine if the discharge from outfall(s) is chronically toxic. Such testing will determine if the water affects the survival, growth, and reproduction of the test organisms. Static renewal tests will be conducted on three 24- hour composite samples of effluent. The first of these composite samples will be used to set up the tests and for the day 1 and day 2 renewals, the second of these composite samples will be used to renew the tests on days 3 and 4, and the third composite sample will be used to renew the tests on days 5 and 6. Not more than 36 hours will elapse between sampling and the first use of any of the composite samples. The chronic test(s) shall be considered valid only if the acceptability criteria referenced in Short-Term Methods for estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, (EPA/600/4-89/001), or the most recent edition, are met. All data shall be statistically analyzed according to the referenced manual.

(c) If the Mississippi Office of Pollution Control determines that the receiving water is estuarine, the permittee shall conduct a *Menidia beryllina* Larval Survival and Growth Test and a *Americamysis* Survival, Growth, and Fecundity Test on serial dilutions of effluent to determine if the discharge from outfall(s) is chronically toxic. Such testing will determine if the water affects the survival, growth, and fecundity of the test organisms. Static renewal tests will be conducted on three 24-hour composite samples of effluent. The first of these composite samples will be used to set up the tests and for the day 1 and day 2 renewals, the second of these composite samples will be used to renew the tests on days 3 and 4, and the third composite sample will be used to renew the tests on days 5 and 6. Not more than 36 hours will elapse between sampling and the first use of any of the composite samples. The chronic test(s) shall be considered valid only if the acceptability criteria referenced in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, (EPA/600/4-87/028) or most recent edition are met. All test data shall be statistically analyzed according to the referenced manual.

(d) A standard reference toxicant quality assurance test (chronic) shall be conducted concurrently with the effluent tests using both species used in the toxicity tests. Alternatively, if a lab conducts monthly QA/QC reference toxicant tests with both species as part of their SOP, these results may be submitted in lieu of the above mentioned concurrent tests results. In either case, the reference toxicant test results must be submitted with the final report as well as on the Mississippi Office of Pollution Control NPDES Whole Effluent Toxicity Testing Report Form within two weeks of test completion. Final chronic toxicity test results shall be in report form as

outlined in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition, (EPA-600/4-90/027) or most recent edition.

4. These chronic toxicity tests shall be initiated within 90 days of the date of issuance of the permit to evaluate wastewater toxicity. Such chronic toxicity tests shall be conducted once per quarter for a period of one year following the effective date of the permit. After the first year of testing, the frequency of monitoring may be reduced to once per six months for the life of the permit. Sampling shall be timed to cover the seasonal extremes of the year (hot-dry and cold-wet).

5. In addition to the specific conditions of this permit, the permittee shall comply with all applicable conditions of 40 CFR 122.7 and 40 CFR 122.61 (06-03-93).

NPDES Whole Effluent Toxicity Testing Report Form

Mississippi Office of Pollution Control

* All blanks on this form are to be filled in. Blanks that are not used should be filled in with "N/A" or a line drawn through the blank. Please print.

Please attach the following items to this report form and indicate with an "X" in the box.

1. ALL CHAIN OF CUSTODY FORMS	
2. All Reference Toxicant Data for each Organism used in Test and Current Control Charts for each Organism.	
3. All Raw Data (Bench Sheets) Pertaining to the Tests (i.e., all physical, chemical and biological measurements)	
4. All Result Calculations	
5. Discharge Monitoring Reports (DMRs) when Applicable	

Facility/Industry/Client Name:_____

NPDES Number:_____

County:_____

Name and Phone Number of Contract Laboratory:_____

Date(s) and Time(s) Test(s) Initiated:_____End:_____

Name(s) of Person(s) Conducting Test(s) (Printed):_____

QA/QC Officer/Reviewer Signature:_____

Laboratory Report #:_____

Sampler's Name (Print):_____

Samples

DATE AND TIME COLLECTED	LAB SAMPLE #	GRAB	24-H COMP.	ARRIVAL TEMP. °C	TYPE OF REFRIG. USED IN TRANS.	SAMPLE DELIVR. BY:	*SAMPLE AERATED	SAMPLE FILTERED

* If samples are aerated please describe in report.

**Reference Toxicant Data

Name of Toxicant:_____

Dates of Test(s): _____

Species and Age:_____

In-house or Commercially Obtained Test Organisms:_____

LC_{50} or IC_{25}:_____
**Please attach all ref. tox. raw data for each test organism used.

SUMMARY OF TEST CONDITIONS

	CERIODAPHNIA DUBIA	**PIMEPHALES PROMELAS**
Test Type: Chronic or Acute		
Renewal or Non-renewal		
Test Concentrations (% Effluent)		
Age of Test Org.		
Amount and Type of food		
How often fed		
Test Chamber Volume		
Type of Chamber		
# of Org./Chamber		
# of reps.		
Description of Control Water		
Single, Multiple or Continuous Temp. Readings		

Test Results (Acute and/or Chronic)

TEST SPECIES	**48-HOUR LC_{50}**	**96-HOUR LC_{50}**	**IC_{25} SURVIVAL**	**IC_{25} REPR. OR GROWTH**

EXHIBIT E – ANTIDEGRADATION IMPLEMENTATION METHODOLOGY

STATE OF MISSISSIPPI

WATER QUALITY CRITERIA FOR INTRASTATE, INTERSTATE, AND COASTAL WATERS ANTIDEGRADATION IMPLEMENTATION METHODS

JANUARY 28, 2010

Prepared by

Mississippi Department of Environmental Quality

Office of Pollution Control
Surface Water Division

MDEQ

ANTIDEGRADATION IMPLEMENTATION METHODS
Forms and Instructions
(January 28, 2010)

I. Introduction

The Mississippi Department of Environmental Quality (MDEQ) State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters (WPC-2) provides:

"Antidegradation: The policy inherent in the standards shall be to protect water quality existing at the time these water quality standards were adopted and to upgrade or enhance water quality within the State of Mississippi. Waters whose existing quality is better than the established standards will be maintained at high quality unless the Commission finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In no event, however, may degradation of water quality interfere with or become injurious to existing instream water uses. Further, in no case will water quality be degraded below (or above) the base levels set forth in these standards for the protection of the beneficial uses described herein. In addition, the State will assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control. Where the Commission determines that high quality waters constitute an Outstanding National Resource, such as waters of National and State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected. For the purposes of this section, existing uses are defined as those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the Water Quality Criteria."

Further, the federal antidegradation policy (40 CFR Section 131.12(a)(2)) provides:

"Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife, and recreation in and on the water, that quality shall be maintained and protected, unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located."

Each state or tribe is required to identify methods for implementation of its antidegradation policy (40 CFR Section 131.12(a)):

"The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart."

On June 25, 2008, the State of Mississippi's antidegradation policy was determined by the United States Environmental Protection Agency, Region 4, to be consistent with the requirements of federal regulations.

II. Water Body Tiers

Antidegradation is generally considered in a tiered approach. Tier 1 waters are those waters in which the existing water quality does not support designated uses. Tier 2 waters are those waters in which the water quality meets or exceeds the mandatory minimum levels to support the Clean Water Act (CWA) goal of propagation of fish, shellfish, and wildlife, and recreation in and on such waters. Tier 3 waters are those high quality waters that constitute Outstanding National Resource Waters (ONRWs). MDEQ will decide which tier applies for State waters based on a review of applicable information as described below. All existing uses must be maintained and protected in all waters of the State regardless of whether they are considered a Tier 1, 2, or 3 water.

All waters in Mississippi are considered to be Tier 2 waters unless one of the following conditions is met:

(1) the water is designated as an Outstanding National Resource Water (ONRW), in which case, it is a Tier 3 water;
(2) the water is identified on Mississippi's current §303(d) list, in which case it is defined as a Tier 1 water with respect to the pollutant(s) causing impairment; or
(3) the water has been subject to an established final Total Maximum Daily Load (TMDL), in which case it is defined as a Tier 1 water with respect to the pollutant(s) addressed by the TMDL.

Tier 1 Waters

Tier 1 waters are those water body segments that are known to be impaired by a pollutant. Such waters have an established as final TMDL or are listed in the State's most recently adopted §303(d) list. For Tier 1 waters, the antidegradation policy is implemented through the State's NPDES Permit Issuance Process. New or expanding discharges are not allowed in Section 303(d) listed waters if there is an increase in pollutants proposed for which the water is listed, unless there is a TMDL developed that can be attained due to available assimilative capacity within the wasteload allocation as part of the TMDL. Tier 1 water bodies are pollutant specific, and this designation does not relieve a permit applicant from the requirements of an antidegradation report for this or other "non-listed" pollutants as required proposed to be discharged.

Tier 2 Waters

Tier 2 waters are those water bodies that:
(1) have been determined to have assimilative capacity based on assessment of water quality data and/or water quality modeling tools; or
(2) are assumed to have assimilative capacity because there are insufficient data or information to conclude that there is no assimilative capacity.

An antidegradation report is required for all proposed new or expanding discharges into Tier 2 waters. The level of detail involved in an antidegradation review will generally be dependent upon the State's judgment of the potential impact on water quality from a proposed activity considering factors such as the type of activity (e.g., covered by a general or individual permit) and magnitude of the discharge (e.g., major or minor).

Tier 3 Waters

When the Commission determines that high quality waters constitute an Outstanding National Resource, such as waters of National and State Parks and Wildlife Refuges and waters of exceptional recreational or ecological significance, the water quality of such waters shall be maintained and protected by adopting Tier 3 designation. Tier 3 waters are considered Outstanding National Resource Waters (ONRW). In order to achieve this designation, the stream must be nominated as a Tier 3 ONRW and adopted by the Mississippi Commission on Environmental Quality (MCEQ). Any person may submit a nomination to the Commission which will include the rationale and documentation citing the historical, recreational or ecological significance of the water body. The submission must include documentation as shown in Exhibit G. Upon receipt of the nomination, the Commission staff will review the water body, assess any available data or information to determine the impairment status, identify the current NPDES permits in the watershed, and make a recommendation to the Commission for consideration. If adopted as a Tier 3 water, the water body will not be allowed to experience any further permanent degradation.

III. Applicability of Antidegradation Policy Review Methods

The methods outlined herein focus on how the State will implement the antidegradation policy for discharges to surface waters. The methods include the following components:

(1) A determination of the impact of the discharge upon state waters;
(2) alternatives analysis;
(3) socio-economic issues;
(4) a preliminary State antidegradation decision;
(5) public review/input; and
(6) a final State decision.

A report regarding compliance with the antidegradation policy shall be conducted for all new or expanding wastewater discharges into Mississippi surface waters that require an NPDES permit.

NPDES Permit reissuances will not be subject to the report procedures provided there are no proposed changes to the facility's effluent which would result in increases in pollutant loadings. General permit coverage will undergo an antidegradation review. MDEQ will conduct the antidegradation review for each activity for which a Notice of Intent (NOI) to discharge is received for coverage under a general permit. The procedures for general permits follow:

(1) An application is received for coverage (NOI).
(2) The NOI is posted on MDEQ's website at http://opc.deq.state.ms.us/report_gnp_notice.aspx. Typically, the notice is posted for at least a 10-day period prior to action on the NOI.
(3) The permit manager uses the NOI application and other available data and information to answer a list of questions that relate to a proposed project including alternatives analysis and socio-economic issues.
(4) The information in the completed project awareness checklist provides the basis for MDEQ to complete its antidegradation review.
(5) If, based on the results of the antidegradation review, MDEQ determines that the applicant can receive coverage under a general permit, notice of coverage by a general permit is posted on MDEQ's website at: http://opc.deq.state.ms.us/report_gnp_issued.aspx.
(6) If, based on the results of the antidegradation review, MDEQ determines that the applicant can not receive coverage, the applicant must apply for an individual NPDES permit and fulfill the requirements of Section IV of this methodology.

IV. Required Antidegradation Components

The antidegradation report requirements must be addressed as described in this section and contained in the forms attached hereto. The **Antidegradation Instruction Form** along with the **Calculation of Total Annualized Project Costs** worksheets should be incorporated into the appropriate NPDES application forms.

These forms shall be completed by all individual NPDES permit applicants for new discharges or existing discharges with proposed effluents that contain new or additional pollutants or an increase in flow that results in an increase in pollutant loading. Antidegradation requires documentation that discharge and treatment alternatives and socio-economic impacts have been evaluated and considered. The applicant may utilize EPA's "The Interim Economic Guidance for Water Quality Standards Workbook" dated March, 1995, for guidance in completing the report.

Project Information

The applicant should supply the required information from the Antidegradation Instruction Form providing the specific information regarding the name and other pertinent details of the proposed discharge. The location information and/or a map must be provided. The proposed effluent discharge flow details should also be given in this section. MDEQ reserves the right to require completion of the remaining sections of the Antidegradation Instruction Form for any proposed NPDES permit application.

Alternatives Analysis

An analysis of alternatives is required to ensure that the applicant has considered alternatives that would reduce impacts to state surface waters. The analysis should include a description of each alternative in terms of both technical and economic feasibility. Alternatives to be considered should include (but are not limited to):

(1) a centralized no discharge system;
(2) connection to an existing wastewater treatment facility;
(3) an alternative discharge point; and
(4) product or raw material substitution.

Alternatives may also consider:
(5) other treatment options which would reduce the predicted impact to the stream;
(6) improved operation and maintenance of existing treatment operations;
(7) seasonal or controlled discharge options to avoid critical conditions; and
(8) pollution prevention, increased efficiency, water conservation, recycle or reuse alternatives.

Socio-Economic Impacts Analysis

Socio-economic or environmental / public health issues may be considered as justifications for lowering water quality. This analysis is not necessary if a non-degrading alternative is chosen following the alternatives analysis.

Factors to be considered in making a determination include:

(1) employment (increasing production and jobs, maintaining, or avoiding reduction in employment);
(2) improved community tax base; and
(3) correction of an environmental or public health problem; and
(4) providing a social benefit to the community.

The Interim Economic Guidance for Water Quality Standards Workbook, published by the U.S. Environmental Protection Agency, March 1995, may be used as a guide in preparing this analysis.

Public Review / Input

Prior to issuance of an individual NPDES permit, the proposed permit is sent to public notice in accordance with the Environmental Permits Division's administrative procedures. The NPDES permit public notice will state that an antidegradation report has been prepared for the project and is available for public inspection. All applications for coverage under a general permit will consider available alternatives and socio-economic issues. Public notice of proposed general permit coverage is accomplished by website notification.

Final Action

At the completion of the public review / input process, any comments received will be reviewed and considered to determine if changes should be made to the proposed discharge permit. Significant changes may require an update to the antidegradation report for the project and/or an additional public notice.

ANTIDEGRADATION INSTRUCTION FORM

FOR NEW/EXPANDING DISCHARGES TO TIER 2 WATERS

Individual Permits

Project Information

The information in this section is not required again if it has already been provided with the NPDES permit application or request for coverage under a general permit.

- Name of project
- Location of project (map showing proposed discharge point and location of treatment facility)
- Proposed treatment type
- Proposed influent constituents
- Proposed design flow
- Name of discharge stream
- Latitude and Longitude of discharge point if available
- Contact information for permit applicant
- Is the applicant seeking coverage under a general permit for this discharge?

Alternatives Analysis

The demonstration should include, but not be limited to, consideration of the alternatives listed below:

(1) a centralized no discharge system;
(2) connection to an existing wastewater treatment facility;
(3) an alternative discharge point; and
(4) product or raw material substitution.

Alternatives may also consider:
(5) other treatment options which would reduce the predicted impact to the stream;
(6) improved operation and maintenance of existing treatment operations;
(7) seasonal or controlled discharge options to avoid critical conditions; and
(8) pollution prevention, increased efficiency, water conservation, recycle or reuse alternatives.

The applicant should consider if the alternative is technically feasible. If it is technically feasible, then the applicant must consider if it is economically feasible. If the alternative is economically feasible, then degradation of the stream may not occur. If the alternative is not

feasible, then the next alternative should be considered. Documentation is required for all technical and economic feasibility considerations.

The applicant must complete the **Calculation of Total Annualized Project Costs** worksheet for each technically feasible alternative considered. Then the Total Annualized Project Cost for each alternative must be compared to the chosen alternative. Those alternatives that have a Total Annualized Project Cost less than 110% of the chosen alternative are considered economically feasible.

Social and Economic Impact Analysis

All applicants for a new or expanded discharge must demonstrate that the proposed discharge is necessary for important economic or social development in the area. This section is not applicable if a non-degrading alternative such as a no discharge system or connection to an existing treatment facility has been selected.

Socio-economic or environmental / public health issues which would justify the proposed discharge may include:

(1) employment (increasing production and jobs, maintaining, or avoiding reduction in employment);
(2) improved community tax base; and
(3) correction of an environmental or public health problem; and
(4) provide a social benefit to the community.

The applicant should estimate the number of new jobs (both direct and indirect jobs) created as a result of the project. Documentation should also predict the effect of the new jobs on the local and state tax base – i.e. tax revenues expected to be gained by local and state governments and/or any other economic benefits.

The permit applicant should document any existing environmental or public health problem, as well as the expected effect of the proposed project on the existing problem.

For example, a description of the environmental benefits from a proposed wastewater treatment plant which will take failing septic tanks offline.

Others – Please list and describe.

MDEQ may require additional documentation and calculations or require consideration of other alternatives as necessary to justify the proposed degradation.

Calculation of Total Annualized Project Costs

This form must be completed for the chosen alternative. All figures presented must be supported with documentation.

Capital Costs — Chosen Alternative

Alternative _____

Capital Cost of Project (show a breakout of costs on a separate sheet) $_____

Other One-Time Costs of Project
(Please List, if any):

_____ $_____

_____ $_____

_____ $_____

Total Capital Costs (Sum columns) $_____

Interest Rate Used (expressed as decimal) (i)_____

Time Period of Financing (in years) (n)_____

Annualization Factor (or see Table of Annualization Factors) $\boxed{\frac{i(1+i)^n}{(1+i)^n-1}}$ (af)_____

Annualized Capital Cost [(Total Capital Cost) x (af)] (acc)$_____

Operating and Maintenance Costs

List Annual Costs of Operation and Maintenance (O&M) (including but not limited to: monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement.)

_____ $_____

_____ $_____

Total Annual O & M Costs (Sum column) $_____

Total Annual Cost of Project $_____

Calculation of Total Annualized Project Costs For No Discharge Alternative

This form must be completed for the no discharge alternative considered. All figures presented must be supported with documentation.

Capital Costs No Discharge Alternative

Alternative _____

Capital Cost of Project (show a breakout of costs on a separate sheet) $_____

Other One-Time Costs of Project
(Please List, if any):

_____ $_____

_____ $_____

_____ $_____

Total Capital Costs (Sum columns) $_____

Interest Rate Used (expressed as decimal) (i)_____

Time Period of Financing (in years) (n)_____

Annualization Factor (or see Table of Annualization Factors) $\frac{i(1+i)^n}{(1+i)^n-1}$ (af)_____

Annualized Capital Cost [(Total Capital Cost) x (af)] (acc)$_____

Operating and Maintenance Costs

List Annual Costs of Operation and Maintenance (O&M) (including but not limited to: monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement.)

_____ $_____

_____ $_____

Total Annual O & M Costs (Sum column) $_____

Total Annual Cost of Project $_____

Table of Annualization Factors

Year	Interest Rate											
	0.0050	0.0100	0.0150	0.0200	0.0250	0.0300	0.0350	0.0400	0.0450	0.0500	0.0550	0.0600
1	1.0050	1.0100	1.0150	1.0200	1.0250	1.0300	1.0350	1.0400	1.0450	1.0500	1.0550	1.0600
2	0.5038	0.5075	0.5113	0.5150	0.5188	0.5226	0.5264	0.5302	0.5340	0.5378	0.5416	0.5454
3	0.3367	0.3400	0.3434	0.3468	0.3501	0.3535	0.3569	0.3603	0.3638	0.3672	0.3707	0.3741
4	0.2531	0.2563	0.2594	0.2626	0.2658	0.2690	0.2723	0.2755	0.2787	0.2820	0.2853	0.2886
5	0.2030	0.2060	0.2091	0.2122	0.2152	0.2184	0.2215	0.2246	0.2278	0.2310	0.2342	0.2374
6	0.1696	0.1725	0.1755	0.1785	0.1815	0.1846	0.1877	0.1908	0.1939	0.1970	0.2002	0.2034
7	0.1457	0.1486	0.1516	0.1545	0.1575	0.1605	0.1635	0.1666	0.1697	0.1728	0.1760	0.1791
8	0.1278	0.1307	0.1336	0.1365	0.1395	0.1425	0.1455	0.1485	0.1516	0.1547	0.1579	0.1610
9	0.1139	0.1167	0.1196	0.1225	0.1255	0.1284	0.1314	0.1345	0.1376	0.1407	0.1438	0.1470
10	0.1028	0.1056	0.1084	0.1113	0.1143	0.1172	0.1202	0.1233	0.1264	0.1295	0.1327	0.1359
11	0.0937	0.0965	0.0993	0.1022	0.1051	0.1081	0.1111	0.1141	0.1172	0.1204	0.1236	0.1268
12	0.0861	0.0888	0.0917	0.0946	0.0975	0.1005	0.1035	0.1066	0.1097	0.1128	0.1160	0.1193
13	0.0796	0.0824	0.0852	0.0881	0.0910	0.0940	0.0971	0.1001	0.1033	0.1065	0.1097	0.1130
14	0.0741	0.0769	0.0797	0.0826	0.0855	0.0885	0.0916	0.0947	0.0978	0.1010	0.1043	0.1076
15	0.0694	0.0721	0.0749	0.0778	0.0808	0.0838	0.0868	0.0899	0.0931	0.0963	0.0996	0.1030
16	0.0652	0.0679	0.0708	0.0737	0.0766	0.0796	0.0827	0.0858	0.0890	0.0923	0.0956	0.0990
17	0.0615	0.0643	0.0671	0.0700	0.0729	0.0760	0.0790	0.0822	0.0854	0.0887	0.0920	0.0954
18	0.0582	0.0610	0.0638	0.0667	0.0697	0.0727	0.0758	0.0790	0.0822	0.0855	0.0889	0.0924
19	0.0553	0.0581	0.0609	0.0638	0.0668	0.0698	0.0729	0.0761	0.0794	0.0827	0.0862	0.0896
20	0.0527	0.0554	0.0582	0.0612	0.0641	0.0672	0.0704	0.0736	0.0769	0.0802	0.0837	0.0872

Year	Interest Rate											
	0.0650	0.0700	0.0750	0.0800	0.0850	0.0900	0.0950	0.1000	0.1050	0.1100	0.1150	0.1200
1	1.0650	1.0700	1.0750	1.0800	1.0850	1.0900	1.0950	1.1000	1.1050	1.1100	1.1150	1.1200
2	0.5493	0.5531	0.5569	0.5608	0.5646	0.5685	0.5723	0.5762	0.5801	0.5839	0.5878	0.5917
3	0.3776	0.3811	0.3845	0.3880	0.3915	0.3951	0.3986	0.4021	0.4057	0.4092	0.4128	0.4163
4	0.2919	0.2952	0.2986	0.3019	0.3053	0.3087	0.3121	0.3155	0.3189	0.3223	0.3258	0.3292
5	0.2406	0.2439	0.2472	0.2505	0.2538	0.2571	0.2604	0.2638	0.2672	0.2706	0.2740	0.2774
6	0.2066	0.2098	0.2130	0.2163	0.2196	0.2229	0.2263	0.2296	0.2330	0.2364	0.2398	0.2432
7	0.1823	0.1856	0.1888	0.1921	0.1954	0.1987	0.2020	0.2054	0.2088	0.2122	0.2157	0.2191
8	0.1642	0.1675	0.1707	0.1740	0.1773	0.1807	0.1840	0.1874	0.1909	0.1943	0.1978	0.2013
9	0.1502	0.1535	0.1568	0.1601	0.1634	0.1668	0.1702	0.1736	0.1771	0.1806	0.1841	0.1877
10	0.1391	0.1424	0.1457	0.1490	0.1524	0.1558	0.1593	0.1627	0.1663	0.1698	0.1734	0.1770
11	0.1301	0.1334	0.1367	0.1401	0.1435	0.1469	0.1504	0.1540	0.1575	0.1611	0.1648	0.1684
12	0.1226	0.1259	0.1293	0.1327	0.1362	0.1397	0.1432	0.1468	0.1504	0.1540	0.1577	0.1614
13	0.1163	0.1197	0.1231	0.1265	0.1300	0.1336	0.1372	0.1408	0.1444	0.1482	0.1519	0.1557
14	0.1109	0.1143	0.1178	0.1213	0.1248	0.1284	0.1321	0.1357	0.1395	0.1432	0.1470	0.1509
15	0.1064	0.1098	0.1133	0.1168	0.1204	0.1241	0.1277	0.1315	0.1352	0.1391	0.1429	0.1468
16	0.1024	0.1059	0.1094	0.1130	0.1166	0.1203	0.1240	0.1278	0.1316	0.1355	0.1394	0.1434
17	0.0989	0.1024	0.1060	0.1096	0.1133	0.1170	0.1208	0.1247	0.1285	0.1325	0.1364	0.1405
18	0.0959	0.0994	0.1030	0.1067	0.1104	0.1142	0.1180	0.1219	0.1259	0.1298	0.1339	0.1379
19	0.0932	0.0968	0.1004	0.1041	0.1079	0.1117	0.1156	0.1195	0.1235	0.1276	0.1316	0.1358
20	0.0908	0.0944	0.0981	0.1019	0.1057	0.1095	0.1135	0.1175	0.1215	0.1256	0.1297	0.1339

EXHIBIT F - BIBLIOGRAPHY

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The Department may utilize any document which is approved by the Department and/or EPA and/or duly promulgated through the Federal Administrative Procedures Act, and/or is scientifically defensible.

EXHIBIT G – TIER 3 NOMINATION DOCUMENTATION REQUIREMENTS

The following information, documentation, and data shall be provided to the Commission by any person nominating a water body for Tier 3 or ONRW status:

1) A United States Geological Survey 7.5 minute topographic map or its equivalent as approved by the Commission showing those surface waters to be nominated including a description consisting of a river mile index with any existing and proposed discharge points;

2) Existing uses and water quality data for the surface water for which the nomination is proposed. If adequate data are unavailable, additional studies may be required by the Commission;

3) Descriptions of general land uses and specific land uses adjacent to the surface water for which the nomination is proposed;

4) The existing and designated uses of the water upstream and downstream of the proposed water body;

5) General physical characteristics of the surface water including width, depth, bottom composition, and slope;

6) The frequency of occasions when there is no natural flow in the surface water, and the 7Q10 and harmonic mean flow values for the surface water and adjacent surface waters;

7) An assessment of the existing and potential aquatic life habitat in the surface water under consideration and the adjacent upstream surface waters. The existing aquatic life shall be documented including the occurrence of individuals or populations, indices of diversity and well-being, and abundance of species of any unique native biota;

8) A documented rationale as to why the water qualifies for the nomination; and the rationale used to support the national significance of the water;

9) A listing of the types of persons, businesses, and organizations likely to be impacted by the change in Tier designation. Current users, downstream users, and potential future users of the water body and the surrounding land are the types of persons, businesses and organizations likely to be impacted by the change in designation. Those potentially impacted include cities, townships, permit holders, environmental organizations, and recreational users.

CHAPTER THREE - WATER QUALITY CERTIFICATION OF ACTIVITIES REQUIRING FEDERAL LICENSES OR PERMITS

I. BACKGROUND AND GENERAL REQUIREMENTS

A. Background

Section 401 of the Federal Act, 33 U. S. C. Section 1341, requires any applicant for a Federal license or permit to conduct any activity which may result in any discharge into the waters of the United States to provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate that any discharge will comply with the applicable provisions of §§ 301, 302, 303, 306 and 307 of the Federal Act, 33 U. S. C. §§ 1311, 1312, 1313, 1316 and 1317. Miss. Code Ann. § 49-2-7 provides that the Department shall be responsible for conserving, managing, developing and protecting the natural resources of the State of Mississippi. In addition, Miss. Code Ann. § 49-17-28 authorizes the Mississippi Environmental Quality Permit Board to issue water quality certifications required by Section 401 of the federal Clean Water Act.

B. General Requirements of Section 401 Certification

1. These regulations establish procedures and policies for implementing State water quality certification requirements of Section 401 of the Federal Act, 33 U.S.C. § 1341 ("§ (Section) 401 Certification"), which is incorporated herein and adopted by reference.

2. Pursuant to Miss. Code Ann. § 49-17-28(3) and § 49-17-28(3)(a), the Executive Director is authorized to make decisions on issuance, reissuance, denial, modification, and revocation of water quality certifications on projects regarding which the Department has received no written adverse comments. Additionally, the Permit Board may authorize the Executive Director to implement these regulations and to make decisions on issuance, reissuance, denial, modification, and revocation of water quality certifications for other projects, including projects regarding which the Department receives adverse written comments. The Executive Director may further delegate this authority to appropriate Department staff members, pursuant to Miss. Code Ann. §§ 49-2-13(a) and (c) and 49-17-29(3)(a). For purposes of Miss. Code Ann. § 49-17-29(3)(a), the word “permit” in the phrase “ permit issuance, reissuance, denial, modification or revocation” and in the phrase “all other permits within the jurisdiction of the Permit Board,” includes water quality certification actions taken pursuant to these regulations. The term "Department" in parts I, II, III, and IV of this chapter means:

(a) In a case where the Permit Board has authorized the Executive Director or Department staff to act on a certification, the Department acting through or under the direction of the Executive Director or the Executive Director (her/him)self; or

(b) In a case where the Permit Board has not authorized the Executive Director to act on a certification, or where the Executive Director has determined that the action should be taken by the Permit Board, the Permit Board.

In parts V and VI of this chapter, the terms "Department" and "Permit Board" are specific to those entities.

3. Any applicant for a federal license or permit to conduct any activity which during construction or operation may result in any discharge to waters of the United States shall first obtain a certification from the Department that any such discharge will comply with the applicable provisions of §§ 301, 302, 303, 306 and 307 of the Federal Act (33 U. S. C. §§ 1311, 1312, 1313, 1316, and 1317). Section 401 provides that no federal license or permit shall be granted until such certification is obtained. Federal permits or licenses for which certification is required include, but are not limited to, the following:

(a) individual, general or nationwide Federal permits issued pursuant to § 404 of the Federal Act, 33 U.S.C. § 1344;
(b) federal permits issued pursuant to § 10 of the Federal Rivers and Harbors Act, 33 U.S.C. § 403;
(c) permits or licenses issued by the Federal Energy Regulatory Commission, 16 U.S.C. §1791, et seq;
(d) permits or licenses issued by the United States Coast Guard, Bridge Administration Branch;
(e) any other federal permit or license to conduct any activity which may result in any discharge to waters of the United States.

4. Certification action is not required with regard to permits issued under federal law for which the State has received authority from the Administrator to issue, such as NPDES permits required under Section 402 of the Federal Act.

5. The Department may issue, deny or revoke certifications for categories of activities or for activities specified in Federal nationwide or general dredge and fill permits pursuant to federal law or regulations.

6. Any certification issued shall state that any discharge shall comply with applicable provisions of §§ 301, 302, 303, 306 and 307 of the Federal Act (33 U. S. C. §§ 1311, 1312, 1313, 1316, and 1317) and all State laws and regulations promulgated pursuant to the aforementioned sections of the Federal Act.

7. Any certification issued shall set forth limitations, conditions, and/or monitoring requirements necessary to assure (a) maintenance of classified or existing water uses and standards and (b) compliance with other requirements of these regulations or other appropriate requirements of State law and/or regulations. Monitoring requirements may include, but are not limited to, chemical analysis of water, sediment or fill material, and bioassays to determine

potential water quality impacts of dredged material in accordance with EPA approved methods and/or the methods set forth in Chapter Two.

II. APPLICATIONS

A. The application for certification shall be the public notice issued by the Federal permitting or licensing agency. The date of receipt of the public notice will be considered the date of application for certification if the application is deemed complete by the Department. To be deemed complete by the Department, all applications for certification shall at a minimum contain the information that follows:

1. the name, address, phone numbers, principal place of business of the applicant and, if applicable, the name and address of the agent for the applicant;

2. a complete description of the proposed activity, including the location, adjacent water body(s), purpose and intent of the project, maps, drawings, and plans (detailed engineering plans and specifications are not required);

3. a description of all proposed discharges and/or other activities associated with the proposed activity, including planned or proposed future development by the applicant;

4. a description of the composition, source, and quantity of any material to be dredged or used as fill and a description of the area to be impacted;

5. the method of dredging or filling and specific plans for disposal and control of dredge spoils; and

6. the names and addresses of adjacent property owners.

Potential applicants are encouraged to contact the Department prior to submitting an application.

B. The Department may require the applicant to provide water quality monitoring data, water quality modeling results, or other information necessary to complete the certification review.

III. PUBLIC NOTICE AND PUBLIC HEARING

A. Public Notice

Public notice of all applications for § 401 certification is required. Public notice may be accomplished through either a joint public notice between the federal and/or state agency and the Department or a public notice by the applicant at his expense.

1. Joint public notice procedures with federal or state agencies are normally used to facilitate processing.

2. If a joint public notice procedure is not implemented, public notice shall be accomplished by publication by the applicant in a newspaper having general circulation in the area in which the activity is proposed or throughout the State. The Department shall provide the applicant with the format for publication.

3. The public notice of the application for certification shall provide a reasonable period of time, normally at least 30 days from the date of notice, within which interested persons may submit to the Department their comments and information concerning the certification application.

B. Public Hearing

1. Any person may request a public hearing during the comment period. Requests shall be in writing addressed to the Department and shall state the issues to be raised at the hearing.

2. The Department shall hold a public hearing whenever the Department determines such a hearing may be useful in reaching a decision on an application for certification. The public hearing shall be held within thirty (30) days after the Department makes its determination, and notifies the applicant. The Department shall coordinate with other regulatory agencies and conduct joint public hearings when feasible. The decision of whether public hearings shall be held jointly or independently will be made on a case-by-case basis.

3. All public hearings shall be reported verbatim by a court reporter. A copy of the transcript shall be made available for public inspection.

IV. SCOPE OF REVIEW FOR APPLICATION DECISIONS

A. Factors

The factors related to the construction and operations of the activity which must be addressed by the applicant and will be considered in determining certification action are as follows:

1. feasible alternatives to the activity;

2. mitigation;

3. initial and secondary impacts on all existing and all classified uses of the waters of the State;

4. degree of compliance of the proposed activity with the State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters;

5. degree of physical, chemical, and biological impacts on waters of the State;

6. the effect on circulation patterns and water movement on waters of the State;

7. degree of alteration of the aquatic ecosystem;

8. degree of consistency with approved water quality management plans adopted by the Commission;

9. storm water management;

10. compliance history of the applicant; and

11. any other factors deemed to be necessary by the Department to protect water quality.

B. Denial

After consideration of the factors in Section IV.A. a decision to issue or deny certification shall be made. However, it is the policy of the Department to deny certification when any of the following determinations are made unless the Department is assured that appropriate measures will be taken to eliminate unreasonable degradation and irreparable harm to waters of the State.

1. The proposed activity permanently alters the aquatic ecosystem such that water quality criteria are violated and/or it no longer supports its existing or classified uses. An example is the channelization of streams.

2. There is a feasible alternative to the activity which reduces adverse consequences on water quality and classified or existing uses of waters of the State.

3. The proposed activity adversely impacts waters containing State or federally recognized threatened or endangered species.

4. The proposed activity adversely impacts a special or unique aquatic habitat, such as National or State Wild and Scenic Rivers and/or State Outstanding Resource Waters.

5. The proposed activity in conjunction with other activities may result in adverse cumulative impacts.

6. Nonpoint source/storm water management practices necessary to protect water quality have not been proposed.

7. Denial of wastewater permits and/or approvals by the State with regard to the proposed activities.

8. The proposed activity results in significant environmental impacts which may adversely impact water quality.

C. Criteria

The Department has developed a number of criteria which the applicant must substantially satisfy when the proposed activity involves any of the items addressed below.

1. Excavated Canals

These canals generally have flow and circulation less than that of the parent body of water and can become traps for organic material, nutrients and pollutants, resulting in a decline in water quality. Due to this potential for water quality degradation, the Department discourages canals. If no feasible alternatives are available, the Department has formulated a set of design and construction criteria to minimize the anticipated adverse water quality impacts. These criteria must be substantially satisfied in order for certification issuance to be considered. The criteria with regard to canals is attached hereto as Exhibit A and incorporated herein by reference.

2. Marinas

Numerous construction, development and operation activities at a marina can adversely impact water quality. In order to prevent potential adverse water quality impacts, the Department has formulated a set of criteria for marina development. These criteria must be substantially satisfied in order for certification issuance to be considered. The criteria with regard to marinas is attached hereto as Exhibit B and incorporated herein by reference.

3. Sand and Gravel Mining Within or Adjacent to Streams

Potential physical effects of excavations adjacent to streams and sand/gravel mining within stream banks include, but are not limited to, stream channel modifications, such as alteration of flow patterns, sediment transport, increased headcutting and channelization. These effects may adversely impact water quality by causing increased turbidity, reduced light penetration, resuspension of pollutants, increased water temperatures, and decreased dissolved oxygen. All sand and gravel mining activities which require a Section 401 Water Quality Certification shall be evaluated in accordance with Section IV.A. and B. of Chapter Three. In addition, the Department shall consider the following in evaluating sand and gravel mining within or adjacent to streams.

(a) Excavations Adjacent to Streams

To prevent adverse water quality impacts resulting from excavations adjacent to streams, the Department shall require a buffer zone between the mining activity and adjacent water bodies. A buffer zone (natural or undisturbed greenbelt on the perimeter of a land disturbing activity) shall be measured as the distance between the edge of the mining activity and the highest point of the top bank of the stream. Mining activity includes, but is not limited to, extraction operations, stockpiling of overburden or sand and gravel, gravel washing operations and sedimentation ponds. The purpose of the buffer zone is to prevent nonpoint source impacts and channel and hydraulic modifications. Channel and hydrologic modifications occur when the water body

captures a mining pit during high water. The width of the buffer zone shall be based on the stream size. The buffer zone requirements for excavations adjacent to streams are as follow:

(1) Intermittent Streams

Mining activities adjacent to intermittent streams shall normally have a 50-foot buffer zone. Intermittent streams will generally be indicated by a broken blue line on the latest version of the United States Department of the Interior Geological Survey Quadrangle Map (Scale 1:24,000, 7.5 minute series). The applicant may file a written request with the Department to reroute an intermittent stream, either temporarily or permanently, to avoid the mining activity. The Department shall approve the applicant's request only if the applicant can demonstrate that no significant adverse water quality impacts will result from the rerouting. In the event the Department approves the rerouting of an intermittent stream, appropriate erosion and siltation controls shall be implemented. Slopes shall normally be graded to 3 to 1 (horizontal to vertical) or flatter and seeded with a native species of grass to prevent erosion. The Department may require a different slope, on a case-by-case basis, as long as the slope is protective of the integrity of the stream bank and water quality.

(2) Perennial Streams

Mining activities adjacent to perennial streams shall normally have a 150-foot buffer zone. Perennial streams will generally be indicated by a solid blue line on the latest version of the United States Department of the Interior Geological Survey Quadrangle Map (Scale 1:24,000, 7.5 minute series). When a perennial stream is also classified as a navigable waterway, the requirements regarding navigable waterways shall be applied.

(3) Navigable Waterways

Mining activities adjacent to navigable waterways shall normally have a 300-foot buffer zone. Navigable waterways are defined and designated by the U. S. Army Corps of Engineers pursuant to Section 10 of the Rivers and Harbors Act.

The Department may require a different buffer zone, on a case by case basis, as long as the buffer zone is protective of water quality. In determining whether a different buffer zone is appropriate, the Department may consider factors including, but not limited to, the stability of the stream banks and the existing uses of the stream and adjacent areas.

(b) Sand/Gravel Mining within Stream Banks

The two types of sand/gravel mining within stream banks include sand/gravel bar mining in-the-dry and sand/gravel mining in-the-wet[13]. To prevent adverse water quality impacts, the Department has formulated a set of criteria for sand/gravel bar mining in-the-dry. These criteria are attached hereto as Exhibit C and incorporated herein by reference. Except as otherwise provided in these regulations, sand/gravel mining in-the-wet may be allowed if the applicant can demonstrate to the satisfaction of the Department that the water quality impacts associated with the proposed activity are minor. In assessing the impacts on water quality, the Department shall

[13] "Sand/gravel bar mining in-the-dry" is mining in such a manner that no equipment or dredged material is in contact with flowing water, that the soil/water or groundwater interface is not touched by the equipment and that infiltration in the mining site is not pumped into the stream. "Sand/gravel mining in-the-wet" is mining in such a manner that equipment and dredged material may come in contact with water.

consider these activities on a case-by-case basis in accordance with the factors set forth in Section IV.A. and B. of Chapter Three.

4. Development Requiring Storm Water Management

Nonpoint source pollution is a significant obstacle to preserving and improving the quality of our state's waterways. In order to prevent adverse water quality impacts, the Department has formulated a set of criteria for storm water management. These criteria must be substantially satisfied in order for certification issuance to be considered. The criteria with regard to storm water management is attached hereto as Exhibit D and incorporated herein by reference. These storm water runoff criteria are separate from any Storm Water Pollution Prevention Plan (SWPPP) required under any required storm water permit.

5. Certain Existing Subdivisions on the Mississippi Gulf Coast originally platted in lands which, because of the passage of the Federal Act and related laws and/or regulations, are presently unsuitable for development.

Several coastal subdivisions were platted prior to the passage of a number of pertinent regulatory laws, including but not limited to, Sections 401 and 404 of the Federal Act. These subdivisions typically have waterfront access to estuarine waters by man-made canals, have inadequate sewage treatment, and require filling of productive salt marsh. Current law and regulatory policy would not allow the platting and/or development of such subdivisions due to adverse environmental impacts. However, in an attempt to allow residential development to proceed in existing platted and partially developed subdivisions, while addressing water quality concerns, the Department has formulated a set of criteria that must be substantially satisfied in order for certification issuance to be considered. The criteria with regard to residential development in such subdivisions is attached hereto as Exhibit E and incorporated herein by reference.

Notwithstanding the criteria set forth above, the Department may develop criteria for other proposed activities which may have an adverse impact on water quality.

V. ENFORCEMENT OF CERTIFICATION DECISIONS AND CONDITIONS

A. Any certification shall set forth any effluent limitations, other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations under 33 U. S. C. §§ 1311 or 1312, standard of performance under 33 U. S. C. § 1316 or prohibition, effluent standard, or pretreatment standard under 33 U. S. C. § 1317, and with any other appropriate requirement of State law set forth in such certification. A certification condition becomes a condition of the Federal license or permit. For purposes of Miss. Code Ann. § 49-17-43, a violation of a certification condition is deemed a violation of a permit issued by the Permit Board.

B. Certification conditions are subject to enforcement proceedings available to the federal agency issuing the permit or license. Other proceedings under State law, including modification

and/or revocation and/or suspension of certification and enforcement actions pursuant to Miss. Code Ann. § 49-17-43, may also be used to correct or prevent adverse water quality impacts resulting from construction or operation of activities for which certification has been issued.

C. The Department may conduct inspections for determining compliance with certification conditions.

D. Nothing in these regulations shall be construed to limit the authority of any department or agency pursuant to any other provision of law to require compliance with any applicable water quality requirements.

VI. REVIEW AND APPEALS

A. Review of Certification Denial through Informal Review and Formal Hearings.

1. Prior to the denial of an application for certification, the Department shall issue a notice of intent to deny certification to the applicant. Upon receipt of the notice of intent to deny, the applicant is encouraged immediately to contact the Department for further discussions regarding the application for certification.

2. Within thirty days after the date the Department denies and/or revokes certification, an applicant may file a written request for an informal review with the Department. The Department shall fix the time and place of such informal review and shall notify the applicant thereof.

3. Within thirty days after (1) the date the Department denies certification or (2) the date of the informal review in which the Department makes a decision to continue to deny certification, the applicant may file a written request for a formal hearing before the Permit Board. The request shall set forth grounds for the hearing request and be made in accordance with Miss. Code Ann § 49-17-29(4)(b).

4. If an initial decision to deny the application is made by the Permit Board instead of by the Department, the applicant may request a formal hearing before the Permit Board pursuant to Miss. Code Ann. § 49-17-29(b).

B. Review of Other Certification Actions

Any interested party aggrieved by an action of the Department or the Permit Board concerning a water quality certification may request a formal hearing before the Permit Board within thirty days after the date the Permit Board takes action, as recorded in the minutes of the Permit Board, pursuant to Miss. Code Ann. § 49-17-29(b). "As recorded in the minutes of the Permit Board" means the date of the Permit Board meeting at which the action concerned is taken by the permit board.

C. Appeals of Certification Action

Following the formal hearing, the final action of the Permit Board upon such matters shall be conclusive unless the applicant perfects an appeal to the appropriate chancery court within twenty days of the Permit Board's action, as specified by Miss. Code Ann. § 49-17-29(4)(c) and (5).

EXHIBIT A - CRITERIA FOR THE SITING AND DESIGN OF EXCAVATED CANALS

I. Criteria for Canal Design and Siting

(a) Canals shall not be constructed or excavated in wetlands, creeks or natural drainage ways.
(b) Canals should all have two or more connections to the parent body of water to allow greater flow through the system.
(c) Canals shall not be box cut. Slopes of canal banks shall be one vertical to three horizontal or flatter to promote colonization by littoral vegetation, which provides nutrient uptake, habitat and bank stabilization. Any bulkheading shall be done above ordinary high water.
(d) Canals shall be no deeper than -4 to -5 feet normal water level due to problems with incomplete mixing, poor reaeration, stratification, and depressed dissolved oxygen associated with excessive depths.
(e) Excavation resulting in ridges or depressions within the canal shall be avoided due to limitations on water exchange.
(f) Where feasible, canal projects shall be located on the run of a river rather than in a pool and backwater segment.
(g) Canals shall be designed to maximize wind-induced mixing and other natural forms of reaeration. For example, the longest dimension of the canal should be oriented with prevailing winds. Complex geometric designs shall be avoided and keyhole boat slips shall not be placed off of the canal. The minimum bottom width of a canal shall be 100 feet in order to allow for reaeration.
(h) Where feasible, designs shall have an enlarged surface area (a pool or embayment) which is shallower than the canal at the landward terminus. This design results in better water quality due to the enhanced effects of wind reaeration in the pool and in creased flow because of the storage area in the pool.

II. Wastewater Treatment

A central sewage collection and treatment system is the preferred method of wastewater treatment. Individual home disposal systems shall only be considered after a determination is made that other treatment methods are not economically feasible and State Department of Health approval shall then be required. Wastewater treatment approval from either the Department or the State Department of Health must be obtained prior to the issuance of a § 401 Certification.

The minimum requirements for wastewater treatment approvals shall include, but are not limited to, the following:

(a) no effluent, treated or untreated, shall be discharged directly into the canal,

(b) depending on the soil type, a minimum of 150 feet from a septic tank absorption field to any water body shall be required,
(c) the bottom of a septic tank absorption field shall be at least five feet above the impervious layer or groundwater, and
(d) the bottom of a septic tank absorption field shall be above the 10-year flood plain.

III. Storm Water Management

Storm water runoff from any project site shall be directed away from the canals to prevent discharge of water-borne contaminants, bacteria, nutrients, oils, greases, sediments, etc.

EXHIBIT B - FRESHWATER AND COASTAL MARINA GUIDELINES

I. Siting Criteria

A. Marinas shall be located in areas that eliminate or minimize the loss of wetland vegetation.

B. Marinas shall not be sited in open shellfish harvesting waters.

C. Marina design shall not disrupt normal water circulation patterns or restrict tidal flow in adjacent water bodies.

D. Marina basins shall provide for water circulation and be designed to accommodate tidal flushing by incorporating flow through breakwaters or similar structures.

E. Marina basins excavated from uplands shall be designed to optimize tidal flushing and internal circulation.

1. The basin should be rectangular and have a length to width ratio between 0.5 and 2.0.

2. Corners in the basin interior should be rounded.

3. The basin should have a symmetric entrance(s) with maximum width and minimum length.

4. The basin shall not be greater in depth than the entrance channel which shall be no deeper than the controlling navigational depth.

5. Basin and channel depths shall gradually increase toward open water.

II. Sewage Treatment Guidelines

A. No persons shall live on boats moored at the marina unless the boats are equipped with a Type III (non-discharging) marine sanitation device (MSD).

B. A wastewater pumpout facility shall be provided for the following:

1. marinas that are located within one tidal cycle of open shellfish harvesting waters,

2. marinas that berth more than twenty-five (25) boats,

3. marinas that berth any boats used in a live-aboard status,

4. marinas that berth a majority of commercial boats,

5. marinas that are in close proximity to a public water supply intake, or

6. marinas that are in close proximity to a swimming area.

C. Marinas utilizing wastewater pumpout facilities shall prominently display a sign at the marina showing the location of the nearest pumpout facility as well as other appropriate waste disposal information.

D. The pumpout facility shall be tied into a collection and treatment system that has the approval of the Department or State Department of Health.

E. All marinas shall observe compliance with a "locked head" policy for all docked vessels with Type I and II MSDS and the notification of this policy to marina users shall be initiated upon completion of the project.

III. Storm Water Management

The applicability of these criteria will be determined by the Department on a case-by-case basis. If storm water runoff management is necessary to protect water quality, criteria shall be applied as follows:

A. Approximately the first half inch (0.5) of storm water runoff from impervious surfaces and boat maintenance areas shall be retained. Runoff shall be routed through grassed swales, wetlands, retention and detention ponds and other systems that decrease run off velocity, increase infiltration and allow suspended solids to settle and remove pollutants in the water column.

B. Surface runoff from the construction, operation and/or maintenance of any service facility associated with the marina, especially boat maintenance areas, shall not discharge directly into water bodies with limited flushing and pollutant assimilation potential (i.e., marina basin, entrance channels). When storm water outfalls are necessary, they shall be located to discharge into areas with high flushing rates.

C. Porous surfaces such as crushed stone or shell shall be used wherever possible (particularly in parking areas).

D. Clearing shall be minimized and vegetated buffers such as marsh or natural vegetation shall be created and/or retained on the site between land disturbance activities and water areas.

E. Erosion and sediment controls shall be installed prior to commencement of upland construction.

IV. Fueling Facilities

A. Fuel storage tanks shall be located onshore above ground unless the tanks meet the federal requirements for underground storage tanks in 40 C.F.R. 280.

B. Containment dikes shall be constructed around above ground storage tanks. The diked area shall be able to contain:

1. the volume of the tank plus a ten-year, 24-hour rainfall event, or
2. 150% of the volume of the tank.

EXHIBIT C - SAND AND GRAVEL BAR MINING IN-THE-DRY

1. The only vehicles/equipment on the sandbar shall be loading equipment and off-road hauling equipment. All highway vehicles shall remain on the access road.

2. The stream banks shall remain sloped and intact. Any disturbance shall be repaired.

3. Vegetation on the stream bank shall remain undisturbed except for a minimum area (normally less than 20 feet in width) necessary for ingress and egress to the site.

4. The stream bottom shall remain intact.

5. The mining activity shall be conducted in the dry. A natural undisturbed area of at least 15 feet in width shall be left between the mining activity and the stream flow. No equipment shall be allowed to operate in the undisturbed area.

6. Measures shall be taken to prevent erosion and sedimentation.

7. In no event shall a sand bar adjacent to a previously mined sand bar be mined until the previously mined sand bar has substantially replenished to pre-mining conditions. Additionally, sand bars less than one river mile apart shall not be mined concurrently.

8. No mining activity shall be conducted at sharply angled bendways (90° or more change in direction) unless the applicant has demonstrated to the Department that there is no significant potential of bisecting the point bar and altering the existing flow pattern.

9. No mining activity shall be conducted on mid-channel sand bars.

10. Vegetation and debris disturbed during the mining activity shall be removed to an upland location and placed in such a manner as to prevent re-entry into the stream.

11. Mined material shall not be stored or stockpiled within the banks of the stream, except for a limited quantity for daily operation.

12. No rubbish, trash, oil, lubricating material, or other pollutants shall be stored within the banks of the stream or be placed in a location where they are likely to cause pollution of any waters of the State.

13. When work is completed in an area, normal physical characteristics of the work area shall be restored, to the extent practicable, without causing additional disturbance. The site shall be graded to smooth contours while maintaining the integrity of the undisturbed areas and the stream bank.

14. The Department may require additional conditions and limitations necessary to protect water quality.

EXHIBIT D - STORM WATER RUNOFF PLAN

1. Appropriate installation of erosion and sediment controls shall be required during the construction phase.

2. Approximately the first half inch (0.5) of storm water runoff from impervious surfaces (ex. parking lots) shall be temporarily ponded on site and treated through infiltration, settling and evapotranspiration.

3. Grassed/sanded areas and grassed waterways shall be incorporated into the drainage / landscape design to provide maximum opportunity for infiltration and filtration of storm water runoff.

4. Buffer zones shall be maintained on the project perimeter where possible to provide treatment of overland flow before leaving site (minimum 15 feet).

5. The Department may include additional requirements necessary to protect water quality.

EXHIBIT E - CRITERIA FOR CERTAIN EXISTING COASTAL SUBDIVISIONS ORIGINALLY PLATTED IN LANDS WHICH, BECAUSE OF THE PASSAGE OF THE FEDERAL ACT AND RELATED LAWS AND/OR REGULATIONS, ARE PRESENTLY UNSUITABLE FOR DEVELOPMENT

1. House fill shall be limited to one foot beyond the "drip line" around the house or 1,500 square feet, whichever is smaller.

2. Driveway fill shall not exceed 500 square feet. If surface drainage will be impaired, appropriate culverts must be provided.

3. Bulkheads, if allowed, shall be constructed no further water-ward than mean high tide.

4. State Department of Health approval shall be required on all individual home disposal systems.

5. Fill material must be confined / stabilized to prevent intrusion into adjoining waters.

6. The lot must be directly accessible by an existing improved road or street along which at least one dwelling has been constructed.