Process Effluent Treatment System Operating Plan
Nippon Dynawave Packaging Company
Longview, Washington
February 2018

Process Effluent Treatment System Operating Plan

Responsible Individuals

Operators	The effluent treatment system is staffed with one operator on shift at all times. The operator can be contacted on the mill radio E&U2 channel.
Maintenance	Maintenance personnel are at the plant 24 hours/day 7 days/week. Maintenance personnel can be contacted day shift Monday – Friday on the mill radio E&U2 channel and at all other times on the mill radio Kraft channel.
Managers	The Effluent Treatment System Owner is typically in the plant Monday – Friday, excluding holidays. In addition, an operations and/or environmental manager is available at all times. The contact information for the operations and environmental managers is located in the weekly mill-wide on-call list or by contacting the communications center at x5296.

Plant Description & Design Criteria

Overview

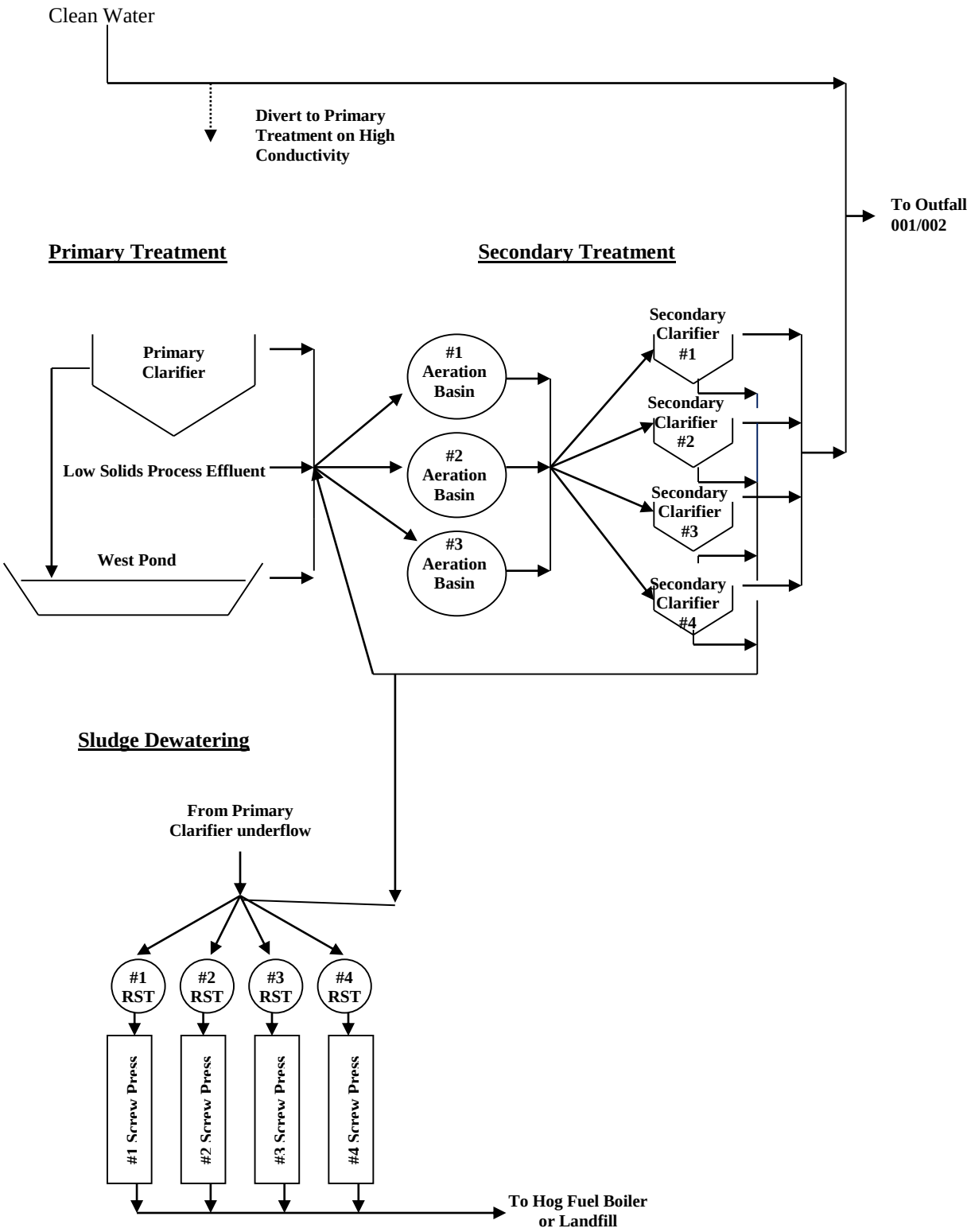
Process effluent from Nippon Dynawave Packaging's Bleached Kraft Pulp and Paper Mill, NORPAC's Thermo Mechanical Pulping, Deink, and Printing Papers Manufacturing, and Weyerhaeuser's Wood Products operations is treated in the process effluent treatment system. A small amount of effluent from several nearby industrial plants is also treated by the process effluent treatment system.

Capacity

Treatment system loading is 15-65 MGD flow, 140-800 Klbs/d TSS, and 35-325 Klbs/d BOD. Sludge dewatering processes 55-410 tpd combined primary and secondary solids.

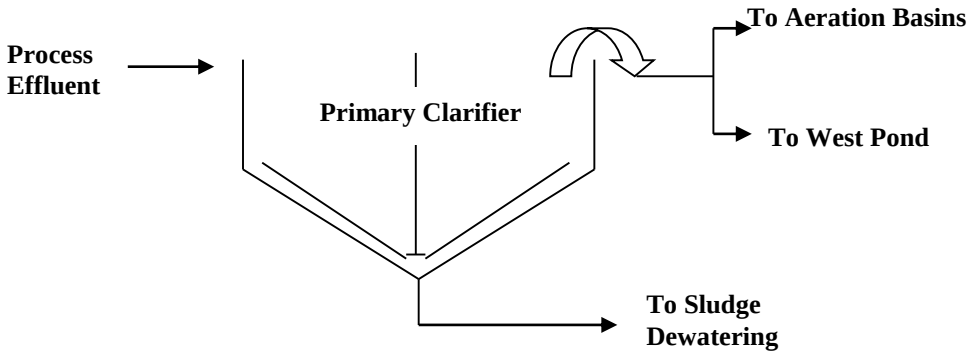
The treatment system capacity has been upgraded incrementally as needed to provide treatment for the system loading and provide sufficient treatment system operating equipment so that individual pieces of equipment can be taken off-line for maintenance. TSS removal efficiency is 85-98% in primary treatment. Secondary treatment is an activated sludge system with a BOD removal efficiency of 85-99%.

Process Effluent Treatment Plant Overview



Process Unit Description & Operation

PRIMARY CLARIFIER



General

The Primary Clarifier separates solids from the liquid portion of the process effluent. Approximately 15-65 MG of process effluent containing 140,000-800,000 lbs solids enters Primary Treatment each day. The treatment system has one 295-foot diameter Primary Clarifier. This clarifier normally handles all of the flow and solids into primary treatment and has a solids removal efficiency of 85-98%.

Controls

Clarified Primary Clarifier effluent can be pumped to Secondary treatment or allowed to gravity flow to the West Pond, a combination back-up primary clarifier and spill basin.

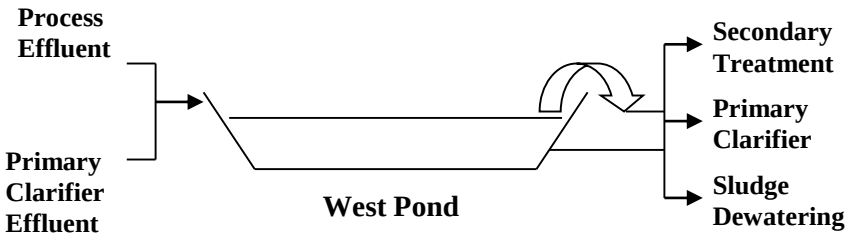
The solids removal rate from the Primary Clarifier is controlled by the pumping rate of two sludge pumps running in parallel. Normal flow set point for these pumps is a combined flow of 400-950 gpm. The pumps have a combined capacity of 1200 gpm at 3% solids (432,000 lbs/d).

pH in and out of the Primary Clarifier can be adjusted by sulfuric acid addition.

Fail Safe Features

At peak rates, the flow into the Primary Clarifier exceeds the capacity of the pumps that send the effluent to Secondary treatment. During these peak flow times, process effluent is automatically diverted to the West Pond to prevent overflow of the Primary Clarifier Launder Ring.

WEST POND



General

The West Pond is an 8.8 MG combination spill basin and back-up primary clarifier.

High solids, pH, COD and/or BOD loads into the treatment system can be diverted and held in the West Pond. The effluent can then be pumped at a low rate into the Primary Clarifier or the secondary treatment system.

The West Pond can treat 100% of the flow and solids into primary treatment and is used when the Primary Clarifier is taken out of service. The West Pond has a solids removal efficiency of 70-97%. Solids removed from the West Pond can be pumped to either the Primary Clarifier or Sludge Dewatering.

Controls

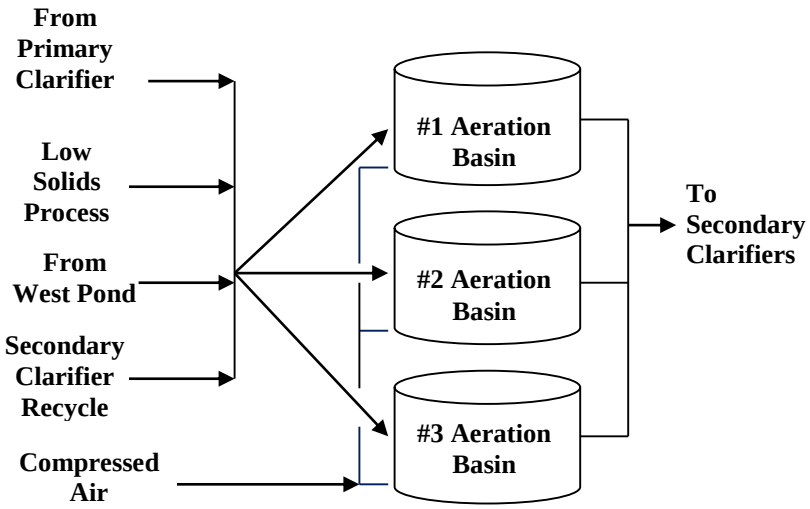
Opening or closing the West Pond Gate valve controls flow into the West Pond.

One of four pumps operating in parallel are used to transfer West Pond effluent. The combined capacity of these pumps is 57 MGD. A recirculation line allows the level in the West Pond Sump to be automatically controlled to an operator selected set point. The set point typically ranges from 30-80%.

One 800 gpm sludge pump removes solids out of the bottom of the West Pond. Solids can also be removed with supplemental pumps or dredged to the Primary Clarifier or Sludge Dewatering when extra solids removal capacity is required.

West Pond level is continuously monitored and an alarm alerts the operator that the level is high.

AERATION BASINS



General

BOD load into secondary treatment ranges from 35,000 – 325,000 lb/day and is treated by an activated sludge secondary treatment system. BOD removal is done in one, two, or three aeration basins operating in parallel with a BOD removal efficiency of 85%-99%.

The daily BOD load can be treated with one or two aeration basins. This allows one aeration basin to be down for maintenance or kept in standby at all times.

Recycle activated sludge is recycled from the secondary clarifiers to the aeration basins.

Air is supplied to the basins by 9 blowers operating in parallel with a combined capacity of 52,000 scfm. The air is distributed in the aeration basins through fine bubble diffusers.

The mixed liquor gravity flows from the aeration basins to the secondary clarifiers.

Controls

BOD load into the aeration basins can be controlled by diverting all or part of the process effluent or Primary Clarifier effluent to the West Pond during periods of high BOD load and then pumping it slowly to the aeration basins during periods of lower BOD load.

Adjusting the number and speed of recycle pumps that are operating controls recycle flow.

Adjusting the number of blowers that are operating controls air flow. Dissolved oxygen (DO) is monitored in each aeration basin to ensure that an adequate amount of air is added to the basins for BOD removal. The operating

target for DO is equal to or greater than 3.0 mg/l for optimum biological health. The DO target may be lowered if nitrification is occurring in the Aeration Basins without excess nitrogen residuals.

Adjusting the sludge wasting rate controls mixed liquor suspended solids (MLSS) concentration. Target Mean Cell Residence Time (MCRT) of 5-9 days depending on BOD loading, sludge health, and equipment configuration.

Temperature in the aeration basins is controlled, when necessary, by the use of a cooling tower that cools Primary Clarifier or West Pond effluent prior to reaching the aeration basins. The cooling tower removes up to 180 MMbtu/hr.

pH into the aeration basins is adjusted by sulfuric acid addition upstream at the inlet to the Primary Clarifier and the inlet to the West Pond. pH is also adjusted at the outlet of the Primary Clarifier. The pH target is 6.5-8 in the aeration basins.

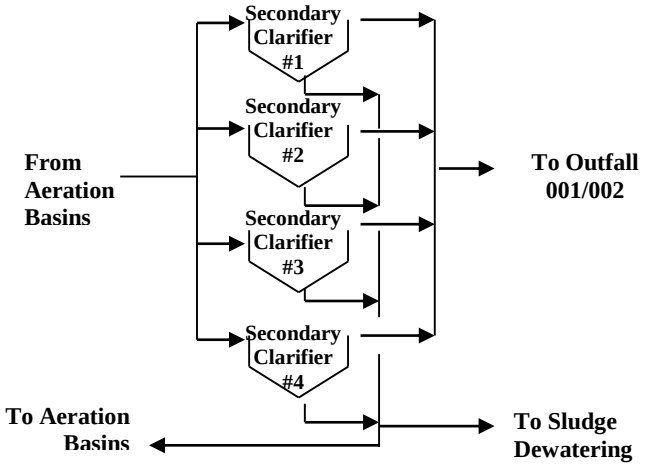
Nitrogen and phosphorus are added, as necessary, to the aeration basins to promote healthy biological growth. The addition rates are adjusted based on residual ammonia, nitrate, and ortho-phosphate concentrations.

Fail Safe Features

The electrical feed to the process effluent treatment system is double ended. If power is lost to one power center, the load is automatically transferred to the other power center. The equipment that was shut down in the power loss can be quickly restarted and the impact to the process is minimized.

In addition to the double ended electrical feed, the aeration basin blowers are split between each end for their primary power feed. In the event of a power loss, only one half of the blowers will be impacted and some air flow to the aeration basins is maintained.

SECONDARY CLARIFIERS



General

The biosolids are separated from the mixed liquor in four 210-foot secondary clarifiers operating in parallel. The clarifiers treat a combined flow of 30-120 MGD, including recycle, and typically have a solids removal efficiency of 99.3-99.8%. The effluent from the secondary clarifiers flows to the Columbia River via outfall 001/002.

Secondary clarifiers can be taken off line for maintenance consistent with meeting NPDES permit requirements. The remaining clarifiers are able to treat the solids and flows from the aeration basins.

Controls

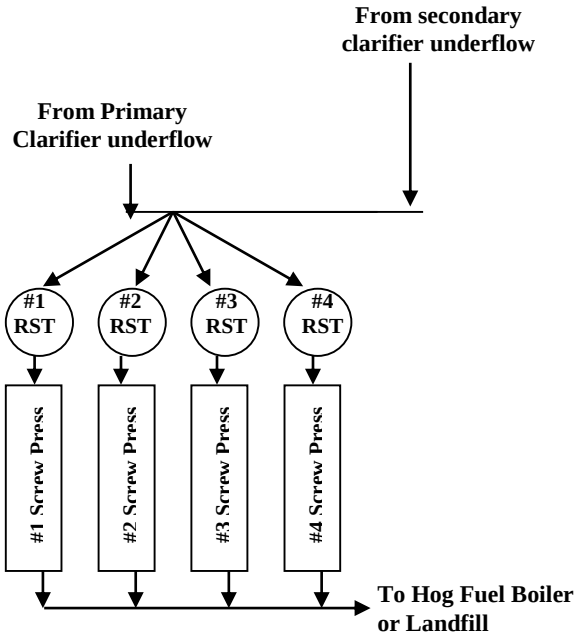
Total flow into the clarifiers is dependent on the process effluent flow and the clarifier recycle rates. Recycle rates are adjusted by adjusting secondary clarifier underflow pump speed and bringing secondary clarifier underflow pumps on and off line. Flows into the secondary clarifiers are balanced using flow control valves on the influent lines to each clarifier. Flow set points to each clarifier range from 10 – 35 MGD including recycle flow.

Sludge bed depth is monitored at each clarifier and can be adjusted by changing the flow to the individual clarifiers, the clarifier recycle rates, and the sludge wasting rate.

Each Secondary Clarifier RAS line was equipped with ORP probes in 2017. ORP is monitored continuously and displayed in real time on the mill's process data software. An excessively low ORP is associated with excess sludge residence time in the clarifiers. Increases in ORP can indicate denitrification in the secondaries. The site is evaluating this data and may set control parameters in the future.

The impact of short term upsets can be controlled by diverting effluent to the West Pond. If upset conditions persist, process effluent flow into the treatment system can be reduced by curtailing the production of the operations. This is done when a significant flow reduction to the secondary clarifiers is needed to prevent TSS or related BOD permit limit violations.

SLUDGE DEWATERING



General

75-300 tpd combined waste activated sludge (WAS) and primary treatment solids are combined and then dewatered to approximately 8-10% solids through four Rotary Screen Thickeners operating in parallel.

After the RSTs, the sludge is dried to 25-45% solids in four screw presses operating in parallel. The dried sludge is burned as fuel in the mill hog fuel boiler or is transported to landfill for disposal.

If sludge inventories allow, one or more RST/Screw Press line(s) can be taken down for maintenance at any time. The remaining lines can process all of the sludge from primary and secondary treatment.

Controls

When sending WAS directly to sludge dewatering, the WAS flow is controlled by an automatic flow control valve. Target set points range from 500 – 2000 gpm. In

normal operation, one WAS line is used for 500-1200 gpm of WAS. In situations where the system has too many secondary solids or MCRT is too high, the second WAS line installed on #4 Secondary Clarifier in 2017 is used to control MCRT.

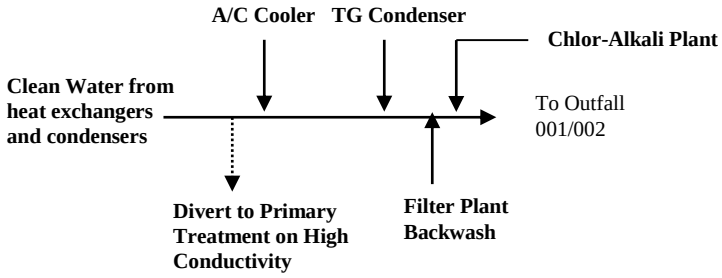
Flow set point to the RSTs range from 200-800 gpm for each RST.

Screw press performance is controlled by the steam, speed, and polymer to each Screw Press. Steam set point is typically 60-65 psi. The screw press speed set points depend on the amount of sludge to be processed and are typically 0.35-0.87 rpm. Polymer addition rate is adjusted to maintain optimal sludge dryness and is dependent on the type of polymer, its concentration, and sludge composition.

Fail Safe Features

Screw press torque is continuously monitored and the screw presses are programmed to shut down on high torque. This prevents damage to the screw press and drive.

CLEAN WATER



General

Approximately 10 - 45 MGD of clean process water from various heat exchangers and condensers in the mill is collected and pumped directly to outfall 001/002.

Controls

The non-contact cooling water flow is controlled by the level in the non-contact cooling water sump.

Fail Safe Features

To avoid sending contaminated water to the outfall, the conductivity of the stream is monitored and the pumps are automatically shut down if the conductivity exceeds the trip point. With the pumps down, the effluent gravity flows to the process effluent treatment plant.

Treatment System Parameters

Dissolved Oxygen

The concentration of dissolved oxygen in each aeration basin is continuously monitored. A dissolved oxygen (DO) concentration of 3 mg/l is targeted to ensure adequate oxygen supply for BOD reduction. Maintaining >3 mg/l DO also discourages the growth of low dissolved oxygen filaments that can lead to bulking sludge. At >4.0 mg/L, the system has an increased chance to entrain air in the biomass and form float on the secondary clarifiers.

Temperature

The temperature of the secondary treatment system is continuously monitored. Temperature varies seasonally from 65 - 105 °F. A cooling tower is used through the summer to lower the temperature of the effluent going into the aeration basins.

Operating experience shows that peak temperatures of 99-101 F for several days does not have a significant negative impact on activated sludge health or BOD reduction.

pH

Aeration basin target pH is 6.5-8. Operating experience shows that pH levels of 6.0 to 8.5 for short periods of time do not have a significant negative impact on activated sludge health or BOD reduction.

pH outside the 6.0-8.5 range can have a significant impact on biomass health and BOD reduction. High pH material is typically neutralized with sulfuric acid addition. High and low pH influent can also be diverted to the West Pond and added to the aeration basins at a rate that allows target pH to be maintained.

Sludge Volume Index

Settled sludge volume and sludge volume index are monitored to track the settleability of the sludge going to the secondary clarifiers. $SVI_{(60)}$ typically ranges from 50 – 260.

Sodium Hypochlorite usage

If the $SVI_{(60)}$ begins to exceed approximately 200 and the cause is an abundance of filamentous bacteria in the activated sludge, sodium hypochlorite is used to damage the filaments and improve the settleability of the activated sludge.

The sodium hypochlorite is dosed in #Cl2/klb MLSS, usually at 18#Cl2/klb MLSS. The dosage can range from 4-24 #Cl2/klb MLSS based on filament damage/effectiveness. During the sodium hyochlorite usage, the aeration basin volumes must be turned over >2x

in a day. It is most effective when >4x. The turnover rate is adjusted with secondary clarifier recycle rates and aeration basins in service.

Upsets due to filament growth can be mitigated by using sodium hypochlorite. Proper attention needs to be directed to the biomass floc size and health to prevent pin floc or damaging the floc. Dosing sodium hypochlorite should be avoided when expecting large increases in BOD to prevent creating a "low D.O." environment.

Mean Cell Residence Time

An MCRT of 5-9 days is targeted for the secondary treatment system. A mean cell residence time below four days is correlated with filamentous bacteria growth nad potential to under treat BOD. Maintaining an MCRT greater than nine days results in excess activated sludge inventory and potentially a decreased floc size.

Upsets due to small floc can be resolved by decreasing the MCRT. At sludge ages <6 days, we typically see an increase floc size. Maintaing a MCRT <6 days for three sludge ages should dramatically increase floc size. This response is assumed to be due to wasting toxins in the WAS. However, during this time the system is more susceptible to filament growth. In extreme situations, an MCRT of ~3 days may need to be targeted, however the simple BOD (VOA's, starches, sugars, etc.) to the effluent system need to be reduced. Excess simple BOD will create filament growth.

Food to Mass

When the MCRT is within range, typical MLSS concentrations range from 2000-4000 mg/l. F:M is monitored to prevent any low D.O. filamentous bacteria blooms. At higher F:M ratio's (>0.65), the system becomes more susceptible to filament blooms.

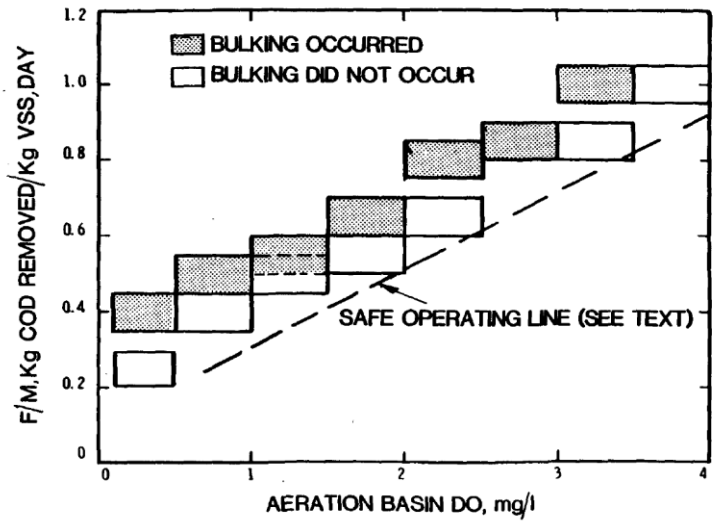


Figure 1:Combinations of F/M and aeration basin DO concentration where bulking and non-nulking sludge occurs in completely-mixed, continuously-fed aeration basins [1]

Nitrogen

A nitrogen residual of 1.0 – 2.0 mg/l is targeted at the outlet of the aeration basins. The nitrogen can be in the form of ammonia, nitrate, or nitrite. This target provides adequate nitrogen for metabolic activity for the floc forming bacteria and is low enough to discourage the growth of nitrifying bacteria.

Phosphorous

An ortho-phosphorous residual of 1 – 2 mg/l is targeted at the outlet of the aeration basins. This level ensures adequate phosphorous is available for metabolic activity.

[1] Palm, J.C., Jenkins, D., and Parker, D.S. (1980) "Relationship Between Organic Loading, Dissolved Oxygen Concentration and Sludge Settleability in the Completely-Mixed Activated Sludge Process," *J. Water Plln. Control Fedn., 43,* 1817

Response to Upsets

Issue	Cause	Response
Rise in Secondary Clarifier Beds	Bulking due to filamentous bacteria or small/diffuse biology floc. See below for Filamentous bulking and small floc. Secondary Beds can also increase due to heavily increasing or decreasing the clarifier residence time.	See below for filamentous bulking and small or diffuse floc Ensure RAS flow is less than 100% of the clarifier overflow. Check state point analysis to ensure RAS flow is not too low.
Filamentous Bulking (or filamentous bloom)	Filamentous growth due to simple organics in our effluent. At high F:M or low DO environments we tend to grow larger filaments that impact settling/disperse the floc	Go on hypo if possible. If Low DO filaments are growing, ensure nutrients addition is in range and F:M is <0.45
Small or diffuse Floc (toxic slug load or overload)	Toxins in the influent may cause the floc to decrease in size or increase in diffuse floc. Older biomass may bioaccumulate more toxins causing a decrease in floc size and decreased activities (seen in the SOURs).	Check MCRT. If >9 days, reduce to 6 -7 days to shed toxins
Liquor/soap Spill	Upsets process conditions can lead to large amounts of black liquor to the effluent system. The black liquor will result in excess influent BOD.	If the BOD load is larger than the system can handle, a portion or all of the effluent will need to be diverted to the West Pond. Action needs to be taken to reduce any black liquor leakage to the effluent system
Low D.O. Event	Low D.O. Events can be caused by excess defoamer, solvent, or BOD to the effluent system. Low D.O.'s can cause blooms of filamentous bacteria	If D.O.'s cannot be maintained, a portion or all of the effluent will need to be diverted to the West Pond if it was due to a spill. If it is expected to be an issue for more than 6 hours, influent BOD sources will need to be reduced.

Equipment Outages

Maintenance

Reserve capacity is built into the process effluent treatment system so that equipment can be taken off line for maintenance without impacting normal operations. The following table identifies the major equipment that can be taken off line for maintenance under full load conditions.

Equipment	Available for Maintenance
Primary Clarifier/West Pond	1
Primary to Secondary Pump	1-4
Primary Underflow Pump	1
West Pond Discharge Pump	1-4
Aeration Basin	1
Aeration Basin Blower	1-6
Secondary Clarifier	1
Screw Press	1-4

All maintenance related work includes the capture and appropriate treatment of all maintenance related substances such as cleaners, degreasers, solvents, etc.. Maintenance related work does not result in the discharge to river of maintenance related substances.

Low Load Conditions

Some equipment may be taken off line in response to extended low load conditions. This includes 1-6 Aeration Basin Blowers, 1-2 aeration basins, 1-2 secondary clarifiers, and 1-2 screw press lines.

Non-Routine Operations

Overview

The following regularly scheduled activities in the Nippon Dynawave Packaging operations affect the volume or character of the wastes discharged to the wastewater treatment system**.**

Activity	Impact
Tank cleaning at recausticizing plant	High pH, High COD
Recovery Boiler water wash	High pH, High COD
Pulp digester cleaning and inspection	High pH, High BOD, High COD
Caustic storage tank cleaning	High pH
Paper machine shutdown and startup	Reduced/Increased flow, High Solids
Bleach plant shutdown	Reduced flow/Reduced Influent BOD
Powerhouse Stripper shutdown	High BOD load

Occasionally, other treatment system compatible waste sources are introduced into the treatment system such as Nippon Dynawave Packaging obsolete or off-quality process chemicals.

High pH material is typically neutralized with sulfuric acid addition. High pH, COD, and BOD loads can be diverted and contained in the West Pond and pumped to the aeration basins or the primary clarifier at a rate that allows target pH and DO to be maintained.

Laboratory Procedures

Overview

Laboratory tests are conducted to aid in treatment system operation and to verify compliance with the NPDES permit. The table on the next page details the samples taken, sampling method and frequency, and laboratory tests performed. Items in bold are required testing for NPDES permit or Cluster Rules BMP compliance.

Process Effluent Treatment System Sampling and Analysis

Sample	Sampling Method	Sampling Frequency	Laboratory Test or Monitoring Parameter
Primary Treatment Inlet	24 hour composite	3/week	Total Suspended Solids (TSS), Biochemical Oxygen Demand (BOD_5) Chemical Oxygen Demand
Low Solids Process Effluent (A-Sump)	24 hour composite **On-line**	3/week **Continuous**	TSS, BOD_5, COD **Conductivity**
High Solids Process Effluent (D-Sump)	24 hour composite **On-Line**	3/week **Continuous**	TSS, COD **Conductivity**
Aeration Basins	**On-line**	**Continuous**	**Dissolved Oxygen**
Sludge Inventory	Grab	Weekly	Total sludge in Primary Clarifier, Aeration and Secondary Clarifiers
West Pond Out (when in service)	24 hour composite	3/week	TSS, BOD_5, COD
Mixed Liquor	Grab	Daily 3/week	Mixed Liquor Suspended Solids (MLSS), 60-Minute Settled Sludge Volume (SSV_{60}) Microbiology Analysis
Secondary Clarifier Underflow	Grab	Daily	TSS
Secondary Clarifier Effluent	In-line monitoring 24-hour composite “ “	**Continuous** **Weekly** 3/week **3/week** **Monthly** **2/year**	**Flow, pH, temperature** **BOD_5** COD **TSS** **AOX** **2,3,7,8-TCDD,** 2,3,7,8-TCDF
Screw Press Solids	Grab	Daily **1/year**	% Solids **2,3,7,8-TCDD, 2,3,7,8-TCDF**

Note: Items in **bold** are required for NPDES Permit or Cluster Rules BMP compliance.

Record Keeping

General	Records of all monitoring information are kept for a minimum of three (3) years.
Operator Log Sheets	Operator log sheets have been developed as a tool for the operators to communicate test results and on-going events between shifts. The operating log sheets are a flexible tool and as such, not all boxes on the log sheets are filled out every shift. Log sheets are generally collected and saved for a period of at least three (3) years.
Laboratory Tests	Worksheets for compliance laboratory testing are collected and saved for at least three (3) years. Process laboratory tests (i.e., microbiology analysis, SSV, MLSS) are recorded on worksheets or the operator log sheet. The worksheets are generally collected and saved for at least three (3) years.
Maintenance	Calibration and preventative maintenance records for the outfall pH meters and the outfall flow meter are kept in an automated maintenance tracking system for at least three (3) years.
NPDES Reports	NPDES reports and backup data are collected and saved for three (3) years.

Maintenance

Overview

The following chart details the periodic maintenance schedule for major equipment in the process effluent treatment system.

Equipment	Maintenance	Frequency
Primary Clarifier	Drive rebuild, weir leveling, corrosion bars, general inspection	5-6 Years
Aeration Basins	Clean diffusers, inspect air headers and supports Replace diffuser membranes	6-18 Months 5-8 Years
Secondary Clarifiers	Drive rebuild, weir leveling, corrosion bars, general inspection	5-6 Year
Screw Presses	Rebuild flights	1 Year
Rotating Equipment	Vibration Analysis Lubrication	1 Month 1 Month
Flow Meter	Calibration or inspection	1 Year
pH Meters	Calibration	1 Week

Manufacturer recommendation for clarifier maintenance is once every five years. However, operating experience has shown that maintenance every six years is sufficient to maintain clarifier performance and prevent equipment failure.

Manufacturer recommendations for Aeration Basin maintenance are broad. The aeration systems in the basins were new installations beginning in November 1998 (Basin #3) and ending in March 2002 (Basin #1). Further operating experience will ultimately determine the frequency of periodic maintenance for the aeration systems.

Equipment Information

Spare Parts Inventory	Adequate supplies of spare parts are stocked in the Nippon Dynawave Packaging Storeroom or agreed upon vendor supplies to support repair work when needed and to prevent extended equipment downtime. Storeroom inventory is tracked through an automated maintenance tracking system.
Supplier Data	Equipment data supplied by the manufacturer is located in the engineering files, the maintenance manager's files, and the automated maintenance tracking system. Operating information supplied by the manufacturer is also located in the operator control room.
Warranties	Equipment warranties are located in the Nippon Dynawave Packaging purchasing department.

Safety

Overview

All personnel working in the process effluent treatment system are required to follow Nippon Dynawave Packaging's site safety policies. Copies of these policies can be obtained from the Nippon Dynawave PackagingSafety Office.

In addition, a safety resource is available on-call at all times. The safety resource can be contacted via the Comm Center at extension x5296.

Personal Protective Equipment

Minimum personal protective equipment (PPE) required includes safety-toed shoes, gloves, safety glasses, hi-vis vest or clothing, hard hat, and an escape respirator. Additional PPE is used as needed and includes safety goggles, face shield, hearing protection, rubber coat, rubber pants, and rubber boots.

Chemical Safety

The following chemicals are used in the effluent treatment system:

Hydrogen Peroxide
Sodium Hypochlorite
Aqueous Ammonia
Phosphoric Acid
Ammonium Polyphosphate
Sulfuric Acid
Polymer
Defoamer

A Safety Data Sheet (SDS) for each chemical can be found on the Nippon Dynawave Packaging Co. SharePoint. Consult the SDS for safe chemical handling procedures.

Lockout / Tagout

All equipment must properly isolated, locked, and tagged out prior to starting any maintenance.

Confined Space

All confined spaces must be properly isolated, locked and tagged out prior to entering. In addition, all entrants, attendants, and entry supervisors must be confined space trained and the Nippon Dynawave Packaging Confined Space Entry policy must be followed. A copy of the Confined Space Entry policy can be obtained from the Nippon Dynawave Packaging Safety Office.

Emergency Plans and Procedures

Equipment Failure	All major pieces of equipment are backed up with in line excess capacity. If the Primary Clarifier, an Aeration Basin, Secondary Clarifier, or Screw Press fails, the equipment is taken off line and the loads balanced between the remaining equipment. If the remaining equipment cannot treat the full load into the treatment system, process effluent can be stored in the West Pond while the Nippon Dynawave Packaging operations can be curtailed to reduce the load into the treatment system as needed.
Process Chemical Spill to Effluent Treatment	High pH material is typically neutralized with sulfuric acid addition. High and low pH and high BOD process effluent can be diverted and contained in the West Pond. This effluent can then be pumped to the aeration basins at a rate that allows target pH and DO to be maintained.
Chemical Release	The Nippon Dynawave Packaging Emergency Response Plan should be followed for all chemical releases. A copy of the emergency response plan is located at the Nippon Dynawave Packaging Safety Office.
Other Non-routine Conditions	Not all non-routine scenarios can be anticipated. In these circumstances, Best Professional Judgment will be used to determine operating conditions consistent with the overall objective of meeting the NPDES permit terms and conditions.