



## **PERIODIC REVIEW**

**Former Georgia Pacific Clear Lake Yard,  
now Clear Lake Industrial Park  
Facility Site ID#: 66783635**

**1283 Highway 9,  
Clear Lake, Washington**

**Northwest Region Office**

**TOXICS CLEANUP PROGRAM**

**May 2011**

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## 1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup Site conditions and monitoring data to ensure that human health and the environment are being protected at the Georgia Pacific Clear Lake Yard (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

Cleanup activities at this Site were completed under the Voluntary Cleanup Program. The cleanup actions resulted in concentrations of chlordane remaining at the Site which exceed MTCA cleanup levels. The MTCA cleanup levels for soil are established under WAC 173-340-740. The MTCA cleanup levels for groundwater are established under WAC 173-340-720. WAC 173-340-420 (2) requires that Ecology conduct a periodic review of a Site every five years under the following conditions:

- (a) Whenever the department conducts a cleanup action
- (b) Whenever the department approves a cleanup action under an order, agreed order or consent decree
- (c) Or, as resources permit, whenever the department issues a no further action opinion, and one of the following conditions exists:
  - 1. Institutional controls or financial assurance are required as part of the cleanup;
  - 2. Where the cleanup level is based on a practical quantitation limit; or
  - 3. Where, in the department's judgment, modifications to the default equations or assumptions using Site-specific information would significantly increase the concentration of hazardous substances remaining at the Site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(4)]:

- (a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the Site;
- (b) New scientific information for individual hazardous substances of mixtures present at the Site;
- (c) New applicable state and federal laws for hazardous substances present at the Site;
- (d) Current and projected Site use;
- (e) Availability and practicability of higher preference technologies; and
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The Department shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

## **2.0 SUMMARY OF SITE CONDITIONS**

### **2.1 Site Description and History**

The property is located at 1283 Highway 9 in the Town of Clear Lake, Washington. The property occupies approximately 6.8 acres near the western side of Clear Lake, approximately 100 feet northwest of the shoreline. The Site lies at an elevation of approximately 50 feet above mean sea level, and is relatively flat, with approximately 12 feet of topographic relief. The property has been used for commercial purposes for approximately 66 years, primarily related to forestry. The northeastern corner of the Site was utilized as a tree nursery in the 1980s with a greenhouse, a pesticide/chemical mixing building, and a helicopter pad and hanger.

Since closure of the forestry operation, the property has been leased to a variety of commercial businesses. The property was utilized in the early 2000s as a storage area for Wise Mobile Home Repair and Sales, and as a staging area for I. Davis Construction. Ownership of the property was transferred from Georgia Pacific Corporation to Plum Creek, Inc. in 2002.

### **2.2 Site Investigations and Sample Results**

Chlordane was detected in October 1994 in the uppermost few inches of the soil in the southwestern and southeastern corners of the greenhouse. Georgia Pacific's operating practices included the mixing and storage of chlordane pesticide in the storage building and application of the chlordane to tree seedlings in the greenhouse. Prior environmental assessments at the Site indicated that the use of chlordane in the greenhouse and mixing building resulted in dilute chlordane overspray and possibly rinse water from sprayers entering the Site drainage system. This discharge of chlordane caused contamination of the soil at locations along the drainage pipelines and at two drywells. Approximately 274 cubic yards of chlordane contaminated soil was excavated in March 1995 from around the drywell east of the mixing building and disposed at the Roosevelt County Landfill. The residual in situ concentrations of chlordane in this area were non-detectable or were less than the MTCA Method B soil cleanup level of 2.86 milligrams per kilogram (mg/kg) (Independent Remedial Action Report, dated June 6, 1996).

A subsurface investigation was performed in December 1996 and January 1997 along the drain lines that ran from the southeastern corner of the greenhouse and from the storage building to the former drywell. The drain line from the greenhouse collected runoff from the greenhouse floor and roof drains, while those from the storage building collected water from a sink and floor drain located there. Contaminated soil was removed from the greenhouse and the associated drain line trenches such that the residual in situ concentration of chlordane was non-detectable or less than the MTCA Method B soil cleanup level (Report of Greenhouse Cleanup, dated April 17, 2001). Since 1995, ground water samples have been periodically collected and analyzed from shallow monitoring wells located on the Site and between it and Clear Lake. Ground water samples from only two of the monitoring wells (MW-1 and MW-3) have regularly contained chlordane, at concentrations ranging from 1.2 to 36 micrograms per liter (ug/L). MW2, MW-4, and MW-6 have also had previous chlordane detections above the ground water cleanup standard. The

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chlordanes concentrations at MW-1 and MW-3 have generally tended to decrease or stabilize over time. The apparent direction of shallow ground water flow at the Site has consistently been to the northwest, away from Clear Lake, since the establishment of the complete monitoring network in 1998.

Periodic ground water monitoring was initiated in 1995 and was performed at the Clear Lake Yard on a quarterly basis since October 1998 until 2003. The monitoring network at the Site includes six monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-6 and MW-7). MW-5 was not sampled since July 2000 due to vandalism which rendered it unusable. On December 3, 2002, BEK observed the decommissioning of monitoring well MW-5 by Hayes Drilling in accordance with WAC 173-160. The samples from monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-6 were analyzed for total chlordanes using U.S. EPA Method 8081. The sample from MW-7, which is located adjacent to Clear Lake, was analyzed for alpha- and gamma-chlordanes using a modified U.S. EPA Method 8081 to obtain a lower detection limit.

The results for the January 2003 monitoring event were similar to historical trends. The ground water gradient was to the northwest, away from Clear Lake. Chlordanes were not detected in any of the ground water samples, except those from MW-1 and MW-3, which contained chlordanes at concentrations of 2.7 ug/L and 4.4 ug/L, respectively. During the January 2003 event, the sampling rate was reduced at MW-1 and MW-3 to 0.16 liter per minute in an effort to minimize potential disturbance of the water column during sampling; however, the analytical results indicate that the sampling rate has little or no effect on chlordanes concentrations measured in those wells. Chlordanes have been previously detected at MW-2, MW-4, and MW-6 but no chlordanes detections have occurred at those wells for at least the past nine quarters of sampling.

On December 4, 2002 an additional ground water sampling event was conducted at MW-1 and MW-3, using the same low-flow sampling procedures implemented during quarterly sampling events at the Site. The analytical results indicated non-detectable concentrations of chlordanes (< 0.06 ug/L) in the filtered samples from MW-1 and MW-3. Based in this data the consultant made some conclusions:

- Given the selected filter type and relative solubility of chlordanes (56 ug/L at 25°C, Sanborn et al 1976), it is unlikely that the chlordanes results were a relic of the filtration process itself.
- These results, combined with the results of the reduced flow sampling conducted at those wells in January 2003, indicate that the chlordanes concentrations detected in those wells are more likely associated with fine soil particles that permanently remain in suspension in the wells.

An investigation of the surface water and sediment quality was conducted in Clear Lake near the Site to determine whether surface water and sediments in Clear Lake comply with Washington State Sediment Management Standards interpretive criteria (WAC 173-204). Appropriate sediment cleanup standards would be provided on a case-by-case basis (WAC 173-204-340).

The sampling and analysis was completed in general accordance with the Sediment and Surface Water Sampling and Analysis Plan (SAP), dated May 3, 2001. The SAP called for the collection of fine-grained sediment samples from the biologically active and mixed surface layer, from the surface of the lake bottom down to 10 cm beneath the surface, and at three locations near the upland portion of the Site that had been affected by the chlordane release. These three stations are located near the shoreline, such that the depth of the water at each location was about 3 feet. The SAP additionally called for the collection of surface water samples at the same three locations, from the middle of the water column (i.e., approximately 15 feet beneath the water surface and 15 feet above the lake bottom). The locations of the sampling stations were selected to provide worst-case samples. The stations are located horizontally closest to the monitoring wells known to contain chlordane contaminated ground water (MW-1 and MW-3) and vertically near the top of the most shallow ground water zone where the concentration of chlordane was expected to be greatest.

The initial sediment sampling event was completed on October 18, 2001 by BEK with assistance from personnel from Anchor Environmental of Seattle. The sampling stations (Station 01 to Station 03) were reached on foot. All sampling attempts were completed in approximately 3 feet of water. The sediment sampling attempts failed due to the gravelly nature of the nearshore sediments. A successful sampling event was completed on December 10, 2001 by BEK with assistance by personnel from Anchor Environmental. Based on the lack of recoverable sediment samples in the nearshore environment, samples were collected by boat using a Petite Ponar sampler provided and operated by Anchor Environmental personnel. The sampling attempts were initiated near the shoreline at each sampling station, and moved progressively away from the shore until a fine-grained sample was successfully collected (Station 01A to Station 03A). In general, the lake bottom in the area up to approximately 100 to 150 feet from the shoreline in the vicinity of the dolphins was found to be covered with gravel, bricks, impenetrable vegetation, and woody debris. No samples were recovered in this area, either due to refusal of the sampler, or because the jaws of the sampler were jammed with debris and the samples were lost. The sediment sample collected at Station 01A was recovered beneath approximately 14.5 feet of water, and consisted of approximately 4.5 inches of fine sand with silt and wood fragments. The wood fragments comprised approximately 50 percent of the sample. The sample collected at Station 02A was recovered from beneath approximately 23 feet of water, and consisted of fine sand with silt and a trace of wood fragments and plant matter. The sediment sample collected at Station 03A was recovered beneath approximately 2 feet of water, and consisted of silt with a trace of sand and wood fragments. All of the sediment samples were olive green in color and no odors were noted in any of the samples.

Surface water samples were also collected at a depth of approximately 15 feet below the water surface at Stations 01A, 02A and 03A. The location of each Site was determined with a portable GPS system provided and operated by Anchor Environmental personnel. Sediment and surface water samples were analyzed by Analytical Resources, Inc. (Seattle). No chlordane was detected in any of the sediment or surface water samples or the rinsate blank.

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## 2.3 Cleanup Actions

A phased Site cleanup program has been implemented at the Clear Lake Yard to remove residual chlordane contaminated soil. The initial Independent Remedial Action Report was prepared in June 1996 by W. D. Purnell & Associates. However, several actions remained at that time to demonstrate that Site cleanup was sufficient to justify a “No Further Action” determination by Ecology. Those remaining remedial actions included:

- Removal of remaining plastic drain pipes and the associated contaminated soil,
- Continuation of quarterly ground water monitoring,
- Determination of the yield the shallow ground water aquifer with regard to potential installation of domestic water wells, and
- Assessment of the surface water and sediment in Clear Lake.

BEK Engineering & Environmental, Inc. (BEK) completed the field work supervision associated with these remedial actions, and the original draft of an addendum final independent remedial action report (FIRAR Addendum), dated December 30, 2002. Bennett Engineering, LLC was retained in January 2003 to finalize the FIRAR Addendum and perform the on-going ground water monitoring at the Site, and assist in completing the Voluntary Cleanup Program process with Ecology.

BEK retained Glacier Environmental Services, Inc (Glacier) to assist with the final soil cleanup activities. BEK directed Glacier from April 12 to May 25, 2001 during excavation and removal of contaminated soil from the Site. Glacier excavated two distinct Site areas, one located south of the chemical mixing building and another west of the hanger building.

Glacier removed a small concrete pad south of the mixing building to access the perforated pipes at that location. Glacier then removed a steel corrugated drain pipe located southeast of the chemical mixing building and three plastic perforated drain pipes bedded in drain rock south of the mixing building. Two of the plastic drain pipes connected to the roof drain at the southeastern corner of the greenhouse. At BEK’s direction, Glacier also excavated chlordane contaminated soil in this area to depths of 7 and 8 feet below the ground surface (bgs). BEK collected four soil samples from the bottom of the excavation on the first day and three more samples on the second day.

In the area west of the hanger building, Glacier removed a portion of the concrete pad and the soil above the perforated drain pipe. The drain pipe extended in a north-south direction approximately 25 feet. Glacier removed the drain pipe and excavated the associated chlordane contaminated soil to depths ranging from 7 and 10 feet bgs. The southern end of the pipe terminated at a roughly circular drywell. The drywell was filled with drain rock. It was 4 to 5 feet deep and extended laterally approximately 20 feet in the east-west direction. Prior to excavation of the drywell, Pearson Construction of Bellingham installed a single pin piling in the northwestern corner of the hanger building to a depth of 25 feet bgs. The piling was intended to support the structure in the event the drywell excavation needed to extend beneath the building slab. Glacier excavated the dry well to approximately 11 feet bgs, removed all the drain rock,

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and over-excavated the underlying soil 5 to 6 feet below the bottom of the drywell. The completed excavation extended laterally approximately 25 to 30 feet west of the hanger building, to depths ranging from 7 to 17 feet bgs. BEK collected one soil sample from below the perforated drain pipe at approximately 7 feet bgs, and a total of five soil samples from the drywell excavation.

None of the eight soil samples obtained from the bottom of the excavation south of the mixing building contained detectable chlordane (detection limit = 0.02 mg/kg). Of the six soil samples obtained from the bottom of the excavation west of the hanger building, only one soil sample (041800-2) contained chlordane at a concentration (3.6 mg/kg) that exceeded the MTCA Method B direct contact cleanup level (2.86 mg/kg). However, following additional excavation at that location, subsequent soil samples did not contain chlordane at concentrations greater than the cleanup level. Samples of the excavated stockpile contained TCLP-extractable chlordane at concentrations varying from non-detectable to 0.0021 mg/L.

Since 1994, when Georgia Pacific began reviewing past operations at the Clear Lake Yard to identify potential past sources of environmental contamination on Site, it discovered several areas where hazardous constituents were present. Contaminated soil was excavated and removed from the Site so that the soil remaining at the Site did not contain hazardous constituents at concentrations exceeding MTCA Method B cleanup levels. Previous reports, including the original Independent Remedial Action Report and Report of Greenhouse Cleanup, and the FIRAR Addendum, document the cleanup of all known areas with contaminated soil at the Clear Lake Yard. In March 2000, Georgia Pacific conducted an invasive Site-wide search for other contaminated areas that had not been discovered (Report of April 2000 Ground Water Monitoring and Supplemental Geoprobe Investigation, dated December 6, 2000). The results of that exploratory investigation found no indication of undiscovered soil contamination at the Site. The removal of remaining plastic drain pipes and associated contaminated soil was completed in the spring of 2001. Therefore, the consultant concluded that contaminated soil at the Clear Lake Yard has been fully remediated.

Surface water and sediment sampling was conducted in Clear Lake, which is located approximately 100 feet southeast of the subject property. The analytical results indicated non-detectable concentrations of chlordane in the surface water and sediments of the lake. Ground water samples from MW-7, which is located between the Clear Lake Yard and the lake, have had non-detectable concentrations of chlordane (< 0.002 ug/L) for the history of the sampling program at that well (October 1998 through 2010). In addition, the measured ground water gradient has been to the northwest, away from the lake, during 12 of the last 17 monitoring events. These data indicate that surface water and sediments in Clear Lake have not been impacted by the historic chlordane contamination documented at the Site.

Groundwater samples from two specific locations of the Site (MW-1 and MW-3) have consistently contained concentrations of chlordane which exceed the MTCA Method B cleanup level for ground water. Both of these wells are located adjacent to the former dry wells where chlordane contaminated soil was excavated and removed from the Site. Analytical results for



filtered samples obtained in December 2002 indicate that the detected chlordane is likely associated with fine soil particles which remain in suspension in those wells, and is not soluble chlordane. The other monitoring wells at the Site, MW-2, MW-4, MW-6, MW-7 and the former MW-5 are located in upgradient and downgradient positions relative to the affected MW-1 and MW-3. Groundwater samples from these wells have historically had isolated or no detections of chlordane but all have had non-detectable concentrations of chlordane ( $< 0.06$  ug/L) in the quarterly sampling events which occurred until 2003. Based on the documented contamination source removal from the Site and water quality results the consultant concluded that chlordane detections in MW-1 and MW-3 are isolated and relatively immobile. Also, the analytical chromatograms of the contaminated groundwater samples indicate that the detected chlordane has degraded significantly. It was anticipated that the residual chlordane in MW-1 and MW-3 will continue to degrade until it is no longer detectable, or below the cleanup level. Ecology agreed with the assessment of protectiveness and issued a 'No Further Action' letter July 13, 2004 after a restrictive covenant was recorded with the county; however, confirmational groundwater monitoring was required. Sampling events every two years since 2004 have shown only a moderate decline in chlordane levels in MW-1 and MW-3, and the levels still exceed MTCA Method B; furthermore, MW-3 appears to be outside the property limits. This remedy in its present form, with an institutional control (covenant) on the former Georgia Pacific parcel, but none on the parcel between there and the surface water, is incompatible with regulatory requirements for conditional points of compliance of groundwater contamination.

## 2.4 Cleanup Levels

The MTCA cleanup levels as published in 1996 were used as the criteria for the initial cleanup and monitoring activities at the Clear Lake Site. A revised MTCA was published in 2001, with new cleanup levels for chlordane. The current chlordane cleanup levels of 0.25 ug/L for ground water, 0.00131 ug/L for surface water, and 2.86 mg/kg for soil from the 2001 MTCA are utilized.

## 2.5 Restrictive Covenant

Based on the Site use, surface cover and cleanup levels, it was determined that the Site was eligible for a 'No Further Action' determination if a Restrictive Covenant was recorded for the property. A Restrictive Covenant was recorded for the Site in 2004 which imposed the following limitations:

Section 1. The Property contains residual chlordane in the groundwater at the east (MW-3) and the southeast (MW-1) of the Site as shown in Figure 2 (enclosed). The Owner shall not alter, modify, or remove the existing structures nor conduct any other activity on the Property that may result in the release or exposure to the environment of the residual chlordane in the groundwater that was contained on Site, or creates a new exposure pathway without prior written approval from Ecology. Some examples of activities that are prohibited without prior written approval from Ecology include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface

beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork or pumping of groundwater.

Section 2. No groundwater may be taken from the Property for any use that is inconsistent with the remedial action implementation.

Section 3. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 4. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 5. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation and maintenance of the Remedial Action. The Owner conveying any interest in the property shall notify Ecology of the name, mailing address and telephone number of the person or persons who acquired the title, easement, lease, or other interest in the Property within fifteen (15) days of the transaction.

Section 6. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 7. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 8. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.

Section 9. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

The Restrictive Covenant is available as Appendix 6.4.

## **3.0 PERIODIC REVIEW**

### **3.1 Effectiveness of completed cleanup actions**

The Restrictive Covenant for the Site was recorded and is in place. This Restrictive Covenant prohibits activities that will result in the release of contaminants at the Site without Ecology's approval, and prohibits any use of the property that is inconsistent with the Covenant. This Restrictive Covenant serves to ensure the long term integrity of the remedy.

Based upon the Site visit conducted on July 19, 2011, the remedy at the Site continues to eliminate exposure to contaminated soils by ingestion and contact. The remedy appears in satisfactory condition and no repair or maintenance actions have been required; however, a conditional point of compliance for groundwater needs to be established. The Site is still operating as an industrial park. A photo log is available as Appendix 6.5.

Soils with chlordane concentrations higher than MTCA cleanup levels may still be present at the Site. However, the remedy prevents human exposure to this contamination by ingestion and direct contact with soils. The Restrictive Covenant for the property will ensure that the contamination remaining is contained and controlled on the property.

### **3.2 New scientific information for individual hazardous substances for mixtures present at the Site**

There is no new scientific information for the contaminants related to the Site.

### **3.3 New applicable state and federal laws for hazardous substances present at the Site**

The cleanup at the Site was governed by Chapter 173-340 WAC. WAC 173-340-702(12) (c) [2001 ed.] provides that,

“A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment.”

Although cleanup levels changed for petroleum hydrocarbon compounds as a result of modifications to MTCA in 2001, these changes do not appear to affect this cleanup. Even so, the cleanup action is still protective of human health and the environment. A table comparing MTCA cleanup levels from 1991 to 2001 is available below.

<b>Analyte</b>	<b>1991 MTCA Method A Soil Cleanup Level (ppm)</b>	<b>2001 MTCA Method A Soil Cleanup Level (ppm)</b>	<b>1991 MTCA Method A Groundwater Cleanup level (ppb)</b>	<b>2001 MTCA Method A Groundwater Cleanup Level (ppb)</b>
Cadmium	2	2	5	5
Lead	250	250	5	15
TPH	NL	NL	1000	NL
TPH-Gas	100	100/30	NL	1000/800
TPH-Diesel	200	2000	NL	500
TPH-Oil	200	2000	NL	500

NL = None listed

### **3.4 Current and projected Site use**

The Site is currently used for commercial and industrial purposes. There have been no changes in current or projected future Site or resource uses.

### **3.5 Availability and practicability of higher preference technologies**

The remedy implemented included containment of hazardous substances, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

### **3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels**

The analytical methods used at the time of the remedial action were capable of detection below selected Site cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

## 4.0 CONCLUSIONS

The following conclusions have been made as a result of this periodic review:

- The cleanup actions completed at the Site appear to be protective of human health, but not the environment (groundwater).
- Soils cleanup levels may not have been met at the standard point of compliance for the Site; however, the cleanup action for the soil has been determined to comply with cleanup standards since the long-term integrity of the containment system is ensured, and the requirements for containment technologies are being met.
- Groundwater contamination appears to exceed the property boundary and there are no institutional controls in effect except for the property; therefore, groundwater cleanup standards are not met at an allowable point of compliance. Additionally, there are statements in cleanup reports which indicate groundwater flow direction to be away from the lake; if so, monitoring wells should be placed to detect chlordane in areas next to where chlordane was released on the side opposite the lake. Groundwater sampling must be obtained from properly constructed monitoring wells.
- The Restrictive Covenant for the property is in place and continues to be effective in protecting public health from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, the Department of Ecology has determined that the requirements of the Restrictive Covenant continue to be met. Additional cleanup actions are required for the groundwater by the responsible person. It is the property owner's responsibility to continue to inspect the Site to assure that the integrity of the remedy is maintained.

### 4.1 Next Review

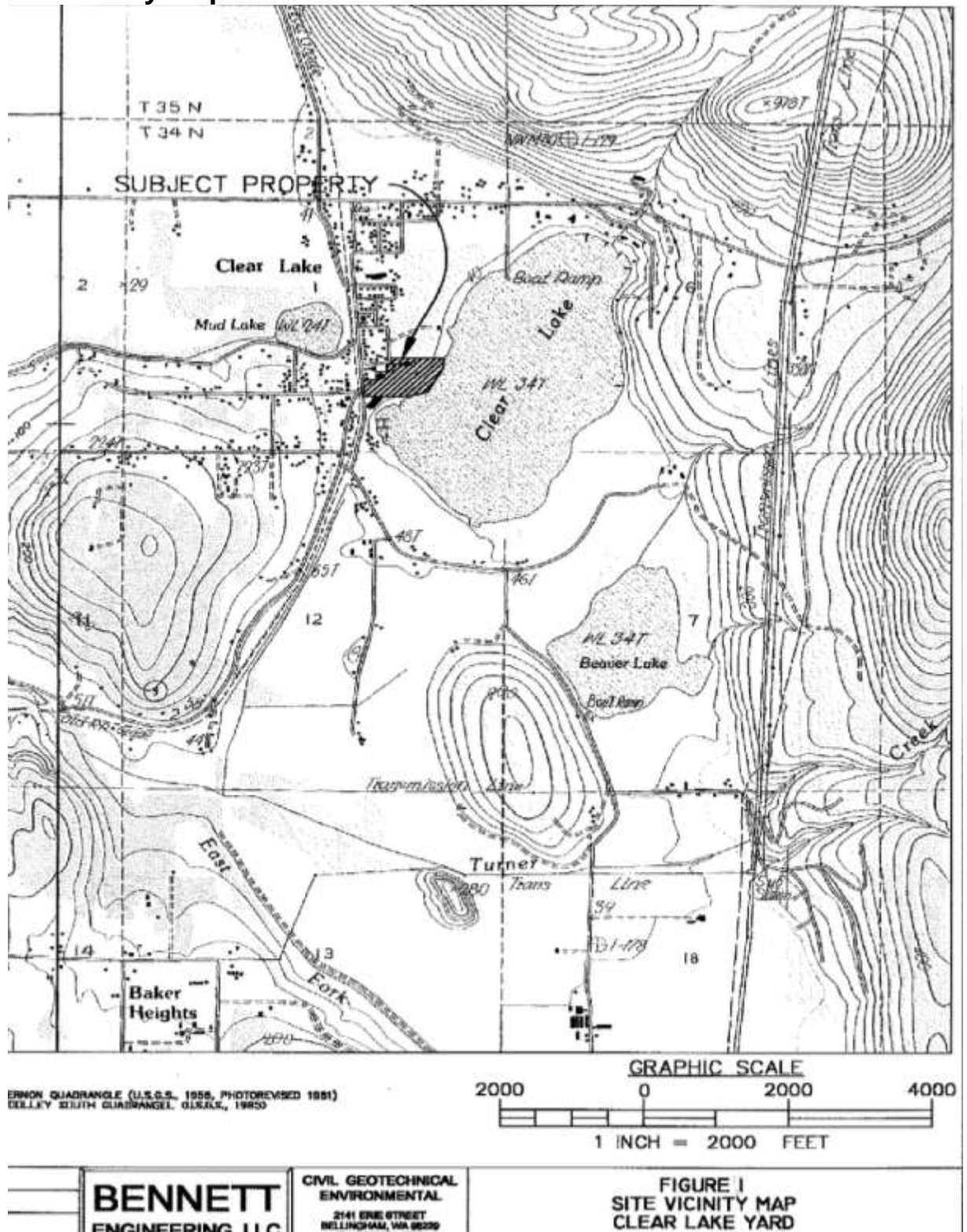
The next review for the Site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

## 5.0 REFERENCES

1. Addendum Report — Final Independent Remedial Action, Clear Lake Yard, by Bennett Engineering, Inc. of March 12, 2003;
2. Final Independent Remedial Action, Clear Lake Yard, by W.D. Purnell, of June 6, 1996;
3. Sampling and Analysis Plan, Groundwater, Surface Water, Soil, Georgia Pacific West, Inc., Clear Lake Facility, of Dec 8, 1998, by BEK Purnell;
4. Proposed Additional Action, Georgia Pacific West, Inc., Clear Lake Facility, of April 3, 1998, by BEK Purnell;
5. Request for Change in Well Sampling Plan, Clear Lake Facility, of Jan. 7, 2000, by BEK Engineering & Environmental, Inc.;
6. General Project Update Georgia Pacific West, Inc., Clear Lake Facility, of March 20, 2001, by BEK Engineering & Environmental, Inc.;
7. Groundwater Compliance Monitoring Plan, Georgia Pacific West Inc., Clear Lake Facility, Clear Lake, WA, 98235 by Bennette Engineering, LLC, of June 2004;
8. Restrictive Covenant (RC) Former Georgia Pacific Clear Lake Yard 1283 Highway 9, Clear Lake WA 98235, Skagit County Auditor of May 14, 2004, RC No. 200405140075;
9. Ecology Approval Letter of the Groundwater Compliance Monitoring Plan, Georgia Pacific West Inc., Clear Lake Facility, Clear Lake, WA, 98235 dated July 12, 2004;
10. Ecology, 2011 Site Visit.

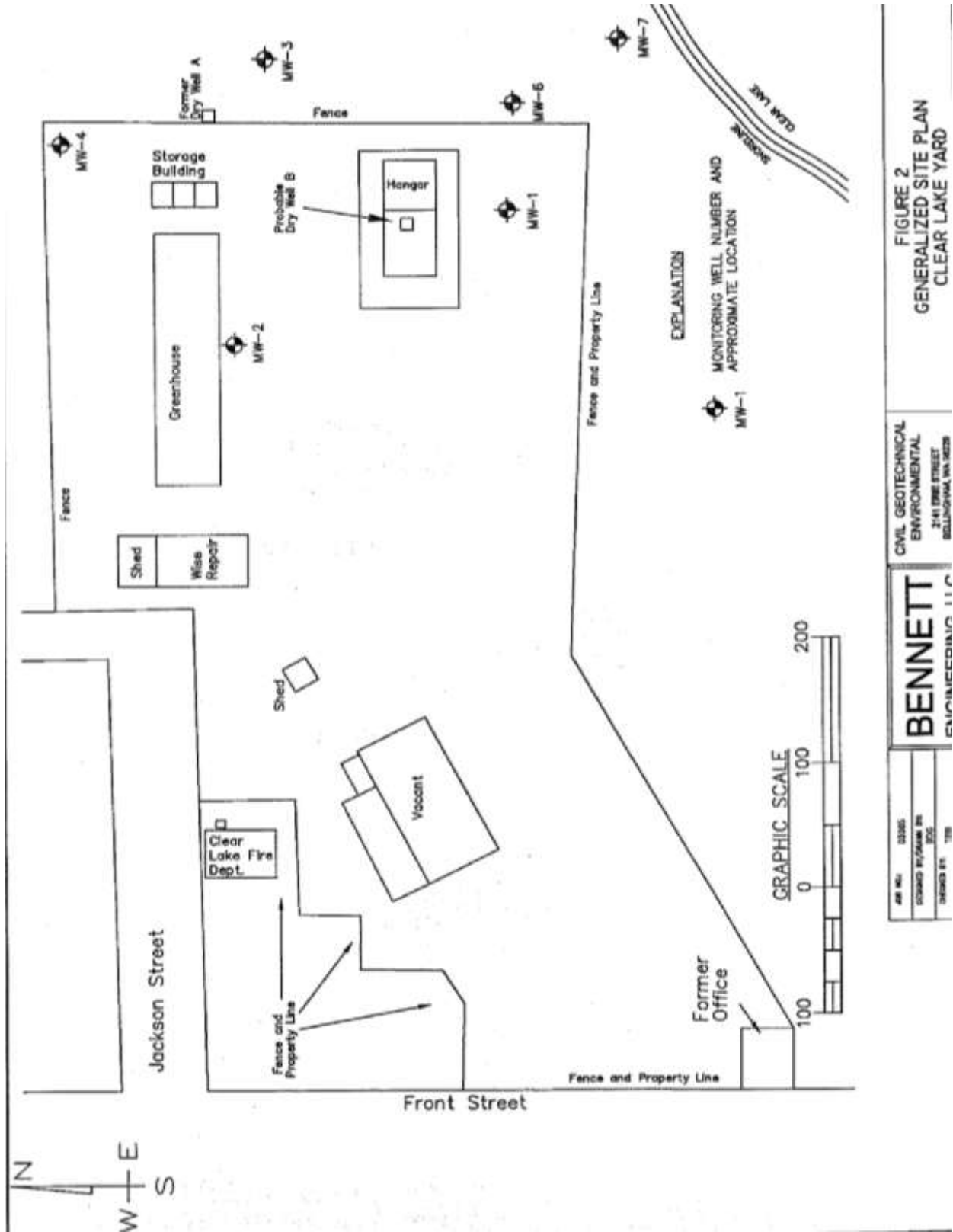
## **6.0 APPENDICES**

### 6.1 Vicinity Map

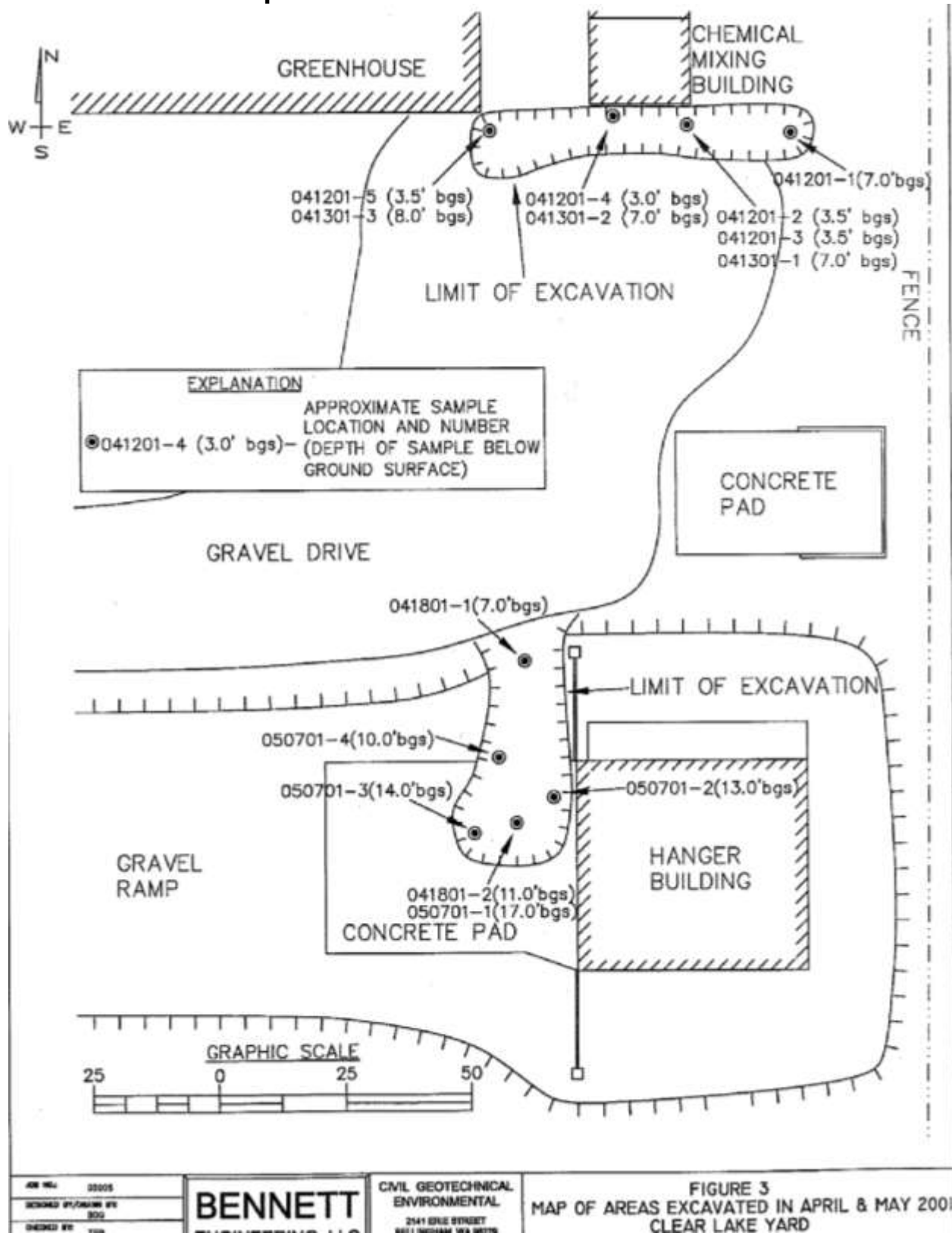




## 6.2 Site Plan



### 6.3 Excavation Map



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## 6.4 Environmental Covenant

  
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### RESTRICTIVE COVENANT

Former Georgia-Pacific Clear Lake Yard  
1283 Highway 9, Clear Lake, WA 98235

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**Grantor:** Plum Creek Timberlands, L.P., its successors and assigns

**Grantee:** Washington State Department of Ecology, its successors and assigns.

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**Legal Description:** A portion of government lot 12 in the N1/2 of the S1/2 of the SE Quarter of Section 1, T34N R04E.

**Tax Parcel #:** 23293

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## RESTRICTIVE COVENANT

Former Georgia Pacific Clear Lake Yard  
1283 Highway 9, Clear Lake, WA 98235

This declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f and g), and WAC 173-340-440. Plum Creek Timberlands L.P., its successors and assigns, and the Washington State Department of Ecology, its successors and assigns.

Legal Description: A portion of government lot 12 in the N1/2 of the S1/2 of the SE Quarter of Section 1, T34N R04 E, Tax parcel 23293.



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Skagit County Auditor

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**RESTRICTIVE COVENANT**

**Former Georgia Pacific Clear Lake Yard**  
**1283 Highway 9, Clear Lake, WA 98235**

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Plum Creek Timberlands L.P. (Owner) its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents, which are on file at Ecology's Northwest Regional Office:

1. Addendum Report – Final Independent Remedial Action, Clear Lake Yard by Bennett Engineering, Inc of March 12, 2003
2. Final Independent Remedial Action, Clear Lake Yard by W.D. Purnell of June 6, 1996
3. Sampling and Analysis Plan, Groundwater Surface water, soil, Georgia Pacific West, Inc. Clear Lake Facility of Dec 8, 1998 by BEK Purnell
4. Proposed Additional Action, Georgia Pacific West, Inc. Clear Lake Facility of April 3, 998 by BEK Purnell
5. Request for Change in Well Sampling Plan, Clear Lake Facility of Jan 7, 2000 by BEK Engineering & Environmental, Inc.
6. General Project Update Georgia Pacific West, Inc. Clear Lake Facility of March 20, 2001 by BEK Engineering & Environmental, Inc.
7. Groundwater Compliance Monitoring Plan, Georgia Pacific West, Inc. Clear Lake Facility Clear Lake, WA 98235 by ..... dated .....
8. Ecology Approval Letter of the Groundwater Compliance Monitoring Plan, Georgia Pacific West, Inc. Clear Lake Facility Clear Lake, WA 98235 dated .....

This Restrictive Covenant is required because the Remedial Action resulted leaving residual chlordane concentrations, which exceed the Model Toxics Control Act Method B Cleanup Levels established under WAC 173-340-740 in the groundwater at the :



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The undersigned, Plum Creek Timberlands L.P., is the fee owner of real property (hereafter "Property") in the County of Skagit, State of Washington that is subject to this Restrictive Covenant. The Property is legally described as follows:

**A portion of government lot 12 in the N1/2 of the S1/2 of the SE Quarter of Section 1, T34N R04E, Tax parcel 23293.**

Plum Creek Timberlands L.P. makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Section 1. The Property contains residual chlordane in the groundwater at the east (MW-3) and the southeast (MW-1) of the site as shown in Figure 2 (enclosed). The Owner shall not alter, modify or remove the existing structures nor conduct any other activity on the Property that may result in the release or exposure to the environment of the residual chlordane in the groundwater that was contained on site, or creates a new exposure pathway without prior written approval from Ecology. Some examples of activities that are prohibited without prior written approval from Ecology include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork or pumping of groundwater.

Section 2. No groundwater may be taken from the Property for any use that is inconsistent with the remedial action implementation.

Section 3. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 4. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 5. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation and maintenance of the Remedial Action. The Owner conveying any interest in the property shall notify Ecology of the name, mailing address and telephone number of the person or persons who acquired the title

... other interest in the



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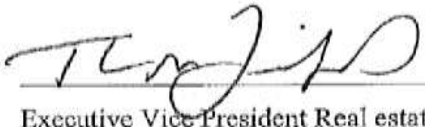
Property within fifteen (15) days of the transaction.

Section 6. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 7. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 8. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.

Section 9. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

  
\_\_\_\_\_  
Executive Vice President Real estate

4/25/04  
\_\_\_\_\_  
Date



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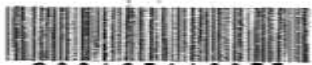
STATE OF WASHINGTON )  
 )ss.  
COUNTY OF SKAGIT )

On this 26<sup>th</sup> day of April, 2004, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Thomas M. Hendquist, to me known to be the person who signed as Executive Vice President Real Estate of Plum Creek Timberlands L.P., the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation for the uses and purposes therein mentioned, and on oath stated that he was duly elected, qualified and action as said officer of the corporation, that he was authorized to execute said instrument and that the seal affixed, if any, is the corporate seal of said corporation.

IN WITNESS WHEREOF I have hereunto set my hand and official seal the day and year first above written.



Karen L Roberts  
Print Name: KAREN L ROBERTS  
Notary Public in and for the State of Washington,  
Residing at Seattle  
My commission expires: 4-9-08



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Skagit County Auditor



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## 6.5 Photo log

**Photo 1: Building formerly used as greenhouse – MW-2 standpipe in foreground**



**Photo 2: Property line (fence) beyond wood pile – looking toward Clear Lake**



**Photo 3: MW-1 standpipe - from the east property line looking west**



**Photo 4: Former greenhouse visible beyond storage shed – from the east looking west**

