3.0 Water Resources

3.1 Water Supplies

SSC water supplies include groundwater supply for drinking, sanitation, fire protection, and industrial uses and surface water for rocket testing cooling and standby fire protection.

3.1.1 Surface Waters

The SSC facility is located in the southwestern part of Hancock County, Mississippi. A Buffer Zone around the Fee Area is located in Hancock and Pearl River counties in Mississippi and St. Tammany Parish, Louisiana. The East Pearl River flows along the southwest boundary of the Fee Area and the Jourdan River flows in a southeasterly direction through the eastern portion of the Buffer Zone. Tributaries that drain the Fee Area and are hydraulically connected to these two rivers are Mikes River and Turtleskin Creek in the East Pearl River Basin, and the Lion and Wolf branches of Catahoula Creek in the Jourdan River Basin. Approximately 13.7 kilometers (8.5 miles) of constructed canals in the Fee Area are also connected through locks to the East Pearl River (Figure 3-1).

The East Pearl River system is one of Mississippi's principal rivers, draining an approximate area of 22,688 square kilometers (8,760 square miles). The river divides into distinct channels west of Picayune, Mississippi where the main stream is known as the West Pearl River. The East Pearl River is formed by a confluence of Hobolochitto Creek and Farrs Slough, and forms the boundary between Mississippi and Louisiana. The East Pearl River drains to Lake Borgne and eventually to the Mississippi Sound. The ten year, seven day average low flow for the West Pearl River is 49.6 cubic meters per second (1,750 cubic feet per second [cfs]). The flow for the East Pearl River is 2.3 cubic meters per second (80 cfs) (1). During flood stage, the floodplain carrying both channels is utilized. In addition, both channels are subject to saltwater intrusion.

Dead Tiger Creek and Catahoula Creek form the Jourdan River System in the northeast portion of Hancock County, Mississippi. The Lion and Wolf branches are intermittent streams that drain the eastern section of the Buffer Zone. The Jourdan River drains to the

Figure 3-1 Surface Water Bodies in the Vicinity of SSC

FIGURE 3-1

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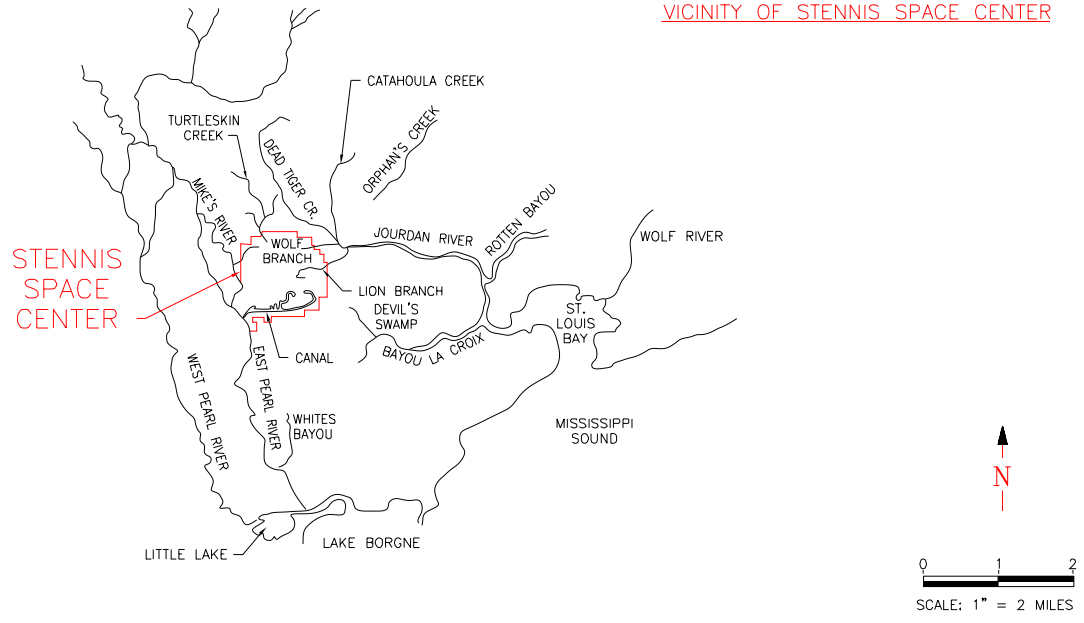
SURFACE WATER BODIES IN THE VICINITY OF STENNIS SPACE CENTER



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Bay of St. Louis and eventually to the Mississippi Sound. No long-term statistics for stream flow are available; however, maximum and minimum flow for the Catahoula Creek range from 450 cubic meters per second (16,000 cfs) to 0.23 cubic meters per second (8.2 cfs). Saltwater intrusion from the Mississippi Sound also takes place in the Jourdan River System. The southeastern portion of SSC drains into the main access canal. The canal is connected to the East Pearl River through a lock system. A spillway and overflow of the canal drains into Devils Swamp which discharges into Bayou LaCroix and the Bay of St. Louis to the Mississippi Sound.

The State of Mississippi classifies the Pearl and the Jourdan Rivers as suitable for recreation. The Pearl River extends through the Buffer Zone and the Jourdan River from the confluence of Catahoula Creek to the Bay of St. Louis; both are designated Inventory Rivers under the Wild and Scenic Rivers Act. Mike's River and the Lion and Wolf branches are designated as supporting fish and wildlife.

SSC holds a permit (MS-SW-02432) to divert or withdraw for beneficial use from the public waters of the State of Mississippi. Permit MS-SW-02432 covers an inlet and pumps that withdraw water from the East Pearl River into the elevated portion of the facility's Access Canal. The Access Canal provides a source of water for emergency fire suppression and rocket test stand deflector cooling.

3.1.2 Groundwater

Several aquifers can be traced through Hancock County. The area is underlain by fresh water-bearing, southward-tipping sands of the Miocene and Pliocene ages. Within these fresh water-bearing sands, one unconfined aquifer is found near the surface with ten or more confined aquifers at depth. The fresh water-bearing zone is 600 to 900 meters (2,000 to 3,000 feet) thick in the area. Individual aquifers range from 30 to 140 meters (100 to 450 feet) in thickness, with most measurements closer to 30 meters. The sequence of alternating sands and discontinuous clay layers, creating the confining nature of the deeper aquifers, is part of the Coastal Lowlands Aquifer System or the Southeastern Coastal Plain System. Groundwater at SSC is soft, containing sodium bicarbonate and exhibiting a high pH (above 8). Concentrations of chlorides range from 13 to 16 ppm and iron content is less than 0.3 ppm. Solids content does not exceed 315 ppm (5). The aquifers have plentiful, almost untapped supplies of fresh water.

Water for potable and industrial use at SSC is supplied through six large capacity wells on site (Figure 3-2). Well permit numbers, well use, well depth, normal discharge and maximum discharge are listed in Table 3-1.

Potable Water - Three of the wells supply potable water to the facility. The well depths range from 437 to 465 meters (1,434 to 1,524 feet) with a natural flow of 4,200 to 9,500 liters (1,100 to 2,500 gallons) per minute. Table 3-2 indicates average potable water use per month based on NASA's 2000 Water Use Report.

The three deep wells and associated pumps, chlorinators, two elevated storage tanks, automatic controls, and a distribution system supply the support and test areas with water for drinking, sanitation, and fire protection.

The elevated tanks supply water to the system and maintain system pressure at 457 to 492 kilograms per square meter (65 to 70 pounds/square inch gauge [psig]). Chlorination operates in conjunction with booster pumps, adding chlorine to the water while the pumps are operating. The water supply is sampled monthly and analyzed in accordance with the federal and state requirements.

Industrial Water - Industrial water is supplied by three wells, ranging in depth from 205 to 571 meters (672 to 1,873 feet). These industrial wells are capable of producing 28 million liters (7.5 million gallons) of water per ten-hour period and 68 million liters (18 million gallons) per day. Industrial water is used for deluge water for the test stands, cooling water, and fire control. Presently, the Access Canal is the primary source of industrial wastewater at the facility. The three industrial wells are maintained as a backup system for the surface water withdrawal system.

3.1.3. Storm Water

Stennis Space Center's Permit Number MSR500068 provides coverage under Mississippi's Land Disposal Storm Water General NPDES Permit. The land disposal storm water permit is applicable to the operation of the SSC non-hazardous waste landfill, which allows storm water associated with industrial activity to be discharged into state waters. A Land Disposal Notice of Intent (LNOI) must be submitted before receipt of a storm water permit. A storm water pollution prevention plan was also developed to identify potential sources of pollution which

may be expected to affect the quality of storm water discharges associated with SSC industrial activity.

At various times, construction activities at Stennis Space Center require permit coverage under Mississippi's Construction General Permit. All construction sites consisting of five acres or more require such coverage. Construction sites of less than five acres should also abide by good engineering practices to minimize erosion that could affect the quality of storm water discharge from the site.

3.2 Water Quality

Background surface water quality information is limited; however, discharge stations are maintained by the U.S. Geological Survey (USGS) on the Pearl River approximately 40 kilometers (25 miles) northwest of the Fee Area. A USGS monitoring station on the West Pearl River measures flow and is located approximately 11.3 kilometers (seven miles) west of the Fee Area. The surface waters in the streams of the area are generally suitable for most uses. USGS analyses indicate that the water in freshwater streams is generally soft and slightly acidic (5.0 to 7.0 pH units), with low concentrations of dissolved solids (1). Dissolved solids concentrations are less than 100 mg/L and hardness is usually less than 50 mg/L. Amounts of dissolved oxygen are usually greater than 4 mg/L. Dissolved solids concentrations increase in the Pearl and Jourdan Rivers with the movement of saltwater during high tide. Water quality in the Fee Area is similar to the regional surface water quality with the following exceptions:

- Water is slightly alkaline in the canal, between 7.0 and 8.0 pH units
- Dissolved solids concentrations range between 60 and 120 mg/L(1).

SSC has also established data for the East Pearl/Mike's River through surface water sampling. Table 3-3 provides 2000 annual pH results.

3.2.1 Programs to Preserve Water Quality

Each State is required to adopt water quality standards under the Federal Water Pollution Control Act, as amended by the Clean Water Act (CWA) of 1977, reauthorized in 1987. These standards are established based on the use and values of waters for public water supplies, propagation of fish and wildlife, recreation, agriculture, industry, and navigation.

Federal standards and guidelines have also been established for the protection of aquatic life and protection of human health through consumptive pathways. Standards for potable water have been established under the Safe Drinking Water Act.

3.2.2 Mississippi Programs to Preserve Water Quality

The State of Mississippi has been given jurisdiction for programs to improve water quality. Mississippi water pollution control laws are contained in the Mississippi Air and Water Pollution Control Act, Title 49, Conservation and Ecology, Chapter 17, Pollution of Waters, Streams and Air. Water Quality criteria appear in Mississippi Water Quality Criteria for Intrastate, Interstate and Coastal Waters. Wastewater permit regulations are included in the Mississippi 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, Mississippi Department of Environmental Quality, Office of Pollution Control. Mississippi has adopted water quality standards contained in Title 49 - Conservation and Ecology, Chapter 17, titled "Mississippi Safe Drinking Water Law of 1976."

These Mississippi water standards apply to "waters of the state" which include all streams, lakes, ponds, impounding weirs, 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 partially within or bordering upon the state, and such coastal waters as are within the jurisdiction of the State. Classifications of water bodies in the SSC area are given in Table 3-4. Quantitative water quality criteria corresponding to the State of Mississippi Stream Classifications for Surface Waters in the SSC area are provided in Table 3-5.

The State issues permits for discharge to surface waters under the NPDES program. These permits are renewed at five-year intervals. SSC holds permit number MS0021610 for surface water discharge. The permit was reissued January 28, 1997; was modified June 7, 1997; and will expire January 27, 2002. This permit is for the following Outfalls:

- Domestic (sanitary) wastewater from outfalls numbered 001, 002, 008 and 010.

- Rocket Testing Deluge Water and Test Stand Rain Sump Water, Outfall 011.

Figure 3-2
Potable Water Sources

FIGURE 3-2

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POTABLE WATER SOURCES

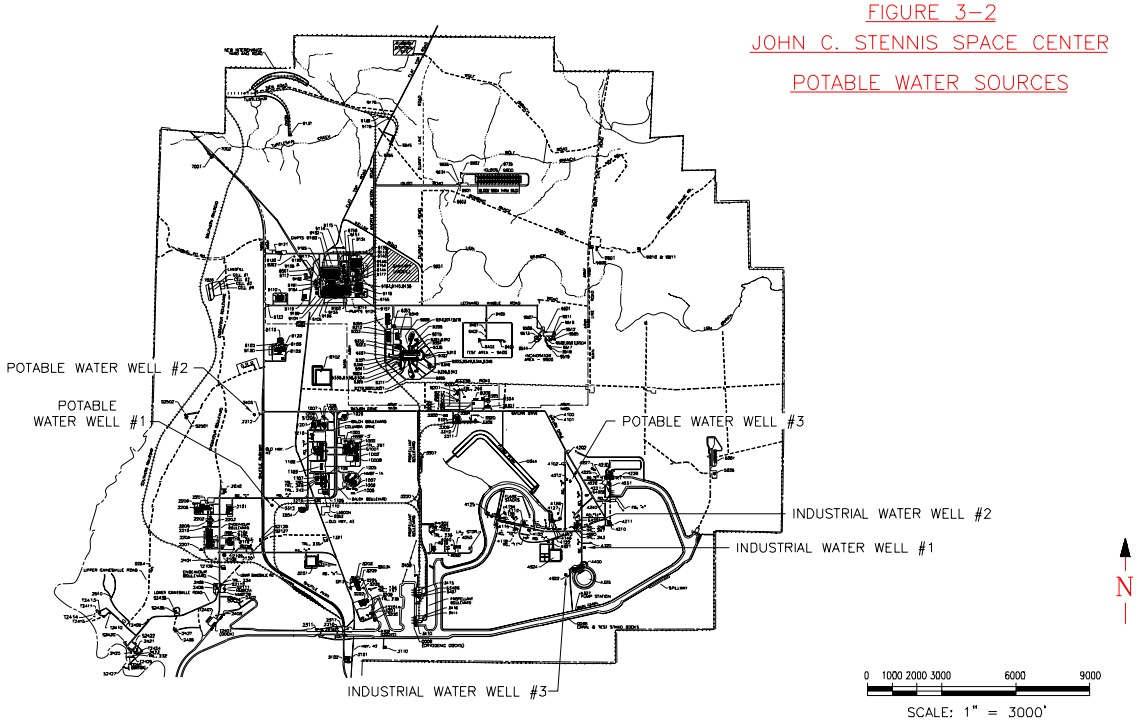

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Table 3-1
SSC Well Use Permits

Permit No.	Well Use	Depth		Normal Discharge		Maximum Discharge	
		Meters	Feet	Million Liters/ Day	Million Gal/ Day	Liters/ Min	Gal/ Min
*MSGW01907	Industrial Water	570.9	1,873	3.2	0.84	13,000	3,500
*MSGW01908	Industrial Water	516.6	1,695	4.5	1.2	20,000	5,000
*MSGW01909	Industrial Water	204.8	672	4.5	1.2	20,000	5,000
MSGW01910	Drinking Water	464.5	1,524	1.5	0.4	2,000	600
MSGW01911	Drinking Water	451.4	1,481	0.4	0.1	1,610	425
MSGW01912	Drinking Water	437.1	1,434	0.57	0.2	3,000	700

* These wells are maintained in a standby mode.

Source: Newcome, R., Jr., 1967, Development of Groundwater Supplies at Mississippi Test Facility, Hancock County, Mississippi, Geological Survey Water Supply Paper 1839-H, pp H3-H27.

Table 3-2
Potable Water Use in 2000
(Groundwater)

Month	Average Monthly Withdrawal Well #1 MSGW01910		Average Monthly Withdrawal Well #2 MSGW01911	
	Liters Per Day	Gallons Per Day	Liters Per Day	Gallons Per Day
January	889,286	234,950	854,490	225,757
February	1,040,163	274,812	865,985	228,794
March	972,162	256,846	829,483	219,150
April	760,728	200,985	782,965	206,860
May	739,968	195,500	1,269,338	335,360
June	1,142,461	301,839	1,087,733	287,380
July	1,705,956	450,715	1,407,547	371,875
August	1,433,380	378,700	1,004,259	265,326
September	1,798,405	475,140	1,904,498	503,170
October	1,387,365	366,543	866,966	229,053
November	2,083,207	550,385	389,514	102,910
December	1,251,094	330,540	647,159	170,980

** Well #3 is not operational but maintained in standby mode for the Test Complex. **

Source: NASA, 2000, Water Use Report, Stennis Space Center.

Table 3-3
pH of Natural Surface Waters at SSC

Date	E. Pearl River North of SSC	E. Pearl River South of SSC	Army Ditch at SSC
01/03/00			7.36
02/07/00	6.96	6.78	7.65
03/20/00			7.01
04/10/00			7.05
05/15/00	6.50	6.58	7.94
06/19/00			6.95
07/10/00			6.40
08/07/00	6.85	7.13	6.86
09/25/00			7.29
10/23/00			7.52
11/13/00			6.85
12/11/00	7.01	6.84	6.95
Average	6.83	6.83	7.15
Standard Deviation	0.23	0.23	0.40

The effluent limitations, schedule of compliance, and monitoring requirements are specified in Tables 3-6, 3-7, and 3-8. Outfall 006 was closed in 1998 and has been replaced by a wastewater pre-treatment facility. The wastewater ultimately goes to Outfall 001 and monitoring for silver and cyanide have been transferred from Outfall 006 to Outfall 001. Outfall 011 has no monitoring requirements until rocket testing using kerosene-based fuel begins. Sewerage treatment system at SSC consists of 4 permitted treatment facilities and 57 lift stations.

3.2.3 Wild and Scenic Rivers

The Wild and Scenic Rivers Act (16 U.S.C. § 1271 et seq.) establishes requirements for water resource projects affecting wild, scenic, or recreational rivers within the National Wild and Scenic Rivers System, as well as rivers designated on the National Rivers Inventory to be studied for inclusion in the National System. The protective restrictions under the Act mostly apply to Federal agencies; however, private projects that require Federal agency approval or permits may also be affected.

The Act applies to construction of water resources projects that would have direct and adverse effects on the free-flowing, scenic, and natural values of a river on the National System or National Rivers Inventory. The Act also covers indirect effects from construction of water resources projects below or above rivers or their tributaries that are in the National System or under study on the National Rivers Inventory, such as a dam on a tributary or development on adjacent shorelines. If a project would affect the free-flow characteristic of a designated river or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area, such activities must minimize adverse impacts and consult with the National Park Service and the Department of Agriculture.

Many rivers across the country were declared eligible for studies that would determine their right to protection under the Act. Later, several additional rivers were identified by the National Park Service for these studies. These rivers, known as Inventory Rivers, are not strictly protected under the Act. Inventory Rivers are protected by guidelines issued in 1980 by the Council on Environmental Quality (CEQ). The CEQ guidelines recommend that Federal agencies consider the effect significant Federal actions may have upon Inventory Rivers.

The Pearl River, extending through the Buffer Zone, and the Jourdan River, from the confluence of Catahoula Creek to the Bay of St. Louis, are both designated Inventory Rivers. The Jourdan River, located approximately 8 kilometers (5 miles) east of Stennis Space Center, has been identified as having significant recreational and archaeological resources. The Pearl River, used for SSC barge traffic, has been identified as having numerous endangered, threatened and rare species (see Section 6.0), and as being an excellent example of a large Gulf Coastal Plain river with extensive swamplands.

3.3 Summary of Water Monitoring at SSC

A summary of parameters monitored at SSC for potable water and wastewater is given in Table 3-9. Drinking water samples are obtained throughout the facility on a monthly basis and coordinated quarterly with the Mississippi Department of Health.

Groundwater quality at the SSC landfill has historically been monitored by three monitoring wells, however, a revision to the Groundwater Monitoring System Plan was approved August 1999, by the MDEQ. The revised Plan is designed to monitor groundwater quality at the landfill, specifically in the area of the active cells and inactive cells 1 and 2. Groundwater level measurements will be made during each sampling event. In addition pH, conductivity and temperature will be measured. All groundwater samples will be analyzed for the constituents listed in 40 CFR 258, Appendix I, plus herbicides and pesticides on Table 3 in the Plan.

In March 1999, a sample indicated a statistically significant increase for TCE. In November 1999, additional monitoring indicated the presence of a plume of VOCs in shallow groundwater with concentrations that exceeded Maximum Contaminant Levels (MCL). A plan was approved in August 2000, for shallow groundwater monitoring that includes the five existing wells (02-01MW, 02-03MW, 02-03MW, 02-04MW, 02-05MW, 02-13MW) and ten additional wells (02-21-MW, 02-22MW, 02-23MW, 02-24MW, 02-25MW, 02-26MW, 02-26MW, 02-27MW, 02-27MW, 02-28MW, 02-29MW) for a total of 15 monitoring wells. The wells will be monitored quarterly for the first two years to develop a baseline. Selected wells will be sampled on a semi-annual basis thereafter. The SSC landfill is a long-term monitoring site in the Hazardous Waste Site Clean Up Program. Reports are provided to the State of Mississippi on a semi-annual basis in accordance with SSC's Solid Waste Management Permit.

Groundwater monitoring wells have been installed at various clean up sites at SSC as discussed in Section 7.4.3.

Discharges of wastewater are monitored to meet NPDES permit conditions, and NASA maintains a surface water quality-monitoring program in the Fee Area. NPDES sampling locations are given in Figure 3-3.

3.4 Major Environmental Considerations for Proposed Action

Erosion of surface soils during construction, and land clearing for construction on the site needs to be addressed. Soil erosion could increase the turbidity, suspended solids and color of the receiving waters. In addition, effluent discharges from testing, construction, and manufacturing result in surface water quality impacts. Potentially affected surface waters should be monitored analytically to determine impact on surface waters. All construction and testing operations must be coordinated through NASA Environmental Management so that environmental impacts can be properly assessed.

Table 3-4
Classification of Water Bodies
in the SSC Area

Water Body	From	To	Classification
Pearl River	Byram Bridge	Mississippi Sound	Recreation
Jourdan River	Confluence of Dead Tiger and Catahoula Creek	Highway 43	Recreation
Jourdan River	Highway 43	Bay of St. Louis	Recreation
Bay of St. Louis	Harrison - Hancock Counties		Shellfish Harvesting

Table 3-5
State of Mississippi Water Quality Criteria for Surface Waters

Water Quality Parameters	Recreation	Shellfish Harvesting
Fecal Coliform	Fecal coliform shall not exceed a geometric mean of 200 per 100 ml nor shall more than ten percent (10%) of the sample examined during any month exceed 400 per 100 ml.	The median fecal coliform MPN (most probable number) of the water shall not exceed 14 per 100, and not more than 10% of the samples shall exceed an MPN of 43 per 100.
Specific Conductance	There shall be no substances added to increase the conductivity above 1000 microhos/cm for fresh water streams.	Not Applicable
Dissolved Solids	There shall be no substances added to the water to cause the dissolved solids to exceed 750 mg/l as a monthly average value, nor exceed 1500 mg/l at any time for freshwater streams.	Not Applicable
pH	The normal pH of the waters shall be 6.0 to 8.5 and shall not be caused to vary more than 1.0 unit; however, should background pH be outside the limits, it shall not be changed more than 1.0 units	Same
Temperature	The maximum temperature rise above natural temperatures shall not exceed 5° F in streams, lakes and reservoirs nor shall the maximum water temperature exceed 90° F.	The discharge of any heated waste into any coastal or estuarine waters shall not raise temperatures more than 4° F above natural during the period October through May, nor more than 1.5° F above natural for the months June through September.
Dissolved Oxygen	Dissolved oxygen concentrations shall be maintained at a daily average of not less than 5.0 mg/l with an instantaneous minimum of not less than 4.0 mg/l in streams, estuaries and in tidally affected portions of streams, and in the epilimnion.	Same
Toxic Substances, Color, Taste and Odor Producing substances	Waters will be free from objectionable sludge deposits, floating debris, oil, and scum from discharges. It will also be free from materials from discharges producing color, odor, taste, total suspended solids or other conditions that create a nuisance. Toxic substances will not exceed levels causing toxicity to aquatic life or pose a treat to human health	Same

Source: State of Mississippi, 1995, Water Quality Criteria for Intrastate, Interstate and Coastal Waters

Table 3-6
Effluent Limitations and
Monitoring Requirements for Domestic Wastewater Outfall - No. 001

Effluent Characteristics	Effluent Limitations - Daily Max	Effluent Limitations - Monthly Average	Monitoring Requirements - Frequency	Monitoring Requirements - Sample Type
Flow (MGD)	Report	Report	Bimonthly	Instantaneous
BOD5	45 mg/l	30 mg/l	Bimonthly	24-hour composite
TSS	45 mg/l	30 mg/l	Bimonthly	24-hour composite
Fecal Coliform Geometric Mean	400/100 ml	200/100 ml	Bimonthly	Grab
Cyanide, Total	0.022 mg/l	0.0052 mg/l	Once/Week	Grab
Silver, Total	0.00105 mg/l	N/A	Once/Week	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week with a grab sample of the effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The discharge shall not cause the occurrence of a visible sheen on the surface of the receiving waters.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): the nearest accessible point after the final treatment but prior to actual discharge or mixing with the receiving waters.

Source: State of Mississippi, 1997, Water Pollution Control Permit No. MS0021610

Table 3-7
Effluent Limitations and
Monitoring Requirements for Domestic Wastewater Outfall - No. 002

Effluent Characteristics	Effluent Limitations - Daily Max	Effluent Limitations - Monthly Average	Monitoring Requirements - Frequency	Monitoring Requirements - Sample Type
Flow (MGD)	Report	Report	Bimonthly	Instantaneous
BOD5	45 mg/l	30 mg/l	Bimonthly	24-hour composite
TSS	45 mg/l	30 mg/l	Bimonthly	24-hour composite
Fecal Coliform Geometric Mean	400/100 ml	200/100 ml	Bimonthly	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month with a grab sample of the effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The discharge shall not cause the occurrence of a visible sheen on the surface of the receiving waters.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): the nearest accessible point after the final treatment but prior to actual discharge or mixing with the receiving waters.

Source: State of Mississippi, 1997, Water Pollution Control Permit No. MS0021610

Table 3-8
Effluent Limitations and Monitoring Requirements for
Domestic Wastewater Outfalls No. 008 and 010

Effluent Characteristics	Effluent Limitations - Daily Max	Effluent Limitations - Monthly Average	Monitoring Requirements - Frequency	Monitoring Requirements- Sample Type
Flow (MGD)	Report	Report	Once/Year	Instantaneous
BOD5	45 mg/l	30 mg/l	Once/Year	Grab
TSS	45 mg/l	30 mg/l	Once/Year	Grab
Fecal Coliform Geometric Mean	400/100 ml	200/100 ml	Once/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per year with a grab sample of the effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The discharge shall not cause the occurrence of a visible sheen on the surface of the receiving waters.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): the nearest accessible point after the final treatment but prior to actual discharge or mixing with the receiving waters.

Source: State of Mississippi, 1997, Water Pollution Control Permit No. MS0021610

Table 3-9
Water Monitoring Parameters

Potable Water	Wastewater
pH	pH
Residual Chlorine	Flow Rate
Biochemical Oxygen Demand (BOD)	Fecal coliform
Total Suspended Solids (TSS)	Oil and Grease
Total Dissolved Solids (TDS)	Biochemical Oxygen Demand (BOD)
Total Organic Carbon (TOC)	Total Suspended Solids (TSS)
Total Coliform	Total Dissolved Solids (TDS)
Turbidity	Total Organic Carbon (TOC)
Silver	Silver
Arsenic	Cadmium
Barium	Chromium
Chloride	Copper
Cadmium	Nickel
Chromium	Lead
Copper	Zinc
Fluoride	Cyanide
Iron	Ammonia
Mercury	Total Kjeldahl Nitrogen
Manganese	
Nitrate	
Sodium	
Nickel	
Lead	
Sulfate	
Selenium	
Zinc	
VOCs	
Temperature	
Total Kjeldahl Nitrogen	

Figure 3-3 NPDES Outfall Locations

FIGURE 3-3
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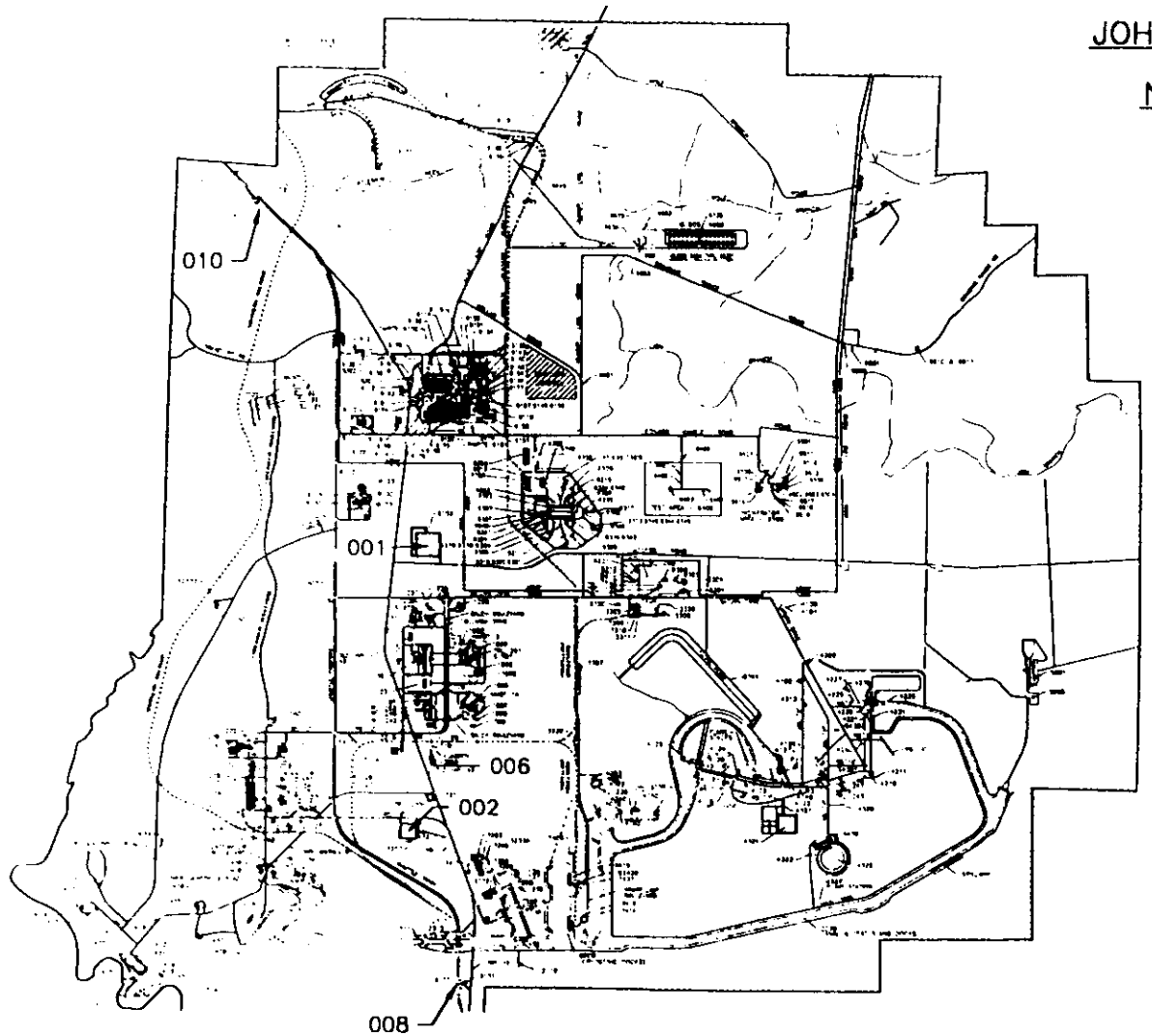
NPDES OUTFALL LOCATIONS



LEGEND

001 LAGOON 1

002 LAGOON 2

006 PHOTO LAGOON

008 SOUTH GATE

010 NORTH GATE

N

0 1000 2000 3000 6000 9000

SCALE: 1" = 3000'

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3.5 References

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2. NASA, 2000, Water Use Report, Stennis Space Center.

3. NASA, 1986, Well Use Permits, Stennis Space Center.

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5. Newcome, R., Jr., 1967, Development of Groundwater Supplies at Mississippi Test Facility, Hancock County, Mississippi, Geological Survey Water Supply Paper 1839-H, pp. H3-H27.

6. State of Mississippi, 1966, Mississippi Air and Water Pollution Control Act, Title 49, Conservation and Ecology, Chapter 17, Pollution of Waters, Streams, and Air.

7. State of Mississippi, 1995, 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.

8. State of Mississippi, 1995, State of Mississippi Water Quality Criteria for Intrastate, Interstate and Coastal Waters.

9. State of Mississippi, 1997, Water Pollution Control Permit No. MS00216210.

10. State of Mississippi, 1994, Land Disposal Storm Water General NPDES Permit No. MSR500068.