STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF REMEDIAL ACTION BY:	)	
Rayonier, Inc.	)	AGREED ORDER
AND	)	NO. DE 99TC-S260
Peninsula Holding Co., L.L.C.	)	

To: Mr. Dana Dolloff
Rayonier, Inc.
50 North Laura Street
Jacksonville, FL 32202

Peninsula Holding Co., L.L.C.
c/o John and Lisa Butters
P.O. Box 31085
Seattle, WA 98103

I.

JURISDICTION

This Agreed Order (Order) is issued pursuant to the authority of Revised Code of Washington (RCW) 70.105D.050(1).

II.

FINDINGS OF FACT

The Department of Ecology (Ecology) makes the following Findings of Fact, without admission of such facts by Rayonier, Inc. (Rayonier), and Peninsula Holding Company L.L.C. :

1. The Goose Lake Site property (Site) is owned in part by Rayonier, Inc. and in part by Peninsula Holding Company L.L.C. and is located at 200 West Wallace Kneeland Boulevard, Shelton, Washington. The Site is approximately 170 acres and is generally depicted on Figure 1 to this Order. Its legal description is:

Parcel 1

The southeast half of the southwest quarter of the southwest quarter (SE ½ of SW ¼ of SW ¼) and the west half of the southeast quarter of the southwest quarter (W ½ of SE ¼ of SW ¼) of Section 12, and the northwest quarter of the northeast quarter of the northwest quarter (NW ¼ of NE ¼ of NW ¼) and the north half of the northwest quarter

of the northwest quarter (N ½ of NW ¼ of NW ¼) of Section 13, all in Township 20 North, Range 4 West, Willamette Meridian.

AND

Parcel 2

The north half of the northeast quarter (N ½ of NE ¼) excepting therefrom the west 268.85 feet of Section 14, all in Township 20 North, Range 4 West, Willamette Meridian.

All located in Mason County, State of Washington.

2. The Site was owned by Rayonier until 1970, when it was sold to John and Thelma Kneeland. John and Thelma Kneeland owned the property until 1996, when title to the property was transferred to Goose Lake Enterprises. On March 15, 1999, Goose Lake Enterprises sold the property to Shelton 101, L.L.C.

3. On May 7, 1999, Shelton 101, L.L.C. conveyed Parcel 1 to Rayonier by statutory warranty deed.

4. Shelton 101, L.L.C. subsequently conveyed its remaining interest in the property to Peninsula Holding Company, L.L.C. (Peninsula).

5. Goose Lake is located approximately 0.3 miles west of Shelton, in Mason County. The lake is south of Sanderson Air Field and the Mason County Fairgrounds and adjacent to Highway 101.

6. The Goose Lake Site and nearby upland property were reportedly used as a disposal area for Rayonier's waste from a calcium sulfite pulp mill. Thousands of tons of waste sulfite liquor were deposited from May 1931 to 1934 into the lake and from 1934 to 1943 into a series of upland disposal lagoons. The disposal lagoons were constructed west of the lake.

7. From May 1931 and until 1957, Rayonier reportedly disposed and periodically covered unknown quantities of solid waste from its pulp mill in Shelton, including wood debris, pulp by-products, building material, and incineration char. From 1936 to 1974, Rayonier disposed of solid waste from its

Research Center including office and laboratory waste in a landfill area next to the lake. Small amounts of household waste were also reportedly dumped in the landfill area.

8. After a Preliminary Assessment conducted by Ecology, the Environmental Protection Agency (EPA) recommended in a May 24, 1994, letter to Ecology that additional investigation be conducted at the Site.

9. In June 1997, SAIC completed for Ecology an additional investigation to assess the potential hazards of the Site. The investigation was conducted to determine if contamination exists within the sediments of Goose Lake, the groundwater downgradient of the landfill area, and the soils in the former disposal lagoon area.

10. Goose Lake sediment samples demonstrated extremely high concentrations of sulfide. Analyses for total metals indicate that the sediments are contaminated with mercury. Polychlorinated biphenyl (PCBs) was also present in the sediments.

11. Bioassay analyses also demonstrated significant toxicity responses. Hyalella azteca responded with significantly increased mortality over the reference and control samples. The Chironomus tentans did not exhibit significant mortality but did exhibit a significant reduction in growth in the Goose Lake sediments over the reference and control samples. The Microtox analyses also demonstrated a toxic response to the Goose Lake sediments. The specific cause of toxic responses has not been determined.

12. Analysis of groundwater in the vicinity of the landfill indicated the presence of chromium above the Method A cleanup level. Potential contamination with arsenic above the Method A cleanup level was found in all three (3) monitoring wells.

13. Chromium has also been detected in soil and groundwater at Sanderson Air Field, which is located in the Port of Shelton just north of Goose Lake.

14. Soil samples in the vicinity of the former disposal ponds indicated arsenic concentrations were above the Method B cleanup level. Ecology's publication "Natural Background Soil Metals

Concentrations in Washington State" shows background levels for Mason County are also above Method B. Three polycyclic aromatic hydrocarbons (PAHs) were detected at concentrations less than the PQLs in one location within the ponds. A photoionization monitor detected the presence of volatile organic compounds during soil sampling.

III.

Ecology Determination

Ecology makes the following determinations without admission by Rayonier or Peninsula:

1. Rayonier and Peninsula are "owners and/or operators" as defined in RCW 70.105D.020(12) of a "facility" as defined in RCW 70.105D.020(4).

2. The substances found at the facility as described above, specifically PCBs, chromium, mercury; arsenic, PAHs, and VOCs, are "hazardous substances" as defined in RCW 70.105D.020(7).

3. Based on the presence of these hazardous substances at the Site, and all factors known to Ecology, Ecology has determined that there has been a release of hazardous substances from the facility, as defined in RCW 70.105D.020(20).

4. By a letter dated September 15, 1997, Ecology notified Rayonier of its status as a "potential liable person" under RCW 70.105D.040. By a letter of November 20, 1997, Ecology determined that Rayonier is a "potentially liable person" under 70.105D.040.

5. By a letter dated June 17, 1999, Ecology notified Peninsula Holding Company, L.L.C. of its status as "potential liable person" under RCW 70.105.D.040. By a letter dated November 8, 1999, Ecology determined that Peninsula Holding Company L.L. C. is a "potentially liable person" under RCW 70.105D.040.

6. Pursuant to RCW 70.105D.030(1) and 70.105D.050, Ecology may require potentially liable persons to investigate or conduct other remedial actions with respect to the release or threatened release of hazardous substances whenever it believes such action to be in the public interest.

7. Based on the foregoing facts, Ecology believes the activities required by this Order are in the public interest.

IV.

Work to be Performed

Based on the foregoing Facts and Determinations, it is hereby ordered that Rayonier, perform a remedial investigation/feasibility study (RI/FS) and that these actions be conducted in accordance with Chapter 173-340 WAC unless otherwise specifically provided for herein. The general tasks of this Order are described below in summary fashion and in more detail in the Scope of Work attached as Exhibit A, hereby incorporated into Section IV by reference as an enforceable part of this Order.

1. Within sixty (60) days of the effective date of this Order, Rayonier shall submit to Ecology for review and approval a draft remedial investigation (RI) Work Plan for determining the nature and extent of Site soils contamination, potential groundwater contamination and potential sediment contamination within Goose Lake. The RI Work Plan shall also include a:

- draft sampling and analysis plan, which includes quality assurance/quality control activities prepared per the requirements of WAC 173-340-820. Proposed analytical procedures shall be in accordance with WAC 173-340-830.

- draft health and safety plan. All work performed at the Site shall be in accordance with the provisions specified in WAC 173-340-810(1). A health and safety plan shall be prepared per WAC 173-340-810 (2). Although the health and safety plan must be submitted to Ecology for review and comment, Ecology does not have authority to approve the plan.

Ecology's comments on the draft Work Plan shall be addressed (including explanation of any remaining disagreements) in the final Work Plan, which shall be submitted to Ecology within thirty (30) days of receipt of such comments. The implementation of the final RI Work Plan shall be in accordance with the schedule approved in the final RI Work Plan or as modified, in writing, with the agreement of all parties.

2. The Work Plan shall provide a process to determine the nature and extent of contamination and potential contamination in the sediments within Goose Lake and Site soils and the upper aquifer. Site is defined in Section 11(1) of this Agreed Order and in WAC 173-240-200. If the investigation reveals that ground water contamination concentrations exceeding the applicable ground water cleanup standards have approached the Site's property boundary then the investigation may extend beyond the Site's property boundary. The Work Plan shall include steps to assess seasonal variation in the groundwater contamination levels and groundwater flow direction. This shall include quarterly measurements of water levels in the upper aquifer for a minimum of one (1) year. Ecology may review the frequency of water level measurements at its discretion or at the request of Rayonier.

3. The RI Work Plan shall describe analytical methods, parameters, and detection limits in addition to all quality assurance/quality control details needed as described in the most recent publication *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)*.

4. All sediment sampling and analysis shall follow methodologies described in the Draft Sediment Sampling and Analysis Plan Appendix (Ecology 1995) and recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediment (PSEP 1995).

5. Within ninety (90) days of receiving all analytical data, Rayonier shall submit to Ecology for review a draft remedial investigation report. Ecology's comments on the draft report shall be addressed (including explanation of any remaining disagreements) in the final RI Report and submitted to Ecology within thirty (30) days of receipt of Ecology's comments.

6. Within sixty (60) days of the approval of the RI report, Rayonier will be required to submit a Work Plan for a feasibility study (FS), per the requirements of Chapter 173-340 WAC. Upon approval by Ecology of the FS Work Plan, the FS shall be performed and a draft FS report will be submitted for Ecology's review and approval. Ecology's comments on the draft FS report shall be addressed (including explanation of any remaining disagreements) in the final FS Report and submitted to Ecology for review and approval within thirty (30) days of receipt of Ecology's comments.

7. If Ecology's approved FS Report concludes that Site remediation is required, then within sixty (60) days after completion and approval of the FS, Rayonier shall submit to Ecology a draft Cleanup Action Plan (CAP) to satisfy the requirements of WAC 173-340-400.

8. After public review and comment, the draft CAP will be finalized by Ecology. Ecology, Rayonier, and Peninsula Holding Company, L.L.C. will enter into discussions for a consent decree or agreed order as determined by the parties hereto or an enforcement order as determined by Ecology to design, construct, operate, and monitor the selected cleanup. Nothing in this Order shall be construed to require Rayonier or Peninsula to undertake the CAP.

9. In accordance with WAC 173-340-840(5), environmental sampling data shall be submitted in writing within twenty (20) working days of receipt from the laboratory.

10. Once approved, or modified and approved in writing by Ecology, all Ecology-approved submittals are incorporated by reference and become enforceable parts of this Order as if fully set forth herein.

11. Rayonier shall provide a bi-monthly (every two months) progress report which will include the following:

- activities that happened in the past two (2) months;
- activities planned for the next two (2) months;
- a written summary of all lab data required by this Order;

- all lab data required by this Order or requested by Ecology shall be provided in an Ecology-approved electronic format.

This progress report frequency may be revised by Ecology if adequate justification is provided by Rayonier or if Ecology provides justification for a change.

V.

TERMS AND CONDITIONS OF ORDER

1. Definitions.

Unless otherwise specified, the definitions set forth in Chapter 70.105D RCW and Chapter 173-340 WAC shall control the meanings of the terms used in this Order.

2. Public Notices.

WAC 173-340-600(10)(c) requires a thirty- (30) day public comment period before this Order for a state RI/FS becomes effective. Ecology shall be responsible for providing such public notice and reserves the right to modify or withdraw any provisions of this Order should public comment disclose facts or considerations which indicate to Ecology that the Order is inadequate or improper in any respect. Ecology agrees to provide Rayonier with notice and opportunity to comment prior to modifying or withdrawing any provision of this Order. Rayonier reserves the right to withdraw from the modified Order if Rayonier objects to such modification or withdrawal by Ecology.

3. Remedial Action Costs.

Rayonier shall pay to Ecology costs incurred by Ecology pursuant to this Order. These costs shall include work performed by Ecology or its contractors for investigations, remedial actions, and Order preparation, oversight, and administration. Ecology costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). As of April 2000, Ecology's staff charges are estimated to be $60,000.00. Rayonier shall pay the required amount within ninety (90) days of receiving from Ecology an itemized statement of costs that includes a general description of the work

performed, a summary of costs incurred, an identification of involved staff, and the amount of time spent by involved staff members on the project. Itemized statements shall be prepared quarterly by Ecology. Failure to pay Ecology's costs within ninety (90) days of receipt of the itemized statement of costs will result in interest charges.

4. Designated Project Coordinators.

The project coordinator for Ecology is:

Name:	Robert Warren
Address:	Department of Ecology Southwest Regional Office P.O. Box 47775 Olympia, Washington 98504-7775
Telephone:	(360) 407-6361
Fax:	(360) 407-6305
E-Mail:	rwar461@ecy.wa.gov

The project coordinator for Rayonier is:

Name:	Jack Anderson Manager, Environmental Engineer
Address:	Rayonier 4470 Savannah Highway Jesup, GA 31545
Telephone:	(912) 427-5354
Fax:	(912) 427-5587
E-Mail:	jack.anderson@rayonier.com

The project coordinator(s) shall be responsible for overseeing the implementation of this Order. To the maximum extent possible, communications between Ecology and Rayonier and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order, shall be directed through the project coordinator(s). If Ecology or Rayonier should change project coordinator(s), written notification shall be provided to the other parties at least ten (10) calendar days prior to the change.

5. Performance.

All work performed pursuant to this Order shall be under the direction and supervision, as necessary, of a professional engineer or hydrogeologist, or similar expert, with appropriate training,

experience and expertise in hazardous waste site investigation and cleanup. Rayonier shall notify Ecology about the identity of such engineer(s) or hydrogeologist(s), and of any contractors and subcontractors to be used in carrying out the terms of this Order, in advance of their involvement at the Site. Rayonier shall provide a copy of this Order to all agents, contractors, and subcontractors retained to perform work required by this Order and shall ensure that all work undertaken by such agents, contractors, and subcontractors is in compliance with this Order.

Except where necessary to abate an emergency situation, Rayonier shall not perform any remedial actions at the Site beyond those required by this Order unless Ecology concurs, in writing, with such additional remedial actions.

6. Access.

Ecology or any Ecology-authorized representative shall have the authority to enter and freely move about the Site at all reasonable times for the purposes of, inter alia: inspecting records, operation logs, and contracts related to the work being performed pursuant to this Order; reviewing the progress in carrying out the terms of this Order; conducting such tests or collecting samples as Ecology or the project coordinator may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Order; and verifying the data submitted to Ecology by Rayonier By signing this Order, Rayonier, and Peninsula agree that this Order constitutes reasonable notice of access, and agrees to allow access to the Site at all reasonable times for purposes of overseeing work performed under this Order. Ecology shall allow split or replicate samples to be taken by Rayonier during an inspection unless doing so interferes with Ecology's sampling. Unless an emergency exists, Ecology shall provide to Rayonier and Peninsula seven (7) days notice before conducting any sampling activity. Rayonier and Peninsula shall allow split or replicate samples to be taken by Ecology and shall provide seven (7) days notice before conducting any activity relative to this Order.

Furthermore, by signing this order, Peninsula grants to Rayonier, its agents and contractors, the right to enter Peninsula's portion of the Site for the purpose of undertaking any and all activities necessary to carry out the terms of this Order.

7. Public Participation.

Rayonier shall help prepare and/or update a public participation plan for the Site. Ecology shall maintain the responsibility for public participation concerning the Site. Rayonier shall help coordinate and implement public participation for the site.

8. Retention of Records.

Rayonier and/or Peninsula shall preserve in a readily retrievable fashion, during the pendency of this Order and for ten (10) years from the date of completion of the work performed pursuant to this Order, all records, reports, documents, and underlying data in its possession relevant to this Order. If any portion of the work performed hereunder is undertaken by contractors or agents of Rayonier, then Rayonier agrees to include in their contract with such contractors or agents a record retention requirement meeting the terms of this paragraph.

9. Dispute Resolution.

Rayonier and/or Peninsula may request Ecology to resolve disputes, which may arise during the implementation of this Order. Such request shall be in writing and directed to the signatory, or his/her successor(s), to this Order. Ecology resolution of the dispute shall be binding and final. Rayonier and/or Peninsula are not relieved of any requirement of this Order during the pendency of the dispute and remains responsible for timely compliance with the terms of the Order unless otherwise provided by Ecology in writing. All parties to this Order understand that the dispute resolution process is voluntary and nothing in this provision is intended to waive any rights of Respondents to exercise all rights of appeal available to them under RCW 70.105D, the Model Toxics Control Act..

10. Reservation of Rights/No Settlement.

This Order is not a settlement under Chapter 70.105D RCW. Ecology's signature on this Order in no way constitutes a covenant not to sue or a compromise of any Ecology rights or authority. Ecology will not, however, bring an action against Rayonier or Peninsula to recover remedial action costs paid to and received by Ecology under this Order. In addition, Ecology will not take additional enforcement actions against Rayonier or Peninsula to require those remedial actions required by this Order, provided Rayonier and Peninsula comply with this Order. Ecology reserves the right, however, to require additional remedial actions at the Site should it deem such actions necessary.

Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the releases or threatened releases of hazardous substances from the Site.

In the event Ecology determines that conditions at the Site are creating or have the potential to create a danger to the health or welfare of the people on the Site or in the surrounding area or to the environment, Ecology reserves the right to order Rayonier and/or Peninsula to stop further implementation of this Order for such period of time as needed to abate the danger.

11. Transference of Property.

No voluntary conveyance or relinquishment of title, easement, leasehold, or other interest in any portion of the Site shall be consummated by Rayonier and/or Peninsula without provision for continued implementation of all requirements of this Order and implementation of any remedial actions found to be necessary as a result of this Order.

Prior to voluntary transfer of any legal or equitable interest, Rayonier and/or Peninsula may have in the Site or any portions thereof, Rayonier and/or Peninsula shall serve a copy of this Order upon any prospective purchaser, lessee, transferee, assignee, or other successor in such interest. At least thirty (30) days prior to finalization of any transfer, Rayonier and/or Peninsula shall notify Ecology of the contemplated transfer.

12. Compliance With Applicable Laws.

A. All actions carried out by Rayonier and/or Peninsula pursuant to this Order shall be done in accordance with all applicable federal, state, and local requirements, including requirements to obtain necessary permits, except as provided in paragraph B of this section.

B. Pursuant to RCW 70.105D.090(1), the substantive requirements of Chapters 70.94, 70.95, 70.105, 75.20, 90.48, and 90.58 RCW and of any laws requiring or authorizing local government permits or approvals for the remedial action under this Order are binding and enforceable requirements of the Order.

Rayonier has a continuing obligation to determine whether additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order. In the event Rayonier determines that additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Order, it shall promptly notify Ecology of this determination. Ecology shall determine whether Ecology and/or Rayonier shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, Rayonier shall promptly consult with the appropriate state and/or local agencies and provide Ecology with written documentation from those agencies of the substantive requirements those agencies believe are applicable to the remedial action. Ecology shall make the final determination on the additional substantive requirements that must be met by Rayonier and on how Rayonier must meet those requirements. Ecology shall inform Rayonier in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Order. Rayonier shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

Ecology shall ensure that notice and opportunities for comment are provided to the public and appropriate agencies prior to establishing the substantive requirements under this section.

Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the exemption from complying with the procedural requirements of the laws referenced in RCW 70.105D.090(1) would result in the loss of approval from a federal agency, which is necessary for the state to administer any federal law, Ecology shall provide written notice to Rayonier that the exemption shall not apply and Rayonier shall comply with both the procedural and substantive requirements of the laws referenced in RCW 70.105D.090(1), including any requirements to obtain permits.

VI.

SATISFACTION OF THIS ORDER

The provisions of this Order shall be deemed satisfied upon receipt of written notification from Ecology that Rayonier has completed the remedial activity required by this Order, as amended by any modifications, and that all other provisions of this Order have been complied with.

VII.

ENFORCEMENT

1. Pursuant to RCW 70.105D.050, this Order may be enforced as follows:

A. The Attorney General may bring an action to enforce this Order in a state or federal court.

B. The Attorney General may seek, by filing an action, if necessary, to recover amounts spent by Ecology for investigative and remedial actions and orders related to the Site.

C. In the event Rayonier and/or Peninsula refuse, without sufficient cause, to comply with any term of this Order, the party refusing to comply will be liable for:

(1) up to three (3) times the amount of any costs incurred by the state of Washington as a result of its refusal to comply; and

(2) civil penalties of up to $25,000 per day for each day it refuses to comply.

D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under Section 6 of Chapter 70.105D RCW.

Effective date of this Order: April 25, 2001

Rayonier, Inc.

By _____
Dana Dolloff
Director, Environmental Affairs

State of Washington
Department of Ecology

By _____
~~Tim Nord~~ REBECCA S. LAWSON, P.E.
~~Acting~~ Southwest Region Supervisor
Toxics Cleanup Program

Peninsula Holding Company. LLC

By _____
Lisa Butters, Principal

By _____
John Butters, Principal

Approved as to legal form

Exhibit A:

Scope of Work
Investigation of the Goose Lake Site
Goose Lake
Shelton, Washington

March 20, 2001

CONTENTS

APPENDICES

GOOSE LAKE INVESTIGATION
RAYONIER INC.

1.0 SITE DESCRIPTION

The Goose Lake property is located approximately 0.3 miles west of Shelton, in Mason County, Washington. The property is adjacent to Highway 101 just south of the Mason County Fairgrounds and Sanderson Air Field. The areas of study include; Goose Lake, the former disposal lagoons, the landfill area north of Goose Lake, and, the ground water underlying the site.

2.0 BACKGROUND

Goose Lake and the adjacent property to the west were reportedly used as a disposal area for spent calcium sulfite liquor from the former Rayonier Pulp Mill in Shelton. Spent liquor was reportedly pumped from the mill to the property between 1931 to 1943. The liquor initially was pumped into Goose Lake, and later to a series of disposal lagoons located west of the lake. A small landfill is located on the north side of Goose Lake. This area received solid waste material from the mill until 1957, and also from the Rayonier research laboratory until 1974. In addition, there was apparently some unauthorized dumping of household waste by other parties at the site.

The Washington Department of Ecology (Ecology) performed a preliminary assessment and inspection of the property, which included sediment sampling in Goose Lake. Ecology later contracted Science Applications International Corporation (SAIC) to perform additional assessment at the site.

2.1 ECOLOGY STUDY:

A site assessment was performed by SAIC at the property in April 1997. Tasks performed during this assessment included sediment sampling in Goose Lake, installation of three ground water monitoring wells, and soil sampling in the former liquor disposal lagoons. A nearby lake was also used for obtaining reference sediment samples to compare to the Goose Lake sediment parameters.

SAIC reported that sediments from Goose Lake contained high levels of total sulfide. Mercury levels were detected at concentrations slightly above the Marine Sediment Quality Standards (SQS) and Cleanup Screening Level (CSL) criteria. The polychlorinated biphenyl (PCB), Aroclor 1260, was also detected at levels exceeding the SQS and CSL criteria. Detection limits for semi-volatile organic compounds exceeded the SQS and CSL criteria for several compounds. These compounds were not detected at the elevated detection limits. SAIC reported that the detection limits were probably elevated due to the high organic content of the sediment.

A 10-day *Hyalella azteca* amphipod bioassay test was performed on the Goose Lake sediment. This test showed no survival, which was significantly different from the control samples. The pH of the water during the test dropped to approximately 3 by the

sixth day of the test. A 10-day *Chironomus tentans* bioassay test was also performed. This test showed no significant difference in survival rate between the Goose Lake sample and the reference sample, however the *Chironomus* had significantly lower growth in the Goose Lake sample than in the reference sample. Similar to the Hyalella test, a drop in pH was observed in the Goose Lake sample during the test. A *Microtox* deionized water extract bioassay was also performed on the Goose Lake sediment. The SAIC report stated that the result "suggests a toxic response" compared to the reference sample.

Ground water samples were collected from three monitoring wells installed at the property. Samples were analyzed for volatile organic compounds, semi-volatile organic compounds, total metals, and pesticides/PCBs. Arsenic and chromium were detected in the samples at levels above the Model Toxics Control Act (MTCA) Methods A and/or B Cleanup levels. No other compounds that were tested for were detected at concentrations exceeding cleanup levels.

Three soil samples were collected from the former liquor disposal lagoons. These samples were analyzed for total metals and semi-volatile organic compounds. Arsenic was detected in low concentrations from two of the samples. The concentrations detected were below the MTCA Method A cleanup level, but exceeded the MTCA Method B cleanup level. No other compounds were detected at concentrations exceeding MTCA Method A or MTCA Method B cleanup levels.

2.2 RAYONIER STUDY:

At the request of Rayonier, Pacific Environmental Group (PEG) performed an assessment at the property between December 1997 and January 1998. Findings of this investigation are summarized below:

Former Lagoon Area: Analytical results from soil collected within the former lagoon area identified no concentrations of PCBs or metals exceeding MTCA Method A or Method B cleanup levels. Ground water Monitoring Well MW-5 was installed downgradient of the former lagoons and is screened from a depth of 18 to 33 feet below grade. Analytical results of the ground water collected from MW-5 indicate that arsenic, chromium, and lead concentrations exceeded the MTCA Method A cleanup levels and arsenic, copper and nickel concentrations exceeded the MTCA Method B cleanup levels.

Former Landfill Area: Concentrations of PCBs were detected in two of the four soil samples submitted for analysis. Aroclor 1260 (the only Aroclor detected) was identified but at concentrations below the MTCA Method A and B cleanup levels. Concentrations of arsenic, lead and/or mercury were detected above MTCA Method A and/or B cleanup levels in four of the five test pits sampled. Asbestos was not detected in the five soil samples submitted for analysis.

Goose Lake Sediment: Total sulfides were found in the Goose Lake sediment samples, but not at the "extremely high" concentrations of sulfide noted in the SAIC report. PCB's were detected at concentrations above the Puget Sound Dredged Disposal Analysis (PSDDA) program screening level. The PCBs levels were also above concentrations found to be predictive of adverse effects to freshwater sediment bioassay organisms. Concentrations of metals in all sediment samples were below the sediment maximum levels.

Ground Water: Depth to ground water in Monitoring Wells MW-4 through MW-6 ranged from approximately 17.0 to 31.4 feet below grade. The inferred direction of ground water migration on this date was to the east/southeast at a gradient of approximately 0.02 feet/feet. Concentrations of chromium and lead were detected above MTCA Method A cleanup levels in the ground water collected from Monitoring Well MW-4 located downgradient of Goose Lake. In addition, arsenic concentrations were detected above the MTCA Method B cleanup level. The values were not above the United States Environmental Protection Agency MCLs for drinking water.

Former Lagoons: Neither 1997 study showed contaminants exceeding MTCA Method A in the soils from this area. One Ecology sample showed arsenic just above the Method B level but less than one-fourth of the Method A level. In addition, all of the arsenic levels found were well within the natural soil levels for Mason County.

3.0 SCOPE OF WORK

This Scope of Work (Scope) is designed to outline the effort that will occur during the Remedial Investigation, as defined in Washington Administrative Code (WAC) 173-340-350. The details of the investigation will appear in the Remedial Investigation Plan. This study is intended to provide additional information to supplement the findings reported by SAIC and PBG during the initial assessments at the property. SAIC and PBG performed the initial investigations between April 1997, and January 1998.

This Scope was prepared to further define the site conditions in accordance with State and Federal technical guidelines. A brief summary of the scope and objectives follows:

- **Goose Lake (Lake Water).** Previous studies have not examined the Goose Lake water quality in detail. The proposed sampling and testing would examine the water quality for the parameters of interest at several locations on the site. This would include collecting lake water samples from two depths at three stations and analyzing the samples for surface water characterization. Lake water samples will be analyzed for metals, PCBs, and total sulfidity. In addition, pH, temperature, conductivity, turbidity, and dissolved oxygen will be measured in the field and/or laboratory. Analytical methods will be performed as required to compare to Water Quality Standards (Chapter 173-201A WAC). Specific protocols such as for dissolved or

total recoverable fraction will be dictated by the standards (e.g., mercury chronic freshwater criteria are reported as total recoverable fraction and acute criteria are reported as dissolved). Analyses for organic compounds have not been included because there were no significant findings in the previously analyzed sediment and ground water samples.

- **Goose Lake (Fish).** Previously analyzed sediment samples have identified elevated levels of PCBs and mercury, groundwater samples showed elevated chromium and lead and the landfill area had elevated arsenic, copper, nickel chromium and lead. Because of the bioaccumulative nature of PCBs, arsenic, chromium, lead, and mercury, these and percent lipids will be analyzed for in fillets and whole body tissues of fish from Goose Lake. This study will collect two predator species and one bottom feeding species, examine fish for abnormalities such as parasites, lesions for tumors, and submit tissue samples and whole body samples to a laboratory for analysis.
- **Goose Lake (Sediment).** Sediment samples will be collected in an effort to analyze and determine lateral and horizontal extent of each distinct lacustrine sediment strata. The purpose for this sampling is to 1) analyze the visually distinct sediment strata for contamination, and 2) determine the lateral and horizontal extent of each visually distinct sediment strata. Eight sediment sampling stations will be sampled using coring equipment that allows discrete samples to be collected for each visually distinct sediment strata. Four stations will be sampled along a transect directed westerly across Goose Lake from the Landfill area. The additional four stations will be distributed to obtain a representative sample of sediment layers to determine the extent of the sediment units across the entire lake basin.
- **Landfill.** This study will institute a systematic soil sample collection program to collect soil samples at various depths and analyze the samples for metals, PCBs, and total sulfides. The sample containing the highest level of each contaminant will also be analyzed for the contaminants leaching ability (TCLP) using EPA Method 1311. In addition, the four samples with the highest PID readings will be analyzed for volatile and semivolatile organics by EPA methods 8260 and 8270, respectively. A second phase of investigation consisting of test trenching will be implemented to better define the boundary of landfilled contaminants.
- **Ground water.** Samples collected from the six monitoring wells on site have not shown any contaminants of significance other than certain heavy metals; arsenic, chromium and lead. The proposed project would include the installation of four new ground water monitoring wells. One monitoring well will be installed down gradient of monitoring well MW-5. One monitoring well will be installed down gradient of Ecology Wells MW-1 and MW-2. One monitoring well will be installed upgradient of the former lagoon area. One monitoring well will be installed northeast of the landfill area. Ground water samples will be collected on a quarterly basis from the four newly installed wells and the six existing on-site wells and analyzed for total metals, total sulfidity, and PCBs. Total sulfidity and PCB levels were not of significance in the previously sampled wells, but analyses for these parameters has

been included because these compounds were detected in the lake and landfill areas. Ground water depths will be recorded to determine ground water elevation. A ground water flow direction will be evaluated for each quarterly sampling event.

- **Former Lagoon Area.** Neither 1997 study showed any contaminants exceeding MTCA Method A in the soils from this area. One DOE sample showed arsenic just above the Method B level but less than one-fourth of the Method A level. In addition, all of the arsenic levels found were well within the natural soil levels for Mason County. However, additional sampling is scheduled for the former Lagoon area. Several soil samples will be taken from the area immediately to the west and to the south of the former lagoons to determine if any materials were placed there. The soil samples will be tested for metals and PCBs.

The Scope has been divided into the following tasks: (1) Pre-Field Activities, (2) Field Activities/Data Collection, (3) Risk Assessment Activities, (4) Remedial Investigation Report, (5) Feasibility Study, Calculation of Risk Based Cleanup Levels and, if necessary, a Review of Remediation Alternatives, and (6) Feasibility Study Report. These tasks consist of a series of subtasks, which are described below.

4.0 TASK 1: PRE-FIELD ACTIVITIES

4.1 PRE-FIELD MEETING:

Rayonier and the Washington State Department of Ecology to discuss proposed areas of investigation prior to planned field activities. A site health and safety plan will be presented that meets the requirements of WAC 173-340-810 (1) and (2).

4.2 SUBMITTAL OF REMEDIAL INVESTIGATION PLAN:

The Plan consists of project work planning documentation, including the Project Sampling and Analysis Plan and the Site Health & Safety Plan.

5.0 TASK 2: FIELD ACTIVITIES/DATA COLLECTION

Samples submitted for laboratory analyses will be tested using analytical procedures consistent with WAC 173-340-830.

5.1 LAKE WATER SAMPLING:

Lake water samples will be collected from Goose Lake to characterize the water quality with reference to surface water standards. Lake water will be collected from two sampling stations within 50 feet of the landfill shoreline and from one sampling station distal to the landfill. Two lake water samples will be collected from each of these stations: (1) from the surface water of the lake, and (2) from 8 feet of water and/or within two feet of the lake bottom.

Lake water samples will be analyzed for metals, PCBs, and total sulfidity. In addition, pH, temperature, conductivity, turbidity, and dissolved oxygen will be measured in the field and/or laboratory. Analytical methods will be performed as required to compare to Water Quality Standards (Chapter 173-201A WAC). Specific protocols such as for dissolved or total recoverable fraction will be dictated by the standards (e.g., mercury chronic freshwater criteria are reported as total recoverable fraction and acute criteria are reported as dissolved). Analyses for organic compounds have not been included because there were no significant findings in the previously analyzed sediment and ground water samples.

5.2 FISH SAMPLING:

Purpose: Goose Lake is believed to contain fish, which are harvested by residents of the area. Fish tissue sampling will be conducted for bioaccumulating contaminants known to exist at the Goose Lake site, (i.e., PCBs, mercury, arsenic, lead, and chromium) in order to determine if contaminants in composite samples of edible fish exceed human health screening concentrations. Rayonier will conduct fish sampling in accordance with USEPA guidance contained in "Guidance for Assessing Chemical Contaminant Data For Use In Fish Advisories, Volume 1, Fish Sampling And Analysis, EPA 823-R-95-007" (hereafter USEPA guidance document), and Puget Sound Estuarine Protocols (PSEP). Bioaccumulative concerns for ecological receptors will be addressed by analyzing appropriate whole fish (size and species) for PCBs, mercury, arsenic, lead, and chromium.

Proposed Work, Human Health - Target Species and Size Class Selection: The objective will be to collect two species of predators and one species of bottom feeder for tissue (edible fillet) and whole body analyses. It is reported that trout (Family Salmonidae) have been stocked in Goose Lake and largemouth bass are believed to have been introduced , and thus trout and bass will be targeted as the two preferred predator species for edible fillet analyses. These species also represent differing bioaccumulating potential, the high lipid content of trout tends to accumulate organics such as PCBs whereas bass are known to accumulate contaminants such as mercury. If trout are not collected due to lack of availability, secondary predator species will be collected if available. In order of decreasing preference these would be Percidae (yellow perch and walleye), smallmouth bass (*M. Dolomieui*), or other members of the Family Centrarchidae (sunfish species) as may be present in the lake. Other potential predators that may be utilized include Esocidae (pickerel and pike).

Bottom feeding species that will be targeted for edible fillet analyses are (1) common carp (*Cyprinus carpio*), (2) channel catfish (*Ictalurus punctatus*) and (3) white sucker (*Catostomus commersoni*). If none of these species are present in sufficient numbers, available bottom feeders such as other catfish or other edible sucker species will be

collected. It is assumed that at least two predator and one bottom feeding species are present in the lake in sufficient numbers and size to provide adequate samples.

Tissue Analysis – Contaminants that may bioaccumulate and that have been reported at elevated concentrations at the Goose Lake site include arsenic, chromium, lead, mercury, and PCBs. These contaminants and percent lipid will be analyzed for in composited tissue samples following guidelines in PSEP and USEPA guidance document.

Proposed Work, Ecological Health - An ecological risk determination will dictate the fish species and sizes appropriate for whole body fish analyses. This determination will be based on likely ecological receptors.

Time of Sampling: Samples should be collected at the time of year when the target species is most frequently harvested by the population at risk. This is likely to be in the spring and summer months. Also fishing success with gill nets will generally be greater when fish activity increases as water warms in spring.

Sampling Methods: The primary method of sampling will be with gill nets. Upon arrival on site, Rayonier will deploy sufficient gill nets to adequately cover likely fish habitats. The gill nets will be left in place overnight and checked the following morning, with re-deployment if necessary to obtain sufficient specimens. The surface area of the deployed net, its location and depth, and the duration of deployment will be appropriately documented. Electroshocking equipment will also be used to supplement the gill netting if necessary.

Number and Type of Samples: In the field, collected fish will be identified to species, measured to the nearest 1.0 mm, weighed to the nearest 1.0 g, and examined for abnormalities such as parasites, lesions or tumors. The fish specimens will then be wrapped in aluminum foil, placed in labeled plastic bags and in a cooler with ice for transport to the laboratory for tissue and whole body sample preparation. Field observations will also include observations of weather conditions, lake vegetation and in-situ water quality parameters including temperature, conductivity, pH and dissolved oxygen concentration.

Rayonier will attempt to collect and analyze replicate composite samples of each species. If possible, three replicate composite samples will be prepared for each species tested, and a duplicate sample of one of the replicates will also be prepared. Replicate composite samples will be as similar to each other as possible in length. If enough fish are collected, each sample will consist of fillets from a minimum of five to eight fish of each species, as near the same age (length) as possible. The fish incorporated into each composite sample will be of the same species.

USEPA guidance recommends that, for health risk assessments, composite samples of fish prepared for analysis should consist of the portions commonly consumed by the population at risk. Because trout are often prepared and eaten with the skin on, skin-on fillets with the belly flap included will be prepared for trout samples. Skin-on fillets with

the belly flap included will also be used for other scaled predator or bottom feeding species as recommended in USEPA guidance. Samples from scaleless species such as catfish will be skinned prior to taking of fillets. All tissue samples will be prepared in accordance with Section 7.2 (Sample Processing) of the USEPA guidance document. Whole body fish samples will also be prepared according to USEPA guidance.

PSEP and USEPA protocols for collection of fish tissue and sample integrity and tracking will be observed at all times. Field Activity Daily Logs (FADLs) will be completed each day documenting all sampling activities. Notes will include a site map showing all sampling locations and indicating where all fish samples were collected and the type of sampling gear used. Unique sample identifiers will be assigned to each fish sample indicating the date, time and collection location of each sample. This number will be recorded on the sample containers, the FADLs, and on the Chain of Custody form (COC) which will be created in the field and will accompany the samples to the laboratory. The COC will also accompany the prepared and composited samples to the analytical laboratory.

Fish (fillet and whole body) samples will be prepared as described above and shipped to the analytical laboratory for analysis of PCB Aroclors, arsenic, chromium, lead, mercury, and percent lipids.

5.3 SEDIMENT INVESTIGATION – GOOSE LAKE:

Purpose: Previous sediment sampling identified lake bed sediments comprised of a black, fine-grained surface layer, 3 to 6 cm in depth, underlain by a layer of waste materials that is of unknown depth and has not been analyzed for contaminants. This layer is thought to be comprised of solids associated with the calcium sulfite liquor and wood digestate that was previously discharged into the lake. This sampling effort is directed at estimating the depth and volume of each layer and determining contaminant levels, pore water pH, ammonia and sulfides for in this material.

Sampling and Analysis: Eight sediment sampling stations will be sampled in Goose Lake. Sediment cores will be collected in an effort to determine the thickness of the various sediment layers across Goose Lake and to evaluate the concentrations of PCB aroclors, arsenic, lead, mercury, chromium and total sulfides (short suite). A discrete sample will be collected from each visually and/or physically distinct layer, and will be analyzed for the short suite of contaminants. Sediment sampling will be performed in accordance with Ecology's draft "Sediment Sampling and Analysis Plan Appendix" (SAPA) as applicable. Sediment samples will be collected using percussion sediment coring, freeze-coring and/or vibracoring methodologies. If coring is not effective in assessing the depth of the underlying layers of waste materials, acoustic sub-bottom

profiling or other technology will be employed to attempt to determine vertical distribution of these layers.

Four stations will be located in a westerly transect from the landfill area across Goose Lake. At these four sampling stations, sediment samples will be collected from each distinct lacustrine sediment layer, including the material beneath the previously observed woody material if the coring equipment can obtain adequated samples of this layer. Sediment samples, representative of each strata will be laboratory analyzed for the short suite of contaminants.

Additionally, the samples collected from the transect station closest to and most distal from the landfill will be analyzed for total metals (antimony, cadmium, chromium, copper, lead, nickel, zinc, arsenic, mercury and silver), semivolatile organics and PCB Aroclors. Sediment samples collected from the overlying black sediment will be analyzed for the short suite of parameters and will additionally be analyzed for conventional parameters (ammonia, total organic carbon, total solids, total sulfides, pH [of pore water] and grain size).

Sediment core logs will be generated at each sediment station to document the sediment composition and thickness.

Four additional sediment sampling stations are proposed in Goose Lake. These station locations will be selected to best characterize the distribution and thickness of the various sediment materials along the lake bottom. Sediment core logs will be generated at each sediment station to document the sediment composition and thickness.

5.5 SOIL INVESTIGATION - LANDFILL AREA:

Soil samples will be collected from the former landfill area. Approximately twenty test pits will be installed in this area to determine the lateral and vertical extent of landfilled material. A systematic soil sample collection method will be utilized in the landfill area. Soil samples will be collected from primarily non-native (fill) material. Criteria used to determine what fill material is sampled will include: PID readings; physical composition; visual evidence of contamination; and, olfactory observations. In addition, native soil samples will be collected from below the landfilled material, where practical, and at least three soil samples will be collected from the soil overlying the landfilled material.

Soil samples from the former landfill area will be analyzed for total metals (As, Cr, Cu, Pb, and Hg) by EPA Methods 6010/7041/7061/7131/7191/7421 as applicable and/or PCBs by EPA Method 8080, and/or total sulfide by EPA Method 376.2. In addition, the soil sample with the highest detected concentration of each metal will be analyzed with the TCLP procedure. The plan assumes 20 samples analyzed for total metals, four samples analyzed for TCLP, and five samples analyzed for PCBs and total sulfide. If elevated PID readings are observed during field screening operations, the four soil samples with the highest PID readings will be analyzed for volatile and semivolatile

organic compounds by EPA Methods 8260A and 8270. Following receipt of analytical results, a series of at least four test trenches will be installed to better define the boundaries of the landfill contaminants.

5.6 MONITORING WELL INSTALLATION:

A driller will be subcontracted to install four ground water monitoring wells. The wells will be installed to determine water quality in the vicinity of the former lagoon area and landfill area. Monitoring well construction will be performed in accordance with WAC 173-160.

Former Lagoon Area. A total of two wells will be installed in the former lagoon area. One of the wells will be installed at least 100 feet down gradient of Well MW-5. One of the wells will be installed upgradient of the former lagoon area. These wells will be installed to monitor the first encountered aquifer currently monitored by MW-5.

Landfill Area. Two wells will be installed in the vicinity of the landfill. One well will be installed northeast of the landfill periphery. One well will be installed down gradient of wells MW-1 and MW-2 but prior to the property boundary adjacent to Highway 101. These wells will be installed to monitor the first encountered aquifer currently monitored by MW-1 and MW-2.

Monitoring well construction will consist of two inch PVC casing with a 0.020-inch factory slotted screened interval. The screened well casing for the two monitoring wells will be installed to approximately 20 feet below grade. Soil samples will be collected initially at approximately 5 feet below grade and continue thereafter at 5-foot intervals.

The wells will be drilled using hollow-stem auger equipment. Each monitoring well will be completed with above grade waterproof, locking monuments. Protective bollards will be placed around each monitoring well that may be on or near a roadway.

A qualified geologist using standard field procedures will document well installation, and well logs will be prepared. Soil samples will be initially collected at approximately four feet below grade. Soil sampling thereafter will be performed at five foot intervals in the borings. Selected soil samples will be preserved for possible laboratory analyses.

Soils generated during drilling will be temporarily placed on and covered with plastic sheeting and stored on-site.

The monitoring wells will be developed using a surge block and/or bailer. A minimum of 10 casing volumes of water will be removed during development, unless the wells are pumped dry or the ground water appears free of turbidity. The development water will be placed in drums and temporarily stored on-site.

The newly installed monitoring wells will be surveyed to determine the vertical elevation of the well casing to one one-hundredth of a foot. The vertical elevations will be referenced to the same datum used to determine the elevations of existing on-site wells.

5.7 GROUND WATER SAMPLING:

Four quarterly rounds of ground water samples will be obtained from the newly installed wells and the six existing on-site wells. Monitoring wells will be sampled in accordance with WAC 173-160. This plan includes the collection of one duplicate sample and one rinsate sample for laboratory analysis. Ground water samples will be analyzed for total metals (As, Cr, Cu, Pb, and Hg) by EPA Methods 6010/7041/7061/7131/7191/7421 as applicable, total sulfidity by EPA Method 9030 Modified, and/or PCBs by EPA Method 8080.

5.8 SOIL INVESTIGATION - WEST AND SOUTH OF FORMER LAGOON AREAS:

At a minimum, four test pits will be installed west of the former lagoons and four test pits will be installed south of the former lagoons. These test pits will be installed to determine if there is evidence that material has been landfilled in this area. In addition, if non-native materials are suspect (due to elevated PID readings, physical composition, visual evidence, and/or olfactory observations), soil samples will be collected.

Soil samples that are collected will be analyzed for total metals (As, Cr, Cu, Pb, and Hg) by EPA Methods 6010/6020/7041/7061/7131/7191/7421 as applicable and/or PCBs by EPA Method 8080, and/or total sulfide by EPA Method 376.2. In addition, the soil sample with the highest detected concentration of each metal (exceeding relevant cleanup standards) will be analyzed with the TCLP procedure (Method 1311). The plan assumes 4 samples analyzed for total metals, two samples analyzed for TCLP, and four samples analyzed for PCBs and total sulfide. If elevated PID readings are observed during field screening operations, the soil sample with the highest PID reading will be analyzed for volatile organic compounds by EPA Method 8260A.

In addition to the above samples, a minimum of four soil samples will be obtained from within the former lagoons and analyzed for arsenic by EPA Method 6020.

Area background soil samples will be collected in accordance with WAC 173-340-708(11) only if the findings of this investigation warrant a background evaluation.

5.9 LABORATORY ANALYTICAL REPORTS:

A laboratory certified by Ecology for analysis of each matrix (water, sediment, soil, tissue) will be contracted to perform the analyses required. QA/QC for sediments and tissue will follow requirements identified in Ecology's SAPA for QA level 1. Water and soil analytical QA will follow MTCA requirements. Hardcopy and electronic data will be provided for all media, data for sediments and tissue will be provided in Sedqual format templates

6.0 TASK 3: RISK ASSESSMENT ACTIVITIES

6.1 SCREENING ECOLOGICAL RISK EVALUATION:

Ecological risk will initially be screened using the qualitative and quantitative results of the tests of Goose Lake sediment, water quality and fish tissue. If the screening indicates that a risk assessment for ecological receptors is appropriate, Rayonier and Ecology will develop an agreed work plan for that assessment and Rayonier will conduct the risk assessment according to the work plan.

6.2 HUMAN HEALTH RISK EVALUATION FOR RECREATIONAL FISHERMAN:

If sufficient contamination is found, Rayonier will perform a risk evaluation based on a recreational fisherman exposure scenario. This task will only be performed if concentrations of PCBs, lead or mercury are detected in the fish samples submitted for analysis. The evaluation, if performed, will be conducted in accordance with applicable provisions of WAC 173-340-350.

Rayonier will present the data collected from the field investigation and will prepare a report documenting their findings. The report will include documentation of sampling procedures, findings, and analytical laboratory results.

7.0 TASK 4: REMEDIAL INVESTIGATION REPORT

Rayonier will present the data resulting from the field investigation, associated conclusions, and results of the screening risk assessments (as applicable) in the investigation report. The report will include documentation of sampling procedures, findings, and analytical laboratory results and associated QA/QC backup. Analytical data will also be provided in electronic format.

8.0 TASK 5: FEASIBILITY STUDY

A feasibility study of appropriate magnitude will be performed pursuant to applicable provisions of WAC 173-340-350 and WAC 173-340-360.

9.0 TASK 6: FEASIBILITY STUDY REPORT

A report will be prepared within the guidelines of WAC 173-340-350 and 360 that describes the procedures and results of the risk assessment, the remediation alternatives considered and the recommendations proposed for the site.

A feasibility study will be performed under WAC 173-340-350. This report will be submitted to Ecology for review and approval.

APPENDIX A
CONCEPTUAL SCHEDULE OF EVENTS

APPENDIX A

CONCEPTUAL SCHEDULE OF EVENTS

MILESTONE A: AGREED ORDER SIGNED.

Item 1 - Following the signing of the Agreed Order - prepare and submit the draft RI work plan that is consistent with the Agreed Order, the Scope of Work and that includes:

- A detailed sampling and analysis plan in accordance with WAC 173-340-820 and 830.
- A Health and Safety Plan in accordance with WAC 173-340-810 (1) and (2).
- A detailed schedule of the events that will occur during the RI.

Item 2 - Following receipt of Ecology's comments on the draft RI work plan - prepare and submit the final RI work plan.

MILESTONE B: FINAL RI WORK PLANS APPROVED

Item 3 - Complete the following on-site activities.

- Installation of Ground water Monitoring Wells.
- Development of Ground water Monitoring Wells.

Item 4 - Complete the following on-site activities.

- Surveying of Ground water Monitoring Wells.
- Sampling of Ground water Monitoring Wells.
- Sediment Sample Collection.
- Lake Water Sampling.
- Benthic Sampling.

Item 5 - Complete the following on-site activities.

- Fish Sampling.
- Landfill Sampling.
- Lagoon Area Sampling.

Item 6 - Complete the following off-site activities.

- Fish Analyses.
- Landfill Analyses.

Item 7 - Complete the following activities.

- Complete the laboratory analyses.
- Prepare risk evaluations.

Item 8 - Complete the following activities.

- Collect second, third, and fourth round of ground water samples.

MILESTONE C - INVESTIGATIVE SAMPLING AND ANALYSES COMPLETED

Item 9 - Prepare the Draft RI report.

Item 10 - Prepare and submit the final RI report.

MILESTONE D - FINAL RI REPORT APPROVED

Item 10 – Prepare and submit the draft Feasibility Study to Ecology that is consistent with the Agreed Order, the Scope of Work, WAC 173-340-350 and that includes:

- Evaluation of Remedial Alternatives.
- A recommended Remedial Alternative, which has been selected in accordance with WAC 173-340-360.

Item 11 - Prepare and submit the final FS report.

MILESTONE E - APPROVAL OF THE FINAL FEASIBILITY STUDY REPORT

Item 12 – Prepare and submit the draft Cleanup Action Plan (CAP) in accordance with WAC 173-340-400, the Agreed Order, and the Scope of Work.