**AUGUSTA TISSUE LANDFILL SCOPE OF WORK**

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**WORK ITEM LIST**

**5/24/23**

1. Provide ongoing recommendations for leachate management system improvements and

Maintenance as needed. Hire and supervise a subcontractor to complete the improvements as directed by the Department.

2. Control and maintain the leachate pond manhole level as directed by the Department. Report monthly pump totalizer readings to the Greater Augusta Utility District and to the Department until the pump station is decommissioned.

3. Conduct landfill inspections per the inspection report form and pump station maintenance as directed by the Department on a weekly basis. Closure and post closure inspections will be conducted as requested by the Department. Provide inspection reports to the Department every two weeks.

4. Provide professional services to the Department regarding remediation of the landfill facility on an as-needed basis.

5. Attend meetings with the Department and, if requested, meetings with the public and/or municipal officials to discuss the landfill and to present information, including final remedial activities. For the purposes of this scope of services, assume 3 meetings will be necessary.

6. Where requested, provide electronic copies of the documents prepared under this contract. Documents should be prepared and submitted in a format approved by the Department.

7. Submit to the Department, a monthly invoice which itemizes total expenditures.

**Augusta Tissue Landfill**

**Open Work Items**

**5/24/23**

**11-0427-40** - The manual valve upstream of the pond auto is sometimes difficult to cycle. When the leachate pond is empty, the valve riser and valve need to be excavated and cleaned/repaired as necessary. Estimate to excavate and clean the valve is $1,590. Work needs to be performed during the dry part of the year (July – August).

5/24/23 – No corrective action has been scheduled (need Department approval). Valve is currently shut.

**16-0727-54 –** After the south leachate inlet has been closed out, grout the pond manhole frame onto the top manhole section to help prevent access (would no longer inspect it weekly).

5/24/23 – Not Complete (grouting). Pushed the manhole frame over the manhole opening to help ensure that no one throws anything in it that could clog up the new pipe (bottle, etc.). Will stop inspecting the pond manhole (has a bolted-on cover).

**16-0919-58** – If it is decided to shut the valves from the leachate pond manhole to the wet well permanently, then a 3” fire hose blank flange should be installed at the outlet of the auto valve (requires a confined space entry). The entire pipe should probably be grouted from the pond manhole to the valve manhole so there is not constant pressure on the valves from the pond manhole (line could eventually fail).

5/24/23 – Not Complete (pipe not grouted). Blank fire hose flange was installed on 5/24/18.

**20-0224-86** – Coordinate an inspection of Manholes SMH-1017 and SMH-453 with GAUD in the late summer of 2020.

5/24/23– Ted Berry tried to flush from SMH-1017 across the Riggs Brook to MH No.1 on November 25, 2020; however, the ground was not firm enough to support the water trailer (got stuck on woods road**).** GAUD plans to place additional gravel to improve the access and will submit an estimated cost to the DEP prior to performing any road work (plan is to split the cost?). GAUD installed a locked cable across the access road off Riverside Drive.

**20-0310-87 –** Update the site As-Built Drawings along with the Pump Station/Site O&M Manual.

5/24/23 – Drawings are complete.

**23-0221-97 –** Repair the potholes and ruts in the main access road to just beyond the solar farm project with compacted gravel, as needed, after the solar farm construction is complete. This work item is the responsibility of the solar farm developer, New Gen Hospitality Management LLC, as agreed to with Susan Parmelee of the DEP.

5/24/23 – Not complete.

 **Augusta Tissue Landfill**

**Closed Work Items**

**5/24/23**

06-0907-1 - Repair MW-21T protective casing.

**10/19/06 – Complete**

06-0907-2 – Install a staff gauge in the leachate pond. Make sure that the numbers are large enough so they can be read without binoculars. Ensure it has a “red zone” starting 2' from the bottom of the overflow channel.

10/11/06 - Complete

06-0907-3 – The clean water diversion berm next to the perimeter road has washed out on the south east side of Phase III. All upgradient water is flowing into Phase III and through the 24” HDPE culvert installed under Phase II North. It will take an estimated 300 yards of clay to repair.

**9/25/12** – **Complete.** A new rip-rap ditch was constructed at the location where the culvert crosses the east road. The washed out area next to the east road was filled in.

06-0907-4 – The bar screen installed at the inlet of the 24” HDPE culvert (located at the base of the east berm) needs to be cleaned and sumped.

9/14/06 – Complete

06-0907-5 – Remove trees/vegetation from the clean water channels.

9/8/14 – **Complete.** Trees have been removed from the clean water channel down to the brook.

06-0907-6 – The culvert installed under the east side road in Phase II currently has plastic wrapped around the north end to prevent any water from going through it. Need to evaluate whether the plastic should be removed.

9/25/12 – This item will be removed. The culvert no longer has plastic wrapped around it.

06-0907-7 – There are a number of burrow holes in the face of the main dam. The holes should be filled with clay, or a bentonite/sand mixture.

**10/11/06 –** **Complete.** Note: Used 1,100 lbs of bentonite powder mixed with clean sand and bentonite chips to fill the holes. Some of the holes appeared active so also utilized four rodent smoke bombs. Keeping the pond water level down should help keep animals from boring into the dam (no good water source).

06-0907-8 – Need to install a screen on the end of the 8” pipe (and on the tee further down the pipe after the pond is pumped below it) that is connected to the pond manhole (located on inside of main dam).

9/19/06 – Complete

06-0907-9 – There is a disconnected 4” pipe “finger drain” on the inside of the main dam. It is now located above the ground and no longer covered with ¾” stone.

5/5/15 **– Complete**. The nine finger drains and stone were removed to below the final ditch grade waste elevations and caps were screwed on the ends of the 4" pipes. This will prevent the west clean water ditch storm water run-off from flowing into the leachate collection system after the site has been capped.

06-0928-10 – Tighten the packing on the 6” valve in the wet well.

1/16/07 – Complete

06-1019-11 – Remove the flow restriction between the pond manhole and the valve manhole.

10/24/06 – Complete

06-1019-12 – Replace the main gate, pump station and valve manhole locks with new secure locks.

**10/24/06 – Complete**

07-0125-13 – Before spring run-off, pull the pumps to clean and inspect. If the pump flows are still low after performing this work, pig the force main.

3/1/07 – Stevens inspected the pumps today and they appear satisfactory.

3/8/07 – Complete (Force Main was successfully pigged today).

07-0131-14 – Clean out the built up material in the base of the pond manhole.

**6/20/07 – Complete.**

07-0502-15 – Install check dam(s) in the Phase III area, as needed, to reduce soil erosion from clogging the inlet grate to the 24” pipe.

5/23/07 - Complete. Installed 25’ of silt fence.

07-0523-16 – Leachate vent pipe located on the south side of the east dike is lying on the ground (ref. 11/83 E.C. Jordan Drawing & 3/92 Morrison Geotechnical Engineering Drawing 4). Try to locate the 6” PVC vent pipe in the ground and extend up.

6/13/07 – Was not able to locate the vent pipe – probably buried. This Work Item will be closed.

07-0605-17 – Purchase and install a new safety net for the wet well hatch.

**6/28/07 - Complete.**

07-0605-18 – Purchase a spare leachate pump.

**8/9/07 – Complete.** Steven’s Electric now has the pump at their shop. Decided to have them store it there (it weighs over 200 lbs.).

07-0829-19 – Install 7 signs around the perimeter of the landfill that read “LANDFILL BOUNDARY – KEEP OFF”.

**9/12/07 – Complete.**

07-1010-20 – Need to install cover for the valve box for the dam toe drain gate valve (was noted as missing on the 6/27/07 inspection) so it does not fill up with snow/ice in the winter making it inoperable.

**10/17/07 – Complete**

07-1128-21 – Pig the force main. Have called Ted Berry Co. to get this on their schedule.

12/6/07 – Complete. Instantaneous flow increased to 108gpm (116gpm with both pumps on). Also generated a force main cleaning procedure.

08-0206-22 – Repair pump #1 (Steven’s Electric currently scheduled to troubleshoot on 2/7/08)

**2/12/08 – Complete** – Replaced the run capacitor and start relay.

08-0321-23 – Instantaneous flows dropped to 56 gpm so scheduled Ted Berry Co. to pig the force main on 3/24/08.

**03/25/08 – Complete.** A large amount of organic matter was observed in the terminus manhole when the line was pigged (lasted for approximately two minutes in front of the first pig). The instantaneous flow only increased from 58 gpm to 68 gpm, so Steven’s Electric was contacted for further investigation. On 3/25/08 Seven’s Electric checked the flowmeter instantaneous reading verses wet well drawdown and it was close. The instantaneous pump flow had increased from 68 gpm to 90 gpm overnight, so decided not to pull the pumps for inspection. The flushing procedure was revised to specify that the flow meter internal components/spool piece be thoroughly cleaned every time the force main is cleaned (believe this is the issue).

08-1023-24 – Replace the existing manual gate valve in the wet well with an automatic flow control valve. Replace the upgradient 12” manual valve with a new valve.

**1/5/09 – Complete**. The existing 12” valve was thoroughly cleaned and the automatic valve was placed in a new manhole.

09-0107-25 – Instantaneous pump flows have dropped to 44 gpm so scheduled Ted Berry Co. to pig the force main on 1/14/09.

**1/14/09 – Complete.** The flow meter spool piece was also cleaned with a brush. The pigs should be replaced (Ted Berry can order them) before the next line cleaning because they are showing wear. It took approximately 15 minutes for the first pig to make it to the terminus manhole due to all the material in the force main.

09-0114-26 – Clean the leachate pond auto-valve so no water leaks through when it is closed (approx. 5.4 gpm was flowing through it when it was closed in December 2011).

Stevens Electric could not locate a replacement disc. The only way to fix the leakage would be to replace the entire valve unit.

**5/25/16** – Complete. The 2 ½ year old battery that closes the valve on loss of power had to also be replaced. The monthly check of the battery voltage is apparently not an accurate test of the system readiness. Stevens Electric installed two lights on the panel in the pump house. Once per month the power breaker (second one from the right) will be turned off. The red light (open) should go off and the white light (closed) should light up to verify system readiness (can also check it at the manhole). The Weekly Inspection form was revised to reflect this change.

09-0128-27 – Need to replace the Milltronics MicroRanger II and ultrasonic sensor for the wet well. The sensor needed to be replaced and per Steven’s electric (checked with their supplier), the existing controller is so old (1992) that a replacement sensor is not available (need to replace the entire unit).

**2/27/09 – Complete**

09-0226-28 – Steven’s Electric to repair the leaking joint, in the new manhole, upgradient of the 12” gate valve. After the leaking joint is repaired, the groundwater should be resampled to find out if a permanent sump pump is needed.

**6/24/09 – Complete.** Stevens Electric bolted on a new Dresser coupling on the upgradient side of the 12” manual valve on 6/16/09. The 12” manual valve was then shut for a week to back up the water in the system to pressure test the new coupling. No contaminated water was observed in the manhole a week later.

09-0527-29 – The pump station roof needs to be repaired (exposed wood visible).

**7/1/09 – Complete**

09-0909-30 – Instantaneous pump flows have dropped to 53 gpm so scheduled Ted Berry Co. to pig the force main on September 30th.

**9/30/09 - Complete**

09-1007-31 – Both pump controller coils were damaged and need to be replaced.

**11/23/09 – Complete**

10-0331-32 – Cut down and remove the pine trees from the west berm outside slope.

**5/12/10 – Complete**

10-0331-33 – Inspect the inside toe of the west berm (for any burrow holes, erosion, etc.) after the leachate pond has been drained down.

**5/26/10 – Complete** – Inspected on 5/26/10. No burrow holes, or erosion problems, were found on the lower inside slope of the berm.

10-0331-34 – Drain down the west berm outside toe drain system after the leachate pond and site under drain system has been drained down (pumps are currently pumping continuously). This will be accomplished by cracking open the manual valve so the system drains at approximately 5 gpm.

**6/9/10 – Complete.** System is drained

10-0526-35 – Dig out the end of the culvert that drains Phase I run-off into the leachate pond.

7/24/12 – Cut a ditch through the Phase I Berm to direct the Phase I perimeter ditch run-off into the leachate pond**. Complete.**

10-0806-36 – Stevens Electric will troubleshoot the old pump #2 in their shop and provide an estimate to repair it.

**10/27/10 – Complete** (spare pump is now stored in the pump house)

10-0824-37 – Calibrate the flow meter.

**12/6/10 – Complete.**

10-0922-38 – Replace the Pump #2 controller.

**10/27/10 – Complete**

11-0323-39 - Pond freeboard is down to 2.9’ so scheduled Ted Berry Co. to pig the force main next week.

**3/30/11 – Complete**

12-0229-41 - The HydroRanger breaker keeps tripping off (pump station will not operate until this is fixed).

**3/13/12 – Complete.** The Dry well sump pump was tripping the HydroRanger breaker because it was drawing 14 amps (10 amp shared breaker). Unplugged the sump pump (can use an extension cord if needed).

12-0618-42 - Clean and adjust the height of the staff gage (need to wait until the pond is almost empty for access).

**8/6/12 *–*** **Complete.** Lowered the gage back down to the top of the manhole, so it now reads correctly. Fastened the gage to the rebar with six new fitting, cleaned the sign and the side of the manhole and repainted the gage readings on the side of the manhole.

13-0903-43 - Pump No. 1 is not working.

**9/5/13 - Complete**. Replaced a bad coil in the controller (used the coil from the old Pump No. 2 controller)

13-0903-44 - Remove the culvert in the north road drainage ditch (not needed), then install erosion control fabric and seed.

**10/8/13 – Complete**

13-1029-45 - Pump No. 1 controller needs to be replaced.

**11/19/13 - Complete.**

13-1029-46 - Need to replace the backup battery that closes the auto valve during power failures.

**11/19/13 - Complete.**

13-1128-47 - Upgrade/reconstruct the clean water rip-rap channel from the pump station road up to the Phase I discharge point. Install a new 21" (minimum) additional culvert across the pump station road.

9/22/14 - **Complete.**

14-0324-48 - Repair the low area in the clean water drainage ditch located between Phase II South and Phase II North in the 2014 construction season.

**6/23/14 - Complete.**

14-1103-49 - Add two barrel sections to the pond manhole, then place and compact bulked waste around it using an excavator. This needs to be performed so the base of the pond can continue to be brought up to grade through the winter months.

**11/20/14 - Complete**

14-1210-50 - Seed and install erosion mat on the side of the clean water channel damaged by an ATV after the snow melts in the spring.

**4/20/15 - Complete**

**14-1210-51 -** Pump #2 is not operating (drawing high amps) and pump 1 is short cycling.

**12/12/14 - Complete.** Stevens Electric replaced a Pump #2 relay and capacitor. Also replaced the pump float switches (reason for the short cycling).

**16-0229-52 -** The sump pump in the dry well will not pump (electrical cord sparks when plugged in). The water level in the dry well is over the flow meter electronics.

**3/1/16 – Complete.** Stevens Electric replaced the top section of the sump pump power cord (was shorting out). After it was repaired, the dry well was pumped all the way down.

**16-0613-53** – Repair the soft areas in Phase 1. Use geogrid (gift from Verso Paper) and/or 600x to reinforce the subgrade, then haul topsoil (after hauled in from CPRC) in one-ton dump truck over the gas pipeline gravel/topsoil material to the soft areas. Use small excavator to load the one-ton truck and to spread the topsoil over the soft areas. After the topsoil has been placed, seed the areas.

**7/18/16 – Complete**

**16-0727-55** – After all the required topsoil has been placed, remove the gravel and culvert from the rip-rap ditch by the southwest access road and reinstall the removed section of fence.

**9/20/16 – Complete.**

**16-0906-56** – Repair the soft area in the Phase 1 ditch on the southeast side. Will need additional topsoil and some geotextile.

**9/13/16 – Complete**

**16-0913-57** – Hydro seed the remaining 1.4 acres that had topsoil installed recently by the end of September. Reseed other areas as directed by the DEP.

**9/26/16 – Complete**. Also spread additional seed and fertilizer over the 4.5 acres that were hydro seeded this summer.

**16-1128-59** – Install Access by Permission Signs on all the gates and every 100’ along the Phase 1 and Phase 2 North landfill perimeter fence. Repair the damaged sections of the perimeter fence. Install barbed wire along the top of the fence.

**12/28/16 – Complete.**

**16-1228-60 –** Repair the broken main gate.

**1/18/17 – Complete**

**17-0404-61** – Instantaneous flows dropped to 57 gpm.

**12/29/17 – Complete. Force main was cleaned.**

**17-0718-62** – Repair broken fence barbed wire fitting.

**8/9/17 – Complete**. Replaced the fence fitting.

**17-1114-63 –** Need to troubleshoot and repair the HydroRanger because it is not working (closes the auto valve on high wet well level).

**1/2/18 – Complete.**

**17-1220-64** – The flow meter is not working properly.

**3/21/18 – Complete.** New flow meter was installed, and the spool piece size was increased from 2” diameter to 3” diameter (will decrease friction loss and increase the flow rate).

**17-1220-65** – The Dry Well sump pump is not working.

**2/5/19 – Operated the sump pump on 1/29/19 and it appeared to be operating properly (will remove this item from the worklist) .**

**18-0213-66 –** Cut down the trees between the South Branch of Riggs Brook and the pump station road that could potentially hit the power line if they fall or are cut down by a beaver. Cut down the pine trees on the perimeter of the northwest side of the area proposed for wetlands treatment. **3/6/18 – Complete.** All hardwood within 100’ of the pump station was cut up into 4 foot sections.

**18-0213-67 –** After snow/ice melt, inspect the old road culvert under the pump station road to determine if it needs to be replaced.

**4/18/18 –** Inspected the culvert and there was some deterioration and corrosion at the inlet, but it is currently functioning properly. The culvert is 15-inch diameter on both ends and appears to be 12-inch diameter in the middle section (installed in three sections). The total culvert length under the road is 32 feet long.

**18-0306-68** – Install a PVC gravity pipe from the pond manhole to the valve manhole.

**5/25/18 – Complete.**

**18-0501-69 –** Repair broken fence barbed wire fitting on fence next to first gate.

6/26/18 – **Complete.**

**18-0703-70** – Mow the entire landfill (Phases 1 and 2).

**8/1/18 – Complete.**

**18-0712-71**  – Install 6” of clay over the wet area on the southeast side of Phase 1, then seed and mulch**.** After the area was mowed, a number of other nearby small areas were identified that needed to be repaired.

**8/8/18 – Complete**. Installed 6” of clay over the wet area and installed non-woven geotextile over four other soft bare areas then installed 6” of clay. Installed clay over other nearby bare areas that were soft. Seeded and mulched all the repaired areas.

**18-0712-72**  **–** Remove the trees in the outside ditch to the northwest of Phase 1. After mowing remove any remaining trees in Phase 2.

**10/22/18 – Complete.**

**18-0828-73** – Liquid level was high in the wet well this morning, there was power to the pumps but they were not pumping in auto.

**8/29/18 – Complete.** Steven’s Electric personnel were on-site first thing in the morning. It was decided to relocate the pump float assembly to the back of the pump station so there is no chance the floats will get hung up on the structural components in the wet well (it could be causing the sporadic problem we have experienced with the pumps not starting). Verified that the pumps were cycling properly before leaving.

**19-0123-74** **–** Construct the leachate retention ponds in the spring of 2019, including extending the 6” diameter PVC pipe from the stub out.

**8/20/19 – Complete.**

**19-0205-75** **–** The totalizer still shows flow for about 3 minutes after the pumps turn off.

**4/17/19 – Complete.** Stevens Electric replaced the pump 1 check valve.

**19-0205-76** – The pump 2 inlet flange to the 90 degree elbow in the wet well is leaking significantly when pump 2 is operating and a small amount when pump 1 is operating.

**2/28/19 – Complete.** Stevens Electric replaced the broken fitting.

**19-0403-77** – Jet the pipe between GAUD SMH-453 and AT MH-1 in February/first of March of 2020 when the ground is still frozen for access (providing the leachate system is still being utilized). Will need to plow a road in for access.

**2/24/20 – Complete**. Inspected Manholes SMH-1017 and SMH-453 with Tim Wade on 2/24/20 and he said that the pipes do not need to be cleaned at this time (there is some grit buildup). Tim wants to get together again this summer and check the manholes again to make sure the invert continues to only have a relatively small amount of grit in it.

**19-0403-78** **–** Find and inspect MH 3 and MH 4 and check their condition and flow through them (currently still have snow/ice in the woods).

**4/23/19 – Complete.** Removed the handles from the MH-5, 4, 3 and 2 covers so anyone walking through the woods cannot just open them up (need to use a manhole hook). Flow through MH 3 and 4 is sat.

**19-0405-79** – Replace the two gate valves and the pump 2 check valve in the Dry Well

**5/30/19 – Complete.**

**19-0425-80** – Repair the perimeter sign located on the southeast side of Phase 2 South.

**5/1/19 – Complete**

**19-0425-81** – Install a French drain (approx.. 300’ long) along the west ditch, both north and south of where the channel through the west berm, and connect it to the 6” PVC solid pipe that was installed in 2018.

**7/23/19 – Complete.**

**19-0425-82** – Repair the pot holes in the main access road from the entrance to the south road intersection and just before the road to where the leachate retention ponds will be constructed.

**6/10/19 –Complete.**

**19-0515-83 –** Both pump hour meters are high. Last week the wet well level was below the shut off float and pump 1 was running continuously. Watched it go through two cycles last week and two cycles today and the pumps were cycling properly so it is some type of sporadic issue (sometimes it works, sometimes it doesn’t) . Stevens Electric was contacted today and will be troubleshooting the problem asap.

**5/15/19 – Complete. Steven’s Electric troubleshooted and repaired it today.**

**19-0604-84** – Pump 1 is drawing high amps and not running (tripped the breaker).

**6/5/19 – Complete. Steven’s Electric replaced the starter relay and capacitor.**

**19-1017-85** – Install a erosion control mix berm along the fence on the north side by the access road and downgradient of the stockpile area on the west side of the site. Install marker stakes outside of the berm on the north side to prevent the plow truck from disturbing it.

**10/30/19 – Complete**

**20-0630-88** – Mow the entire landfill (Phases 1 and 2).

**8/18/20 – Completed last week.**

**21-0316-89** – After the ground has thawed, repair any erosion under the pond outlet pipes and anchor them into the ground with longer spikes.

**4/27/21 – Complete.**

**21-0323-90** – The Hydroranger probe may need to be replaced before the auto valve(s) can be placed in service to drain the system down (if it is decided to grout up the pipes). The Hydroranger level controls the auto valve.

4/12/22 – The Hydroranger has been working properly recently so this work item will be removed. If the auto valve(s) are placed in service in the future to drain the site, Steven’s Electric (or other company) will need to be on-site to perform a confined space entry to remove the auto valve end cap fitting in the valve manhole. They can also verify that the auto valve(s) are working properly (Hydroranger controls the valves) because the auto valves have been out of service for years.

**21-0325-91** – Appears that the pump float switches probably need to be replaced (were replaced last in 2014).

**3/26/21 – Complete**

**21-0720-92** – Need to trouble shoot the pump station floats/etc. to find out why the pumps are not starting automatically on a high level.

**3/29/22- Complete.** Steven’s Electric tried to recreate the failure condition on 7/20/21 and they were not successful (everything was working properly). The same issue happened on 2/8/22, 2/15/22 and 3/9/22. Bill from Steven’s Electric was on-site the afternoon of 3/11/22 to troubleshoot the problem. The floats and pumps appeared to be cycling properly. He disconnected one of the non-essential relays (cycle timer), and installed a holding circuit for the lag relay to keep the second pump operating until the off limit level is reached.

**22-0315-93 –** Install clay, or a soil/bentonite mixture, to seal up the eroded areas around the Pond 3 and 4 discharge pipes (so all flow goes through the pipes).
**3/29/22 – Complete** (used a combination of clay and waterfall expansion foam).

**22-0524-94 –** Mow the entire landfill in 2022 (Phase 1 and 2).

**8/30/22 – Complete.**

**21-0816-95 –** Need to trouble shoot the pump station floats/etc. to find out why the pumps are not starting automatically on a high level. Also last week the wet well level was below the shut off float and both pumps were running continuously. Stevens Electric is scheduled to troubleshoot the issues in the next two days.

**8/19/22 – Complete. Steven’s Electric was on-site today. They replaced the start and stop floats and moved the float rack to the right to help avoid the valve in the Wet Well.**

**22-0103-96 –** The dry well Bilco cover is jammed shut. Tried prying it open with a breaker bar today and could only open it 1 ½ “. Called Steven’s Electric and they will try to repair the issue with the cover during the next week.

**1/9/23 – Complete.**