PHASE 2 FACILITY OPERATIONS AND MAINTENANCE PLAN FOR 2014
Appendix B

to

Remedial Action Work Plan for Phase 2 Dredging and Facility Operations in 2014

HUDSON RIVER PCBs SUPERFUND SITE

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PHASE 2 FACILITY OPERATIONS AND MAINTENANCE PLAN FOR 2014

Section 3.1.1 of the revised Statement of Work (SOW) for Remedial Action and Operations, Monitoring and Maintenance (Appendix B to the Consent Decree), issued by the United States Environmental Protection Agency (EPA) in December 2010, requires that the Remedial Action Work Plan (RAWP) for Phase 2 dredging and facility operations in each year of Phase 2 must include a Phase 2 Facility Operations and Maintenance Plan or updates to a previously approved plan. The RAWP submitted by General Electric Company (GE) for 2013, dated April 2013, included (as Appendix B) a *Phase 2 Facility Operations and Maintenance Plan for 2013* (2013 Facility O&M Plan). That plan addressed the operation and maintenance of the sediment processing facility, located in Fort Edward, New York, during 2013 and the following off-season. It described operational aspects of sediment processing at this facility, from receipt of dredged material through transfer of dewatered solids to a staging area for loading of rail cars. It also described the treatment of process water and storm water at the site and the reuse and discharge of treated water. That plan included, for each operation, descriptions of the equipment and processes involved, as well as the instruments and controls and the inspection and maintenance procedures for the equipment used. The plan also presented a general operations schedule and description of manpower requirements, a contingency plan for unplanned maintenance of critical equipment, and a description of worker health and safety measures, decontamination procedures for personnel and equipment, spill control and response measures, and contractor noise and light monitoring to be implemented at the processing facility. Finally, the plan included a description of the decommissioning procedures at the conclusion of the season and of the activities to be undertaken at the facility during the following off-season.

There are very few substantive changes to the 2013 Facility O&M Plan for operations to be conducted at the Fort Edward sediment processing facility in 2014. Accordingly, this *Phase 2 Facility Operations and Maintenance Plan for 2014* (2014 Facility O&M Plan), which is Appendix B to the *Phase 2 Remedial Action Work Plan for Dredging and Facility Operations in 2014* (2014 RAWP), incorporates by reference the 2013 Facility O&M Plan with the following exceptions:

- References in the 2013 Facility O&M Plan to the 2013 RAWP and the plans that are appendices to it should be read to refer to the 2014 RAWP and its corresponding appendices.
- Certain portions of the 2013 Facility O&M Plan, which relate to a description of the equipment in one area, manpower projections, and equipment inspection and maintenance schedules, have been slightly revised. These portions of the plan consist of Section 2.3.2.1 (Equipment Overview), Table 3-1 2013 Full-Scale Operational Manpower Projections, and the inspection and maintenance schedules in Attachments

1A, 1B, 2A, 2B, 3, 4, 7, and 9. Revised versions of those portions of the Facility OM&M Plan are attached hereto.

It should be noted that the 2014 RAWP does not specifically cover dredging and associated sediment handling operations in the non-navigable area known as the Landlocked Area in Reach 7 of the Upper Hudson River. Those operations are addressed in a separate RAWP – the *Phase 2 Remedial Action Work Plan for Reach 7 –Landlocked Area*. However, as noted in that RAWP, the off-loading and processing operations at the Fort Edward sediment processing facility for the sediments transported from the Landlocked Area will be subject to this 2014 Facility O&M Plan.

Section 2.3.2.1 of the 2013 Facility O&M Plan, which describes the equipment at the North Size Separation Area at the processing facility, shall be replaced with the following:

2.3.2.1 Equipment Overview

A series of screens will be used to separate the coarse oversize fractions from the sand and fine fractions. A log washer will be used to scrub the separated coarse oversize fractions and separate the lighter materials, such as wood and plastic. The sand will be separated from the fines fraction with three desanding units, which consist of an integrated bucket wheel, hydrocyclone cluster, and dewatering screen unit. The fines fraction (silt and clay) will be discharged from the size separation plant as a slurry and pumped to the dewatering area. The process steps are as follows:

1. The unloader will feed the dredged material from the barge into a hopper.
2. A belt feeder will convey the material into a feed box containing an 8-ft by 24-ft triple deck scalping screen.
3. The oversize from the top deck (greater than 4-inch diameter) will be directed to a bin adjacent to the screen via a chute.
4. The material captured in the second (1-inch to 4-inch) and third (1-inch to 5/8-inch) decks will be directed to belt conveyors that will take the material to the 6-ft by 20-ft midsize vibratory screen.
5. The underflow (less than 5/8-inch diameter) from the triple deck screen will be pumped to a 6-ft x 20-ft fine vibratory screen.
6. The overs (1/4-inch to 5/8-inch diameter) from the midsize and fine vibratory screens will be conveyed to a log washer.
7. The underflow from the midsize and fine vibratory screens will be pumped to one of three desanding units.
8. The log washer will scrub the coarse component of the dredged material to complete the separation of the fines fraction. Additionally, the light material, such as wood and plastic will float in the log washer and be discharged via a dewatering screen. Both of these fractions will be stacked and then loaded into dump trucks for transport to the CMSAs.
9. The underflow from the log washer will be pumped to a desanding unit.
10. In each of the three desanding units, a bucket wheel will filter the sand and discharge it onto a dewatering screen. The water and fines in the sump will be pumped to a cluster of hydrocyclones for additional desanding. The hydrocyclone overflow will be discharged to a storage tank. The underflow from the hydrocyclones discharges onto the same dewatering screen as the bucket wheel. The dewatered sand is rejected onto a

stacking conveyor. The dewatered sand will then be loaded into dump trucks for transport to the CMSAs.

11. The hydrocyclone overflow is either recycled back to the sump under the triple deck screen to act as dilution water or is pumped to the gravity thickener for dewatering.

Material Staging in the North Size Separation Area

At each unit of the size separation process, the solids removed will be staged for hauling. This operation includes the following:

- The initial steps of the size separation system involve scalping operations and size classification of the material. Large debris from barges may be directly unloaded onto trucks for transport to the CMSAs and items larger than the truck bed will be offloaded to the wharf pavement for reduction in size for transport. Stockpiles will be created at the initial scalper screen.
- Material captured by the log washer will be staged for transport to the CMSAs with a radial stacker.
- Material captured by the desanding units will be staged for transport to the CMSAs with a radial stacker.

Mobile equipment supporting the North Size Separation Area is shared with the South Plant as described in Section 2.3.1.2 above.

Oversized material and large debris will be transported to the CMSAs using dump trucks, cycling between the size separation area and the CMSAs so that these materials do not accumulate to the point where operations are impeded. Figure 2-4 depicts this on-site waste transport routing. Drainage from the stockpiles will be captured and conveyed to the waterfront storm water basin (Section 2.6).

Table 3.1 of the 2013 Facility O&M Plan shall be replaced with the following:

Table 3-1 2014 Full-Scale Operational Manpower Projections.

General Labor Category	First Shift	Second Shift	Third Shift
Management & Administration[1]	20	7	--
Sediment Unloading	5	5	--
Size Separation	15	15	2
Thickening and Dewatering	9	9	1
Water Treatment	2	2	--
Staging Area	1	1	--
Rail Car Loading	0	0	12
Health and Safety & QC	5	4	--
Maintenance & Site Operations Support	10	9	8

Note:

1. 8-hour workdays are planned for project accounting & receptionist.

During operations, the actual manpower requirements, number of shifts and shift durations will be adjusted as necessary to meet demand. Manpower requirements during facility decommissioning and off-season operations are further described in Section 6.

Attachments 1A, 1B, 2A, 2B, 3, 4, 7, and 9 to the 2013 Facility O&M Plan shall be replaced with the following:

Attachment 1A
Equipment Inspection Schedule – South Size Separation Area

Equipment Item	Inspection Required	Frequency
TROMMEL FEEDER SYSTEM		
Wobbler	Wobbler Individual Roller Alignment	Daily
	Bearings	Daily
	Automatic Lubricating System	Daily
Apron Feeder System	Conveyor Chain	Daily
	Bearings	Daily
	Conveyor Drive Gearbox	Daily
TROMMEL SCREEN EQUIPMENT		
Trommel Barrel	Hydraulic Lift Jacks on each Side are not deployed	Daily
	Visual Confirmation – interior of barrel	Daily
	Trommel Spray Water System – Barrel interior	Daily
+5/8-inch Conveyor	Drive System	Daily
	Rollers	Daily
	Conveyor Belt	Daily
	Gear Case	Daily
	Guards	Daily
	Bearings	Daily
	Discharge Chute from Trommel Barrel	Daily
	E-Stop System	Daily
Underflow Pumps	Shaft Couplers/Belt and Sheave	Daily
	Bearing/Seal Waters	Daily
	Discharge Pressures	Daily
INTERMEDIATE SCREEN EQUIPMENT		
Intermediate Screen Tank	High and Low Level Alarms	Daily
	Valves/Flanges/Piping	Daily
	Walkways	Daily
	Handrails	Daily
Intermediate Screen Tank Mixers	Gear Case Fluids	Daily
	Shaft Couplers	Daily
	Shaft Flange Lugs	Daily
	Shaft Seals	Daily
	Coupler Guards	Daily
	Bearings	Daily
Vibrator Screens	Screen Wear	Daily
	Screen Supports	Daily
	Springs	Daily
	Vibrator Motor Bolts	Daily

Attachment 1A
(continued)
Equipment Inspection Schedule – South Size Separation Area

Equipment Item	Inspection Required	Frequency
INTERMEDIATE SCREEN SYSTEM (continued)		
	Screen Tension Lugs	Daily
	Bearings	Daily
Conveyor	Rollers	Daily
	Driver Motor and Chain	Daily
	Gear Box	Daily
	E-Stop System	Daily
Underflow Pumps	Shaft Couplers/Belt and Sheave	Daily
	Bearings/Seal Water	Daily
	Discharge Pressures	Daily
HYDROCYCLONES		
Hydrocyclones	Cones	Daily
	Pressure Gauges	Daily
Vibratory Dewatering Screens	Screens	Daily
	Springs	Daily
	Screen Supports	Daily
	Screen Tension Legs	Daily
	Vibrator Motor Bolts	Daily
	Bearings	Daily
Conveyors	Drive System	Daily
	Rollers	Daily
	Belts	Daily
	Gear Case	Daily
	E-Stop System	Daily
Recycle Pumps	Gear Case Lube	Daily
	Bearings / Seal Water	Daily
	Shaft Couplers/Belt and Sheave	Daily
	Guards	Daily
Feed Pumps	Gear Case Lube	Daily
	Bearings / Seal Water	Daily
	Shaft Couplers / Belt and Sheave	Daily
	Guards	Daily
Hydrocyclone Control Room	Recirculation Pump Variable Frequency Driver (VFD) Settings	Daily

Attachment 1A
(continued)
Equipment Inspection Schedule – South Size Separation Area

Equipment Item	Inspection Required	Frequency
HYDROCYCLONES (continued)		
Hydrocyclone Control Room	Conveyor VFD Settings	Daily
	Control Room Exhaust and Cooling	Daily
	Control Room Doors Closed During Operations	Daily
DESANDING UNITS		
Vibratory Dewatering Screens	Screens	Daily
	Springs	Daily
	Screen Supports	Daily
	Screen Tension Legs	Daily
	Vibrator Motor Bolts	Daily
	Bearings	Daily
Conveyors	Drive System	Daily
	Rollers	Daily
	Belts	Daily
	Gear Case	Daily
	E-Stop System	Daily
Wheel Motors	Gear Case	Daily
	Guards	Daily
	Bearings	Daily
	Drive System	Daily
Feed Pumps	Bearings / Seal Water	Daily
	Shaft Couplers / Belt and Sheave	Daily
	Guards	Daily
TANKS AND ACCESSORIES		
Trommel Screen Make-up Water Feed Pumps (1-active / 1-Spare)	Gear Case Lube	Daily
	Bearings / Seal Water	Daily
	Shaft Couplers / Belt and Sheave	Daily
	Guards	Daily
	Discharge Pressures	Daily
Sediment Slurry Tank Make-up Water Feed Pumps (1-active / 1-Spare)	Gear Case Lube	Daily
	Bearings/ Seal Water	Daily
	Shaft Couplers/ Belt and Sheave	Daily
	Guards	Daily
	Discharge Pressures	Daily

Equipment Item	Inspection Required	Frequency
Sediment Slurry Tank Mixers	Gear Case Fluids	Weekly
	Shaft Couplers	Weekly
	Shaft Flange Lugs	Weekly
	Shaft Seals	Weekly
	Coupler Guards	Weekly
	Bearings	Weekly
Size Separation Process Water Storage Tank	High Level Alarm	Daily
	Low Level Alarm	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
	Walkways	Daily
	Handrails	Daily
	Ladders	Daily
Sediment Slurry Tank	High Level Alarm	Daily
	Low Level Alarm	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
	Walkways	Weekly
	Handrails	Weekly
	Ladders	Weekly

Attachment 1B
Equipment Inspection Schedule – North Size Separation Area

Equipment Item	Inspection Required	Frequency
TRIPLE DECK SCREEN EQUIPMENT		
Screen Deck	Screen Wear	Daily
	Screen Supports	Daily
	Springs	Daily
	Vibrator Motor Bolts	Daily
	Spray bars	Daily
	Walkways	Daily
	Handrails	Daily
Conveyors	Drive System	Daily
	Rollers	Daily
	Conveyor Belt	Daily
	Gear Case	Daily
	Guards	Daily
	Bearings	Daily
	Discharge Chute from Trommel Barrel	Daily
	E-Stop System	Daily
Underflow Pumps	Shaft Couplers/Belt and Sheave	Daily
	Bearing/Seal Waters	Daily
	Discharge Pressures	Daily
DOUBLE DECK SCREEN EQUIPMENT		
Screen Deck	Screen Wear	Daily
	Screen Supports	Daily
	Springs	Daily
	Vibrator Motor Bolts	Daily
	Spray Bars	Daily
	Walkways	Daily
	Handrails	Daily
Conveyors	Drive System	Daily
	Rollers	Daily
	Conveyor Belt	Daily
	Gear Case	Daily
	Guards	Daily
	Bearings	Daily
	Discharge Chute from Trommel Barrel	Daily
	E-Stop System	Daily
Underflow Pumps	Shaft Couplers/Belt and Sheave	Daily
	Bearing/Seal Waters	Daily
	Discharge Pressures	Daily
LOG WASHER		
Screen Deck	Conveyor Paddles	Daily

Attachment 1B

(continued)
Equipment Inspection Schedule – North Size Separation Area

Equipment Item	Inspection Required	Frequency
LOG WASHER (continued)		
Screen Deck	Paddle Supports	Daily
	Paddle motor	Daily
	Walkways	Daily
	Handrails	Daily
Conveyors	Drive System	Daily
	Rollers	Daily
	Belts	Daily
	Gear Case	Daily
	E-Stop System	Daily
Feed Pumps	Gear Case Lube	Daily
	Bearings / Seal Water	Daily
	Shaft Couplers / Belt and Sheave	Daily
	Guards	Daily
DESANDING UNITS		
Vibratory Dewatering Screens	Screens	Daily
	Springs	Daily
	Screen Supports	Daily
	Screen Tension Legs	Daily
	Vibrator Motor Bolts	Daily
	Bearings	Daily
Conveyors	Drive System	Daily
	Rollers	Daily
	Belts	Daily
	Gear Case	Daily
	E-Stop System	Daily
Wheel Motors	Gear Case	Daily
	Guards	Daily
	Bearings	Daily
	Drive System	Daily
Feed Pumps		
	Bearings / Seal Water	Daily
	Shaft Couplers / Belt and Sheave	Daily
	Guards	Daily

Attachment 1B
(continued)
Equipment Inspection Schedule – North Size Separation Area

Equipment Item	Inspection Required	Frequency
DESANDING UNITS (continued)		
Bucket Wheel	Wheel VFD Settings	Daily
	Ladder and walkway	Daily
	Buckets	Daily
TANKS AND ACCESSORIES		
Screen Deck Make-up Water Feed Pumps (1-lead / 1-lag)	Gear Case Lube	Daily
	Bearings / Seal Water	Daily
	Shaft Couplers / Belt and Sheave	Daily
	Guards	Daily
	Discharge Pressures	Daily
Logwash Water Feed Pumps (1-lead / 1-lag)	Gear Case Lube	Daily
	Bearings/ Seal Water	Daily
	Shaft Couplers/ Belt and Sheave	Daily
	Guards	Daily
	Discharge Pressures	Daily
Hydrocyclone Overflow Tank Mixers	Gear Case Fluids	Weekly
	Shaft Couplers	Weekly
	Shaft Flange Lugs	Weekly
	Shaft Seals	Weekly
	Coupler Guards	Weekly
	Bearings	Weekly
Size Separation Process Water Storage Tank	High Level Alarm	Daily
	Low Level Alarm	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
	Walkways	Daily
	Handrails	Daily
	Ladders	Daily
Triple and Double Deck Screen Tanks	High Level Alarm	Daily
	Low Level Alarm	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
	Walkways	Daily
	Handrails	Daily
	Ladders	Daily

Attachment 2A
Maintenance Activities at South Size Separation Area

Equipment Item	Maintenance Category	Daily[1]	Weekly	Monthly
TROMMEL FEEDER SYSTEM				
Wobbler	Inspection	✓		
	Lubrication	✓		
	Scheduled Maintenance			✓
Apron Feeder System	Inspection	✓		
	Lubrication	✓		
	Scheduled Maintenance			✓
TROMMEL SCREEN EQUIPMENT				
Screen	Inspection		✓	
	Lubrication	✓		
	Scheduled Maintenance			✓
Overflow Conveyor	Inspection	✓		
	Lubrication	✓		
	Scheduled Maintenance			✓
Underflow Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
INTERMEDIATE SCREEN				
Vibratory Screen	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Conveyor	Inspection	✓		
	Lubrication	✓		
	Scheduled Maintenance			✓
Underflow Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
HYDROCYCLONES				
Vibratory Dewatering Screens	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Conveyors	Inspection	✓		
	Lubrication	✓		
	Scheduled Maintenance			✓
Sump/Recycle Assembly Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓

Attachment 2A
(continued)
Maintenance Activities at South Size Separation Area

Equipment Item	Maintenance Category	Daily[1]	Weekly	Monthly
Feed Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
DESANDING UNITS				
Vibratory Screen Deck	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Bucket Wheels	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Feed Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
TANKS AND ACCESSORIES				
Trommel Screen Make-up Water Feed Pumps	Inspection	✓		
	Lubrication			✓
	Scheduled Maintenance			✓
Sediment Slurry Tank Make-up Water Feed Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Sediment Slurry Tank Mixers	Inspection		✓	
	Lubrication		✓	
	Scheduled Maintenance			✓
Size Separation Process Water Storage Tank	Inspection	✓		
	Scheduled Maintenance			✓
Sediment Slurry Tank	Inspection	✓		
	Scheduled Maintenance			✓

1. Visual Inspection only. Does not require shutdown of equipment.

Attachment 2B
Maintenance Activities at North Size Separation Area

Equipment Item	Maintenance Category	Daily[1]	Weekly	Monthly
TRIPLE & DOUBLE DECK SCREEN SYSTEMS				
Vibratory Screen	Inspection	✓		
	Lubrication	✓		
	Scheduled Maintenance			✓
Underflow Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
LOG WASHER				
Screen Deck	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Underflow Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Conveyors	Inspection	✓		
	Lubrication	✓		
	Scheduled Maintenance			✓
DESANDING UNITS				
Vibratory Screen Deck	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Bucket Wheels	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
Feed Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
TANKS AND ACCESSORIES				
Tank Mixers	Inspection	✓		
	Lubrication			✓
	Scheduled Maintenance			✓
Tanks	Inspection	✓		
	Scheduled Maintenance			✓

Attachment 3
Equipment Inspection Schedule – Sediment Conveyance[(1)(2)]

Equipment Item	Inspection Required	Frequency
HYDROCYCLONE OVERFLOW LIFT STATION		
Hydrocyclone Overflow Wet Well Mixers	Gear Lube	Weekly
	Couplings	Weekly
	Flange Bolts	Weekly
	Bearings	Weekly
	Shaft Seals	Weekly
	Guards	Weekly
Overflow Pumps	Gear Lube	Daily
	Couplings	Daily
	Bearings / Seal Water	Daily
	Actuated Control Valves	Daily
	Pressure Indicators	Daily
	Shaft Seals	Daily
	Discharge Pressure	Daily
FORCE MAINS		
12-inch Slurry Force Mains	Flanged Connections	Daily
14-inch Recycle Water Force Main	Flanged Connections	Daily
3-inch Seal Water Distribution Force Main	Flanged Connections	Daily
12-inch Slurry Force Main	Welded Connections	Monthly
14-inch Recycle Water Force Main	Welded Connections	Monthly
14-inch Slurry Force Main	Welded Connections	Monthly
14-inch Slurry Force Main	Flanged Connections	Daily
18-inch Slurry Force Main	Welded Connections	Monthly
18-inch Slurry Force Main	Flanged Connections	Daily
3-inch Seal Water Distribution Force Main	Welded Connections	Monthly
12-inch HDPE	Wall Thickness	Annual
Air/Vacuum Release Valves	Release Valves	Daily
	Release Valve Wear	Annual

1. Force mains include separate 14-inch main that conveys water from Dewatering Area to Size Separation Process Water Storage Tank.
2. Table includes both North and South system.

Attachment 4
Maintenance Activities for Sediment Conveyance[1]

Equipment Item	Maintenance Category	Daily[2]	Weekly	Monthly
HYDROCYCLONE OVERFLOW LIFT STATION				
Hydrocyclone Overflow Wet Well Mixers	Inspection		✓	
	Lubrication		✓	
	Scheduled Maintenance			✓
Hydrocyclone Overflow Pumps	Inspection	✓		
	Lubrication		✓	
	Scheduled Maintenance			✓
FORCE MAINS				
12-inch, 14-inch, and 18-inch Slurry Force Mains	Inspection	✓		
	Flange Bolt Tightening		✓	
	Force Main Support Realignment			✓
	Scheduled Maintenance	As required		
14-inch Recycle Water Force Main	Inspection	✓		
	Flange Bolt Tightening		✓	
	Force Main Support Realignment			✓
	Scheduled Maintenance	As required		
3-inch Seal Water Distribution Force Main	Inspection	✓		
	Flange Bolt Tightening		✓	
	Force Main Support Realignment			✓
	Scheduled Maintenance	As required		
Air/Vacuum Release Valves	Inspection	✓		
	Flange Bolt Tightening		✓	
	Scheduled Maintenance			✓

1. Table includes both North and South system
2. Visual Inspection only. Does not require shutdown of equipment.

Attachment 7
Equipment Inspection Schedule – Water Treatment

Equipment Item	Inspection Required	Frequency
STORM WATER COLLECTION AND EQUALIZATION		
South Storm Water Basin Pumps	Motors	Daily
	Guards	Daily
	Pumps	Daily
	Bearings	Daily
	Seals	Daily
	Discharge Pressure	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
North Storm Water Basin Pumps	Motors	Daily
	Guards	Daily
	Pumps	Daily
	Bearings	Daily
	Seals	Daily
	Discharge Pressure	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
Waterfront Storm Water Basin Pumps	Motors	Daily
	Guards	Daily
	Pumps	Daily
	Bearings	Daily
	Seals	Daily
	Discharge Pressure	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
Storm Water Equalization Tank	Equalization Lines	Daily
	Valves	Daily
	High Level	Daily
	Low Level	Daily
	Hand Rails	Daily
	Holding Capacity	Daily
	Solids Build-up	Daily
	Walk-ways	Daily
Storm Water Equalization Tank Discharge Pump (to Storm Water Treatment Train)	Motors	Daily
	Guards	Daily
	Pumps	Daily
	Bearings	Daily
	Seals	Daily
	Discharge Pressure	Daily

Attachment 7
(continued)
Equipment Inspection Schedule – Water Treatment

Equipment Item	Inspection Required	Frequency
STORM WATER COLLECTION AND EQUALIZATION (continued)		
	Valves	Daily
	Flanges	Daily
	Piping	Daily
PROCESS WATER EQUALIZATION		
Process Water Equalization Tank	Ladders	Daily
	Walk-ways	Daily
	Hand rails	Daily
	Piping	Daily
	Valves	Daily
	High Level	Daily
	Low Level	Daily
Process Water Equalization Tank Discharge Pumps (to Process Water Treatment Trains)	Motors	Daily
	Guards	Daily
	Pumps	Daily
	Bearings	Daily
	Seals	Daily
	Discharge Pressure	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
WATER TREATMENT - CLARIFICATION		
Rapid Mix Chamber Mixer	Motors	Daily
	Guards	Daily
	Shafts	Daily
	Couplers	Daily
	Propeller	Daily
	Bearings	Daily
	Seals	Daily
Flocculation Chamber Mixer	Motors	Daily
	Guards	Daily
	Shafts	Daily
	Couplers	Daily
	Propeller	Daily
	Bearings	Daily
	Seals	Daily
Inclined Plate Clarifier	In-Flow	Daily
	Out-Flow	Daily
	Performance	Daily
	Build-up on Plates	Daily

Attachment 7
(continued)
Equipment Inspection Schedule – Water Treatment

Equipment Item	Inspection Required	Frequency
WATER TREATMENT – CLARIFICATION (continued)		
	Solids in Lower Sump	Daily
	Scum Build-up	Daily
	Piping	Daily
	Valves	Daily
	Flanges	Daily
Clarified Underflow Sludge Pump	Piping	Daily
	Valves	Daily
	Seals	Daily
	Clamps	Daily
	Performance	Daily
Clarifier Effluent Tank	Ladders	Daily
	Walk-ways	Daily
	Hand rails	Daily
	In-Flow	Daily
	Out-Flow	Daily
	High Level	Daily
	Low Level	Daily
	Water Quality – TSS	Daily
	Valves	Daily
	Piping	Daily
Effluent Tank Discharge Pump	Motors	Daily
	Guards	Daily
	Shafts	Daily
	Propeller	Daily
	Bearings	Daily
	Seals	Daily
	Discharge Pressure	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
Plant Air System Compressor	Motors	Daily
	Compressor Fluids	Daily
	Belts	Daily
	Sheaves	Daily
	Pulleys	Daily
	Pressure Relief Valve	Daily
	Operating Pressures	Daily
	Air Intake Filters	Daily
	Condensate Drains/ Water Traps	Daily
	Air Dryers	Daily

Attachment 7
(continued)
Equipment Inspection Schedule – Water Treatment

Equipment Item	Inspection Required	Frequency
WATER TREATMENT – CLARIFICATION (continued)		
Sludge Underflow Pump Solenoid Valves	RAM Pressure	Daily
	RAM Seals	Daily
	Hydraulic Fittings	Daily
	Motors	Daily
	Fluid Levels	Daily
	Hydraulic Oil Filter	Daily
	Operating Performance	Daily
WATER TREATMENT – FILTRATION AND GAC		
Multimedia Filters – Vessels	Vessel Inlet Pressure	Daily
	Flow Restrictions	Daily
	Outflow TSS	Daily
	Piping	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
	Pressure Relief Valves	Daily
	Backwash	Daily
Multimedia Filters - Media	Backwash	Weekly
	Skimming/Removal of flow Restrictive Sediments on Surface of Filter Media	Frequency as required
	Replacement of Surface Media Above Lateral Flow Screens	Frequency as required
Carbon – Vessels	Inlet Pressure	Daily
	Relief Valves	Daily
	Piping	Daily
	Valves	Daily
	Flanges	Daily
Bag Filters (Replacement of Filters)	Inlet Pressure	Daily
	Bag Filter Micron Ratings	Daily
	Inspection Hatch	Daily

Attachment 7
(continued)
Equipment Inspection Schedule – Water Treatment

Equipment Item	Inspection Required	Frequency
WATER TREATMENT – FILTRATION AND GAC (continued)		
	Seals	Daily
	Clamps	Daily
	Piping	Daily
	Valves	Daily
	Flanges	Daily
BACKWASH WATER		
Backwash Water Holding Tank	Ladders	Daily
	Hand rails	Daily
	Piping	Daily
	Valves	Daily
	High Level	Daily
	Low Level	Daily
Backwash Water Feed Pumps	Motors	Daily
	Guards	Daily
	Pumps	Daily
	Bearings	Daily
	Seals	Daily
	Discharge Pressure	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily
Plant Water Feed/Pressurization Pump	Motors	Daily
	Guards	Daily
	Pumps	Daily
	Bearings	Daily
	Seals	Daily
	Discharge Pressure	Daily
	Valves	Daily
	Flanges	Daily
	Piping	Daily

Notes.
1. A rainfall event is defined as a precipitation event of 0.5-inches or greater.

Attachment 9
Maintenance Activities – Rail Yard Area

Equipment Item	Maintenance Category	Daily	Weekly	Other
Critical Track				
Yard Tracks	Inspection		✓	
	Scheduled Maintenance		As Required	
Track #1	Inspection		✓	
	Scheduled Maintenance		As Required	
Turn-Outs				
Yard Switches	Inspection		✓	
	Lubrication		As Required	
	Scheduled Maintenance		As Required	
Track #1 Switches	Inspection		✓	
	Lubrication		✓	
	Scheduled Maintenance		✓	
Scale, Rail Cars and Other Equipment				
Locomotives	Inspection	✓		
	Lubrication	As Required		
	Scheduled Maintenance	As Required		92 Day Inspection
Idler Cars	Inspection	✓		
	Lubrication	✓		
	Scheduled Maintenance	As Required		
Mill Gondolas	Inspection	In and Outbound		
	Lubrication	As Needed		
	Scheduled Maintenance	As Required		
Scale	Inspection	✓		
	Scheduled Maintenance			90 days
Air Compressors – Yard Air	Inspection		✓	
	Lubrication (including motors)			Annual
	Scheduled Maintenance Air Filter			Monthly
	Scheduled Maintenance Fluid Filter			6 months
	Scheduled Maintenance Separator Elements, Safety Shutdown System, Pressure relief valve			Annual