

Confederated Tribes and Bands Yakama Nation

Via Electronic Mail

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October 20, 2023

Mady Lyon Stephanie Ogle Industrial Section, Solid Waste Management Program Washington State Department of Ecology PO Box 47600 300 Desmond Dr. SE Lacey, WA 98503

RE: Yakama Nation Comments on the Revised (March 31, 2023) Agency Review Draft Remedial Investigation Work Plan for the Upland areas as the Georgia-Pacific Camas Mill Site, Camas, Washington

Dear Ms. Lyon and Ms. Ogle:

Yakama Nation has prepared these comments on the March 31, 2023 Revised Agency Review Draft Remedial Investigation Work Plan (RIWP) for the Upland Area Cleanup Unit of the Georgia Pacific Camas Mill Site (FSID# 66765272, CSID# 15156, prepared by Kennedy Jenks for Georgia-Pacific Consumer Operations, LLC. These comments were prepared by Yakama Nation Fisheries staff.

Background

The Georgia-Pacific Consumer Products (GPCP) Camas Mill Site is located on the historical Columbia River Paper Company property and encompasses the historic pulp and paper mill operational areas, the Camas Business Center, and Lady Island, which have known or threatened and releases to the upland areas of the site in downtown Camas, Lady Island, and riparian and in-water (Washougal River, Camas Slough, and Columbia River) environments. This RIWP only addresses upland areas of the Site; in-water areas will be addressed separately. The initial draft of the RIWP was submitted to Ecology on January 3, 2022 (Kennedy Jenks, 2022). Ecology and Yakama Nation provided comments on the Agency Review Draft RIWP on November 4, 2022 (Ecology, 2022). Georgia-Pacific provided responses in a response to comment (RTC) letter dated 3 February 3, 2023 (GRES, 2023). This Revised Draft RIWP for Upland Areas incorporates changes outlined in Ecology's comment letter and Georgia-Pacific's RTC letter.

Even though this phase of remedial investigation is focused on the upland portion of the site, it needs to be noted that the site is situated at the confluence of the Washougal and Columbia rivers at the Camas Slough. The Washougal River and its tributaries provide critical habitat for Endangered Species Act (ESA)-listed and tribally important species including Chinook salmon, coho salmon, chum salmon, steelhead trout, and Pacific lamprey. The tidally influenced Lower Washougal River, including Camas Slough, provides important floodplain, off-channel and instream habitat for rearing, foraging, migrating, spawning, and adult habitat for salmon, steelhead, lamprey, and other aquatic species, such as sea-run cutthroat trout. The Washougal River watershed, including the Lower Washougal River, has been identified for restoration and protection actions to restore floodplain and riparian function and instream habitat diversity to support recovery of Washougal River and Columbia River salmonids. The Lower Washougal River, around the site has been identified as an area where recovery actions would result in the greatest benefits for recovery of salmonids.

General Comments

1. Site History. From the information presented in the revised RIWP, more attention is given to recent historical information. To better inform a thorough and complete RIWP, a complete review of historical and current operations and areas associated with the present and historical use of the site should be conducted. The complete area to be investigated should be clearly defined based on the facility's history and areas owned and operated by the potential liable party (PLP), predecessor, or related entities. The historical aerial images, historical maps, and other records (like those from the Washington State Pollution Control Board) should be included and used to identify areas (including properties no longer owned by PLP or related entities) where any release or threatened releases of a hazardous substance, recent or historical, may have occurred (for example some historical information can be found on Figure 1 and Figure 2 showing Sanborn Fire Insurance Maps from July 1922). Historical site locations are relevant to this work and historical changes of the facility should be included in the RIWP. The aerial extent of the full area to be investigated in the RIWP should comprehensively include both upland and in-water areas associated with the facility.

Many properties currently held by Georgia-Pacific Corporation (or the Fort James Camas LLC or James River II Inc. are entities believed to be associated with the Georgia-Pacific Corporation) may not be included in the proposed RIWP. Please see the accompanying table of parcels (Table 1), which represents some (not comprehensive) current properties identified as owned by Georgia-Pacific Corporation or a related entity. It should be clear and discussed why these parcels are not included in the current scope of investigation. Any historical properties associated with the facility, even if not presently owned by GPCP, should also be discussed.

The site historical summary should also specifically include any areas where log rafting, dredging, or any other overwater work occurred. Please see attached Figure 3, 1955 aerial image showing extent of log rafting including into areas west of Ackerman/Sand Island. More recent log rafts can be viewed on Google Earth images from 1990. Areas that were landfilled or where dredge spoils were placed should be clearly identified and a history of material placement and origin should be included. The Washington Water Pollution Control Commission records/archives should be consulted for detailed early studies of the site, information about historical outfalls (trail races/wastewater, log flumes), and wastewater discharge and handling prior to the construction of the wastewater treatment facility (mid-1950s?), if GPCP does not have these files directly or has not provided them to Ecology.

2. Operable Units Designations and Bifurcation of the MTCA Site. Ecology has allowed for the bifurcation of the site into two separate operable units (OUs) with cleanup proceeding on separate timelines and deliverables for each OU. Bifurcated sites frequently under characterize the riparian areas that are the nexus where the uplands meet the in-water areas. This area is key to understanding contaminant transport from the upland to the in-water areas. The Upland and In-Water remedial investigation work plans should provide clarity and adequate detail on how these OUs are defined (aerial extent) and how they will be appropriately characterized so that transport mechanisms and pathways are evaluated holistically, rather than separately as indicated in the RIWP. Clarity is needed on how the spatial extent of the uplands

was determined and a preliminary extent of in-water areas to be investigated should be defined. Once these areas are appropriately articulated, riverbanks, beaches, and nearshore areas should be sampled and included in the Upland OU scope of work. To evaluate the full scope of impacts from operations, the historical extent of land and in-water use needs to be defined.

- 3. In-Water RIWP Schedule. There is a high probability of impacts to riparian and in-water areas from historical and more recent contaminant releases and discharges from the site. We urge an expedited and defined schedule for characterization and delineation of these impacts. From the current RIWP timeline, it appears that the In-Water RIWP will be completed sometime in 2025 through 2026. It is imperative that this stays on schedule and a more detailed schedule be developed. It should not wait for completion of the upland remedial investigation, but any available information should be used to inform and advance in-water investigation efforts.
- 4. Zoning, Land Use, and Surrounding Areas. Please provide figure(s) that shows the land owned or leased by GPCP or any affiliated entity (including parcels where ownership transfer has already occurred), zoning of land owned or leased by GPCP, and zoning of adjacent properties not owned or leased by GPCP (or any related entity). For any leased areas, please include corresponding lease numbers. Please identify the upland OU area as including all lands owned or leased by GPCP or any predecessor. Please indicate the status of all in-water areas (zoning, leases, areas of current and historical GPCP occupation or use including by any predecessor) including areas that were used for historical log storage in the Camas Slough and the Columbia River in both Washington and Oregon. Please provide a table summarizing all GPCP or related entity holdings (including properties already transferred), land use designations, parcel numbers or property account, area, land type (upland or in-water lands), and wetland inventory and class.
- 5. Land Use and Screening Levels. The revised RIWP assumes industrial land use in perpetuity. The paper mill facilities are located on valuable riverfront property in a vibrant downtown area, surrounded by businesses, residents, and important upland/riparian/aquatic habitat. Recent GPCP operations have been significantly altered and reduced and the RIWP discusses plans for demolition of large portions of the property but does not discuss potential future use of those areas. The Yakama Nation does not agree that only industrial zoning should be considered for future land use. Screening levels should include restricted and unrestricted land use. This should include, but not be limited to, screening levels for residential, terrestrial ecological receptors, groundwater as a drinking water, and for the protection of surface water and sediment. As part of the process for sites cleaned up under MTCA, a Terrestrial Ecological Evaluation (TEE) should be conducted to ensure protection of terrestrial receptors, including ESA-listed and tribally important species of native plants, soil biota, and wildlife, unless an exclusion can be documented and demonstrated. Eco-risk derived screening levels should be considered until it has been demonstrated that they do not apply. For upland areas with surface water and sediment including wetlands, sediment management standards also may apply.
- 6. **Applicable or relevant appropriate requirements (ARARs)**. Please include a summary table of all applicable ARARs for the facility response actions. This will support the development of appropriate site-specific screening levels for site COPCs. Please include any ARARs that contain narrative or non-numeric requirements in addition to those with numeric criteria.

- 7. Chemicals of Potential Concern and Proposed RIWP Analyte Lists. Due to the length of time and intensity of chemical use at and associated with this facility, all chemicals of potential concern (COPCs) should be analyzed in all media throughout all areas associated with the facility. At this point in the remedial investigation process, since little data is available and the full potential list of COPCs is not well established, industry standard practices would suggest that full analyte lists for each chemical family should be analyzed for the initial investigation(s) until adequate information on the nature and extent is available to identify COPCs. It will be more appropriate to pare down potential analyte lists once more information is known about the sitewide distribution of chemicals and that potential transport pathways have been thoroughly evaluated. In addition, analyte lists should be determined based on types of products used, potential chemical mixtures, known chemicals from production and maintenance processes, and potential related degradation and waste products.
 - a. Sites with petroleum hydrocarbon contamination should use the analyte list as shown in Table 7.2 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites*¹. If an analyte is not included in the proposed RIWP, the rationale for its exclusion should be noted.
 - b. Because paints have been used, mixed, stored, and applied at the site, chemical specific analytes should be included. COPCs associated with paints should also include volatile and semivolatile compounds, heavy metals including hexavalent chromium, and PCBs.
 - c. For Per- and polyfluoroalkyl substances (PFAS) please follow MTCA requirements and use the June 2023 Ecology published guidance document².
 - d. For wood waste areas along waterways or in areas where wood waste has been used as fill material to create land, please reference applicable materials from Ecology Guidance document for Wood Waste Cleanup³
- 8. Remedial Investigation Scope Inclusion of Roads and Railways. The Revised Upland OU RIWP discussion and figures divide the Upland OU into six Site Operational Units (SOUs) but excludes all transportation Rights-of-Way (ROWs) without providing any discussion or rationale. ROWs are part of the site, appear to be unpaved historically (based on aerial photos), contain structures like pipelines and conduit related to the movement of wastes, wastewater, other hazardous substances, and have high potential for historic releases and impacts. The RIWP must include investigation of these areas and discuss any rationale for access issues or exclusion.
- 9. Remedial Investigation and Site Access. This RIWP proposes investigation in limited areas of the site due to perceived access issues (RIWP Figures 5 and 6), including areas that are inactive or planned for demolition. It is not common and typically not appropriate to limit sampling due to normal site activities or to limit areas proposed for demolition. In addition, the location and sampling density are extremely sparse and not appropriate given the size of the site. Prior to any demolition, the site should be inspected and any observed environmental

¹ Washington State Department of Ecology (2016). Guidance for Remediation of Petroleum Contaminated Sites. Toxics Cleanup Program. Publication No. 10-09-057. Revised. June.

² Washington State Department of Ecology (2023). *Guidance for Investigating and Remediating PFAS Contamination in Washington State*. Toxics Cleanup Program. Publication No. 22-058. June.

³ Washington State Department of Ecology (2013). Wood Waste Cleanup, Identifying, Assessing, and Remediating Wood Waste in Marine and Freshwater Environments. Guidance for Implementing the Cleanup Provisions of the Sediment Management Standards, Chapter 173-204 WAC. Publication No. 09-09-044. September.

impacts or areas of potential impacts (e.g., areas with fuel piping or other chemical distribution system) should be noted and thoroughly documented prior to demolition. If demolition occurs prior to collecting this environmental information, the spatial information will be lost along with the ability to conduct a targeted investigation. This would result in needing a higher density of samples to fully assess nature, extent, and magnitude of any potential releases. It is not unusual for the density of borings for remedial investigations to require 20 to 40 borings or more per acre to determine the vertical and horizontal distribution of subsurface contamination. We do not feel that the number and density of borings and groundwater monitoring wells is adequate for the potential size of this site.

Environmental inspections for all planned demolition should be completed prior to demolition. Other specialized coring and directional drilling equipment that can be used to gain access through hard surfaces, tighter spaces, and under areas that are active or not directly accessible, whether they are indoors or outdoors. In addition, samples could be collected immediately adjacent to features or areas where access is still limited to evaluate if the area has contamination, rather than not sample at all.

No timeline or schedule is provided for when those inaccessible areas will become. Please include an accessibility schedule for when active areas, areas designated for demolition, and other restricted areas will become accessible for completion of remedial investigation activities. RI planning for those areas designated as inaccessible should be completed within this iteration of the RIWP, not at some undefined future time,

It is noted in Section 4.3 that areas marked for demolition will not remove foundation, paved areas, or any subsurface features. If there's no modification of surface and subsurface features, why are remedial investigation actions on hold in these areas?

- 10. **Remedial Investigation Scope General Approach.** In general, the revised RIVVP remedial investigation scope of investigation and approach is not appropriate for a site with extensive chemical use over a long operational history. It appears that the PLP can organize environmental investigations on a smaller scale and the more recent targeted environmental work shows that they can work with consultants and develop a work product that meets general industry standards. However, the scope and approach for this remedial investigation does not show the same level of effort and does not meet industry standards given the scope of the site and its history. A detailed targeted approach that focuses on all potential sources or a high-resolution gridded approach needs to be employed at an appropriate scale both horizontally and vertically to evaluate the entire site including areas that are currently outside the current prosed footprint for investigation. The objectives of the standard of care for a remedial investigation effort to evaluate nature, extent, and magnitude of impacts.
- 11. Wood Waste. Extensive wood waste is known to be present in some of the shoreline and upland areas, specifically those adjacent to waterways. Log rafting, sawmill, debarking, chipping, hog fuel storage, and other related activities may have left extensive impacts from wood waste. Please clarify how this wood waste will be characterized (potential chemical impacts) and evaluated (aerial and vertical extent) and what the planned (re)use or disposal of this material will be. Please use Ecology's wood waste guidance to inform characterization and subsequent evaluation, specially looking at the ecological impacts as part of the remedial investigation. In

addition, methane and hydrogen sulfide may be present and impacts from these materials and others should be considered for investigation in soil gas.

- 12. Potential Impacts to Resident Fish and the Protection of Human Health. With the long history of chemical use at the site including carcinogenic and bioaccumulative compounds, the likelihood of chemical impacts into the adjacent waterway is high. Because of the potential risk and impacts to aquatic organisms and human health, we recommend a survey of and an immediate sampling of resident fish tissue right away. An understanding of chemical concentrations in fish tissue will help develop fish consumption advisories, if needed, and outreach materials to protect the community members consuming resident fish and shellfish. Delaying this type of sampling and any resulting needs for public outreach with knowledge of the site history and existing site puts the community at greater risk. Dioxins/furans have been measured in site sediments with maximum TEQs of 16.53 nanograms per kilogram (ng/kg) (ND=0) and 16.56 ng/kg (ND=1/2DL). Total PCB Aroclors have maximum concentration of 92 micrograms per kilograms (µg/kg) in the slough sediments (Please see Appendix B, Table B-3, 2009 sediment data from Camas Slough pdf pages 385-886,391).
- 13. Natural resources and ecological receptors. The Yakama Nation is concerned about changes to aquatic habitat that may negatively affect ESA-listed and treaty-protected species and resources. Our concern goes beyond individual elements of remedial design to the overall quality of habitat that will be present following remediation, including riparian, riverbank and aquatic habitat that supports salmonids and other tribally important species such as lamprey and sturgeon. Habitat and species present and near the site should be considered early and throughout all phases of the cleanup process, but well before remedial design to allow for the overall improvement of the environment including laying the foundation for future mitigation and restoration efforts.

Because of the importance of habitat at and in the vicinity of the project site (riparian and nearshore areas including floodplain and wetlands, shallow water, beach, shoreline, and upland areas) and the need to collect this data to inform remedial decisions and design phases so that future restoration is not precluded, at a minimum, evaluations should be initiated during the investigation phase of cleanup and include the following:

- a. Habitat surveys to document presence of and expected use by terrestrial and aquatic species that include characterization of the historic and existing conditions.
- b. Evaluation and assessment of expected climate change impacts to the project area and Lower Washougal River, including the Camas Slough.
- c. Consideration of habitat-based approaches to allow for living shorelines as well as reconnecting historic floodplain to accommodate future sea-level rise and shifting habitats and species use due to climate change.
- d. Coordination and collaboration with salmonid habitat experts including those at the local, state, federal and tribal level.
- e. Removal of all debris, pilings and structures from shoreline and in-water areas.

Habitat information needs to be included in the RIWP and field observations on biota and habitat conditions should be collected during field investigations. Additionally, any ESA-listed and tribally important species expected to be in the area during cleanup and return to the area once cleanup and restoration occurs should be noted. Areas identified as being important for the

recovery of salmonids or identified for restoration in or adjacent to the project site should be documented. For example, in the early to mid-2000s restoration projects, funded by Washington State Salmon Recovery Board, were conducted in the lower Washougal River to restore floodplain and instream habitat for ESA-listed and tribally important salmonid species. In 2022, the Washougal River system received millions of dollars in federal funding through the National Oceanic and Atmospheric Administration (NOAA) to remove a dam on a tributary to the West Fork Washougal River to support recovery of the Washougal River watershed's Columbia River salmon and steelhead populations.

14. **Remedial Investigation Report.** The Remedial Investigation report is only minimally discussed that it will be prepared in the RIWP, but the scope of that report is not included in the work plan. Please include a section of the RIWP that discusses how the Remedial Investigation report will be organized and what it will contain and how, if the investigation is done in a step-wise manner, how reporting will be done in a cohesive manner.

Specific Comments

- I. In the List of Abbreviations and Acronyms, please include ASB.
- 2. In Section I Introduction and Background, the area to be investigated is not very clear. In the first paragraph, an address is referenced and figures I and 2 are referenced to indicate the location of the Site, but figures I and 2 only show the upland operational units (limited to only some of lands owned and used by the PLP). The full remedial investigation area is not well defined. The area to be investigated should include all properties, ROWs, in-water areas, and all areas historically used by and potentially impacted by potential and threatened releases of hazardous substances by the PLPs (including any predecessors) from any site activities. Please update reference figures that show the full area to be investigated (in both the uplands and inwater areas). Once the full area is referenced, then it is appropriate to identify the scope of RIWP that is limited to the Upland OU including shorelines, beaches, and other upland areas at the interface of the Upland and In-Water OUs.
- 3. In Section 2.1, please add a summary of how the site is defined. Please include ownership information (including ownership history) for the facility and all associated parcels, parcel numbers, Quarter Section Township and Range, leased areas and identification numbers, and description of the in-water areas that were used by the facility during the operation history of GPCP or any of its predecessors. A corresponding table should be provided.
- 4. In Section 2.1, please add a section that describes the historical use of the area by tribal entities and if cultural resources are expected to be encountered during remedial investigation activities. Please identify any areas with a high probability of archaeological impacts. Please also include a discussion whether threatened or endangered species occur within or adjacent to the facility. Please include a discussion of the lands surrounding the facility. Please include any open spaces, parks, or other undeveloped areas that may be used by wildlife. Please include approximate area in acres.
- 5. As indicated in Section 2.1.3 and 2.1.4., geologic, hydrologic, and hydrogeologic features should be shown in figures. Please include figure(s) that show soil types, geologic formations, geologic features such as faults, location of water bodies and streams including historical and current water way configurations. For example, Blue Creek was a free-flowing creek, but over the

years, it was built upon and channelized. The known historical channel and present configuration should both be shown. Other areas of upland surface water and wetland areas should also be identified in figures.

- 6. Please add a section prior to Section 3.5 that summarizes and identifies previous investigations conducted at the site. There isn't adequate information presented in the RIWP to evaluate the data gaps assessment completed for each of the Site Operational Units (SOUs). Please ensure that the source materials (and how the complete reports can be obtained) and how the data quality objectives align for each of the investigation areas to demonstrate how that data advances the understanding of nature and extent and identification of site COPCs as part of this remedial investigation effort.
- 7. In Section 3.5 for each area, site media and COPCs should be considered for all areas. If it is believed that adequate data (with appropriate sampling and laboratory methods, method reporting and method detection limits, and other sampling or analytical protocols) of appropriate quality (meets RIWP data quality objectives and quality assurance/quality control metrics) is available from previous investigations to eliminate a class of COPCs or media type, then the demonstration must be made relative to appropriate screening levels. The details of the analysis must be shown through a discussion of how previous work contributes to the understanding of nature and extent. If this case cannot be made to the standard for a MTCA remedial investigation with current screening/cleanup levels, then the area/chemical class/media must be carried forward in the RIWP and be included in the proposed work plan and Sampling and Analysis Plan (SAP).
 - a. In Section 3.5.1.1.2., a full inventory of chemicals and materials historically and presently stored in the Dock Warehouse should be included in the Upland OU RIWP. The investigation should evaluate the full site COPCs list in all areas.
 - b. In Section 3.5.1.1.3., the proposed investigations for the Second Windmill only includes groundwater investigations. The rationale for excluding soil is not discussed. Soil investigations should only be excluded where detailed rationale and demonstration of adequate understanding of nature and extent can be provided. This same concern applies to many other areas of the site discussed throughout Section 3.5 (e.g., OA-B2 Power House, Sulfite Pulp Bleaching Area, K4 & K5 Bleach Plants, Machine Shop, Converting, Mill Modernization Debris Area, Waste Handling Area and Fueling Station, Car Barn/Paint Shop/UST Area).
 - c. In Section 3.5.1.1.4., please describe the activities, chemical uses, or equipment containing chemicals of the Cat Shop. Please specifically describe what a Cat Shop is.
 - d. In Section 3.5.2.1.6., this RIWP does not appear to include efforts to locate or investigate pipelines associated with the No. 5. Power Boiler. This same concern applies to many other areas of the site with pipelines that are discussed throughout Section 3.5. This concern also applies to drains, ditches, conveyances, sewers, and utilities (current and historical).
 - e. In Section 3.5.2.1.7., the proposed investigations for the No. 6 Substation only includes soil investigation. The rationale for excluding groundwater is not discussed. An investigation of groundwater should only be excluded where detailed rationale and a

demonstration of how previous work contributes to the understanding of nature and extent of site COPCs. This same concern applies to many other areas of the site discussed throughout Section 3.5 (e.g., No. 1, 7, 8, 9, 10 Substations, Lady Island Former Waste Ditches).

- f. In Section 3.5.2.5., more information is needed on chemical uses in the Specialty Minerals Area. The analysis of soil and groundwater should include all COPCs.
- g. In Section 3.5.4.1.3, there should be a discussion on how waste effluent was disposed of prior to the construction of the wastewater treatment plant. The RIWP should identify the location of wastewater conveyances, flumes, tail races, ponds, and solids disposal areas.
- In Section 3.5.3.2.3. Buried Materials Area, the inert waste closure report documentation should describe when and how the landfill was closed and any construction details of a cap and monitoring required as part of the closure process. If specific institutional controls were required for this area, they should be identified. Please include information about when the incinerator was active, what pollution control measures were used over time and how waste from the incinerator was handled and disposed of (bottom ash, fly ash, and any other waste materials).
- i. In Section 3.5.5.2, solvent potentially released from the Former Laundromat and Dry Cleaner could affect the redox potential and mobilization of metals. Metals and all site COPCs should be included in this area and all areas of the CBC.
- 8. In Section 4.1 Preliminary Conceptual Site Model, the section identifies that COPCs will be broken out into two groups: OU-specific COPCs and Site-wide COPCs. We do not agree that this is an appropriate approach. For sites with an extensive operational history, such as the mill site, OU-specific COPCs will have likely migrated site-wide. All COPCs should be considered as site wide COPCs until more information is known about the nature, extent, and magnitude of impacts at the site.
- 9. In Section 4 Preliminary Conceptual Site Model, the screening levels proposed are Method A and B based on impacts to only soil and groundwater. The preliminary conceptual site model (CSM) must evaluate the whole MTCA site and would include both the Upland OU and the Inwater OU. It is highly probably that impacts from the uplands (soil and/or groundwater) would have migrated to the surface water and sediments and so those cleanup levels should be applicable when evaluating screening levels for the Upland OU. Please ensure that the preliminary CSM is complete and evaluates all potential pathways at the site.
- 10. In Section 4.1 Constituents of Potential Concern, due to the length of history of chemical use at the facility, limited presentation of historical information on use and practices, all COPCs should be considered site wide.
- 11. In Section 4.3 Potential exposure Pathways, the discussion regarding the solubility of COPCs is not relevant. Due to the long history of the site, demolition of previous buildings, landfilling and onsite disposal, various chemical handling and waste management practices, the distribution of COPCs is and has not been limited to natural processes and is not limited by solubility.

Terrestrial ecological risk should be evaluated because the GPCP properties do contain large areas of open space and receptors are likely present. Ecology will need to evaluate the properties associated with the PLP relative to those of the mill area to determine what areas are considered for evaluation as part of the remedial investigation. Properties within 500 feet of the "site"; however this is defined, must also be considered. There are significant open space, wetlands, and forested areas both on Lady Island and within the upland areas of the site that would likely provide habitat for potential ecological receptors. A Terrestrial Ecological Evaluation (TEE) should be conducted and guidance from Ecology may needed to help define the site and surrounding areas for evaluation through the TEE, if through this process site-specific ecological risk may need to be fully evaluated.

Groundwater may not be currently used at the site, but all groundwaters of Washington state are a presumed natural resource for protection that should be considered for future use. Future potential pathways should also be evaluated. At present, since the gradient of groundwater and flow directions are not known, there is not adequate information to ascertain whether groundwater is directly impacting potential off-site receptors or impacting air quality off site due to the presence of volatile compounds or wood waste degradation gases if present. Without additional information, groundwater pathways should be carried forward and further evaluated.

The presence of and migration of soil gases (like methane and hydrogen sulfide) in addition to industrial airborne vapors, in areas where wood waste may be decomposing should be considered.

Off-site receptors (human health and ecological) should be considered until adequate information is collected to demonstrate risks for those receptors are not present at the site. Human health should also be considered for the exposure to surface water, sediment, and the consumption of fish and shellfish, including potential tribal users.

- 12. In Section 4.4 Initial Data Gaps, the text states that initial data gaps should be addressed prior to other data gaps at the Site. It has not been demonstrated that pre-existing data is useful for evaluating current data quality objectives and analytical needs for the site-wide remedial investigation. A holistic approach to evaluating the nature, extent, and magnitude of impacts at the site should be the goal. The rationale for areas that are deemed inaccessible do not meet industry standards for those areas truly being inaccessible. We are concerned that this approach, without clear schedules and a plan access, will result in overly complicated and extended process with data collected over a very long period and ultimately, resulting in delays in implementing remedial actions necessary for the protection of human health and the environment.
- 13. In Section 5, the Proposed groundwater investigations are limited to 4 quarters. It is likely that a second or additional RI phases will be needed to delineate the site and address inaccessible or newly demolished areas. Groundwater investigations should continue throughout the length of the RI and FS activities to capture seasonal and annual fluctuations in groundwater table and resulting contaminant concentrations. Four consecutive quarters of monitoring is not adequate and not useful for statistical analysis for evaluating groundwater trends. Tidal influence and seasonal variability should be part of the early evaluation to ensure that screened intervals for monitoring wells are appropriate for evaluating impacts to groundwater.

There is a statement within this Section that proclaims an off-ramp for monitoring based on a

COPC being either non-detect or detected at a concentration below the relevant MTCA cleanup level indicating that monitoring for that parameter at that location will be considered complete. Monitoring of COPCs should not cease until adequate information has been collected about nature, extent, and applicable risk evaluations.

- 14. In Section 5.1 Pre-Field Activities, underground utilities should be surveyed at each potential subsurface sample location, regardless of if that location is for soil collection or the installation of a groundwater monitoring well. Utilities clearances should not be limited to groundwater well installation locations.
- 15. In Section 5.3.1 Installation and Soil Sampling, this section identifies that monitoring well locations as the only locations planned for soil samples collection at depth and with planned analysis for site COPCs. This density of soil boring locations is not adequate for determining nature, extent, and magnitude of impacts at this site. We recommend 20 to 40 soil borings or more per acre with samples collected at multiple depths analyzed for all site COPCs to evaluate contamination impacts (depending on history of area, heterogeneity of subsurface materials, and density of potential sources), characterize soil and hydrogeologic conditions. If sonic drilling is the preferred method, all samples for volatile analytes will need to be collecting using methods to reduce exposure to the heat generated during drilling (like https://www.cascade-env.com/resources/blogs/how-does-heat-affect-voc-sampling-in-sonic-core-samples/).
- 16. In Section 5.4.1 Shallow Soil Sampling, the proposed soil sampling in the upper 1 foot or less and at the proposed density is inappropriate and not adequate for determining nature, extent, and magnitude of impacts at this site. We recommend 20 to 40 soil borings or more per acre to evaluate impacts (depending on history of area and density of features), evaluate soil and underlying geologic and hydrogeologic conditions. Samples should be collected in the upper 0.5 foot (ft.), 5 ft. below ground surface (bgs), and at five-foot intervals until contamination is not present and native material is encountered that appears uncontaminated. If intermediate areas indicate the presence of contamination, those areas should be sampled and analyzed for the site COPCs, as well. The bottom of soil borings should be free of contamination to vertically bound the extent. For example, in the former sawmill areas where there is extensive wood waste (SOU-AI), borings should be adequate in density to delineate the extent of wood waste horizontally (along the waterfront until wood wastes are no longer encountered) and vertically with uncontaminated native material (slough shoreline sediments) at the base of all borings within that area to estimate the volume of material present, in addition to identifying any contamination within those materials. Adequate data should be collected to communicate nature and extent in addition to soil types and groundwater presence in cross-sections across the sites at multiple sections (this would be better presented at the SOU scale).
- 17. In Section 5.4.2 Surface Soil Sampling, two surface soil samples are proposed following a visual inspection. Prior to sample collection, a more thorough evaluation of the substations should be conducted. This evaluation should include when substations were constructed, a summary of the type, size, and other equipment details. Results of any previous equipment sampling, schematics of the substations and equipment, and maintenance and monitoring records for the equipment. Any sampling should be targeted based on an evaluation of this information in addition to a visual survey of the site. Please expand on the information provided about the substation. Any samples collected should be collected in such a manner that can evaluate the nature, extent, and magnitude of impacts within this area. Any samples collected should be analyzed for the full suite of site COPCs.

- 18. In Section 5.4.3 Test Pits, it is not clear why test pits are proposed investigation sampling method. This method is not appropriate for the investigation of soils and not appropriate for the sampling of volatile compounds. Please explain what data quality objectives this sampling method and samples are trying to satisfy. All soil samples collected should be analyzed for the full suite of site COPCs.
- 19. In Section 5.4.4 and Figure 27, soil sampling in the Former Wastewater Ditches will need additional locations. The spacing indicated in Figure 27 is greater than a 500-foot interval. It is estimated that at least 10 locations may be necessary in this area to meet the specified density. Samples should be collected as indicated and any final sample within the boring should be collected in what is determined as clean, native material. All samples collected should be analyzed for the full suite of site-specific COPCs.
- 20. In Section 5.5 Seep, Sediment, and Stormwater Sampling, as indicated in the Agreed Order, sampling and analysis of seeps, surface and subsurface sediments, stormwater and catch basin solids should be samples as part of the remedial investigation effort and be analyzed for the full suite of site COPCs. Seeps should be surveyed across an appropriate area beyond what has been designated as the site by GPCP and in areas downgradient of the site. A broader survey may be necessary until the groundwater gradient has been determined. Groundwater monitoring is not a replacement for seep survey, sampling, and analysis. Surface water and sediment should be evaluated in all wetlands, streams/creeks, ditches, and other areas of surface water within the uplands, using definitions of these features as defined in MTCA or by Ecology. Stormwater and potential solids should be evaluated like all other media during the remedial investigation for the full suite of site COPCs in events. National Pollution Discharge and Elimination System (NPDES) sampling requirements are designed to meet different sampling and data needs and do not satisfy the data quality objectives of a remedial investigation.
- 21. For all figures using aerial photographs, please identify the date and source of the image used.
- 22. In Figure I, only a subarea of parcels owned by GPCP or related entities are shown. Please update to include all parcels owned in Camas, Washington, and adjacent areas (including inwater areas) that are owned, leased, previously owned by GPCP, related entities, and predecessors.
- 23. Figure 2 only shows a subsection of parcels owned, previously owned, or leased by GPCP, related entities, or predecessors. Please expand the outlined area to include all GPCP parcels identified in Figure 1. Please include a figure that includes the known recent bathymetry of all inwater areas.
- 24. Please include a series of figures prior to Figure 3 (Site Operable Units) that document the properties and mill structure throughout time. Please use information contained in historical aerials or Sanborn maps to identify mill structures and infrastructure, identifying structures, areas where chemicals were stored, processed, and used, utilities, and other features relevant to evaluating releases or threatened releases that may have occurred at the site. Please target the window between 1880 and 1990 in this historical review. These figures should have a similar level of detail to the Arcadia Figures prepared for the Black Liquor Basement Release Kraft Mill Building Area (Figure 2) and communicate both above ground features and below ground utilities at an appropriate scale and in a useful method of display.

- 25. Figures 3 and 4 identify the Site operable units. Please add information about the lands adjacent to these operable units including ownership, land-use, and zoning. Please clearly identify other areas owned and operated by GPCP and predecessors outside of the SOU boundaries and provide information on current and historical uses of those parcels. Please include transportation ROWs used or accessed as part of site operations presently or at any time in the past in the area defined by the SOU.
- 26. Figures 5 and 6 identify the operational areas within the SOUs and there are call outs for some features, but unfortunately these figures do not describe the operational areas for all GPCP's parcels and there are significant areas of infrastructure, buildings, and other features with no labels. Greater detail should be provided in these figures and in potentially additional figures given the size and complexity of the site. Please expand on these figures to provide the necessary detail for evaluating the potential releases or threatened releases at the site. These figures should have a similar level of detail to the Arcadia Figures prepared for the Black Liquor Basement Release Kraft Mill Building Area (Figure 2).
- 27. In Figure 8, please identify the areas owned or leased by GPCP, related entities or predecessors. Please identify when the shaded areas (area served by pipeline, area served by process server, area served by wood processing collections [grit pump]) came online. For example, the brown shaded area is the area served by the Wood Processing Collections Grit Sump, when was this system constructed and first utilized (date). Did the whole system come online at that date or was it constructed and implemented in a phased approach? Please add additional information to clarify how current sewer or stormwater management is occurring in areas that are not shaded.
- 28. Figures 9 and 10 show operation features, however, the level of detail is not adequate for evaluating potential or threatened releases at the site. For example, the CDC area only has one feature identified, No. 7 Substation. Please identify the operational features of the facility for current and historical operational features at a scale appropriate for evaluating potential impacts to the site. This may require additional figures at a different scale to provide the level of detail necessary to evaluate.
- 29. In Figures 11 through 21, the selection of colors, shades, and line work makes these figures difficult to interpret and differentiate between utility features. Please update to make this possible. For example, if dashed lines are used in the image, please use dashed lines in the key. Please do not use similar colors and use more than two-line styles. The scale presented in these figures is also not appropriate for evaluating features and potentials sources. Supplemental materials, like large scale plan drawings may be necessary to evaluate these features across the site at appropriate scales. It also appears that utility details are missing. For example, on Figure 12, in Area B5, it appears that natural gas, the fire main, and the sanitary sewer enter the parcel, but the scale and detail do not show those utilities moving between buildings, the tank farm, or other structures within that area. Greater detail needs to be provided to evaluate the potential for releases or other impacts.
- 30. Figure 24 Preliminary Site Conceptual Model does not show human consumption of fish or shellfish for recreation or tribal consumers. In addition, the CSM does not address off-site resident exposure to historical direct discharges (specifically stack emissions that may have contaminated surface soils in residential areas). These should be added to the CSM and

appropriate human health and ecological risk should be evaluated as part of the remedial investigation.

- 31. In Figure 25 Proposed Monitoring Well Locations, the proposed monitoring well network is not well developed. There are not adequate wells for this size of site. It is not clear by the distribution of wells what data quality objectives are trying to be met. It is also not clear which wells are considered background or upgradient. More thought needs to go into the preliminary groundwater monitoring well network for a site of this size and complexity.
- 32. In Figure 26 and 27 Proposed Soil Sampling Locations, the number and density of locations for soil sampling are not adequate in density or proposed number. Given the long history of chemical processes and those supporting operations for 140 years, a high-resolution investigation approach would be most appropriate to evaluate nature, extent, and magnitude of impacts at the site if adequate site detail is not provided by the PLP for a targeted investigation approach.
- 33. Appendix A Sampling and Analysis Plan/Quality Assurance Project Plan was not reviewed due to the amount of modification likely to occur in the revision and will be reviewed at a future date.
- 34. In Appendix B Previous Investigation Environmental Data Tables, the table presented in this appendix is difficult to evaluate because data from chemical groups are scattered across multiple pages. Recommend changing the orientation of tables so that analytes are presented vertically, and location and sample information is presented horizontally. Alternatively, a flat file or excel spreadsheet could be provided to facilitate review. However, without the complete reports including data validation and laboratory documentation, it is unclear what the objective of these data collection efforts was and if it is appropriate for supporting remedial investigation data quality objectives.
- 35. In the Appendix C Previous Investigation Well Logs, it appears that based on emergent environmental issues arise, the scale of environmental investigation to determine nature and extent of an impact appears that the response is appropriate in terms of scale for other environmental investigation efforts. The level of detail and scope of the investigations needs to be translated to the entire facility for the remedial investigation effort to capture potential or threatened releases from historical facility infrastructure alignments, spills or accidental releases, and other related activities and the present ones. As previously noted, complete reports on previous investigations should be included or be available to access.
- 36. In the Appendix D: Summary of Spills table, please add the spill volume and resulting action to remedy the spill (e.g., 2000-2001 diesel fuel and lube oil spill in SOU A1, was it cleaned up? Was soil removed, if so, how much? Where can the spill cleanup report or incident report be found? Were soils disposed of off-site, sent to the landfill? Did any reach surface water? Etc.
- 37. In Appendix E: SPCC Tank and Equipment Inventory Tables and Excepts from: SPCC Plan, December 2022 Update, please provide this information for historical tanks. Please include date of installation and date of closure/removal, in addition to the other information presented in the table. This information is needed for all storage tanks and large chemical containing equipment that was used on-site historically.

We hope to see these comments reflected in the revised Data Report. We look forward to continuing to support the effort to ensure that this site is protective of human health and the environment.

Please do not hesitate to contact me with any questions. I can be reached at <u>rame@yakamafish-nsn.gov</u> or by telephone at (509) 426-3179.

Sincerely,

RERAC

R. Elena Ramirez Groszowski, L.G. Yakama Nation Fisheries

Attachments:

- 1. Table 1. Partial List of Current Parcels/Properties list associated with the Georgia Pacific Corporation.
- 2. Figure 1. Sanborn Fire Insurance Map from Camas, Clark County, Washington (Sanborn Map Company, July 1922), Sheet 7.
- 3. Figure 2. Sanborn Fire Insurance Map from Camas, Clark County, Washington (Sanborn Map Company, July 1922), Sheet 8.
- 4. Figure 3. Figure 3. Clark County Assessors Image of the GPCP Camas Mill Showing Log Rafts in the Camas Slough and Columbia River from Lady Island to west of Sand/Ackerman Island (1955).

	Table 1: Partial List of Current	Parcels/Properties	associated with Ge	eorgia-Pacific Corporation.
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Map Location	Property	Owner	General	Legal	Area
C a m a s (4)	91044013	Georgia-Pacific Corporation/Fort James Camas LLC	Description Main Plant Area	#275 Maxon Coffey DLCS SEC 10-1-2 Overlook & Camas (Bldg)	(Acres) 189.27
Vancouver Vancouver Camas Vancouver Vancouver	83700000	Fort James Camas LLC	Lady Island	#I WM. Goodwin DLC 475.5 A	476.5
the sector binn there is a sector of the sector binn the sector binnt the sector binn the sector binn the sector binn the sect	83003000	Fort James Camas LLC	Upland adjacent to SW 6 th Ave and Hwy 14	#5 S of TT of WP Smith DLC 37.87 A	37.87
The second	91043000	Fort James Camas LLC	Islands in Washougal River	#257 HJG Maxon DLC 45.5 A	45.4

	Table 1: Partial List of Current	Parcels/Properties	associated with Ge	eorgia-Pacific Corporation.
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Map Location	Property	Owner	General	Legal	Area
Committee River	82920000	Fort James Camas LLC	Camas Business Center	#91 T M COFFEY DLC & COWANS ADDN 26.49A	26.49
With results and a second seco	8415000	Fort James Camas LLC	Upland Waterfront Immediately. W of HWY I4	Glenwood HD Lots #32 16A	1
	82531000	Fort James Camas LLC	Division St. and south of Mill Ditch	#2 of TM Coffey BNTY CL 3.41A	3.41
	79980000	Fort James Camas LLC	Property at Division St. and NE 6 th Ave.	Camas Lots I-8 BLK 60	1.08

	cis/110pc1tics	associated with G	eoigia-racific C		r
Map Location	Property No.	Owner	General Description	Legal Description	Area (Acres)
Ach Open Space	81770000	Fort James Camas LLC	Downtown commercial block	Prospect Plance Addn Camas Lots 9 & 10	0.3
All Den Space	81760000	Fort James Camas LLC	Downtown commercial block on 7 th Ave	Prospect Plance Addn Camas Lot 8	0.16
	79970000	Fort James Camas LLC	Downtown commercial block (NW block at 7 th Ave and Adams St.)	Camas Lots 7 & 8 Blk 59	0.23
	79960000	Fort James Camas LLC	Downtown commercial (NE block at 7 th Ave and Birch St.)	Camas Lots 5 & 6 Blk 59	0.23

Table 1: Partial List of Current Parcels/Properties associated with Georgia-Pacific Corporation.

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Map Location	Property No.	Owner	General Description	Legal Description	Area (Acres)
	79930000	Fort James Camas LLC	201 NE 6 th Ave, Camas, WA 98	Camas Lot I Blk 59	0.11
	74940000	Fort James Camas LLC	213 NE 6TH AVE, CAMAS,WA 98607	CAMAS LOT 2 BLK 59	0.11
	79941000	Fort James Camas LLC	217 NE 6TH AVE, CAMAS,WA 98607	CAMAS LOT 3 BLK 59	0.11
	79040000	Fort James Camas LLC	Full block between Adams and Birch Sts and NE 6 th Ave and 5 th Ave	CAMAS BLOCK 42	0.92

Table 1: Partial List of Current Parcels/Properties associated with Georgia-Pacific Corp	oration.
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Map Location	Property No.	Owner	General Description	Legal Description	Area (Acres)
	77830000	Fort James Camas LLC	339 NE ADAMS ST, CAMAS,WA 98607	CAMAS #1 BLOCK 20	0.69
LE LUILOR RE LUILOR RE LUILOR Columbia River	700525000	Fort James Camas LLC	BNSF Lease (3 subparcels)	BN RR LEASE #500,086	
Columbia River	88980000	Fort James Camas LLC	Parking lot area ?	OVERLOOK ADDN CAMAS #1 LOTS 5 THRU 10 BLK 4	
Tidelands					
Columbia River	500903000	Fort James Camas LLC	Tideland area slough north of Lady Island, west of Hwy 14	TIDELAND TAX LOT NO 500903	7.61

Map Location	Property	Owner	General	Legal	Area
Columbia River	5000815000	Fort James Camas LLC	Tideland area slough north of Lady Island	TIDELAND TAX LOT NO 500815	3.32
Columbia River	500814000	Fort James Camas LLC	Tideland area north of Lady Island and Ackerman Island	Tideland Tax Lot No 500814	9.22
Columbia River	500814001	Fort James Camas LLC	Tidelands near Lady Island south of Hwy 14	Tidelands Tax Lot No 500814	4.72
Van e ouvel Canedouenee Columbia River	500816000	Fort James Camas LLC	Sand Island	TIDELAND TAX LOT NO 500816	11.75

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Table 1. Partial List of Current Part	eis/ Fioperties	es associated with Georgia-Pacific Corporation.					
Map Location	Property	Owner	General Description	Legal Description	Area		
	500810000	Fort James Camas LLC	Tidelands north of Sand Island	TIDELAND TAX LOT NO 500810	17.96		
SE 23rd ST	50090404000	Fort James Camas LLC	Tidelands near main plant area	TIDELAND TAX LOT NO 500904	17.73		
NW McIntosh Rd Ca m as NW 6th Ave SW 6th Ave Columbia River	500902000	Fort James Camas LLC	Northeast tidelands on Lady Island	TIDELAND TAX LOT NO 500902	16.64		
round and a second	5009011000	Fort James Camas LLC	Tidelands northside of Lady Island, west of Hwy 14	TIDELAND TAX LOT NO 500901	12.3		

Table 1: Partial List of Current Parcels/Properties associated with Georgia-Pacific Corporation.

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Map Location	Property	Owner	General	Legal	Area
No demonstrationed and a second secon	No. 500818000	Fort James Camas LLC	Description Tidelands northside of Lady Island – north side toward west	Description TIDELAND TAX LOT NO 500818	(Acres) 9.23
Columbia Rive	500817000	Fort James Camas LLC	Tidelands on west end of Lady Island	TIDELAND TAX LOT NO 500817	17.2
Other Parcels	1	1	1	1	1
Source Based Figure 1 Based Ba	82532000	Clark Public Utilities	Substation	#3 of TM Coffey BNTY CL. .43A	0.43
	82932000	City of Camas (Sold or donated by GP?)	Park north of CBC	#103 T M COFFEY DLC 2.41A	2.41



Figure 1. Sanborn Fire Insurance Map from Camas, Clark County, Washington Sheet 7 (Sanborn Map Company, July 1922). Library of Congress, Geography and Map Division, Sanborn Maps Collection.



Figure 2. Sanborn Fire Insurance Map from Camas, Clark County, Washington, Sheet 8 (Sanborn Map Company, July 1922). Library of Congress, Geography and Map Division, Sanborn Maps Collection.



Figure 3. Clark County Assessors Image of the GPCP Camas Mill Showing Log Rafts in the Camas Slough and Columbia River from Lady Island to west of Sand/Ackerman Island (1955).