

DOCUMENT MANAGEMENT SYSTEM

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Doc# NSCS-M-P-7093-02-42
 Title: Unknown High or Low Incoming pH, Strong Chrome, or Unusual Wastewaters
 Issue Dt: 05/19/2006
 Revision Dt: 02/28/2016 Review Interval: 12
 Cat: Quality Doc Type: SOP
 Auth: Environmental
 Desc: Environmental ISO 14001
 Loc: Midwest - Utilities-Midwest - Plant Maintenance-Midwest-Gary Works

Process Overview

When the Pretreat Operator notices an unusual condition in the incoming wastewater, or during physical rounds of the treatment plants, the following procedure should be followed. Examples are leaks of piping or process equipment or associated equipment, loss of electric power, strong chrome, high pH, high flow rates, odd color, unusual amounts of oils or solids at the chrome treatment plant, main trench sump or the API Oil Interceptor. It is very important that problems are stopped at Pretreat as hexchrome and soluble oil cannot be fully treated at the Final Treatment Plant.

Examples of Unusual Conditions

The following conditions are examples of when to follow this SOP:

Loss of electric power
 Extreme weather
 Strong chrome at chrome treat
 Incoming pH > ■
 Flow rates > ■ gpm at API Oil Interceptor
 Unusual Color
 Excessive oil
 Excessive foaming
 Any other condition considered very odd or unique
 Leaks

Check for Leaks in Utilities Areas

Investigate all areas at Pretreat for possible leaks in the chrome wastewater system, oily wastewater system and any related chemical storage tanks. Leaks in process tanks, piping, and associated equipment may result in process materials escaping into a sewer system, soaking into the ground and causing unexpected contamination of surface water, soil or into a sewer system.

If a problem is found in the Utilities treatment plants address it immediately and notify the Final Treatment Plant Operator so they are aware the source of the problem has been found.

In the event that a leak is found as a result of the inspection contact Load Dispatch, Utilities management and the on shift UT craftsman as soon as possible. Attempt to control or minimize the problem as much as possible without endangering oneself.

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Check Utilities Treatment Areas

Before contacting the production units always check the Utilities areas first by inspecting Pretreat. North Final Treat, and south Final Treat. Sludge Dewater and the Energy Plant do not connect to Pretreat so they can not be the source.

The following are examples of possible problems that could occur at the Pretreat area wastewater treatment plants and associated equipment:

Loss of electric power to mechanical equipment

Severe weather extremes affects treatment equipment.

Low pH: Chrome Treatment Plant over feed of acid
 Acid leak at Pretreat
 API Oil Interceptor overtreat

High pH: API Oil Interceptor overtreat

Oil: Oil Tech decanting improperly
 API Oil Interceptor carryover

If a problem is found in the Utilities treatment plants address it immediately and notify the Final Treatment Plant Operator, and the on shift craftsman so they are aware the source of the problem has been found.

Call the Production Units

Using the following table call the production units if the problem is not found in the Utilities areas. The Shift Manager phones at [REDACTED] [REDACTED] will also PAGE the shift manager. Be sure to leave a "voice mail" message on the phone if no one answers. Always call all four of the numbers as sometimes one foreman covers two areas.

No Call Backs from Production

After one hour call back every phone number that did not return the phone call. If the situation is important send the UT Helper or the on Shift Craftsman to find the supervisor for the area that has not called back.

Documentation

All situations that result in calling a production unit or load dispatch about an unusual condition or leaks should be documented on the dump log sheet if its from the production areas. Include details in the comments section as needed.

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All situations that result in calling load dispatch about an unusual condition or leaks in the treatment plant areas should be documented on the Pretreat log sheet. Include details in the comments section as needed.

No documentation is required if everything is found to be normal.

Emergencies

If its an emergency and no one calls back from a production area:

1. Send the UT Helper and on Shift Craftsman as needed into the mill to find the source and get it corrected.
2. If needed, call Plant Protection and have them find the needed Shift Managers.
3. If it will cause an Environmental incident or exceedence call Load Dispatch and report it.
4. Call the on duty Operations Service management person at home if needed

Odd Events and Sources

The following are unusual events and are not commonly considered:

- Large volume of water leaving the PT API Interceptor is usually the 80" Five Stand washing the mill
- Large volume of water coming down the DIW sewer is usually the 80" Five Stand water flow control valves
- Strong chrome at chrome treat can come from the ETL, or TFS.
- Be sure the ETL and TFS "look" at the lines and not just the conductivity probes as they have been known to malfunction.
- See the specific SOP's on chrome treat and waste oil treatment for more detailed troubleshooting information.

Specific SOP's of help

The following SOP's should be referred to for help.

- SOP NSCS-M-7093-02-03 is for chrome problems
- SOP NSCS-M-P-7093-02-11 is for the trench
- SOP NSCS-M-P-7093-02-13 is for oil treatment
- SOP NSCS-M-P-7091-50 is for loss of power, equipment failure, or severe weather induced problems.

If the above SOP's are not of adequate assistance call the on duty Operations Service management representative.

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Loss of Electric Power

If the loss of electric power is to a specific piece of mechanical or electrical equipment use back up mechanical equipment where its available.

If the loss of electric power is to equipment that has no redundant backup, shut down that portion of the wastewater treatment plant and divert the flow to the remaining system.

If this is not possible and all of the wastewater treatment plant has to be shut down contact the Energy Plant by phone or radio and have them shut down all of the production lines immediately to stop the generation of wastewater. Also, contact the on shift craftsman and start the process or having the problem fixed. Management should be contacted as soon as possible.

If the loss of power is to the entire treatment plant contact the Energy Plant by phone or radio and have them shut down all of the production lines immediately to stop the generation of wastewater. Also, contact the on shift craftsman and start the process or having the problem fixed. Management should be contacted as soon as possible.

Mechanical Failure

If the mechanical failure is to a specific piece of equipment in many cases there is redundancy available. Where redundant mechanical equipment is available, switch to the back up equipment.

If there is no redundancy then take that portion of the wastewater system out of service. An example would be south final treat clarifier rake drive. If the rake fails stop the wastewater flow to south final treat and divert all of the wastewater to north final treat.

Weather Issues

Abnormal weather can causes problems due to extreme heat or cold, excessive rain or snow fall, ice storms and similar issues. In most cases the weather will either cause a mechanical or electrical failure that is already covered by this SOP.

If the issue is excessive rainfall getting into the DIW sewer system and there is too much gallorage to treat contact the Energy Plant, the on shift craftsman, and management by phone or radio. Have the Energy Plant contact all of the production lines and have them shut down as soon as

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possible which will cut the industrial wastewater flow to almost zero.
Once the excessive gallonage problem is over, IE: it stopped raining,
contact the Energy Plant and have production resume.

***Consequences of non-compliance: Non-compliance with environmental procedures could result in harm to the environment and may expose the company and responsible individuals to enforcement actions that could include civil or criminal penalties for violations of environmental laws, rules and/or permit conditions.**

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Table

Use the following table as a guide in determining probable sources.

				TYPICAL PRODUCTS FOR DUMPS				
Production Unit	Control Room	Shift Mgr		ACID DUMP to FT	CLEANER DUMP to FT	CHROME DUMP to PT	OIL DUMP to PT	OIL DUMP to DIW to Final Treat
PICKLE LINE	N/A	5319 (K)		X				(I)
80" FIVE STAND							X	
SHEET TMR MILL	N/A							X
52" FIVE STAND		(K)					X	
CA LINE					X			
CLEANER LINE					X			
DCR (#1TTM)							X	
#2 TTM								
BATCH ANNEAL								
COMBO					"A"			X
72" GAL LINE					X	"F"		
#3 GAL LINE						"F"		
#1 TIN RECOIL								
#2 TIN RECOIL								
ETL (TIN)				X	X	"C"		
TFS (CHROME)				X	X	"B"		
COIL PACKAGE								
TIN WAREHOUSE								
ROLL SHOP								X

DOES NOT TIE TO THE DIW OR STORM SEWERS UNLESS THEY HAVE A SPILL.

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NOTES TO THE TABLE:

- A. [REDACTED] cleaner solution is very weak and unlikely to be a source of high Ph but foams a lot.
- B. Chrome sump on chrome line is called the chemtreat sump or plater bath sump as the chrome solution is called chemtreat or plater bath depending on who you speak with.
- C. Chrome sump on tin line (ETL) is called the chemtreat sump as the chrome solution is called [REDACTED]. The ETL tin bath is made up of [REDACTED] hich is an acid and tin. This solution is called plater bath on the ETL. Plater bath on the Tin Line discharges to the ETL plater sump and then into the DIW sewer.
- D. FT = Final Treatment Plant AKA: [REDACTED] o some people.
- E. PT = Pretreat
- F. 3 gal ships its chrome to pretreat via forklift and in a tote bin
- G. 72" Gal Line pumps its chrome via pipeline to Pretreat, the chrome is very strong in comparison to ETL chrome.
- H. [REDACTED] is the water chemical supplier to Midwest. Its easy to confuse them with [REDACTED] [REDACTED] which is the final treatment plant in the wastewater system. [REDACTED]
- I. Pickle Line looper pit goes to DIW sewer and then to Final Treat, it does not go to Pretreat oil treatment.
- J. Note similar phone numbers [REDACTED] they are different and correct.

CORRECTIVE ACTIONS

CORRECTIVE ACTIONS ARE CONTAINED IN THIS SOP. IF PROBLEMS CAN NOT BE RESOLVED CALL THE ON CALL OPERATIONS SERVICE MANAGER.