June 11, 2018

Mr. Thomas P. Lanphar Senior Environmental Scientist Department of Toxic Substances Control tom.lanphar@dtsc.ca.gov.

#### Dear Mr. Lanphar

We have prepared the following comments to clearly express our firm opposition to approval of the draft final Operable Unit E Feasibility Study prepared by Kennedy/Jenks Consultants for the former Georgia-Pacific (G-P) Wood Products Facility in Fort Bragg, California. We assert that the draft Feasibility Study, as submitted, is inadequate for the following reasons:

- 1. It is based upon an inadequate analysis of certain Contaminants of Concern that appears to ignore the true extent of contamination that would remain *in situ* if the preferred alternatives are implemented.
- 2. It fails to fully assess the risk of contaminants that, according to the selected preferred alternatives, would remain *in situ*.
- 3. It fails to consider other reasonable strategies that could effectively mitigate the continuing risk of future exposures.
- 4. The selected preferred alternative for the remediation of Pond 8 aquatic sediment is supported by incompletely defined and undocumented device(s) with no reliable evidence that such a strategy is feasible.
- 5. It fails to provide a complete analysis of selected preferred alternatives.
- 6. It fails to address Comment 56 from your review of the previous draft Feasibility Study, which required a separate analysis of contaminant levels in the eastern section of Pond 8 if, as proposed, the original pond is to be bifurcated by a barrier.
- 7. It inadequately addresses the risk of future contaminant release to the environment due to the effects of sea level rise.
- 8. As submitted, the preferred alternatives selected in this Feasibility Study ARE NOT acceptable to the public.

We will briefly address each of these objections and stand ready to discuss them in much greater detail if you desire clarification or further justification.

#### Objection 1. Inadequate analysis of Dioxin levels in Pond 8 aquatic sediment.

A review of analytical data for Dioxin samples collected from Pond 8 aquatic sediment will reveal several critical deficiencies that prevent a true evaluation of the potential exposure risks posed by those contaminated soils. Many of the samples were collected at the most shallow depths (0-0.5 and 0.5-1.5 feet below sediment surface). Unfortunately, those few samples that were collected at greater depths often exhibited higher levels of Dioxin. Exceedingly few samples were collected at or near the bottom of the sediment deposits. Therefore, we have no reliable estimate of the true extent of Dioxin contamination in Pond 8. This incomplete data set negates our ability to accurately estimate the true threat to the environment and the exposed receptor organisms posed by residual Dioxin-contaminated

sediments. This incomplete data set also potentially fails to identify existing "hot spots" of Dioxincontaminated sediment. We find that this incomplete assessment of the true risks posed by residual Dioxin-contaminated sediments in Pond 8 fails to support the selected preferred alternative. Therefore, we suggest that the current Feasibility Study be sent back for revision.

### **Objection 2.** Failure to fully assess the risk of contaminants left *in situ*.

This objection specifically refers to the Dioxin-contaminated sediments and soils that would remain in the areas in and near Ponds 8 and 7. The previous objection addressed our concerns over the failure to adequately determine the levels of Dioxin in the contaminated substrate. However, risk is a factor of longevity as well as concentration. In your November 17, 2017, list of comments on the previous draft Feasibility Study, Comment 57 stated "The second to the last sentence in this section [Alternative 2 -Institutional Controls (Pond 8) page 7-12] states that the sediment COI [Contaminant of Concern, i.e., Dioxin] concentrations will continue to decline naturally through existing biological and geochemical processes. Please describe these processes and possible rates of attenuation." We find that the current Feasibility Study fails to address your comments, particularly as they apply to the theoretical attenuation of Dioxin-contaminated aquatic sediments. No scientific justification is provided to support the assertion that Dioxin levels will be naturally attenuated. But more importantly, no reliable half-life estimate is offered. The question remains - how long will residual levels of Dioxin be present if the contaminated sediment, especially the "hot spots" are left in place? This information is vitally important to assess the risk of potential environmental exposure in the event of a future failure of the dam or earthen walls that would serve as a containment device in the selected preferred alternative. Therefore, we request that the current Feasibility Study be sent back for revision.

# **Objection 3. Failure to consider other reasonable alternatives.**

The current draft Feasibility Study alternatives for Pond 8 aquatic sediments poses two "all or nothing" choices: leave the (currently unknown) levels of contamination in place and impose administrative controls (this is the proposed selected preferred alternative), or dredge and remove all sediment (approximately 106,000 cubic yards). However, the selected preferred alternative also includes the installation of a barrier that would separate Pond 8 into western and eastern entities. According to existing analytical data, the western section of the pond has significantly lower contaminant levels, while the eastern section contains multiple documented "hot spots" that exceed recreational cleanup goals. We suggest that G-P consider another alternative for Pond 8 aquatic sediments – the removal of Dioxin-contaminated "hot spots" once the proposed barrier is installed. Therefore, we request that the current Feasibility Study be sent back for revision.

# **Objection 4.** Selected preferred alternative dependent upon unsupported strategy.

Unfortunately for the remediation solution in Objection 3, the current draft Feasibility Study fails to provide supporting documentation that its strategy of using a separation barrier to divide Pond 8 is itself feasible. Similarly, there is no concrete proposal for strengthening the existing dam or the beach berm to the extent that they will be able to adequately withstand the effects of sea level rise over the 100-year life span that is promised in the Feasibility Study. This is particularly troubling since that document also fails to address the residual Dioxin levels that can be expected during that period. Any

containment strategy must be proven to be sufficient to prevent the potential release of contaminants into the adjacent ocean environment. The current draft Feasibility Study contains no such assurances. Therefore, we request that the current Feasibility Study be sent back for revision.

### **Objection 5.** Incomplete analysis of selected preferred alternatives.

Section 7 of the draft feasibility study addresses the "Development and Evaluation of Remedial Alternatives" for each of the areas in OU-E. The analysis of **Alternative 4 – Excavation and Disposal** for Pond 7 Aquatic Sediment (section 7.3.1.4) and Pond 8 Aquatic Sediment (section 7.5.1.4) include an estimate of the amount of carbon dioxide that would be generated during completion of each remedial action. That information is subsequently cited as a reason to lower the overall rating of that alternative. However, no such estimate of carbon dioxide generation is provided for the selected preferred alternative. Without that information, a thorough comparison of the alternatives is not possible. Additionally, the selected preferred alternative for Pond 8 aquatic sediment fails to provide any analysis of the impacts generated by the installation of a new dam to divide that pond into two sections. The installation and removal uncharacterized sediment, and will result in an undefined generation of additional carbon dioxide. A thorough analysis of the selected preferred alternative must address such impacts. Therefore, we request that the current Feasibility Study be sent back for revision.

### **Objection 6:** Failure to address your comment concerning characterization of Pond 8.

In your November 17, 2017 list of comments on the previous draft Feasibility Study, Comment 56 [ Section 3.1.2, Alternative 2 – Institutional Controls (Pond 8) Page 7-12] stated "... This section describes planned modifications of the Mill Pond Dam that address requirements of the California Department of Water Resources, Division of Safety of Dams (DSOD). The Mill Pond Dam will be modified to include separation of the pond into east and west sections, thus creating two separate containment structures. DTSC encourages Georgia-Pacific to evaluate these two sections separately in the Feasibility Study as each poses a different level of risk. The Pond 8 western section exhibits lower contamination and risk than the eastern section. Additional characterization sampling of Pond 8 would provide a more complete characterization of contaminants and risk." As previously stated in this letter, the lack of a thorough assessment of Dioxin levels in Pond 8, especially in the more contaminated areas of the eastern section, prevents a complete assessment of the long-term risk posed by Dioxin contaminants that would be retained in that area per the proposed selected alternative. Similarly, it appears to negate the assertion that this newly created eastern pond would meet recreational standards for Dioxin. Therefore, we request that the current Feasibility Study be sent back for revision.

# **Objection 7.** Failure to adequately address potential impact of sea level rise.

We believe that after all the investigation and remediation that has been done on the former Georgia-Pacific Mill Site to date, the greatest threat of future environmental contamination is the contaminated soil and sediments that, according to the selected preferred alternatives of the draft Feasibility Study, will remain in Pond 8 and near the berm of Pond 7. Unfortunately, these are the areas that will be most vulnerable to the effects of rising sea levels. Similarly, the increasing strength and duration of storms, a troubling phenomenon that has been documented across the globe, will further threaten the stability of the proposed containment devices. Locally we have already witnessed the destruction of Georgia-Pacific's former railway and haul road, infrastructure that had stood for decades, from such storm surge. The draft Feasibility Study claims, without any documentation or other technical support, that undescribed improvements to the Pond 8 dam and the beach berm will provide effective protection of these areas for 100 years. As partial evidence for the "Long-Term Effectiveness and Performance" of these containment controls, the Feasibility Study states that "Major repairs [of the existing dam] have been relatively infrequent, on the order of 50 or more years between major maintenance activities." That statement clearly demonstrates that the proposal fails to take into account the well-documented changes that will threaten existing coastal infrastructure in the next 100 years. Therefore, we request that the current Feasibility Study be sent back for revision.

#### **Objection 8. Lack of public acceptance.**

From the beginning of this remediation project, the local public have consistently expressed their desire and their expectation that the former mill site would be cleaned, and that no significant contamination should remain. The Fort Bragg City Council has assured the public that they understood and concurred with this expectation. Much hard work has been performed to help meet that goal. The City of Fort Bragg and its people have been blessed with the opportunity to enjoy the remediated coastal trail. Tourists crowd the parking lots for a chance to visit those areas that are open to them. Unlike the early days after the mill closure when people were afraid to take their children in their cars onto the mill site to watch the annual fireworks display because of the toxins that were present, people now ride their bikes, walk the trails, enjoy picnics, walk their dogs, and bring their babies to enjoy the open coastline. The former mill site is now an asset to this community, a resource that we are proud of. In many ways it is the new face of Fort Bragg. However, the existence of Dioxin-contaminated 'hot spots'' will remain a perceived threat in the eyes of the public, a permanent symbol of betrayed trust, a veritable wart on the nose of that new face. For that reason, the retention of Dioxin-contaminated sediment and soil in excess of recreational levels is unacceptable to the citizens of Fort Bragg. Therefore, we request that the current Feasibility Study be sent back for revision.

We trust that DTSC's final approval of the Feasibility Study will be based on the technical and scientific merits of that document. We thank you for your attention in this matter and want you to know that we truly appreciate all the work you have done to date to shepherd this project. Please feel free to contact us with any questions regarding these comments.

Sincerely,

David Jensen Teri Jo Barber John Gallo Leslie Kashiwada Susan Kelley Doug Kern Bill Lemos George Reinhardt Sheila Semans cc: Tabatha Miller, City Manager City of Fort Bragg <u>tmiller@fortbragg.com</u>

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