

Appendix A

Site-specific Health and Safety Plan

ECOLOGY AND ENVIRONMENT, INC.

**SITE-SPECIFIC
HEALTH AND SAFETY PLAN**

Project: Rayonier Mill Off-Property Soil Dioxin Study

Project No.: 002330.WD18

Project Location: Port Angeles, Washington

Proposed Date of Field Activities: September 3-15, 2008

Project Director: Bill Richards

Project Manager: Alma Feldpausch

Prepared by: D. Joseph Grojean Date Prepared: June 30, 2008

Approved by: Joe Grojean Date Approved: _____

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1. INTRODUCTION

1.1 POLICY

This site-specific health and safety plan (SHASP) establishes the procedures and requirements to ensure the health and safety of E & E employees for the Rayonier Mill Off-property Soil Dioxin Study. E & E's overall safety and health program is described in the *Corporate Health and Safety Program (CHSP)*. After reading this plan, applicable E & E employees shall read and sign the Site-Specific Health and Safety Plan Acceptance form attached to this plan.

This SHASP has been prepared to meet the following applicable regulatory requirements and guidance:

Applicable Regulation/Guidance
29 CFR 1910.120, Hazardous Waste Operations and Emergency Response (HAZWOPER)
Other: Washington State regulations at Chapter 296-843, WAC (Hazardous Waste Operations)

1.2 SCOPE OF WORK

Description of Work: Investigating the presence of polychlorinated dibenzo-p-dioxins (dioxins) and polychlorinated dibenzofurans (furans) in Port Angeles soils. Study involves recruiting property owners to participate in the study and collection of surface soil on undeveloped and residential properties surrounding the former Rayonier Mill.

Equipment/Supplies: Attachment 1 contains a checklist of equipment and supplies that will be needed for this work.

The following is a description of each numbered task:

Task Number	Task Description
1	Recruit property owners to participate in study (door-to-door visitation).
2	Collection of soil samples using hand tools.
3	Oversight of soil sampling by archaeology staff.

1.3 SITE DESCRIPTION

Site Map: A site map or sketch is attached at the end of this plan.

Site History/Description (see project work plan for detailed description): The study will focus on dioxins/furans present in surface soils in the vicinity of the former Rayonier Mill. Dioxins/furans were formed during combustion of salt-laden hog fuel. Boiler testing confirmed the presence of dioxins/furans and these chemicals have been found in soils on the Rayonier property. No sampling will be performed on the former Rayonier Mill property.

Is the site currently in operation? Yes No

Locations of Contaminants/Wastes: Dioxins/furans have been identified on the former Rayonier Mill property. There is a potential for these chemicals to be present in off-site soils surrounding the mill due to historic emissions from mill operations.

No hazardous wastes are expected to be generated during the sampling effort.

Types and Characteristics of Contaminants/Wastes:

- Liquid Solid Sludge Gas/Vapor
 Flammable/Ignitable Volatile Corrosive Acutely Toxic
 Explosive Reactive Carcinogenic Radioactive
 Medical/Pathogenic Other: _____

2. ORGANIZATION AND RESPONSIBILITIES

Team personnel shall have on-site responsibilities as described in E & E's standard operating procedure (SOP) for Site Entry Procedures (GENTECH 2.2). The project team, including qualified alternates, is identified below.

Name	Site Role/Responsibility
Alma Feldpausch (E & E)	Project Manager
Bruce Carpenter, George Iftner (Herrera)	Team Leader
Alma Feldpausch (E & E)	Site Safety Officer
Courtney Funk (E & E)	Sample Collection
Christine McCollum (E & E)	Sample Collection / Archaeology oversight
Sandra Pentney (E & E)	Archaeology Principal Investigator

3. TRAINING

Prior to work, team personnel shall have received training as indicated below. As applicable, personnel shall have read the project work plan, sampling and analysis plan, and/or quality assurance project plan prior to project work.

Training	Required
40-Hour OSHA HAZWOPER Initial Training and Annual Refresher (29 CFR 1910.120)	X
Annual First Aid/CPR	X
Hazard Communication (29 CFR 1910.1200)	X
40-Hour Radiation Protection Procedures and Investigative Methods	
8-Hour General Radiation Health and Safety	
Radiation Refresher	
DOT and Biannual Refresher	
Other: _____	

4. MEDICAL SURVEILLANCE

4.1 MEDICAL SURVEILLANCE PROGRAM

Field personnel shall actively participate in E & E's and Herrera's medical surveillance program as described in the CHSPs and shall have received, within the past year, an appropriate physical examination and health rating, as required.

Health and safety record (HSR) form will be maintained on site by each team member for the duration of his or her work. Field staff should inform the site safety officer (SSO) of any allergies, medical conditions, or similar situations that are relevant to the safe conduct of the work to which this SHASP applies.

Is there a concern for radiation at the site? Yes No

If no, go to 5.1.

4.2 RADIATION EXPOSURE

4.2.1 External Dosimetry

Thermoluminescent Dosimeter (TLD) Badges: NA

Pocket Dosimeters: NA

Other: _____

4.2.2 Internal Dosimetry

Whole body count Bioassay Other

Requirements: NA

4.2.3 Radiation Dose

Dose Limits: NA

Site-Specific Dose Limits: NA

ALARA Policy: NA

5. SITE CONTROL

5.1 SITE LAYOUT AND WORK ZONES

Site Work Zones: Refer to the map or site sketch, attached at the end of this plan, for designated work zones. Samples will be collected in residential yards and open space areas throughout the city. No exclusion zones or contaminant reduction areas will

be established.

Site Access Requirements and Special Considerations: Permission obtained from property owners prior to sampling effort;
otherwise, no special requirements or considerations.

Illumination Requirements: None; field activities will be conducted during daylight hours only.

Sanitary Facilities (e.g., toilet, shower, potable water): None.

On-Site Communications: Cell phones.

Other Site-Control Requirements: None.

5.2 SAFE WORK PRACTICES

Daily Safety Meeting: A daily safety meeting will be conducted for all field personnel and documented on the Daily Safety Meeting Record form or in the field logbook. The information and data obtained from applicable site characterization and analysis will be addressed in the safety meetings and also used to update this SHASP, as necessary.

Work Limitations: Work shall be limited to a maximum of 12 hours per day. If 12 consecutive days are worked, at least one day off shall be provided before work is resumed. Work will be conducted in daylight hours unless prior approval is obtained and the illumination requirements in 29 CFR 1910.120(m) are satisfied.

Weather Limitations: Work shall not be conducted during electrical storms. Work conducted in other inclement weather (e.g., heavy rain) will be approved by project management and the regional safety coordinator or designee.

Other Work Limitations: _____

Buddy System: Field work will be conducted in pairs of team members according to the buddy system.

Line of Sight: Each field team member shall remain in the line of sight as much as possible and within verbal communication of at least one other team member.

Eating, Drinking, and Smoking: Eating, drinking, smoking, and the use of tobacco products shall be prohibited during sample collection, at a minimum, and shall only be permitted in designated areas.

Contamination Avoidance: Field personnel shall avoid unnecessary contamination of personnel, equipment, and materials to the extent practicable.

Sample Handling: Protective gloves of a type designated in Section 7 will be worn when samples are handled for labeling, packaging, transportation, and other purposes.

Other Safe Work Practices: Driving will be required between most sampling locations – pay particular attention to safe driving practices.

6. HAZARD EVALUATION AND CONTROL

6.1 PHYSICAL HAZARD EVALUATION AND CONTROL

Potential physical hazards and their applicable control measures are described in the following table for each task.

Hazard	Task Number	Hazard Control Measures
Biological (flora, fauna, etc.)	1, 2, 3	<ul style="list-style-type: none"> ■ Potential hazard: poisonous plants and insects, animals (dogs) ■ Establish site-specific procedures for working around identified hazards. ■ Other:
Cold Stress		<ul style="list-style-type: none"> ■ Provide warm break area and adequate breaks. ■ Provide warm noncaffeinated beverages. ■ Promote cold stress awareness. ■ See <i>Cold Stress Prevention and Treatment</i> (attached at the end of this plan if cold stress is a potential hazard).
Compressed Gas Cylinders		<ul style="list-style-type: none"> ■ Use caution when moving or storing cylinders. ■ A cylinder is a projectile hazard if it is damaged or its neck is broken. ■ Store cylinders upright and secure them by chains or other means. ■ Other:
Confined Space		<ul style="list-style-type: none"> ■ Ensure compliance with 29 CFR 1910.146. ■ See SOP for Confined Space Entry. Additional documentation is required. ■ Other:
Drilling		<ul style="list-style-type: none"> ■ See SOP for Health and Safety on Drilling Rig Operations. Additional documentation may be required. ■ Landfill caps will not be penetrated without prior discussions with corporate health and safety staff. ■ Other:
Drums and Containers		<ul style="list-style-type: none"> ■ Ensure compliance with 29 CFR 1910.120(j). ■ Consider unlabeled drums or containers to contain hazardous substances and handle accordingly until the contents are identified. ■ Inspect drums or containers and assure integrity prior to handling. ■ Move drums or containers only as necessary; use caution and warn nearby personnel of potential hazards.
		<ul style="list-style-type: none"> ■ Open, sample, and/or move drums or containers in accordance with established procedures; use approved drum/container-handling equipment. ■ Other:
Electrical		<ul style="list-style-type: none"> ■ Ensure compliance with 29 CFR 1910 Subparts J and S. ■ Locate and mark energized lines. ■ De-energize lines as necessary.

Hazard	Task Number	Hazard Control Measures
		<ul style="list-style-type: none"> ■ Ground all electrical circuits. ■ Guard or isolate temporary wiring to prevent accidental contact. ■ Evaluate potential areas of high moisture or standing water and define special electrical needs. ■ Other:
Excavation and Trenching		<ul style="list-style-type: none"> ■ Ensure that excavations comply with and personnel are informed of the requirements of 29 CFR 1926 Subpart P. ■ Ensure that any required sloping or shoring systems are approved as per 29 CFR 1926 Subpart P. ■ Identify special personal protective equipment (PPE) (see Section 7) and monitoring (see Section 8) needs if personnel are required to enter approved excavated areas or trenches. ■ Maintain line of sight between equipment operators and personnel in excavations/trenches. Such personnel are prohibited from working in close proximity to operating machinery. ■ Suspend or shut down operations at signs of cave in, excessive water, defective shoring, changing weather, or unacceptable monitoring results. ■ Other:
Fire and Explosion		<ul style="list-style-type: none"> ■ Inform personnel of the location(s) of potential fire/explosion hazards. ■ Establish site-specific procedures for working around flammables. ■ Ensure that appropriate fire suppression equipment and systems are available and in good working order. ■ Define requirements for intrinsically safe equipment. ■ Identify special monitoring needs (see Section 8). ■ Remove ignition sources from flammable atmospheres. ■ Coordinate with local fire-fighting groups regarding potential fire/explosion situations. ■ Establish contingency plans and review daily with team members. ■ Other:
Heat Stress	1, 2, 3	<ul style="list-style-type: none"> ■ Provide cool break area and adequate breaks. ■ Provide cool noncaffeinated beverages. ■ Promote heat stress awareness. ■ Use active cooling devices (e.g., cooling vests) where specified. ■ See <i>Heat Stress Prevention and Treatment</i> (attached at the end of this plan if heat stress is a potential hazard).
Heavy Equipment Operation		<ul style="list-style-type: none"> ■ Define equipment routes, traffic patterns, and site-specific safety measures. ■ Ensure that operators are properly trained and equipment has been properly inspected and maintained. Verify back-up alarms. ■ Ensure that ground spotters are assigned and informed of proper hand signals and communication protocols. ■ Identify special PPE (Section 7) and monitoring (Section 8) needs. ■ Ensure that field personnel do not work in close proximity to operating equipment.

Hazard	Task Number	Hazard Control Measures
		<ul style="list-style-type: none"> ■ Ensure that lifting capacities, load limits, etc., are not exceeded. ■ Other:
Heights (Scaffolding, Ladders, etc.)		<ul style="list-style-type: none"> ■ Ensure compliance with applicable subparts of 29 CFR 1910. ■ Identify special PPE needs (e.g., lanyards, safety nets, etc.) ■ Other:
Noise		<ul style="list-style-type: none"> ■ Establish noise level standards for on-site equipment/operations. ■ Inform personnel of hearing protection requirements (Section 7). ■ Define site-specific requirements for noise monitoring (Section 8). ■ Other:
Overhead Obstructions		<ul style="list-style-type: none"> ■ Wear hard hat. ■ Other:
Power Tools		<ul style="list-style-type: none"> ■ Ensure compliance with 29 CFR 1910 Subpart P. ■ Other:
Sunburn	1, 2, 3	<ul style="list-style-type: none"> ■ Apply sunscreen. ■ Wear hats/caps and long sleeves. ■ Other:
Utility Lines	2	<ul style="list-style-type: none"> ■ Identify/locate existing utilities prior to work. ■ Ensure that overhead utility lines are at least 25 feet away from project activities. ■ Contact utilities to confirm locations, as necessary. ■ Other: Check with private residences on location of buried sprinkler systems prior to work.
Weather Extremes		<ul style="list-style-type: none"> ■ Potential hazards: ■ Establish site-specific contingencies for severe weather situations. ■ Provide for frequent weather broadcasts. ■ Weatherize safety gear, as necessary (e.g., ensure eye wash units cannot freeze, etc.). ■ Identify special PPE (Section 7) needs. ■ Discontinue work during severe weather. ■ Other:
Other:		<ul style="list-style-type: none"> ■

6.2 CHEMICAL HAZARD EVALUATION AND CONTROL

6.2.1 Chemical Hazard Evaluation

Potential chemical hazards are described by task number in Table 6-1. Hazard Evaluation Sheets for major known contaminants are attached at the end of this plan.

6.2.2 Chemical Hazard Control

An appropriate combination of engineering/administrative controls, work practices, and PPE shall be used to reduce and maintain employee exposures to a level at or below published exposure levels (see Section 6.2.1).

Applicable Engineering/Administrative Control Measures: Minimize generation of dust when disturbing soil.

PPE: See Section 7.

6.3 RADIOLOGICAL HAZARD EVALUATION AND CONTROL

6.3.1 Radiological Hazard Evaluation

Potential radiological hazards are described below by task number. Hazard Evaluation Sheets for major known contaminants are attached at the end of this plan.

Task Number	Radionuclide	DAC ($\mu\text{Ci/ml}$)	Route(s) of Exposure	Major Radiation(s)	Energy(s) (MeV)	Half-Life

6.3.2 Radiological Hazard Control

Engineering/administrative controls and work practices shall be instituted to reduce and maintain employee exposures to a level at or below the permissible exposure/dose limits (see sections 4.2.3 and 6.3.1). Whenever engineering/administrative controls and work practices are not feasible or effective, any reasonable combination of engineering/administrative controls, work practices, and PPE shall be used to reduce and maintain employee exposures to a level at or below permissible exposure/dose limits.

Applicable Engineering/Administrative Control Measures: _____

PPE: NA

**TABLE 6-1
CHEMICAL HAZARD EVALUATION**

Task Number	Compound	Exposure Limits (TWA)			Dermal Hazard (Y/N)	Route(s) of Exposure	Acute Symptoms	Odor Threshold/Description	FID/PID	
		PEL	REL	TLV					Relative Response	Ioniz. Poten. (eV)
2	TCDD (dioxin) *		Ca (lowest feasible concentration)		Yes	Inhalation, ingestion, skin and/or eye contact	Irritated eyes; dermatitis, chloracne; porhyria; gastrointestinal disturbance; possible reproductive, teratogenic effects	NA Colorless to white, crystalline solid		NA

Note: Use an asterisk (*) to indicate known or suspected carcinogens.

7. LEVEL OF PROTECTION AND PERSONAL PROTECTIVE EQUIPMENT

7.1 LEVEL OF PROTECTION

The following levels of protection (LOPs) have been selected for each work task based on an evaluation of the potential or known hazards, the routes of potential hazard, and the performance specifications of the PPE. On-site monitoring results and other information obtained from on-site activities will be used to modify these LOPs and the PPE, as necessary, to ensure sufficient personnel protection. The authorized LOP and PPE shall only be changed with the approval of the regional safety coordinator or designee. Level A is not included below because Level A activities, which are performed infrequently, will require special planning and addenda to this SHASP.

Task Number	B	C	D	Modifications Allowed
1			X	
2			X	
3			X	

Note: Use "X" for initial levels of protection. Use "(X)" to indicate levels of protection that may be used as site conditions warrant.

7.2 PERSONAL PROTECTIVE EQUIPMENT

The PPE selected for each task is indicated below. E & E's and Herrera's PPE programs comply with 29 CFR 1910.120 and 29 CFR 1910 Subpart I and are described in detail in each company's CHSP. Refer to 29 CFR 1910 for the minimum PPE required for each LOP.

PPE	Task Number/LOP					
	1	2	3			
Full-face APR						
PAPR						
Cartridges:						
P100						
GMC-P100						
GME-P100						
Other: Organic vapors						
Positive-pressure, full-face SCBA						
Spare air tanks (Grade D air)						
Positive-pressure, full-face, supplied-air system						
Cascade system (Grade D air)						

PPE	Task Number/LOP					
	1	2	3			
Manifold system						
5-Minute escape mask						
Safety glasses		D	D			
Monogoggles						
Coveralls/clothing		D	D			
Protective clothing:						
Tyvek						
Saranex						
Other:						
Splash apron						
Inner gloves:						
Cotton						
Nitrile						
Latex						
Other:						
Outer gloves:						
Viton						
Rubber						
Neoprene						
Nitrile		D	D			
Other:						
Work gloves						
Safety boots (as per ANSI Z41)		D	D			
Neoprene safety boots (as per ANSI Z41)						
Boot covers (type: _____)						
Hearing protection (type: _____)						
Hard hat						
Face shield						
Other:						
Other:						

8. HEALTH AND SAFETY MONITORING

Health and safety monitoring will be conducted to ensure proper selection of engineering/administrative controls, work practices, and/or PPE so that employees are not exposed to hazardous substances at levels that exceed permissible exposure/dose limits or published exposure levels. Health and safety monitoring will be conducted using the instruments, frequency, and action levels described in Table 8-1. Health and safety monitoring instruments shall have been appropriately calibrated and/or performance-checked prior to use.

9. DECONTAMINATION PROCEDURES

All equipment, materials, and personnel will be evaluated for contamination upon leaving each sampling location. Equipment and materials will be decontaminated and/or disposed and personnel will be decontaminated, as necessary. Decontamination will be performed in the contamination reduction area or any designated area such that the exposure of uncontaminated employees, equipment, and materials will be minimized. Specific procedures are described below.

Equipment/Material Decontamination Procedures (specified by work plan): Pre-cleaned disposable sampling materials will be used and disposed of as solid waste. For sampling supplies used to initiate the excavation that need to be decontaminated, such as shovels or other digging equipment, the following decon protocol will be used: 1) Scrub and wash sampling equipment with Liqinox®/water solution; 2) rinse with tap water; 3) rinse with distilled water three times; and 4) air dry.

Ventilation: All decontamination procedures will be conducted outdoors.

Personnel Decontamination Procedures: Gloves will be changed in between sampling events. Field personnel will wash as soon as practicable.

PPE Requirements for Personnel Performing Decontamination: NA

Personnel Decontamination in General: Following equipment decontamination, all field personnel will wash their hands and face with soap and potable water. Personnel should shower at the end of each work shift.

Disposition of Disposable PPE: Disposable PPE must be rendered unusable and disposed of as indicated in the work plan.

Disposition of Decontamination Wastes (e.g., dry wastes, decontamination fluids, etc.): Dry wastes (e.g., used disposable gloves, paper towels, etc.) will be placed in a large black plastic garbage bag and disposed of in a dumpster. Soap and water decontamination wastes will be poured onto the ground or into the sanitary sewer at the end of each day.

TABLE 8-1					
HEALTH AND SAFETY MONITORING					
Instrument	Task Number	Contaminant(s)	Monitoring Location	Monitoring Frequency	Action Levels
Personal Sampling Pump Type: _____ Sampling medium: _____					Action Level Action
Micro R Meter					<2 mR/hr: Continue work in accordance with action levels for other instruments. 2 to 5 mR/hr: In conjunction with a radiation safety specialist, continue work and perform stay-time calculations to ensure compliance with dose limits and ALARA policy. >5 mR/hr: Evacuate area to reassess work plan and evaluate options to maintain personnel exposures ALARA and within dose limits.
Ion Chamber					See micro R meter action levels above.
Radiation Survey Ratemeter/Scaler with External Detector(s)					Detector Action Level Action
Noise Dosimeter (Sound Level Meter)					≤85 decibels as measured using the A-weighted network (dBA): Use hearing protection if exposure will be sustained throughout work shift. >85 dBA: Use hearing protection. >120 dBA: Leave area and consult with safety personnel.
Other:					
Other:					

No health and safety monitoring will be performed for this project. Field staff shall minimize exposure by limiting the generation of dust when disturbing soil.

10. EMERGENCY RESPONSE

This section contains additional information pertaining to on-site emergency response and does not duplicate pertinent emergency response information contained in earlier sections of this plan (e.g., site layout, monitoring equipment, etc.). Emergency response procedures will be rehearsed regularly, as applicable, during project activities.

10.1 EMERGENCY RESPONSIBILITIES

All Personnel: All personnel shall be alert to the possibility of an on-site emergency; report potential or actual emergency situations to the team leader and SSO; notify appropriate emergency resources, as necessary.

Team Leader: The team leader will determine the emergency actions to be performed by field personnel and will direct these actions. The team leader also will ensure that applicable incidents are reported to appropriate corporate and client project personnel and government agencies.

SSO: The SSO will recommend health/safety and protective measures appropriate to the emergency.

Other: _____

10.2 LOCAL AND SITE RESOURCES (including phone numbers)

Ambulance: Olympic Ambulance Service, 1011 East Front Street, Port Angeles, WA 98362; phone number 360/452-2366

Hospital: Olympic Medical Center, 939 Caroline Street, Port Angeles, WA 98362; phone number 360/417-7000

Directions to Hospital (map attached at the end of this plan shows hospital location): From the east (via US-101): 1) proceed west on US-101 to N. Race Street; 2) turn RIGHT onto N. Race Street and proceed north to Caroline Street; 3) turn RIGHT onto Caroline Street and proceed to hospital. From the west (via US-101): 1) proceed east on US-101 to N. Race Street; 2) turn LEFT onto N. Race Street and proceed north to Caroline Street; 3) turn RIGHT onto Caroline Street and proceed to the hospital.

Poison Control: Washington Poison Control Center, phone number 800/222-1222

Police Department: Port Angeles Police, phone number 360/452-4545

Fire Department: Port Angeles Fire, phone number 360/417-4655

Client Contact: Connie Groven (Ecology, SW Regional Office), phone number 360/407-6254

Site Contact: NA

On-Site Telephone Number: NA

Cellular Telephone Number: Fill in when in the field.

Radios Available: No

Other: _____

10.3 E & E EMERGENCY CONTACTS

E & E Emergency Operations Center (24 Hours): 716/684-8060

Corporate Health and Safety Director, Dr. Paul Jonmaire: 716/684-8060 (office)
716/655-1260 (home)

Assistant Corporate Safety Director, Tom Siener, CIH: 716/684-8060 (office)
716/662-4740 (home)
716/597-5868 (Cell)

Seattle Office Contact: Bill Richards 206/624-9537 (office)

Regional Health & Safety Coordinator, Joe Grojean, CIH 206/624-9537 (office)
206/419-3420 (cell)
206/232-0145 (home)

10.4 OTHER EMERGENCY RESPONSE PROCEDURES

On-Site Evacuation Signal/Alarm (must be audible and perceptible above ambient noise and light levels): NA

On-Site Assembly Area: NA

Emergency Egress Route to Get Off Site: NA

Off-Site Assembly Area: NA

Preferred Means of Reporting Emergencies: NA

Site Security and Control: NA

Spill Control Procedures: If decontamination fluids are spilled, absorbent materials will be used to soak up the fluid, the affected materials will be bagged and placed in a well-ventilated, secure area until further disposal direction is obtained.

Emergency Decontamination Procedures: NA

PPE: Gloves will be used when handling spilled material.

Emergency Equipment: Absorbent materials, plastic bags.

Incident Reporting Procedures: No spill reporting is expected to be required based on the small volume of chemicals used.

Traffic accidents shall be reported to 911.

ATTACHMENTS

EQUIPMENT/SUPPLIES CHECKLIST

	No.
INSTRUMENTATION	
FID	
Thermal desorber	
O ₂ /explosimeter w/cal. Kit	
Photovac tip	
PID (probe: _____ eV)	
Magnetometer	
Pipe locator	
Weather station	
Draeger tube kit (tubes: _____)	
Brunton compass	
Real-time cyanide monitor	
Real-time H ₂ S monitor	
Heat stress monitor	
Noise equipment	
Personal sampling pumps and supplies	
MiniRam dust monitor	
Mercury monitor	
Spare batteries (type: _____)	
RADIATION EQUIPMENT/SUPPLIES	
Documentation forms	
Portable ratemeter	
Scaler/ratemeter	
1" NaI gamma probe	
2" NaI gamma probe	
ZnS alpha probe	
GM pancake probe	
Tungsten-shielded GM probe	
Micro R meter	
Ion chamber	
Alert monitor	
Pocket dosimeter	
Dosimeter charger	
Radiation warning tape	

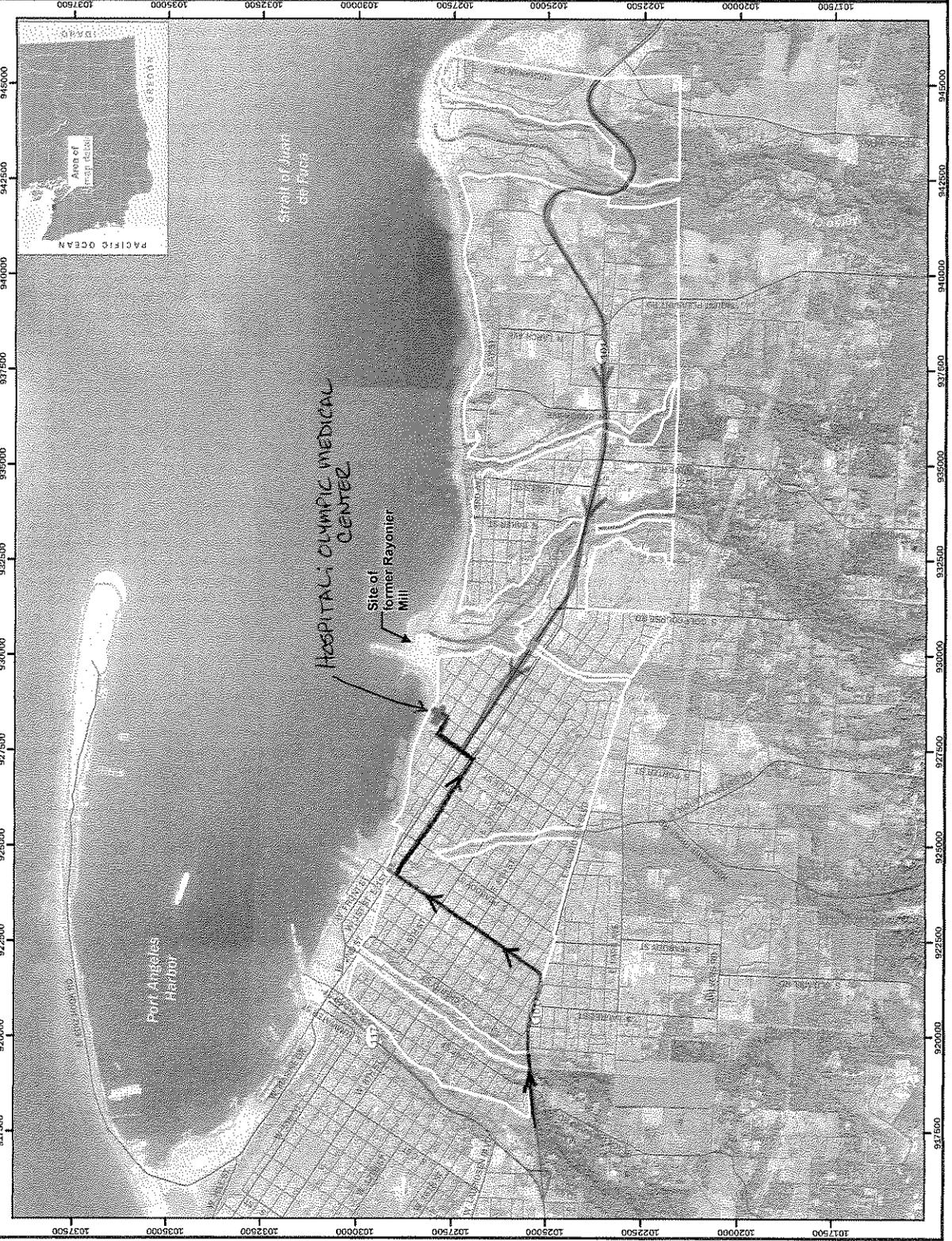
	No.
Radiation decon supplies	
Spare batteries (type: _____)	
SAMPLING EQUIPMENT	
8-oz. jars	X
Half-gallon bottles	
VOA bottles	
String	
Hand bailers	
Thieving rods with bulbs	
Spoons	X
Knives	
Filter paper	
Bottle labels	X
Bowls	X
MISCELLANEOUS	
Pump	
Surveyor's tape	
100' Fiberglass tape	X
300' Nylon rope	
Nylon string	
Surveying flags	X
Camera	X
Film	
Bung wrench	
Soil auger	
Pick	
Shovel	X
Catalytic heater	
Propane gas	
Banner tape	
Surveying meter stick	
Chaining pins and ring	
Logbooks (____ large, ____ small)	X

Figure 4-1.
Study Area Boundary
 Rayonier Mill Off-Property Soil
 Dioxin Study
 Port Angeles, WA

Legend

- Study Area Boundary
- River
- Highway
- Arterial or Collector Road
- Road
- Port Angeles City Limits
- Park

0 1,250 2,500 5,000 Feet
 Coordinates: Washington State Plane South
 NAD 83 (feet)
 Aerial: USDA, 2006



HOSPITAL ROUTE FROM THE EAST (—) AND FROM THE WEST (—) VIA US-101.

ecology and environment, inc.
SITE-SPECIFIC HEALTH AND SAFETY PLAN ACCEPTANCE

Project: Rayonier Off-Property Soil Dioxin Study

Project No. 0002330.WD18

Project Location: Port Angeles, WA

Project Manager: Alma Feldpausch

The undersigned acknowledge that they have read and understood and agree to abide by the health and safety plan.

Name (Printed)	Name (Signature)	Date
Alma Feldpausch		
Courtney Funk		
Christine McCollum		
Sandra Pentney		

ecology and environment, inc.
EXISTING SITE SAFETY PLAN ADDENDUM FORM

Site Name: Rayonier Off-Property Soil Dioxin Study

Date of original SSP: _____

Date of amendment: _____

Date of proposed new work: _____

Added activities and hazard evaluations: _____

Added monitoring activities: _____

Level of protection: ___A ___B ___C ___D

Reason for up/downgrading: _____

Decon: _____

Team Members

Responsibility

Equipment

Quantity

Equipment

Quantity

The Terms of the Original SSP Shall Be in Effect Except as Noted on this Form.

Prepared by: _____

Date: _____

Reviewed by: _____

Date: _____

INSTRUCTIONS: This form to be approved through normal channels and attached to original plan.

DAILY SAFETY MEETING RECORD

Initial Project Safety Checklist

1. Emergency information reviewed? ___ and made familiar to all team members?
2. Route to nearest hospital driven? ___ and its location known to all team members?
3. Health and safety plan readily available and its location known to all team members?
4. E & E START Drilling SOP on site? NA and available for team member review? NA

Attendees

Meeting shall be attended by all personnel who will be working within the exclusion area. Daily informal update meetings will be held prior to work and when site tasks and/or conditions change.

Name (Printed)	Name (Signature)	Date	Representing (Company/Agency)
			Ecology and Environment, Inc.
			Ecology and Environment, Inc.
Meeting Conducted By:			

ecology and environment, inc.	
DAILY SAFETY MEETING RECORD	
GENERAL INFORMATION	
Project:	
Project No:	TDD/PAN No.:
Project Location:	
Date:	Time:
Weather:	
Specific Location:	
Planned Activities:	
SAFETY TOPICS PRESENTED	
Chemical Hazards Update:	
Physical Hazards Update:	
Radiation Hazards Update:	
Review of Previous Monitoring Results:	
Protective Clothing/Equipment Modifications:	
Special Equipment/Procedures:	
Drilling Safety Issues (including testing the operation of drill rig emergency stop switches):	
Emergency Procedures:	
Additional Topics/Observations:	
Team Members' Comments/Suggestions:	

ECOLOGY AND ENVIRONMENT, INC.
EMPLOYEE EXPOSURE/INJURY INCIDENT REPORT

A separate report is to be completed for each incident and submitted immediately to the corporate H & S director (Paul Jonmaire) for consideration.

CC: Regional H & S Coordinator, START Leader/Office Manager
Human Resources (Worker's Compensation)

Today's Date

1. Employee's Name:
2. Employee Number:
3. Sex: M F
4. Age:
5. Marital Status:
6. Office:
7. Project/Overhead Number:
8. Program: START: Commercial:
9. Job Title:
10. Job Task at Time of Incident:
11. Incident
 - a. Type – Possible Exposure: Exposure: Physical Injury:
 - b. Location:
 - c. Date of incident: Time of incident:
 - d. Date of reporting incident:
 - e. Date of initial diagnosis:
 - f. Person to whom incident was reported:
 - g. Weather condition during incident - Temperature: Wind speed and direction:
Clear: Humidity:
Cloud cover: Precipitation:
 - h. Name of materials potentially encountered:
Chemical (liquid, solid, gas, vapor, fume, mist):
Radiological:
Physical Injury:
Other:
 - i. Was client notified of the incident: Yes No
If yes, attach documentation.
12. Nature of the Exposure/Injury
 - a. State the nature of the exposure/injury in detail and list the parts of the body affected.
 - b. Did you receive medical care? Yes No
 - c. If so, when?
 - d. Where? On Site Off Site
 - e. By whom? Name of paramedic, EMT, etc.
Name of physician:
Other:
 - f. If "off-site," name facility (hospital, clinic, etc.):
 - g. Length of stay at the facility:
 - h. Was your office contacted? Yes No When?

- i. Was E & E headquarters notified? Yes No
- j. Has the employee returned to work? Yes No
- k. List the names of other persons effected during this incident:
- l. List the names of persons who witnessed the exposure/injury incident (E & E, EPA, state, or other employees):

13. Possible cause of the exposure/injury

- a. What was the name and title of the field team leader or immediate supervisor at the site of the incident?
- b. Was the operation being conducted under an established safety plan? Yes No
If yes, attach a copy. If no, explain:
- c. Was protective equipment and clothing used by the employee? Yes No
If yes, list items:
- d. Describe protective equipment and clothing:
- e. Did any limitations in safety equipment or protective clothing contribute to or affect exposure:
 Yes No If so, explain:
- f. What was the employee doing when the exposure/injury occurred? (Describe briefly as "site reconnaissance," "site categorization," sampling," etc.)
- g. Where exactly on site or off site did the exposure/injury occur:
- h. How did the exposure/injury occur? (Describe fully what factors led up to and/or contributed to the incident:

14. Attache any other relevant data and information regarding this incident.

15. Name of Person(s) initiating this report, Job Title, Phone Number:

Employee Signature

Date

Field Team Leader or Supervisor's Signature

Date

Additional Comments: