SECTION 7

MONITORING PROCEDURES

The federal pretreatment regulations require monitoring of wastewater discharges by both the significant users and the City of Villa Rica. The specific monitoring responsibilities are categorized below:

A. Significant User

1. Characterization monitoring
2. Compliance monitoring

B. City of Villa Rica

1. Industrial surveillance monitoring
2. Industrial enforcement monitoring
3. Emergency response
4. Violation monitoring

All wastewater analyses performed by the city or the significant user should comply with the sample preservation and analytical procedures specified in the EPA regulations entitled, "Guidelines Establishing Test Procedures for the Analysis of Pollutants", 40 CFR 136. All monitoring information compiled by either the city or a significant user relative to this pretreatment program will be available to the Georgia EPD or the U.S. EPA upon request. To ensure sample integrity from collection to data reporting, proper chain-of- custody procedures should be followed, as prescribed in Standard Methods for the Examination of Water and Wastewater, Sect 1060 B (1) (see sample form in table 7.1).

7.1 Significant User Monitoring

A. Characterization Monitoring

To obtain representative data on the pollutant concentrations and flow, the makeup of the waste stream from the manufacturing process must be evaluated. As a guide to the monitoring requirements, each significant industrial user with a discharge of non-domestic wastewater will collect and analyze samples to define the nature and concentration of the pollutants in the discharge. The frequency of sampling for significant users will be determined on a case by case basis. If feasible, samples should be flow proportional composite samples of all discharges. The sampling and reporting requirements will generally adhere to the provisions of section 21-165 of the industrial pretreatment regulations.

B. Compliance Monitoring

Significant industrial users must sample and submit self-monitoring reports as required by their permits. All self-monitoring reports shall be submitted within 15 days following the end of a reporting period. The following shall be the minimum permitted requirements:

1. The industry shall submit two self-monitoring reports each year, one for the reporting period of January 1 through June 30 and the other for the reporting period of July 1 through December 31.

2. As a minimum, the industry shall sample for every parameter in their permit during the months of February and August or other months as required by the plant manager.

Receipt of the self-monitoring reports submitted by the industry will be recorded and the reports will be reviewed by the city for completeness and permit compliance. The first case of noncompliance will result in the city contacting the industry to discuss the reasons for noncompliance and agree on actions the industry will take to correct the problem. It is also required that the industry repeat the sample procedure within a period of 30 days of detecting a non-compliant condition. When a violation is repeated, the city will inspect the industry and provide the industry with written notification of the violation and the required corrective actions. The city will also sample the industry's discharge to verify the violation as discussed in the following section.

Pretreatment program personnel will follow procedures to insure that industrial user reports are received in accordance with the schedule included in the permit and that the reports are reviewed promptly and thoroughly upon receipt from the user. A tracking system will be utilized to track whether reports are being received as scheduled. Due to the limited number of industrial users, a simple system will be used initially, composed of a dedicated calendar with report dates written in. In the future as the number of industrial users increases, the city may develop a computer database program to store reporting data.

It is also required through the sewer use regulations and the discharge permit that industries immediately report all slug discharges, spills or pretreatment plant upsets that could cause interference at the POTW. As provided for in the sewer use regulations, a list of significant users who had significant violations will be published annually in a newspaper of general circulation in Carroll County. A form for submitting this information to the newspaper is provided in table 8.4.

All reports shall be reviewed within 30 days of the due date. Industries shall maintain chain-of-custody and analytical records. The review of the self-monitoring report shall include the following:

1. Comparison with categorical standards, permit limits and requirements
2. Comparison with compliance schedules
3. Comparison with POTW data
4. Verification sampling
5. Notification of user of noncompliance
6. Date, place, method & time of sampling, name of person taking sample
7. Date analysis performed
8. Who performed analysis
9. Analytical techniques/methods used.
10. Results of such analysis
11. Concentration of discharged pollutants
12. Maximum average daily flows
13. Signature of authorized representative

All personnel should use accepted procedures for quality assurance in sampling. All samples must be properly labeled and a chain of custody form must accompany each sample. Chain of custody procedures must be followed strictly and must include:

1. Date and time sample was taken
2. Signatures of all persons handling the sample
3. Date and time that the sample changed hands
4. Type of sample
5. Preservatives added to the sample
6. Analytical methods used
7. Security measures employed

Self-Monitoring Report
Compliance Procedures

3. Received reports will be directed to the Industrial Pretreatment Coordinator.

4. All users shall submit self-monitoring reports in accordance with the frequency contained in the discharge permit (see sample form in table 7.2).

5. The industrial pretreatment coordinator shall review said compliance reports and note any violations, omissions, or other non compliant data.

6. The industrial pretreatment coordinator shall submit monthly summary to the wastewater plant manager.

7. After review of monthly summary compliance report, the plant manager shall contact the industry to discuss reasons for non-compliance and to take corrective action.

8. Repeated violations will cause the city to inspect the industry and provide written notification of the violation and the required corrective action.

7.2 Monitoring by the City of Villa Rica

A. Industrial Surveillance Monitoring

For those industries that self-monitor, the city will independently monitor their discharge to verify the compliance status of the significant user by sampling each permitted industry. The city will conduct at least one unannounced sampling inspection and one unannounced walk-through inspection each year (see sample form in table 7.3). Testing will be consistent with the pollutants identified in the discharger's permit, and any other parameters to confirm compliance with the city's sewer use regulations.

The city may contract its laboratory sampling and testing services. The city or contract staff will perform routine collection and analyses of samples from city-owned treatment plants. Annual inspection of the pre-treatment facility will cover the following:

1. Manufacturing facility
2. Chemical storage areas
3. Hazardous waste generation
4. Spill prevention and control
5. Pretreatment facilities
6. Industrial user sampling and laboratory procedures
7. Monitoring and haulers' records
8. Record keeping

B. Industrial Enforcement Monitoring

Based on the results identified in the significant user's self-monitoring reports or surveillance monitoring conducted by the city, enforcement monitoring may be necessary when categorical standards or permitted discharge limits have been exceeded. When significant violations are observed, the city will require comprehensive monitoring of the significant user's discharge consisting of 3-5 days of continuous sampling. Samples collected will be analyzed by the city or an independent laboratory if necessary.

C. Emergency Response

Spills or slug discharge by industry may occur periodically and do interfere with the treatment plant's performance and ability to comply with its permit limits. The safety of operating personnel may also be jeopardized by these discharges. While these occurrences are expected to be infrequent, personnel and procedures should be identified to promptly locate and cease the discharge by the responsible party. The response procedures should include the following:

- Identify a person to be contacted when a spill is detected by operating personnel.
- Make industry aware of the requirement to notify the city in event of a spill. Supply them with the name(s) and phone number(s) of the contact official(s).
- Develop a location map of industries on each main sewer line.
- Identify type and location of sampling and monitoring equipment available for emergency.
- Identify key manholes or pumping stations for inspection when tracking spills.
- Identify safety precautions when tracking spills.
- Coordinate with other affected agencies, such as the fire department.
- Industry shall pay for any additional treatment cost incurred.

These documents follow this page

Table 7.1 – Example Chain-Of-Custody
Table 7.2 – Example Self-Monitoring Report
Table 7.3 – Example Inspection Report

City of Villa Rica
Wastewater Department

205 Barber Industrial Ct
Villa Rica, GA 30180

WEST PLANT
(770) 459-7015

NORTH PLANT
(770) 459-8302

MICHAEL KAUFFMANN
PLANT MANAGER

Industrial Sampling

Chain of Custody

Composite Sampling

Sampler On				Sampler Off					Container		
Date	Time	Initials	ml/aliquot	Date	Time	Initials	Aliquots	Temperature	Volume	Type	Number

Grab Sampling

	Collected		Collected	Preservation	Container		
Sampling Location	Date	Time	By:	Method	Volume	Type	Number

Grab Sample Analyses

Sample	pH	Temperature	Time	Initials

Additional Comments

Samples Relinquished by:	Time	Date	Received by:	Time	Date

Samples Relinquished by:	Time	Date	Received by:	Time	Date

City of Villa Rica Industrial Wastewater Discharge Monitoring Report Summary

Major Industry, Inc, 1000 Industrial Parkway, Villa Rica, GA 30180

Permit # VR001

Reporting Period
From To

Parameter		Quantity or Loading			Quality or Concentration				No. Ex	Frequency of Analysis	Sample Type
		Average	Maximum	Units	Minimum	Average	Maximum	Units			
Flow from Pretreatment Effluent Gross Value	Sample Measurement			Gallons per Day	*********	*********	*********				
	Permit Requirement	50,000 Monthly Average	60,000 Daily Maximum		*********	*********	*********			Continuous	*******
BOD 5-Day (20 Deg. C) Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	47.4 Monthly Average	68.24 Daily Maximum		*********	250 Monthly Average	300 Daily Maximum			Once/ Quarter	Compos
Oil & Grease Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	19.00 Monthly Average	22.75 Daily Maximum		*********	100 Monthly Average	100 Daily Maximum			Once/ Quarter	Grab
Total Suspended Solids Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	47.4 Monthly Average	68.24 Daily Maximum		*********	250 Monthly Average	300 Daily Maximum			Once/ Quarter	Compos
Ammonia Nitrogen Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	19.00 Monthly Average	22.75 Daily Maximum		*********	100 Monthly Average	100 Daily Maximum			Once/ Quarter	Compos
Cadmium, Total Recoverable Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	0.0070 Monthly Average	0.0130 Daily Maximum		*********	0.035 Monthly Average	0.07 Daily Maximum			Once/ Quarter	Compos
Chromium, Total Recoverable Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	0.095 Monthly Average	0.23 Daily Maximum		*********	0.50 Monthly Average	1.00 Daily Maximum			Once/ Quarter	Compos

Name/Title Principal Executive Officer	Signature of Principal Executive Officer	Telephone	Date

City of Villa Rica Industrial Wastewater Discharge Monitoring Report Summary

Major Industry, Inc, 1000 Industrial Parkway, Villa Rica, GA 30180

Permit # VR001

Reporting Period
From To

Parameter		Quantity or Loading			Quality or Concentration				No. Ex	Frequency of Analysis	Sample Type
		Average	Maximum	Units	Minimum	Average	Maximum	Units			
Copper, Total Recoverable Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	0.13 Monthly Average	0.32 Daily Maximum		*********	0.07 Monthly Average	0.14 Daily Maximum			Once/ Quarter	Compos
Lead, Total Recoverable Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	0.009 Monthly Average	0.023 Daily Maximum		*********	0.05 Monthly Average	0.10 Daily Maximum			Once/ Quarter	Compos
Nickel, Total Recoverable Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	0.028 Monthly Average	0.068 Daily Maximum		*********	0.15 Monthly Average	0.30 Daily Maximum			Once/ Quarter	Compos
Silver, Total Recoverable Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	0.281 Monthly Average	0.594 Daily Maximum		*********	1.48 Monthly Average	2.61 Daily Maximum			Once/ Quarter	Compos
Zinc Total Recoverable Effluent Gross Value	Sample Measurement			kg per Day	*********			mg per Liter			
	Permit Requirement	0.196 Monthly Average	0.471 Daily Maximum		*********	1.04 Monthly Average	2.07 Daily Maximum			Once/ Quarter	Compos
Total Toxic Organics (TTO) Effluent Gross Value	Sample Measurement	*********	*********		*********	*********		mg per Liter			
	Permit Requirement	*********	*********		*********	*********	2.13 Daily Maximum			Once/ Year	Grab
pH Effluent Gross Value	Sample Measurement	*********	*********			*********		Standard Units			
	Permit Requirement	*********	*********		5.5 Daily Minimum	*********	11.0 Daily Maximum			Once/ Day	Grab

Name/Title Principal Executive Officer	Signature of Principal Executive Officer	Telephone	Date

City of Villa Rica Industrial Wastewater Discharge Monitoring Report Summary

Major Industry, Inc, 1000 Industrial Parkway, Villa Rica, GA 30180

Permit # VR001

Reporting Period
From To

Parameter		Quantity or Loading			Quality or Concentration				No. Ex	Frequency of Analysis	Sample Type
		Average	Maximum	Units	Minimum	Average	Maximum	Units			
Cyanide Effluent Gross Value	Sample Measurement			kg per Day	*********						
	Permit Requirement	0.008 Monthly Average	0.018 Daily Maximum		*********	0.04 Monthly Average	0.08 Daily Maximum			Once/ Quarter	Grab
	Sample Measurement				*********						
	Permit Requirement	Monthly Average	Daily Maximum		*********	Monthly Average	Daily Maximum				
	Sample Measurement				*********						
	Permit Requirement	Monthly Average	Daily Maximum		*********	Monthly Average	Daily Maximum				
	Sample Measurement				*********						
	Permit Requirement	Monthly Average	Daily Maximum		*********	Monthly Average	Daily Maximum				
	Sample Measurement				*********						
	Permit Requirement	Monthly Average	Daily Maximum		*********	Monthly Average	Daily Maximum				
	Sample Measurement				*********						
	Permit Requirement	Monthly Average	Daily Maximum		*********	Monthly Average	Daily Maximum				
	Sample Measurement				*********						
	Permit Requirement	Monthly Average	Daily Maximum		*********	Monthly Average	Daily Maximum				

Name/Title Principal Executive Officer	Signature of Principal Executive Officer	Telephone	Date

City of Villa Rica Industrial Wastewater Daily Sample Results Discharge Monitoring Report

Major Industry, Inc, 1000 Industrial Parkway, Villa Rica, GA 30180

Permit # VR001

Reporting Period: From To

		Composite Sample Required										Grab Sample Required		
Date	Flow gpd	BOD mg/L	TSS mg/L	Ammonia mg/L	Cadmium mg/L	Chromium mg/L	Copper mg/L	Lead mg/L	Nickel mg/L	Silver mg/L	Zinc mg/L	O & G mg/L	Cyanide mg/L	pH S.U.
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Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative:_____ Title:_____ Date:_____

INDUSTRIAL INSPECTION REPORT

Date _____

Industry Name: _____ SIC _____

Address: _____

Representative: _____ Title _____

Type of Inspection: ❑ Annual ❑ Spot Check ❑ Complaint Response ❑ Other _____

A. Manufacturing Facilities

1. Briefly describe the manufacturing / business activity.

2. Other than sanitary waste, is there any wastewater generated? If yes, briefly describe the process.

3. What are the raw materials and chemicals used?

4. Are there floor drains in the manufacturing area? Where do they drain to?

5. What are the potential pollutants resulting from this industry / business?

6. Is pretreatment needed and / or practiced? Does all process water flow to pretreatment?

7. Is the manufacturing area reasonably clean? YES NO

8. Are reasonable housekeeping practices followed to prevent unnecessary wastes from entering the sewer system? YES NO

9. What are the primary cleaning materials used?

10. Does the facility practice any onsite water conditioning (ie deionization, softening, etc)?

11. Are there cooling towers or boilers?

12. Is the cooling water contact or non-contact? Where does the water go?

13. Are non-process wastewaters generated at the facility? If so, where does the discharge go? If wastewater is discharged to a storm sewer, does the facility have an NPDES permit for these discharges? (NPDES# _____)

B. Chemical Storage Areas

1. Types of storage containers onsite (circle all that apply):

Drums Totes Canisters Open Tanks Closed Tanks

Other: _____

2. Chemical state of materials (circle all that apply):

Solid Liquid Gas

3. Are floor drains present in the chemical storage areas? Where do they drain to? If they drain to sewer, what prevents any spills from entering the sewer system?

4. Are any of the chemicals considered hazardous materials? List quantities.

5. Is spill containment present for all storage tanks? Is it adequate?

6. Are any storm sewers located adjacent to outside storage areas? Where does the grade carry the rainfall?

7. Are any creeks or stream located adjacent to outside storage areas?

8. Are outside storage areas covered?

9. Are any incompatible chemicals stored in close proximity?

10. Does the facility have a spill prevention, control, and countermeasure plan? Attach.

11. Have there been any recent spills or chemical releases (especially during the past twelve months)?

C. Hazardous Waste Storage and Disposal

1. Is any hazardous waste generated at this facility (circle all that apply)?

Flammable Corrosive Reactive Toxic

2. How is the hazardous waste stored and is it covered?

3. How long is the waste generally stored onsite?

4. Is the hazardous waste labeled? YES NO

5. List each hazardous waste, the waste's hazardous chemicals / compounds, and the maximum quantity stored.

6. Is there a spill prevention containment area? YES NO Is it adequate? YES NO

7. Does the facility have a hazardous waste manifest log? YES NO

D. Pretreatment Facility

1. Is any type of pretreatment practiced? YES NO

2. Is any hazardous sludge produced? YES NO

3. How is non-hazardous sludge disposed of?

4. Does the pretreatment facility discharge continuously or is it a batch discharge? CONTINUOUS BATCH

5. Is there any way to bypass the pretreatment system? YES NO

6. Describe any bypasses from the last twelve months?

7. Do they perform influent monitoring?

8. What is the current effluent pH?

9. List the designated pretreatment plant operators and their level of certification?

E. Slug Loading and Batch Discharges

1. Does the facility have the potential to slug load the sanitary or storm sewers? YES NO

2. Are there any processes and / or storage tanks connected directly to the sanitary sewer? YES NO

3. Does the facility have a plan to prevent slug discharges of any contaminants? Attach.

4. Are the personnel properly trained to prevent batch discharge of any contaminants? YES NO

5. List the quantities of any chemicals stored onsite that could be detrimental to the sewer system and the environment.

_____

_____

_____

_____

F. Sampling Point

1. Is the effluent sampling point representative of the process wastewaters generated at this facility? YES NO

2. Is there adequate security provided for any control authority samplers? YES NO

3. Do the non-process waste streams enter the sewer system upstream of the monitoring point? YES NO

G. Flow Monitoring

1. How is wastewater flow monitored? METER WEIR FLUME WATER USE RECORDS

2. How often is the meter calibrated? _____

3. How often is the calibration checked? _____

4. How frequently is the flow recorded? _____

5. Is there continuous flow recording? _____

6. Where are the logs and charts kept? _____

7. What was the flow during the inspection? _____

H. Self Monitoring

1. Types of samples collected (circle all that apply): GRAB COMPOSITE

2. Are samples properly preserved? YES NO

3. Where are the samples analyzed?

_____

4. Is the lab technician certified? YES NO

5. Name the procedures are being performed including the technical reference.

6. Are monitoring records on file for the last three years? YES NO

I. Compliance Problems

J. Comments

Inspected By: _____