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Staff:	Tiffany S. Tauber Robert S. Merrill
Staff Report:	January 23, 2009
Hearing Date:	February 4, 2009
Commission Action:	

REVISED STAFF REPORT: PERMIT AMENDMENT

APPLICATION NO.:	**A-1-FTB-05-053-A6**
APPLICANT:	**Georgia-Pacific Corporation**
AGENT:	Arcadis BBL
PROJECT LOCATION:	At the former Georgia-Pacific California Wood Products Manufacturing Facility, 90 West Redwood Avenue, Fort Bragg; APNs 008-010-26, 008-020-09, 008-151-22, 008-053-34, 008-161-08, 018-010-67, 018-020-01, 018-030-42, 018-040-52, 018-120-43, 018-120-44, 018-430-01, 018-430-02, 018-430-07, 018-430-08.
DESCRIPTION OF PROJECT PREVIOUSLY APPROVED:	Georgia-Pacific Mill Site Foundation Removal, Additional Investigation and Interim Remedial Measures Project – Entailing: (1) removal of building foundations, additional investigation, and if necessary, interim remedial measures (IRMs) at the following areas: (a) Compressor House, (b) Former Sawmill #1, (c) Powerhouse and associated buildings, (d) Fuel Barn, (e) Chipper Building, (f) Water Treatment Plant, (g) Powerhouse Fuel Storage Building, (h) Sewage Pumping Station, (i) Dewatering Slabs, (j) Water Supply Switch Building, (k) Former Mobile Equipment

Shop, and (l) associated subsurface structures; (2) removal of debris from Glass Beaches #1 through #3; and (3) removal of geophysical anomalies on Parcels 3 and 10 of the former Georgia-Pacific Sawmill site.

DESCRIPTION OF AMENDMENT REQUEST: (1) Excavate approximately 13,000 cubic yards of dioxin-impacted soil from several areas in Parcel 10 (within the area referred to as Operable Unit A [OU-A South]; (2) construct an approximately 1.5-acre consolidation cell with an engineered cap for onsite, subsurface management of the excavated dioxin-impacted soil described in Item 1 above; (3) modify Special Condition No. 3(A)(1) of the original permit regarding the protection of sensitive bird species; and (4) allow construction activities to be conducted outside of the previously authorized work window (April 15 - October 15).

SUBSTANTIVE FILE DOCUMENTS: (1) *Final Operable Unit A Remedial Action Plan and Feasibility Study, Former Georgia-Pacific Wood Products Facility,* prepared for Georgia-Pacific, LLC by ARCADIS BBL, August 2008;
(2) City of Fort Bragg certified LCP

SUMMARY OF STAFF RECOMMENDATION

REVISE TO REFLECT REVISIONS TO REPORT

The staff recommends that the Commission approve with conditions, the requested amendment to the coastal development permit originally granted for the interim remedial measures being undertaken at the former Georgia-Pacific Wood Products Manufacturing Facility in Fort Bragg.

The proposed amendment involves additional remediation activities, including (1) excavation of approximately 13,000 cubic yards of dioxin-impacted soil from four areas in Parcel 10 (within the area referred to as OU-A South), and (2) placement of the excavated dioxin-impacted soil within an approximately 1.5-acre subsurface consolidation cell with an engineered cap. The proposed amendment also involves changes to Special Condition No. 3(A)(1) of the original permit pertaining to the protection of sensitive bird species. Lastly, the proposed amendment requests authorization to allow construction activities to be conducted outside the previously imposed construction window (April 15 - October 15).

The remediation activities included as part of the proposed amendment are intended to remove dioxin-impacted soils from various locations throughout the site and consolidate the contaminated soils in an engineered, lined, subsurface cell to prevent exposure to humans and

wildlife. The applicant prepared an "*Operable Unit A (OU-A) Remedial Action Plan and Feasibility Study"* (RAP), dated August 2008, that outlines the proposed remediation activities at the OU-A portion of the site and contains the implementation plan, including design features and best management practices (BMPs), for the remedial activities proposed under this permit amendment. The RAP was reviewed and approved by the Department of Toxic Substances (DTSC) and by the Regional Water Quality Control Board (RWQCB). In addition, the Coastal Commission's water quality unit staff reviewed the RAP and determined that the proposed construction of the consolidation cell with liners and cap would minimize the chances for migration of contaminants and would be adequate to prevent significant adverse impacts to water quality.

The Commission opened the public hearing on the permit amendment at the Commission meeting of December 12, 2008. The Commission received a presentation from staff, took testimony and continued the hearing. The Commission requested that additional information be provided including background on the overall background on cleanup efforts at the project site, the levels of dioxin contamination in the soils to be contained in the consolidation cell, and additional information about the alternative of trucking the contaminated soils to an off-site location.

Background discussion on the various cleanup efforts that have occurred and are ongoing at the site has been added to Finding A of the report. The current amendment request involves additional remediation work within only one portion of the site, Operable Unit OU-A, which consists primarily of shoreline areas that the City intends to purchase from Georgia Pacific and develop for public access utilizing a grant from the Coastal Conservancy. All the necessary site investigation work and remedial action planning has been completed by the applicant and approved by DTSC for Operable Unit A. The remediation work that is the subject of the current amendment request is to excavate dioxin/furan contaminated soils from Operable Unit A and bury them within a consolidation cell on Parcel 8, approximately 1,000 feet away from the shoreline. With successful completion of the work proposed under the permit amendment request, Operable Unit A will have been fully remediated to DTSC requirements. Further site investigation work and remedial action planning is required for other operable units at the Georgia Pacific site which will require additional coastal development permit authorization in the future.

With regard to contamination levels, the concentration of dioxin in the contaminated soils to be placed in the consolidation cell is relatively low compared to dioxin concentrations found in other contaminated sites. According to the applicant, the average concentration of dioxins in the soil to be placed in the consolidation cell is 100 parts per trillion (ppt). This level of concentration is 100 times lower than the concentration level at which contaminated material must be managed as hazardous waste under either state or federal law. The 100 ppt concentration is approximately two times the concentration level considered to be safe by DTSC (52 ppt) to leave untreated in other areas of the project site and two times the screening level set for residential soils by the Agency for Toxic Substances and Disease Registry. In addition to being present in relatively low concentrations, the dioxin in the soil is relatively immobile. Dioxin molecules bind strongly to soil particles, making them largely immobile in the

environment. Dioxin molecules are also highly "hydrophobic," which means they do not easily go into solution.

With regard to the alternative of hauling the contaminated soils away, the alternatives analysis in the CEQA finding contains additional information about this alternative. The Removal/Offsite Disposal alternative has significant potential adverse impacts associated with trucking the material off-site and the extended clean-up time that would be required. It is estimated that approximately 1,000 truck trips would be required to haul the dioxin/furan-impacted material off-site. The nearest non-hazardous landfill is located in the San Francisco Bay Area at Keller Canyon, in Pittsburg, California, a 400-mile roundtrip from Fort Bragg. Thus, hauling the contaminated soil away would require approximately 400,000 truck miles on local and state roads, causing thousands of pounds of carbon to be released into the air, wear on the roads, increased traffic, and increased potential for vehicle accidents. Additionally, the amount of time necessary to load and unload approximately 1,000 truck trips greatly prolongs the amount of time necessary to conduct the remedial activities at the site and would increase the duration of exposure to humans and the environment. Staff continues to recommend that the Commission find that removal/offsite disposal alternative is not a feasible alternative to the proposed consolidation and capping which would lessen any significant adverse impact that the proposed activity would have on the environment.

At the December 12, 2008 hearing, staff modified the staff recommendation to include a condition requiring that if alternative bioremediation techniques become feasible and are approved by the Department of Toxic Substances Control (DTSC) in the future, the applicant must apply for a permit amendment for the Commission to consider authorizing the application of such techniques to treat the contaminated soil to be contained under the current proposal within a consolidation cell on the property. Research and development of bioremediation techniques continues and such bioremediation techniques may become feasible contamination remediation alternatives in the future. A remediation technique that can successfully treat the contaminants rather than simply contain them in place would serve to reduce or eliminate the risk that the contaminants would become exposed and potentially contaminate surface or groundwater due to failure of the consolidation cell in the event of a severe earthquake or some other catastrophic event.

Therefore, staff recommends that the Commission find that the alternative of bioremediation of the dioxin/furan contaminated soil to be consolidated and capped in the consolidation cell should be reconsidered after a period of time has elapsed. Special Condition No. 12 would limit the time period for which the consolidation cell is authorized to the time period that passes before the Department of Toxic Substances Control completes its five-year review of the final remediation plan. As required by statute and the DTSC order approving the Final Operable Unit A Remedial Action Plan approved by DTSC on August 28, 2008, DTSC will re-evaluate the remedial action plan five years after the consolidation cell has been constructed to determine if at that time, a more appropriate approach to remediate the dioxin/furan contaminated soils contained in the consolidation cell exists, based on the criteria utilized by DTSC for evaluating remedial activities. The DTSC will evaluate the feasibility of bioremediation techniques and other new technologies available at the time for remediating the contaminated soils, and could require implementation of such techniques if certain findings can be made. Special Condition

No. 12 would require that the permittee submit an application for a permit amendment to either remove the consolidation cell or retain the consolidation cell in place after DTSC has completed action on its re-valuation of the remedial action plan. The permit amendment application must be accompanied by an alternatives analysis for the remediation of the dioxin/furan-impacted soils including, but not limited to the use of bioremediation techniques and other advanced remediation technologies available at the time. This requirement for the submittal of a permit amendment will enable the Commission to consider the re-evaluation conducted by DTSC, the alternative analysis submitted by the applicant, public comment, and other information available at the time to determine whether any of the alternative remediation techniques available at the time constitute feasible alternatives that would lessen any significant adverse impact that the consolidation cell has on the environment.

The applicant indicates that the DTSC requires a "Consolidation Cell Design Document" to be submitted and approved by DTSC prior to implementation of the cell portion of the proposed amended project that would include the particular engineering and construction details for the siting and design of the proposed consolidation cell. To ensure that the final engineered design of the proposed consolidation cell approved by DTSC does not differ from the project as amended and approved by the Commission, or result in otherwise unanticipated impacts to coastal resources, staff recommends Special Condition No. 11 that requires the applicant to submit, prior to commencement of construction of the consolidation cell, evidence that the DTSC has reviewed and approved the Consolidated Cell Design Document.

The applicant further indicates that an Operation and Maintenance Plan and a Monitoring Plan will be prepared and submitted to the Department of Toxic Substances Control (DTSC) following completion of construction of the proposed consolidation cell. To ensure that the consolidation cell is properly monitored and maintained to minimize the potential for significant adverse impacts to water quality or other coastal resources, staff recommends Special Condition No. 10 that requires the applicant to (a) submit to the Executive Director, a copy of (1) the Operation and Maintenance Plan, and (2) the Monitoring Plan as reviewed and approved by DTSC, and (b) report immediately to the Executive Director, any failure(s) of the consolidation cell determined by the Department of Toxic Substances Control (DTSC) based on the review by DTSC of the maintenance and monitoring reports submitted to DTSC pursuant to the approved Operation and Maintenance Plan and Monitoring Plan referenced in (a) above, including, but not limited to, evidence that subsurface dioxins/furans present in the soil at the consolidation cell are impacting groundwater or other environmental resources. The condition further requires that any corrective actions and/or repairs shall not be performed until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

As part of the proposed amendment, the applicant is requesting changes to the requirements of Special Condition No. 3(A)(1) of the original permit regarding the protection of sensitive bird species. The changes in part request that required surveys for nesting birds be allowed to be conducted closer to the time of development and, in part, request that limitations against working in the vicinity of the nests when fledglings are present be relaxed under certain prescribed conditions. Staff recommends that the Commission approve only those portions of the proposed modified condition language to Special Condition No. 3(A)(1) that pertains to imposing more

stringent limitations on the timing of required pre-construction avian surveys to require that surveys be performed no more than 14 days prior to commencement of construction. Staff recommends that the Commission not approve the portions of the applicant's requested changes to Special Condition No. 3(A)(1) that would (1) allow a reduction of the 100-foot exclusionary buffer, and (2) eliminate the requirement for submittal of survey reports to the Executive Director for review and approval. Staff believes such relaxation of the permit condition requirements has not been demonstrated to provide sufficient protection for the environmentally sensitive avian nesting habitat on the site and would not conform with the minimum 30-foot buffer requirement of the certified LCP.

Lastly, the applicant seeks authorization to allow certain construction activities to be conducted outside of the previously imposed construction work window (April 15th to October 15th). Allowing a slightly expanded seasonal work window to allow certain work to be conducted between April 1 and October 31st would be consistent with the seasonal limitations on grading and excavation work imposed by recently amended provisions of the certified LCP. Therefore, staff recommends that Special Condition No. 1 of the original permit be further amended to provide an exception to the provisions in the Stormwater Pollution Prevention Plans (SWPPPs) referenced therein that all excavation and Interim Remedial Measure (IRM) activities shall be conducted during the non-rainy season as defined from April 1 through October 31.

None of the other project limitations and performance standards established under the original permit and determined adequate for reducing the effects of the development in and on adjoining ESHA, coastal water quality, geologic hazards, and archaeological resources would be reduced or otherwise altered by the proposed amendment.

As conditioned, the project as amended would be consistent with the policies contained in the City's certified LCP and the Coastal Act public access and recreation policies.

The motion to adopt the staff recommendation of approval with conditions is found on page 9.

STAFF NOTES:

1. Continuance from December Agenda

The Commission opened the public hearing on the permit amendment at the Commission meeting of December 12, 2008. The Commission received a presentation from staff, took testimony and continued the hearing.

This revised staff report adds a special condition and provides additional findings. At the December 12, 2008 hearing, staff modified the staff recommendation to include a condition requiring that if alternative bioremediation techniques become feasible and are approved by the

Department of Toxic Substances Control (DTSC) in the future, the applicant must apply for a permit amendment for the Commission to consider authorizing the application of such techniques to treat the contaminated soil to be contained under the current proposal within a consolidation cell on the property. This condition is now included as Special Condition No. 12 of this staff recommendation and findings addressing the condition have been added to the water quality and CEQA finding.

In addition, the staff report contains additional discussion in the project description, water quality, and CEQA findings provding background on cleanup efforts at the project site, the levels of dioxin contamination in the soils to be contained in the consolidation cell, and additional information about the alternative of trucking the contaminated soils to an off-site location.

The Commission will hold the continued public hearing and may take action on the permit amendment at the February 4, 2009 Commission meeting.

2. Procedural Note

Section 13166 of the California Code of Regulations states that the Executive Director shall reject an amendment request if: (a) it lessens or avoids the intent of the approved permit; unless (b) the applicant presents newly discovered material information, which he or she could not, with reasonable diligence, have discovered and produced before the permit was granted.

The Executive Director has determined that the proposed amendment would not lessen or avoid the intent of the conditionally approved permit. On May 12, 2006, Coastal Permit No. A-1-FTB-05-053 (Georgia-Pacific Corporation, Applicant) was approved by the Commission with nine special conditions intended to assure consistency with the provisions of the Fort Bragg LCP and the public access and recreation policies of the Coastal Act. The proposed amendment to the authorized development involves additional remediation measures as part of the overall site decommissioning and clean-up activities that were anticipated, but were not included in the original CDP. In addition, the proposed amendment involves modifications to the requirements of Special Condition No. 3(A)(1) of the original permit regarding the protection of sensitive bird species. The changes, in part, request that required surveys for nesting birds be allowed to be conducted closer to the time of development and, in part, request that limitations against working in the vicinity of the nests when fledglings are present be relaxed under certain prescribed conditions. As performing the surveys closer to the time of development will reduce the chances that nesting birds would be identified and protected from the adverse effects of the development, and as the Commission can modify the applicant's proposed changes to the special condition in a manner that does not reduce protections for nesting birds, the Executive Director accepted this portion of the amendment as consistent with the intent of the Commission in its action on the original permit to prohibit development near nests of sensitive bird species during the nesting season that would disturb the nesting birds.

The applicant also seeks authorization to allow certain construction activities to be conducted outside of the previously imposed construction work window (April 15th to October 15th). As allowing a slightly expanded seasonal work window to allow certain work to be conducted between April 1 and October 31st would be consistent with the seasonal limitations on grading

and excavation work imposed by recently amended provisions of the certified LCP, and as the Commission can modify the applicants proposed changes to the special condition in a manner that would conform to the seasonal grading and excavation windows of the recently amended LCP, the Executive Director accepted this portion of the amendment as consistent with the intent of the Commission in its action on the original permit to minimize the impacts of erosion and sedimentation on water quality consistent with the certified LCP.

None of the other project limitations and performance standards established under the original permit and determined adequate for reducing the effects of the development in and on adjoining ESHA, coastal water quality, geologic hazards, and archaeological resources would be reduced or otherwise altered. Accordingly, the development as amended and conditioned would conform to the policies and standards of the LCP with respect to the protection of environmentally sensitive habitat areas and water quality.

Therefore, for the reasons discussed above, the Executive Director has determined that the proposed amendment would not lessen or avoid the intent of the conditionally approved permit and has accepted the amendment request for processing.

3. Commission Jurisdiction and Standard of Review

The City's approval of the original project was appealed to the Commission in 2005. The Commission found the appeal raised a substantial issue and approved the project with conditions *de novo* in May 2006. After approving a coastal development permit, the Commission retains jurisdiction over all permit amendments. Pursuant to Section 30604(b) of the Coastal Act, after effective certification of an LCP, the standard of review for all coastal permits and permit amendments within a certified area is the certified LCP and, for areas located between the first through public road and the sea, the public access and recreation policies of the Coastal Act. Thus, the standard of review for the original permit (A-1-FTB-05-053) and all subsequent permit amendments previous to the subject amendment (A-1-FTB-05-053-A6) was the City of Fort Bragg LCP as certified at the time of Commission action on the permit and permit amendments, and the public access and recreation policies of the Coastal Act.

In February 2008, the Commission certified with suggested modifications, a comprehensive update to the City of Fort Bragg's LCP, including the City's Land Use Plan (Coastal General Plan) and implementing ordinance (Coastal Land Use and Development Code). The City later adopted the suggested modifications and adopted the necessary implementing measures, and the update amendment was effectively certified in July 2008. Therefore, the applicable standard of review for the subject permit amendment (filed in September 2008) is the City of Fort Bragg LCP as effectively certified in July 2008.

4. Scope

This staff report addresses only the coastal resource issues affected by the proposed permit amendment, provides recommended special conditions to reduce and mitigate significant impacts to coastal resources and achieve consistency with the certified LCP and the public access and recreation policies of the Coastal Act, and provides findings for conditional approval of the

amended project. All other analysis, findings, and conditions related to the originally permitted project, except as specifically affected by this proposed permit amendment and addressed herein, remain as stated within the findings for the original development adopted by the Commission on May 12, 2006 and all subsequent permit amendments, and included as Exhibit No. 7 of this report.

I. MOTION, STAFF RECOMMENDATION, AND RESOLUTION:

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve Coastal Development Permit Amendment No. A-1-FTB-05-053-A6 pursuant to the staff recommendation.

Staff Recommendation of Approval:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit amendment as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution to Approve with Conditions:

The Commission hereby approves the proposed permit amendment and adopts the findings set forth below, subject to the conditions below, on the grounds that the development with the proposed amendment, as conditioned, will be in conformity with the City of Fort Bragg Local Coastal Program and the public access and recreation policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because all feasible mitigation measures and alternatives have been incorporated to substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS: See attached Appendix A.

III. SPECIAL CONDITIONS:

Note: Special Condition Nos. 2, 4, and 6 through 9 of the original permit, and Special Condition No. 5 as modified and reimposed by Permit Amendment No. A-1-FTB-05-053-A2 are reimposed as conditions of this permit amendment without any changes and remain in full force and effect. Special Condition No. 1 of the original permit, and Special Condition No. 3 of the original permit as modified and reimposed by Permit Amendment No. A-1-FTB-05-053-A2 are modified and reimposed as conditions of Permit Amendment No. A-1-FTB-05-053-A6. Special Condition Nos. 10, 11, and 12 are added as new conditions of Permit Amendment No. A-1-FTB-05-053-A6. Deleted wording within the modified special condition is shown in ~~strikethrough~~ text, and new condition language appears as **bold double-underlined** text. For comparison, the text of the original permit conditions is included in Exhibit No. 7 and the text of Special Condition Nos. 3 and 5 as modified and reimposed by Permit Amendment No. A-1-FTB-05-053-A2 is included as Exhibit No. 8.

1. Scope of Approved Development

A. This Coastal Development Permit **as amended**, authorizes: (a) the removal and stockpiling of concrete and reinforcement steel building foundation materials from a 26 structure complex of former industrial buildings; (b) the excavation, stockpiling, and/or disposal of underlying soil with COPC concentrations exceeding cleanup levels; (c) the excavation and extraction of buried "geophysical anomalies" from Parcels 3 and 10; and the extrication of visible debris and excavation and removal for stockpiling and/or disposal of any underlying, near-surface soil with COPC concentrations exceeding cleanup levels from Glass Beaches 1, 2 and 3**, and (d) excavation of dioxin/furan-impacted soils from Parcel 10, construction of a subsurface consolidation cell within Parcel 8 to contain the contaminated soils, and retention of the consolidation cell until the Department of Toxic Substances Control completes its five-year review of the final remediation plan** at Georgia-Pacific Corporation's former California Wood Products Manufacturing Facility, situated at 90 West Redwood Avenue, Fort Bragg, as further detailed and conditioned, in the following documents:

- *Workplan for Foundation Removal, Additional Investigation, and Interim Remedial Measures,* Acton Mickelson Environmental, Inc., March 21, 2005;
- *Addendum #1 to Workplan for Foundation Removal, Additional Investigation, and Interim Remedial Measures,* Acton Mickelson Environmental, Inc., May 6, 2005;
- *Addendum #2 to Work Plan for Foundation Removal, Additional Investigation, and Interim Remedial Measures,* Acton Mickelson Environmental, Inc., August 19, 2005;
- *Response to RWQCB Comments on Work Plan for Foundation Removal, Additional Investigation, and Interim Remedial Measures,* Acton Mickelson Environmental, Inc., September 22, 2005;
- *Revised Appendix D for Work Plan for Foundation Removal, Additional Investigation, and Interim Remedial Measures,* Acton Mickelson Environmental, Inc., September 28, 2005;

- *Clarification and Modification to Work Plan for Foundation Removal, Additional Investigation, and Interim Remedial Measures Dated March 21, 2005, Addenda #1 and #2 to the Work Plan for Foundation Removal, Additional Investigation, and Interim Remedial Measures Dated May 6 and August 19, 2005, Respectively, and Response to RWQCB Comments Dated July 18, 2005 Former Georgia Pacific California Wood Products Manufacturing Facility Fort Bragg, California,* Acton Mickelson Environmental, Inc., March 28, 2006; and
- *Stormwater Pollution Prevention Plan for Foundation Removal, Additional Investigation, and Interim Remedial Measures,* Acton Mickelson Environmental, Inc., September 28, 2005.
- ***Stormwater Pollution Prevention Plan - Georgia-Pacific Wood Products Manufacturing Facility, Fort Bragg, California,*** **BBL Sciences, September 2006.**
- ***SWPPP Addendum - Georgia-Pacific Wood Products Manufacturing Facility, Fort Bragg, California,*** **Arcadis, May 2008.**

B. All revegetation planting identified in any of the above-enumerated documents shall utilize native plants obtained from local genetic stocks.

C. All excavation and Interim Remedial Measure (IRM) activities shall be conducted during the non-rainy season from April 1 through October 31 except as further restricted by Special Condition No. 3(A)(3)(a) below.

~~C~~**D.** The permittee shall undertake the removal, excavation, stockpiling, and disposal activities as proposed in accordance with the above-listed plans as modified by sub-section B **and C** above, and shall implement all collection and testing of soil samples for COPCs and all mitigation measures contained and described therein. Any proposed changes to the work plans shall be reported to the Executive Director. No changes to the work plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

3. Protection of Marine and Coastal Biological Resources

A. All removal, excavation, stockpiling, and disposal activities authorized by this Coastal Development Permit shall be performed consistent with the conclusions and recommendations contained in: (1) *Jurisdiction Determination and Habitat Assessment* (TRC Companies, Inc., August 2003); (2) *Botanical Field Study of Some of the Bluff Areas at the GP Mills Site* (Teresa Scholars, Biological Consultant, undated); (3) *Late Season Botanical Survey for the GP Mill Site Bluffs* (Teresa Scholars, Biological Consultant, August 16, 2005); (4) *Avian Habitat Utilization and Impact Assessment* (WRA Environmental Consultants, January 2006); (5) *Rocky Intertidal Environmentally Sensitive Habitat Area Engineering and Biological Assessment* (Acton-Mickelson Environmental, Inc. and WRA Environmental Consultants, February 2006); (6) *Conceptual Glass Beach 3 Mitigation and Monitoring Plan* (Teresa Scholars, Biological Consultant, September 22, 2005); and (7) *Conceptual Revegetation Plan Former*

Georgia-Pacific California Wood Products Manufacturing Facility (Circuit Rider Productions, Inc., September 22, 2005), and shall implement all mitigation measures contained therein including but not limited to the following measures as modified below:

1) For the Protection of Coastal Bluff Avian Resources:

- **Sensitive Avian Species Nesting Survey - PRIOR TO COMMENCEMENT OF DEBRIS EXTRICATION ACTIVITIES AT GLASS BEACHES 1-3 AND ON PARCELS 3 AND 10 AND EXCAVATION OF DIOXIN-IMPACTED SOILS ON PARCEL 10,** and consistent with the applicant's proposed project description, the permittee shall submit for review and approval of the Executive Director, a survey of the associated coastal bluff face and blufftop margin areas, conducted by a qualified biologist or resource ecologist with specific knowledge of threatened, endangered, species of special concern, or treaty-protected migratory birds ("sensitive avian species") which fully evaluates any and all indications of the presence or absence of these species, and which demonstrates compliance with all of the following:

  a) No ~~less~~ **more** than 14 days ~~and no more than 30 days~~ prior to the beginning of construction, a qualified biologist or resource ecologist shall conduct a non-invasive survey for any sensitive avian species nesting in the coastal bluff face and blufftop margin areas. If the survey finds any indication that nesting sensitive avian species with unfledged young are present on the bluff face and blufftop margins, project work shall be limited consistent with the mitigation measures identified in the *Avian Habitat Utilization and Impact Assessment* (WRA Environmental Consultants, January 2006), including the imposition of exclusionary buffer areas identified therein, however, in no case shall the exclusionary buffer be less than 100 horizontal feet from the affected nesting site. Work within the exclusionary buffers shall not proceed until a subsequent bird survey has been conducted by a qualified biologist or resource ecologist that demonstrates that the young have fledged and are not nesting in the area for thirty (30) continuous days, and such surveys have been submitted for the review and approval of the Executive Director;

  b) If no indications of nesting sensitive avian species are found during the initial survey, no additional surveys or mitigation is required, provided the project commences within ~~30~~ **14** days of completion of the survey, and provided the project does not extend into the commencement of the nesting season of the sensitive avian species;

  c) If more than ~~30~~ **14** days have passed since completion of the initial survey and work has not commenced, or if it is determined that work will extend past the commencement of the nesting seasons of the various sensitive avian species (see *Avian Habitat Utilization and Impact Assessment*, Tables A1, A2, and A3) a new survey shall be conducted and submitted

for the review to the Executive Director, no more than ~~30 days and no less than~~ 14 days prior to the start of the nesting-season or the start of work, and submit a report to the Executive Director for review and approval. If any survey discovers indications of sensitive avian species nesting in the coastal bluff face and blufftop margin areas, human activity in the affected area(s) shall be minimized and construction shall cease until a sensitive avian species survey has been conducted by a qualified biologist or resource ecologist that demonstrates that all young have fledged and are not nesting in the coastal bluff face and blufftop margins for thirty (30) continuous days, and such surveys have been submitted for the review and approval of the Executive Director; and

d) Following completion of restoration activities and revegetation, the botanist shall prepare a follow-up report that identifies all measures taken to protect rare plant species in each location and that evaluates the success of the mitigations in protecting and/or re-establishing the rare plant populations. The report shall be submitted to the Executive Director.

2) For the Protection of Rare Plant Biological Resources:

- **Final Plant Restoration Monitoring Program - PRIOR TO COMMENCEMENT OF DEBRIS EXTRICATION ACTIVITIES AT GLASS BEACHES 1-3 AND ON PARCELS 3 AND 10**, the applicant shall submit for review and written approval of the Executive Director, a final detailed restoration monitoring program designed by a qualified wetland biologist for monitoring of the plant restoration site. The monitoring program shall at a minimum include the following provisions:
  a) Performance standards that will assure achievement of rare plant species replacement at coverages, densities, and associative compositions, as applicable, that existed in the areas prior to development;
  b) Surveying the relative cover and density of each plant species of special concern found in the proposed development area prior to the commencement of construction;
  c) Monitoring and restoration of the affected areas in accordance with the approved final monitoring program for a period of five years;
  d) All revegetation planting shall utilize native plants obtained from local genetic stocks;
  e) Submission of annual reports of monitoring results to the Executive Director by November 1 each year for the duration of the required monitoring period, beginning the first year after completion of the project. Each report shall include copies of all previous reports as appendices. Each report shall also include a "Performance Evaluation" section where information and results from the monitoring program are used to evaluate the status of recolonization of the affected plant species in relation to the performance standards;

f) Submission of a final monitoring report to the Executive Director at the end of the five-year reporting period. The final report must be prepared in conjunction with a qualified botanist or wetlands biologist. The report must evaluate whether the restoration sites conform with the goals, objectives, and performance standards set forth above. The report must address all of the monitoring data collected over the five-year period. If the final report indicates that the success standards have not been achieved, the applicant shall submit a revised or supplemental restoration program to compensate for those portions of the original program which did not meet the approved success standards. The revised enhancement program shall be processed as an amendment to this coastal development permit;

g) Monitoring and restoring the plan restoration sites in accordance with the approved monitoring program. Any proposed changes from the approved monitoring program shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines no amendment is legally required;

h) Flagging of the locations of the rare plant species by a qualified botanist prior to commencement of the grading in bluff face and blufftop areas. Work shall only be permitted to occur within 100 feet of the outer perimeter of the rare plant populations if such work is necessary to perform the required environmental remediation activities on the property;

i) No storage of equipment or stockpiling of materials within 100 feet of the outer perimeter of the rare plant populations;

j) If debris or soil removal is necessary within the rare plant sites and/or the 100-foot buffer zones, the following measures shall be required:

(1) If a rare species cannot be avoided, the botanist shall make a determination as to the feasibility of whether the species can be removed for the affected area prior to waste removal activities within the area and transplanted back to the affected area after work activities are completed.

(2) If possible, work shall be conducted after seed set at locations where rare species are identified.

(3) The botanist shall make a determination at each work location as to whether removal of the surface soil (containing the seed bank) for stockpiling is warranted. If warranted, and contingent upon analytical test results for the presence of chemicals of potential concern, stockpiled soil containing the seed bank shall be placed at the location (laterally and vertically) from which it was removed following completion of work activities. The permittee shall follow the recommendations for increasing the likelihood for survival of transplanted rare species as made by the botanist; and

(4) Following completion of restoration activities and revegetation, the botanist shall prepare a follow-up report that identifies all measures taken to protect rare plant species in each location and

that evaluates the success of the mitigations in protecting and/or re-establishing the rare plant populations. The report shall be submitted to the Executive Director.

3) For the Protection of Rocky Intertidal Marine Biological Resources:

a) Bluff face and blufftop margin grading activities shall only be conducted during the dry season, from April 15 through October 15;
b) Excavation activities shall be initiated leaving a 4-foot-thick strip of fill/topsoil at the sea cliff to prohibit any sediment or water falling onto the rocky intertidal area. Upon completion of excavation activities to the east, the remaining 4-foot-thick strip shall be excavated in a manner to minimize soil or debris dropping onto the rocky intertidal area;
c) Manual methods shall be used to remove any material that falls onto the rocky intertidal area;
d) Excavated soil and debris shall be segregated and stockpiled on heavy-duty plastic at designated locations to the east of the work areas. These storage locations are paved with asphalt and are greater than 300 feet from the sea cliff;
e) Holes and imperfections in the asphalt surface cover of the proposed stockpile areas shall be repaired prior to stockpile placement to prevent surface water infiltration;
f) If necessary, both storage areas can be expanded onto existing paved surface to accommodate any additional storage requirements. Alternatively, excavated soil and debris may be transported to the central debris and soil stockpile areas as specified in the Excavation and Stockpile Quantification Estimate and Site Plan Map;
g) Berms or ditches shall be constructed upslope of the work areas to intercept surface water runoff and redirect it to engineered locations away from the work areas;
h) Test pits will be backfilled with acceptable soil material, compacted, and covered to minimize rainfall or runoff infiltration; and
i) All revegetation planting shall utilize native plants obtained from local genetic stocks.

4) For the Protection of Offshore Rocky Marine Biological Resources:

a) Baseline observations of pinnipeds in the project area shall be conducted prior to initiating project activities. The baseline study shall be submitted to the Executive Director prior to commencement of development in coastal bluff face and blufftop margin areas. A morning and afternoon count shall be conducted the day prior to work activities are scheduled to commence. Observations shall also be made every morning work is scheduled to occur;
b) Surveying and monitoring for behavioral changes shall be conducted by a qualified biologist using minimum 8x42 magnification power binoculars or a spotting scope;

c) Survey data shall include type of marine mammals present, numbers, age class, sex (if possible), location, time, tide, type of development activity being conducted, and whether animals respond to the activity. Rates of departure and arrival of animals to and from the haul-out shall be noted;

d) If seals flush for a work-related reason, the portion of the project that caused the seals to flush shall be delayed until the animals leave the area;

e) If a marine mammal shows behavioral changes that are potentially related to restoration activities all work shall be stopped immediately;

f) Project work in areas in proximity to sensitive haul-out areas shall only be performed during daylight hours when visibility allows detection of marine mammals within 200 meters (656 feet) of the project area to lessen the chance of harassment;

g) Project work shall only be conducted when no marine mammals are present within 100 meters (328 feet) of the project areas;

h) If marine mammals wander within 100 meters (328 feet) of the work area, work activities within the area shall be postponed until the animal(s) leaves the project area;

i) Additional counts shall be conducted every two days for one week after all work is terminated to compare the use of haul-out sites without work-related disturbances pursuant to the pre- and post-activity behavior-specific monitoring recommendations of the National Marine Fisheries Service (NMFS); and

j) All surveying data shall be compiled and submitted to the Executive Director at the end of the construction season.

B. The permittee shall undertake the removal, excavation, stockpiling, and disposal activities in accordance with the above-listed biological mitigation measures. Any proposed changes to the work plans shall be reported to the Executive Director. No changes to the work plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

10. <u>Consolidation Cell Maintenance and Monitoring</u>

A. <u>Within 180 days following completion of construction of the consolidation cell, or within such additional time as the Executive Director may grant for good cause, the applicant shall submit to the Executive Director, a copy of (1) the Operation and Maintenance Plan, and (2) the Monitoring Plan as reviewed and approved by the Department of Toxic Substances Control (DTSC).</u>

B. <u>The applicant shall report immediately to the Executive Director, any failure(s) of the consolidation cell determined by the Department of Toxic Substances Control (DTSC) based on the review by DTSC of the maintenance and monitoring reports submitted to DTSC pursuant to the approved Operation and Maintenance Plan and Monitoring Plan referenced in (a) above, including, but not limited to, evidence that subsurface dioxins/furans present in the soil at the consolidation cell are impacting groundwater or other environmental resources; and</u>

C. Any corrective actions and/or repairs shall not be performed until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

11. Consolidated Cell Design Document

PRIOR TO COMMENCEMENT OF CONSTRUCTION of the Consolidation Cell, the applicant shall submit evidence that the Department of Toxic Substances Control (DTSC) has reviewed and approved the Consolidated Cell Design Document required by DTSC. The applicant shall inform the Executive Director of any changes to the project required by the DTSC. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

12. Time Period for Which Consolidation Cell for Dioxin Impacted Soil is Authorized

The authorization granted by this coastal development permit for the use of the consolidation cell for dioxin impacted soil shall be valid until the California Department of Toxic Substances Control (DTSC) has completed it's five-year re-evaluation of the Final Operable Unit A Remedial Action Plan approved on August 28, 2008. No later than 90 days after DTSC has taken final action on the re-evaluation, or within such additional time as the Executive Director may grant for good cause, the permittee shall either:

A. Submit a coastal development permit application to the Commission for removal of the consolidation cell and the dioxin impacted soil contained within the cell, or

B. Submit a coastal development permit application to the Commission for the retention and continued use of the consolidation cell for dioxin impacted soil, accompanied by:

i.) An analysis of the effectiveness of the consolidation cell in containing the dioxins/furans present in the soil and preventing these contaminants within the consolidation cell from adversely affecting groundwater and other environmental resources, and

ii.) A new analysis of alternatives to the authorized consolidation cell authorized by Coastal Development Permit Amendment No. A-1-FTB-05-053-A6 for the remediation of the dioxin/furan-impacted soils including, but not limited to the use of bioremediation techniques and other advanced remediation technologies available at the time, taking into account the relative impact of the various alternatives on coastal resources and the criteria set forth by the Environmental Protection Agency (USEPA) and DTSC for evaluating remediation alternatives.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

A. Project Background

Contamination Problems Associated with Overall Project Site and Cleanup Efforts

The 415-acre Georgia Pacific property in Fort Bragg had been used as lumber sawmill since 1885 up until 2002 when the mill was closed. During sawmill operations, lags were received onsite, unloaded, sorted in the log storage areas, debarked, and milled. Milled lumber was then shipped green, kiln dried, or air dried. Finished lumber was transported by rail or truck. Bark and wood refuse was collected and burned in an onsite power plant to generate steam and electricity for site operations. Since 2002, most of the structures and equipment on site has been removed.

The primary hazardous substance used across the site was petroleum. Tanks and drums stored diesel fuel, motor oil, fuel oil, lube oil, hydraulic oil, and diala oil. In addition, jet fuel was used for a short time to refuel planes using the former onsite runway. Other chemicals used onsite included antifreeze and transmission fluids for vehicle servicing, water treatment chemicals, small quantities of acids/bases, solvents, and paint and paint thinners. Buildings had lead-based paint and asbestos containing materials, and power poles has transformer using PCBs. For a few years, small-scale treatment of wood occurred using a fungicide at a small dip tank. Scrap metals, ash/clinker and burn debris were also found in isolated areas of the site.

A series of soil, sediment, groundwater, and surface water investigations have been undertaken at the site since the mid 1980's. Beginning in 2003, these investigations were conducted under the auspices of the North Coast Regional Water Quality Control Board (RWQCB). In August 2006, RWQCB requested that the Department of Toxic Substances Control (DTSC) take over the lead agency oversight role. DTSC issued a Site Investigation and Remediation Order in February 2007 and Georgia Pacific has since been conducting investigations, monitoring, and remedial activities under that order. Those activities constituting development under the Coastal Act have been authorized by the Commission under Coastal Development Permit No. A-1-FTB-05-053 as amended.

The investigations conducted to date have identified the following areas and chemicals as priorities for remediation:

A. Ponds. Some of the sediments in ponds associated with fly ash and scrubber water management have elevated concentrations of metals and dioxins/furans. These ponds have been investigated and warrant further evaluation as to appropriate next steps.

B. Equipment Shops and hazardous materials fuel storage areas. These areas have petroleum compounds in soil/and or groundwater. Bioremediation of many of these areas has commenced with remaining areas subject to additional cleanup.

C. Offsite Sources. Perimeter monitoring wells and other sampling confirm that at least two areas of the site are being impacted by chemicals migrating from offsite.

D. Operable Unit A. Soils with lead and PCBS are to be disposed of offsite and soils with dioxins are proposed under the current amendment request to contained and capped onsite.

The site has been divided into five operable units (OUs) to facilitate investigation and remedial work (see Exhibit No. 3). Investigations have been conducted in all five OUs and remedial activities are underway or anticipated in all OUs except OU-B which requires no further cleanup. As discussed below, the Commission approved the original coastal development permit on appeal in 2005 and a series of amendments that authorized the cleanup activities that have been performed to date and additional interim cleanup work that has yet to be performed.

The current amendment request involves additional remediation work within only one of the OUs, Operable Unit OU-A, which consists primarily of shoreline areas that the City intends to purchase from Georgia Pacific and develop for public access utilizing a grant from the Coastal Conservancy. All the necessary site investigation work and remedial action planning has been completed by the applicant and approved by DTSC for Operable Unit A. The remediation work that is the subject of the current amendment request is to excavate dioxin/furan contaminated soils from Operable Unit A and bury them within a consolidation cell on Parcel 8, approximately 1,000 feet away from the shoreline. With successful completion of the work proposed under the permit amendment request, Operable Unit A will have been fully remediated to DTSC requirements. Further site investigation work and remedial action planning is required for other OUs at the Georgia Pacific site which will require additional coastal development permit authorization in the future.

Commission Review of Original Project on Appeal

On February 11, 2005, the City of Fort Bragg Community Development Department filed a coastal development permit application from the Georgia-Pacific Corporation for the removal of concrete foundation materials, additional investigation, and if warranted, interim remedial measures to remove underlying soil with Constituents of Particular Concern (COPC) concentrations exceeding cleanup levels at eleven building site locations within the 435-acre property of the applicant's former lumber mill complex located between Highway One the Pacific Ocean, and Noyo Bay, on the western shoreline of the City of Fort Bragg in west-central Mendocino County. The application also sought authorization to excavate and remove debris from three coastal bluff areas above so-called "Glass Beaches Nos. 1-3." In addition, the applicants requested permission to excavate numerous locations on two of the mill site bluff top parcels to ascertain the composition of various metallic "geophysical anomalies" discovered in the area and to similar remove the materials if COPC concentrations exceed cleanup levels.

The purpose of the project is to provide further information regarding the extent of COPCs in soil and groundwater and allow areas on the mill site where initial soil borings have indicated the presence of COPCs to be uncovered so that they may be further assessed to provide data for a risk assessment and comprehensive remediation plan. Interim remediation measures, including the excavation of exposed soil with COPC concentrations exceeding cleanup levels, and

temporary stockpiling for future *in-situ* treatment or removal to a appropriate disposal facility, and back-filling the excavations, would be implemented depending upon the presence, composition, and concentrations of any COPCs encountered. In addition, the applicants requested authorizations to remove refuse and debris materials at the coastal bluff sites to reduce the liability associated with possible injuries to humans and wildlife from the presence of these materials, especially with regard to the on-going efforts by the Coastal Conservancy and the City to acquire and develop a public blufftop trail in these areas.

Following completion of the Community Development Department staff's review of the project, and the requisite preparation and circulation of environmental review documentation, on August 10, 2005, the Fort Bragg Planning Commission approved with conditions Coastal Development Permit No. CDP 3-05 for the subject development.

The decision of the Planning Commission was locally appealed to the Fort Bragg City Council. On October 11, 2005, the Council upheld its planning commission's conditional approval of the development, and the City's approval was appealed to the Commission on October 27, 2005.

At its meeting of December 14, 2005, the Commission found that the appeal raised a substantial issue of conformance of the project as approved with the certified LCP regarding protection of marine biological resources, protection of environmentally sensitive habitat areas, namely rocky intertidal areas and coastal bluffs, and the avoidance and minimization of geologic instability. The Commission also found that additional information was required to allow for a full analysis of the proposed development's consistency with the policies and standards of the City's LCP. These requisite informational items entailed: (1) an assessment of potential avian habitat utilization of the project site's coastal bluff areas; (2) engineering and biological analyses of the project's potential effects on rocky intertidal areas; (3) a geo-technical evaluation of the coastal bluff face and blufftop margins; (4) an estimation of foundation material and soil removal volumes and stockpile quantities; and (5) an alternatives analysis of other characterization and assessment logistics, including sampling via the use of low-angle horizontal directional drilling with the foundation materials retained in place.

During the period from January through early March 2006, the requested supplemental information items were prepared by the applicant's consultants and forwarded to the Commission staff for review. Throughout March 2006, both Commission and Regional Water Quality Control Board staff members conferred over the various concerns relating to coastal resources and identified a set of project changes that if accepted by the applicant and incorporated into the project description would resolve many of the identified concerns. The suggested project modifications included: (1) provisions for pre-demolition testing for COPCs at perimeter areas around select building foundations; (2) requirements for the use of appropriately low-permeable capping back-fill in the areas where materials would be excavated and it is determined that soil with COPC concentrations exceeding cleanup levels would have to remain until full remediation of the site at a later date; and (3) further specification to the scope of the debris removal and confirmation testing to be performed on the site's coastal bluff face and blufftop margins to minimize disruption of bluff stability and bluff face and intertidal habitat.

On March 28, 2006, the applicant amended the project description for purposes of the Commission's *de novo* review of the appeal to incorporate the suggested changes.

On May 12, 2006, the Commission approved with conditions Coastal Development Permit No. A-1-FTB-05-053 with nine special conditions attached to the permit. Five of the conditions required that finalized biological surveys and rare plant restoration monitoring plans be approved, and evidence that all authorizations from other permitting and review agencies had been secured prior to work commencing in certain environmentally sensitive areas.

During the summer and fall of 2006, the building foundation removal portions of the project were undertaken and largely completed, while work on the blufftop and bluff face areas of Glass Beaches 1, 2, and 3, and the Parcel 3 and 10 geophysical anomaly sites deferred until all necessary studies were completed for the areas and related approvals secured.

On August 11, 2006, the Department of Toxic Substances Control (DTSC) assumed from the North Coast Regional Water Quality Control Board (NCRWQCB) the lead agency oversight role for future site investigation and remedial activities at the former mill site.

Original Project Description

The originally authorized development consists of foundation and debris removal, additional site investigation, and interim remedial measures, if necessary, associated with the voluntary site assessment of the former Georgia-Pacific Corporation sawmill complex. Since October 2002, when the mill ceased production and closed, the site has undergone a series of assessments for reuse of the site. Preliminary evaluations as part of the Georgia-Pacific Mill Site Reuse Study and Specific Plan projects were performed to assess the presence of COPCs resulting from past operations on the mill properties, including numerous soils and groundwater samples taken from the network of surface-grab, auger-bored and trench-excavated and monitoring well sample points on the site. In addition, to eliminate the source of any identified COPCs, much of the industrial machinery has been previously removed from the site as were many of the former industrial buildings (see City of Fort Bragg Coastal Development Permit Nos. CDP 1-03 and 2-04).

The original development authorized de novo by the Commission entails the removal of concrete building foundations from the 26 structure complex of former industrial buildings clustered on the central portion of the mill site inland of Soldier's Bay / Fort Bragg Landing and at the site of the mobile equipment shops to the northeast of the sawmill complex. Heavy tractored and rubber-tired construction equipment including excavators, backhoes, dump trucks, and hand and power tools were utilized to perform the concrete break-out, material excavation/extrication, and transportation to stockpile areas located along the eastern side of the sawmill / powerhouse / water treatment complex and equipment shop buildings, and inland of the Glass Beach and Parcel 3/10 sites.

Once the concrete foundation rubble and refuse materials had been removed from the building sites and bluff areas and secured at the designated storage locations, the exposed areas were examined for the presence and extent of any underlying COPCs. A soils sampling grid was

established over and around the exposed foundation areas. An adaptive management approach was undertaken with respect to the specific spacing and number of sampling points. Soil samples were then collected and analyzed for a variety of chemical constituents, including Total Petroleum Hydrocarbons as gasoline, diesel, diesel with silica gel cleanup, and motor oil (TPHg, TPHd, TPHdsgc, TPHo), solvents in the form of Volatile and Semi-Volatile Organic Compounds (VOCs), Polynuclear Aromatic Hydrocarbons (PAH), Polychlorinated biphenyls (PCBs), Organochlorine pesticides, Dioxins and furans, site-specific pesticides/herbicides, certain heavy metals subject to California water quality regulations, Hexavalent chromium, and tannins and lignin compounds.

The appealed project was amended, for purposes of the Commission's *de novo* review, to include provisions for collecting soil samples from select areas adjacent to the foundation perimeters (outside the foundation footprint) prior to removal of the foundations; however, removal of the foundations was not conditioned on whether these samples are collected or the analytical results of the samples. In the event physical constraints preclude collection of specific perimeter samples prior to foundation removal (e.g., personnel or equipment access were impeded by foundation layout), these samples were to be collected following removal of the foundations. Based on the results of the analysis of the perimeter samples, additional pre- or post-foundation removal perimeter samples were collected as specified in the Work Plan.

As warranted by field conditions determined by the work site supervisor to be subject to criteria enumerated within the work plan, further "interim remedial measures," including the further excavation of soils containing COPC concentrations exceeding cleanup levels to unspecified depths for either direct removal from the sites to an appropriate disposal facility or stockpiling of the materials on the mill property for in-place treatment or eventual transport and disposal, were implemented. Additional soil column testing for COPCs was also performed as warranted by site conditions and the determination of the site supervisor and/or regional water board staff.

The excavation and stockpiling activities were performed pursuant to certain water quality best management practices and performance standards, including provisions for covering the excavation and stockpiles with plastic sheeting, constructing berms, placing stormwater and soil debris interception barriers, discontinuing work during windy periods, site watering from furtive dust abatement, and conducting the excavation to minimize further introduction of COPCs in groundwater. Excavated areas were then to be back-filled with appropriately low-permeable earthen, geo-textile fabric, or paving materials to stabilize the excavation sites.

Previous Permit Amendments

The Commission has reviewed and approved five previous amendments to the original permit, including one material amendment (A-1-FTB-05-053-A2) and four immaterial amendments attached as Exhibit No. 7 of this staff report for reference. These amendments addressed cultural resources monitoring, a bioremediation pilot study conducted in 2007, additional excavation and bioremediation of petroleum-impacted soil, in situ bioremediation of groundwater, and building demolition.

B. Proposed Amendment Description and Project Setting

Project Setting

The project site consists of portions of the approximately 435-acre Georgia-Pacific Corporation lumber mill complex situated on the uplifted marine terrace that spans a roughly four-mile-long stretch of open ocean coastline to the west of Highway One and the city center of Fort Bragg. Immediately to the south of the site lies the mouth embayment of the Noyo River. The project area is bounded on the north by low-density single-family residential housing (see Exhibit Nos. 1 and 2). The property consists of a generally flat, heavily graded industrial site with scattered thickets of brushy vegetation along its western coastal bluff face, and within and around the various log curing and fire suppression ponds developed on the site.

The project site properties are situated within the incorporated boundaries and the coastal development permit jurisdiction of the City of Fort Bragg. The site is planned and zoned in the City's LCP (certified in 2008) as "Timber Resources Industrial." The property is not situated within any viewpoint, view corridor, or highly scenic area as designated in the visual resources inventory of the LCP's Land Use Plan. Due to the elevation of the project site relative to the beach and ocean, and, until recently, the presence of intervening industrial structures and timber products processing and storage areas, no public views of blue water across the property from Highway One to and along blue-water areas of the ocean and designated scenic areas exist. The views that are afforded across the property are limited to either glimpses of distant horizon vistas from Highway One, or lateral views of the coastal bluff areas as viewed from the public-accessible areas at Glass Beach to the north and from the beach areas to the west of Ocean Front Park at the mouth of the Noyo River.

The portion of the property that is the subject of the proposed amendment is referred to as "Operable Unit A" (OU-A). The total acreage of OU-A is approximately 87 acres and includes two geographically separate units referred to as OU-A North (22 acres) and OU-A South (65 acres). The western boundary of OU-A is the mean high tide line and includes an approximately 100- to 110-foot-wide area that traverses the top of the coastal bluff and an approximately 30-acre parkland area. (See Exhibit No. 3.) As part of the former timber mill operation, areas within OU-A were used for log and untreated lumber storage. Portions of OU-A were also used for surface disposal activities, open burning, scrap storage, and landfill. The remedial site investigations determined elevated concentrations of dioxins/furans within the areas that are the subject of this permit amendment.

Proposed Amendment Description

As part of the proposed amendment application, Georgia-Pacific LLC (applicant) submitted a proposed "*Operable Unit A Remedial Action Plan and Feasibility Study"* (RAP) dated August 2008 prepared pursuant to requirements of the California Department of Toxic Substances Control (DTSC). The remedial action plan and feasibility study present the measures required to address contaminated soils within OU-A that pose a potential risk to human health and/or the environment. The proposed RAP was developed separately from plans for other portions of the site to expedite remediation of OU-A, which is expected to be purchased by the City with funds

granted through the Coastal Conservancy for the future use of the area for public access and recreation.

The proposed amendment involves additional remediation activities, including (1) excavation of approximately 13,000 cubic yards of dioxin-impacted soil from four areas in Parcel 10 (within the area referred to as OU-A South), and (2) placement of the excavated dioxin-impacted soil within an approximately 1.5-acre subsurface consolidation cell with an engineered cap. The proposed amendment also involves changes to Special Condition No. 3(A)(1) of the original permit pertaining to the protection of sensitive bird species. Lastly, the proposed amendment requests authorization to allow construction activities to be conducted outside the previously imposed construction window (April 15 - October 15). These various elements of the proposed amendment are described in further detail below.

1. Excavation of Dioxin-Impacted Soil in Parcel 10 Fill Area

The proposed amendment involves additional remedial measures within the project area known as Operable Unit A South (OU-A). OU-A South contains most of Parcel 10, which occupies approximately 50 acres along the southwestern portion of the former GP mill site. Although remedial measures at this site were previously anticipated, these specific areas and activities were not included in the original CDP. The majority of this parcel had no structures associated with sawmill operations. According to the applicant, scrapings from the log storage area in Parcel 10 were apparently pushed to an area north of the Blowhole (a natural feature located on the southwestern portion of this parcel). Other areas in Parcel 10 were also used as fill areas. Sampling in the Parcel 10 Fill Area found elevated levels of dioxins/furans in four areas with concentrations greater than the target cleanup level (53 pg/g).

The proposed amendment involves excavating approximately 13,000 cubic yards of dioxin-contaminated soil from four impacted areas ("Presumptive Remedy Areas") to a depth ranging from 2 to 5 feet below ground surface (bgs) (dioxins/furans concentrations below these depths are less than the target cleanup level). The excavation locations are shown on Exhibit No. 4. All excavation locations are located more than 20 feet from the edge of the shoreline bluff. The excavated soil is proposed to be placed in a subsurface "consolidation cell" constructed on-site as described in Item 2 below. All excavated areas would be backfilled with clean soil from the consolidation area to match existing grade and the areas would be revegetated with a native plant seed mix using a hydroseeder.

2. Construction of Consolidation Cell for Dioxin-Impacted Soil

The proposed amendment involves constructing an on-site, subsurface consolidation cell (cell) within which to place and cap the approximately 13,000 cubic yards of dioxin-impacted soil that would be excavated as described in Item 1 above. Consolidation of the contaminated soil limits the areal extent of impacted soil and capping provides an effective engineered barrier to prevent direct contact with, and mitigate potential infiltration of, precipitation (rain water) into the contaminated material.

The concentration of dioxin in the contaminated soils to be placed in the consolidation cell is relatively low compared to dioxin concentrations found in other contaminated sites. According to the applicant, the average concentration of dioxins in the soil to be placed in the consolidation cell is 100 parts per trillion (ppt). This level of concentration is 100 times lower than the concentration level at which contaminated material must be managed as hazardous waste under either state or federal law. The 100 ppt concentration is approximately two times the concentration level considered to be safe by DTSC (52 ppt) to leave untreated in other areas of the project site and two times the screening level set for residential soils by the Agency for Toxic Substances and Disease Registry.

In addition to being present in relatively low concentrations, the dioxin in the soil is relatively immobile. Dioxin molecules bind strongly to soil particles, making them largely immobile in the environment. Dioxin molecules are also highly "hydrophobic," which means they do not easily go into solution.

The proposed cell would be generally located within a 9-acre area situated at the southeastern portion of the property within Parcel 8, just south of the pond and west of the former nursery/greenhouse area (see Exhibit No. 3). Within this 9-acre area, the cell itself would be only approximately 1.5 acres in size. The precise location of the cell would be selected based on (1) the final volume of the excavated material (which may be slightly higher or lower depending on actual field confirmation sample results), and (2) consultation with the City of Fort Bragg.

The proposed site of the cell was relocated from the location described in a previous version of the RAP (December 2007) following discussions between the applicant and Coastal Commission staff. The cell location was moved further inland to a location more than 1,000 feet from the edge of the bluff to reduce potential geologic and erosion hazards while still meeting the criteria to provide effective and appropriate capping and consolidation (i.e., appropriate elevation to meet groundwater separation requirements).

The consolidation cell would be approximately 6.5 feet in depth and would be lined with a 40 mil polyvinyl chloride (PVC) liner on the bottom and sides, and with a geosynthetic clay liner (GCL) on top (see Exhibit No. 5). A simple leachate collection system (i.e., an engineered control to deal with liquids that might accumulate in the cell such as a sloped design with collection pipe) would also be installed. A layer of crushed rock would be placed along the sides, over the top of the cell liner, and below the final cover layer to prevent rodents from burrowing into the capped cell and to provide proper drainage. The surface layer would be composed of a vegetated soil cap and would be graded to provide positive drainage from the surface of the capped area. The material excavated from the cell location would be used to backfill the source areas and/or the areas would be graded to provide an even, relatively flat surface. The capped area would be revegetated with seed mix consisting of native coastal plants from a "clean" source (i.e., a seed mix that is as free as possible from non-native plant seeds). To the extent possible, seeds from local sources will be utilized.

3. Allow Selected Earthmoving Activities before April 15 and after October 15

The applicant requests authorization to allow excavation and grading activities to occur outside of the construction work window that, as originally authorized, is limited to the non-rainy season between April 15th and October 15th. The applicant proposes that some planned remedial activities at the site - in particular, bioremediation of impacted soil - require up to five months for completion and that extending the construction work window would allow greater flexibility in planning and carrying out the various components of the site remediation work. The applicant proposes that certain remediation activities, including construction of the land treatment unit, asphalt and foundation removal, and excavation of the consolidation cell, could be accomplished prior to April 15th without generating runoff through use of best management practices (BMPs) described in the SWPPP (BBL, 2006) and SWPPP addendum (ARCADIS, 2008). The applicant proposes that should rainfall sufficient to cause runoff (e.g., over 1 inch in 24 hours) be predicted after foundation/asphalt removal or consolidation cell construction has begun, work would be suspended and hay bales and/or straw wattle would be placed around the work area to prevent transport of asphalt, concrete, or soil away from the pavement or foundation location. Work would resume after heavy rain ended.

In addition to allowing work prior to April 15, the applicant proposes that rainfall conditions in late fall, after October 15, are normally mild enough to conduct earth-moving activities with the implementation of appropriate BMPs. The applicant indicates that extending the work window beyond October 15 would allow additional treatment time for bioremediation, if needed, or final site closure activities such as backfilling, final grading and revegetation, etc. The additional time would also allow for further treatment of groundwater in the excavations by biosparging to reduce petroleum hydrocarbon concentrations prior to backfilling.

4. Modifications to Special Condition No. 3(A)(1) Regarding Protection of Sensitive Avian Species

The applicant is requesting modifications to Special Condition No. 3(A)(1) of the original permit and as previously modified by Permit Amendment No. A-1-FTB-05-053-A2 that sets forth mitigation measures to ensure the protection of sensitive avian species. The proposed changes would (1) restrict the timing of pre-construction bird surveys to occur no more than 14 days prior to commencement of construction, (2) allow for reduction of the 100-foot exclusionary buffer area around identified nests, and (3) eliminate provisions for submittal of survey reports to the Executive Director for review and approval. The applicant's proposed changes to the text of Special Condition No. 3(A)(1) are shown below [language proposed to be added is shown in **bold double underline**; language proposed to be deleted is shown in ~~strikethrough~~]:

3. Protection of Marine and Coastal Biological Resources

A. All removal, excavation, stockpiling, and disposal activities authorized by this Coastal Development Permit shall be performed consistent with the conclusions and recommendations contained in: (1) *Jurisdiction Determination and Habitat Assessment* (TRC Companies, Inc., August 2003); (2) *Botanical Field Study of Some of the Bluff Areas at the GP Mills Site* (Teresa Scholars, Biological Consultant, undated); (3) *Late*

Season Botanical Survey for the GP Mill Site Bluffs (Teresa Scholars, Biological Consultant, August 16, 2005); (4) *Avian Habitat Utilization and Impact Assessment* (WRA Environmental Consultants, January 2006); (5) *Rocky Intertidal Environmentally Sensitive Habitat Area Engineering and Biological Assessment* (Acton-Mickelson Environmental, Inc. and WRA Environmental Consultants, February 2006); (6) *Conceptual Glass Beach 3 Mitigation and Monitoring Plan* (Teresa Scholars, Biological Consultant, September 22, 2005); and (7) *Conceptual Revegetation Plan Former Georgia-Pacific California Wood Products Manufacturing Facility* (Circuit Rider Productions, Inc., September 22, 2005), and shall implement all mitigation measures contained therein including but not limited to the following measures as modified below:

1) For the Protection of Coastal Bluff Avian Resources:

- **Sensitive Avian Species Nesting Survey - PRIOR TO COMMENCEMENT OF DEBRIS EXTRICATION ACTIVITIES AT GLASS BEACHES 1-3 AND ON PARCELS 3 AND 10,** and consistent with the applicant's proposed project description, the permittee shall submit for review and approval of the Executive Director, a survey of the associated coastal bluff face and blufftop margin areas, conducted by a qualified biologist or resource ecologist with specific knowledge of threatened, endangered, species of special concern, or treaty-protected migratory birds ("sensitive avian species") which fully evaluates any and all indications of the presence or absence of these species, and which demonstrates compliance with all of the following:

  a) No ~~less~~ **more** than 14 days ~~and no more than 30 days~~ prior to the beginning of construction, a qualified biologist or resource ecologist shall conduct a non-invasive survey for any sensitive avian species nesting in the coastal bluff face and blufftop margin areas. If the survey finds any indication that nesting sensitive avian species with unfledged young are present on the bluff face and blufftop margins, project work shall be limited consistent with the mitigation measures identified in the *Avian Habitat Utilization and Impact Assessment* (WRA Environmental Consultants, January 2006), including the imposition of exclusionary buffer areas identified therein,**. The exclusionary buffer may be less than 100 horizontal feet from the affected nesting site if the biologist works in concert with work crews and monitors the nest site to confirm that there is no disturbance. In addition, the 100 foot buffer may be reduced if avian species become acclimated to disturbance associated with ongoing construction activities and choose to nest within 100 feet of ongoing construction activities or if the biologist determines that the level of background disturbance is equal to or greater than the proposed construction disturbance, such as those sites adjacent to heavily trafficked roads.** ~~however, in no case shall the exclusionary buffer be less than 100 horizontal feet from the affected nesting site.~~ Work within the exclusionary buffers shall not proceed until a subsequent bird survey has been conducted by a qualified biologist or

resource ecologist that demonstrates that the young have fledged ~~and are not nesting in the for thirty (30) continuous days, and such surveys have been submitted for the review and approval of the Executive Director~~;

b) If no indications of nesting sensitive avian species are found during the initial survey, no additional surveys or mitigation is required, provided the **task** ~~project~~ commences within ~~30~~ **14** days of completion of the survey, and provided the **task** ~~project~~ does not extend into the commencement of the nesting season of the sensitive avian species;

c) If more than ~~30~~ **14** days have passed since completion of the initial survey and work has not commenced, or if it is determined that work will extend past the commencement of the nesting seasons of the various sensitive avian species (see *Avian Habitat Utilization and Impact Assessment*, Tables A1, A2, and A3) a new survey shall be conducted ~~and submitted for the review to the Executive Director,~~ no more than ~~30~~ **14** days ~~and no less than 14 days~~ prior to the ~~start of the nesting season or the~~ start of work, ~~and submit a report to the Executive Director for review and approval~~. If any survey discovers indications of sensitive avian species nesting in the coastal bluff face and blufftop margin areas, human activity in the affected area(s) shall be minimized and construction shall cease until a sensitive avian species survey has been conducted by a qualified biologist or resource ecologist that demonstrates that all young have fledged ~~and are not nesting in the coastal bluff face and blufftop margins for thirty (30) continuous days, and such surveys have been submitted for the review and approval of the Executive Director~~; and

…

C. Protection of Coastal Water Quality

LCP Provisions:

Policy OS-9.1:

Minimize Introduction of Pollutants. Development shall be designed and managed to minimize the introduction of pollutants into coastal waters (including the ocean, estuaries, wetlands, rivers, streams, and lakes) to the extent feasible.

Policy OS-9.2:

Minimize Increases in Stormwater Runoff. Development shall be designed and managed to minimize post-project increases in stormwater runoff volume and peak runoff rate, to the extent feasible, to avoid adverse impacts to coastal waters.

Policy OS-9.3:

Maintain Biological Productivity and Quality of Coastal Waters. Development shall be designed and managed to maintain, and restore where feasible, the biological productivity and quality of coastal waters, consistent with sections 30230, 30231, and other relevant sections of the California Coastal Act. The Coastal Act sections set forth below are incorporated herein as policies of the Land Use Plan:

Policy OS-9.4:

Maintain, Enhance, and Restore Marine Resources. Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Policy OS-9.5.

Maintain and Restore Biological Productivity and Water Quality. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Policy OS-10.1:

Construction-phase Stormwater Runoff Plan. All development that requires a grading permit shall submit a construction-phase erosion, sedimentation, and polluted runoff control plan. This plan shall evaluate potential construction-phase impacts to water quality and coastal waters, and shall specify temporary Best Management Practices (BMPs) that will be implemented to minimize erosion and sedimentation during construction, and prevent contamination of runoff by construction chemicals and materials.

Policy OS-10.3:

Emphasize Site Design and Source Control BMPs. Long-term post-construction Best Management Practices (BMPs) that protect water quality and control runoff flow shall be incorporated in the project design of development that has the potential to adversely impact water quality in the following order of emphasis:

A) Site Design BMPs: Any project design feature that reduces the creation or severity of potential pollutant sources, or reduces the alteration of the project site's natural flow regime. Examples include minimizing impervious surfaces, and minimizing grading.
B) Source Control BMPs: Any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices, or operational practices that aim to prevent stormwater pollution by reducing the potential for contamination at the source of pollution. Examples include covering outdoor storage areas, use of efficient irrigation, and minimizing the use of landscaping chemicals.
C) Treatment Control BMPs: Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption, or any other physical, biological, or chemical process. Examples include vegetated swales, and storm drain inserts.

Site Design BMPs may reduce a development's need for Source and/or Treatment Control BMPs, and Source Control BMPs may reduce the need for Treatment Control BMPs. Therefore, all development that has the potential to adversely affect water quality shall incorporate effective post-construction Site Design and Source Control BMPs, where applicable and feasible, to minimize adverse impacts to water quality and coastal waters resulting from the development. Site Design and Source Control BMPs may include, but are not limited to, those outlined in the City's Storm Water Management program.

Policy OS-10.4:

Incorporate Treatment Control BMPs if Necessary. If the combination of Site Design and Source Control BMPs is not sufficient to protect water quality and coastal waters consistent with Policy OS-9.3, as determined by the review authority, development shall also incorporate post-construction Treatment Control BMPs. Projects of Special Water Quality Concern (see Policy OS-12.1) are presumed to require Treatment Control BMPs to meet the requirements of OS-9.3. Treatment Control BMPs may include, but are not limited to, those outlined in the City's Storm Water Management program, including biofilters (e.g., vegetated swales or grass filter strips), bioretention, infiltration trenches or basins, retention ponds or constructed wetlands, detention basins, filtration systems, storm drain inserts, wet vaults, or hydrodynamic separator systems.

Policy OS-13.1:

Municipal Activities to Protect and Restore Water Quality. The City shall promote both the protection and restoration of water quality and coastal waters. Water quality degradation can result from a variety of factors, including but not limited to the introduction of pollutants, increases in runoff volume and rate, generation of non-stormwater runoff, and alteration of physical, chemical, or biological features of the landscape.

Policy OS-14.4:

Stabilize Soil Promptly. Development shall implement soil stabilization BMPs (including, but not limited to, re-vegetation) on graded or disturbed areas as soon as feasible.

Policy OS-14.5:

Grading During Rainy Season. Grading is prohibited during the rainy season (from November 1 to March 30), except in response to emergencies, unless the review authority determines that soil conditions at the project site are suitable, and adequate erosion and sedimentation control measures will be in place during all grading operations. (emphasis added)

LUDC Section 17.62.030:

Erosion, Sediment, and Other Construction Pollution Control
Erosion, sediment, and other polluted runoff generated during construction shall be controlled by temporary construction-phase Best Management Practices (BMPs) as provided by this Section.

A. ***Best Management Practices for projects under construction.*** *The following Best Management Practices which address the problem of polluted runoff from construction sites shall apply to all development and proposed land uses. The following requirements shall apply at the time of demolition of an existing structure or commencement of construction and until receipt of a Certificate of Occupancy.*
    1. ***Minimize Runoff and Pollution from Construction.*** *All development shall minimize construction site runoff and erosion, and eliminate the discharge of sediment and other stormwater pollution resulting from construction activities (e.g., chemicals, vehicle fluids, concrete truck wash-out, and litter), to the extent feasible, through implementation of Best Management Practices. Sediment and construction waste from construction sites and parking areas shall not leave the site.*
    2. ***Minimize Land Disturbance During Construction.*** *Land disturbance activities during construction (e.g., clearing, grading, and cut-and-fill) shall be minimized, to the extent feasible, to avoid increased erosion and sedimentation. Soil compaction due to construction activities shall be minimized, to the extent feasible, to retain the natural stormwater infiltration capacity of the soil.*
    3. ***Minimize Disturbance of Natural Vegetation.*** *Construction shall minimize the disturbance of natural vegetation (including significant trees, native vegetation, and root structures), which are important for preventing erosion and sedimentation.*
    4. ***Grading during the rainy season.*** *Grading is prohibited during the rainy season (from November 1 to March 30), except in response to emergencies, unless the City Engineer determines that soil conditions at the project site are suitable, and adequate erosion and sedimentation control measures will be in place during all grading operations. Should grading be permitted during the rainy season (see Section 17.62.050), the smallest practicable area of erodible land shall be exposed at any one time during grading operations and the time of exposure shall be minimized.*
    5. ***Slope surface stabilization.*** *Temporary mulching, seeding, or other suitable soil stabilization measures approved by the City Engineer shall be used to protect exposed erodible areas during construction. Soil stabilization BMPs shall be*

implemented on graded or disturbed areas as soon as feasible. Earth or paved interceptors and diversions shall be installed at the top of cut or fill slopes where there is a potential for erosive surface runoff.

6. ***Use of plastic covering.*** *On an emergency basis only, plastic covering may be utilized to prevent erosion of an otherwise unprotected area, along with runoff devices to intercept and safely convey the runoff.*
7. ***Placement of excavated soil.*** *Excavated soil shall be located on the site in a manner that eliminates the possibility of sediments running into the street, adjoining properties, and/or storm drain facilities and waterways. Soil piles shall be covered and contained until the soil is either used or removed.*
8. ***Removal of off-site sediments.*** *Any sediments or other materials which are tracked off the site shall be removed the same day as they are tracked off the site. Where determined necessary, by the City Engineer, a temporary sediment barrier shall be installed. Removal shall be by scraping, collecting, and properly disposing of debris. Street washing is prohibited unless performed in the presence of a City Inspector.*
9. ***Prohibition against washing construction vehicles.*** *No washing of construction or other industrial vehicles shall be allowed adjacent to a construction site. No runoff from washing vehicles on the construction site shall be allowed to leave the site.*
10. ***Erosion control devices.*** *In order to prevent polluting sediment discharges, erosion and sediment control devices shall be installed as required by the City Engineer for all grading and filling. Control devices and measures that may be required include, but are not limited to energy absorbing structures or devices to reduce the velocity of runoff water, detention ponds, sediment ponds, or infiltration pits, or downdrains, chutes or flumes.*

B. ***Final erosion control measures.*** *All disturbed areas shall be stabilized prior to October 15th, or as soon thereafter as feasible, and in all cases before November 1, to provide sufficient time for seed germination prior to the rainy season. All surfaces disturbed by vegetation removal, grading, haul roads, or other construction activity that alters natural vegetative cover, shall be revegetated to control erosion as provided by Section 17.62.070 (Revegetation and Slope Surface Stabilization) unless covered with impervious or other improved surfaces authorized by approved plans. Erosion controls may include any combination of mechanical, chemical, or vegetative measures, including those described*

LUDC Section 17.62.050:

Grading During the Rainy Season. *Grading may only be permitted during the period from November 1 through March 30 if the City Engineer determines that soil conditions at the site are suitable, and adequate and effective erosion and sediment control measures will be in place during all grading operations.* (emphasis added)

Discussion:

The City's LCP sets forth extensive provisions and criteria for the review of development projects to prevent adverse impacts to water quality from stormwater runoff, sedimentation, natural landform alterations, or changes to site drainage. In general, the LCP directs that development be designed to protect and maintain the biological productivity and quality of coastal waters and marine resources, and that optimum population of marine organisms be maintained by, in part, incorporating water quality best management practices to minimize erosion and sedimentation during construction, and prevent stormwater runoff from leaving the site.

As described above, the remediation activities included as part of the proposed amendment are intended to remove dioxin-impacted soils from various locations throughout the site and consolidate the contaminated soils in an engineered, lined, subsurface cell to prevent exposure to humans and wildlife. The consolidation cell would be constructed in a location and manner that would avoid contact with groundwater, as the maximum depth of the cell would be approximately 10 feet below ground surface (bgs) and the depth to groundwater at the cell site is approximately 20 feet bgs. Given that the distance between the cell and depth to groundwater would exceed the requirement of five feet of separation between the highest anticipated elevation of underlying groundwater and the waste material, consolidation and capping of the dioxin-impacted soils would not result in significant adverse impacts to groundwater at the site. The concentration of dioxin in the contaminated soils to be placed in the consolidation cell is relatively low compared to dioxin concentrations found in other contaminated sites. According to the applicant, the average concentration of dioxins in the soil to be placed in the consolidation cell is 100 parts per trillion (ppt). This level of concentration is 100 times lower than the concentration level at which contaminated material must be managed as hazardous waste under either state or federal law. The 100 ppt concentration is approximately two times the concentration level considered to be safe by DTSC (52 ppt) to leave untreated in other areas of the project site and two times the screening level set for residential soils by the Agency for Toxic Substances and Disease Registry (ARCADIS BBL 2007. In addition to being present in relatively low concentrations, the dioxin in the soil is relatively immobile. Dioxin molecules bind strongly to soil particles, making them largely immobile in the environment. Dioxin molecules are also highly "hydrophobic," which means they do not easily go into solution.

The applicant prepared an "*Operable Unit A (OU-A) Remedial Action Plan and Feasibility Study"* (RAP), dated August 2008, that outlines the proposed remediation activities at the OU-A portion of the site and contains the implementation plan, including design features and best management practices (BMPs), for the remedial activities proposed under this permit amendment. The Commission's Water Quality unit staff reviewed the proposed amended project described in the Remedial Action Plan (RAP) and determined that the proposed method of excavation and subsurface management of dioxin-impacted soils is generally acceptable and, as conditioned as described herein, would not result in significant adverse impacts to coastal water quality.

A number of individuals commenting on the project to the Commission have suggested that because bioremediation techniques involving the use of fungal degradation have not yet been

perfected and are not yet ready to implement, that the Commission should consider allowing the dioxin/furan impacted soil to be consolidated and capped as proposed, but then required to be treated with such bioremediation techniques in the future when the techniques have been perfected for practical application. Research and development of bioremediation techniques continues and such bioremediation techniques may become feasible contamination remediation alternatives in the future. A remediation technique that can successfully treat the contaminants rather than simply contain them in place would serve to reduce or eliminate the risk that the contaminants would become exposed and potentially contaminate surface or groundwater due to failure of the consolidation cell in the event of a severe earthquake or some other catastrophic event.

Therefore, the Commission finds that the alternative of bioremediation of the dioxin/furan contaminated soil to be consolidated and capped in the consolidation cell should be reconsidered after a period of time has elapsed. The Commission accordingly imposes Special Condition No. 12, which limits the time period for which the consolidation cell is authorized to the time period that passes before the Department of Toxic Substances Control completes its five-year review of the final remediation plan. As required by statute and the DTSC order approving the Final Operable Unit A Remedial Action Plan approved by DTSC on August 28, 2008, DTSC will re-evaluate the remedial action plan five years after the consolidation cell has been constructed to determine if at that time, a more appropriate approach to remediate the dioxin/furan contaminated soils contained in the consolidation cell exists, based on the criteria utilized by DTSC for evaluating remedial activities. The DTSC will evaluate the feasibility of bioremediation techniques and other new technologies available at the time for remediating the contaminated soils, and could require implementation of such techniques if certain findings can be made. Special Condition No. 12 of Coastal Development Permit No. A-1-FTB-05-053 requires that the permittee submit an application for a permit amendment to either remove the consolidation cell or retain the consolidation cell in place after DTSC has completed action on its re-valuation of the remedial action plan. The permit amendment application must be accompanied by an alternatives analysis for the remediation of the dioxin/furan-impacted soils including, but not limited to the use of bioremediation techniques and other advanced remediation technologies available at the time. This requirement for the submittal of a permit amendment will enable the Commission to consider the re-evaluation conducted by DTSC, the alternative analysis submitted by the applicant, public comment, and other information available at the time to determine whether any of the alternative remediation techniques available at the time constitute feasible alternatives that would lessen any significant adverse impact that the consolidation cell has on water quality and other coastal resources.

Special Condition No. 1 of the original permit requires the applicant to undertake the removal, excavation, stockpiling, and disposal activities authorized under the original permit in accordance with various plans prepared for the project, including the *Stormwater Pollution Prevention Plan for Foundation Removal, Additional Investigation, and Interim Remedial Measures* (SWPPP), prepared by Acton Mickelson Environmental, Inc., dated September 28, 2005. Subsequent to the approval of the original permit, the applicant prepared a September 2006 revision to the 2005 SWPPP, and a May 2008 SWPPP Addendum that set forth additional mitigation measures and best management practices to be employed to address potential water

quality impacts from additional remediation activities proposed at the site, including the remedial activities proposed as part of the subject amendment.

The applicant proposes that the remediation activities proposed as part of this permit amendment would be conducted consistent with the Stormwater Pollution Prevention Plans (SWPPP) referenced above to insure appropriate management of stormwater during proposed excavation, stockpiling, and capping activities. The plans include BMPs and monitoring provisions to ensure that stormwater does not result in the discharge of any contaminated soil or other hazardous substances remaining at the site. Best Management Practices (BMPs) identified in the SWPPPs to control sediment and other polluted runoff include, for example, the use of berms to divert runoff around exposed areas; use of other sediment control measures including filtration devices, barriers (e.g., fiber rolls, silt fences, straw bale barriers, gravel inlet filters, storm drain inlet protection, and gravel bag dikes) and settling devices (i.e., sediment traps) or other controls, as appropriate; and inspection of stormwater drains in close proximity to any ongoing excavation activities on a daily basis for evidence of erosion causing settlement, blockage, or damage resulting in standing water. To ensure that the applicant implements the water quality protection measures set forth in the 2006 SWPPP revision and the 2008 SWPPP Addendum, Special Condition No. 1 of the original permit is modified to include reference to these SWPPPs that were prepared subsequent to the original permit authorization. Given that the excavation and capping activities proposed as part of this permit amendment would be implemented in accordance with the SPPPs and the BMPS contained therein, the project as amended would not result in uncontrolled erosion, sediment, or other polluted runoff.

The SWPPPs referenced above and required to be implemented pursuant to Special Condition No. 1, contain a provision requiring that excavation and Interim Remediation Measure (IRM) activities be conducted during the non-rainy season from April 15 through October 15. As part of the permit amendment, the applicant requests authorization to allow excavation and grading activities to occur outside of the construction work window that is otherwise set forth in the SWPPPs and thus, required by Special Condition No. 1. The applicant proposes that some planned remedial activities at the site - in particular, bioremediation of impacted soil - require up to five months for completion and that extending the construction work window would allow greater flexibility in planning and carrying out the various components of the site remediation work. The applicant proposes that certain remediation activities, including construction of the land treatment unit, asphalt and foundation removal, and excavation of the consolidation cell, could be accomplished prior to April 15th without generating runoff through use of best management practices. For example, the applicant proposes that should rainfall sufficient to cause runoff (e.g., over 1 inch in 24 hours) be predicted after foundation/asphalt removal or consolidation cell construction has begun, work would be suspended and hay bales and/or straw wattle would be placed around the work area to prevent transport of asphalt, concrete, or soil away from the pavement or foundation location. In addition to allowing work two to four weeks prior to April 15, the applicant proposes that rainfall conditions in late fall, after October 15, are normally mild enough to conduct earth-moving activities with the implementation of appropriate BMPs. The applicant indicates that extending the work window two to four weeks beyond October 15 would allow additional treatment time for bioremediation, if needed, or final site closure activities such as backfilling, final grading and revegetation, etc. The additional time

would also allow for further treatment of groundwater in the excavations by biosparging to reduce petroleum hydrocarbon concentrations prior to backfilling.

As part of the proposed permit amendment, the applicant has not explicitly proposed alternative work window start and ending dates, but rather, generally requests that the work window be extended from two to four weeks on either end of the work period. Fort Bragg LCP OS-14.5 and LUDC Section 17.62.050 prohibit grading during the rainy season, which is defined by the policies as November 1 to March 30. Stated another way, the LCP essentially requires that grading be conducted between April 1 and October 31 during the dry season when the potential for stormwater runoff is minimized. Policy OS-14.5 and LUDC Section 17.62.050 provide an exception to allow grading during the rainy season (from November 1 to March 30) if the City Engineer determines that soil conditions at the project site are suitable, and adequate erosion and sedimentation control measures will be in place during all grading operations. LUDC Section 17.62.030 requires that, should grading be permitted during the rainy season, the smallest practicable area of erodible land shall be exposed at any one time during grading operations and the time of exposure shall be minimized. The areas that would be graded and excavated under the proposed amendment are significant in size, including the 1.5-acre consolidation cell and large areas where asphalt and foundations would be removed and other grading would occur. Thus, the exposure of soil to erosion and sedimentation from stormwater runoff is significant. In addition, at this time, the applicant has not provided evidence from the City Engineer that proposed grading during the rainy season would be acceptable at the project site.

The Commission finds that because the standard of review for the subject amendment is the updated Fort Bragg LCP that was certified by the Commission after the original permit was approved, the currently certified grading work window set forth in Policy OS-14.5 and LUDC Section 17.62.050 is applicable to the proposed permit amendment. Policy OS-14.5 and LUDC Section 17.62.050 would allow the grading work window to be extended from the originally authorized period of April 15th through October 15th to April 1st through October 31st, which would provide some additional time and flexibility for scheduling and conducting remediation activities at the site as generally requested by the applicant while still providing equivalent, or greater, water quality protective measures as set forth in the SWPPPs. Therefore, Special Condition No. 1 of the original permit is further amended to provide an exception to the provisions in the SWPPPs referenced therein that all excavation and Interim Remedial Measure (IRM) activities shall be conducted during the non-rainy season as defined from April 1 through October 31.

The Commission notes that Special Condition No. 3(A)(3)(a) of the original permit explicitly requires that grading activities along the bluff face and blufftop margin shall only be conducted during the dry season, from April 15 through October 15 to protect adjacent rocky intertidal habitat. This condition would not change as a result of the proposed amendment. The changes to the construction window discussed above apply only to activities located in project areas other than the bluff face and blufftop margin, as the applicant has indicated that it is not necessary to extend the timing of the proposed work in the bluff face and blufftop margin areas beyond the work window limitations set forth in Special Condition No. 3(A)(3)(a) as originally approved by the Commission.

The "*Operable Unit A Remedial Action Plan and Feasibility Study"* prepared for Georgia-Pacific LLC by ARCADIS BBL (OU-A RAP) was reviewed by the Department of Toxic Substances Control (DTSC) pursuant to Section 5.11 of the Site Investigation and Remediation Order ("Order" Docket No. HSA-RAO 0607- 150) for the former Georgia-Pacific Wood Products Facility, and by the Regional Water Quality Control Board (RWQCB). An Implementation Plan is included as Appendix C of the OU-A RAP pursuant to the requirements set forth in Section 5.12 of the Order. The OU-A RAP was released for a 45-day public comment period from March 13, 2008 to April 28, 2008 and the comments received are addressed in the Responsiveness Summary included in the Final OU-A RAP. In reviewing the OU-A RAP, the DTSC and the RWQCB considered potential impacts of the proposed remediation measures on water quality at and surrounding the site. On August 28, 2008, DTSC issued a letter to the applicant approving the OU-A RAP (Exhibit No. 6). In addition, as noted above, the Coastal Commission's water quality unit staff have reviewed the RAP and determined that the proposed construction of the consolidation cell with liners and cap would minimize the chances for migration of contaminants and would be adequate to prevent significant adverse impacts to water quality.

The Remedial Action Plan (RAP) submitted by the applicant indicates that the Department of Toxic Substance Control (DTSC) requires a "Consolidation Cell Design Document" to be submitted and approved by DTSC prior to implementation of the cell portion of the proposed amended project. The Consolidation Cell Design Document would include the particular engineering and construction details for the siting and design of the proposed consolidation cell. To ensure that the final engineered design of the proposed consolidation cell approved by DTSC does not differ from the project as amended and approved by the Commission, or result in otherwise unanticipated impacts to coastal resources, the Commission attaches Special Condition No. 10 that requires the applicant to submit, prior to commencement of construction of the consolidation cell, evidence that the DTSC has reviewed and approved the Consolidated Cell Design Document. The condition further requires the applicant to inform the Executive Director of any changes to the project required by the DTSC, and any such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

The applicant further indicates that an Operation and Maintenance Plan and a Monitoring Plan will be prepared and submitted to the Department of Toxic Substances Control (DTSC) following completion of construction of the proposed consolidation cell. As described by the applicant, the Operation and Maintenance Plan would include a Soil Management Plan and financial assurances to address future operation and maintenance responsibilities for the cell (i.e., annual inspections and necessary repairs) and to ensure that soil handling activities onsite in the future will be performed safely and appropriately. The Monitoring Plan will be prepared to ensure that the dioxins/furans present in the soil do not impact groundwater or other environmental resources. The proposed design of the consolidation cell includes installation of a monitoring well downgradient of the capped area. The Commission finds that failure to properly monitor and maintain the consolidation cell could result in potential adverse impacts to water quality and other coastal resources. Therefore, to ensure that the consolidation cell is properly monitored and maintained, the Commission attaches Special Condition No. 11. Special

Condition No. 11 requires the applicant to (a) submit to the Executive Director, a copy of (1) the Operation and Maintenance Plan, and (2) the Monitoring Plan as reviewed and approved by DTSC, and (b) report immediately to the Executive Director, any failure(s) of the consolidation cell determined by the Department of Toxic Substances Control (DTSC) based on the review by DTSC of the maintenance and monitoring reports submitted to DTSC pursuant to the approved Operation and Maintenance Plan and Monitoring Plan referenced in (a) above, including, but not limited to, evidence that subsurface dioxins/furans present in the soil at the consolidation cell are impacting groundwater or other environmental resources. The condition further requires that any corrective actions and/or repairs shall not be performed until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

The Commission thus finds that as conditioned, the proposed amended development is consistent with the policies of the certified LCP regarding the protection of coastal water quality, as best management practices to minimize erosion and polluted stormwater runoff would be implemented, grading would not occur outside during the rainy season, and the site would be monitored and maintained to ensure the protection of groundwater.

D. Development Adjacent to Environmentally Sensitive Habitat Areas (ESHAs)

LCP Provisions:

Policy OS-1.1:

Definition of ESHA. "Environmentally sensitive habitat area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Protection of environmentally sensitive habitat areas is one of the essential aspects of the Coastal Act. Fort Bragg has several environmentally sensitive habitat areas including, but not limited to, portions of coastal bluffs, biologically rich tide pools, nesting grounds, kelp beds, wetlands, riparian habitats, and rare, threatened, or endangered plants or plant communities. (emphasis added)

…

Policy OS-1.6:

Development within Other Types of ESHA shall protect ESHA against any significant disruption of habitat values and shall be limited to the following uses:

a. Resource Dependent Uses. Public nature trails within riparian ESHA are considered a resource dependent use provided that: (1) the length of the trail within the riparian corridor shall be minimized; (2) the trail crosses the stream at right angles to the maximum extent feasible; (3) the trail is kept as far up slope from the stream as possible;

(4) trail development involves a minimum of slope disturbance and vegetation clearing; and (5) the trail is the minimum width necessary. Interpretive signage may be used along permissible nature trails accessible to the public to provide information about the value and need to protect sensitive resources.

b. Restoration projects where the primary purpose is restoration of the habitat.

c. Invasive plant eradication projects if they are designed to protect and enhance habitat values.

d. Pipelines and utility lines installed underneath the ESHA using directional drilling techniques designed to avoid significant disruption of habitat values.

Policy OS-1.7:

Development in areas adjacent to Environmentally Sensitive Habitat Areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

Policy OS-1.8:

Development adjacent to ESHA shall provide buffer areas to serve as transitional habitat and provide distance and physical barriers to human intrusion. The purpose of this buffer area is to provide for a sufficient area to protect environmentally sensitive habitats from significant degradation resulting from future development. Buffers shall be of a sufficient size to ensure the biological integrity and preservation of the ESHA they are designed to protect. The width of the buffer area shall be a minimum of 100 feet, unless an applicant can demonstrate, after consultation with the California Department of Fish and Game, other relevant resource agencies, and the City, that 100 feet is not necessary to protect the resources of that particular habitat area and the adjacent upland transitional habitat function of the buffer from possible significant disruption caused by the proposed development. The buffer area shall be measured from the outside edge of the environmentally sensitive habitat areas and in no event shall be less than 30 feet in width. (emphasis added)

Policy OS-1.9:

Utilize the following criteria to establish buffer areas: (emphasis added)

a. Biological Significance of Adjacent Lands. Lands adjacent to a wetland, stream, or riparian habitat area vary in the degree to which they are functionally related to these habitat areas. Functional relationships may exist if species associated with such areas spend a significant portion of their life cycle on adjacent lands. The degree of significance depends upon the habitat requirements of the species in the habitat area (e.g., nesting, feeding, breeding, or resting).

Where a significant functional relationship exists, the land supporting this relationship shall also be considered to be part of the ESHA, and the buffer zone shall be measured from the edge of these lands and be sufficiently wide to protect these functional relationships. Where no

significant functional relationships exist, the buffer shall be measured from the edge of the ESHA that is adjacent to the proposed development.

b. Sensitivity of Species to Disturbance. The width of the buffer zone shall be based, in part, on the distance necessary to ensure that the most sensitive species of plants and animals will not be disturbed significantly by the permitted development. Such a determination shall be based on the following after consultation with the Department of Fish and Game or others with similar expertise:

(i) Nesting, feeding, breeding, resting, or other habitat requirements of both resident and migratory fish and wildlife species;
(ii) An assessment of the short-term and long-term adaptability of various species to human disturbance;
(iii) An assessment of the impact and activity levels of the proposed development on the resource.

c. Erosion susceptibility. The width of the buffer shall be based, in part, on an assessment of the slope, soils, impervious surface coverage, runoff characteristics, erosion potential, and vegetative cover of the parcel proposed for development and adjacent lands. A sufficient buffer to allow for the interception of any additional material eroded as a result of the proposed development shall be provided.

d. Use natural topography. Where feasible, use hills and bluffs adjacent to Environmentally Sensitive Habitat Areas, to buffer these habitat areas. Where otherwise permitted, locate development on the sides of hills away from Environmentally Sensitive Habitat Areas. Include bluff faces in the buffer area.

e. Use existing man-made features. Where feasible, use man-made features such as roads and dikes to buffer environmentally sensitive habitat areas.

f. Lot Configuration and Location of Existing Development. Where an existing subdivision or other development is largely built-out and the buildings are a uniform distance from a habitat area, at least that same distance shall be required as a buffer zone for any new development permitted. However, if that distance is less than one hundred (100) feet, additional mitigation measures (e.g., planting of native vegetation) shall be provided to ensure additional protection.

g. Type and Scale of Development Proposed. The type and scale of the proposed development will, to a large degree, determine the size of the buffer zone necessary to protect the ESHA. Such evaluations shall be made on a case-by-case basis depending upon the resources involved, the degree to which adjacent lands are already developed, and the type of development already existing in the area.
…

Policy OS-1.10:

Permitted Uses within ESHA Buffers. Development within an Environmentally Sensitive Habitat Area buffer shall be limited to the following uses:

…

c. Other types of ESHA Buffer.

i. Uses allowed within the adjacent ESHA pursuant to Policy OS-1.6.
ii. Buried pipelines and utility lines.
iii. Bridges.
iv. Drainage and flood control facilities.

NOTE: Land Use and Development Code (LUDC) Section 17.50.050(H) & (I) reiterate and implement the provisions of Policy OS-1.8 and Policy OS-1.10.

Discussion:

Although extensively modified since the late 1800s when the property was first cleared and graded for use as a shipping and rail terminus and for related forest products processing, the project site still contains a variety of environmentally sensitive habitat areas of varying biological integrity. These areas include impounded aquatic and emergent wetlands in the form of a series of lumber storage and fire suppression "log ponds," riparian corridor remnants along original or re-aligned watercourses, uplifted marine terrace blufftop margins populated with rare plants, coastal bluff face areas containing potential nesting sites to a variety of shoreline avian species, and intertidal rocky habitat providing substrate for intermittently exposed tidepool and persistently submerged littoral flora and fauna. In addition, adjoining the site are offshore sea stack areas used as nesting, holding, and foraging habitat for a variety of marine mammals and waterfowl.

The special conditions imposed under the original permit set forth various mitigation measures to protect wetlands, rare plants, marine mammal habitat, and rocky intertidal ESHAs present at the site. The proposed amendment would not change or lessen any of the previously imposed conditions intended to protect these types of ESHA. However, as discussed below, the applicant is requesting revisions to Special Condition No. 3(A)(1) pertaining to the protection of sensitive avian species of the original permit, portions of which, as proposed, would lessen the intent of the mitigation measures set forth in the condition.

According to a habitat assessment prepared for the original project, it was determined that the site contains potential nesting habitat for sensitive avian species including the western snowy plover, tri-colored blackbird, tufted puffin, raptors (including osprey), waterfowl, and other migratory species. All migratory bird species are protected by the Migratory Bird Act of 1918. The nesting and breeding season for raptors is February through September. Most other migratory birds nest and breed from March through September.

An Avian Habitat Utilization and Impact Assessment was prepared for the bluff face, intertidal, and offshore areas on and adjoining the project property that included recommendations that specific measures be taken in the interest of avoiding and minimizing significant impacts to bird nesting habitat. These measures include conducting pre-construction breeding bird surveys, establishing buffer areas around any such nests discovered during the surveys, and postponing

clean-up and remedial work until all young in the nest(s) have fledged. Special Condition No. 3(A)(1) of the original permit requires implementation of these mitigation measures.

The applicant is requesting several changes to Special Condition No. 3(A)(1), including revising the timing of pre-construction avian surveys from being performed between 14 and 30 days prior to the beginning of construction to no more than 14 days prior to construction. This portion of the proposed amendment to the condition would effectively require that avian surveys be conducted closer to the proposed start of construction, while still providing time (14 days) to plan for and implement any necessary protective measures and construction modifications. The Commission finds this particular change to Special Condition No. 3(A)(1) proposed by the applicant regarding the timing of avian surveys relative to the commencement of construction would provide equivalent, or greater, protection of nesting sensitive bird species potentially present at the site.

Special Condition No. 3(A)(1) of the original permit also requires that if the avian surveys described above find any indication that nesting sensitive avian species with unfledged young are present on the bluff face and blufftop margins, project work shall be limited consistent with the mitigation measures identified in the Avian Habitat Utilization and Impact Assessment prepared for the project (WRA Environmental Consultants, January 2006), including the imposition of exclusionary buffer areas that in no case shall be less than 100 horizontal feet from the affected nesting site. The condition further requires that work within the exclusionary buffers shall not proceed until a subsequent bird survey has been conducted by a qualified biologist or resource ecologist that demonstrates that the young have fledged and are not nesting in the area for thirty (30) continuous days, and such surveys have been submitted for the review and approval of the Executive Director. The applicant is requesting a change to these requirements of Special Condition No. 3(A)(1) to allow a reduction of the required 100-foot exclusionary buffer under certain circumstances. The proposed amended condition would also eliminate the requirement that surveys be submitted to the Executive Director for review and approval. The applicant's proposed condition language regarding the exclusionary buffer is as follows [proposed language is shown in bold underline; existing language proposed to be deleted is shown in strikethrough]:

…

(a) No ~~less~~ **more** than 14 days ~~and no more than 30 days~~ prior to the beginning of construction, a qualified biologist or resource ecologist shall conduct a non-invasive survey for any sensitive avian species nesting in the coastal bluff face and blufftop margin areas. If the survey finds any indication that nesting sensitive avian species with unfledged young are present on the bluff face and blufftop margins, project work shall be limited consistent with the mitigation measures identified in the *Avian Habitat Utilization and Impact Assessment* (WRA Environmental Consultants, January 2006), including the imposition of exclusionary buffer areas identified therein~~,~~**. The exclusionary buffer may be less than 100 horizontal feet from the affected nesting site if the biologist works in concert with work crews and monitors the nest site to confirm that there is no disturbance. In addition, the 100 foot buffer may be reduced if avian species become acclimated to disturbance associated with ongoing construction activities and choose to nest**

> **within 100 feet of ongoing construction activities or if the biologist determines that the level of background disturbance is equal to or greater than the proposed construction disturbance, such as those sites adjacent to heavily trafficked roads.** ~~however, in no case shall the exclusionary buffer be less than 100 horizontal feet from the affected nesting site.~~ Work within the exclusionary buffers shall not proceed until a subsequent bird survey has been conducted by a qualified biologist or resource ecologist that demonstrates that the young have fledged ~~and are not nesting in the for thirty (30) continuous days, and such surveys have been submitted for the review and approval of the Executive Director~~;

Fort Bragg Policy OS-1.8 and LUDC Section 17.50.050(H) require that development adjacent to ESHA shall provide buffer areas to serve as transitional habitat and provide distance and physical barriers to human intrusion. The purpose of this buffer area is to provide for a sufficient area to protect environmentally sensitive habitats from significant degradation resulting from development. Buffers shall be of a sufficient size to ensure the biological integrity and preservation of the ESHA they are designed to protect. Policy OS-1.8 and LUDC Section 17.50.050(H) require that the width of the buffer area be a minimum of 100 feet, unless an applicant can demonstrate, after consultation with the California Department of Fish and Game, other relevant resource agencies, and the City, that 100 feet is not necessary to protect the resources of that particular habitat area from significant disruption caused by the proposed development. Policy OS-1.8 and LUDC Section 17.50.050(H) further require that in no event shall the buffer area be less than 30 feet in width.

Policy OS-1.9 requires that the ESHA buffer may only be reduced from 100 feet to a minimum of 30 feet based on several standards for determining the appropriate width of the buffer area, including (a) the biological significance of adjacent lands, (b) sensitivity of species to disturbance, (c) susceptibility of parcel to erosion, (d) use of natural topographic features to locate development, (e) use of existing cultural features to locate buffer zones, (f) lot configuration and location of existing development, and (g) the type and scale of the development proposed. The applicant has not provided an analysis based on the standards set forth in Policy OS-1.9 to demonstrate that a reduction of the required 100-foot exclusionary buffer area as proposed would continue to protect sensitive avian species to an equivalent or greater extent than the requirements of the original condition, nor has the applicant provided evidence of consultation with the California Department of Fish and Game, other relevant resource agencies, and the City to demonstrate that a 100-foot buffer is not necessary to protect sensitive avian species. Thus, the Commission finds that allowing the 100-foot exclusionary buffer to be reduced to an unspecified minimum in the manner requested by the applicant would be inconsistent with LUP Policies OS-1.8 and OS-1.9 and LUDC Section 17.50.050(H).

Furthermore, submittal of avian survey reports to the Executive Director for review and approval as required by Special Condition No. 3(A)(1) is necessary to ensure that the project approved by the Commission is conducted and implemented consistent with all required mitigation measures imposed to ensure the protection of the ESHA. Therefore, the Commission does not approve the portions of the applicant's requested changes to Special Condition No. 3(A)(1) that would (1) allow a reduction of the 100-foot exclusionary buffer, and (2) eliminate the requirement for

submittal of survey reports to the Executive Director for review and approval. As conditioned by this permit amendment, the Commission approves only the portion of the proposed amendment to Special Condition No. 3(A)(1) that pertains to imposing more stringent limitations on the timing of required pre-construction avian surveys to require that surveys be performed no more than 14 days prior to commencement of construction.

Thus, the Commission finds that only as conditioned is the proposed amendment consistent with the LCP provisions regarding the protection of ESHA and the establishment of adequate ESHA buffer areas.

E. Locating New Development

LCP Provisions:

Policy LU-5.1:

Additional Sites for Visitor-Serving Commercial: Continue to provide for and encourage additional visitor-serving commercial facilities.

Policy LU-5.2:

Ensure that there are adequate sites for visitor-serving land uses by:
a) Maintaining existing areas designated for Highway-Visitor Commercial uses;
b) Maintaining the Highway Visitor Commercial land use designation as one allowing primarily recreational and visitor-serving uses; and
c) Reserving adequate infrastructure capacity to accommodate existing, authorized, and probable visitor serving uses.

Policy LU-5.3:

Lower Cost Facilities: Protect, encourage, and, where feasible, provide lowercost visitor and recreational facilities for persons and families of low and moderate income. If and when average annual occupancy rates at Fort Bragg visitor facilities exceed 70%, removal or conversion of existing lower cost facilities shall be prohibited unless the use will be replaced with another facility offering comparable visitor serving or recreational facilities.

Policy LU-5.4:

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Policy LU-5.5:

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Policy LU-5.6:

The use of private lands suitable for visitor-serving and commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

Policy LU-5.8:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Policy LU-10.7:

Priority for Coastal Dependent Uses. Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.

Discussion:

The Coastal Act gives priority to recreational, visitor-serving, and coastal dependent uses in the coastal zone by, in part, requiring protection of an adequate amount of oceanfront and shoreline land for recreational and coastal dependent uses, and protecting existing and encouraging new low cost visitor-serving and recreation facilities. As cited above, the City's LCP incorporates numerous provisions to ensure the protection of Coastal Act priority land uses.

The proposed permit amendment involves additional remediation measures as part of the on-going decommissioning activities being undertaken at the former 435-acre Georgia-Pacific Wood Products Manufacturing Facility for the future reuse of the site. Following successful completion of remediation activities, the City of Fort Bragg intends to purchase the portion of the site that is the subject of this permit amendment (referred to as area OU-A) for conversion to public parkland and a segment of the California Coastal Trail using grant funds from the State Coastal Conservancy. Future uses of the remainder of the site will be determined through a specific planning process currently being undertaken by the City and Georgia-Pacific in consultation with regulatory agencies with jurisdiction in the project area, including the Coastal Commission.

As described above, the proposed amendment involves excavating approximately 13,000 cubic yards of dioxin-contaminated soil and placing it in an approximately 1.5-acre subsurface consolidation cell in the southeast portion of the site located over 1,000 feet inland from the edge of the shoreline bluff. The consolidation cell would be capped and managed to avoid exposure

to humans and wildlife. The applicant proposes that deed restrictions would be recorded to limit the future uses of the land at the site of the consolidation cell. Such land use restrictions are necessary to protect human health and safety, and to protect the environment from potential adverse impacts from the presence of buried contaminated soils (e.g., to prohibit residential use of the consolidation cell area). The applicant indicates that necessary land use restrictions would be determined in consultation with the Department of Toxic Substances Control (DTSC) based on remediation standards. In addition, the applicant indicates that deed restrictions will be recorded to require financial assurances from the landowner for the proper maintenance and monitoring of the capped consolidation cell, including yearly inspection by DTSC and monitoring of groundwater.

The Commission notes that any deed restrictions that the applicant may choose to record at the site and/or that DTSC may require, are separate from any land use requirements or restrictions that the Commission may impose pursuant to its jurisdiction over the site.

Regardless of any deed restrictions that the applicant may record, any proposed future change in the density or intensity of use of the land would require a coastal development permit amendment and/or an LCP amendment. For example, as the site is currently planned and zoned in the City's certified LCP as Timber Resources Industrial, no residential use of the site could occur without Commission certification of an LCP Amendment and subsequent coastal development permits.

Due to the presence of subsurface soils containing dioxin/furans, future development on the 1.5-acre consolidation cell site would be limited to uses that would not pose a human health and safety hazard. As a result, such land use restrictions may preclude the future development of priority uses, such as visitor-serving facilities, at the particular site of the consolidation cell. However, the consolidation cell area represents only 1.5 acres of the total 435-acre former mill site that is subject to specific planning for future reuse. Therefore, although priority uses may not be allowed to be developed on the 1.5-acre consolidation cell area, the proposed amendment would not otherwise preclude priority uses from the remainder of the property. Additionally, as noted above, the remediation activities proposed as part of the proposed amendment involving excavation and consolidation of dioxin-impacted soils are intended to prepare portions of the property for transfer to the City and future use for public access and recreation, which is a priority use under the Coastal Act.

Therefore, the Commission finds that the proposed amendment, as conditioned, would be consistent with LCP provisions regarding locating new development and protecting priority uses.

F. California Environmental Quality Act

The Department of Toxic Substances Control (DTSC) is the lead agency for purposes of CEQA review. The DTSC prepared a Mitigated Negative Declaration for the proposed project and filed a Notice of Determination on August 28, 2008 (State Clearinghouse No. 2008032049).

Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as

modified by any conditions of approval, to be consistent with any applicable requirement of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

Analysis of Alternatives to the Proposed On-Site Capping/Sealing of Dioxin/Furan-Impacted Soils

The Commission has received a number of items of correspondence on the proposed permit amendment suggesting that alternatives to the proposed consolidation and capping remedial activities be considered. These alternatives include (a) removing, transporting, and disposing of the approximately 13,000 cubic yards of dioxin/furan-impacted soil offsite to a landfill facility capable of receiving such material, and (b) incorporating the use of bioremediation techniques, specifically fungal degradation, to treat the contaminated soil. The Commission has considered whether there are feasible alternatives available which would substantially lessen any significant adverse effect the proposed development may have on the environment. Four specific alternatives have been considered, including (1) No Action, (2) Land use Restriction/Controls, (3) Removal/Offsite Disposal, and (4) Bioremediation. These alternatives were also examined and considered by the Department of Toxic Substances Control during its review and approval of the Final Operable Unit A Remedial Action Plan.

Evaluation Criteria

Alternatives to the proposed consolidation and capping remedial activities were evaluated based on criteria set forth by the Environmental Protection Agency (USEPA) and the Department of Toxic Substances Control (DTSC). According to USEPA and DTSC, the nine criteria listed below must be used to evaluate remedial alternatives. For an alternative to be selected, it must meet the first two threshold criteria, which are (1) overall protection of human health and the environment, and (2) compliance with Applicable or Relevant and Appropriate Requirement (ARARs). Criteria 3 through 7 are the five primary balancing criteria that provide comparisons between the alternatives and identify tradeoffs between them, and criteria 8 and 9 are the two modifying criteria that consider acceptance by the state and local community. The nine criteria used to evaluate project alternatives are summarized as follows:

1. Overall Protection of Human Health and the Environment: whether or not a remedy provides adequate protection of human health and the environment.

2. Compliance with ARARs: whether or not a remedy will meet all appropriate federal, state, and local environmental laws and regulations.

3. Long-Term Effectiveness and Permanence: ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup goals have initially been met.

4. Reduction of Toxicity, Mobility, and Volume through Treatment: ability of a remedy to reduce the toxicity, mobility, and volume of the hazardous substances or constituents present at the site.

5. Cost – 30-Year Present Worth: estimated 30-year present worth capital and operation and maintenance costs. Level of accuracy of the costs estimated is "Order of Magnitude," as defined by the American Association of Cost Engineers (i.e., plus 50 percent and minus 30 percent).

6. Short-Term Effectiveness: period of time needed to complete the remedy and any adverse impact on human health and the environment that may be posed during the construction and implementation period, until the cleanup standards are achieved.

7. Implementability: technical and administrative feasibility of a remedy, including the availability of materials and services needed to carry out a particular option.

8. State Acceptance: whether, based on current knowledge of regulations and agency mandates, the applicable regulatory agencies would agree with the preferred alternative. Actual assessment depends on comments received during the agency review and public comment periods

9. Community Acceptance: whether community concerns are addressed by the remedy, and whether the community has a preference for a remedy.

Alternatives Analysis

Four alternatives in addition to the proposed consolidation and capping alternative were evaluated for the remediation of the dioxin/furan-impacted soils based on the nine evaluation criteria outlined above, including: (1) No Action, (2) Land Use Restriction/Controls, (3) Removal/Offsite Disposal, (4) and Bioremediation. As explained below, each of these alternatives is infeasible and/or does not result in a project that is less environmentally damaging than the proposed project. The Commission finds, as discussed below, that as conditioned, there are no other feasible alternatives available which would lessen any significant adverse impact that the proposed activity would have on the environment.

(1) No Action

The No Action alternative would involve leaving the dioxin/furan-impacted materials on-site in the current condition. This alternative would not meet the threshold criteria of protection of human health and the environment and compliance with ARARs, nor would the no action alternative be acceptable to the state or community. The no action alternative would provide no long-term risk reduction or reduction of toxicity, mobility, or volume of contaminated soils. The no action alternative also received a low ranking for the threshold and balancing criteria, except for short-term effectiveness. Short-term effectiveness received a high ranking because no remediation would be implemented, and therefore, there would be no short-term worker or environmental exposure. Additionally, the no action alternative would not be accepted by the Department of Toxic Substances Control (DTSC), the Regional Water Quality Control Board, and other state agencies with jurisdictional oversight. Therefore, the Commission finds that the

no project alternative is not a feasible alternative to the proposed consolidation and capping which would lessen any significant adverse impact that the proposed activity would have on the environment.

(2) Land Use Restriction/Controls

The Land Use Restriction/Controls alternative involves administrative actions or institutional controls that would restrict the uses of and access to the site. The Land Use Restriction/Controls alternative by itself would not meet the threshold criteria of protection of human health and the environment and compliance with ARARs, nor would it be acceptable to the state or community.

The future proposed land use of the subject site, Operable Unit A, is passive recreational use (i.e., coastal trail and parkland). Although land use restrictions/controls could potentially be used to reduce human exposure, land use restrictions alone would not reduce the risk to the environment. Thus, the land use restriction/controls alternative does not meet the criterion for protection of human health and the environment. Land use restrictions/controls also received low ranking for long-term risk reduction, reduction of toxicity and mobility through treatment, and state acceptance since the impacted material would remain in place. This alternative received a medium ranking for long-term effectiveness and permanence since it provides only limited risk reduction to human health and no risk reduction to the environment, but is permanent. The Land Use Restriction/Controls received a high ranking for short-term effectiveness and implementability because there would be no exposure to workers or the environment from implementing a remedy, and it is implementable.

Land use restrictions/controls would be used in conjunction with an active remedial alternative for the dioxin PRAs. According to the applicant, land use restrictions that would prevent sensitive uses (such as residences, hospitals, day care facilities, schools, etc.) would be imposed as part of the conditions placed on the land by the Coastal Conservancy and in the purchase and sale agreement. Such restrictions would be based on a determination by DTSC.

Given the reasons discussed above, the Commission finds that the Land Use Restriction/Controls alternative alone is not a feasible alternative to the proposed consolidation and capping which would lessen any significant adverse impact that the proposed activity would have on the environment.

(3) Removal/Offsite Disposal

The Removal/Offsite Disposal alternative would involve excavation of the approximately 13,000 cubic yards of dioxin/furan-impacted soil and transporting and disposing of the excavated material as non-hazardous waste at the Allied Waste Services Keller Canyon Landfill in Pittsburg, California (Keller Canyon; a Class II, Subtitle D permitted landfill).

Removal and offsite disposal of the dioxin/furan-impacted material received a high ranking for protection of human health, compliance with ARARs, long-term effectiveness and permanence, implementability, and state acceptance. The analysis indicates that community acceptance of removal and offsite disposal was ranked as medium due to the large quantity of material that

would be excavated and trucked offsite; however, the community desires public access to the coastal trail, and remediation of the site is necessary to support this goal. This alternative received a medium rank for short-term effectiveness due to the potential for short-term worker or environmental exposure during implementation, and a medium ranking for reduction in toxicity, mobility, or volume because the material would be landfilled rather than treated. Although this alternative has a relatively high cost (approximately $2,500,000), removal and offsite disposal is an effective and implementable alternative that would be protective of human health and the environment. However, the Removal/Offsite Disposal alternative has significant potential adverse impacts associated with trucking the material off-site and the extended clean-up time that would be required. It is estimated that approximately 1,000 truck trips would be required to haul the dioxin/furan-impacted material off-site. The nearest non-hazardous landfill is located in the San Francisco Bay Area at Keller Canyon, in Pittsburg, California, a 400-mile roundtrip from Fort Bragg. Thus, hauling the contaminated soil away would require approximately 400,000 truck miles on local and state roads, causing thousands of pounds of carbon to be realeased into the air, wear on the roads, increased traffic, and increased potential for vehicle accidents. Additionally, the amount of time necessary to load and unload approximately 1,000 truck trips greatly prolongs the amount of time necessary to conduct the remedial activities at the site and would increase the duration of exposure to humans and the environment.

Therefore, the Commission finds that the Removal/Offsite Disposal alternative is not a feasible alternative to the proposed consolidation and capping which would lessen any significant adverse impact that the proposed activity would have on the environment.

(4) Bioremediation

The applicant evaluated bioremediation (i.e., fungal degradation) as a potential remedial action. As described below, evaluation of the bioremediation remediation alternative determined that (1) the physical conditions (temperature, soil pH) are not favorable, (2) successful field trials are lacking, (3) concentration reductions are likely insufficient to meet remedial goals, (4) the time associated with implementation would not meet the requirements for property transfer, and (5) the cost is likely similar to or higher than other alternatives being evaluated.

Recalcitrant compounds such as PCBs and dioxins/furans degrade at an extremely slow rate and microbial degradation has been shown to be limited. According to the analysis contained in the RAP, fungal degradation of these and other recalcitrant compounds (such as pentachlorophenol) has been observed in controlled laboratory studies using the white rot fungus (Singh, 2006; Takada et al., 1996; Mori and Kondo, 2002; Kamei and Kondo, 2005). However, these studies were conducted on a small scale and in controlled laboratory conditions (30^{o}C, pH of 4.5) in flasks where glucose (1-10%) was added, the dioxin compounds were added in dissolved form in liquid media, and the flasks were flushed with oxygen. Even under these optimal conditions, average degradation rates for studies conducted for 5 to 20 days have been shown to be 50% or less and the more highly substituted dioxin congeners (tetra- to octa-CDDs) had even lower degradation rates (as low as 6%).

Field studies using this technology have been largely untested or marginally successful. White rot fungus has an optimal growth temperature between 30 and 39^{o}C, grows more slowly at

temperatures below 25°C, and does not grow at temperatures less than 15°C (Kirk et al., 1992; Singh, 2006). High moisture and oxygen content, and presence of food (i.e., glucose), and low pH (4.5) conditions are also optimal conditions for growth. These conditions are difficult to achieve in the field. Furthermore, the availability of an effective delivery mechanisms for the fungus to soil is a barrier to practical implementation (Loomis et al., 1996) and the degree of degradation observed in the laboratory has not been observed in the field (Reddy, 1995).

Field studies that have been conducted have involved building bioreactor cells to which the soil was added along with wood chips colonized by the white rot fungus. A field study on pentachlorophenol (Kirk et al., 1992) showed a 9 to 14% decrease over 6.5 weeks (note that field conditions such as temperature, pH, etc. were not reported in this study). EarthFax (www.earthfax.com/WhiteRot/Dioxin.htm) conducted a field trial using two aboveground constructed treatment cells holding 2 cubic yards (cy) of soil, each inoculated with 20 to 40% of the white rot fungus and utilizing air blowers at a site in North Carolina (other conditions such as temperature and pH were not reported). After 282 days, degradation ranged from 61 to 80% for dioxins and 51 to 80% for furans. As TEQs, degradation ranged from 63 to 69%.

Although this technique is promising, there is a lack of proven field methods and no successful large-scale field trials. The optimal temperature conditions of 30°C and minimum temperature conditions of 15°C would not be achieved in Fort Bragg where temperatures average 53 to 57°F (12 to 14°C). Additionally, degradation rates of 80 to 90% would be needed for dioxins/furans and PCBs, respectively, to meet remedial goals. Even in Weed, California, with average temperatures in the summer of approximately 85°F (30°C), a 282-day study resulted in an average degradation rate around 70%. Additionally, the cost to implement this technology is estimated to be $75 per cy for the treatment alone (not including other costs such as excavation, backfilling, etc.), comparable to the costs for offsite disposal.

Therefore, for the reasons discussed above, the Commission finds that, at this time, the Bioremediation alternative is not a feasible alternative to the proposed consolidation and capping which would lessen any significant adverse impact that the proposed activity would have on the environment.

A number of individuals commenting on the project to the Commission have suggested that because bioremediation techniques involving the use of fungal degradation have not yet been perfected and are not yet ready to implement, that the Commission should consider allowing the dioxin/furan impacted soil to be consolidated and capped as proposed, but then required to be treated with such bioremediation techniques in the future when the techniques have been perfected for practical application. Research and development of bioremediation techniques continues and such bioremediation techniques may become feasible contamination remediation alternatives in the future. A remediation technique that can successfully treat the contaminants rather than simply contain them in place would serve to reduce or eliminate the risk that the contaminants would become exposed and potentially contaminate surface or groundwater due to failure of the consolidation cell in the event of a severe earthquake or some other catastrophic event.

Therefore, the Commission finds that the alternative of bioremediation of the dioxin/furan contaminated soil to be consolidated and capped in the consolidation cell should be reconsidered after a period of time has elapsed. The Commission accordingly imposes Special Condition No. 12, which limits the time period for which the consolidation cell is authorized to the time period that passes before the Department of Toxic Substances Control completes its five-year review of the final remediation plan. As required by statute and the DTSC order approving the Final Operable Unit A Remedial Action Plan approved by DTSC on August 28, 2008, DTSC will re-evaluate the remedial action plan five years after the consolidation cell has been constructed to determine if at that time, a more appropriate approach to remediate the dioxin/furan contaminated soils contained in the consolidation cell exists, based on the criteria utilized by DTSC for evaluating remedial activities. The DTSC will evaluate the feasibility of bioremediation techniques and other new technologies available at the time for remediating the contaminated soils, and could require implementation of such techniques if certain findings can be made. Special Condition No. 12 of Coastal Development Permit No. A-1-FTB-05-053 requires that the permittee submit an application for a permit amendment to either remove the consolidation cell or retain the consolidation cell in place after DTSC has completed action on its re-valuation of the remedial action plan. The permit amendment application must be accompanied by an alternatives analysis for the remediation of the dioxin/furan-impacted soils including, but not limited to the use of bioremediation techniques and other advanced remediation technologies available at the time. This requirement for the submittal of a permit amendment will enable the Commission to consider the re-evaluation conducted by DTSC, the alternative analysis submitted by the applicant, public comment, and other information available at the time to determine whether any of the alternative remediation techniques available at the time constitute feasible alternatives that would lessen any significant adverse impact that the consolidation cell has on the environment.

(5) Proposed Consolidate and Cap Alternative

As described in the project description finding, the proposed consolidate and cap alternative would involve placing the 13,000 cubic yards of excavated dioxin/furan-impacted material in a cell approximately 6 feet in depth and 1.3 acres in size with a PVC liner on the bottom and a geosynthetic clay liner on top. The surface layer could include a vegetated soil cap. The cap/cell area would be surveyed and a deed restriction and land use covenants would be placed on that area to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials.

The proposed consolidation and capping of the dioxin-impacted material received a high ranking for protection of human health and compliance with ARARs. The concentration of dioxin in the contaminated soils to be placed in the consolidation cell is relatively low compared to dioxin concentrations found in other contaminated sites. According to the applicant, the average concentration of dioxins in the soil to be placed in the consolidation cell is 100 parts per trillion (ppt). This level of concentration is 100 times lower than the concentration level at which contaminated material must be managed as hazardous waste under either state or federal law. The 100 ppt concentration is approximately two times the concentration level considered to be safe by DTSC (52 ppt) to leave untreated in other areas of the project site and two times the screening level set for residential soils by the Agency for Toxic Substances and Disease Registry

(ARCADIS BBL 2007. In addition to being present in relatively low concentrations, the dioxin in the soil is relatively immobile. Dioxin molecules bind strongly to soil particles, making them largely immobile in the environment. Dioxin molecules are also highly "hydrophobic," which means they do not easily go into solution. Furthermore, capping eliminates exposure pathways for the community and prevents water infiltration into the cell. However, since the cap would require maintenance, it was ranked as having a medium long-term effectiveness and permanence. It received a medium rank for short-term effectiveness due to the potential for short-term worker or environmental exposure during implementation, and a medium ranking for reduction in toxicity, mobility, or volume because once placed in a cap, the dioxin would be less mobile but would have the same volume and toxicity. This alternative has a lower cost (approximately $1,500,000) than the Removal/Offsite Disposal alternative discussed above.

The proposed capping and consolidation alternative is technically feasible and received a medium ranking for implementability due to operation and maintenance requirements. State acceptance was ranked as medium-to-high because capping has been shown to be effective. Additionally, the Department of Toxic Substances Control and the Regional Water Control Board have approved the consolidate and cap alternative. Community acceptance was ranked as low-to-moderate, because the dioxin-impacted material would remain onsite. Based on comments received during the public comment period on the RAP, it was clear that some community members dislike this approach; however, others have expressed a desire to reduce trucking, and thus, reduce the carbon footprint of the project. In addition, members of the City Council and some community members have stated that consolidating and capping the material on-site allows the City to exercise social responsibility to address the City's own contamination issues within the City rather than trucking the contaminated soil to another community to deal with.

Another advantage of keeping the contaminated soil within a consolidation cell is that it enables the soil to be remediated in the future with bio-remediation or other techniques when proven technology for such remediation is available. As discussed above, Special Condition No. 12 limits the time period for which the consolidation cell is authorized to the time period that passes before the Department of Toxic Substances Control completes its five-year review of the final remediation plan. Special Condition No. 12 of Coastal Development Permit No. A-1-FTB-05-053 requires that the permittee submit an application for a permit amendment to either remove the consolidation cell or retain the consolidation cell in place after DTSC has completed action on its re-valuation of the remedial action plan. The permit amendment application must be accompanied by an alternatives analysis for the remediation of the dioxin/furan-impacted soils including, but not limited to the use of bioremediation techniques and other advanced remediation technologies available at the time. This requirement for the submittal of a permit amendment will enable the Commission to consider whether any of the alternative remediation techniques available at the time constitute feasible alternatives that would lessen any significant adverse impact that the consolidation cell has on the environment.

As discussed above in the findings about LCP consistency, the Commission has imposed special conditions to avoid and mitigate all significant adverse impacts that the activity may have on the environment.

The Commission incorporates its findings on conformity with the policies of the City of Fort Bragg LCP as certified and the public access and recreation policies of the Coastal Act at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As specifically discussed in these above findings, which are hereby incorporated by reference, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed amended project as conditioned can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

City of Fort Bragg LCP as certified at the time of Commission action on the permit and permit amendments, and the public access and recreation policies of the Coastal Act.

Click on the links below to go to the exhibits.

EXHIBITS:

1. Regional Location Map
2. Vicinity Map
3. OU-A Location Map
4. Map of Dioxin/Furan Concentrations In Soil (South)
5. Capping and Consolidation Cross Section
6. Correspondence from DTSC Approving RAP
7. A-1-FTB-05-053 Adopted Findings
8. A-1-FTB-05-053-A2 Adopted Findings
9. Immaterial Permit Amendments
10. Correspondence Receive Prior to December 12, 2008 Commission Meeting
11. New Correspondence

APPENDIX A

STANDARD CONDITIONS

1. Notice of Receipt and Acknowledgement. The permit amendment is not valid and development shall not commence until a copy of the permit amendment, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit amendment will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable amount of time. Application for extension of the permit must be made prior to the expiration date.

3. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director of the Commission.

4. Assignment. The permit amendment may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.