COUNTY OF ST. CLAIR
ENVIRONMENTAL SERVICES DEPARTMENT

Matthew Williams
Landfill/Resource Recovery Manager

August 8, 2024

Mr. Iranna Konanahalli
Department of Environment, Great Lakes, and Energy
Senior Environmental Engineer
Air Quality Division
Southeast Michigan District Office
27700 Donald Court
Warren, Michigan 48092

Subject: Smiths Creek Landfill (SCL)
Response to July 19, 2024, Violation Notice

Mr. Konanahalli:

We have received the Department of Environment, Great Lakes and Energy (EGLE) Violation Notice (VN) issued on July 19, 2024, describing alleged inadequacies related to operation of an air cleaning device at the Smiths Creek Landfill (SCL). Specifically, EGLE states that the recently installed dry scrubber unit associated with the supplemental flare servicing Cell 8 gas collection lines was not operated properly during the period May through July 2024.

The referenced scrubber unit was installed as added control to manage the occurrence of unexpectedly elevated hydrogen sulfide (H2S) concentrations resulting from an anomalous waste stream in Cell 8. With this proactive installation, we acted in good faith to address an environmental issue affecting the surrounding community related to both H2S and Sulfur Dioxide (SO2) emissions while awaiting EGLE review and approval of a Permit to Install (PTI) originally submitted on December 15, 2023. During the initial start-up period, we have been in frequent contact and working closely with the equipment manufacturer to make operational adjustments to optimize efficiency and performance of the unit to maximize H2S removal.

After reviewing the VN, we request additional evidence to support the conclusion asserted by EGLE staff that the air cleaning device is in violation of Rule 336.1910 and guidance on criteria constituting satisfactory operation during the start-up period for such a unit.

Basis of the VN and Assumptions

As stated in the VN, the notice was issued based on staff verification that "FerroSorp®, Hydrogen Sulfide Removal Dry Scrubber (Fe(OH)3) was not operating properly especially in the initial period."

The VN cited Rule 910, P.A. 451, 1994, as amended as the basis for the notice. The rule states:

> *R 336.1910: An air-cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with these rules and existing law.*

Background

On 11/1/23, a supplemental flare system was brought online to add additional capacity to the Gas Collection and Control System (GCCS) at SCL. Prior to installation, documentation was submitted to EGLE demonstrating that the flare was expected to be exempt from permitting obligations based on documented sitewide H2S concentrations based on historic weekly H_2S measurements at the on-site landfill gas to energy (LFGTE) facility, operated by Blue Water Renewables.

The supplemental flare (Flare 3) was specifically intended as a targeted control device specifically for gas generated from Cell 8 in the southwest corner of the site. As such, selected gas collection lines from Cell 8 were re-routed directly to Flare 3. After start-up, H2S samples taken from the header leading to Flare 3 indicated that gas from Cell 8 contained significantly higher concentrations of H2S than the sitewide commingled gas stream had historically recorded. Based on those concentrations, we submitted a PTI application on December 15, 2023. That PTI provided for increased capacity of the flare system up to 1,000 cfm to enhance gas control in the Cell 8 area.

Through this initial trial, it was demonstrated that operation of Flare 3 was effective and beneficial in the effort for control of emissions related to gases specific to Cell 8. It was also determined that a larger capacity flare system would more fully achieve control and allow for additional segregation of elevated H2S in the gas unique to Cell 8.

During an in-person meeting between EGLE and St. Clair County on 1/25/24, EGLE was formally notified of our decision to procure and install a larger capacity flare and blower system as an upgrade to Flare 3 as a responsible action towards fully controlling odors. Discussion during that meeting included recognition by both EGLE and SCL staff that the flare would be installed concurrent with the remainder of the review of the permit application. The PTI application continues to be under review, with EGLE recently requesting an extension to complete processing until December 2024. Operation of the larger supplemental flare began on 04/02/24 as a response action undertaken to control odors which were known to affect the local community.

Active investigation and corrective measures related to the unexpectedly potent odors originating from Cell 8 led to the identification of waste received from Domtar as the likely source of anomalous

H2S generation in certain lifts of Cell 8 (Attachment 1). Subsequent delineation confirmed the Domtar material to be central to the H2S issue as a result of waste characteristics not previously disclosed by the generator during the waste acceptance process.

Frequent H2S measurements from the lateral collection lines and header feeding Flare 3 indicated that H2S concentrations related to the Domtar waste would likely produce SO2 emissions requiring control to standards which will be established in the PTI, when issued. Based on calculations used to anticipate control requirements that may be established in the future permit, SCL committed to the proactive installation of a dry scrubber unit to remove H2S from landfill gas prior to destruction in Flare 3.

EGLE was notified of the selected technology in weekly updates beginning on 3/08/24 as well as weekly status updates on procurement, installation and operation of the device. The scrubber unit was charged with FerroSorp ® media and placed into service on 4/29/24.

Documented Conditions:

SCL has since provided routine updates on the performance of the scrubber system via email and in person during a meeting with EGLE on 05/28/24. H2S concentrations prior to flaring at Flare 3 have been documented and voluntarily shared during those updates as well as details of collaborative efforts with the system manufacturer to establish consistent and reliable H2S removal during the start-up period. Since start-up, SCL has actively worked to refine operating conditions of the scrubber to compensate for real-world conditions while closely collaborating with the manufacturer to implement recommendations. EGLE appears to contend that the need for operational adjustments constitute operational failure of the scrubber system based on information provided in the VN.

EPA has offered clarification through the CERCLA program on its interpretation of the requirement that a remedy is operating properly and successfully (120(h)(3)). EPA concludes “properly and successfully are somewhat subjective concepts” and has clarified that a remedial action is operating "properly" if it is operating as designed. That same system is operating "successfully" if its operation will achieve performance goals as described in the document below: Guidance for Evaluation of Federal Agency Demonstrations that Remedial Actions are Operating Properly and Successfully Under CERCLA Section 120(h)(3) | US EPA . The scrubber unit constitutes a remedial system to address H2S from a waste stream which we believe was misrepresented during the approval process. The system is functioning as designed and intended although the performance was not optimal during short or brief periods of the start-up phase of operation.

The VN citation regarding operation of the air cleaning device emphasizes system performance “especially in the initial period”. As with any treatment system, the start-up period involves efforts to customize and optimize settings and procedures to effectively manage site specific conditions. EPA has also established in its guidance for New Source Performance Standards that a start-up period in which equipment is brought into full functionality is the initial period up to 180 days.

Manufacturer established procedures have been followed for installation and operation since the system first went online on 4/29/24. When anomalous conditions were first identified on 5/22/24, adjustments were immediately made in monitoring frequency, flow to the system and oxygen introduction in the effort to optimize H2S removal prior to the flare. In addition to adherence to equipment operating instructions, the equipment manufacturer (Interra Global) was contacted on 5/28/24 for support and recommendations on operating adjustments to improve performance and to determine if premature breakthrough was occurring.

Table 1 below details consultation and responses to anomalous conditions during the brief interval which we interpret to correspond with the initial period referenced in the VN and for which the H2S adsorption was lower than predicted. While this table focuses solely on this initial period, routine H2S monitoring, adjustments, and ongoing conversations with the manufacturer have continued.

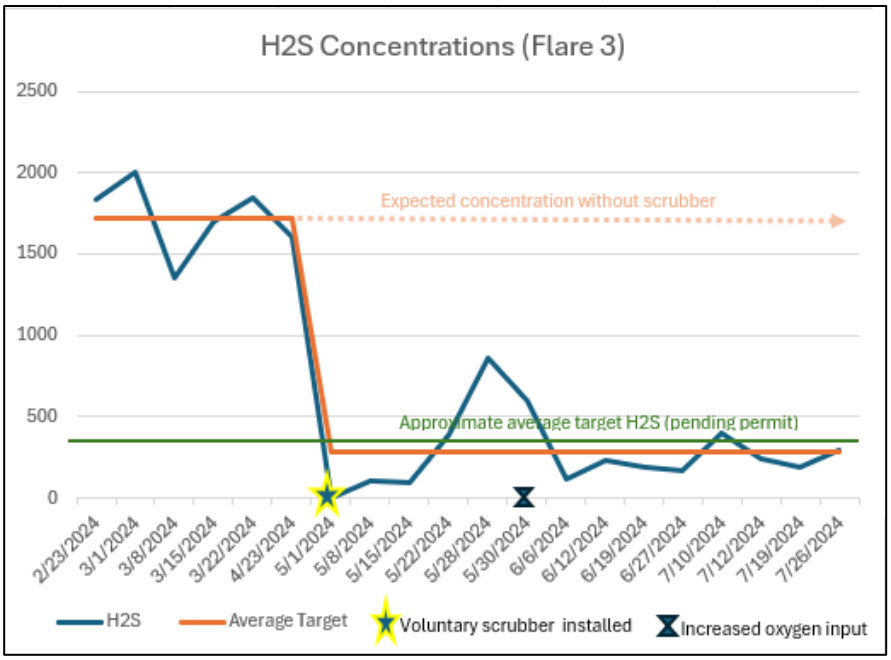
Table 1

Date	Issue	Manufacturer Directives	Outcome
4/29/24	System operation begins (media projected to provide adequate adsorption for 90 days)	N/A	Non-detectable H2S in scrubber effluent
5/22/24	Fluctuating H2S concentrations measured after scrubber	N/A	H2S measurements increased from weekly to daily to track H2S trend to identify whether breakthrough was occurring
5/28/24	Contacted manufacturer due to increasing H2S concentration in scrubber effluent suggesting premature breakthrough; provided current data on relative humidity and oxygen to assist in troubleshooting	Manufacturer recommended increased oxygen input to 1.0 – 1.5% oxygen to ensure regeneration and measurements of relative humidity using wet bulb readings	Manufacturer recommendations on increased oxygen introduction and field measurements implemented 5/29/24

Date	Issue	Manufacturer Directives	Outcome
5/30/24	Follow up with manufacturer on regeneration performance improvements and field-testing results; discuss projections for media regeneration; request clarification about leachability of sulfur from adsorbed media and/or condensate	Manufacturer advises that regeneration of media is anticipated with increased oxygen and very little elemental sulfur is anticipated to leach into condensate	Enhanced daily monitoring planned for following week to verify regeneration of media. Monitoring week of 6/3, shows 0-0.1 ppm of H2S after scrubber
6/5/24	Requested revised projection on projected media life based on actual operating conditions since system start-up	Manufacturer provided an estimate showing 3.16 months of service life	Additional FerroSorp® material ordered to prepare for media change-out
7/1/24	Consulted manufacturer on useful life projection of media based on current data	Manufacturer confirmed optimal operation conditions based on oxygen ratios and predicted that the media is approaching depletion	Continued operation using manufacturer recommendations
7/8/24	Continued consultation with manufacturer on useful life projection of media based on current data and future improvements to increase media life upon re-filling with fresh media.	Manufacturer recommended sampling procedures for waste characterization of spent media	Scheduled media change-out for 7/31/24
7/31/24	ML Chartier removed media. SCL staff replaced media with new FerroSorp®	New media replaced using manufacturer recommendations	Disposal of media pending off-site disposal approval

The equipment was operating properly as gas was flowing, as expected, through the media and significant H2S adsorption was occurring as indicated both in lab analysis of the media for elemental sulfur and H2S measurements indicated in the chart below. Further, operating practices were adequate to promptly identify unexpected conditions in which H2S adsorption was temporarily reduced below the expected performance level. Prompt consultation with the manufacturer helped us to restore performance to expected levels with minor changes in oxygen introduction into the system to account for site specific conditions.

As indicated below, this proactively installed air cleaning device is functioning as intended and has been operated in accordance with manufacturer recommendations and advice. The overall effectiveness of the device is demonstrated in the chart below, clearly showing that operation of the system has effectively and significantly reduced H2S in the influent of Flare 3. With few exceptions, the target H2S concentrations required to maintain SO2 emissions have been met during this initial period and measures taken by SCL to address periodic H2S fluctuations have been responsible and timely.



Summary and Conclusion

Operational adjustments are necessary and expected during the start-up period of any device. We disagree that the adjustments required during the period described above constitute improper operation of the system. We submit the above information as evidence that the system is operated properly and that good faith efforts have been made to minimize fluctuations during the start-up period. In the absence of further evidence of improper operation as referenced in the VN, we respectfully request that the Violation Notice be rescinded.

We will continue to provide timely updates on the scrubber system operation and the overall resolution of odor issues at the site and welcome EGLE staff to observe operations during normal business hours. If you have questions regarding our progress or this submittal, please contact me at (810) 989-6979.

Sincerely,

Matt Williams
Director, Smiths Creek Landfill

Cc/via e-mail:

Annette Switzer, EGLE
Christopher Ethridge, EGLE
Brad Myott, EGLE
Jenine Camilleri, EGLE
Joyce Zhu, EGLE
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Aaron Darling, EGLE
Mary Carnagie, EGLE
Kerry Kelly, EGLE
Julie Bruner, EGLE
Erin Berish, CTI
Terri Zick, CTI
Laura Niemann, EIL

Attachments

ATTACHMENT 1

Protecting, Enhancing, and Restoring Our Environment

May 7, 2024

Matt Williams
Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074

Subject: Discussion of hydrogen sulfide generation as related to waste composition
Smiths Creek Landfill, Cell8

Dear Mr. Williams:

The following information is provided as a follow up to the email dated February 28, 2024, summarizing the efforts made to identify potential sources of hydrogen sulfide (H_2S) generation related to waste streams managed at Smiths Creek Landfill (SCL). The review of waste acceptance was conducted in conjunction with other engineering and operational investigations at the site to narrow the potential sources of odors present near the landfill in late 2023 and early 2024.

As a result of the comprehensive evaluation of engineering, design and operations, strategic repairs were conducted to main headers and additional collection capacity has been added to the system in the effort to regain full control of landfill gas across the site. As a part of the assessment, measurements were collected throughout the system in order to identify areas of elevated H_2S which may be related to the odor occurrence.

Gas produced in Cell 8 was found to have inordinately elevated levels of H_2S that were, in some instances, an order of magnitude greater than those measured in other areas of the landfill. Although licensed as a bioreactor area, Cell 8 has not received liquid septage injection, and only limited semi-solid septage sludge has been disposed in the cell since it went into service in November 2019. Bioreactor activities are, therefore, not considered to be a contributing factor to the elevated H_2S occurrence in the cell.

The rate and volume of demolition debris (including drywall and related material) accepted for disposal in Cell 8 were reviewed with the third-party operator (Talaski Excavating). Based on their experience with long-term landfill operations at SCL and site records, there is no indication that an atypical mass of gypsum has been received into Cell 8 as compared with other cells at the site.

CTI and Associates, Inc. (CTI) completes a review of special wastes proposed for disposal to verify that materials are not prohibited from disposal under state or federal regulations. CTI provides recommendations to SCL on the regulatory status of the material and the final disposal decision is made by St. Clair County. The County has the prerogative to further limit waste acceptance of materials based on operational considerations. The County routinely imposes added restrictions or special handling in

addition to regulatory requirements for materials including, but not limited to asbestos and per- and polyfluoroalkyl substance (PFAS) containing compounds.

A comprehensive review of industrial waste streams evaluated through the County's waste acceptance process from January 1, 2018 – December 31, 2023, was conducted. The time interval was specifically selected to identify wastes considered for disposal approval since waste acceptance began in Cell 8 (November 2019), that cell being identified as the primary source of elevated H_2S at the site. Previously evaluated waste streams with the potential for elevated sulfur content were specifically targeted for review. As there is no regulatory prohibition on disposal of non-reactive solid wastes containing elevated total sulfur, analysis for sulfur content is not generally required as an industry standard in the review process.

Waste streams selected for additional review included municipal wastewater treatment sludges/ biosolids, industrial sludges, manufactured gas plant waste, trona and petroleum contaminated soils. Documents including generator waste profiles (and supporting data), landfill receipt documentation, discussions with landfill operators (Talaski Excavating), and documents prepared by the Michigan Attorney General's office and Michigan Department of Environment, Great Lakes and Energy (EGLE) were considered in the review.

Background

As a result of investigation and corrective measures of the SCL gas collection and control system (GCCS) as it relates to off-site odor occurrences, it has become apparent that the source of odors reported on and off-site has been predominately related to conditions associated with Cell 8. This active cell is the area currently receiving all incoming waste and is located in the southwestern portion of Smiths Creek Landfill. Investigation into methane generation and capture in the cell was expanded to include the presence of Hydrogen sulfide (H_2S) gas in the gas collection system due to the pungent nature of odors resulting from this byproduct gas.

The H_2S concentrations in gas generated in each active cell were measured using draeger tubes. A significantly greater concentration of H_2S was detected in the gas collected from Cell 8 as compared with gas collected from other cells at the site. The average H_2S concentration of gas measured at the engine skid (representing commingled gas from the landfill) prior to the start of the odor issue was found to be approximately 300ppm. In contrast, H_2S concentrations measured in Cell 8 were >2,000 ppm.

A network of gas collection lines is constructed every 20' above the liner elevation, with the first collectors integrated with the drainage layer overlying the liner itself. These lateral networks are installed as a means for early gas collection. As soon as at least 20' of compacted waste is placed over each collection layer, vacuum can be applied to the perforated lines to draw gas from the waste mass nearest the collectors. To further refine the investigation, the lateral collection lines in the drainage layer and lifts 2 and 4 of Cell 8 were measured separately. H_2S concentrations in the lines installed in Lift 4 were determined to be significantly greater than the levels in other lifts.

H_2S is commonly generated from waste streams containing sulfur compounds, particularly when in anaerobic conditions. Gypsum materials found in drywall are often associated with H_2S generation in municipal solid waste (MSW) and construction/demolition (C&D) landfills. As SCL receives C&D materials as a common waste stream, C&D waste receipt history for Cell 8 was reviewed to determine if inordinately large volumes of C&D had been placed in the cell during the filling activities, particularly in the area of influence for Lift 4 gas extraction lines. Landfill operators were interviewed about placement of the C&D

materials received and no significant pattern was identified that would suggest a concentrated or specific source of the elevated H_2S readings in Cell 8.

Similarly, special wastes (wastes other than residential MSW and C&D) were considered and investigated as potential sources of sulfur from which H_2S can be generated in a landfill environment. SCL conducts an evaluation of each special waste proposed for disposal under its Prohibited Waste Plan. Wastes are evaluated to verify that regulated prohibited wastes such as hazardous waste, PCBs or other materials that may damage landfill infrastructure are not accepted at the facility. Records of all special waste reviews are kept as part of the site operating record.

Wastes evaluated and approved for disposal during the period of time that Lift 4 of Cell 8 was being filled were reviewed for H_2S generation potential. Specifically, wastes reviewed/approved between January 1, 2018 – December 2023 were selected and, of those, 10 waste streams were identified as having the potential for significant H_2S production (Table 1).

Waste receipt records for the identified waste streams were obtained from SCL's computerized system and dates of receipt/volume received were determined for each of the wastes. Of those 10 waste streams, a single waste was identified as having the potential for significant H_2S production, was received during the period of time when Lift 4 of Cell 8 was being filled and was of a sufficient volume to potentially generate H_2S to the level measured in Lift 4.

The waste stream selected for further assessment is paper mill sludge generated by EB Eddy (dba Domtar) disposed between 1/28/20 – 3/23/21. Papermill sludges (particularly sludges from primary wastewater treatment operation from kraft paper and de-inking operations) are known to contain elevated sulfur due, in part, to the use of numerous processing chemicals including sodium sulfide and hydrogen sulfide.

Domtar Paper Mill Sludge Waste Stream

Prior to 1998, SCL routinely received solidified paper mill sludge from EB Eddy (Domtar). Historically, the waste was approved as alternate daily cover by Michigan Department of Environmental Quality (MDEQ) in SCL's Alternate Daily Cover Plan. The approval continues to be present in the Alternate Daily Cover Management (ADCM) Plan, although the waste stream has not been used for this purpose for many years.

In 1998, Techni-Comp Environmental was incorporated for the specific purpose of managing Domtar paper mill sludge via composting methods. The sludge was directed to Techni-Comp for composting based on a designation of inertness (DOI) issued to Domtar by MDEQ on March 17, 1998. Between March 1998 – January 2020, Domtar reportedly delivered 145,000 yards of sludge to Techni-Comp. There is no indication in SCL's records that any sludge was received for disposal during that time period.

On January 6, 2020, Domtar submitted a profile to SCL for up to 1,000 tons/year of paper mill sludge. The profile was accompanied by laboratory data dated December 24, 2019, demonstrating that the material was not prohibited under the Resource Conservation and Recovery Act (RCRA). There was no reasonable concern that PCBs or other wastes prohibited by regulation were present in the waste. SCL approved the profile and issued approval number 20-003 for the material. (Figure 1)

The first load of Domtar papermill sludge was received under approval 20-003 at the landfill on January 28, 2020. Loads were delivered by Domtar via Waste Management, Inc. approximately daily thereafter in 30-yard roll-off boxes until the last load was received on March 23, 2021. Subsequently, SCL received notice from Domtar that the facility was in the process of closing permanently.

Over a period of approximately 13 months, 4,368 tons of papermill sludge were disposed in Lift 3 and Lift 4 of Cell 8 at SCL. The distribution of the Domtar waste has been plotted based on dates received and the fill progression at that time as represented in the isopach drawing provided as Figure 2.

EGLE Mandate to Cease Composting of Domtar Waste

The impetus for submittal of the January 6, 2020, profile by Domtar after a lengthy absence of the waste stream was unclear to SCL at the time the disposal request was received, and the waste stream was evaluated. Based on documentation in a complaint filed against Domtar by the Michigan Attorney General on December 16, 2022, it is now apparent that the decision for Domtar to pursue landfill disposal in January 2020 after 22 years of composting was directly related to the impending revocation of the DOI. The complaint details that EGLE revoked the previously approved DOI in February 2020. The revocation was based on cited concerns regarding Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) in the Domtar papermill sludge which are thought to have impacted areas around the Techni-Comp compost site.

Further, the complaint states that, in the absence of the DOI, the sludge must be managed as a solid waste under Part 115. The only alternative for Domtar was to begin landfilling at a licensed solid waste facility. Further, the only licensed Part 115 landfill authorized in the state approved solid waste management plan is Smiths Creek Landfill. By default, SCL was the sole viable option for proper disposal as a result of the EGLE decision to order Domtar to cease composting of the material.

Approval for disposal was issued based on generator certifications and laboratory data demonstrating that the waste was not restricted under state or federal regulations. Past experience with the material prior to 1998 also suggested that the waste had not previously been the source of significant odors when used as daily cover. No information was provided to SCL by the generator or EGLE which indicated other concerns associated with the material.

Unique Waste Stream Issues

Paper mill sludge is acknowledged as a potential source of significant H_2S in a landfill environment by EPA and numerous state agencies. H_2S potential varies depending on the specific processes used in paper production. Notably, bleaching, de-inking and kraft paper production are known to produce wastes with particularly significant sulfur content. Previous management of the material at SCL included use as approved ADCM, which was a substantially aerobic management method as opposed to direct burial which involves predominately anaerobic breakdown of the materials which may be a factor in the occurrence of greater H_2S generation related to the material than that observed prior to 1998.

Additionally, it has become apparent that the waste stream may have included materials associated with the final decommissioning of the production system at Domtar in preparation for permanent facility closure. While not divulged in the profile, it is reasonable to question whether the character of sludge materials associated with the final clean-out of tanks, clarifiers and production lines was consistent with that produced during normal production activities as certified in the profile.

Citation 89 in the complaint filed against Domtar in December 2022 indicated that material composted at Techni-Comp was intended to be re-used by Domtar as feedstock in their papermill processes subsequent to composting. This repetitive re-use of the sludge was not divulged in the profile, and it is not known whether such re-use may have served to concentrate sulfur bearing compounds in the sludges that were

subsequently disposed at SCL. If so, it is possible that the concentration of sulfur compounds available for conversion to H_2S under landfill conditions may have exceeded that of traditional papermill sludge.

Based on the results of continuing investigation into the nature of the papermill sludge received in Cell 8, it is considered likely that the material has contributed significantly to the recent occurrence of odors and may have accelerated production of byproduct gases in a manner not generally anticipated in design and engineering of a traditional GCCS. SCL has also been approached regarding disposal of the compost residuals from the Techni-Comp site and an evaluation of sulfur content in addition to the known PFAS compounds will be required by SCL before a determination will be made about its acceptance based on its relationship with the Domtar sludge.

Additional procedures are currently being incorporated into special waste review practices for potentially sulfur containing solid waste that is not otherwise prohibited by regulation. A detailed profile addendum is being prepared which will require generator certification of sulfur-bearing wastes including demonstration using laboratory analysis for certain materials.

Conclusion

Potential contributing factors which may have resulted in greater than expected H_2S concentrations in Cell 8 when compared with industry standards and generation rates in other comparable cells at SCL have been evaluated. The following conclusions have been drawn from our investigation:

- As liquid septage introduction has not, to date, commenced in Cell 8, bioreactor activities are not a factor in the greater than expected H_2S generation in the cell. Further, the limited septage sludge disposed in Cell 8 was not conducted in the areas in which elevated H_2S have been measured. Additionally, measurements taken over time in areas that received both septage and septage sludge have not shown the elevated H_2S levels as those documented in Cell 8. Finally, bioreactor operation has been conducted successfully since 2008 with minimal odor issues as confirmed by EGLE staff. This is evidenced by EGLE records which show that, between 2008 and mid-2023, only five (5) complaints involving odors thought to be related to SCL were conveyed to the Department. This suggests that unique and atypical conditions have been experienced since September 5, 2023, when the first community complaint was lodged with the Department through the Pollution Emergency Alert System (PEAS).
- Although gypsum is well documented as a source of sulfur, its disposal in the form of construction and demolition debris has been proportional to that received for disposal in equivalent cells at the site. Cell 8 has received a similar proportion of gypsum containing materials as other cells at SCL, however H_2S production in lift 4 of Cell 8 is disproportionately greater than that measured in any other cell at SCL.
- Industrial waste streams with the potential for elevated sulfur content, which may result in H_2S generation under anaerobic conditions, were re-evaluated. Of the identified waste streams, the Domtar paper mill waste was the sole material having the potential for elevated sulfur content that was delivered in significant quantities and disposed in areas correlating to the uniquely elevated H_2S occurrences in lift 4 of Cell 8.

As we now understand, EGLE conducted an investigation of the Domtar papermill sludge and determined in December 2019 that the material was the source of significant environmental impact at multiple sites. The EGLE investigation focused on PFAS compounds resulting in Part 201 regulated response actions at

Domtar and at Technicomp, a composting operation receiving Domtar papermill sludge from 1998 – 2020. As a result of the investigation and enforcement action, Domtar was directed to manage papermill sludge at a Part 115 solid waste landfill as a function of revocation of the inertness designation previously authorized by EGLE and its predecessors.

Therefore, the material was directed to SCL as the sole licensed landfill authorized in the state approved solid waste management plan. The material was evaluated by CTI using industry practices and in accordance with the SCL prohibited waste plan in January 2020. The waste was determined to be non-hazardous and not otherwise prohibited by State or Federal regulations based on generator provided information and certifications.

However, the Michigan Attorney General's complaint against Domtar identifies that Domtar may have mis-represented the material to the State of Michigan for an extended period of time. As Domtar has since ceased activities at their St. Clair County location, it is difficult to conclusively determine whether the Domtar sludge was also mis-represented during application for SCL disposal approval. The State's complaint against Domtar includes a definitive statement that the Domtar sludge composted at Technicomp was intended for continued use as papermill feedstock in the Domtar process. It is unclear what effect repetitive use of the material in the Domtar process may have had on sulfur content of the sludge over time, although it is reasonable to conclude a concentrating effect may have occurred.

The sampling and investigation conducted by EGLE did not include an evaluation of the sulfur content of the composted sludge. Observations made by CTI staff at the Technicomp site indicate that the sludge has since been mixed with significant amounts of topsoil such that the original sludge material has been diluted to a degree that an evaluation of possible sulfur content of the sludge is no longer possible.

Further, during the time period in which the Domtar waste was delivered to SCL, the company was in the process of de-commissioning operations at the St. Clair County location. Facility closure frequently results in generation of waste streams that are unrepresentative of normal production wastes. These industrial cleaning activities often include removal of tank bottoms and process pit clean-outs which may be characteristically different than traditional process generated waste materials. There is no record of Domtar submitting a separate profile for disposal of these materials, therefore it is unknown whether unauthorized residues from such processes were included in the materials delivered to the landfill under the paper mill sludge approval authorization.

Specific to waste acceptance reviews conducted for the SCL, information included in the Attorney General's complaint against Domtar was not made available to SCL at the time of the waste review process in January 2020, or during the period in which waste was received through March 2021. This information would have likely altered SCL's decision to authorize or continue receipt of the materials without further analysis and/or certifications from the generator.

In the absence of those critical details, SCL accepted, in good faith, material that was unlisted and characteristically non-hazardous in accordance with P.A. 451, Part 111 rules based on information certified by the generator and reviewed in accordance with the SCL Prohibited Waste Plan. Also, the potential impacts of highly elevated PFAS constituents documented in the complaint as well as the potential for elevated sulfur in the sludge due to the unique intention of closed loop recycling of the sludge as feedstock,

are in large part unknown. The decision to accept the material for disposal was made without access to knowledge of the unique nature of the materials as it was known to both Domtar and EGLE dating back to 2019 based on court documents and EGLE laboratory data.

PFAS concentrations were in 2020, and are still, largely unregulated in the context of solid waste disposal. There are, however, significant implications related to PFAS solubility in leachate that must be considered in acceptance of PFAS containing wastes. EGLE has mandated that wastewater treatment facilities, such as the Port Huron Wastewater Treatment Plant which treats leachate from SCL, restrict PFAS in the influent contributed by solid waste landfills. For this reason, SCL has been cautious in acceptance of materials known to contain significant PFAS concentrations.

As an example, in May 2020, SCL declined to approve disposal for compost materials from the Technicomp site based on the submitted profile and supporting data from samples collected by EGLE in November 2019. That lab data documented excessive PFAS concentrations and served as the basis (along with additional leachability testing conducted by SCL) for the decision to decline acceptance of the material. The decision was based on the potential for surface water impacts and long-term negative impacts to leachate quality posed by the material in the absence of adequate pre-treatment, which had yet to be reliably developed at the time. Had the information been made available linking the Domtar sludge to the PFAS levels of the Technicomp material, SCL would have had the opportunity to consider this prior to making its decision to accept the Domtar sludge in 2020 – 2021.

As you are aware, the SCL special waste review process has been evolving based on both emerging contaminant issues and on the above-described experience with otherwise unregulated sulfur content in some industrial waste streams. Effective January 1, 2024, CTI began requesting analysis for total sulfur content as part of the review for new or renewal waste streams reasonably suspected of containing elevated sulfur. Further, PFAS screening using totals and/or method 1312 leachability extraction have been in place since 2020.

Please let me know what additional questions you may have regarding the above information.

Sincerely,
CTI and Associates, Inc.

Terri Zick
Senior Scientist

Attachment

Table 1: Waste streams with H2S generation potential reviewed

Approval Date	Generator	Transporter	Description	Profile Quantity	Completed Volume	Receipt Dates	Approval Number	Considerations
03/06/2018	MDEQ	DP Schweihofer	Petroleum Contaminated Soil	21000 tons*	2170.63 tons	3/6/18 to 3/15/18	18-018	Prior to Cell 8
09/24/2018	City of Port Huron	To Be Determined	Sludge - Sand and Biosolids	1200 yards	0.00 tons	None received	17-069	Not received
09/27/2018	DTE Electric	TKMS	Manufactured Gas Plant Contaminated Soils	21,464 CY	40,402 yards	10/30-17 to 5/22/18	17-077	Prior to Cell 8
10/29/2018	GLWA	ML Chartier	Alum Sludge w/ minor brush and phragmites	8,000 tons	5962.34 tons	10/7/16 to 10/18/16	16-077	Prior to Cell 8
12/03/2019	Georgetown WWTP	Stone Transport	Dewatered biosolids from treatment of residential sewage	600 tons	483.11 tons	12/3/19 to 12/24/19	19-082	Insignificant mass
01/09/2020	EB Eddy Paper (dba Domtar)	Waste Management	Process Sludge from paper manufacturing	1000 yards	4368.28 tons	1/28/20 to 3/23/21	20-003	Significant mass received during Lift 4 filling
06/15/2020	Environmental Services Inc.	Environmental Services Inc.	Bio-Solids (municipal wastewater processing)	5000 tons	0.00 tons	None received	20-035	Not received
09/13/2022	City of St Clair WWTP	T.K. Associates LLC	Dry Digested Municpal Sludge	1000 tons	0.00 tons	None received	19-062	Not received
10/20/2022	DTE Energy	HPC-Industrial	Filter Bags Stained w/ coal CCR Trona & activated carbon	500 yards	255 yards	10/24/22 to 5/17/23	22-067	Insignificant mass, received after lift 4
04/28/2023	City of Port Huron	Marcotte	Wet Well and Sewer Cleanings	1000 yd	480 yards	2/8/19 to 12/7/20	19-035	Mass disposed in Cell 8 (> Nov. 2019) insignificant

*Generator hand wrote 21,000 tons on profile, believed to be a typo (i.e., meant to be 2,100 tons)

Figure 1: Domtar Special Waste Profile/Review

APPROVAL NO.

SPECIAL WASTE CHARACTERIZATION FORM

Smiths Creek Landfill
6779 Smiths Creek Road
Smiths Creek, MI 48074
Phone: (810) 985-2443 Fax: (810) 367-3062

Generator/Transporter Information

Generator Name: E. B. Eddy Paper (dba Domtar)
Address: 1700 Washington Ave
Port Huron MI 48060
Generator Contact: Christine Loeffler
Telephone: 810-650-2419

Transporter Name: Waste Management
Address: 3005 Petit St.
Port Huron MI 48060
Transporter Contact: Rob Adamick
Telephone: 586-615-8184

Waste Stream Information

General Material Description: Process waste from paper manufacturing

Process Generating Waste: Dewatered primary sludge from industrial wastewater treatment plant

Shipping Frequency: Daily
☐ Once ☐ Week ☐ Month ☐ Year

Shipping Volume: 30
☐ Tons ☒ Yards ☐ Other:

Shipping Container: ☒ Roll Off ☐ Drums ☐ Totes ☐ Other:

Physical Properties

Physical State at 70°F:
☐ Solid
☒ Semisolid
☐ Liquid
Free Liquids ☐ yes ☒ no

Color: various
Texture: soft
Density: 933 lb/cu yard
Liquid Content: 50 % by Weight

Odor:
☒ None
☐ Mild
☐ Strong

Is this a Hazardous Waste? ☐ Yes ☒ No
(MDEQ regulated – listed or characteristic)

Is this a Liquid Industrial Waste? ☐ Yes ☒ No
(MDEQ regulated – example: Used Oil)

Does the Waste Contain (check all that apply):

☐ PCBs	☐ Friable Asbestos	☐ Beverage Containers	☐ Lead Acid Batteries
☐ CFCs or HCFCs	☐ Raw Sewage	☐ Yard/Landscaping Waste	☐ Organic Chemicals (solvents)
☐ Medical Waste	☐ Whole Tires	☐ Low Level Radioactive Waste	☐ Other:
☐ Universal Waste	☐ Used Oil	☐ Non-Friable Asbestos	☒ None of the Above

Attached Information: ☒ Analytical ☐ Material Safety Data Sheet ☐ Other:

Where in the waste generation process was the sample collected? Prior to entering the roll off box.

Non-Hazardous Certification

The generator of the waste described on this profile sheet, by signature below of a duly authorized representative, hereby certifies that all information provided is complete and accurate, that all known or suspected hazards have been disclosed, that the analytical data attached hereto is derived from the testing of a representative sample in accordance with 40 CFR 261.20 (c), the waste is not subject to treatment standards under 40 CFR 268.40 or 40 CFR 268.48, and that this material is considered non-hazardous according to US EPA and Michigan DEQ Rules and Regulations. The generator releases this waste to the St. Clair County for disposal as determined by the Smiths Creek Landfill.

Signature: Christine L. Loeffler
Name: Christine Loeffler
Title: Environmental Team Lead
Company: EB Eddy Paper, Inc (dba Domtar)
Date: 1/6/20

SCL Office Use Only

Special Waste Review Completed By:
Acceptance Decision: ☐ Accept ☐ Reject
Recertification Frequency: ☐ Bi Annual ☐ Annual ☐ Semi Annual ☐ Other:
Conditions of Acceptance:
Special Handling Procedures:
County Officer: Date:
Facility Officer: Date:

Revision Date 052207

LAMBTON SCIENTIFIC

a division of TECHNICAL CHEMICAL SERVICES Inc.

P.O. Box 2020, 391 Vidal Street South, Sarnia, ON, N7T 7L1
Phone: (519) 344-4747 Fax: (519) 344-2350 E-Mail: info@lambtonscientific.com

Certificate of Analysis

Customer:	**Domtar - Port Huron Mill**	L.S. Submission No.:	1912-146
Address:	1700 Washington Avenue Port Huron, MI 48060, U.S.A.	Invoice Number.:	33198
Attention:	**Chris Loeffler**	Purchase Order No.:	4500572409
Authorized By:	Chris Loeffler	Date Received:	Dec-16-2019
Phone Number:	(810) 984-9549	Time Received:	08:00
Fax Number:	(810) 982-3223	Date Re-Submitted:	---
E-Mail:	christine.loeffler@domtar.com, Carmella.Sullivan@domtar.com		
Project Number:		Requested Turn-Around:	Standard (4 - 7 Days)
		Report Due Date:	Dec-24-2019 by 16:30

Project Description:	**Waste Sludge**

PDF Copy to be E-MAILED to Client (w/ Hardcopy)

Notes/Explanations:

1. "---" - sample not analyzed
2. MDL - Method Detection Limit, RL - Reporting Limit
3. "<" - less than MDL, or less than MDL multiplied by any dilution factor used.
4. "Toxicity Characteristic Leaching Procedure" (TCLP) as specified by US EPA Method 1311 (publication SW-846) and in accordance with O. Reg 347. Schedule 4.
5. "Leachate Quality Criteria" (expressed as TCLP-concentrations) as specified by O. Reg 347, Schedule 4.

Lambton Scientific (LS) is a wholly owned division of Technical Chemical Services Inc. (TCS).
Methodologies used by LS are based upon those found in "Standard Methods for the Examination of Water and Wastewater" 21st Edition, or the principles of MISA or US EPA methodologies or ASTM procedures or customer prescribed methods.
The following work performed and recorded herein has been carried out in accordance with acceptable professional standards employing acceptable/recognized analytical methodologies and quality assurance procedures.
If this analytical work is applicable to Ontario Reg. 153/04 (i.e. Brownfields) or regulatory perscribed procedures, this data must be considered as preliminary or used as a prescreen only. This analytical data not to be included in the official Record of Site Condition (RSC).
Although every care and due diligence is taken in the performance of our services, TCS/LS and its staff shall not be held responsible for any losses or damages resulting directly or indirectly from any errors or omissions. The extent of TCS/LS's liability is limited to a refund of the analytical cost(s) for the parameter(s) in question. No other warranty is expressed or implied.
Customer samples will be retained at LS for a minimum of one month from the date of report publication (provided sufficient sample size originally received).

The information in this report/facsimile/electronic transmission is intended for the named recipient(s) only. It may contain privileged and confidential information. If you have received this report in error, any perusal, use, copying or dissemination of its contents is prohibited. Please notify Lambton Scientific immediately by telephone at the number indicated.

This report has been reviewed and approved by:

December 20, 2019

Dated **Andy Schmidtmeyer, M.Sc.**

Interim Report 1:	*Interim Report 2:*	*Final Report:*
		E-MAILED *December 20, 2019*

LAMBTON SCIENTIFIC

a division of TECHNICAL CHEMICAL SERVICES Inc.

Certificate of Analysis *(Summary Only)*

Domtar - Port Huron Mill

Sub. Num: 1912-146

Sub. Date: Dec-16-2019

Waste Sludge

	Customer ID:	WWTP Sludge	WWTP Sludge
	LSID #:	1912- **11759**	1912- **11760**
	Sample Date:	Dec-10-2019	Dec-12-2019
	Sample Time:	16:30	01:00
	Info:	Grab x 2 / Other	Grab x 2 / Other
Waste Characteristic Determinations	Waste Type:	Non-Aqueous	Non-Aqueous
	Corrosivity:	Negative	Negative
	TCLP Toxicity (see below):	Negative	Negative
Leachate Details	TCLP - Weight % Solids:	100	100
	pH Initial (5g sample + 96.5mL of water):	8.23	8.87
	pH Final (after TCLP Bottle Extraction):	5.50	5.11

TCLP - Summary of Analytical Results			**Units**	**Criteria[1]**	**Results**	**Results**
Inorganics	**Metals**	Arsenic	mg/L	**5**	< 0.005	< 0.005
		Barium	mg/L	**100**	0.074	0.058
		Cadmium	mg/L	**1**	< 0.0005	< 0.0005
		Chromium	mg/L	**5**	< 0.005	< 0.005
		Lead	mg/L	**5**	< 0.005	< 0.005
		Mercury	mg/L	**0.2**	< 0.005	< 0.005
		Selenium	mg/L	**1**	< 0.02	< 0.02
		Silver	mg/L	**5**	< 0.001	< 0.001
Organics	**Volatiles**	Benzene	mg/L	**0.5**	< 0.0050	< 0.0050
		2-Butanone (Methyl Ethyl Ketone, MEK)	mg/L	**200**	< 0.050	< 0.050
		Carbon Tetrachloride	mg/L	**0.5**	< 0.010	< 0.010
		Chlorobenzene (Monochlorobenzene)	mg/L	**100**	< 0.0050	< 0.0050
		Chloroform (Trichloromethane)	mg/L	**6**	< 0.0050	< 0.0050
		1,4-Dichlorobenzene (p-)	mg/L	**7.5**	< 0.010	< 0.010
		1,2-Dichloroethane (Ethylene Dichloride)	mg/L	**0.5**	< 0.010	< 0.010
		1,1-Dichloroethylene (-ethene)	mg/L	**0.7**	< 0.025	< 0.025
		Hexachlorobutadiene	mg/L	**0.5**	< 0.010	< 0.010
		Tetrachloroethylene (Perchloroethylene, -ethene)	mg/L	**0.7**	< 0.0050	< 0.0050
		Trichloroethylene (-ene, TCE)	mg/L	**0.5**	< 0.0050	< 0.0050
		Vinyl Chloride	mg/L	**0.2**	< 0.0050	< 0.0050
	Acid Extractables	o-Cresol (2-Methylphenol)	mg/L	**200**	< 0.001	< 0.001
		m+p-Cresol (3+4-Methylphenol)	mg/L	**200**	0.003	< 0.0025
		Pentachlorophenol	mg/L	**100**	< 0.005	< 0.005
		2,4,5-Trichlorophenol	mg/L	**400**	< 0.001	< 0.001
		2,4,6-Trichlorophenol	mg/L	**2**	< 0.001	< 0.001
	Base Neutral Extractables	2,4-Dinitrotoluene	mg/L	**0.13**	< 0.001	< 0.001
		Hexachlorobenzene	mg/L	**0.13**	< 0.002	< 0.002
		Hexachlorobutadiene	mg/L	**0.5**	< 0.002	< 0.002
		Hexachloroethane	mg/L	**3**	< 0.002	< 0.002
		Nitrobenzene	mg/L	**2**	< 0.002	< 0.002
		Pyridine	mg/L	**5**	< 0.01	< 0.01

Report Notes/Comments:

[1] Leachate Quality Criteria for determining Toxicity (i.e. O Reg 347 - Sch 4 & 13).

Comments: | **Comments:**

LAMBTON SCIENTIFIC

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Certificate of Analysis

Domtar - Port Huron Mill

Sub. Num: 1912-146

Sub. Date: Dec-16-2019

Waste Sludge

Customer ID: WWTP Sludge
LSID #: 1912- **11759**
Sample Date: Dec-10-2019
Sample Time: 16:30
Info: Grab x 2 / Other

	Waste (1) Identification	Reference Method	Units	Reg 347 Specification *	Results	Waste Characteristic Determination	Qualifier	Initials	Analysis Date
	Aqueous (2) or Non-Aqueous (3)	SM2540D / 5520B-Mod	n/a	---	Non-Aqueous	---	---	---	---
Corrosivity	Corrosive Waste (5) - pH (Aqueous)	SM-4500-B	pH units	**pH = 2 - 12.5**	---	Negative		TO	12-17-2019
Corrosivity	Corrosive Waste (5) - pH (1:1) (Solids)	EPA 9045D	pH units		8.26				
Ignitability	Ignitable Waste (6) - Flashpoint by PMCC(7) - Liquids	ASTM D-93	°C	**> 61°C**	---	---		---	---
Ignitability	Ignitable Waste (6) - Ignition Spot Test (8) - Solids	---	Pass/Fail	**Note 8**	---				
Ignitability	Ignitable Waste (6) - Water Absorption Spot Test (8) - Solids	---	Pass/Fail		---				
Reactivity	Reactive Waste (9)	LS AP-005	Pass/Fail	**Note 9**	---	---		---	---
Reactivity		ASTM D5058C	°C	---	---	---			
Toxicity	Leachate Toxic Waste (4)	EPA 1311	Pass/Fail	**Note 4**	Pass	Negative		---	---

Information and Definitions

1. Characteristic Waste - a hazardous waste that is corrosive, ignitable, leachate toxic or reactive waste. Characterisation determination is solely based on the client's sample received and only for the analytical parameters requested and tested.
2. Aqueous Waste - Waste that is aqueous and contains < 1 wt% Total Organic Carbon (TOC) and < 1 wt% Total Suspended Solids (TSS).
3. Non-Aqueous Waste - waste that is not aqueous waste.
4. Leachate Toxic Waste - a waste producing leachate containing any of the contaminants listed in Schedule 4 at a concentration equal to or in excess of the concentration specified for the contaminant in Schedule 4 using the Toxicity Characteristic Leaching Procedure (TCLP), i.e. EPA Method 1311. The determination of Leachate Toxicity is based on the client's analytical requests / subsection(s) of Schedule 4 tested and is based solely on the limited TCLP analytics performed.
5. Corrosive Waste as defined by pH measurement only. For liquid wastes the steel corrosion test as defined by NACE TM-01-69 is not performed by Lambton Scientific. Exemptions for solid waste do exist, consult Ont. Reg. 347.
6. Ignitable Waste - for a solid is capable of causing fire through absorption of moisture/water. For a solid when ignited, burns so vigorously and persistently that it creates a danger.
7. PMCC = Pensky-Martens Closed-Cup tester
8. Other conditions for Ignitable Waste may apply (that are not tested for), consult Ont. Reg. 347.
9. Determination performed via multiple spot tests. A "negative " response indicates:

- Samples does **not** "react" violently with DI water (pH ~ 7, neutral)
- Sample does **not** appear to react with acidic water (pH~2)
- Sample does **not** appear to react with alkaline water (pH~12.5)
- No appreciable exothermic reaction observed (i.e. no significant heat generated)
- Sample does **not** appear to form potentially explosive mixture with water, under aforementioned pH conditions
- Sample does **not** appear to generate gas/vapours/fumes when mixed with water. Flame spot test used to verify the **absence** of generated hydrogen, oxygen, carbon dioxide and hydrogen sulfide gases.
- Lead acetate spot test indicates that **no** significant amount of hydrogen sulfide generated, under the aforementioned pH conditions (any liberated hydrogen sulfide will turn lead acetate paper brown/black upon contact).
- Sample does **not** appear to detonate or explode when heated

Other conditions for Reactive Waste may apply (that are not tested for), consult Ont. Reg. 347.

Report Notes/Comments:

Comments:

LAMBTON SCIENTIFIC

a division of TECHNICAL CHEMICAL SERVICES Inc.

Certificate of Analysis

Domtar - Port Huron Mill

Sub. Num: 1912-146

Sub. Date: Dec-16-2019

Waste Sludge

Customer ID: WWTP Sludge

LSID #: 1912- **11760**

Sample Date: Dec-12-2019

Sample Time: 01:00

Info: Grab x 2 / Other

	Waste (1) Identification	Reference Method	Units	Reg 347 Specification *	Results	Waste Characteristic Determination	Qualifier	Initials	Analysis Date
	Aqueous (2) or Non-Aqueous (3)	SM2540D / 5520B-Mod	n/a	---	Non-Aqueous	---	---	---	---
Corrosivity	Corrosive Waste (5) - pH (Aqueous)	SM-4500-B	pH units	**pH = 2 - 12.5**	---	Negative		TO	12-17-2019
Corrosivity	Corrosive Waste (5) - pH (1:1) (Solids)	EPA 9045D	pH units		8.83				
Ignitability	Ignitable Waste (6) - Flashpoint by PMCC(7) - Liquids	ASTM D-93	°C	**> 61°C**	---	---		---	---
Ignitability	Ignitable Waste (6) - Ignition Spot Test (8) - Solids	---	Pass/Fail	**Note 8**	---				
Ignitability	Ignitable Waste (6) - Water Absorption Spot Test (8) - Solids	---	Pass/Fail		---				
Reactivity	Reactive Waste (9)	LS AP-005	Pass/Fail	**Note 9**	---	---		---	---
Reactivity		ASTM D5058C	°C	---	---	---			
Toxicity	Leachate Toxic Waste (4)	EPA 1311	Pass/Fail	**Note 4**	Pass	Negative		---	---

Information and Definitions

1. Characteristic Waste - a hazardous waste that is corrosive, ignitable, leachate toxic or reactive waste. Characterisation determination is solely based on the client's sample received and only for the analytical parameters requested and tested.
2. Aqueous Waste - Waste that is aqueous and contains < 1 wt% Total Organic Carbon (TOC) and < 1 wt% Total Suspended Solids (TSS).
3. Non-Aqueous Waste - waste that is not aqueous waste.
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5. Corrosive Waste as defined by pH measurement only. For liquid wastes the steel corrosion test as defined by NACE TM-01-69 is not performed by Lambton Scientific. Exemptions for solid waste do exist, consult Ont. Reg. 347.
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7. PMCC = Pensky-Martens Closed-Cup tester
8. Other conditions for Ignitable Waste may apply (that are not tested for), consult Ont. Reg. 347.
9. Determination performed via multiple spot tests. A "negative " response indicates:

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- Sample does **not** appear to react with acidic water (pH~2)
- Sample does **not** appear to react with alkaline water (pH~12.5)
- No appreciable exothermic reaction observed (i.e. no significant heat generated)
- Sample does **not** appear to form potentially explosive mixture with water, under aforementioned pH conditions
- Sample does **not** appear to generate gas/vapours/fumes when mixed with water. Flame spot test used to verify the **absence** of generated hydrogen, oxygen, carbon dioxide and hydrogen sulfide gases.
- Lead acetate spot test indicates that **no** significant amount of hydrogen sulfide generated, under the aforementioned pH conditions (any liberated hydrogen sulfide will turn lead acetate paper brown/black upon contact).
- Sample does **not** appear to detonate or explode when heated

Other conditions for Reactive Waste may apply (that are not tested for), consult Ont. Reg. 347.

Report Notes/Comments:

Comments:

LAMBTON SCIENTIFIC
a division of TECHNICAL CHEMICAL SERVICES Inc.

Certificate of Analysis

Domtar - Port Huron Mill

Sub. Num: 1912-146
Sub. Date: Dec-16-2019

Waste Sludge

Customer ID:	WWTP Sludge	WWTP Sludge	
LSID #:	1912- **11759**	1912- **11760**	
Sample Date:	Dec-10-2019	Dec-12-2019	
Sample Time:	16:30	01:00	
Info:	Grab x 2 / Other	Grab x 2 / Other	
Leachate Start Date:	Dec-16-2019	Dec-16-2019	

Reference Method: EPA 1311-BE

	Units	Results	Results
TCLP - Wt% Solids	wt %	100	100
pH Initial (5g sample + 96.5mL of water)	pH units	8.23	8.87
pH after 3.5mL additon of 1N HCl	pH units	2.08	1.77
pH of Extraction Fluid # 1 (4.88 - 4.98)	pH units	4.93	4.93
pH of Extraction Fluid # 2 (2.83 - 2.93)	pH units	n/a	n/a
pH Final (after TCLP Extraction)	pH units	5.50	5.11

LABORATORY QA/QC DATA

Leachate Initials: KA, TO

Metals Initials: MS

Metals

Reference Method: EPA 3010A
Reference Method: EPA 6010C
Analysis completed by ICP-Axial unless otherwise stated.

					1912-11759		**1912-11760**									
				Extraction Date:	Dec-19-2019		Dec-19-2019									
				Analysis Date:	Dec-19-2019		Dec-19-2019									
				Dilution Factor (DF):	1		1									
Component (ICP)	**CAS #**	**MDL**	**Units**	**Leachate Quality Criteria ***	**Results**	**Qualifier**	**Results**	**Qualifier**	**Method Blank**	**LCS** Actual	**LCS** Limits	**MS** Matrix Spiked Sample (% Recovery)		**REP** Replicate --- Dilution Factor (DF) --- Results	**Qualifier**
Arsenic	7440-38-2	0.005	mg/L	**5**	< 0.005		< 0.005		< 0.005	98	80-120	---		---	
Barium	7440-39-3	0.001	mg/L	**100**	0.074		0.058		< 0.001	96	80-120	---		---	
Cadmium	7440-43-9	0.0005	mg/L	**1**	< 0.0005		< 0.0005		< 0.0005	100	80-120	---		---	
Chromium	7440-47-3	0.005	mg/L	**5**	< 0.005		< 0.005		< 0.005	104	80-120	---		---	
Lead	7439-92-1	0.005	mg/L	**5**	< 0.005		< 0.005		< 0.005	102	80-120	---		---	
Mercury	7439-97-6	0.005	mg/L	**0.2**	< 0.005		< 0.005		< 0.005	99	80-120	---		---	
Selenium	7782-49-2	0.02	mg/L	**1**	< 0.02		< 0.02		< 0.02	98	80-120	---		---	
Silver	7440-22-4	0.001	mg/L	**5**	< 0.001		< 0.001		< 0.001	98	80-120	---		---	

Report Notes/Comments:

Comments: **Comments:** **QA/QC Comments:** **Comments:**

LAMBTON SCIENTIFIC
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Certificate of Analysis

Domtar - Port Huron Mill

Sub. Num: 1912-146
Sub. Date: Dec-16-2019

Waste Sludge

Customer ID:	WWTP Sludge	WWTP Sludge
LSID #:	1912- **11759**	1912- **11760**
Sample Date:	Dec-10-2019	Dec-12-2019
Sample Time:	16:30	01:00
Info:	Grab x 2 / Other	Grab x 2 / Other
Leachate Start Date:	Dec-16-2019	Dec-16-2019

Reference Method: EPA-1311-ZHE

	Units	Results	Results
TCLP - Wt% Solids	wt %	100	100
pH of Extraction Fluid # 1 (4.88 - 4.98)	pH units	4.93	4.93

Volatiles

Reference Method: EPA 8260B
Analysis completed by P&T GC-MS

	1912-11759	1912-11760
Analysis Date:	Dec-18-2019	Dec-18-2019
Dilution Factor (DF):	50	50

Component (P&T GC-MS)	CAS#	RL	Units	Leachate Quality Criteria *	Results	Qualifier	Results	Qualifier
Benzene	71-43-2	0.0001	mg/L	**0.5**	< 0.0050		< 0.0050	
2-Butanone *(Methyl Ethyl Ketone, MEK)*	78-93-3	0.001	mg/L	**200**	< 0.050		< 0.050	
Carbon Tetrachloride	56-23-5	0.0002	mg/L	**0.5**	< 0.010		< 0.010	
Chlorobenzene *(Monochlorobenzene)*	108-90-7	0.0001	mg/L	**100**	< 0.0050		< 0.0050	
Chloroform *(Trichloromethane)*	67-66-3	0.0001	mg/L	**6**	< 0.0050		< 0.0050	
1,4-Dichlorobenzene *(p-)*	106-46-7	0.0002	mg/L	**7.5**	< 0.010		< 0.010	
1,2-Dichloroethane *(Ethylene Dichloride)*	107-06-2	0.0002	mg/L	**0.5**	< 0.010		< 0.010	
1,1-Dichloroethylene *(-ethene)*	75-35-4	0.0005	mg/L	**0.7**	< 0.025		< 0.025	
Hexachlorobutadiene	87-68-3	0.0002	mg/L	**0.5**	< 0.010		< 0.010	
Tetrachloroethylene *(Perchloroethylene, -ethene)*	127-18-4	0.0001	mg/L	**0.7**	< 0.0050		< 0.0050	
Trichloroethylene *(-ene, TCE)*	79-01-6	0.0001	mg/L	**0.5**	< 0.0050		< 0.0050	
Vinyl Chloride	75-01-4	0.0001	mg/L	**0.2**	< 0.0050		< 0.0050	

Surrogate Recoveries	CAS#	1912-11759 % Recovery	1912-11760 % Recovery
Dibromofluoromethane	1868-53-7	110	118
Pentafluorobenzene	363-72-4	97	103
Toluene-D8	2037-26-5	107	105
4-Bromofluorobenzene	460-00-4	114	106

Report Notes/Comments:

Comments: | **Comments:**

LAMBTON SCIENTIFIC
a division of TECHNICAL CHEMICAL SERVICES Inc.

Certificate of Analysis

Domtar - Port Huron Mill

Sub. Num: 1912-146
Sub. Date: Dec-16-2019

Waste Sludge

Customer ID:
LSID #:
Sample Date:
Sample Time:
Info:

LABORATORY QA/QC DATA

Leachate Initials: KA, TO

Volatiles Initials: MN

Reference Method: EPA-1311-ZHE
Leachate Start Date:

	Units
TCLP - Wt% Solids	wt %
pH of Extraction Fluid # 1 (4.88 - 4.98)	pH units

Volatiles

Reference Method: EPA 8260B
Analysis completed by P&T GC-MS

Analysis Date:
Dilution Factor (DF):

Component (P&T GC-MS)	**CAS#**	**RL**	**Units**	**Leachate Quality Criteria ***	**MB** Method Blank	**LCS** Lab Control Sample Spiked Blank (% Recovery) Actual	Limits	**REP** Replicate 1912-11760 DF = 50 Results	Qualifier
Benzene	71-43-2	0.0001	mg/L	**0.5**	< 0.0001	101	70-130	< 0.0050	
2-Butanone *(Methyl Ethyl Ketone, MEK)*	78-93-3	0.001	mg/L	**200**	< 0.001	107	70-130	< 0.050	
Carbon Tetrachloride	56-23-5	0.0002	mg/L	**0.5**	< 0.0002	117	70-130	< 0.010	
Chlorobenzene *(Monochlorobenzene)*	108-90-7	0.0001	mg/L	**100**	< 0.0001	97	70-130	< 0.0050	
Chloroform *(Trichloromethane)*	67-66-3	0.0001	mg/L	**6**	< 0.0001	116	70-130	< 0.0050	
1,4-Dichlorobenzene *(p-)*	106-46-7	0.0002	mg/L	**7.5**	< 0.0002	113	70-130	< 0.010	
1,2-Dichloroethane *(Ethylene Dichloride)*	107-06-2	0.0002	mg/L	**0.5**	< 0.0002	116	70-130	< 0.010	
1,1-Dichloroethylene *(-ethene)*	75-35-4	0.0005	mg/L	**0.7**	< 0.0005	108	70-130	< 0.025	
Hexachlorobutadiene	87-68-3	0.0002	mg/L	**0.5**	< 0.0002	119	70-130	< 0.010	
Tetrachloroethylene *(Perchloroethylene, -ethene)*	127-18-4	0.0001	mg/L	**0.7**	< 0.0001	106	70-130	< 0.0050	
Trichloroethylene *(-ene, TCE)*	79-01-6	0.0001	mg/L	**0.5**	< 0.0001	98	70-130	< 0.0050	
Vinyl Chloride	75-01-4	0.0001	mg/L	**0.2**	< 0.0001	74	70-130	< 0.0050	

Surrogate Recoveries	**CAS#**	**Method Blank** % Recovery	**Lab Control Sample** Spike Blank (% Recovery) Actual	Limits	**1912-11760** % Recovery
Dibromofluoromethane	1868-53-7	114	105	70-130	121
Pentafluorobenzene	363-72-4	98	105	70-130	99
Toluene-D8	2037-26-5	110	106	70-130	109
4-Bromofluorobenzene	460-00-4	120	94	70-130	118

Report Notes/Comments:

QA/QC Comments:

Comments:

LAMBTON SCIENTIFIC
a division of TECHNICAL CHEMICAL SERVICES Inc.

Certificate of Analysis

Domtar - Port Huron Mill

Sub. Num: 1912-146
Sub. Date: Dec-16-2019

Waste Sludge

Customer ID:	WWTP Sludge	WWTP Sludge
LSID #:	1912- **11759**	1912- **11760**
Sample Date:	Dec-10-2019	Dec-12-2019
Sample Time:	16:30	01:00
Info:	Grab x 2 / Other	Grab x 2 / Other
Leachate Start Date:	Dec-16-2019	Dec-16-2019

Reference Method: EPA-1311-BE

	Units	Results	Results
TCLP - Wt% Solids	wt %	100	100
pH Initial (5g sample + 96.5mL of water)	pH units	8.23	8.87
pH after 3.5mL additon of 1N HCl	pH units	2.08	1.77
pH of Extraction Fluid # 1 (4.88 - 4.98)	pH units	4.93	4.93
pH of Extraction Fluid # 2 (2.83 - 2.93)	pH units	n/a	n/a
pH Final (after TCLP Extraction)	pH units	5.50	5.11

Acid Extractables (Phenolics)

		1912-11759	**1912-11760**
Reference Method: EPA 8270D	**Extraction Date:**	Dec-19-2019	Dec-19-2019
Reference Method: EPA 8270D	**Analysis Date:**	Dec-19-2019	Dec-19-2019
Analysis completed by L/L Extr GC-MS SVOC-4.	**Dilution Factor (DF):**	1	1

Component (GC-MS)	**CAS#**	**RL**	**Units**	**Leachate Quality Criteria ***	**Results**	**Qualifier**	**Results**	**Qualifier**
o-Cresol *(2-Methylphenol)*	95-48-7	0.001	mg/L	**200**	< 0.001		< 0.001	
m+p-Cresol *(3+4-Methylphenol)*	108-39-4, 106-44-5	0.0025	mg/L	**200**	0.003		< 0.0025	
Pentachlorophenol	87-86-5	0.005	mg/L	**100**	< 0.005		< 0.005	
2,4,5-Trichlorophenol	95-95-4	0.001	mg/L	**400**	< 0.001		< 0.001	
2,4,6-Trichlorophenol	88-06-2	0.001	mg/L	**2**	< 0.001		< 0.001	

Surrogate Recoveries	**CAS#**	% Recovery	% Recovery
2-Fluorophenol	367-12-4	57	56
d6-Phenol	4165-60-0	42	40
2,4,6-Tribromophenol	118-79-6	98	95

Base Neutral Extractables (PAHs)

Reference Method: EPA 8270D

Component (GC-MS)	**CAS#**	**RL**	**Units**	**Leachate Quality Criteria ***	**Results**	**Qualifier**	**Results**	**Qualifier**
2,4-Dinitrotoluene	121-14-2	0.001	mg/L	**0.13**	< 0.001		< 0.001	
Hexachlorobenzene	118-74-1	0.002	mg/L	**0.13**	< 0.002		< 0.002	
Hexachlorobutadiene	87-68-3	0.002	mg/L	**0.5**	< 0.002		< 0.002	
Hexachloroethane	67-72-1	0.002	mg/L	**3**	< 0.002		< 0.002	
Nitrobenzene	98-95-3	0.002	mg/L	**2**	< 0.002		< 0.002	
Pyridine	110-86-1	0.01	mg/L	**5**	< 0.01		< 0.01	

Surrogate Recoveries	**CAS#**	% Recovery	% Recovery
d5-Nitrobenzene	4165-60-0	87	86
2-Fluorobiphenyl	321-60-8	84	84
d14-p-Terphenyl	1718-51-0	91	90

Report Notes/Comments:

Comments: | **Comments:**

LAMBTON SCIENTIFIC
a division of TECHNICAL CHEMICAL SERVICES Inc.

Certificate of Analysis

Domtar - Port Huron Mill

Sub. Num: 1912-146
Sub. Date: Dec-16-2019

Waste Sludge

Customer ID:
LSID #:
Sample Date:
Sample Time:
Info:

LABORATORY QA/QC DATA

Reference Method: EPA-1311-BE
Leachate Start Date:

	Units
TCLP - Wt% Solids	wt %
pH Initial (5g sample + 96.5mL of water)	pH units
pH after 3.5mL additon of 1N HCl	pH units
pH of Extraction Fluid # 1 (4.88 - 4.98)	pH units
pH of Extraction Fluid # 2 (2.83 - 2.93)	pH units
pH Final (after TCLP Extraction)	pH units

Leachate Initials: KA, TO

Semi-Volatiles Initials: MN

Acid Extractables (Phenolics)
Reference Method: EPA 8270D
Reference Method: EPA 8270D
Analysis completed by L/L Extr GC-MS SVOC-4.

Extraction Date:
Analysis Date:
Dilution Factor (DF):

Component (GC-MS)	**CAS#**	**RL**	**Units**	**Leachate Quality Criteria ***	**Method Blank**	**LCS** Spiked Blank (% Recovery) Actual	Limits	**REP** Replicate ---- Dilution Factor --- **Results**	**Qualifier**
o-Cresol *(2-Methylphenol)*	95-48-7	0.001	mg/L	**200**	< 0.001	84	50-140	---	
m+p-Cresol *(3+4-Methylphenol)*	108-39-4, 106-44-5	0.0025	mg/L	**200**	< 0.0025	81	50-140	---	
Pentachlorophenol	87-86-5	0.005	mg/L	**100**	< 0.005	96	50-140	---	
2,4,5-Trichlorophenol	95-95-4	0.001	mg/L	**400**	< 0.001	87	50-140	---	
2,4,6-Trichlorophenol	88-06-2	0.001	mg/L	**2**	< 0.001	87	50-140	---	

Surrogate Recoveries	**CAS#**	% Recovery	Actual	Limits	% Recovery
2-Fluorophenol	367-12-4	60	73	20-65	
d6-Phenol	4165-60-0	42	60	50-120	
2,4,6-Tribromophenol	118-79-6	90	95	30-150	

Base Neutral Extractables (PAHs)
Reference Method: EPA 8270D

Component (GC-MS)	**CAS#**	**RL**	**Units**	**Leachate Quality Criteria ***	**Method Blank**	Spiked Blank (% Recovery) Actual	Limits	---- **Results**	**Qualifier**
2,4-Dinitrotoluene	121-14-2	0.001	mg/L	**0.13**	< 0.001	85	50-140	---	
Hexachlorobenzene	118-74-1	0.002	mg/L	**0.13**	< 0.002	90	50-140	---	
Hexachlorobutadiene	87-68-3	0.002	mg/L	**0.5**	< 0.002	87	50-140	---	
Hexachloroethane	67-72-1	0.002	mg/L	**3**	< 0.002	82	50-140	---	
Nitrobenzene	98-95-3	0.002	mg/L	**2**	< 0.002	85	50-140	---	
Pyridine	110-86-1	0.01	mg/L	**5**	< 0.01	32	30-130	---	

Surrogate Recoveries	**CAS#**	% Recovery	Actual	Limits	% Recovery
d5-Nitrobenzene	4165-60-0	96	88	50-120	---
2-Fluorobiphenyl	321-60-8	93	87	60-120	---
d14-p-Terphenyl	1718-51-0	113	94	60-120	---

Report Notes/Comments:

QA/QC Comments:

Comments:

St. Clair County
Special Waste Assessment

Waste Evaluation

Primary Contact: Christine Loeffler
Phone: 810-650-2419
E-mail: Christine.Loeffler@domtar.com

Generator:	EB Eddy Paper (dba Domtar)	**Transporter:**	Waste Management
Address:	1700 Washington Ave	**Address:**	3005 Petit St
	Port Huron, MI 48060		Port Huron, MI 48060
Contact:	Christine Loeffler	**Contact:**	Rob Adamick
Phone:	810-650-2419	**Phone:**	586-615-8184

Waste Description: Process Sludge from paper manufacturing

Project Location: 1700 Washington Ave. Port Huron, MI

Waste Generated in St. Clair County? [X] Yes [ ] No (complete questions below)

Origin:

Out-of State Authorization: N/A

Reviewer: Wendy Depp Date: 1/9/20

Documents reviewed [X] Profile [ ] SDS [X] Analytical Other (specify):

Exceptions

261.4(b)(1): **Household waste** including motels/hotels, rest stop septic waste, campgrounds, etc.	
261.4(b)(4): Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste, generated primarily from the combusion of coal or other fossil fuels, except as provided by §266.112 of this chapter for facilities that burn or process hazardous waste.	
261.4(b)(5): Drilling fluids, produced waters, and other wastes associated with exploration, development or production of crude oil , natural gas or geothermal energy	
261.4(b)(7) **Solid waste from the extraction, beneficiation, and processing of ores and minerals** (including coal, phosphate rock, and overburden from the mining of uranium ore), except as provided by §266.112 of this chapter for facilities that burn or process hazardous waste.	
261.4(b)(8) **Cement kiln dust waste**, except as provided by §266.112 of this chapter for facilities that burn or process hazardous waste.	
261.4(b)(9) Solid waste which consists of D**iscarded arsenical-treated wood or wood products** which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.	
261.4(b)(10) **Petroleum-contaminated media** and debris that fail the test for the Toxicity Characteristic of §261.24 (Hazardous Waste Codes D018 through D043 only) and are subject to the **corrective action regulations under part 280**	
261.4(b)(13) **Non-terne plated used oil filters** that are not mixed with wastes listed in subpart D of this part if these oil filters have been gravity hot-drained using one of the following methods: (i) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining; (ii) Hot-draining and crushing; (iii) Dismantling and hot-draining; or (iv) Any other equivalent hot-draining method that will remove used oil.	
261.24: **Manufactured Gas Plant** exempted from characterization using TCLP	
261.4(g): **Dredge materials** subject to requirements of a dredging permit (joint permit between MDEQ/USACE is an example)	
Other (Specify)	

Listed Waste Issues

F-Listed wastes

Are any of the following used as solvents in a concentration of 10% or more before u **No** [ ] N/A [X]

acetone (F003)		MEK (2-butanone) (F005)	
benzene (F005)		methyl isobutyl ketone (MIBK) (F003)	
n-butyl alcohol (F003)		nitobenzene (F004)	
carbon disulfide (F005)		ortho-dichlorobenzene (F002)	
carbon tetrachloride (F001)		pyridine (F005)	
chlorinated fluorocarbons (F001)		tetrachloroethylene (F001, F002)	
chlorobenzene (F002)		toluene (F005)	
o,m,p-cresols (F004)		1,1,1-Trichloroethane (TCA) (F001, F002)	
cresylic acid (F004)		1,1,2-trichloroethane (TCA) (F002)	
cyclohexanone (F003)		1,1,2-trichloro-1,2,2-trifluoroethane (F002)	
ethyl acetate (F003)		trichloroethylene (F001, F002)	
ethyl benzene (F003)		trichlorofluoromethane (F002)	
ethyl ether (F003)		xylene (F003)	
isobutyl alcohol (isobutanol) (F005)		2-nitropropane (F005)	
methanol (F003)		2-ethoxyethanol (ethylene glycol monoethyl ether) (F005)	
methylene chloride (F001, F002)			

If yes, was that chemical used as a solvent? Yes [ ] No [ ] Undetermined [ ]

Does concentration of F-listed compound in soil exceed MDEQ "Contained-In" thresholds (Act 307 limits)? Yes [ ] No [X]

	Soil ug/kg (ppb)			Soil ug/kg (ppb)	
acetone (F003)	100		MEK (2-butanone) (F005)	100	
benzene (F005)	10		methyl isobutyl ketone (MIBK) (F003)	100	
n-butyl alcohol (F003)	230		nitobenzene (F004)	330	
carbon disulfide (F005)	100		ortho-dichlorobenzene (F002)	10	
carbon tetrachloride (F001)	10		pyridine (F005)	330	
chlorinated fluorocarbons (F001)	N/A		tetrachloroethylene (F001, F002)	10	
chlorobenzene (F002)	10		toluene (F005)	10	
o,m,p-cresols (F004)	330		1,1,1-Trichloroethane (TCA) (F001, F002)	10	
cresylic acid (F004)	330		1,1,2-trichloroethane (TCA) (F002)	10	
cyclohexanone (F003)	N/A		1,1,2-trichloro-1,2,2-trifluoroethane (F002)	N/A	
ethyl acetate (F003)	N/A		trichloroethylene (F001, F002)	10	
ethyl benzene (F003)	10		trichlorofluoromethane (F002)	10	
ethyl ether (F003)	100		xylene (F003)	30	
isobutyl alcohol (isobutanol) (F005)	1,000		2-nitropropane (F005)	N/A	
methanol (F003)	800		2-ethoxyethanol (ethylene glycol monoethyl ether) (F005)	N/A	
methylene chloride (F001, F002)	10				

K-Listed Wastes

Is the waste generated by any of the following industries? **No** [X]

Wood Preservation		Other metal manufacture	
Explosive manufacturing		veterinary pharmaceuticals	
Petroleum refining		Ink formulating	
Iron & Steel manufacture		Coking operations	
Chemical manufacturing		Other	

If answering yes to any of the above, refer to 40 CFR 261.32 AND Part 111 299.9223 Table 204B

P & U Listed Wastes

Is the waste an un-used, off-spec or out-of-date chemical? [ ] **Yes** [X] **No**

Is waste the result of a spill of an unused chemical on the P/U list? [ ] **Yes** [X] **No**

If yes, refer to 40 CFR 261.32 AND Part 111 299.9224 Table 205c

Characteristic Waste Issues

Analytical provided	Yes	X	No	
Type of Results	Total		TCLP	X

Solid content>0.5% [X] **Yes** [ ] **No**
if yes, the total sample can be used without dividing by 20

Units data provided in	mg/kg		mg/l	X
	µg/kg		%	
	ug/G			

Detection limits acceptable? (ie below regulatory level?) [X] **Yes** [ ] **No**

Does analytical show any of the following above limit? [ ] **Yes** [X] **No** [ ] **N/A**

If so, check the appropriate box(es) below:

	TCLP mg/l	Total mg/kg	
Arsenic (D004)	5	100	
Barium (D005)	100	2000	
Cadmium (D006)	1	20	
Chromium (D007)	5	100	
*Lead (D008)	5	100	
Mercury (D009)	0.2	4	
Selenium (D010)	1	20	
Silver (D011)	5	100	
Endrin (D012)	0.02	0.4	
Lindane (D013)	0.4	8	
Methoxychlor (D014)	10	200	
Toxaphene (D015)	0.5	10	
2,4, D (Dichlorophenoxyacetic acid) (D016)	10	200	
Silvex (D017)	1	20	
Benzene (D018)	0.5	10	
Carbon tectrachnloride (D019)	0.5	10	
Chlordane (D020)	0.03	0.6	
Chlorobenzene (D021)	100	2000	
Chloroform (D022)	6	120	
o-Cresol (D023)	200	4000	

	TCLP mg/l	Totals mg/kg	
m-cresol (D024)	200	4000	
p-cresol (D025)	200	4000	
o,m,p-cresols (D026)	200	4000	
1,4,dichlorobenzene (D027)	7.5	150	
1,2-dichloroethane (D028)	0.5	10	
1,1-dichloroethene (D029)	0.7	14	
2,4-dinitrotoluene (D030)	0.13	2.6	
heptachlor (D031)	0.01	0.16	
hexachlorobenzene (D032)	0.13	2.6	
hexachlorobutadiene (D033)	0.5	10	
hexachloroethane (D034)	3	60	
MEK (2-butanone) (D035)	200	4000	
nitrobenzene (D036)	2	40	
pentachlorophenol (D037)	100	2000	
pyridine (D038)	5	100	
tetrachloroethylene (D039)	0.7	14	
trichloroethylene (D040)	0.5	10	
2,4,5-trichlorophenol (D041)	400	8000	
2,4,6-trichlorophenol (D042)	2	40	
vinyl chloride (D043)	0.2	4	

***Is this demolition/abatement waste from residential property? [ ] **Yes** [X] **No**
if yes, this waste is exempt from hazardous waste regulation

Was the waste previously treated to remove a characteristic? [ ] **Yes** [X] **No**
If so, do LDRs apply? [ ] **Yes** [X] **No**

PCBs

[X] **No to all PCB questions**

Is the waste any of the following?	**Yes***	**No**
from a transformer oil leak		
contaminated with an unknown oil		
From a railroad bed (stone)		
Is PCB analytical data provided?		
PCB Certification Form Completed		

If PCBs are detected, is PCB source:	**Yes**	**No**
equal to or greater than 50 ppm?		
equal to or greater than 500 ppm?		

Total PCB Concentration: _____

* PCB Analysis may be required

St. Clair County
Special Waste Assessment

Other Waste Issues

	Yes	No	
Does waste have potential for free liquids?	X		
Has waste been solidified?		X	If yes, what absorbant was used?
Is the waste a RCRA Empty Container?		X	

Does the waste contain any of the following:	Yes	No	
CFC's (chlorofluorocarbons) or HCFC's (hydro-chlorofluorocarbons)		X	
Asbestos		X	If yes, have generator fill out asbestos shipment record
Regulated Medical Waste		X	If yes, have generator fill out Medical Waste Certification Form
Universal Waste		X	
Sewage		X	
Used Oil		X	
Intact Lead Acid Batteries		X	
Low Level Radioactive Waste		X	
Whole Motor Vehicle Tires		X	
Beverage Containers		X	
Yard Clippings (non-diseased)		X	

Other Questions asked of the generator:

Waste Review Recommendation

[ ] **Recommendation Pending Additional Information**

Recommended for Disposal [X] **NOT Recommended for Disposal** [ ]

Direct disposal only	X	
Daily Cover Candidate		(Complete ADCM Review)
General re-use (inert)		
Other use		(specify):

Special Precautions		None	**Special Handling Requirements**	X	None
Dusty Material			Asbestos (dig hole & survey)		
High odor potential			Other (Describe)		
Other	X	(describe): Ensure No Free Liquids			

Other Comments: [ ] None

Internal Billing Information

Material Type: Industrial Debris

Special Handling Procedures: Direct Disposal only

Disposal Rate: $ -
Disposal Unit: -

Michigan Surcharge Rate: $ 0.12
Disposal Unit: -

Generator:	**EB Eddy Paper (dba Domtar)**	**Date:**	**1/9/20**
Transporter:	**Waste Management**	**Expiration Date:**	1/8/21
Waste Type:	**Process Sludge from paper manufacturing**		
Reviewer:	Wendy Depp	**Approval Number:**	**20-003**

SPECIAL WASTE RECOMMENDATION

Upon reviewing the following documents:

- [X] Profile
- [ ] SDS
- [X] Analytical data
- [ ] Other _____

CTI & Associates, Inc.

- [ ] **Recommendation Pending Additional Information**

- [X] **RECOMMENDS**
- [ ] **DOES NOT RECOMMEND**

the above referenced waste stream for disposal in the licensed area

The waste is suitable for

- [X] Direct Disposal only
- [ ] Alternative Daily Cover
- [ ] General fill (inert)
- [ ] Other use: _____

Precautionary Statements

- [ ] Dusty Material
- [ ] High Odor Potential
- [X] Other (describe): Ensure No Free Liquids
- [ ] None

Special Handling Requirements

- [ ] Asbestos (prepare hole and survey location)
- [ ] Other (describe): _____
- [X] None

Other Comments

COUNTY OF ST. CLAIR

Environmental Services Department
6779 Smiths Creek Road Smiths Creek, MI 48074
(810) 985-2443
scclandfill@stclaircounty.org

January 9, 2020

Christine Loeffler
EB Eddy Paper (dba Domtar)
1700 Washington Ave
Port Huron, MI 48060

Re: Approved Special Waste Disposal Application
Approval # 20-003

Dear Customer:

The application and supporting documentation that you have submitted for disposal of the waste material described below has been reviewed and found to be acceptable for disposal at the Smiths Creek Landfill.

Waste Description: Process Sludge from paper manufacturing
Project Location: 1700 Washington Ave. Port Huron, MI

Material Type: Industrial Debris
Special Handling Procedures: Direct Disposal only

Your waste stream has been assigned Approval Number **20-003** which will expire 12 months from the date of this letter. Please call for current disposal rates and surcharge fees.

Please be advised that the Smiths Creek Landfill does not accept regulated hazardous wastes, free liquids, regulated PCB's, yard waste, or other wastes prohibited by state law. You may access the complete list of prohibited wastes on the Michigan Dept. of Environmental Quality website:

http://www.michigan.gov/deq

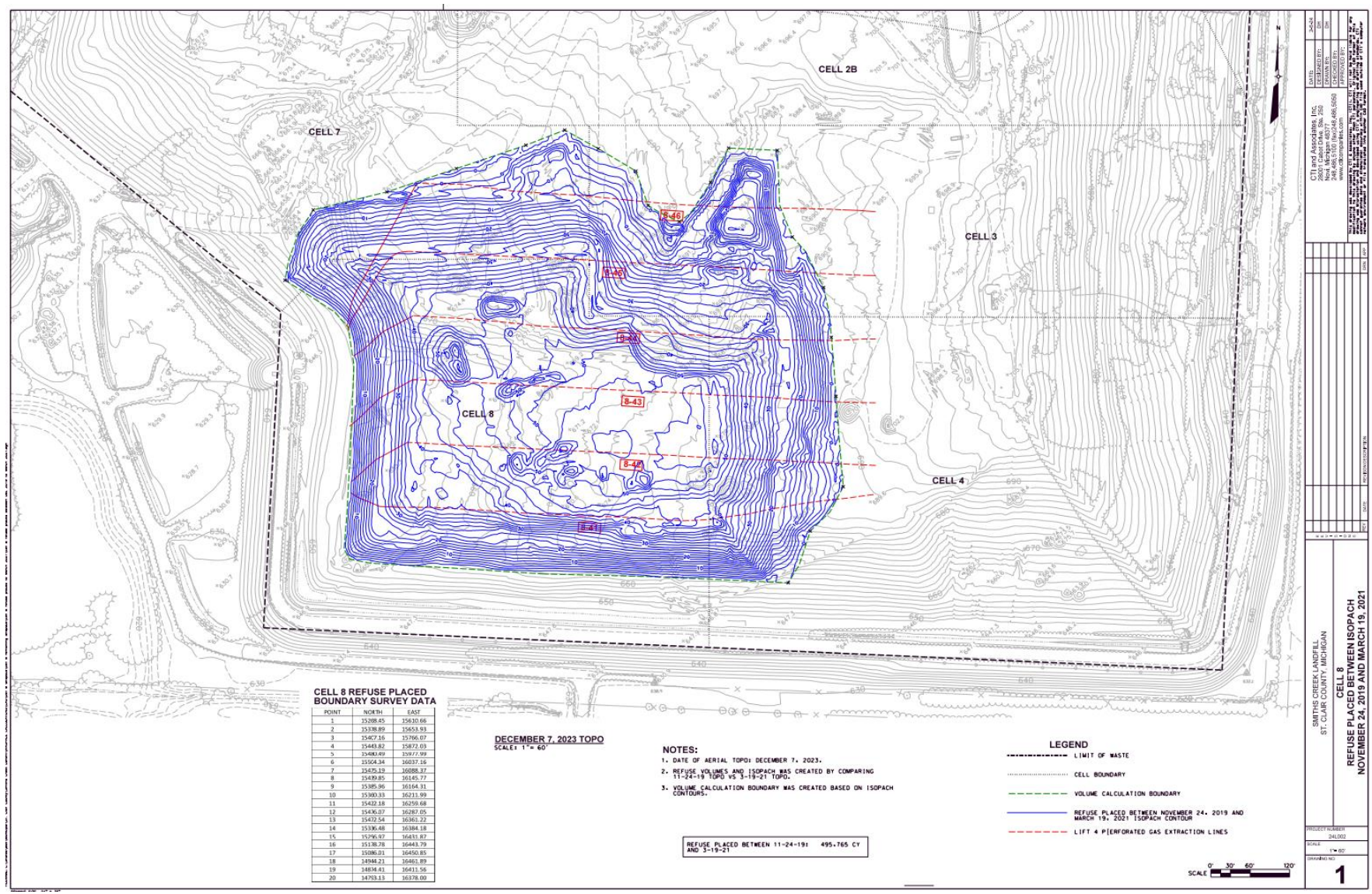
All waste loads offered for disposal at the Smiths Creek Landfill may be subject to a random inspection(s). The Smiths Creek Landfill Management reserves the right to reject any load, or portion of a load that does not conform with the description of the material provided in the waste profile form.

Please do not hesitate to contact the landfill staff directly at (810) 989-6982 with questions you may have regarding the conditions of this approval.

Sincerely,
Smiths Creek Landfill

Matt Williams
Landfill Manager

Figure 2: Cell 8 Paper Mill Sludge Waste Distribution



CELL 8 REFUSE PLACED BOUNDARY SURVEY DATA

POINT	NORTH	EAST
1	15288.45	15610.66
2	15378.89	15653.93
3	15407.16	15766.07
4	15443.82	15872.03
5	15480.49	15977.99
6	15504.34	16037.16
7	15475.19	16088.37
8	15439.85	16145.77
9	15385.96	16164.91
10	15300.33	16211.99
11	15422.18	16259.68
12	15476.07	16287.05
13	15472.54	16361.22
14	15336.48	16384.18
15	15296.97	16431.87
16	15178.78	16443.79
17	15086.01	16450.85
18	14944.21	16461.89
19	14834.41	16411.56
20	14793.13	16378.00

Attachment

State of Michigan v. Domtar Industries, Inc.

December 16, 2022

Approved, SCAO

Original - Court
1st copy - Defendant

2nd copy - Plaintiff
3rd copy - Return

STATE OF MICHIGAN 31st JUDICIAL DISTRICT JUDICIAL CIRCUIT COUNTY PROBATE	SUMMONS	20 22002604NZ LANE

Court address
201 McMorran Blvd., Port Huron, MI 48060

Court telephone no.
810-985-2031

Plaintiff's name(s), address(es), and telephone no(s).		Defendant's name(s), address(es), and telephone no(s).
Attorney General Dana Nessel, on behalf of the People of the State of Michigan, and the State of Michigan	v	Domtar Industries, Inc. 234 Kingsley Park Drive Fort Mill, SC 29715 National Registered Agents, Inc. 40600 Ann Arbor Road E, Suite 201 Plymouth, MI 48170
Plaintiff's attorney, bar no., address, and telephone no. Dana Nessel, Attorney General Polly A. Synk, Assistant Attorney General (P63473) ENRA Division P.O. Box 30755, Lansing, MI 48909 (517) 335-7664		

RECEIVED
JAY M. DEBOYER
2022 DEC 16 PM 2:45
ST. CLAIR COUNTY
CLERK

Instructions: Check the items below that apply to you and provide any required information. Submit this form to the court clerk along with your complaint and, if necessary, a case inventory addendum (form MC 21). The summons section will be completed by the court clerk.

Domestic Relations Case

☐ There are no pending or resolved cases within the jurisdiction of the family division of the circuit court involving the family or family members of the person(s) who are the subject of the complaint.

☐ There is one or more pending or resolved cases within the jurisdiction of the family division of the circuit court involving the family or family members of the person(s) who are the subject of the complaint. I have separately filed a completed confidential case inventory (form MC 21) listing those cases.

☐ It is unknown if there are pending or resolved cases within the jurisdiction of the family division of the circuit court involving the family or family members of the person(s) who are the subject of the complaint.

Civil Case

☐ This is a business case in which all or part of the action includes a business or commercial dispute under MCL 600.8035.

☐ MDHHS and a contracted health plan may have a right to recover expenses in this case. I certify that notice and a copy of the complaint will be provided to MDHHS and (if applicable) the contracted health plan in accordance with MCL 400.106(4).

☑ There is no other pending or resolved civil action arising out of the same transaction or occurrence as alleged in the complaint.

☐ A civil action between these parties or other parties arising out of the transaction or occurrence alleged in the complaint has been previously filed in ☐ this court, ☐ _____ Court, where it was given case number _____ and assigned to Judge _____.

The action ☐ remains ☐ is no longer pending.

Summons section completed by court clerk.

SUMMONS

NOTICE TO THE DEFENDANT: In the name of the people of the State of Michigan you are notified:

1. You are being sued.
2. **YOU HAVE 21 DAYS** after receiving this summons and a copy of the complaint to **file a written answer with the court** and serve a copy on the other party **or take other lawful action with the court** (28 days if you were served by mail or you were served outside this state).
3. If you do not answer or take other action within the time allowed, judgment may be entered against you for the relief demanded in the complaint.
4. If you require special accommodations to use the court because of a disability or if you require a foreign language interpreter to help you fully participate in court proceedings, please contact the court immediately to make arrangements.

Issue date	Expiration date*	Court clerk
DEC 16 2022	91 DAYS	JAY M. DeBOYER

*This summons is invalid unless served on or before its expiration date. This document must be sealed by the seal of the court.

RECEIVED JAY M. DEBOYER 12-16-2022 13:30:01 CLERK OF THE 31ST CIRCUIT COURT - FAX FILED

STATE OF MICHIGAN
CIRCUIT COURT FOR THE 31ST JUDICIAL CIRCUIT
ST. CLAIR COUNTY

ATTORNEY GENERAL DANA NESSEL, on behalf of the People of the State of Michigan, and the STATE OF MICHIGAN,

Plaintiffs,

v

DOMTAR INDUSTRIES, INC.,

Defendant.

No. 2 22002604NZ

HON. LANE

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ST. CLAIR COUNTY CLERK

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RECEIVED JAY M. DEBOYER 12-16-2022 13:30:01 CLERK OF THE 31ST CIRCUIT COURT - FAX FILED

There is no other pending or resolved civil action arising out of the transaction or occurrence alleged in the complaint. MCR 2.113(A); MCR 1.109(D)(2)(a)(i).

COMPLAINT

1. Plaintiffs, Attorney General Dana Nessel, on behalf of the People of the State of Michigan, and the State of Michigan (collectively, State or Plaintiffs), seek to hold Domtar Industries, Inc. (Domtar or Defendant), accountable for releasing and/or arranging for the transport, disposal and/or treatment of hazardous perfluoroalkyl and polyfluoroalkyl substances (PFAS) to Techni-Comp Environmental located at 4152 Dove Road, Port Huron, Michigan (the Techni-Comp Site).[1]

2. Michigan brings this civil action to recover monetary damages for the cost of identifying, monitoring, and remediating contamination caused by Domtar's actions causing releases of hazardous substances within the State and to protect and restore Michigan's precious natural resources from widespread contamination and injury caused by PFAS and other hazardous substances, in addition to injunctive, declaratory, and other equitable relief.

[1] This case only concerns PFAS contamination at the Techni-Comp Site and does not concern contamination to the land surrounding Domtar's paper mill located at 1700 Washington Avenue, Port Huron, Michigan, or any other site within the State of Michigan where Domtar may have caused PFAS contamination.

PARTIES

3. Plaintiffs are Attorney General Dana Nessel, on behalf of the People of the State of Michigan, and the State of Michigan.

4. The State maintains its principal office at 525 West Ottawa Street, Lansing, Michigan 48933.

5. Plaintiffs have the authority to bring an action to enforce Part 201, Remediation, of the Natural Resources and Environmental Protection Act (NREPA), MCL 324.20101 *et seq*. MCL 324.20126a(6); MCL 324.20137(1). The State also brings this action based upon its statutory authority to protect State natural resources and property, and its common law police power. This power includes, but is not limited to, the State's power to prevent pollution of its natural resources and property, to prevent nuisances, and to prevent and abate hazards to public health, safety, welfare, and the environment. MCL 324.1701.

6. Defendant Domtar Industries, Inc. is a Delaware corporation with its principal place of business at 234 Kingsley Park Drive, Fort Mill, South Carolina 29715.

7. Domtar may be served with process through its registered agent, National Registered Agents, Inc, 40600 Ann Arbor Road E., Suite 201, Plymouth, Michigan 48170.

8. Domtar conducts business throughout the United States, including in the State of Michigan.

9. In or about the year 1998, Domtar acquired all assets and liabilities of E.B. Eddy Paper, Inc. (E.B. Eddy). Hereinafter, E.B. Eddy and Domtar are collectively referred to as "Domtar" or "Defendant."

10. Domtar is a "person" within the meaning of the NREPA, including Part 201. MCL 324.301(h).

11. To the extent any act or omission of Defendant is alleged in this Complaint, the officers, directors, agents, employees, or representatives of Defendant committed or authorized each such act or omission, or failed to adequately supervise or properly control or direct their employees while engaged in the management, direction, operation, or control of the affairs of Defendant, and did so while acting within the scope of their duties, employment or agency.

12. Any and all references to Defendant in this Complaint include any predecessors, successors, parents, subsidiaries, affiliates, and divisions of the named Defendant.

JURISDICTION AND VENUE

13. This Court has jurisdiction over the subject matter of this action pursuant to MCL 600.605.

14. Venue is appropriate in this Court pursuant to MCL 600.1627 and MCL 324.20137(5) because the causes of action arose in St. Clair County.

THE TECHNI-COMP SITE

15. Domtar is an international paper manufacturer with an industrial paper mill located at 1700 Washington Avenue, Port Huron, Michigan (the Port Huron Mill).

16. Beginning in or around the 1980s, Domtar began using PFAS chemicals at the Port Huron Mill as part of its industrial process, including, but not limited to, the use of PFAS as grease resistance in specialty papers.

17. From approximately 1998 until 2020, Domtar released and/or arranged for the transport, disposal, and/or treatment of PFAS-containing paper waste from the Port Huron Mill to the Techni-Comp Site for composting.

18. On information and belief, Domtar transported approximately 145,000 cubic yards of PFAS-laden waste to the Techni-Comp Site for composting over an 22-year period, contaminating the property and surrounding lands, ground waters, surface waters, and other natural resources.

19. A canal referred to as the Huffman Drain runs through the Techni-Comp Site and into Bunce Creek, a tributary of the St. Clair River. On information and belief, water run-off from the Techni-Comp Site has caused contamination to these surface waters.

DOMTAR FRAUDULENTLY SELF-DECLARED ITS PAPER SLUDGE AS INERT

20. In or around February of 1996, Domtar sent a letter to the Michigan Department of Environmental Quality (DEQ), the predecessor agency to the Michigan Department of Environment, Great Lakes, and Energy (EGLE), declaring

its paper sludge to be inert pursuant to Part 115, Solid Waste, of the NREPA, MCL 324.11501 *et seq*., and in compliance with the Type B criteria[2] developed pursuant to Part 201 of the NREPA.

21. Based upon Domtar's self-declaration of its paper sludge as inert, free of hazardous substances, and in compliance with Type B criteria for Part 201, in March of 1998 the DEQ approved Domtar's request to compost its paper sludge at the Techni-Comp site. The approval provided: (1) that Domtar "shall be responsible for ensuring that the Material continues to meet the inert criteria"; (2) that "any discharges to the environment (which include ground water, surface water, air, etc.) from the composting process may subject [Domtar] to potential liability"; and (3) that Domtar shall "prepar[e] a report by January 31 of each year, which details the volume of Material that was reused in the previous year to produce compost." (Exhibit A.)

22. Domtar's self-declaration of its paper sludge as inert was inaccurate because, in part, its paper sludge contained toxic and hazardous PFAS substances.

23. On information and belief, Domtar knew at the time that it self-declared its paper sludge as inert that the paper sludge contained hazardous and toxic PFAS chemicals, and that PFAS were toxic contaminants that posed a direct threat to the health and safety of the environment and public health, but failed to disclose this to the DEQ.

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[2] Type B criteria was the residential criteria category under Act 307; the provisions of Act 307 and other environmental statutes were collected and recodified into the NREPA.

24. Even if Domtar did not know prior to 1998 that its paper sludge contained PFAS and that PFAS are toxic, Domtar acquired this information thereafter during the 22-year period from 1998 to 2020 in which Domtar continued to release and/or arrange for transport, disposal and/or treatment of its PFAS-laden paper sludge to the Techni-Comp Site. Domtar continued releasing and/or arranging for the disposal of its contaminated sludge with full knowledge that the material was not inert and contained hazardous PFAS contaminants. During this period, Domtar continued fraudulently misrepresenting to the State that its paper sludge was inert, free of hazardous substances, and in compliance with Type B (residential) criteria for Part 201.

25. Domtar's fraudulent misrepresentations and omissions were material to the DEQ's authorization, which expressly provided that Domtar shall be responsible for ensuring that the paper sludge continues to meet the inert criteria specified in Michigan status and rules and that Domtar is subject to liability for any discharges of contamination to the environment, including ground water, surface water, air, and natural resources.

26. The DEQ's approval of the transport and composting of Domtar's paper sludge to the Techni-Comp Site is void as it was based on upon Domtar's ongoing fraudulent and material misrepresentations and omissions as outlined above.

27. On December 17, 2019, Plaintiffs learned of the presence of PFAS contamination at the Techni-Comp Site. On February 19, 2020, EGLE notified Domtar that its self-declared inert designation is invalid and that the transport and

disposal of Domtar's paper sludge must be managed as a regulated solid waste under Part 115.

MICHIGAN'S ENVIRONMENTAL CLEANUP PROGRAM, PART 201

28. Part 201 of the NREPA requires that parties liable for a release or threat of release of PFAS contamination into Michigan's environment undertake response activities to evaluate and eliminate unacceptable risks posed by the contamination to public health, safety, or welfare, or to the environment. MCL 324.20102(c) and (g).

29. Part 201 places the responsibility for response activities and for compensating and/or repairing injury, destruction, or loss to natural resources caused by a release or threat of release on the person or persons liable for that release. MCL 324.20102(e)–(f).

30. Under Part 201, EGLE is authorized to develop generic criteria for hazardous substances, which apply broadly and designate the level of a hazardous substance above which the hazardous substances are defined to pose a risk to human health or the environment. MCL 324.20120a(1); MCL 324.20104(1).

31. In a case where the assumptions underlying the development of the generic criteria are not met, Part 201 requires the development and use of site-specific criteria based on more specific or detailed information for the particular site or circumstances. MCL 324.20120b; see also Mich Admin Code, R 299.14(2) and R 299.24(2).

32. Liable parties can undertake their own, voluntary actions to stop unacceptable exposures to the hazardous substances, but if action is necessary to protect the public health, safety, or welfare, or the environment, or if a liable party is not "diligently pursuing" such action, EGLE can take enforcement actions, up to and including legal action by the Department of Attorney General. MCL 324.20114(1)(g)(i); MCL 324.20114a; MCL 324.20137(1), (3); see also MCL 324.20126a(6).

33. On information and belief, Defendant had reason to believe that it caused releases of hazardous substances at the Techni-Comp Site, yet failed to notify the State of its releases as required by MCL 324.20114(1) and MCL 324.20137(2).

34. Plaintiffs sought Domtar's cooperation in investigating and remediating the Techni-Comp Site without court intervention. Domtar has refused to comply with its Part 201 obligations, forcing Plaintiffs to initiate the instant action.

PART 201 STANDARDS FOR PFAS

35. PFAS is a class of man-made chemicals, which have varying impacts on human health. The toxicity of PFAS has been evaluated in many human and laboratory animal studies. Epidemiological studies suggest associations between PFAS exposure and several health outcomes including pregnancy-induced

hypertension, increases in serum liver enzymes, increases in serum lipids, decreased antibody response to vaccines, and small decreases in birth weight.[3]

36. Michigan has enforceable criteria for seven types of PFAS: perfluorooctanoic acid (PFOA); perfluorooctanesulfonic acid (PFOS, a/k/a/ perfluorooctane sulfonate); perfluorononanoic acid (PFNA); perfluorohexane sulfonic acid (PFHxS); hexafluoropropylene oxide dimer acid (HFPO-DA) (a GenX compound); perfluorobutane sulfonic acid (PFBS); and perfluorohexanoic acid (PFHxA). The criteria relevant to the Techni-Comp Site pertain to two pathways of exposure: groundwater used as drinking water and, for PFOA and PFOS, the groundwater-surface water interface (GSI).[4]

37. In January 2018, Michigan established criteria for PFOA and PFOS at 70 parts per trillion (ppt) either singly or combined in groundwater used as drinking water.[5] The criteria were developed to address adverse health impacts linked to ingestion of drinking water, including short-term developmental and chronic exposures.[6]

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[3] Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Perfluoroalkyls* (May 2021), p 6, available at https://www.atsdr.cdc.gov/ToxProfiles/tp200.pdf (accessed December 16, 2022).

[4] The GSI is "the location at which groundwater enters surface water." MCL 324.20120e(23)(c). This criteria is designed to protect surface water, water quality standards. MCL 324.20120e.

[5] EGLE, *Table 1. Groundwater: Residential and Nonresidential Part 201 Generic Cleanup Criteria and Screening Levels* (June 25, 2018), available at https://semspub.epa.gov/work/05/2001990.pdf (accessed December 16, 2022).

[6] MDEQ, *Establishing PFOA & PFOS Criteria* (January 9, 2018), available at https://content.govdelivery.com/accounts/MIDEQ/bulletins/1d1db52 (accessed December 16, 2022).

38. Subsequently, the Michigan PFAS Action Response Team's Science Advisory Workgroup reviewed the current science on PFAS and human health and identified health-based values for seven PFAS.[7] Based on these health-based values, Michigan developed and promulgated Maximum Contaminant Levels, which are state drinking water standards. Those Maximum Contaminant Levels were approved and became effective August 3, 2020.

39. Under the terms of Section 20120a(5) of Part 201, MCL 324.20120a(5), if a federal or state drinking water standard differs from an existing Part 201 groundwater cleanup criterion, the groundwater criterion becomes the more stringent of the two by operation of law. The state drinking water standards for PFOA (8 ppt) and PFOS (16 ppt) became effective in August 2020 and replaced the previously-established groundwater cleanup criteria of 70 ppt for PFOA and PFOS, singly or combined.

40. Additionally, as of March 2022, Michigan has promulgated enforceable criteria for groundwater used for drinking water for seven types of PFAS: hexafluoropropylene oxide dimer acid (GenX) (370 ppt), perfluorobutane sulfonic acid (PFBS) (420 ppt), perfluorohexane sulfonic acid (PFHxS) (51 ppt), perfluorohexanoic acid (PFHxA) (400,000 ppt), perfluorononanoic acid (PFNA) (6

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[7] Michigan Science Advisory Workgroup, *Health-Based Drinking Water Value Recommendations for PFAS in Michigan* (2019), available at https://www.michigan.gov/-/media/Project/Websites/pfasresponse/documents/MPART/Reports/2019-Health-Based-Drinking-Water-Value-Recommendations-PFAS-MI.pdf?rev=0dc919f0d56d44f98d5bb1130a8c8907 (accessed December 16, 2022).

ppt), perfluorooctanoic acid (PFOA) (8 ppt), and perfluorooctanesulfonic acid (PFOS) (16 ppt). Mich Admin Code, R 299.44.

41. EGLE also has PFAS criteria for the GSI. The generic GSI criteria "are the water quality standards for surface waters developed by the department pursuant to [P]art 31," Water Quality, of the NREPA, MCL 324.3101 *et seq*. MCL 324.20120e(1)(a). EGLE has developed water quality standards under Part 31 for three PFAS: PFOA, PFOS, and PFBS.[8]

PFAS CONTAMINATION IN MICHIGAN CAUSED BY DOMTAR

42. Domtar's conduct of releasing and/or arranging for the transport, disposal and/or treatment of its paper sludge to the Techni-Comp Site caused the release of PFAS into the environment and the State's natural resources.

43. The PFAS released by Defendant have migrated into the environment, including, but not limited to, groundwater, surface waters, soils, and sediments at and surrounding the Techni-Comp Site.

44. On November 21, 2019, EGLE collected six surface water samples and three compost samples from the Techni-Comp site. EGLE received the results of the samples on December 17, 2019, showing all surface water samples contained PFOS and PFOA above water quality standards, as high as 53,000 ppt for PFOA.

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[8] Mich Admin Code, R 323.1057; EGLE, *Rule 57 Water Quality Values* https://www.michigan.gov/egle/0,9429,7-135-3313_3681_3686_3728-11383--,00.html (click on "Download Rule 57 Water Quality Values spreadsheet") (accessed December 16, 2022).

45. The results evidence that PFAS contamination from the Techni-Comp Site has impacted the Huffman Drain which discharges to Bunce Creek and ultimately the St. Clair River. Plaintiffs are actively investigating the extent of the contamination to Bunce Creek and the St. Clair River emanating from the Techni-Comp Site.

46. In August 2021, EGLE conducted a subsurface investigation on the Techni-Comp Site which included collecting six groundwater samples. On September 7, 2021, EGLE received the sampling results, which again showed all samples above Part 201 criteria for PFAS. The highest result was 170,000 ppt for PFOA.

47. EGLE sampled two residential wells in the surrounding area which did not contain PFAS levels above criteria. EGLE is aware of at least four other residential wells in the surrounding area that may have been impacted by PFAS contamination emanating from the Techni-Comp Site; however, EGLE has not been able to access these properties for sampling. The extent of PFAS contamination to residential drinking water sources is therefore presently unknown.

48. Despite the State's efforts to date, defining the extent of Domtar's contamination will require more investigation and sampling, and the scope of the necessary actions to prevent unacceptable exposures to PFAS and to restore impacted natural resources is currently not known, including the extent of contamination to Bunce Creek and St. Clair River.

49. The extent of Domtar's contamination has not been fully identified, and the State reasonably anticipates further testing will reveal additional groundwater, surface water, and drinking water contamination due to Domtar's historical operations.

50. This contamination poses a substantial and imminent threat to the public health, safety, welfare, and the environment and requires immediate remediation and other response activity to abate the hazards Domtar has created.

STATE NATURAL RESOURCE AND PROPERTY DAMAGE

51. PFAS contamination at and around the Techni-Comp Site has injured the State's natural resources and/or adversely impacted its beneficial public trust uses including those for drinking water, recreation, fishing, agriculture, and other uses.

52. PFAS contamination at and around the Techni-Comp Site has substantially damaged the intrinsic value of these State natural resources.

53. Michigan and its residents have been deprived of the full use, enjoyment, and benefit of the State's public trust resources, and the intrinsic value of such State natural resources, and have been substantially harmed by PFAS contamination, as identified above.

54. The State's natural resources and property will continue to be harmed and injured for the foreseeable future by the ongoing release and/or spread of PFAS, as identified above.

55. Domtar's acts and/or omissions have caused and/or contributed to cause PFAS contamination, as identified above.

56. Each of the State's natural resources is precious, limited, and invaluable, as described in more detail below.

Groundwater.

57. Groundwater is a precious, limited, and invaluable State natural resource that is used for drinking water, irrigation and agriculture, and other important purposes.

58. State natural resources, including groundwater, are vital to the health, safety, and welfare of Michigan residents, and to the State's economy and ecology.

59. Domtar's PFAS have contaminated and injured the State's groundwater at and around the Techni-Comp Site.

60. Domtar's PFAS have contaminated and injured drinking water that is drawn from groundwater sources in locations at and around the Techni-Comp Site.

61. Ongoing additional testing continues to reveal further PFAS contamination and injury of groundwater at and around the Techni-Comp Site. It is virtually certain that this additional testing will reveal further PFAS contamination and injury of groundwater.

Surface waters.

62. Surface waters are precious, limited, and invaluable State natural resources that are used for drinking water, irrigation, recreation such as swimming and fishing, and ecological and other important purposes.

63. Ongoing additional testing continues to reveal further PFAS contamination and injury of surface waters at and around the Techni-Comp Site. It is expected that additional testing will reveal further PFAS contamination in surface waters including, but not limited to, Bunce Creek and St. Clair River.

Wildlife, soils, and sediment.

64. Wildlife, soils, and sediments are precious, limited, and invaluable State natural resources.

65. Domtar has contaminated and injured the State's wildlife, soils, and sediments at and around the Techni-Comp Site.

66. Agriculture relies on uncontaminated soils and is one of Michigan's largest industries, contributing billions annually to Michigan's economy.

67. Michigan's fish and other wildlife are used for food, recreational purposes, and provide a significant economic benefit to the State, including through tourism and recreation.

68. Injuries to wildlife affect not only individual wildlife, but the entire ecosystem of which they are a part.

69. Ongoing additional testing continues to reveal further PFAS contamination and injury of agricultural operations, wildlife, soils, and sediment at

and around the Techni-Comp Site. It is virtually certain that this additional testing will reveal further PFAS contamination and injury of soils, sediments, and wildlife.

THE PFAS CONTAMINATION CAUSED BY DOMTAR MUST BE REMEDIATED

70. Through this lawsuit Plaintiffs seek an order compelling Domtar to remediate PFAS contamination at the Techni-Comp Site and monetary recovery for the cost of all past and future monitoring, identification, response activities, and remediation efforts related to Domtar's pollution of the State's natural resources due to PFAS contamination above current cleanup criteria.

71. There are proven and preliminary remedial techniques for cleaning up PFAS in environmental media, and successfully treating drinking water.

72. Absent use of remediation and treatment methods, PFAS contamination will continue to spread through the State's natural resources and property. Although PFAS are persistent in the environment, PFAS can be successfully remediated in certain natural resources and/or successfully treated, but at significant expense.

73. The presence and migration of PFAS in State natural resources and property, absent large-scale and costly remediation and/or treatment, will continue indefinitely, and will continue to indefinitely threaten such natural resources and property.

74. Because of the injury PFAS have caused and are causing to State natural resources, Michigan's natural resources require restoration, including compensation for interim and permanent losses.

75. The State reserves its right to amend this Complaint as additional evidence of PFAS contamination comes to light including, but not limited to, PFAS contamination of wildlife, soils, sediments, and other State natural resources arising from/related to Domtar's culpability in causing PFAS-contamination at the Techni-Comp Site.

FIRST CAUSE OF ACTION
LIABILITY UNDER PART 201 OF NREPA

76. The State repeats, re-alleges, and incorporates by reference each and every allegation contained in the preceding paragraphs, as though fully set forth herein.

77. Part 201 of the NREPA authorizes the Attorney General, on behalf of the State, to commence a civil action seeking, among other things, "[t]emporary or permanent injunctive relief necessary to protect the public health, safety, or welfare, or the environment from the release or threat of release," "[r]ecovery of state response activity costs pursuant to section 20126a", and a "declaratory judgment on liability for future response activity costs and damages." MCL 324.20137(1). Part 201 defines "response activity costs" or "costs of response activity" as "all costs incurred in taking or conducting a response activity, including enforcement costs." MCL 324.20101(ww).

78. Part 201 of NREPA also allows the State to recover "[d]amages for the full value of injury to, destruction of, or loss of natural resources[.]." MCL 324.20126a(1)(c).

79. The purpose of Part 201 of NREPA is to provide for appropriate response activities to eliminate unacceptable risks to public health, safety, or welfare, or to the environment from environmental contamination at facilities within the State of Michigan. MCL 324.20102(c).

80. Part 201 of NREPA authorizes the Attorney General, on behalf of the State, to commence a civil action seeking, inter alia, "[t]emporary or permanent injunctive relief necessary to protect the public health, safety, or welfare, or the environment from the release or threat of release," and a "declaratory judgment on liability for future response activity costs and damages." MCL 324.20137(1).

81. PFOA, PFOS, GenX, PFBS, PFHxS, PFHxA, and PFNA are "hazardous substances" under Section 20101(1)(x) of Part 201 of the NREPA, MCL 324.20101(1)(x).

82. The leaking, emitting, discharging, escaping, leaching, dumping, and disposal of hazardous substances constitute a "release" or "threat of release" as those terms are defined in MCL 324.20101(1)(pp) and 324.20101(1)(ccc).

83. EGLE has established cleanup criteria for certain PFAS for exposure pathways including the groundwater-surface water interface for PFOA and PFOS and groundwater as a source of drinking water for PFOA, PFOS, GenX, PFBS,

PFHxS, PFHxA, and PFNA. MCL 324.20120e(1)(a); MCL 324.20120a(5); Mich Admin Code, R 299.44.

84. As a result of the testing conducted by MPART, the State has discovered PFAS at the Techni-Comp Site.

85. The levels of PFOA and PFOS in groundwater at and around the Techni-Comp Site exceed the concentrations that satisfy the cleanup criteria under Part 201.

86. The levels of other PFAS in groundwater, drinking water, surface water, soil, and sediments at and around the Techni-Comp Site pose an unacceptable risk to the public health, safety, or welfare, or the environment, considering the fate of the material, dose-response, toxicity, or adverse impact on natural resources.

87. The Techni-Comp Site constitutes an area, place, parcel or parcels of property, or portion of a parcel of property where a hazardous substance in excess of the concentrations that satisfy the cleanup criteria for unrestricted residential use has been released, deposited, disposed of, or otherwise comes to be located.

88. MCL 324.20126(1), provides in relevant part:

> Notwithstanding any other provision or rule of law and except as provided in subsections (2), (3), (4), and (5) and section 20128, the following persons are liable under this part:
>
> ***
>
> (a) The owner or operator of a facility if the owner or operator is responsible for an activity causing a release or threat of release.

> (b) The owner or operator of a facility at the time of disposal of a hazardous substance if the owner or operator is responsible for an activity causing a release or threat of release.
>
> ***
>
> (d) A person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of a hazardous substance owned or possessed by the person, by any other person, at a facility owned or operated by another person and containing the hazardous substance.

89. Domtar owned and operated a facility, the Port Huron Mill, and through its operations at the Port Huron Mill caused a release or threat of release of PFAS at the Techni-Comp Site. Specifically, Domtar's operations at the Port Huron Mill generated PFAS-containing waste that Domtar released, causing contamination at the Techni-Comp Site. Domtar also operated the Techni-Comp Site as, on information and belief, Techni-Comp was incorporated in 1998 specifically to accept Domtar waste; Techni-Comp's composting operations through 2020 consisted almost entirely of Domtar's waste; and the compost was intended for Domtar's reuse as feedstock.

90. Alternatively, by contract, agreement, or otherwise, Domtar arranged for the disposal or treatment of PFAS, and/or arranged with a transporter for transport for disposal or treatment of PFAS wastes that contained PFAS at facilities owned by others, and is liable under MCL 324.20126(1)(d).

91. MCL 324.20126a, provides in part:

> (1) Except as provided in section 20126(2), a person who is liable under section 20126 is jointly and severally liable for all of the following:

(a) All costs of response activity lawfully incurred by the state relating to the selection and implementation of response activity under this part.

***

(c) Damages for the full value of injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing the injury, destruction, or loss resulting from the release.

***

(3) The amounts recoverable in an action shall include interest. This interest shall accrue from the date payment is demanded in writing, or the date of expenditure or damage, whichever is later. The rate of interest on the outstanding unpaid balance of the accounts recoverable under this section shall be the same rate as specified in section 6013(8) of the revised judicature act of 1961, Act No. 236 of the Public Acts of 1961, being section 600.613 of the Michigan Compiled Laws.

***

(6) If the department determines that there may be an imminent and substantial endangerment to the public health, safety, or welfare, or to the environment because of an actual or threatened release from a facility, the attorney general may bring an action against any person who is liable under section 20126 or any other appropriate person to secure the relief that may be necessary to abate the danger or threat. The court has jurisdiction to grant such relief as the public interest and the equities of the case may require.

92. MCL 324.20137(1), provides in part as follows:

[I]n addition to other relief authorized by law, the attorney general may, on behalf of the state, commence a civil action seeking one or more of the following:

(a) Temporary or permanent injunctive relief necessary to protect the public health, safety, or welfare, or the environment from the release or threat of release.

(b) Recovery of state response activity costs pursuant to Section 20126a.

> (c) Damages for the full value of injury to, destruction of, or loss of natural resources resulting from the release or threat of release, including the reasonable costs of assessing the injury, destruction, or loss resulting from the release or threat of release.
>
> (d) A declaratory judgment on liability for future response costs and damages.
>
> (e) A civil fine of not more than $10,000.00 for each day of noncompliance without sufficient cause with a written request of the department pursuant to section 20114(1)(h). A fine imposed under this subdivision shall be based on the seriousness of the violation and any good faith efforts of the person to comply with this part.
>
> (f) A civil fine of not more than $1,000.00 for each day of violation of this part. A fine imposed under this subdivision shall be based upon the seriousness of the violation and any good faith efforts of the person to comply with this part.
>
> ***
>
> (k) Any other relief necessary for the enforcement of this part.

93. As a result of releases and threatened releases of hazardous substances for which Domtar is responsible, the State has incurred and is continuing to incur response activity costs, including investigation, monitoring, and enforcement costs at and around the Techni-Comp Site.

94. Releases and threatened releases of hazardous substances for which Domtar is responsible has also caused injury to, destruction of, and loss of the State's natural resources.

95. Due to the injury, destruction, and loss of natural resources, Domtar is liable to the State for the cost of restoring, repairing, replacing, or acquiring the

equivalent of the natural resources injured or acquiring substitute or alternative resources. MCL 324.20126a(4).

96. Accordingly, under Part 201 of NREPA, the State seeks an order compelling Domtar to remediate PFAS contamination at the Techni-Comp Site in addition to holding Domtar liable for all past and future natural resource damages, loss-of use damages, response activity costs, costs of investigation, costs of testing and monitoring, costs of providing water from an alternate source, costs of installing and maintaining an early warning system to detect PFAS contamination before it reaches wells, costs of remediating PFAS and other hazardous substances from natural resources including groundwater, surface waters, soils, sediments, and other natural resources, costs of remediating PFAS and hazardous substance contamination at the Techni-Comp Site, any other costs or other expenditures incurred to address PFAS contamination and injury at and around the Techni-Comp Site, interest on the damages according to law, any applicable civil fines, and any other relief necessary for the enforcement of Part 201 to remedy PFAS and hazardous substance contamination at and around the Techni-Comp Site.

97. The State also seeks a declaratory judgment on Defendant's liability for future response activity costs and damages pursuant to MCL 342.20137(1)(d) including, but not limited to, costs related to providing an alternative water supply for any impacted or threatened drinking water wells that may be identified in the investigation by EGLE, the Michigan Department of Health and Human Services, or county health department officials, costs related to health assessments or health-

effect studies carried out under the supervision, or with the approval of, the Michigan Department of Health and Human Services related to response activities, interest, and oversight of any future response activities that Domtar may perform.

SECOND CAUSE OF ACTION
LIABILITY UNDER PART 17 OF NREPA

98. The State repeats, re-alleges, and incorporates by reference each and every allegation contained in the preceding paragraphs, as though fully set forth herein.

99. Part 17 of NREPA authorizes the Attorney General, on behalf of the State, to maintain a civil action "for declaratory and equitable relief against any person for the protection of the air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction." MCL 324.1701(1). Part 17 of NREPA is commonly referred to as the "Michigan Environmental Protection Act."

100. Part 17 of NREPA applies to pollution of surface water and groundwater contamination.

101. As set forth in more detail above, surface water and groundwater have been contaminated at and around the Techni-Comp Site.

102. Part 17 of NREPA authorizes the Court to grant declaratory and equitable relief, to impose conditions on Defendant to protect the environment. It allows the court to fashion standards in the context of actual problems as they arise in individual cases.

103. Accordingly, the State seeks an order compelling Domtar to remediate PFAS contamination at the Techni-Comp Site in addition to holding Domtar liable for all past and future natural resource damages, loss-of use damages, response activity costs, costs of investigation, costs of testing and monitoring, costs of providing water from an alternate source, costs of installing and maintaining an early warning system to detect PFAS before it reaches wells, costs of remediating PFAS and hazardous substances from natural resources including groundwater, surface waters, soils, sediments, and other natural resources, costs of remediating PFAS and hazardous substance contamination at and around the Techni-Comp Site, any other costs or other expenditures incurred to address PFAS and hazardous substance contamination and injury at and around the Techni-Comp Site, interest on the damages according to law, and any other relief necessary for the enforcement of Part 17 to remedy PFAS and hazardous substance contamination at and around the Techni-Comp Site.

104. The State also seeks a declaratory judgment on Defendant's liability for future response activity costs and damages including, but not limited to, costs related to providing an alternative water supply, costs related to health assessments or health-effect studies carried out under the supervision, or with the approval of, the Michigan Department of Health and Human Services related to response activities, interest, and oversight of any future response activities that Domtar may perform.

THIRD CAUSE OF ACTION
LIABILITY UNDER PART 31 OF NREPA

105. The State repeats, re-alleges, and incorporates by reference each and every allegation contained in the preceding paragraphs, as though fully set forth herein.

106. Part 31 of NREPA, MCL 324.3101, *et seq*., is Michigan's primary water pollution control statute. Part 31 of NREPA has the dual purpose of protecting water quality and regulating water-waste disposal. Under MCL 324.3103(1), EGLE has the duty and authority to "protect and conserve the water resources of the state." "Waters of the state" includes both surface and underground waters.

107. MCL 324.3115(1) provides that the Attorney General may commence a civil action for appropriate relief, including a permanent or temporary injunction, for violations of Part 31 of NREPA or its implementing rules.

108. MCL 324.3109(1) prohibits the direct or indirect discharge of any substance into the waters of the State that is or may become injurious to: (a) "the public health, safety, or welfare"; (b) "domestic, commercial, industrial, agricultural, recreational, or other uses that are being made or may be made of such waters"; (c) "the value or utility of riparian lands"; (d) "livestock, wild animals, birds, fish, aquatic life, or plants or to their growth, or propagation"; and (e) "the value of fish and game." EGLE has also developed water quality standards under Part 31 for three PFAS: PFOA, PFOS, and PFBS.[9]

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[9] Mich Admin Code, R 323.1057; EGLE, *Rule 57 Water Quality Values* https://www.michigan.gov/egle/0,9429,7-135-3313_3681_3686_3728-11383--,00.html

109. "Waters of the state" means groundwaters, lakes, rivers, and streams and all other watercourses and waters, including the Great Lakes within the jurisdiction of the State of Michigan. MCL 324.3101(aa).

110. Through its release and/or arrangement for transport, disposal and/or treatment of PFAS and/or PFAS-containing products in Michigan, Domtar has directly or indirectly caused PFAS to be discharged into the waters of the state, and these discharges are or may become injurious to public health, fish, plants, aquatic life, and other designated uses of the waters of the state and, therefore, these practices are in violation of MCL 324.3109.

111. A violation of MCL 324.3109 is prima facie evidence of the existence of a public nuisance and "may be abated according to law in an action brought by the attorney general in a court of competent jurisdiction." MCL 324.3109(7).

112. The State is entitled to relief requiring Domtar to take such action as may be necessary to abate the injurious PFAS discharged to the waters of the state as defined in Part 31 of NREPA.

113. The State further seeks statutory penalties, fines, and any other relief available under Part 31.

114. In addition, Domtar knew or should have known that it directly or indirectly discharged substances that are or may become injurious to public health, fish, plants, aquatic life, and other designated uses of the waters of the state.

(click on "Download Rule 57 Water Quality Values spreadsheet") (accessed December 16, 2022).

115. As a result, the value and function of the natural resources of the State have been significantly damaged. In addition, the State has incurred, and continues to incur, costs of surveillance and enforcement resulting from the violations of Part 31.

116. Accordingly, the State seeks an order compelling Domtar to remediate PFAS contamination at the Techni-Comp Site in addition to holding Domtar liable for all past and future natural resource damages, loss-of-use damages, costs of compliance and enforcement, costs of investigation, costs of testing and monitoring, costs of providing water from an alternate source, costs of installing and maintaining an early warning system to detect PFAS before it reaches wells, costs of remediating PFAS from natural resources including groundwater, surface waters, soils, sediments, and other natural resources, costs of remediating PFAS contamination at and around the Techni-Comp Site, any other costs or other expenditures incurred to address PFAS contamination and injury at and around the Techni-Comp Site, interest on the damages according to law, any applicable civil fines, and any other relief necessary for the enforcement of Part 31 to remedy PFAS contamination at and around the Techni-Comp Site.

117. The State also seeks a declaratory judgment on Defendant's liability for future costs and damages including, but not limited to, costs related to providing an alternative water supply, costs related to health assessments or health-effect studies carried out under the supervision, or with the approval of, the Michigan

Department of Health and Human Services related to response activities, interest, and oversight of any future response activities that Domtar may perform.

FOURTH CAUSE OF ACTION
FRAUD

118. The State repeats, re-alleges, and incorporates by reference each and every allegation contained in the preceding paragraphs, as though fully set forth herein.

119. In self-declaring its paper sludge as inert, Domtar materially misrepresented that its paper sludge was free of hazardous substances and in compliance with criteria for Part 201, and materially omitted that its paper-sludge contained hazardous PFAS contaminants. Domtar continued making these same material misrepresentations and omissions for decades, including, but not limited to, through continuing representations to the DEQ that its paper sludge continued to be inert and in compliance with Type B criteria for Part 201.

120. Domtar knew that its paper sludge was not inert, free of hazardous substances, or in compliance with Type B criteria for Part 201 because Domtar knew that its paper sludge contained PFAS contaminants and further knew that PFAS are toxic chemicals that pose significant risk to the welfare of the environment and public health.

121. Domtar intended that Plaintiffs rely upon these representations and omissions in authorizing the composting of Domtar's sludge at the Techni-Comp Site, and Plaintiffs did justifiably act in reliance upon them.

122. As a direct and proximate result of the Defendant's acts and omissions as alleged herein, the State seeks an order compelling Domtar to remediate PFAS contamination at the Techni-Comp Site in addition to holding Domtar liable for all past and future natural resource damages, loss-of use damages, response activity costs, costs of investigation, costs of testing and monitoring, costs of providing water from an alternate source, costs of installing and maintaining an early warning system to detect PFAS before it reaches wells, costs of remediating PFAS from natural resources including groundwater, surface waters, soils, sediments, and other natural resources, costs of remediating PFAS contamination at and around the Techni-Comp Site, any other costs or other expenditures incurred to address PFAS contamination and injury at and around the Techni-Comp Site, interest on the damages according to law, any applicable civil fines, and any other relief necessary to remedy PFAS contamination at and around the Techni-Comp Site.

FIFTH CAUSE OF ACTION
NEGLIGENCE

123. The State repeats, re-alleges, and incorporates by reference each and every allegation contained in the preceding paragraphs, as though fully set forth herein.

124. Defendant had a duty to the State to exercise due care in the release and/or arrangement for transport, disposal and/or treatment of PFAS and products containing PFAS.

125. Defendant breached its duty of care in that it negligently, carelessly, and/or recklessly released and/or arranged for the transport, disposal and/or treatment of PFAS, and products containing PFAS. Defendant directly and proximately caused PFAS to contaminate the State's property and its groundwater, surface waters, fish, wildlife, marine resources, and other natural resources, thereby causing a threat to human health and the environment.

126. As a direct and proximate result of the Defendant's acts and omissions as alleged herein, the State and its residents, which the State represents *parens patriae*, have suffered monetary losses and damages in amounts to be proven at trial.

127. As a direct and proximate result of the Defendant's acts and omissions as alleged herein, the State seeks an order compelling Domtar to remediate PFAS contamination at the Techni-Comp Site in addition to holding Domtar liable for all past and future natural resource damages, loss-of use damages, response activity costs, costs of investigation, costs of testing and monitoring, costs of providing water from an alternate source, costs of installing and maintaining an early warning system to detect PFAS before it reaches wells, costs of remediating PFAS from natural resources including groundwater, surface waters, soils, sediments, and other natural resources, costs of remediating PFAS contamination at and around the Techni-Comp Site, any other costs or other expenditures incurred to address PFAS contamination and injury at and around the Techni-Comp Site, interest on

the damages according to law, any applicable civil fines, and any other relief necessary to remedy PFAS contamination at and around the Techni-Comp Site.

SIXTH CAUSE OF ACTION
TRESPASS

128. The State repeats, re-alleges, and incorporates by reference each and every allegation contained in the preceding paragraphs, as though fully set forth herein.

129. The PFAS that was released and/or arranged for transport, disposal and/or treatment by Defendant affecting the State's property and its groundwater, surface waters, fish, wildlife, marine resources, and other natural resources constitutes an unauthorized direct and immediate physical intrusion of property in which the State and/or a substantial number of its residents have exclusive possessory interests.

130. The trespass of PFAS alleged herein has varied over time and has not ceased.

131. PFAS released and/or arranged for transport, disposal and/or treatment by the Defendant continues to be located on or in the State's property and its groundwater, surface water, fish, wildlife, marine resources, and other natural resources.

132. Defendant knew with substantial certainty that its acts would contaminate the State's property and its surface waters and groundwater, fish, wildlife, marine resources, and other natural resources.

133. The State has not consented to and does not consent to the trespass alleged herein.

134. The State brings this claim as the exclusive owner of the property and interests in property, as well as in both its public trustee and *parens patriae* capacities.

135. The State has a duty to protect and restore its natural resources and protect the health and comfort of its inhabitants.

136. In its *parens patriae* capacity, the State may protect its quasi-sovereign interests, including the State's interest in the well-being of its residents, as well as its residents' interest in the integrity of the State's natural resources.

137. Accordingly, the State is bringing this action for the invasion of its exclusive possessory interests in the State's natural resources, in addition to its residents' interest in the integrity of the State's natural resources.

138. As long as the State's property and natural resources remain contaminated due to Defendant's conduct, the trespass continues.

139. As a direct and proximate result of the Defendant's acts and omissions as alleged herein, the State and its residents, which the State represents *parens patriae*, have suffered monetary losses and damages in an amount to be proven at trial.

140. As a direct and proximate result of the Defendant's acts and omissions as alleged herein, the State seeks an order compelling Domtar to remediate PFAS contamination at the Techni-Comp Site in addition to holding Domtar liable for all

past and future natural resource damages, loss-of-use damages, response activity costs, costs of investigation, costs of compliance and enforcement, costs of testing and monitoring, costs of providing water from an alternate source, costs of installing and maintaining an early warning system to detect PFAS before it reaches wells, costs of remediating PFAS from natural resources including groundwater, surface waters, soils, sediments, and other natural resources, costs of remediating PFAS contamination at and around the Techni-Comp Site, any other costs or other expenditures incurred to address PFAS contamination and injury at and around the Techni-Comp Site, interest on the damages according to law, any applicable civil fines, and any other relief necessary to remedy PFAS contamination at and around the Techni-Comp Site.

SEVENTH CAUSE OF ACTION
PUBLIC NUISANCE

141. The State repeats, re-alleges, and incorporates by reference each and every allegation contained in the preceding paragraphs, as though fully set forth herein.

142. Defendant released and/or arranged for transport, disposal and/or treatment of PFAS and/or products containing PFAS in a manner that created or participated in creating a public nuisance that unreasonably interferes, endangers, or injures the property, health, safety, and welfare of the general public and the State of Michigan.

143. Defendant, by its negligent, reckless, and willful acts and omissions as set forth above, have, among other things, knowingly released PFAS contamination in State natural resources and property throughout Michigan, having concealed the threat, thereby causing and threatening to cause PFAS contamination of the State's natural resources and property. Defendant's PFAS continue to spread in and contaminate more State natural resources and property throughout the State.

144. Defendant has caused, contributed to, maintained, and/or participated in a public nuisance by substantially and unreasonably interfering with, obstructing and/or threatening, among other things, (i) Michigan residents' common public rights to enjoy State natural resources and property free from unacceptable health risk, pollution, and contamination, and (ii) the State's *parens patriae* and public trust abilities to protect, conserve, and manage the State's natural resources.

145. Defendant has, at times relevant to this action, caused, contributed to, maintained, and/or participated in the creation of such public nuisance. Through its acts and omissions, Defendant knowingly released PFAS into the environment, including groundwater and other natural resources, through its ownership, operation, and/or control of the Techni-Comp Site.

146. Defendant knew, or in the exercise of reasonable care should have known, that the introduction and use of PFAS would unreasonably and seriously endanger, injure, and interfere with the ordinary comfort, use, and enjoyment of natural resources and property relied upon by the State and its residents, as it has.

147. Defendant has caused, contributed to, maintained, and/or participated in a public nuisance that has caused substantial injury to the State's natural resources and property, in which the public has interests represented by and protected by the State in its trustee and *parens patriae* capacities. Defendant's conduct also threatens to cause substantial additional injury to the State's natural resources and property. The public nuisance has caused and/or continues to threaten to cause substantial injury to property directly owned by the State.

148. The contamination of the State's natural resources and property with PFAS is ongoing. PFAS continue to threaten, migrate into, and enter the State's natural resources and property, and cause new contamination in new locations.

149. As a direct and proximate result of Defendant's acts and omissions, the State's natural resources and property are contaminated with PFAS.

150. The State has incurred, is incurring, and will incur investigation, remediation, cleanup, restoration, removal, treatment, monitoring, and other costs and expenses related to contamination of the State's natural resources and property.

151. Defendant's acts and omissions have caused and/or threatened to cause injuries to the State's natural resources and property that are indivisible.

152. As a direct and proximate result of the Defendant's acts and omissions as alleged herein, the State seeks an order compelling Domtar to remediate PFAS contamination at the Techni-Comp Site in addition to holding Domtar liable for all past and future natural resource damages, loss-of-use damages, response activity

costs, costs of investigation, costs of compliance and enforcement, costs of testing and monitoring, costs of providing water from an alternate source, costs of installing and maintaining an early warning system to detect PFAS before it reaches wells, costs of remediating PFAS from natural resources including groundwater, surface waters, soils, sediments, and other natural resources, costs of remediating PFAS contamination at and around the Techni-Comp Site, any other costs or other expenditures incurred to address PFAS contamination and injury at and around the Techni-Comp Site, interest on the damages according to law, any applicable civil fines, and any other relief necessary to remedy PFAS contamination at and around the Techni-Comp Site.

EIGHTH CAUSE OF ACTION
UNJUST ENRICHMENT

153. The State repeats, re-alleges, and incorporates by reference each and every allegation contained in the preceding paragraphs, as though fully set forth herein.

154. By common law and the principles of justice, a person may not be inequitably enriched by receiving a benefit at another's expense.

155. The principles of unjust enrichment are violated where a party steps in to address a duty owed by another to the public to protect the public from an urgent threat to their health, safety, or general welfare and pays expenses that rightfully should have been paid by the other person.

156. To address PFAS and hazardous substance contamination in the State of Michigan in order to protect its residents and natural resources, the State has incurred, and continues to incur, substantial costs in investigating and responding to PFAS contamination at the Techni-Comp Site.

157. Defendant has received a benefit from the State's response activities because Defendant should bear the cost of investigating and cleaning up the PFAS and hazardous substance contamination caused by or related to the sale, use, and disposal of PFAS and PFAS-containing products at the Techni-Comp Site.

158. The principles of justice and established common law require Defendant to reimburse the State for performing a duty properly owed by Defendant as a result of its conduct, as alleged herein.

REQUEST FOR RELIEF

WHEREFORE, Plaintiffs seek an order compelling Defendant to remediate PFAS contamination at the Techni-Comp Site and/or monetary damages. Specifically, Plaintiffs request that this Court:

A. Order Defendant to pay the State compensatory damages arising from PFAS contamination and injury of State natural resources and property, including groundwater, surface waters, drinking water supplies, biota, wildlife (including fish), and their associated soils, sediments, and uses, and other State natural resources and property, according to proof, including, but not limited to:

(i) natural resource damages;

(ii) loss-of-use damages;

(iii) past and future response activity costs;

(iv) costs of investigation;

(v) costs of compliance and enforcement;

(vi) costs of testing and monitoring;

(vii) costs of providing water from an alternate source;

(viii) costs of installing and maintaining an early warning system to detect PFAS before it reaches wells;

(ix) costs of remediating PFAS from natural resources including groundwater, surface waters, soils, sediments, and other natural resources;

(x) remedial action at and around the Techni-Comp Site, including cleanup of PFAS contamination;

(xi) any other costs or other expenditures incurred to address PFAS contamination and injury at and around the Techni-Comp Site; and

(xii) interest on the damages according to law;

B. Declare that Domtar is liable under Part 201 for causing the release or threat of release of hazardous substances from its facility and that such actions require Domtar to conduct response activities under Part 201 to address the exceedances of criteria and unacceptable risks to public health and the environment;

C. Declare that Domtar arranged for the transport, disposal and/or treatment of a Part 201 hazardous substance at a facility owned or operated by another person, and that such actions require Domtar to conduct response activities

under Part 201 to address the exceedances of criteria and unacceptable risks to public health and the environment;

D. Order Domtar to prepare and submit for approval to EGLE, for review and comment, all necessary reports or plans, and to perform all further response activities necessary to protect the public health, safety, and welfare or the environment from a release or threat of a release of PFAS contamination resulting from Domtar's actions, releases or threatened releases in compliance with Part 201;

E. Order Domtar to implement a program of ongoing public outreach and information-sharing efforts to provide effective communication to the public and local units of government regarding the status and progress of response activities related to Domtar's releases of PFAS into the environment;

F. Order Domtar to institute protective measures to prevent endangerment to human health and the environment including, but not limited to: (a) sampling for PFAS in drinking water using U.S. EPA-approved Method 537 version 1.1, as written, including any modifications allowed therein, or any subsequent U.S. EPA-approved method; (b) connection to municipal drinking water supplies; and (c) provision and maintenance of drinking water treatment systems, including regular sampling;

G. Order Domtar to complete the investigation and characterization of the PFAS released into the environment from its manufacturing processes and disposal practices, including potential releases via air deposition, and analyze the impact of

such releases to drinking water wells, surface waters, and stream biota, subject to the approval of the State;

H. Declare that Domtar's unpermitted discharges of PFAS into surface water and groundwater are violations of Part 31 of NREPA;

I. Grant injunctive and equitable relief to compel Defendant to abate the continuing nuisance and trespass by enjoining the further disposal, use, sale, distribution, and discharge of PFAS in the State and compelling Defendant to remove PFAS from State natural resources and property;

J. Impose statutory penalties, fines, and any other relief available under Parts 201 and 31 of NREPA.

K. Require Domtar to pay the State's costs (including reasonable attorney fees, court costs, and other expenses of litigation);

L. Order Domtar to pay any prejudgment interest that has accrued on amounts owed to the State; and

M. Order any other and further relief as the Court deems just, proper, and equitable.

JURY DEMAND

Plaintiffs demand a trial by jury of all issues so triable as a matter of right.

Respectfully submitted,

Dana Nessel
Attorney General

/s/ Polly A. Synk
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Dated: December 16, 2022

EXHIBIT A

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:

WASTE MANAGEMENT DIVISION
PO BOX 30241
LANSING MI 48909-7741

March 17, 1998

Ms. Christine J. Lupu, Environmental Engineer
E.B. Eddy Paper, Inc.
P.O. Box 5003
Port Huron, Michigan 48061-5003

Dear Ms. Lupu:

This is in response to your letter dated February 10, 1998, notifying the Michigan Department of Environmental Quality (DEQ) of your intent to reuse the paper fiber waste (Material) generated at the E.B. Eddy Paper, Inc. (E.B. Eddy) facility located in Port Huron, Michigan. Your notification was being made pursuant to Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and its administrative rules. Your letter states that the Material will be mixed with yard wastes at a composting facility owned by Techni-Comp Environmental.

Since E.B. Eddy had previously notified the DEQ, in a letter dated June 3, 1996, per Rule 114(2)(g), that their Material met the inert criteria contained in Rule 115, then they have the right to self-declare their wastes as inert. You have fulfilled your obligations pursuant to Rule 114(2)(g). You should realize that any discharges to the environment (which include ground water, surface water, air, etc.) from the composting process may subject E.B. Eddy to potential liability. In addition, E.B. Eddy shall be responsible for ensuring that the Material continues to meet the inert criteria contained in Rule 115.

E.B. Eddy shall be responsible for preparing a report by January 31 of each year, which details the volume of Material that was reused in the previous year to produce compost. The report should be sent directly me. If you have any questions regarding this approval, please contact me.

Sincerely,

Duane Roskoskey

Duane Roskoskey
Environmental Quality Specialist
Solid Waste Program Section
Waste Management Division
517-335-4712

cc: S. Bentley, E.B. Eddy Paper, Inc.
Mr. Charlie Dally, Techni-Comp Environmental
Ms. Joan Peck, DEQ
File