SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

NOTICE OF CONSTRUCTION APPLICATION FOR STOCK PREPARATION PROJECT

Property:
McKinley Paper Company – Washington Mill
1902 Marine Drive
Port Angeles, Washington

Prepared for:
McKinley Paper Company
1815 Marine Drive
Port Angeles, Washington

Report Date:
February 8, 2019 – Revised May 7, 2019

Notice of Construction Application for Stock Preparation Project

Prepared for:

Mr. Terry Nishimoto
McKinley Paper Company
1815 Marine Drive
Port Angeles, Washington 98363

McKinley Paper Company – Washington Mill
1902 Marine Drive
Port Angeles, Washington 98363

Project No.: 1345-001

Prepared by:

SoundEarth Strategies, Inc.
2811 Fairview Ave East, Suite 2000
Seattle, Washington 98102

February 8, 2019 – Revised May 7, 2019

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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
ADT/day	air dried tons per day
AERMOD	EPA's preferred regulatory atmospheric dispersion modeling system
ASIL	acceptable source impact level
BACT	Best Available Control Technology
CFR	Code of Federal Regulations
Ecology	Washington State Department of Ecology
EPA	US Environmental Protection Agency
LAER	Lowest Achievable Emission Rate
McKinley	McKinley Paper Company
the Mill	the McKinley Paper Company—Washington Mill
NCASI	National Council for Air and Stream Improvement
NOC	Notice of Construction
NSR	New Source Review
OCC	old corrugated container
ODTP/day	oven dried tons of pulp per day
ONP	old newsprint
ORCAA	Olympic Regional Clean Air Agency
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SQER	small quantity emission rate
TAP	toxic air pollutant
tBACT	Best Available Control Technology for Toxics
VOC	volatile organic compound

WAC	Washington Administrative Code

1.0 PROJECT DESCRIPTION

1.1 BACKGROUND

McKinley Paper Company (McKinley) owns and operates an integrated pulp and paper mill in Port Angeles, Washington. Bio Pappel S.A.B. de C.V. is the parent company of McKinley. The McKinley Paper Company—Washington Mill (the Mill) was purchased by McKinley from Nippon Paper Industries in April 2017. McKinley proposes to upgrade the Mill's existing pulping and stock preparation system to allow the use of alternative recovered fiber sources and allow the Mill to produce more competitive paper grades. The new-targeted grades of paper planned for production are bag and liner grades. McKinley does not plan to produce printing and writing paper after the Stock Preparation Project is completed.

The existing Mill is an integrated pulp and paper mill with two paper machine lines and three modes for producing pulp: a mechanical refiner pulp mill, a post-consumer recycled fiber pulp mill (deinking plant), and old corrugated container (OCC) tub pulper. Additionally, the Mill currently has the capability to purchase virgin pulp to blend with the other pulp feedstocks. McKinley operates under Air Operating Permit No. 11AOP816 issued by the Olympic Regional Clean Air Agency (ORCAA) on November 12, 2014 (first revision issued March 31, 2017). The most recent modification to the Mill's pulping system was the installation of the OCC tub pulper system in 2015 under Notice of Construction (NOC) permit No. 15NOC1115 issued by the ORCAA.

2.0 REGULATORY APPLICABILITY

The Mill is located in Clallam County, Washington, which is an attainment area for all pollutants. The Mill is located within 10 kilometers from a Class I Area, the Olympic National Park (Washington Administrative Code [WAC] 173-400-118). The following sections evaluate the regulatory requirements for the proposed project.

2.1 PSD APPLICABILITY

A Prevention of Significant Deterioration (PSD) Application for Applicability Determination was submitted to the Washington State Department of Ecology (Ecology) in November 2018. Because the project emission increases for all New Source Review (NSR) pollutants are below the Significant Emission Rate (SER) and the modeled maximum 24-hour impacts due to project NSR emissions increases are below the "significant" threshold of 1 microgram per cubic meter (1 µg/m3), the Stock Preparation project is not subject to PSD review for any pollutant. Ecology concurred with this determination and their PSD Applicability Review Determination letter dated January 14, 2019, is provided in Appendix A.

2.2 NOTICE OF CONSTRUCTION

The ORCAA is the air permitting authority for the proposed project. ORCAA's air permitting requirements are codified in Regulation 6. They incorporate the federal program requirements listed in 40 Code of Federal Regulations (CFR) Parts 50-99 and state requirements listed in Chapter 173-400 of the Washington Administrative Code (WAC). They establish permit review procedures for all facilities that can emit pollutants to the ambient air.

Under ORCAA Rule 6.1, an owner or operator that proposes to modify a source must file a NOC application prior to beginning the construction; this process is also called NSR. NSR of a modification

is limited to the emission units proposed to be modified and the air contaminants whose emissions would increase as a result of the modification. A modification is defined under the Federal Clean Air Act (Section 7411, Title 42, United States Code) as any physical change or change in operation of a source which increases the amount of any air pollutant emitted by that source or that results in the emissions of any air contaminant not previously emitted.

In addition, if the project is located within 10 kilometers of the boundary of a Class I area, PSD review is required if the impact of any regulated pollutant is equal to or greater than 1 µg/m3 (24-hour average). The project is located within 10 kilometers of Olympic National Park, a Class I area.

Figure 1 shows the project location. NOC application forms are presented in Appendix B.

Chapter 173-460 WAC requires an acceptable source impact level (ASIL) analysis for each toxic air pollutant (TAP) emitted by modified emission units with an emission increase greater than the de minimis emission levels. The ASIL analysis requirement can be satisfied for any TAP using either dispersion modeling or the small quantity emission rate (SQER).

2.3 APPLICABLE REQUIREMENTS

The stock preparation project is subject to WAC 173-460—Controls for New Sources of TAPs as discussed above. The stock preparation project would also be subject to the applicable general requirements in Chapter 173-400 of the WAC and in ORCAA Regulations 7 and 8.

3.0 EXISTING STOCK PREPARATION AND PAPER MACHINE SYSTEM DESCRIPTION

Stock Preparation System. The existing stock preparation system includes an old newsprint (ONP) drum pulper, an OCC tub pulper, a deinking plant, two mechanical refiner lines, and a purchased kraft re-pulper. The maximum pulping capacity with the existing system configuration is 700 oven dried tons of pulp per day (ODTP/day). There are two existing paper machines that have an existing capacity of 550–800 air dried tons per day (ADT/day) depending on the paper grade being manufactured to meet market demand.

Kraft Re-pulper. This project does not directly affect the current kraft re-pulper. Virgin kraft pulp may still be purchased from other pulp producers and re-pulped on-site, depending on market conditions.

Refiners. The existing two refiner lines will be decommissioned as part of the proposed project. The existing refiners are used to make virgin groundwood pulp. The design capacity of the existing refiners is 500 ODTP/day.

OCC Tub Pulper. This unit was installed in 2015 and will be decommissioned as part of the proposed project. The design capacity of the existing OCC tub pulper is 230 ODTP/day.

Paper Machines. The existing system is optimized for the production of lightweight directory grade paper, for which there is a declining market. The existing paper machine capacity when manufacturing lightweight printing and writing grades is 550 ADT/day. The existing paper machine capacity when manufacturing heavyweight liner and bag grades is 800 ADT/day.

Cogen Boiler. There is no anticipated increase in the steam demand and subsequent emissions from the #11 Cogen Boiler (EU8) or the Cogen Cooling Tower (EU9) associated with this project. A separate

reliability improvement project is planned for the cogeneration boiler, which will not increase boiler capacity or emissions. Therefore, these two emission units are not included in this application.

3.1 PROPOSED STOCK PREPARATION SYSTEM AND PAPER MACHINE CHANGES

Proposed Stock Preparation System. In order to accommodate a wider variety of recycled feedstocks and meet changes in customer demand, the following changes are proposed to the existing pulping system:

- The existing ONP pulper will be replaced by a new single-line continuous pulper with 900 tons per day ODTP capacity.
- The existing stock contaminant removal system will be modified by the addition of new cleaning and screening equipment.
- The upgrades to the pulping reject removal, dewatering, and compaction system.
- The addition of a dissolved air flotation system for effluent clarification.
- The OCC tub pulper and refiners will be decommissioned.

All proposed equipment upgrades will occur inside the existing recycling plant building. The existing ONP drum pulper equipment is located in the existing recycle plant building and will be removed. The proposed continuous pulper will be housed in the existing recycle plant building. No new vents to the exterior will be constructed as a result of the proposed project. The location of the recycle plant building is shown in Figure 2.

Proposed Paper Machine Changes. In order to produce new paper grades, some supporting changes to the two paper machines are planned. The new targeted grades of paper planned for production are bag and liner grades. If the paper machines in their existing configuration are used to produce heavyweight liner and bag grades, the capacity of the existing paper machines would be 800 ADT/day. A gross production capacity of 840 ADT/day of liner and bag grades (representing a 40 ADT/day increase) are anticipated after the following proposed changes are made to the paper machines:

- Improvements to the Paper Machine 1 (formerly PM3) to improve formation and increase paper strength.
- Replacement of four dryer cans to the drying section of Paper Machine 1 (formerly PM3) that are currently not in service.

All proposed equipment changes will occur inside the existing paper machine building. No new vents to the exterior will be constructed as a result of the proposed project. Paper Machine 2 will not undergo any improvements as part of this project. The location of the paper machine building is shown in Figure 2.

3.2 PULPER EMISSIONS

Emissions from the new stock preparation system will be similar in characteristics to the Mill's current stock preparation system emissions. The proposed stock preparation system will have fewer additives, such as surfactants (soap-like additives for ink removal) because the mixed paper fiber that will be pulped is much cleaner than ONP. In addition no bleaching of the pulp will be needed, since

the mixed paper fiber begins with less ink in it than the ONP fiber and because a brown paper is the desired final product.

TAP emissions were estimated using emission factors for a similar process as presented in the National Council for Air and Stream Improvement (NCASI) Technical Bulletin No. 973 (NCASI 2010). Emissions were calculated for all TAP compounds that had valid emissions factors as indicated in the NCASI document.

Emissions from the existing ONP pulper were calculated using emission factors for a similar process as presented in NCASI Technical Bulletin No. 737 (NCASI 1997) and No. 973 (NCASI 2010). Differences were calculated for TAP compounds emitted by both the ONP pulper and the proposed mixed paper Pulper.

The results of the emission change from using the proposed mixed paper pulper instead of the existing ONP pulper are shown in Table 1. The emission rates are presented in pounds per hour and tons per year. Detailed emission calculations are provided in Appendix C.

3.3 PAPER MACHINE EMISSIONS

Emissions of TAPS from the paper machines were calculated using emission factors for a similar process as presented in the NCASI Technical Bulletin No. 737 (NCASI 1997) and No. 973 (NCASI 2010). Differences were calculated for all TAP compounds emitted by the operation of the proposed paper machines. The results of the estimated emission changes from project at the paper machines are shown in Table 1. The emission rates are presented in pounds per hour and tons per year. Detailed emission calculations are provided in Appendix C.

3.4 AGGREGATE PROJECT EMISSIONS

The results of the estimated emission changes for the overall project are shown in Table 1 for TAP emission. The emission rates are presented in pounds per hour and tons per year. Detailed emission calculations are provided in Appendix C.

4.0 REGULATORY APPLICABILITY

4.1 TAP EMISSIONS

As shown in Table 1, all TAPs regulated by Chapter 173-460 were below de minimis levels except formaldehyde and methylene chloride. Formaldehyde and methylene chloride emissions also exceeded the SQER. For emissions that exceed the SQER, air dispersion modeling is required to demonstrate that ambient impacts would be below the ASIL.

AERMOD, the atmospheric dispersion modeling system recommended by US Environmental Protection Agency (EPA), was used to model the concentrations of formaldehyde and methylene chloride beyond the property boundary and to compare the concentrations to the ASIL. Details of the air dispersion modeling are included in Appendix D. Air dispersion modeling results indicated that TAP concentrations for methylene chloride were below the ASIL, and concentrations for formaldehyde were above the ASIL. As the predicted model concentrations for formaldehyde were greater than the ASIL, a Tier II review for ambient impacts is required. As provided in WAC 173-460-090, McKinley is preparing a request that Ecology perform a Tier II review of the project's emissions.

4.2 WASHINGTON STATE ENVIRONMENTAL POLICY ACT COMPLIANCE

A Washington State Environmental Policy Act (SEPA) Checklist for the Stock Preparation Project is included as Appendix E of this NOC application. This NOC application and SEPA checklist are submitted concurrently to ORCAA and the City of Port Angeles, as the City of Port Angeles will act as the lead agency under the SEPA.

5.0 BACT REVIEW PROCESS

The BACT review process serves to identify the maximum degree of reduction for each regulated air pollutant which can be achieved through the "application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant" (Washington Administrative Code chapter 173-400-030).

ORCAA Rule 6.1.4(a)(2) requires all new air pollution sources to install Best Available Control Technology (BACT). ORCAA Rule 1.4 defines BACT as follows:

> Best Available Control Technology (BACT) means an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under chapter 70.94 RCW [Revised Code of Washington] emitted from or which results from any new or modified stationary source which the permitting agency, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such stationary source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of such air pollutant. In no event shall application of the best available control technology result in emissions of any pollutants which would exceed the emissions allowed by any applicable standard under 40 CFR Part 60, Part 61, and Part 62. Emissions from any stationary source utilizing clean fuels, or any other means, to comply with this paragraph shall not be allowed to increase above levels that would have been required under definition of BACT in the Federal Clean Air Act as it existed prior to enactment of the Clean Air Act Amendments of 1990.

In addition to BACT, sources must employ Best Available Control Technology for Toxics (tBACT) for all toxic air pollutants (TAPs) for which the increase in emissions will exceed de minimis values.

The EPA and Ecology[1] have provided guidance on determining BACT using a "top-down" methodology. This "top-down" methodology consists of five steps and is presented in Table 1-1. BACT is determined on a case-by-case basis for each project.

Table 1-1
The Five Steps of the "Top-Down" Methodology for Determining BACT

Step	Analysis
1	Identify each emission unit and all available control options.
2	Evaluate the technical feasibility of each control option. Eliminate control options that are not technically feasible based on physical, chemical, and engineering principals.

[1] Washington State Department of Ecology. 2013. *Best Available Control Technology*. Publication ECY 070-410D. February.

3	Rank remaining control options on the basis of control efficiency, the top ranked control alternative is the first selection of BACT.
4	Eliminate control options based on evaluation of economic, environmental, and energy Impacts.
5	Select the most effective option as BACT.

For the proposed project, the facility emission units required to employ BACT and tBACT are the pulping operations and the paper machines. The RACT/BACT/LAER (RBLC) Clearinghouse database was reviewed for this proposed project using Process Type 30.400 (Non-Kraft Pulp & Paper Process) as well as Process Subtype 30.402 (Non-Kraft Paper Machines) and Process Subtype 30.490 (Other Non-Kraft Operations).

5.1 PULPER BACT

For the pulper, volatile organic compounds (VOCs) were the only criteria pollutant that would increase at this source as a result of the proposed project and the only pollutant subject to a BACT analysis.

Based on review of the EPA RBLC Clearinghouse, review of agency BACT guidance, and use of previous permitting experience at similar units, there were no thermal oxidizers, scrubbers, or other control devices available on the market that were demonstrated to be effective in the control of VOCs from mechanical pulpers. McKinley is not aware of any non-kraft mills that have implemented add-on VOC controls for pulping sources. In addition, the use of pulping additives is not anticipated after the installation of the new pulper. We propose that no additional add-on controls are reasonably available for the control of VOC emissions from the proposed project pulping operations and that BACT is satisfied with no emission limits.

The above discussion serves to satisfy BACT. Controlling VOCs for BACT would also control volatile TAPs and hazardous air pollutants, and would be considered tBACT.

5.2 PAPER MACHINE BACT

For the paper machines, VOCs are the criteria pollutant that would increase at this source as a result of the proposed project. Controlling paper machine VOCs to meet BACT would also control volatile TAP and hazardous air pollutants, and would be considered tBACT.

Trace quantities of particulate emissions may be present in the paper machine vents. Measurement data to quantify these emissions is scarce. Although the amounts of particulate matter emissions are low, they are considered in the BACT analysis for completeness.

The volumes of air exhausted from paper machines are large and the concentration of emissions is small. This exhaust is mostly air and water vapor that is exhausted at an extremely high airflow rate. The low concentration of emissions coupled with the high airflow rate makes treating paper machine emissions technically difficult with controls.

As noted by the National Council of Air and Stream Improvement (NCASI), "Control techniques for paper machine vents are considered impractical because of the high moisture content and high volume of the vent exhaust gasses and the minimal pollutant concentrations."[2]

[2] NCASI. *Handbook of Environmental Regulations and Control, Volume 1: Pulp and Paper Manufacturing*. Revised 2013.

Based on review of the EPA RBLC Clearinghouse, review of agency BACT guidance, and use of previous permitting experience at similar units, there were no add-on thermal oxidizers, scrubbers, or other control devices available on the market that were demonstrated to be effective in the control of VOCs or particulate matter from non-kraft paper machines.

However, the review of the EPA RBLC Clearinghouse yielded two examples of facilities where pollution prevention measures were deemed to be effective control technology for VOC emissions from non-kraft paper machines. These results are shown in Table 1-2.

Table 1-2
EPA RBLC Search Results for VOC Control at Non-Kraft Paper Machines

RBLC ID	Facility	Control Method
WI-0267	Green Bay Packaging, Inc.	Pollution Prevention: Use of low VOC-containing additives, cleaners, and biocides.
WI-0266	Green Bay Packaging, Inc	Pollution Prevention: Use of low VOC coating and additives.

Since add-on control technologies are not feasible, McKinley proposes that BACT for VOC control and particulate matter at the paper machines be established as a work practice standard based on operating in a manner consistent with good air pollution control practices, and that BACT is satisfied with no emission limits. BACT work practices at the paper machines will include minimizing the usage rates and the VOC contents of additive paper machine chemicals, where feasible.

The above discussion serves to satisfy BACT for the paper machines. Controlling VOCs for BACT would also control volatile TAPs and hazardous air pollutants, and would be considered tBACT.

6.0 CONCLUSIONS

The methodology described above predicted that TAPs increases attributable to the proposed project are sufficiently low for most of the chemicals to protect human health and safety from potential carcinogenic and/or other toxic effects. However, since emissions of one TAP chemical, formaldehyde, exceeded the ASIL, additional Tier II review by Ecology is required.

McKinley requests that ORCAA coordinate with Ecology to perform a Tier II analysis for the project's emissions of methylene chloride and formaldehyde. McKinley will be preparing a Health Impact Assessment Protocol for submission to Ecology.

7.0 REFERENCES

National Council of Air and Stream Improvement (NCASI). 1997. Updated 2009. *Volatile Organic Compound Emissions from Non-Chemical Pulp and Paper Mill Sources Part II – Recycled Paperboard, Technical Bulletin No. 737. July 1997, Updated 2009.*

_____. 2010. *Compilation of 'Air Toxic' and Total Hydrocarbon Emissions Data for Pulp and Paper Mill Sources – A Second Update, Technical Bulletin No. 973.*

_____. 2013. NCASI Handbook of Environmental Regulations and Control - Volume 1: Pulp and Paper Manufacturing.

Olympic Regional Clean Air Agency (ORCAA). 2019. Best Available Control Technology guidance reviewed online at the ORCAA website <http://www.orcaa.org>.

_____. 2019. Application for Notice of Construction. ORCAA Form 1, revision August 14, 2018. Obtained from ORCAA website <http://www.orcaa.org>.

Ramboll Corporation. 2018. *Stock Preparation Project PSD Applicability Class I Area Air Dispersion Modeling Report*. November 2, 2018.

SoundEarth Strategies, Inc. (SoundEarth). 2018. *Prevention of Significant Deterioration Applicability Analysis for Stock Preparation Project.* November 5, 2018.

US Environmental Protection Agency (EPA). 1997. Pulp, Paper and Paperboard Industry – Background Information for Promulgated Air Emission Standards. EPA-453-R-93-050b. October 1997.

_____. 2011. Section 112(d)(6)Technology Review for Pulping and Papermaking Process EPA Contract No. EP-D-11-084. November 16, 2011.

_____. 2018. *Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program.* Memorandum from EPA Administrator E. Scott Pruitt to Regional Administrators. March 8, 2018.

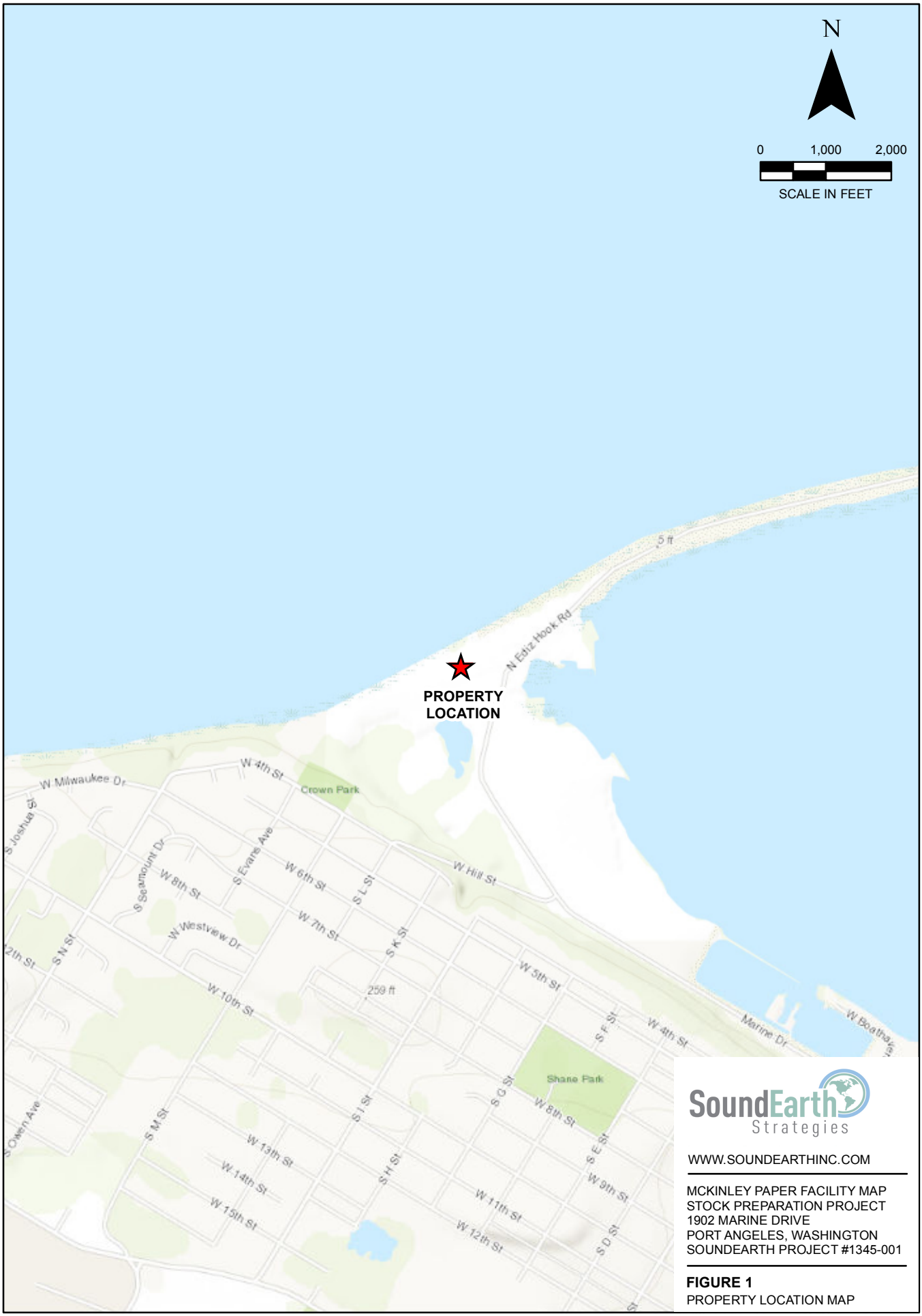
Washington State Department of Ecology. 2010. *Guidance Document: First, Second, and Third Tier Review of Toxic Air Pollution Sources*. Publication Number: 08-02-025. September 2010, Revised August 2015.

_____. 2013. Application for a Prevention of Significant Deterioration Applicability Determination. Form ECY 070-413.

_____. 2017. *Guidance on Washington State's Prevention of Significant Deterioration Permitting Program*. Publication No. 17-02-014.

_____. 2019. *Letter to McKinley Paper Company—Washington Mill Stock Preparation Project Prevention of Significant Deterioration (PSD) Applicability Determination. January 14, 2019.*

FIGURES



SoundEarth Strategies

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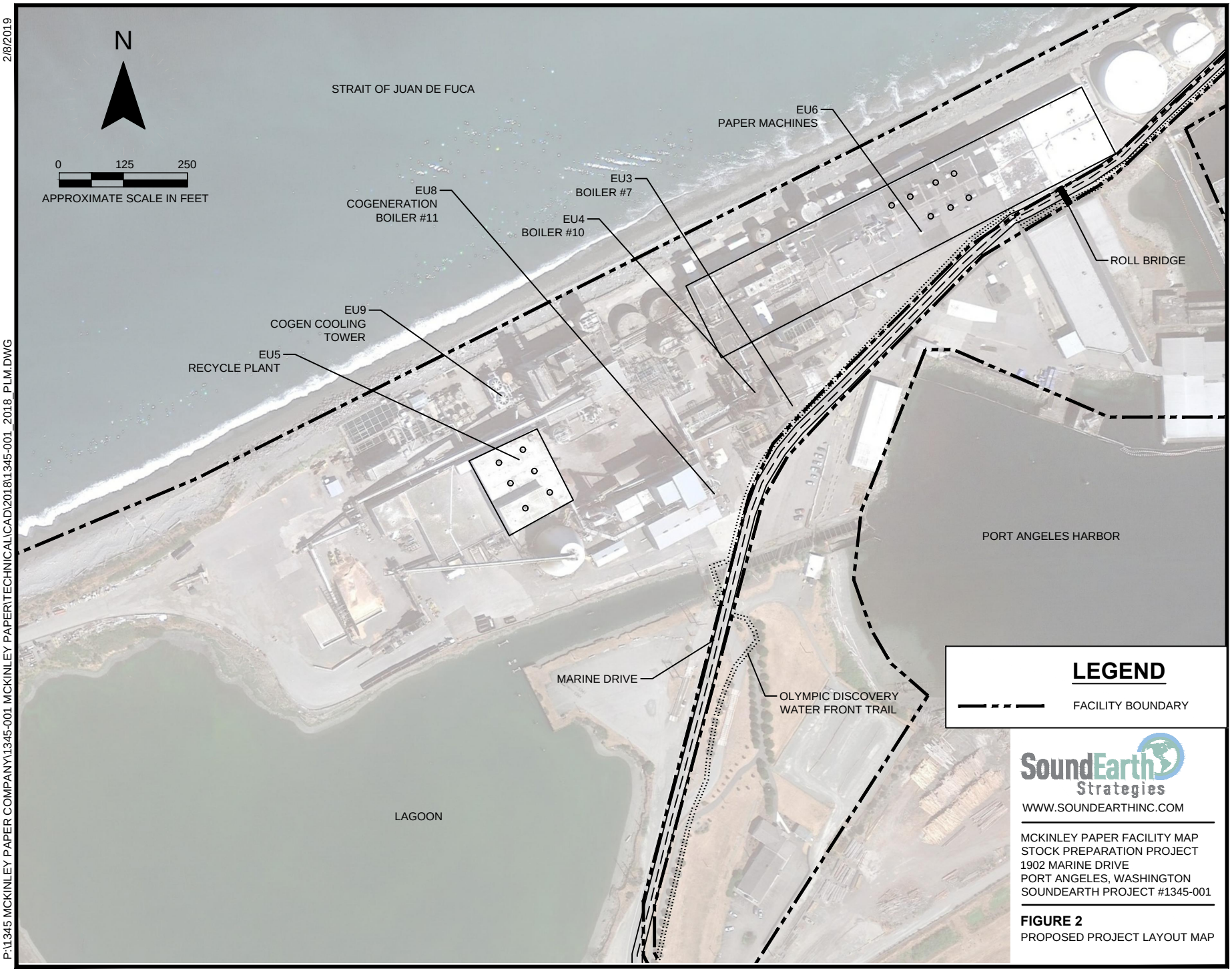
MCKINLEY PAPER FACILITY MAP
STOCK PREPARATION PROJECT
1902 MARINE DRIVE
PORT ANGELES, WASHINGTON
SOUNDEARTH PROJECT #1345-001

FIGURE 1
PROPERTY LOCATION MAP


N
0
125
250
APPROXIMATE SCALE IN FEET
STRAIT OF JUAN DE FUCA
EU6
PAPER MACHINES
EU3
BOILER #7
EU8
COGENERATION
BOILER #11
EU4
BOILER #10
ROLL BRIDGE
EU9
COGEN COOLING
TOWER
EU5
RECYCLE PLANT
PORT ANGELES HARBOR
MARINE DRIVE
OLYMPIC DISCOVERY
WATER FRONT TRAIL
LAGOON
LEGEND
FACILITY BOUNDARY
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MCKINLEY PAPER FACILITY MAP
STOCK PREPARATION PROJECT
1902 MARINE DRIVE
PORT ANGELES, WASHINGTON
SOUNDEARTH PROJECT #1345-001
FIGURE 2
PROPOSED PROJECT LAYOUT MAP
2/8/2019
P:\1345 MCKINLEY PAPER COMPANY\1345-001 MCKINLEY PAPER\TECHNICAL\CAD\2018\1345-001_2018_PLM.DWG

TABLE

SoundEarth Strategies

Table 1 - REVISED 5/7/19
Aggregate Stock Preparation Project Emission Changes
McKinley Paper Company - Washington Mill
1902 Marine Drive
Port Angeles, Washington

Pollutant	CAS #	Averaging Period	Lb/Averaging Period (net)			De Minimus (lb/Averaging Period)	Below De Minimus Threshold?	SQER (lb/Averaging Period)	Below SQER?	ASIL ($\mu g/m^3$)	Model Results ($\mu g/m^3$)	Below ASIL?
			Stock Prep & Pulping	Paper Machine	Total							
Acetaldehyde	75-07-0	year	-4013.21	-316.75	-4329.97	3.55	Yes	71	--	0.37	--	--
Carbon Disulfide	75-15-0	24-hr	1.21	0.75	1.96	5.26	Yes	105	--	800	--	--
Chloroform	67-66-3	year	-1460.89	1058.02	-402.87	0.417	Yes	8.35	--	0.0435	--	--
Cumene	98-82-8	24-hr	-1.66	1.18	-0.49	2.63	Yes	52.6	--	400	--	--
Formaldehyde	50-00-0	year	-1052.35	1870.13	818	1.6	No	32	No	0.167	0.64	No
Methanol	67-56-1	24-hr	-60.84	-61.38	-122.22	26.3	Yes	526	--	4000	--	--
Methyl Ethyl Ketone	78-93-3	24-hr	-6.28	-1.49	-7.77	32.9	Yes	657	--	5000	--	--
Methylene Chloride	75-09-2	year	-7.37	743.17	735.80	9.59	No	192	No	1	0.28	Yes
Naphthalene	91-20-3	year	-2352.15	-301.52	-2653.67	0.282	Yes	5.64	--	0.0294	--	--
Phenol	108-95-2	24-hr	-16.60	-22.72	-39.32	1.31	Yes	26.3	--	200	--	--
Toluene	108-88-3	24-hr	0.07	13.18	13.25	32.9	Yes	657	--	5000	--	--

NOTES:

-- = no data

$\mu g/m^3$ = micrograms per cubic meter

ASIL = Acceptable Source Level Impact

CAS # = Chemical Abstracts Service Number

hr = hour

lb = pound(s)

NCASI = National Council for Air and Stream Improvement

OCC = old corrugated container

SQER = Small Quantity Emission Rate

Emission factors for existing paper machine emissions obtained from Table 10.1 (recycle furnish) and Table 10.2 (virgin mechanical furnish) from NCASI TB 973 (2010).

Emission factors for existing stock preparation system obtained from Table 10.6 (refiners) and Table 10.5 (deinking operations) from NCASI TB 973 (2010).

Emission factors for proposed stock preparation emissions obtained from Table 10.4 (OCC and Recycled Paperboard Stock Preparation) from NCASI TB 973 (2010).

Emission factors for proposed paper machine emissions from Table 10.1 (100% secondary fiber furnish) from NCASI TB 973 (2010); liner and medium paper (Mill KK) from NCASI TB 737 (2009 Update).

APPENDIX A

ECOLOGY PSD APPLICABILITY DETERMINATION LETTER

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

January 14, 2019

Mr. Isaac Rosas, General Manager
McKinley Paper Company – Washington Mill
1815 Marine Drive
Port Angeles, WA 98363

Re: McKinley Paper Company – Washington Mill Stock Preparation Project Prevention of Significant Deterioration (PSD) Applicability Determination

Dear Isaac Rosas:

The Washington Department of Ecology's Air Quality Program reviewed McKinley Paper Company's Stock Preparation Project PSD applicability determination request. The request was received by Ecology on November 9, 2018. Your PSD applicability determination fee of $500.00 was processed by Ecology on November 13, 2018. The number of hours required to make this determination exceeded the base number of hours included in the base fee. McKinley Paper Company has paid for the extra time Ecology used to prepare this determination.

We find this project does not trigger PSD review. Our determination is enclosed.

If you have any questions, please contact Marc Crooks at (360) 407-6803 or marc.crooks@ecy.wa.gov.

Sincerely,

Chris Hanlon-Meyer
Science and Engineering Section Manager
Air Quality Program

Enclosures

cc: Marc Crooks, Ecology
Tonnie Cummings, National Park Service
Amy Dougherty, McKinley Paper Company
Mark Goodin, ORCAA
Kelly McFadden, EPA Region 10

APPENDIX B
ORCAA NOC FORMS

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 1- NOTICE OF CONSTRUCTION

TO CONSTRUCT - INSTALL - ESTABLISH OR MODIFY AN AIR CONTAMINANT SOURCE

Form 1 Instructions:

1. Please complete all the fields below. **This NOC application is considered incomplete until signed.**
2. If the application contains any confidential business information, please complete a Request of Confidentiality of Records (www.orcaa.org/permit-programs/permit-registration-assistance/permit-registration-forms/)
3. Duty to Correction Application: An applicant has the duty to supplement or correct an application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit supplementary factors or corrected information.

Business Name: McKinley Paper Company - Washington Mill	**For ORCAA use only**
Mailing Address: 1815 Marine Drive, Port Angeles, WA 98363	File No: County No: Source No: Application No:
Physical Address of Project or New Source: 1902 Marine Drive, Port Angeles, WA 98363	Date Received:
Billing Address: 1815 Marine Drive, Port Angeles, WA 98363	

Are you currently registered with ORCAA? Yes ☒ No ☐

Project/ Equipment to be installed/established: Stock Preparation Project

Previous business name (if any): Nippon Paper Industries USA

This project must meet the requirements of the State Environmental Policy Act (SEPA) and applicable building and fire codes before ORCAA can issue final approval. Complete one of the following options.

☐ SEPA was satisfied by City of Port Angeles (government agency) on ___/___/___ (date). A copy of the final determination and the environmental checklist is enclosed.

☒ SEPA is pending approval by City of Port Angeles (government agency). A copy of the environmental checklist is enclosed and a copy of the final determination will be forwarded to ORCAA when issued.

☐ ORCAA is the only government agency requiring a permit. A completed environmental checklist or documentation that the project or new source is/will be in compliance with local building and fire codes is enclosed.

☐ This project is exempt from SEPA per _____ (WAC citation).

Name of Owner of Business: Bio Pappel S.A.B. de C.V.		Agency Use Only
Title: Mr. Isaac Rosas, General Manager		
Email: irosas@biopappel.com	Phone: (505) 972-2146	
Application Contact Name (if different than owner): Terry Nishimoto		
Title: Environmental Manager		
Email: terry.nishimoto@biopappel.com	Phone: (360) 565-7045	
Facility Operations Contact Name (if different than owner): Terry Nishimoto		
Title: Environmental Manager		
Email: terry.nishimoto@biopappel.com	Phone: (360) 565-7045	
I hereby certify that the information contained in this application is, to the best of my knowledge, complete and correct.		
Signature of Owner:	**Date** Feb/8/2019	

Revised 8/14/18

APPENDIX C
EMISSION CALCULATIONS

Table A1
Existing Stock Preparation Emissions
McKinley Paper Company—Washington Mill
1902 Marine Drive
Port Angeles, Washington

Pollutant	CAS #	Averaging Period	Total lb/Averaging Period
Acetaldehyde	75-07-0	year	4436.6
Carbon Disulfide	75-15-0	24-hr	0.4
Chloroform	67-66-3	year	1479.1
Cumene	98-82-8	24-hr	2.0
Formaldehyde	50-00-0	year	1102.7
Methanol	67-56-1	24-hr	63.4
Methyl Ethyl Ketone	78-93-3	24-hr	6.4
Methylene Chloride	75-09-2	year	68.7
Naphthalene	91-20-3	year	2487.2
Phenol	108-95-2	24-hr	16.9
Toluene	108-88-3	24-hr	4.6

NOTES:

CAS # = Chemical Abstracts Service Number

hr = hour

lb = pound(s)

Table A1
Existing Stock Preparation Emissions
McKinley Paper Company—Washington Mill
1902 Marine Drive
Port Angeles, Washington

Table A1-1. Existing Emissions from ONP Pulper 2012-2013 - REVISED 05/07/19

30599 ADTP 27539 ODTP ONP Pulper annual production

Pollutant	CAS #	Averaging Period	EF lb/ADTP[(1)]	lb pollutant per year	lb pollutant per 24-hr	lb pollutant by year	SQER lb/averaging period	% SQER	De Minimus (lb/averaging period)	% of De Minimus
Acetaldehyde	75-07-0	year	1.09E-02	3.34E+02	--	3.34E+02	71	469.8	3.55	9395.2
Carbon Disulfide	75-15-0	24-hr	9.20E-06	2.82E-01	7.71E-04	--	105	0.0	5.26	0.0
Chloroform	67-66-3	year	3.69E-02	1.13E+03	--	1.13E+03	8.35	13522.1	0.417	270767.1
Cumene	98-82-8	24-hr	2.14E-06	6.55E-02	1.79E-04	--	52.6	0.0	2.63	0.0
Formaldehyde	50-00-0	year	1.09E-04	3.34E+00	--	3.34E+00	32	10.4	1.6	208.5
Methanol	67-56-1	24-hr	2.63E-02	8.05E+02	2.20E+00	--	526	0.4	26.3	8.4
Methyl Ethyl Ketone	78-93-3	24-hr	1.83E-03	5.60E+01	1.53E-01	--	657	0.0	32.9	0.5
Methylene Chloride	75-09-2	year	3.36E-04	1.03E+01	--	1.03E+01	192	5.4	9.59	107.2
Naphthalene	91-20-3	year	4.34E-04	1.33E+01	--	1.33E+01	5.64	235.5	0.282	4709.2
Phenol	108-95-2	24-hr	2.89E-03	8.84E+01	2.42E-01	--	26.3	0.9	1.31	18.5
Toluene	108-88-3	24-hr	1.82E-02	5.57E+02	1.53E+00	--	657	0.2	32.9	4.6

NOTES:

10% moisture correction from ODTP to ADTP.

[(1)]Emission factors from Table 10.5 (deinking operations) from NCASI TB 973 (2010).

-- = no data

% = percent

ADTP = air-dried tons of pulp

CAS # = Chemical Abstracts Service Number

lb = pound(s)

EF = Emission Factor

hr = hour

NCASI = National Council for Air and Stream Improvement

ODTP = oven dried tons of pulp per day

ONP = old newsprint

SQER = Small Quantity Emission Rate

Table A1
Existing Stock Preparation Emissions
McKinley Paper Company—Washington Mill
1902 Marine Drive
Port Angeles, Washington

Table A1-2. Existing Emissions from Refiners 2012-2013

120679 ADTP refiner production

Pollutant	CAS #	Averaging Period	EF lb/ADTP[(1)]	lb pollutant per year	lb pollutant per 24-hr	lb pollutant by year	SQER lb/averaging period	% SQER	De Minimus (lb/averaging period)	% of De Minimus
Acetaldehyde	75-07-0	year	3.40E-02	4.10E+03	--	4.10E+03	71	5779.0	3.55	115579.9
Carbon Disulfide	75-15-0	24-hr	1.12E-03	1.35E+02	3.70E-01	--	105	0.4	5.26	7.0
Chloroform	67-66-3	year	2.90E-03	3.50E+02	--	3.50E+02	8.35	4191.2	0.417	83925.4
Cumene	98-82-8	24-hr	5.91E-03	7.13E+02	1.95E+00	--	52.6	3.7	2.63	74.3
Formaldehyde	50-00-0	year	9.11E-03	1.10E+03	--	1.10E+03	32	3435.6	1.6	68711.6
Methanol	67-56-1	24-hr	1.85E-01	2.23E+04	6.12E+01	--	526	11.6	26.3	232.6
Methyl Ethyl Ketone	78-93-3	24-hr	1.89E-02	2.28E+03	6.25E+00	--	657	1.0	32.9	19.0
Methylene Chloride	75-09-2	year	4.84E-04	5.84E+01	--	5.84E+01	192	30.4	9.59	609.1
Naphthalene[(2)]	91-20-3	year	2.05E-02	2.47E+03	--	2.47E+03	5.64	43863.8	0.282	877276.4
Phenol	108-95-2	24-hr	5.04E-02	6.08E+03	1.67E+01	--	26.3	63.4	1.31	1272.0
Toluene	108-88-3	24-hr	9.24E-03	1.12E+03	3.05E+00	--	657	0.5	32.9	9.3

NOTE:

[(1)]Emission factors from Table 10.6 (refiners) from NCASI TB 973 (2010).

[(2)]Naphthalene was non-detect; 1/2 the maximum detection limit of 4.1E-02 was used.

% = percent

ADTP = air-dried tons of pulp

CAS # = Chemical Abstracts Service Number

EF = Emission Factor

hr = hour

lb = pound(s)

NCASI = National Council for Air and Stream Improvement

SQER = Small Quantity Emission Rate

Table A2
Projected Emissions from Stock Preparation
with Mixed Paper Pulper
McKinley Paper Company—Washington Mill
1902 Marine Drive
Port Angeles, Washington

Table A2. Projected Emissions from Stock Prep with Mixed Paper Pulper - REVISED 5/7/2019 365000 ADTP projected annual pulper production

Pollutant	CAS #	Averaging Period	EF lb/ADTP[1]	lb Pollutant Per Year	lb Pollutant Per 24-hr	lb Pollutant by Year	SQER lb/Averaging Period	% SQER	De Minimus (lb/Averaging Period)	% of De Minimus
Acetaldehyde	75-07-0	year	1.16E-03	4.23E+02	--	423.4	71	596.3	3.55	1192676%
Carbon Disulfide	75-15-0	24-hr	1.58E-03	5.77E+02	1.6	--	105	1.5	5.26	3004%
Chloroform	67-66-3	year	4.98E-05	1.82E+01	--	18.2	8.35	217.7	0.417	435899%
Cumene[2]	98-82-8	24-hr	2.90E-04	1.06E+02	0.3	--	52.6	--	2.63	1103%
Formaldehyde	50-00-0	year	1.38E-04	5.04E+01	--	50.4	32	157.4	1.6	314813%
Methanol	67-56-1	24-hr	2.53E-03	9.23E+02	2.5	--	526	0.5	26.3	962%
Methyl Ethyl Ketone[2]	78-93-3	24-hr	1.25E-04	4.56E+01	0.1	--	657	--	32.9	38%
Methylene Chloride	75-09-2	year	1.68E-04	6.13E+01	--	61.3	192	31.9	9.59	63942%
Naphthalene[2]	91-20-3	year	3.70E-04	1.35E+02	--	135.1	5.64	--	0.282	4789007%
Phenol	108-95-2	24-hr	3.07E-04	1.12E+02	0.3	--	26.3	1.2	1.31	2344%
Toluene	108-88-3	24-hr	1.60E-03	5.84E+02	1.6	--	657	0.2	32.9	486%

NOTES:

ODTP to ADTP (10% moisture correction).

[1]Emission factors from Table 10.4 (OCC and Recycled Paperboard Stock Preparation) from NCASI TB 973 (2010).

[2]Cumene, MEK, and Naphthalene were non-detects so 1/2 of their respective maximum detection limits were used.

-- = no data

ADTP = air-dried tons of pulp

CAS # = Chemical Abstracts Service Number

EF = Emission Factor

lb = pound(s)

MEK = Methyl Ethyl Ketone

NCASI = National Council for Air and Stream Improvement

OCC = old corrugated container

ODTP = oven-dried tons of pulp

SQER = Small Quantity Emission Rate

Table A3
Existing Paper Machine Emissions
McKinley Paper Company—Washington Mill
1902 Marine Drive
Port Angeles, Washington

Pollutant	CAS #	Averaging Period	Total lb/Averaging Period
Acetaldehyde	75-07-0	year	4026.6
Carbon Disulfide	75-15-0	24-hr	0.9
Chloroform	67-66-3	year	174.5
Cumene	98-82-8	24-hr	0.7
Formaldehyde	50-00-0	year	1318.5
Methanol	67-56-1	24-hr	79.6
Methyl Ethyl Ketone	78-93-3	24-hr	1.5
Methylene Chloride	75-09-2	year	204.2
Naphthalene	91-20-3	year	304.9
Phenol	108-95-2	24-hr	25.4
Toluene	108-88-3	24-hr	1.7

NOTES:

CAS # = Chemical Abstracts Service Number

hr = hour

lb = pound(s)

Table A3
Existing Paper Machine Emissions
McKinley Paper Company—Washington Mill
1902 Marine Drive
Port Angeles, Washington

Table A3-1. Existing Emissions from Paper Machines 2012-2013 - REVISED 05/07/19

29807 ADTFP total production paper machines average was 156,879 ADTFP; 19% of total production was from recycle furnish.

Pollutant	CAS #	Averaging Period	EF lb/ADTFP[(1)]	lb pollutant per year	lb pollutant per 24-hr	lb pollutant by year	SQER lb/averaging period	% SQER	De Minimus (lb/averaging period)	% of De Minimus
Acetaldehyde	75-07-0	year	1.70E-02	5.07E+02	--	5.07E+02	71	713.7	3.55	14273.8
Carbon Disulfide	75-15-0	24-hr	6.44E-03	1.92E+02	5.26E-01	--	105	0.5	5.26	10.0
Chloroform	67-66-3	year	3.22E-03	9.60E+01	--	9.60E+01	8.35	1149.4	0.417	23016.4
Cumene	98-82-8	24-hr	2.21E-03	6.59E+01	1.80E-01	--	52.6	0.3	2.63	6.9
Formaldehyde	50-00-0	year	4.63E-03	1.38E+02	--	1.38E+02	32	431.3	1.6	8625.4
Methanol (fourdrinier)	67-56-1	24-hr	7.96E-02	2.37E+03	6.50E+00	--	526	1.2	26.3	24.7
Methyl Ethyl Ketone	78-93-3	24-hr	4.09E-05	1.22E+00	3.34E-03	--	657	0.0	32.9	0.0
Methylene Chloride	75-09-2	year	2.81E-03	8.38E+01	--	8.38E+01	192	43.6	9.59	873.4
Naphthalene	91-20-3	year	2.81E-03	8.38E+01	--	8.38E+01	5.64	1485.1	0.282	29701.3
Phenol	108-95-2	24-hr	9.92E-03	2.96E+02	8.10E-01	--	26.3	3.1	1.31	61.8
Toluene	108-88-3	24-hr	1.25E-02	3.73E+02	1.02E+00	--	657	0.2	32.9	3.1

NOTES

[(1)]Emission factors from Table 10.1 NCASI TB 973 (2010) for recycle furnish was used.

% = percent
-- = no data
ADTFP = air-dried tons finished paper
CAS # = Chemical Abstracts Service Number
EF = Emission Factor
hr = hour
lb = pound(s)
NCASI = National Council for Air and Stream Improvement
SQER = Small Quantity Emission Rate

Table A3
Existing Paper Machine Emissions
McKinley Paper Company—Washington Mill
1902 Marine Drive
Port Angeles, Washington

Table A3-2. Existing Emissions from Paper Machines 2012-2013 - REVISED 05/07/19

127072 ADTFP 2012-2013 total production paper machines average was 156,879 ADTFP; 81% of production was from mechanical furnish.

Pollutant	CAS #	Averaging Period	EF lb/ADTFP[(1)]	lb pollutant per year	lb pollutant per 24-hr	lb pollutant by year	SQER lb/averaging period	% SQER	De Minimus (lb/averaging period)	% of De Minimus
Acetaldehyde	75-07-0	year	2.77E-02	3.52E+03	--	3.52E+03	71	4957.6	3.55	99151.9
Carbon Disulfide	75-15-0	24-hr	9.86E-04	1.25E+02	3.43E-01	--	105	0.3	5.26	6.5
Chloroform	67-66-3	year	6.18E-04	7.85E+01	--	7.85E+01	8.35	940.5	0.417	18832.3
Cumene	98-82-8	24-hr	1.43E-03	1.82E+02	4.98E-01	--	52.6	0.9	2.63	18.9
Formaldehyde	50-00-0	year	9.29E-03	1.18E+03	--	1.18E+03	32	3689.1	1.6	73781.2
Methanol	67-56-1	24-hr	2.10E-01	2.67E+04	7.31E+01	--	526	13.9	26.3	278.0
Methyl Ethyl Ketone	78-93-3	24-hr	4.35E-03	5.53E+02	1.51E+00	--	657	0.2	32.9	4.6
Methylene Chloride	75-09-2	year	9.48E-04	1.20E+02	--	1.20E+02	192	62.7	9.59	1256.1
Naphthalene	91-20-3	year	1.74E-03	2.21E+02	--	2.21E+02	5.64	3920.3	0.282	78406.1
Phenol	108-95-2	24-hr	7.06E-02	8.97E+03	2.46E+01	--	26.3	93.5	1.31	1876.2
Toluene	108-88-3	24-hr	1.89E-03	2.40E+02	6.58E-01	--	657	0.1	32.9	2.0

NOTES

[(1)]Emission factors from Table 10.2 NCASI TB 973 (2010) for virgin mechanical furnish.

% = percent
-- = no data
ADTFP = air-dried tons finished paper
CAS # = Chemical Abstracts Service Number
EF = Emission Factor
hr = hour
lb = pound(s)
NCASI = National Council for Air and Stream Improvement
SQER = Small Quantity Emission Rate

Table A4
Projected Emissions from Paper Machines
McKinley Paper Company—Washington Mill
1902 Marine Drive
Port Angeles, Washington

Table A4. Projected Emissions from Paper Machines 840 ADTFP/Day 306600 ADTFP/Year projected annual production paper machines

Pollutant(2)	CAS #	Averaging Period	EF lb/ADTFP[(1)]	lb Pollutant Per Year	lb Pollutant Per 24-hr	lb Pollutant by Year	lb/Averaging Period	% SQER	(lb/Averaging Period)	% of De Minimus
Acetaldehyde	75-07-0	year	1.21E-02	3.71E+03	--	3.71E+03	71	5225.2	3.55	104503.1
Carbon Disulfide	75-15-0	24-hr	1.93E-03	5.93E+02	1.623972	--	105	1.5	5.26	30.9
Chloroform[(2)]	67-66-3	year	4.02E-03	1.23E+03	--	1.23E+03	8.35	14760.9	0.417	295571.2
Cumene[(2)]	98-82-8	24-hr	2.21E-03	6.78E+02	1.86E+00	--	52.6	3.5	2.63	70.6
Formaldehyde	50-00-0	year	1.04E-02	3.19E+03	--	3.19E+03	32	9964.5	1.6	199290.0
Methanol	67-56-1	24-hr	2.17E-02	6.65E+03	1.82E+01	--	526	3.5	26.3	69.3
Methyl Ethyl Ketone	78-93-3	24-hr	3.49E-05	1.07E+01	2.93E-02	--	657	0.0	32.9	0.1
Methylene Chloride	75-09-2	year	3.09E-03	9.47E+02	--	9.47E+02	192	493.4	9.59	9879.0
Naphthalene	91-20-3	year	1.09E-05	3.34E+00	--	3.34E+00	5.64	59.3	0.282	1185.1
Phenol	108-95-2	24-hr	3.18E-03	9.75E+02	2.67E+00	--	26.3	10.2	1.31	203.9
Toluene[(2)]	108-88-3	24-hr	1.69E-02	5.18E+03	1.42E+01	--	657	2.2	32.9	43.1

NOTES:

[(1)]Emission factors from Table 10.1 NCASI TB 973 (2010) for 100% secondary fiber furnish (referencing 2009 Update Table B.1 for Mill KK).

[(2)]The chloroform, cumene, and toluene EF for Mill KK was non-detect; therefore the average of all mill detections were used for each of these compounds.

% = percent
-- = no data
ADTFP = air-dried tons finished paper
CAS # = Chemical Abstracts Service Number
EF = Emission Factor
lb = pound(s)
hr = hour
NCASI = National Council for Air and Stream Improvement
SQER = Small Quantity Emission Rate

APPENDIX D
AIR DISPERSION MODELING RESULTS

RAMBOLL

ENVIRONMENT & HEALTH

May 7, 2019

MEMORANDUM

To: Mark V. Goodin, P.E.
Olympic Region Clean Air Agency
2940 Limited Lane NW
Olympia, WA 98502

Project No: 1690010081

CC: Annika Wallendahl, SoundEarth Strategies, Inc.
Terry Nishimoto, McKinley Paper Company

From: Ramboll US Corporation

Project Name: McKinley Paper Company Stock Preparation Project

Subject: NOC Permit Application Modeling Update

Ramboll US Corporation (Ramboll) was retained to develop air dispersion modeling to accompany a Notice of Construction (NOC) permit application for a proposed stock preparation project (hereafter, "the project") at McKinley Paper Company's (McKinley's) integrated pulp and paper mill (hereafter, "the facility") located in Port Angeles, Washington. The NOC application for the project, which included an air dispersion modeling analysis, was originally submitted to the Olympic Region Clean Air Agency (ORCAA) on February 8, 2019. ORCAA requested additional information regarding the project's emissions calculations in a letter dated April 11, 2019. A response to that letter was submitted to ORCAA on April 25, 2019. The air dispersion modeling analysis for the project has been revised based on the updates provided in the April 25 letter. Although the values of the concentrations predicted by the modeling have changed as a result of revisions made to certain aspects of the modeling methodology and inputs, as detailed in this memorandum, the relationship of the modeling results to regulatory thresholds do not differ from those presented in the original NOC application.

MODEL REVISIONS

Except for the updates noted below, all other modeling parameters remain unchanged from the original modeling submitted as part of the NOC permit application in February 2019.

Emission Source Updates

Revised emissions attributable to the proposed project were provided to ORCAA in a letter submitted on April 25, 2019. Please refer to that letter for the updated emission rates for all sources and pollutants which were used in this revised modeling analysis.

Facility Configuration

A total of nine on-site structures were included in the original modeling to account for potential downwash effects that could influence emissions from point sources. Following submittal of the original permit application, it was noted that the Oil Storage Tank structure (also identified as "Tank 1"), which is located northeast of the facility, is not within the facility boundary. For this update, Tank 1 was not included as an on-site structure, but the other eight structures previously modeled are still included. In addition, the facility's ambient air boundary was revised to exclude the storage tank area to the northeast of the facility, which necessitated revisions to the boundary receptors and 25-m spaced receptor grid.

Figures 1 through 3 below represent the updated property boundary, modeled receptors, and facility layout. These figures replace Figures 3-1, 3-2, and 3-4 in the original modeling report.

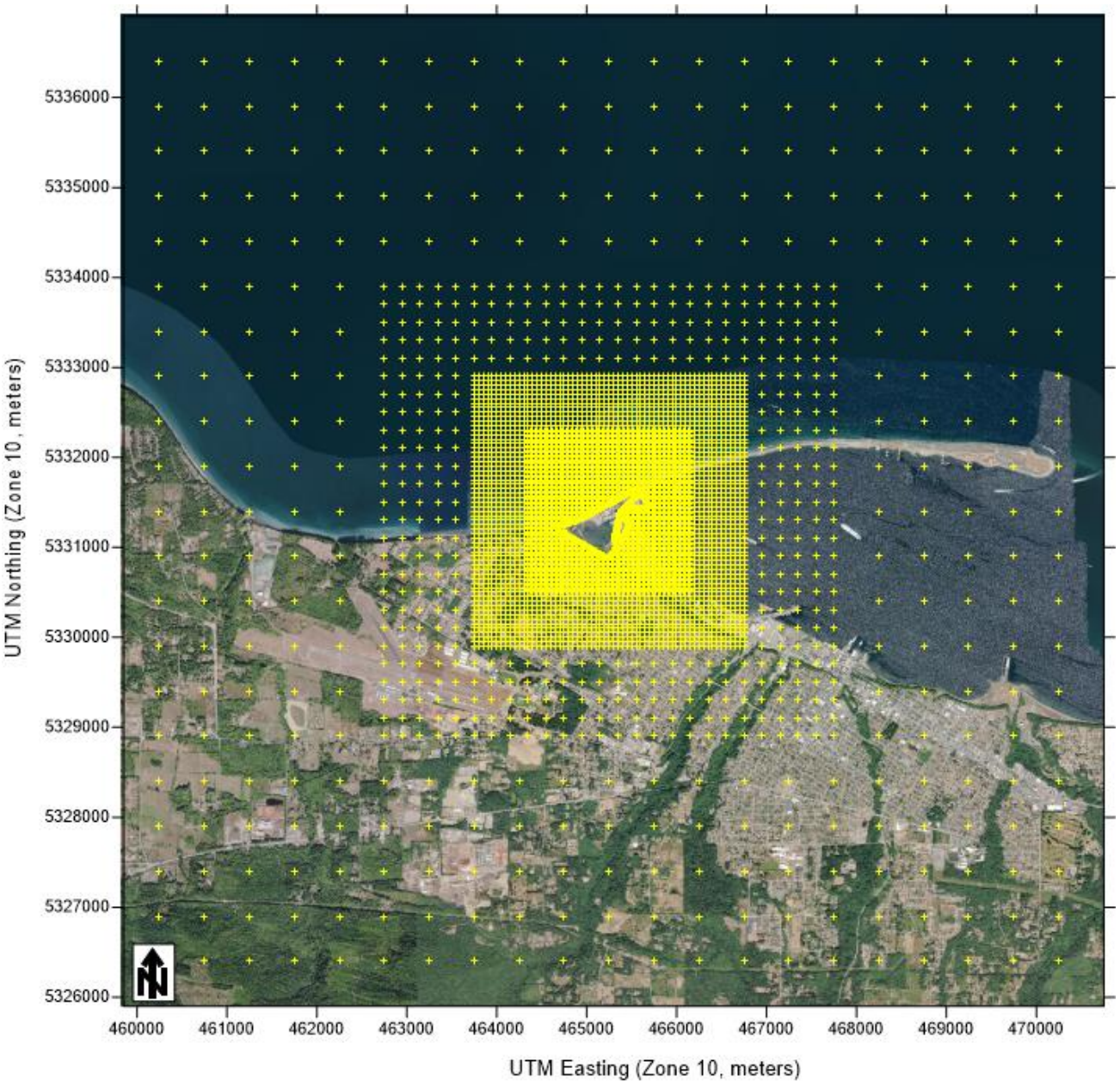


Figure 1. Receptor Grid

Figure 2. Boundary Receptors

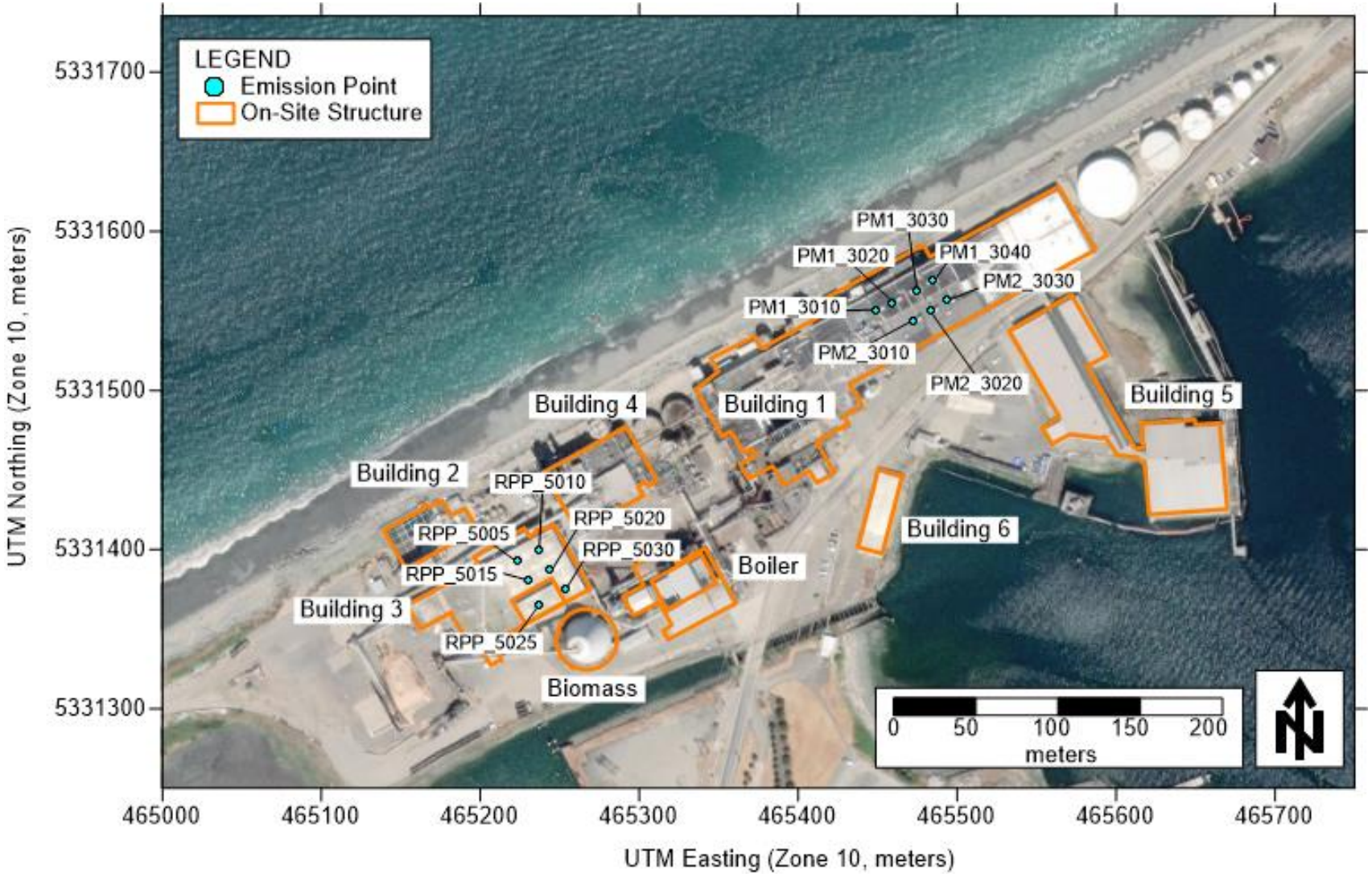


Figure 3. Facility Layout

RESULTS

Criteria Pollutant Analysis

As noted in the original modeling report, the predicted model concentrations for criteria pollutants are less than the applicable ambient standards. Tables 1 and 2 below replace Tables 3-6 and 3-7 in the original modeling report.

Table 1. Predicted Maximum Model Concentrations SIL comparison

Pollutant	Averaging Period	Maximum Concentration (µg/m³)	SIL [1] (µg/m³)	Over SIL?
PM_{10}	24-Hour	5.40	5.0	Yes
	Annual	2.15	1.0	Yes
$PM_{2.5}$	24-Hour	3.75	1.2	Yes
	Annual	1.46	0.3	Yes

Notes:

[1] SIL = Significant Impact Level, from ORCAA Rule 6.1.4 Table 6.1.b (called insignificant impact thresholds) and WAC 173-400-113.

Table 2. Predicted Design Concentrations NAAQS/WAAQS Comparison

Pollutant	Averaging Period	Concentration (µg/m³)			NAAQS/ WAAQS [4] (µg/m³)	Over NAAQS/ WAAQS?
		Project Impacts [1]	Background [2]	Total [3]		
PM_{10}	24-Hour	4.66	25	29.66	150	No
$PM_{2.5}$	24-Hour	2.52	16	18.52	35	No
	Annual	1.46	6.5	7.96	12	No

Notes:

[1] Concentrations shown are the 6th-high 24-hour average PM_{10} concentration over four modeled years, the highest 4-year average of the 98th percentile 24-hour average $PM_{2.5}$ concentration at each receptor, and the highest 4-year average of the annual average $PM_{2.5}$ concentration at each receptor (based on guidance in the "Modeling Procedures for Demonstrating Compliance with the $PM_{2.5}$ NAAQS memorandum" issued on March 23, 2010 by Stephen Page, Director of OAQPS).

[2] The 2009-2011 background concentrations for each criteria pollutant were obtained through the NW AIRQUEST website (http://lar.wsu.edu/nw-airquest/lookup.html) for UTM coordinates: X = 465250, Y = 5331400 (UTM zone 10, units: meters).

[3] Total concentration is the sum of the modeled project impacts and the background concentration.

[4] WAC 173-476 aligns the Washington Ambient Air Quality Standards (WAAQS) with the National Ambient Air Quality Standards (NAAQS).

Toxic Air Pollutant Analysis

Table 3 below shows the updated model-predicted concentrations for modeled TAPs. As in the original application, the predicted model concentration of methylene chloride is less than the ASIL, and the predicted model concentration for formaldehyde is greater than the ASIL, meaning a second tier review is required. This table replaces Table 3-8 in the original modeling report. The Health Impact Assessment submitted to the Washington Department of Ecology was based on the revised modeling methodology presented in this memorandum.

Table 3. Model Predicted Concentrations

Toxic Air Pollutant	CAS #	Averaging Period [1]	Maximum Concentration [2] (µg/m^3)	ASIL [1] (µg/m^3)	Over ASIL?
Formaldehyde	50-00-0	year	0.64	0.167	Yes
Methylene Chloride	75-09-2	year	0.28	1.0	No

Notes:

[1] Pollutant-specific averaging period and ASIL obtained from WAC 173-460-150.

[2] Maximum concentration is highest concentration over four modeled years.

Prepared for:

SoundEarth Strategies, Inc.
Seattle, Washington

Prepared by:

Ramboll US Corporation
Lynnwood, Washington

On behalf of:

McKinley Paper Company
Port Angeles, Washington

Date:

February 6, 2019

Project Number:

1690010081

STOCK PREPARATION PROJECT
AIR DISPERSION MODELING REPORT

RAMBOLL

CONTENTS

TABLES

FIGURES

1. INTRODUCTION

McKinley Paper Company (McKinley) owns and operates an integrated pulp and paper mill located at 1902 Marine Drive in Port Angeles, Washington (hereafter, "the facility"). McKinley plans to upgrade the facility's existing pulping and stock preparation system (hereafter, "the proposed project") to allow the use of alternative recovered fiber sources and to allow the facility to produce more commercially competitive paper grades. To make these changes, McKinley must file a Notice of Construction (NOC) application with the Olympic Region Clean Air Agency (ORCAA) requesting that the existing air permit be changed to accommodate the proposed new equipment and operations.

Among the requirements that must be met before ORCAA can approve the NOC application is a demonstration that maximum allowable emissions attributable to the proposed project will not cause or contribute to a violation of any ambient air quality standard (ORCAA Rule 6.1.4(a)(3)). Ambient air quality standards include the national ambient air quality standards (NAAQS) and Washington ambient air quality standards (WAAQS). Additionally, new or modified air pollution sources that increase emissions of toxic air pollutants (TAPs) are required to comply with the ambient impact review requirements in Washington's regulations under Washington Administrative Code (WAC) 173-460-070. This regulation requires a demonstration that proposed TAP emission increases are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects.

McKinley has retained Ramboll US Corporation (Ramboll) to perform air dispersion modeling to assess compliance with ambient air quality standards and Washington's TAP regulations. This document describes the modeling procedures used to calculate ambient criteria pollutant and TAP concentration increases attributable to the proposed project, summarizes the results of the modeling, and compares them to applicable regulatory thresholds.

2. EMISSION CALCULATIONS

Proposed changes to the facility that are expected to affect air pollutant emissions include:

- Replacement of the existing Old Newsprint (ONP) pulper with a new single-line continuous Mixed Paper (MP) pulper that has a maximum capacity of 900 tons of paper per day (tpd);
- Decommissioning of the existing Old Corrugated Container (OCC) tub pulper and refiners; and
- Increased utilization of the existing paper machines.

The proposed changes to the facility outlined above are expected to result in emission increases of particulate matter (PM), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and volatile organic compounds (VOCs), and TAPs. These emission increases occur only within the paper machine and stock preparation areas.

Table 2-1 presents criteria pollutant emission changes attributable to the proposed project. VOC emissions are not presented because there are no ambient standards for VOCs, and, therefore, VOCs were not included in any of the modeling analyses. However, speciated VOC emission changes attributable to the proposed project are shown in Table 2-2. It should be noted that only compounds which are subject to WAC 173-460-150 are presented in this table.

Table 2-1. Criteria Pollutant Emission Change for Proposed Project by Source

Pollutant	Emission Rate [1]			
	Stock Prep		Paper Machine	
	lb/day	tpy	lb/day	tpy
PM	--	--	17.23	3.14
PM_{10}	--	--	15.75	2.87
$PM_{2.5}$	--	--	10.96	2.00

Notes:
[1] Emission rates shown are the net emission change for the pollutant from each source.

Table 2-2. Toxic Air Pollutant Emission Change for Proposed Project by Source

Pollutant	CAS	Emission Rate [1]			
		Stock Prep		Paper Machine	
		lb/day	lb/year	lb/day	lb/year
Acetaldehyde	75-07-0	-5.14	-1,874	-0.87	-316
Benzene	71-43-2	0	0	-0.66	-241
Carbon Disulfide	75-15-0	1.01	368	0.75	275
Chloroform	67-66-3	-2.92	-1,067	2.90	1,058
Cumene	98-82-8	-1.91	-698	1.18	430
Formaldehyde	50-00-0	-0.70	-254	5.12	1,870
Methanol	67-56-1	-12.96	-4,728	-61.38	-22,404
Methyl Ethyl Ketone	78-93-3	-6.41	-2,339	-1.49	-543
Methylene Chloride	75-09-2	-0.16	-57	2.04	743
Naphthalene	91-20-3	-0.10	-37	-0.83	-301
Phenol	108-95-2	-7.28	-2,655	-22.72	-8,291
Toluene	108-88-3	-0.46	-166	7.23	2,637

Notes:

[1] Emission rates shown are the net emission change for the compound from each source.

3. AIR QUALITY IMPACT ANALYSIS

The regulatory requirement for assessments of compliance with ambient standards and Washington TAP regulations are typically satisfied using air dispersion modeling analyses. This section documents the methodology and results of the near-field air quality impact analysis.

3.1 Model Selection

A review of regulatory modeling techniques was conducted to select an appropriate air quality model to simulate dispersion of air pollutants emitted by the proposed project for a near-field air quality impact analysis. The selection of regulatory modeling tools is influenced by the potential for exhaust plumes to interact with onsite structures (i.e., "building downwash") or to impact intermediate or complex terrain. Several on-site buildings were identified as having the potential to interact with exhaust plumes from the proposed project, and the modeling domain includes both intermediate and complex terrain. As a result, the dispersion model selected for the analysis will be required to consider both intermediate/complex terrain and building downwash effects to allow for the possibility of emissions from stacks shorter than dictated by Good Engineering Practice (GEP).

In this situation, the United States Environmental Protection Agency's (EPA's) "Guideline of Air Quality Models" in 40 CFR 51 Appendix W ("the Guideline") recommends the use of AERMOD, which was specifically designed to estimate impacts of air pollutants in areas containing both simple and intermediate/complex terrain. AERMOD also includes the PRIME downwash algorithms to estimate effects of surrounding buildings on the dispersion of plumes. The most current version of AERMOD (Version 18081) was used for the dispersion modeling analysis.

3.2 Modeling Procedures

AERMOD was applied using regulatory defaults in addition to the options and data discussed in this section.

3.2.1 Averaging Periods

Ambient pollutant concentrations were calculated using AERMOD for 24-hour and annual averaging periods for comparison to applicable regulatory thresholds.

3.2.2 Elevation Data and Receptor Network

Terrain elevations for receptors were prepared using 1/3rd arc-second elevation data from the National Elevation Dataset (NED), which is a product of the United States Geological Survey (USGS). The NED is a seamless elevation dataset covering the continental United States, Alaska, and Hawaii, and is available on the internet from the USGS National Map Viewer[1] These data have a horizontal spatial resolution of approximately 10 meters (m), or 33 feet (ft).

For the dispersion modeling analysis, receptors were spaced 500 meters apart covering the 10 kilometer (km) square simulation domain (shown in **Figure 3-1**), with a 5-km-by-5km nested receptor grid with 200-m receptor spacing, a 3-km-by-3-km nested receptor grid with 50-m spacing and a 1.8-km-by-1.8-km nested receptor grid with 25-m spacing. All receptor grids were centered on the facility. Receptors were also located at 10-m intervals along the facility's ambient air boundary, which includes both sides of an on-site public-accessible road (see **Figure** 3-2).

The base elevation and hill height scale for each receptor were determined using the EPA's terrain processor AERMAP (Version 18081), which generates the receptor output files that are then read by AERMOD. All receptor locations are in Universal Transverse Mercator (UTM) coordinates using the spatial reference of NAD 83, Zone 10.

[1] http://viewer.nationalmap.gov/viewer/

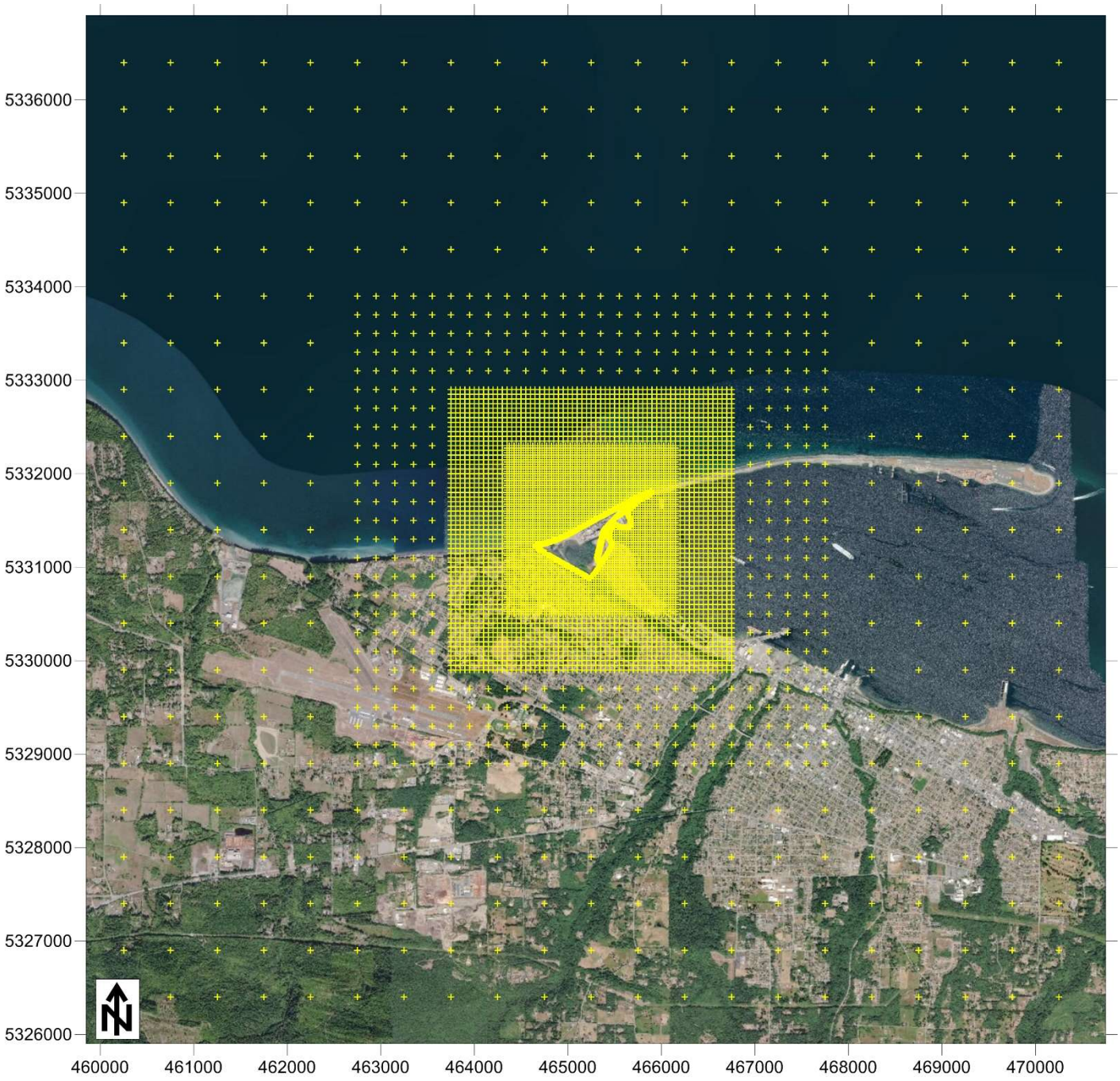


Figure 3-1. Receptor Grid

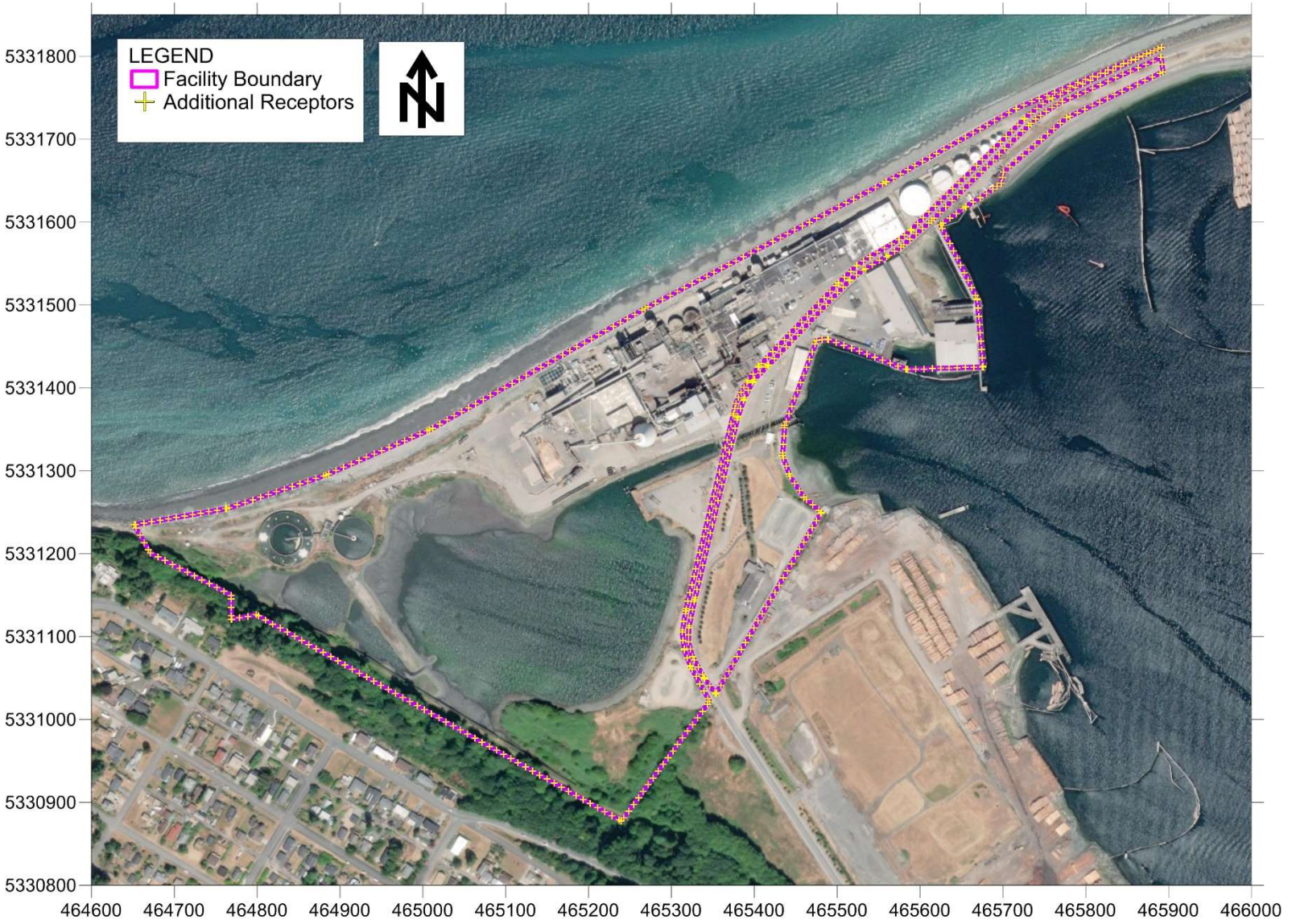


Figure 3-2. Receptors Along Facility Boundary

3.2.3 Meteorological Data

The EPA's meteorological program, AERMET, is used to process meteorological data for use with AERMOD. AERMET combines the surface meteorological observations with twice-daily upper air soundings to calculate the meteorological variables and profiles required by AERMOD. AERMET (Version 18081) was used for this modeling analysis, and the option to adjust the surface friction velocity (U*) for low-wind or stable conditions was used, without the Bulk Richardson Number option.

Documentation of previous dispersion modeling analyses conducted for the facility described using site-specific meteorological data for modeling purposes. The documentation included a specific description of an on-site meteorological data set (hereafter, "the McKinley dataset") and how AERMET was implemented for previous modeling analyses. This description of AERMET (hereafter, "the AERMET memo") is provided in Attachment A. Except as noted in this section, the data and the processing methodology used for this modeling analysis are consistent with those outlined in the AERMET memo and used in modeling analyses in support of permit applications previously submitted to ORCAA by the facility.

A representative meteorological data set was prepared using the McKinley dataset, which was collected by ORCAA between 2002-2005 and contemporaneous upper air data from the National Weather Service (NWS) station in Quillayute, Washington. The surface data were collected at a meteorological station located at 1815 Marine Drive, which is adjacent to the northeast side of the facility.

Regional meteorological data, such as cloud cover, were obtained from the NWS station at the William R Fairchild International Airport (Fairchild Airport), which is located approximately 2 miles southwest of the facility. A windrose summarizing the wind speed and wind direction data from the McKinley data set along with wind data statistics is provided in **Figure 3-3**.

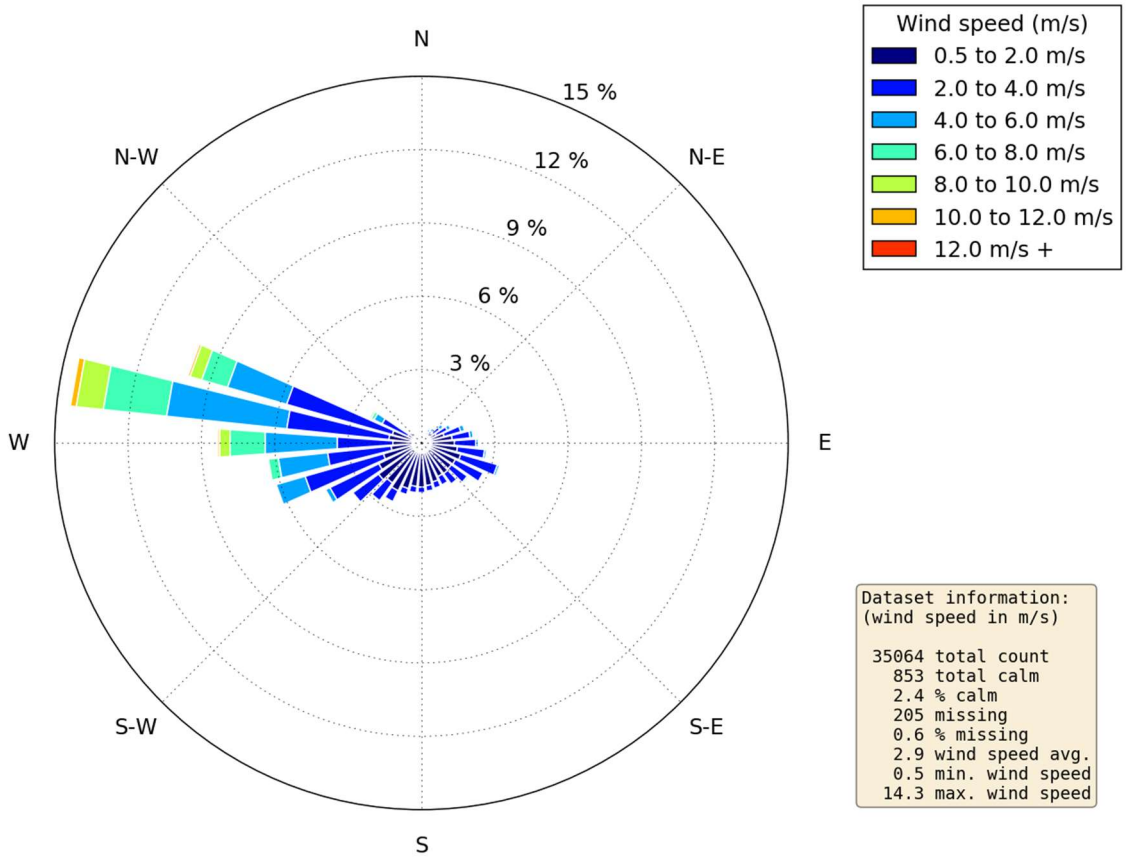


Figure 3-3. McKinley Dataset Windrose

Additional meteorological variables and geophysical parameters are required for the AERMOD dispersion model to estimate surface energy fluxes and construct boundary layer profiles. Surface characteristics including albedo, Bowen ratio, and surface roughness length were determined for the area surrounding the facility and the Fairchild Airport meteorological station using the AERMET surface characteristics pre-processor, AERSURFACE (Version 13061), and USGS National Land Cover Dataset (NLCD) landuse data.

According to the AERMET memo, previous dispersion modeling analyses at the McKinley facility used varying moisture conditions for the four years of data when running AERSURFACE. The AERMET memo specified that the years 2002 and 2003 experienced "average" moisture conditions, whereas the years 2004 and 2005 experienced "dry" conditions. A review of the monthly precipitation throughout these four years indicate that 2004 and 2005 had lower annual averages than other years;

however, these annual totals were missing one or more full months of data[2]. Hence, because the annual precipitation data is incomplete, these two years were assigned "average" moisture conditions, instead of "dry" conditions. All other AERSURFACE inputs specified in the AERMET memo were followed for this dispersion modeling analysis.

3.2.4 Modeled Criteria Pollutant Emissions

Criteria pollutant emission increases associated with the proposed project include PM_{10} and $PM_{2.5}$ emissions. The "project-only" concentrations resulting from the proposed project were modeled and compared with the significant impact levels (SILs) provided in WAC 173-400-113(4)(a). Calculated ambient concentrations less than these screening thresholds indicate that the emission increases associated with the project do not have the potential to cause or contribute to a violation of an ambient air quality standard. If a predicted concentration exceeds the applicable SIL, the impact of all emission units at the facility, proposed and existing may also need to be considered, as well as the contribution of other sources, which are typically accounted for by adding a representative background concentration.

The only source of criteria pollutant emission increases associated with the proposed project is the paper machines. The modeled emission rates from the paper machine are summarized in **Table 3-1**. These emissions were provided to AERMOD in units of grams per second (g/s).

Table 3-1. Criteria Pollutant Emission Rates

Pollutant	Modeled Emission Rate (g/s) [1]			
	Daily		Annual	
	lb/day	g/s	tpy	g/s
PM_{10}	15.75	0.0827	2.87	0.0827
$PM_{2.5}$	10.96	0.0575	2.00	0.0575

Notes:

[1] Only emission increases from the Paper Machines were modeled. Annual emission rates were based on 8,760 hours/year of operation. Emissions were divided evenly between the paper machine vents.

[2] https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?wa6624

3.2.5 Modeled Toxic Air Pollutant Emission Rates

Washington regulations, adopted by ORCAA, require a demonstration that TAP emission increases attributable to new or modified emission units will not exceed certain ambient concentration thresholds, called acceptable source impact levels (ASILs). These levels are designed to protect human health and safety. Regulations also provide emission levels called small quantity emission rates (SQERs); if total project emissions of a given TAP is less than the SQER provided for that TAP in WAC 173-460-150, modeling is not required. This process is referred to as a first tier review. The regulations that describe the first tier review process (WAC 173-460-080) permit the inclusion of reductions in actual TAP emissions from existing emission units at the source, for the purposes of offsetting emissions of the same TAP attributable to a new or modified emission unit.

As shown in **Table 3-2**, emissions of two toxic air pollutants (formaldehyde and methylene chloride) are greater than the applicable SQER, and, therefore, modeling is required to assess whether ambient concentration increases of these TAPs attributable to the proposed project exceed the ASIL. Modeled TAP emission rates, converted to g/s, are shown in **Table 3-3**, along with the averaging period assigned to the TAP in WAC 173-460-150.

Table 3-2. Toxic Air Pollutant SQER Comparison

Pollutant	CAS	Averaging Period [1]	Emission Rate (lb/Avg. Period)	SQER (lb/period)	Above SQER?
Acetaldehyde	75-07-0	24-hr	-6.00	71	No
Benzene	71-43-2	year	-241.45	6.62	No
Carbon Disulfide	75-15-0	24-hr	1.76	105	No
Chloroform	67-66-3	year	-9.39	8.35	No
Cumene	98-82-8	24-hr	-0.74	52.6	No
Formaldehyde	50-00-0	year	1,616	32	Yes
Methanol	67-56-1	24-hr	-74.34	526	No
Methyl Ethyl Ketone	78-93-3	24-hr	-7.90	657	No
Methylene Chloride	75-09-2	year	686.12	192	Yes
Naphthalene	91-20-3	year	-339.37	5.64	No

Pollutant	CAS	Averaging Period [1]	Emission Rate (lb/Avg. Period)	SQER (lb/period)	Above SQER?
Phenol	108-95-2	24-hr	-29.99	26.3	No
Toluene	108-88-3	24-hr	7.95	657	No

Notes:
[1] Pollutant-specific averaging period and SQER obtained from WAC 173-460-150.

Table 3-3. Modeled Toxic Air Pollutant Emission Rates

Pollutant	CAS	Modeled Emission Rate [1]			
		Stock Prep		Paper Machine	
		lb/year	g/s	lb/year	g/s
Formaldehyde	50-00-0	-254.18	-0.0037	1,870	0.0269
Methylene Chloride	75-09-2	-57.05	-0.0008	743.17	0.0107

Notes:
[1] Emissions were divided evenly between the vents for each source.

3.2.6 Emission Source Release Parameters

Emissions from the paper machines (Paper Machine 1 [PM1] and Paper Machine 2 [PM2]) were assumed to be exhausted to the atmosphere through seven vents on the roof of the paper machine building. The current PM1 was formerly called Paper Machine 3 in previous facility configurations. PM1 is associated with four roof vents, and PM2 is associated with three roof vents. Each vent was represented in the modeling as a point source. The total emissions associated with the paper machine were divided evenly between the seven vents.

Emissions from the stock preparation in the recycled paper plant (RPP) were assumed to be exhausted to the atmosphere through six roof vents. Each vent was represented in the modeling as a point source. Total emissions associated with the recycled paper plant were divided evenly between then six vents.

Table 3-4 summarizes the parameters used in the modeling to represent exhaust from the paper machine building roof vents.

Table 3-4. Point Source Release Parameters

Emission Unit	Stack Height (ft)	Temperature (°F)	Exit Velocity (ft/s)	Diameter (ft)
PM1_3010	58.9	110	53.05	5
PM1_3020	60.7	110	65.78	5
PM1_3030	60.7	110	65.78	5
PM1_3040	59.2	110	53.05	5
PM2_3010	60.3	110	53.05	5
PM2_3020	59.9	110	65.78	5
PM2_3030	59.8	110	65.78	5
RPP_5005	80.8	ambient	47.75	3.33
RPP_5010	80.6	ambient	47.75	3.33
RPP_5015	80.6	ambient	47.75	3.33
RPP_5020	80.6	ambient	47.75	3.33
RPP_5025	101.5	ambient	47.75	3.33
RPP_5030	80.6	ambient	47.75	3.33

In addition to the release parameters in the table above, on-site structure dimensions and facility configuration information were provided to AERMOD to assess potential downwash effects. Wind-direction-specific structure profiles were prepared for the modeling using the EPA's Building Profile Input Program for the PRIME algorithm (BPIP PRIME). The approximate facility layout and structure base elevations from previously submitted modeling files were used to prepare data for BPIP PRIME, which provides the necessary input data for AERMOD. **Table 3-5** provides the heights of all existing on-site structures reflected in the BPIP PRIME analysis. The "Boiler" structure and the recycled paper plant building (Building 3) were modeled as two-tiered buildings. **Figure 3-4** shows the facility layout with all modeled emission sources and on-site structures.

Based on the site layout shown and the structure heights, it was assumed that emissions from the proposed project are potentially subject to downwash effects from nearby structures, and the necessary information provided by BPIP PRIME was included in the simulations to reflect these effects.

Table 3-5. Significant On-Site Structures

Structure	Description	Height Above Grade	
		ft	m
Building 1	Paper Machine Building	50	15.2
Building 2	Filter Plant	27	8.2
Building 3 (2 tiers)	Recycled Paper Plant	75 / 96	22.9 / 29.3
Building 4	Refiner Building	77	23.5
Building 5	Storage and Warehouse	30	9.1
Building 6	Storage	20	6.3
Boiler (2 tiers)	Boiler, Sludge Press, and Steam Turbine Generator	60 / 110	18.3 / 33.5
Tank 1	Oil Storage Tank	50	15.2
Biomass	Biomass Silo	121	36.9

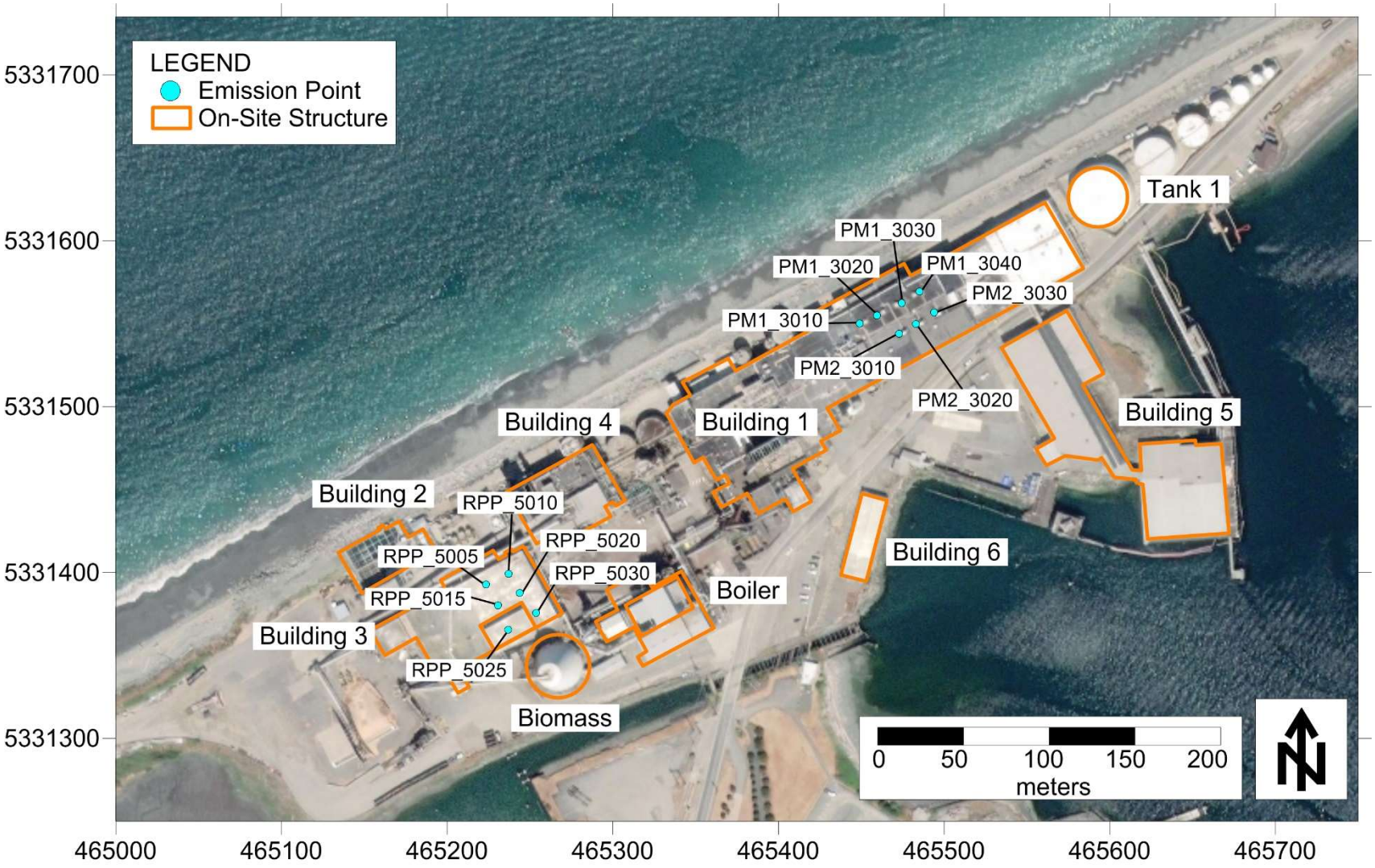


Figure 3-4. Facility Layout

3.3 Project-Only Criteria Pollutant Analysis

Ambient criteria pollutant concentrations attributable to the project were evaluated using the inputs described above. **Table 3-6** summarizes the AERMOD-predicted criteria pollutant concentrations and the applicable SILs for comparison. The SILs represent incremental, project-specific impact levels that the State of Washington accepts as insignificant with respect to assessing compliance with the NAAQS or the WAAQS, which, for most criteria pollutants, are currently identical to the NAAQS. As shown in the table below, the concentrations predicted by AERMOD for all PM_{10} and $PM_{2.5}$ averaging periods exceed the corresponding SILs. As a result, a NAAQS compliance demonstration is required, which is typically accomplished by adding a representative background value to the modeling results. The NAAQS compliance demonstration is described in the next section.

Table 3-6. Predicted Maximum Model Concentrations SIL Comparison

Pollutant	Averaging Period	Maximum Concentration (µg/m³)	SIL [1] (µg/m³)	Over SIL?
PM_{10}	24-Hour	5.24	5.0	Yes
	Annual	2.12	1.0	Yes
$PM_{2.5}$	24-Hour	3.40	1.2	Yes
	Annual	1.43	0.3	Yes

Notes:
[1] SIL = Significant Impact Level, from ORCAA Rule 6.1.4 Table 6.1.b (called insignificant impact thresholds) and WAC 173-400-113.

3.4 Ambient Standard Compliance Demonstration

Because the predicted PM_{10} and $PM_{2.5}$ concentrations exceed the SILs for all averaging periods, an analysis is required to assess compliance with the ambient standards. This modeling analysis includes the addition of a representative background concentration to the modeled concentration, which accounts for contributions from other nearby sources. A representative background concentration for the area was obtained from the NW AIRQUEST consortium, managed by the Washington State University. Background concentrations obtained from NW AIRQUEST are based on data from 2009-2011. The selected background concentration is expected to include contributing criteria pollutant emissions from all existing sources on-site.

Results of this analysis are summarized in Table 3-7. As shown in the table, the impacts from the proposed project including background concentrations are less than the applicable ambient standards for all pollutants of concern.

Table 3-7. Predicted Design Concentrations NAAQS/WAAQS Comparison

Pollutant	Averaging Period	Concentration (µg/m³)			NAAQS/ WAAQS [4] (µg/m³)	Over NAAQS/ WAAQS?
		Project Impacts [1]	Background [2]	Total [3]		
PM_{10}	24-Hour	4.51	25	29.51	150	No
$PM_{2.5}$	24-Hour	2.48	16	18.48	35	No
	Annual	1.43	6.5	7.93	12	No

Notes:

[1] Concentrations shown are the 6th-high 24-hour average PM_{10} concentration over four modeled years, the highest 4-year average of the 98th percentile 24-hour average $PM_{2.5}$ concentration at each receptor, and the highest 4-year average of the annual average $PM_{2.5}$ concentration at each receptor (based on guidance in the "Modeling Procedures for Demonstrating Compliance with the $PM_{2.5}$ NAAQS memorandum" issued on March 23, 2010 by Stephen Page, Director of OAQPS).

[2] The 2009-2011 background concentrations for each criteria pollutant were obtained through the NW AIRQUEST website (http://lar.wsu.edu/nw-airquest/lookup.html) for UTM coordinates: X = 465250, Y = 5331400 (UTM zone 10, units: meters).

[3] Total concentration is the sum of the modeled project impacts and the background concentration.

[4] WAC 173-476 aligns the Washington Ambient Air Quality Standards (WAAQS) with the National Ambient Air Quality Standards (NAAQS).

3.5 Project Emissions Increase Analysis Results

The results of the TAP dispersion modeling analysis are summarized in Table 3-8, and impacts are compared with the applicable ASILs. Model concentrations shown are the maximum annual concentrations from four modeled years. As shown in the table, predicted model concentrations of methylene chloride are less than the ASIL. However, predicted model concentrations for formaldehyde are greater than the ASIL, and, thus, a second tier review is required. As provided in WAC 173-460-090, McKinley will submit a petition requesting that Ecology perform a second tier review to determine a means of compliance with the ambient impact requirement.

Table 3-8. Model-Predicted Concentrations

Toxic Air Pollutant	CAS #	Averaging Period [1]	Maximum Concentration [2] (µg/m³)	ASIL [1] (µg/m³)	Over ASIL?
Formaldehyde	50-00-0	year	0.67	0.167	Yes
Methylene Chloride	75-09-2	year	0.27	1.0	No

Notes:

[1] Pollutant-specific averaging period and ASIL obtained from WAC 173-460-150.

[2] Maximum concentration is highest concentration over four modeled years.

AERMET

The AERMET (Version 06341) pre-processor was used to prepare the meteorological data set. Guidance provided in the most recent *AERMOD Implementation Guide* [Environmental Protection Agency (EPA), March 2009] was used.

AERMET uses three steps to preprocess and combine the surface and upper-air soundings to output the data in a format which is compatible with the AERMOD model. The first step extracts the data and performs a brief quality assurance check of the data. The second step merges the meteorological data sets. The third step outputs the data in the AERMOD compatible format while also incorporating surface characteristics surrounding the data collection or application site.

The output from the AERMET model consists of two separate files: the surface conditions file and a vertical profile dataset. AERMOD utilizes these two files in the dispersion modeling algorithm to predict pollutant concentrations resulting from a source's emissions.

The mid-day albedo, daytime Bowen ratio, and surface roughness length are considered when conducting the third step of AERMET processing. Collectively, these factors are described as surface characteristics. Surface characteristics can vary by season and region (sector) around the data collection site.

The mid-day albedo is the fraction of total incident solar radiation reflected by the surface back to space without absorption. The daytime Bowen ratio is an indicator of surface moisture, which is the ratio of the sensible heat flux to the latent heat flux. The Bowen ratio is used to determine the planetary boundary layer parameters for convective conditions. Surface roughness length is related to the height of obstacles to the wind flow and is the height at which the mean horizontal wind speed is zero. The AERMOD model uses the surface characteristics to define dispersion coefficients in the model.

AERSURFACE

The AERSURFACE program (Version 08009) was used to determine the surface characteristics surrounding the monitoring site. AERSURFACE was developed by the EPA to assist in determining surface characteristics by using U.S. Geological Survey (USGS) land use maps and converting the land use type to values described in the *AERMET User's Guide* (EPA, November 2004, revised December 2006).

AERSURFACE uses a 1-kilometer (km) radius surrounding the data collection site to determine surface roughness values for each sector and a 10x10-km area to determine the mid-day albedo and daytime Bowen ratio.

The surface roughness, mid-day albedo, and Bowen ratio are affected by seasonal variations due to the yearly cycle of trees blooming and shedding leaves. The tree density affects the surface roughness while canopy leaf cover affects the amount of solar radiation reflected or absorbed as well as the amount of retained moisture. AERSURFACE accounts for these variations by assigning different seasons to specific months. The impact of these variations depends on the land use surrounding the data collection site.

Nippon Dataset

To prepare the AERMET meteorological data set, surface observations from Port Angeles, Washington, and twice daily upper-air soundings data from the Quillayute, Washington, upper air station (WBAN # 94240) were used to prepare the AERMET meteorological data set.

The surface data were collected by ORCAA and meet EPA's requirements in its *Meteorological Monitoring Guidance for Regulatory modeling Applications* [EPA, February 2000]. The surface data were collected at 1815 Marine Drive, adjacent to the northeast side of the Nippon property line. This data was obtained from EPA's Air Quality System (AQS) database, accessible via the AQS Data Mart (http://www.epa.gov/ttn/airs/aqsdatamart/access/interface.htm), which is available for public use. Additional cloud cover data was obtained from the William R Fairchild International Airport NWS station, located approximately 2 miles southwest of the project site. The surface data towers are located on the north coast of the Olympic Peninsula, within a mile of the Strait of Juan de Fuca. The terrain is flat in the immediate vicinity of the project site with the foothills of the Olympic Mountains beginning about five miles to the south. Land use surrounding the airport is residential with large forested areas.

The Quillayute upper air station is approximately 50 miles west of the project site. The Olympic Mountains lie between the two locations, but they are both located at lower elevations near the coast. Quillayute upper air station is the nearest upper air sounding station to Port Angeles.

Wind conditions at the surface station are predominantly from the west. Winds conditions are generally consistent throughout the year, with more variability in winds during the winter months (December through February)

When running the AERSURFACE program, the seasonal variations assumed no snow cover in the winter, a transitional spring with partial green coverage, a mid-summer with lush vegetation, and an autumn with un-harvested cropland. The moisture conditions varied according to the year: 2002 and 2003 experienced average conditions, and 2004 and 2005 experienced dry conditions. The following months were assigned to each season:

- Winter: December, January, and February
- Spring: March, April, and May
- Summer: June, July, and August
- Autumn: September, October, and November

Table 1 summarizes the albedo and surface roughness output from the AERSURFACE program and the parameters used in the third step of AERMET processing for the Nippon dataset. Table 2 summarizes the Bowen ratio, which varies by moisture conditions.

Attachment 1 displays the annual wind rose for the Nippon dataset.

TABLE 1
Surface Characteristics for the Nippon Dataset – Albedo and Surface Roughness

	ALBEDO				SURFACE ROUGHNESS			
SECTOR[1]	**SPRING**	**SUMMER**	**FALL**	**WINTER**	**SPRING**	**SUMMER**	**FALL**	**WINTER**
1	0.12	0.12	0.12	0.13	0.009	0.009	0.009	0.003
2	0.12	0.12	0.12	0.13	0.003	0.004	0.004	0.002
3	0.12	0.12	0.12	0.13	0.002	0.003	0.003	0.005
4	0.12	0.12	0.12	0.13	0.005	0.009	0.009	0.03
5	0.12	0.12	0.12	0.13	0.03	0.073	0.073	0.298
6	0.12	0.12	0.12	0.13	0.298	0.456	0.456	0.385
7	0.12	0.12	0.12	0.13	0.385	0.547	0.547	0.287
8	0.12	0.12	0.12	0.13	0.287	0.383	0.383	0.065
9	0.12	0.12	0.12	0.13	0.065	0.075	0.075	0.007
10	0.12	0.12	0.12	0.13	0.007	0.008	0.008	0.006
11	0.12	0.12	0.12	0.13	0.006	0.007	0.007	0.005
12	0.12	0.12	0.12	0.13	0.005	0.005	0.005	0.003

Note:
[1] Each sector is a 30 degree segment from true north.

TABLE 2
Bowen Ratio by Moisture Conditions for the Nippon Dataset

	Average Moisture Conditions				Dry Moisture Conditions			
SECTOR[1]	**SPRING**	**SUMMER**	**FALL**	**WINTER**	**SPRING**	**SUMMER**	**FALL**	**WINTER**
1	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
2	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
3	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
4	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
5	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
6	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
7	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
8	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
9	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
10	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
11	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38
12	0.27	0.20	0.27	0.27	0.35	0.29	0.38	0.38

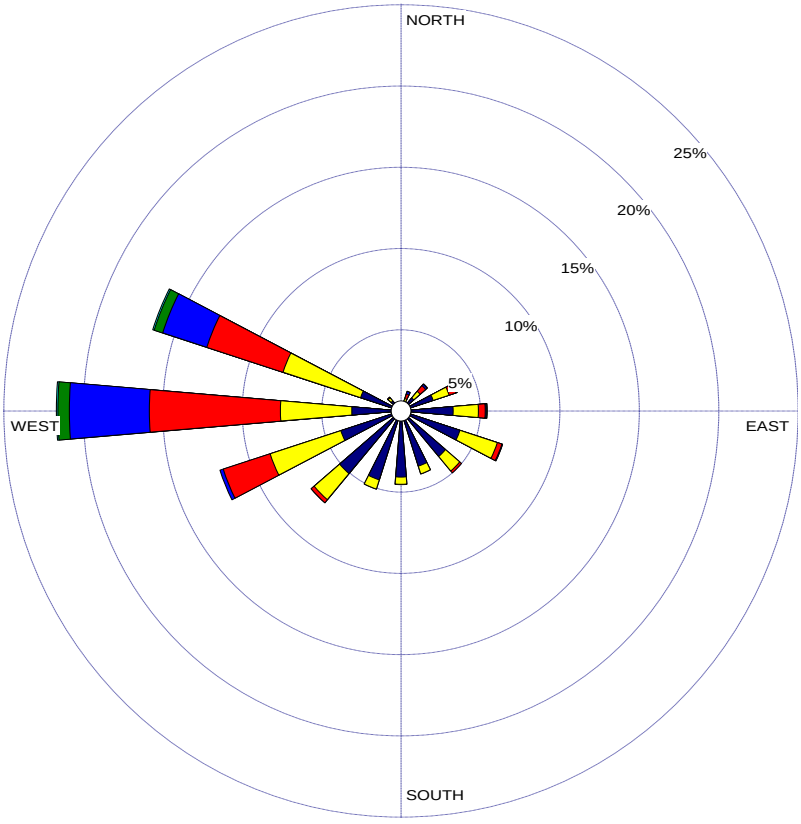
Note:
[1] Each sector is a 30 degree segment from true north.

WIND ROSE PLOT:

Attachment 1
Nippon Paper Wind Rose 2004-2008

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:			
	CALM WINDS: **2.54%**	TOTAL COUNT: **35050 hrs.**	
	AVG. WIND SPEED: **2.88 m/s**		PROJECT NO.:

WRPLOT View - Lakes Environmental Software

AERMET

The AERMET (Version 06341) pre-processor was used to prepare the meteorological data set. Guidance provided in the most recent *AERMOD Implementation Guide* [Environmental Protection Agency (EPA), March 2009] was used.

AERMET uses three steps to preprocess and combine the surface and upper-air soundings to output the data in a format which is compatible with the AERMOD model. The first step extracts the data and performs a brief quality assurance check of the data. The second step merges the meteorological data sets. The third step outputs the data in the AERMOD compatible format while also incorporating surface characteristics surrounding the data collection or application site.

The output from the AERMET model consists of two separate files: the surface conditions file and a vertical profile dataset. AERMOD utilizes these two files in the dispersion modeling algorithm to predict pollutant concentrations resulting from a source's emissions.

The mid-day albedo, daytime Bowen ratio, and surface roughness length are considered when conducting the third step of AERMET processing. Collectively, these factors are described as surface characteristics. Surface characteristics can vary by season and region (sector) around the data collection site.

The mid-day albedo is the fraction of total incident solar radiation reflected by the surface back to space without absorption. The daytime Bowen ratio is an indicator of surface moisture, which is the ratio of the sensible heat flux to the latent heat flux. The Bowen ratio is used to determine the planetary boundary layer parameters for convective conditions. Surface roughness length is related to the height of obstacles to the wind flow and is the height at which the mean horizontal wind speed is zero. The AERMOD model uses the surface characteristics to define dispersion coefficients in the model.

AERSURFACE

The AERSURFACE program (Version 08009) was used to determine the surface characteristics surrounding the monitoring site. AERSURFACE was developed by the EPA to assist in determining surface characteristics by using U.S. Geological Survey (USGS) land use maps and converting the land use type to values described in the *AERMET User's Guide* (EPA, November 2004, revised December 2006).

AERSURFACE uses a 1-kilometer (km) radius surrounding the data collection site to determine surface roughness values for each sector and a 10x10-km area to determine the mid-day albedo and daytime Bowen ratio.

The surface roughness, mid-day albedo, and Bowen ratio are affected by seasonal variations due to the yearly cycle of trees blooming and shedding leaves. The tree density affects the surface roughness while canopy leaf cover affects the amount of solar radiation reflected or absorbed as well as the amount of retained moisture. AERSURFACE accounts for these variations by assigning different seasons to specific months. The impact of these variations depends on the land use surrounding the data collection site.

Nippon Dataset

To prepare the AERMET meteorological data set, surface observations from Port Angeles, Washington, and twice daily upper-air soundings data from the Quillayute, Washington, upper air station (WBAN # 94240) were used to prepare the AERMET meteorological data set.

The surface data were collected by ORCAA and meet EPA's requirements in its *Meteorological Monitoring Guidance for Regulatory modeling Applications* [EPA, February 2000]. The surface data were collected at 1815 Marine Drive, adjacent to the northeast side of the Nippon property line. This data was obtained from EPA's Air Quality System (AQS) database, accessible via the AQS Data Mart (http://www.epa.gov/ttn/airs/aqsdatamart/access/interface.htm), which is available for public use. Additional cloud cover data was obtained from the William R Fairchild International Airport NWS station, located approximately 2 miles southwest of the project site. The surface data towers are located on the north coast of the Olympic Peninsula, within a mile of the Strait of Juan de Fuca. The terrain is flat in the immediate vicinity of the project site with the foothills of the Olympic Mountains beginning about five miles to the south. Land use surrounding the airport is residential with large forested areas.

The Quillayute upper air station is approximately 50 miles west of the project site. The Olympic Mountains lie between the two locations, but they are both located at lower elevations near the coast. Quillayute upper air station is the nearest upper air sounding station to Port Angeles.

Wind conditions at the surface station are predominantly from the west. Winds conditions are generally consistent throughout the year, with more variability in winds during the winter months (December through February)

When running the AERSURFACE program, the seasonal variations assumed no snow cover in the winter, a transitional spring with partial green coverage, a mid-summer with lush vegetation, and an autumn with un-harvested cropland. The moisture conditions varied according to the year: 2002 and 2003 experienced average conditions, and 2004 and 2005 experienced dry conditions. The following months were assigned to each season:

- Winter: December, January, and February
- Spring: March, April, and May
- Summer: June, July, and August
- Autumn: September, October, and November

Table 1 summarizes the albedo and surface roughness output from the AERSURFACE program and the parameters used in the third step of AERMET processing for the Nippon dataset. Table 2 summarizes the Bowen ratio, which varies by moisture conditions.

Attachment 1 displays the annual wind rose for the Nippon dataset.

TABLE 1
Surface Characteristics for the Nippon Dataset – Albedo and Surface Roughness

	ALBEDO				SURFACE ROUGHNESS			
SECTOR[1]	**SPRING**	**SUMMER**	**FALL**	**WINTER**	**SPRING**	**SUMMER**	**FALL**	**WINTER**
1	0.12	0.12	0.12	0.13	0.009	0.009	0.009	0.003
2	0.12	0.12	0.12	0.13	0.003	0.004	0.004	0.002
3	0.12	0.12	0.12	0.13	0.002	0.003	0.003	0.005
4	0.12	0.12	0.12	0.13	0.005	0.009	0.009	0.03
5	0.12	0.12	0.12	0.13	0.03	0.073	0.073	0.298
6	0.12	0.12	0.12	0.13	0.298	0.456	0.456	0.385
7	0.12	0.12	0.12	0.13	0.385	0.547	0.547	0.287
8	0.12	0.12	0.12	0.13	0.287	0.383	0.383	0.065
9	0.12	0.12	0.12	0.13	0.065	0.075	0.075	0.007
10	0.12	0.12	0.12	0.13	0.007	0.008	0.008	0.006
11	0.12	0.12	0.12	0.13	0.006	0.007	0.007	0.005
12	0.12	0.12	0.12	0.13	0.005	0.005	0.005	0.003

Note:
[1] Each sector is a 30 degree segment from true north.

TABLE 2
Bowen Ratio by Moisture Conditions for the Nippon Dataset

	Average Moisture Conditions				Dry Moisture Conditions			
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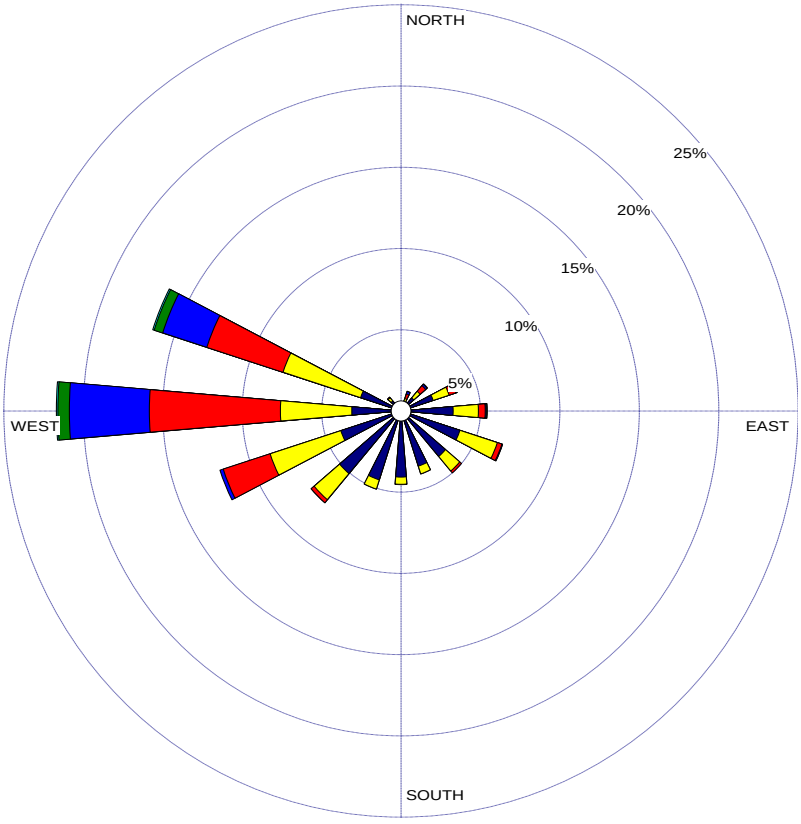
WIND ROSE PLOT:

Attachment 1
Nippon Paper Wind Rose 2004-2008

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:			
	CALM WINDS: **2.54%**	TOTAL COUNT: **35050 hrs.**	
	AVG. WIND SPEED: **2.88 m/s**		PROJECT NO.:

WRPLOT View - Lakes Environmental Software

ATTACHMENT A

2011 Modeling AERMET Description

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Note:
[1] Each sector is a 30 degree segment from true north.

TABLE 2
Bowen Ratio by Moisture Conditions for the Nippon Dataset

	Average Moisture Conditions				Dry Moisture Conditions			
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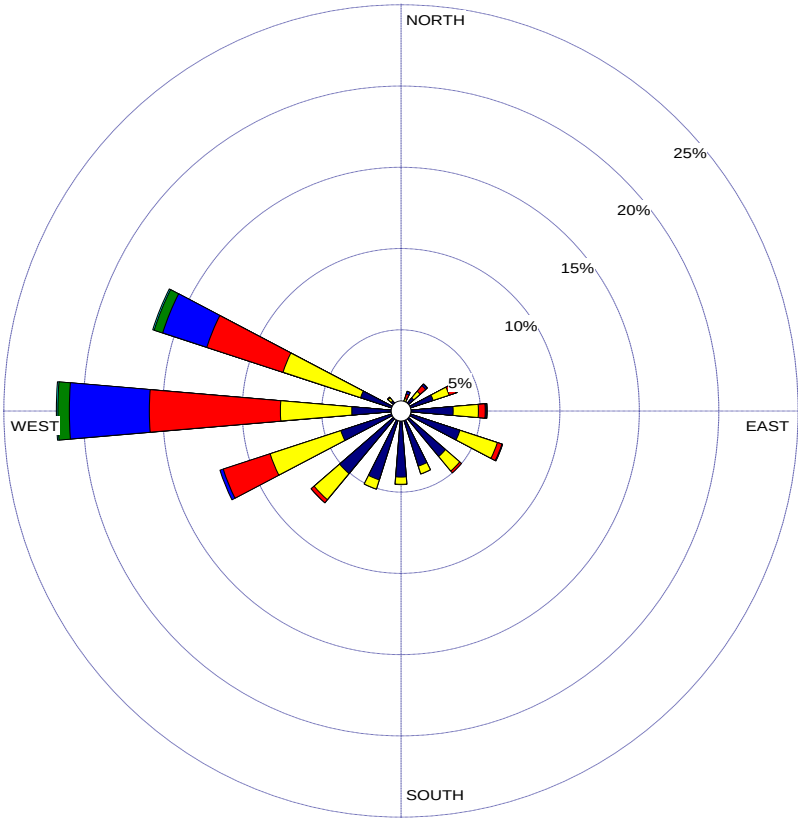
WIND ROSE PLOT:

Attachment 1
Nippon Paper Wind Rose 2004-2008

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:			
	CALM WINDS: **2.54%**	TOTAL COUNT: **35050 hrs.**	
	AVG. WIND SPEED: **2.88 m/s**		PROJECT NO.:

WRPLOT View - Lakes Environmental Software

ATTACHMENT B

AERMOD Modeling Files (electronic copy)

APPENDIX E

WASHINGTON STATE ENVIRONMENTAL POLICY ACT CHECKLIST

STATE ENVIRONMENTAL POLICY ACT
COVER PAGE

Department of Community & Economic Development
321 E. 5th Street, Port Angeles, WA 98362
360.417.4750 | www.cityofpa.us | ced@cityofpa.us

PZ 19-0024
file no.

APPLICANT INFORMATION

Applicant Name: McKinley Paper Company (Property Owner: ☑ Yes ☐ No)
Mailing Address: 1815 Marine Drive, Port Angeles, WA 98363
Phone: (360) 565-7045 Email: terry.nishimoto@biopappel.com
Applicant's Representative (If other than applicant): Terry Nishimoto
Phone: _____ Email: _____
(If applicant, or applicant's representative, is not the owner, property owner acknowledgment of this proposed land use action must be provided)

PROJECT INFORMATION

Project Title: McKinley Paper Stock Preparation Project
Project Summary: Upgrade the mill's pulping and stock preparation system to furnish 100% recycled pulp to the paper machines to produce 100% recycled paper, and replacement of the exterior roll conveyor.

SUBJECT PROPERTY

Full Street Address: 1902 Marine Drive, Port Angeles, WA 98363
Property ID / Parcel #: Parcel Nos. 063100000000 and 063000014600 Current Zoning: M-2 Industrial
Shoreline Designation: Mill shoreline is high intensity-industrial (HI-I), facility within 200' of the ordinary high water mark
Property Owner(s): _____ (☑ Same as Applicant)
Property Owner Address: _____

REQUIRED APPLICATION MATERIALS CHECKLIST

Only completed applications will be accepted. An application must include all of the following information:

☑ **SEPA Cover Page:** A completed application signed by the applicant or applicant's representative

☑ **SEPA Checklist**: Complete all questions and acquire authorized signatures

I have read and completed the application and attached all application materials and know it to be true and correct. I am authorized to apply for this permit and understand that additional information may be required and it is my responsibility to determine what other permits are required and to obtain permits prior to work, use, or activity. I understand that I will forfeit fees if I withdraw the application prior to permit issuance.

Terry Nishimoto

Date | Print Name | Signature (☑ Owner ☐ Representative)

Notes:

Fees: $350.00 ($125 for administrative CUPs)

MAR 14 2019
DATE STAMP

File: PZ 19-0021

CITY OF PORT ANGELES

ENVIRONMENTAL CHECKLIST

☒ **I have attached a SEPA Cover Page**

Purpose of Checklist:

Chapter 43.21C RCW the State Environmental Policy Act (SEPA) requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. The purpose of this review is to provide information to help you and the reviewing agency identify impacts that may result from your proposal and to identify methods to reduce or avoid impacts from the proposal if they exist. The review will help the agency decide whether further information is necessary or whether an environmental impact statement (EIS) is necessary.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Answer each question to the best of your knowledge with the most precise information known. Provide the best descriptions you can. In most cases you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply (N/A). Complete answers to the questions will avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems please ask the City Department of Community & Economic Development employees to assist you.

The checklist questions apply to all parts of your proposal, even if you plan to phase them over a period of time or on different parcels of land. If phasing is proposed, please provide that information in Item 11, the description section. Attach any additional information that will help describe your proposal or its environmental effects and include a site map.

FEES: Standard: $500.00 / Administrative Applications: $125.00

BACKGROUND

1) Name of project: ***McKinley Paper Stock Preparation Project***

   Address or general location of site: ***1902 Marine Drive, Port Angeles, WA 98363***

2) Applicant:

   Name: ***McKinley Paper Company***

   Address: ***1815 Marine Drive, Port Angeles, WA 98363***

   Phone number: ***(360)565-7045*** *e*-mail: ***terry.nishimoto@biopappel.com***

3) Contact Person (If different than Applicant)

   Name: ***Terry Nishimoto*** Address:

   Phone number: E-mail:

KB 4/30/19

PZ 19-0024
CITY USE ONLY

Date checklist prepared: ***3/14/2019***

4) Agency requesting checklist: ***CITY OF PORT ANGELES***

5) Proposed timing or schedule (including phasing, if applicable):

Construction and equipment installation to begin in second half of 2019

a. What is the long term objective of this proposal?

The long term objective is to supply the paper machines with 100% recycled paper while utilizing as much of the existing equipment as possible.

b. How does this project relate to long-term plans?

The project supports McKinley's long term sustainability goal to make 100% recycled paper.

6) Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

There are no further plans for future expansion of the stock preparation area.

7) List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal:

PSD applicability determination and associated air modelling has been conducted and submitted to the Department of Ecology. PSD was determined to be not applicable. A Notice of Construction (NOC) air permit application has been submitted to ORCAA.

8) Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal?

If yes, explain.

There are no known pending approvals or proposals related to this project.

9) List any government approvals or permits that will be needed for your proposal, if known.

9 - Flood Plain Permit is required for this proposal

- ***Shoreline Management Review (City of Port Angeles)***
- ***Building Permit for Roll Handling Conveyor (City of Port Angeles)***
- ***Notice of Construction Air Permit (Olympic Region Clean Air Agency)***
- ***NOC Tier II Analysis (Department of Ecology)***

10) Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed project will involve replacing the existing pulper with a pulper capable of supplying 100% recycled furnish to the paper machines. The existing paper machines will be modified so they can make paper with 100% recycled content. The new equipment will be integrated into the existing recycling facility's process. Current cleaning

4/30/19

PZ 19-0024
CITY USE ONLY

and screening equipment will be optimized to increase the capacity to match the production capacity of the pulper.

Running 100% recycle pulp will make the existing refiner mill obsolete, and therefore it will be decommissioned.

The installation of the proposed Stock preparation equipment will involve the following general aspects:

- ***Preparation: Utilities, survey, finalized site plan, equipment procurement, foundation plan, permitting and approvals***
- ***Removal of existing concrete equipment platforms***
- ***Excavation and subsequent construction of new equipment foundations estimated to be 2 feet deep to support the weight of the equipment***
- ***Demolition of obsolete equipment to make room for new equipment in the stock prep building***
- ***Installation of a new pulping unit and related de-trashing equipment onto the new foundation***
- ***Installation of additional screens and cleaners inside the recycle plant building***
- ***Construction of platforms and mezzanines inside the building to be able to safely access the new equipment***
- ***Upgrades to the existing, exterior roll handling conveyor structure which crosses over Marine Drive.***

11) Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. (answer on next page)

The McKinley Paper Company facility is located at 1902 Marine Drive, Port Angeles, WA 98363. The proposed project location is in Section 32, Township 31 North, Range 06 West and is located on McKinley's private property. The Stock Preparation equipment will be installed within existing buildings. The only exterior modification will be to the elevated roll handling conveyor structure which traverses over Marine Drive.

The City of Port Angeles Parcel numbers are 063100000000 and 063000014600.

Figures attached include:

Figure 1: Property Location Map

Figure 2: Proposed Project Layout Map

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PROJECT SPECIFIC ACTIONS:

Complete this section ***if your proposal involves a project specific action*** *such as a subdivision, new construction, a new or expanding business, a site specific rezone (not area-wide), a conditional use permit, a shoreline permit, or similar action:*

ENVIRONMENT:

1. EARTH

A. General description of the site (Check one):

Flat ☒ Rolling ☐ Hilly ☐ Steep Slopes ☐ Mountainous ☐ Other ☐

B. What is the steepest slope on the site (approximate percent slope)?

The maximum slope at the site is less than 2%.

C. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Soils at the site consist of fill material atop sand and gravel beach deposits.

D. Are there surface indications or history of unstable soils in the immediate vicinity?

Yes ☐ No ☒ If yes, describe:

E. Describe the purpose, type, and approximate quantities of any Filling or grading proposed. Indicate source of fill:

No filling or grading is planned to take place as part of this project.

F. Could erosion occur as a result of clearing, construction, or use?

Erosion is not expected to occur as a result of the project.

G. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The site is 100% impervious surface and will remain impervious after the project construction is complete.

H. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Exterior construction will take place in a paved area so impacts from erosion are not expected.

2. AIR

A. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

During the construction phase the exterior portion of the project may generate a small amount of construction dust and exhaust from construction equipment. After the completion of the project the pulp and

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paper operations will generate some water vapor similar to the operations. Increases and decreases of specific regulated air pollutants are discussed in detail in the NOC application.

B. Are there any off-site sources of emissions or odor that may affect your proposal?

Yes ☐ No ☒ If yes, describe:

C. Proposed measures to reduce or control emissions or other impacts to air, if any:

This project is scheduled to occur during the wet season to minimize construction-related dust. Water suppression will be used where possible, and as necessary, to prevent dust from leaving the property.

3. WATER

A. Surface:

i. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)?

Yes ☒ No ☐ If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

A lagoon is located on the McKinley Paper company property. The lagoon connects to the Port Angeles Harbor via a channel we call the lagoon channel. Most of the McKinley facility is located within 200 feet of a shoreline (the Lagoon, Port Angeles Harbor, or the Strait of Juan de Fuca). The roll handling conveyor portion of the project is approximately 55 feet from the ordinary high water mark (OHWM) of Port Angeles Harbor.

ii. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? Yes ☒ No ☐ If yes, please describe and attach available plans.

The project is located within the 200 foot setback zone from the ordinary high water mark (OHWM).

iii. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material:

No fill or dredge material will be placed in or removed from surface waters or wetlands.

iv. Will the proposal require surface water withdrawals or diversions? Yes ☒ No ☐ Give general description, purpose, and approximate quantities if known.

The proposed project will use mill process water similar the current pulping operation. We do not anticipate additional water use as a result of this project as future operations will be producing paper with 100% recycled material.

v. Does the proposal lie within a 100-year floodplain?

Yes, the project is located within the 100-year floodplain as determined by the Federal Emergency Management Agency (FEMA). The

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project site is within flood zone areas with the designation Zone A6 (7 feet base flood elevation), Zone V6 (13 feet flood elevation), Zone A2 (7 feet base flood elevation) Zone C, and Zone V2.

vi. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No discharge of water materials into surface waters will occur as a result of the proposed project.

B. Ground:

i. Will ground water be withdrawn, or will water be discharged to ground water? Yes ☐ No ☒ Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn and no water will be discharged to groundwater as a result of the proposed project.

ii. Describe waste material that will be discharged into the Ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing chemicals; agricultural wastes; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste materials will be discharged.

C. Water Runoff (including storm water):

i. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will the water flow into other waters? If so, describe.

Surface runoff from project stormwater will continue to be directed to the mill's waste water treatment plant, covered by NPDES Permit WA-000292-5. No additional stormwater is expected, as the project area is relatively small and there will be little change to the impervious surface area. In addition, the proposed project will not disturbed more than 1 acre.

ii. Could waste materials enter ground or surface waters?

Yes ☐ No ☒

If so, generally describe how and what.

D. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

Any excavated material would be temporarily stockpiled on impervious surfaces within the pre-approved stormwater collection/management system.

4. PLANTS

A. Check the type of vegetation found on the site:

☐ deciduous tree: alder, maple, aspen, other:

☐ evergreen tree: fir, cedar, pine, other:

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- ☒ shrubs
- ☒ grass
- ☐ pasture
- ☐ crop or grain
- ☐ wet soil plants: cattail, buttercup, bulrush, skunk cabbage,
- ☐ water plants: water lily, eelgrass, milfoil, other:
- ☐ Other types of vegetation:

B. What kind and amount of vegetation will be removed or altered?

No vegetation exists in the proposed project area, so no vegetation will be removed or altered.

C. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.

This is not applicable to the project because it is not currently vegetated nor is it suitable habitat for vegetation.

5. ANIMALS

A. Check any birds and animals which have been observed on or near the site or are known to be on or near the site:

Birds: hawk ☐ heron ☒ eagle ☒ songbirds ☒ other: *ducks, geese.*
Mammals deer ☒ bear ☐ elk ☐ beaver ☐ other
Fish: bass ☐ salmon ☐ trout ☐ herring ☐ shellfish ☒ other

B. Threatened or endangered species known to be on or near the site. (please identify): **Puget Sound Chinook Salmon, Strait of Juan De Fuca Summer chum Salmon and bull trout are listed as threatened species in the Elwha River, Morse Creek and the Stralt of Juan de Fuca including Port Angeles Harbor Only juvenile Puget Sound Chinook Salmon have been documented to occur in the lagoon and the lagoon channel. Southern Residential Orcas migrate through the Strait of Juan de Fuca.**

C. Is the site part of a migration route? Yes ☒ No ☐

If so, explain. ***Yes, The project lies within the Pacific Flyway for migratory birds. Anadromous species and migratory marine mammals such as Orca, pass by the project site through the Strait of Juan de Fuca***

D. Proposed measures to preserve or enhance wildlife.

The project site is a pre-existing industrial site. No wildlife will be displaced or disturbed by this project.

6. ENERGY AND NATURAL RESOURCES

A. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

The project's energy will be supplied by electricity. 100% recycled pulp uses much less energy than refined mechanical pulp. A net decrease in energy use is expected with this project.

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B. Would your project affect the potential use of solar energy by adjacent properties?

Yes ☐ No ☒

If so, generally describe.

C. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

The proposed equipment will be more energy-efficient than existing equipment and therefore will decrease the average power required to manufacture pulp and make paper at the facility by over 50%.

7. ENVIRONMENT HEALTH

1. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

No particular risks, as identified above, are inherent with either the construction of the project or with the overall completed project.

i. Describe special emergency services that might be required.

No additional emergency services would be required.

ii. Proposed measures to reduce or control environmental health hazards, if any.

No environmental health hazards have been identified in association with this project.

2. NOISE

i. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

No noise is expected to affect the proposed project.

ii. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise would be generated by construction activities in exterior areas, including the operation of construction equipment such as trucks and cranes. Truck traffic noise would be present. Construction inside buildings would likely occur on the site for several months. When the new process equipment arrives there will be heavy machinery onsite to place the process equipment on its foundations.

iii. Proposed measures to reduce or control noise impacts, if any:

We would limit exterior project construction activities to daytime hours.

8. LAND AND SHORELINE USE

A. What is the current use of the site and adjacent properties?

The overall site is an existing industrial pulp and paper facility. The current use is the same as the proposed use.

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B. Has the site been used for agriculture? Yes ☐ No ☒ If so, describe.

C. Describe any structures on the site.

The existing structures on the site are shown in Figure 2. The new process equipment will be installed inside the buildings with some work occurring outside to upgrade the existing roll handling conveyor.

D. Will any structures be demolished? Yes ☐ No ☒ If so, what?

Though no structures will be demolished some of the foundation work will be removed and replaced to accommodate the new machinery.

E. What is the current zoning classification of the site?

8E- Site is zoned Industrial Heavy (IH)

This site is zoned M-2 Industrial

F. What is the current Comprehensive Plan designation of the site?

The Comprehensive plan designation is Heavy Industrial.

G. What is the current Shoreline Master Program designation of the site?

The shoreline Master program designation is High-Intensity Industrial (HI-I)

H. Has any part of the site been classified as an "environmentally sensitive" area?

Yes ☐ No ☒ If so, specify.

I. How many people would reside or work in the completed project?

8I - Roughly 120 people would work at the completed site

No people will reside in the completed project. The staffing will be similar to the current staffing for this area of our facility.

J. Approximately how many people would the completed project displace?

No people will be displaced with this project.

K. Proposed measures to avoid or reduce displacement impacts, if any:

Not Applicable.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposal is consistent with the City of Port Angeles' adopted Growth Management Act land use plans that designate the site for industrial use.

9. HOUSING

M. Approximately how many units would be provided, if any?

Not Applicable

Indicate whether high, middle, or low-income housing.

Not Applicable.

N. Approximately how many units, if any, would be eliminated?

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Not Applicable.

Indicate whether high, middle, or low-income housing.

Not Applicable.

O. Proposed measures to reduce or control housing impacts, if any.

Not applicable.

10. AESTHETICS

1. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The only exterior construction, the roll handling conveyor, will have a post-project elevation essentially the same as the existing elevation.

2. What views in the immediate vicinity would be altered or obstructed?

None.

3. Proposed measures to reduce or control aesthetic impacts, if any.

None.

11. LIGHT AND GLARE

A. What type of light or glare will the proposal produce? What time of day would it mainly occur?

If new external security lighting in the vicinity of the project site is installed, it would supplement the existing security lighting that is in the adjacent recycle paper plant warehouse loading area.

B. Could light or glare from the finished project be a safety hazard or interfere with views?

The new lighting would not be a safety hazard. Light levels would be similar to other safety lighting on the mill facility.

C. What existing off-site sources of light or glare may affect your proposal?

None.

D. Proposed measures to reduce or control light and glare impacts, if any.

Security lighting would be directed so that it would minimize offsite impacts.

12. RECREATION

A. What designated and informal recreational opportunities are in the immediate vicinity?

The existing Olympic Discovery Trail passes through the mill property.

B. Would the proposed project displace any existing recreational uses?

Yes ☐ No ☒ If so, describe.

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C. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any.

Not Applicable.

13. HISTORIC AND CULTURAL PRESERVATION

A. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? Yes ☐ No ☒

If so, generally describe:

Though this site and its structures are not listed on any known registers, this site overlies an area that was once within the immediate traditional territory of the Klallam Village, Tse-With-Zen.

B. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

A literature review suggests cultural deposits were identified when the mill was constructed in the 1920s, although several subsequent and more recent cultural resource monitoring activities have not identified significant cultural resources. However, subsurface excavations at the mill resulted in the identification of shell midden deposits (45CA415) under the paper plant structure that have been determined eligible for listing in the National Register of Historic Places (NRHP).

Additionally, cultural deposits that are potentially eligible for listing on the NRHP have been identified southeast of the paper plant. These deposits consist of a cultural lens of charcoal and mammal bone.

C. Proposed measures to reduce or control impacts, if any:

The proposed project will involve minimal excavation , but installation of a 2 foot deep concrete foundation is planned to replace the existing 1 foot deep concrete apron, A professional archaeologist will be retained to monitor all ground disturbing activities in accordance with the terms of the Memorandum of Agreement, dated May 23, 2011, between Nippon, The Lower Elwha Klallam Tribe, WA Dept of Historic Preservation (DAHP), and other interested parties. The work plan created under this agreement technically applies to the cogeneration construction activities but continues to be utilized by McKinley as the standard operating Procedure for ground-disturbing activities.

14. TRANSPORTATION

A. Identify public streets and highways serving the site and describe proposed access to the existing street system. Show on site plans, if any.

14A - Temporary closures of Marine Drive may be necessary during construction. No permanent changes are proposed.

The site is accessed from Marine Drive via Highway 101. No changes to existing access are needed for construction or ongoing operation of the proposed project.

B. Is site currently served by public transit? Yes ☐ No ☒ If not, what is the approximate distance to the nearest transit stop?

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The site is not served by public transit. The nearest Clallam Transit stop is two miles from the Mill.

C. How many parking spaces would the completed project have? This is not applicable. This project is not altering our existing parking in any way.

How many would the project eliminate? Not Applicable.

D. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate either public or private).

No new roads or streets will be required.

E. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? Yes ☐ No ☒ If so, generally describe.

F. How many vehicular trips per day would be generated by the completed project?

The number of vehicular trips post-project is expected to remain essentially the same as when the mill is in operation.

(#) If known, indicate when peak volumes would occur(dates/times).

G. Proposed measures to reduce or control transportation impacts, if any.

As the number of vehicular trips is not being altered this does not apply to this project.

14G - Any mitigation for the proposed temporary closures will be addressed during the ROW Construction Permit

15. PUBLIC SERVICES

A. Would the project result in an increased need for public services (for example?: fire protection, police protection, health care, schools, other)? Yes ☐ No ☒

If so, generally describe.

No additional public services would be needed.

B. Proposed measures to reduce or control direct impacts on public services, if any.

There will be no impact to public services.

16. UTILITIES

A. Check any utilities currently available at the site:

electricity ☒ natural gas ☐ water ☒ refuse service ☒ telephone ☒ sanitary sewer ☒ septic system ☐ other ☐:

B. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No new utilities will be needed for the proposed project. The mill will not change its utility providers from the current providers.

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17. ECONOMICS

A. If the proposal will result in expansion of an existing business, please describe the nature of the expansion: (e.g., additional land and/or buildings, new equipment, new employees).

The proposal will increase the pulp production capability from the current~700 tons/day (~450 Mechanical Pulp + 250 Recycle) to ~900 ton/day of Recycle pulp using the same building and infrastructure that is already in place.

B. If the proposal is the creation of a new business, please describe (e.g., re-use of an existing building and site, construction of a new building).

Not Applicable

C. Describe if the proposal is the first of its type in the community, or what the similar uses are.

Not Applicable

D. How many people will the proposal provide employment for at its completion and what types of jobs will be created (e.g., sales clerks, factory workers, etc.)?

The project will provide the infrastructure to restart the mill and return to full employment. We anticipate adding ~120 employees to the current staffing once the mill is up to full operation.

- ***Manufacturing operators***
- ***Mechanics***
- ***Electricians***
- ***Shipping and Receiving personnel***

The Construction of this project may contract or subcontract roughly 200 temporary employees.

E. Where will the materials, goods or services utilized by the proposal come from?

Contractors will be utilized for most installation and construction work. Equipment will be purchased from a specialized Pulp and Paper equipment provider. The majority of this equipment will be manufactured in Wisconsin and in Europe.

F. Where will the goods or services produced by the proposal be utilized?

McKinley Paper products will be sold within the US and abroad.

G. Who will utilize the goods or services produced by the proposal?

The paper products manufactured by McKinley Paper will supply converters and box plants that will convert rolls of paper to finished products for consumers.

H. Will the proposal alter the tax assessments of the area?

No it will not.

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Endangered Species Act (ESA)

Supplemental Checklist

Answer to the best of your knowledge.

This checklist was developed to help project proponents and government agencies identify when a project needs further analysis regarding potential adverse effects on Endangered Species as required by the Endangered Species Act (ESA). For our purposes, "ESA listed species" are any species listed as endangered, threatened, or being considered for listing.

This supplemental checklist is for all development within ESA Potential Impact Areas, which include the following locations:

- Federal Emergency Management Act (FEMA) designated floodplain and/or floodway areas;
- Riparian Buffer Zones (RBZ) as described by the Dept of Natural Resources 2007 stream typing system and WDFW's 1997 stream buffer guidelines; and/or
- Channel Migration Zones (CMZ) plus 50' as identified according to Dept of Ecology 2003).

If ESA listed species are present or ever were present within the ESA Potential Impact Area where your project will be located, your project has the potential for affecting them, and you must comply with the ESA. The questions in this section will help determine if your proposed project could have an impact.

The Port Angeles regional watershed is an area where several endangered species have historically been present. Please answer the following questions to the best of your knowledge to assist the city in determining if your project will have adverse impacts to ESA species or their habitats.

Port Angeles Community and Economic Development Department staff can provide technical assistance in answering the following questions in this checklist. If necessary, the Washington Department of Fish and Wildlife (WDFW) regional office can also provide information to help you answer these questions.

PROJECT SPECIFICS: The questions in this section are specific to the project and vicinity.

1. Do you know of any endangered species or WDFW priority species on or in the vicinity of your project? Yes ☒ No ☐

   If yes, identify those species: ***Puget Sound Chinook Salmon***

2. Name of waterbody nearest to your project: ***Port Angeles Harbor.***

3. What is the distance from your project to the nearest body of water?

The roll handling conveyor portion of the project is about 55 ft from the Port Angeles Harbor shoreline.

A buffer in the form of a street, sidewalk, and parking areas exists between the project area and Port Angeles Harbor.

4. What is the current land use adjacent to the potentially affected water body (*developed including commercial, parking lots, residential, paved and/or graveled surfaces, agriculture, forestry, etc)*? ***The current land use is an industrial paper***

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mill and the areas adjacent to the surrounding water bodies are occupied by multiple buildings and parking lots and paved area.

5. What is the predominant vegetative cover between the project and the potentially affected water body *(dense forest, woodland, scrub, grasses, etc)*?

There is no vegetative cover this is a paved area.

6. Is the project above a barrier to fish passage:

- natural permanent barrier (waterfall): Yes ☐ No ☒
- natural temporary barrier (beaver pond): Yes ☐ No ☒
- human-made barrier (culvert, dam): Yes ☐ No ☒
- other: Yes ☐ No ☒ If yes, explain:

If you answered yes to the questions above, describe the barrier and source of information:

This project is not located above or part of any fish passage barriers.

7. If you answered yes to question 7 above, are there any resident salmonid populations above the blockage? Yes ☐ No ☐ Don't know ☐

8. Percent of the project as impervious surface (includes pavement & roof area)? ***100% of the project area is and will remain an impervious surface.***

FISH MIGRATION: The questions in this section will help determine if this project could interfere with the migration of adult and juvenile fish. *(Both increases and decreases in water flows can affect fish migration.)*

1. Does the project require the withdrawal of:

i. Surface water? Yes ☒ No ☐

Historical water consumption for this facility has been approximately 8-9 million gallons per day (MGD). The new process water demands are lower, and we should experience an overall reduction in water usage.

All process water to the mill is sourced from the Elwha River. No overall increases in freshwater consumption is anticipated.

ii. Ground water? Yes ☐ No ☒

Amount N/A

From where

Depth of well

(If you answered yes to any of the above questions, you will need to contact the Washington Department of Fish and Wildlife and the Washington Department of Ecology to obtain appropriate approvals)

2. Will any water be rerouted? Yes ☐ No ☒

If yes, will this require a channel relocation? Yes ☐ No ☐

Please describe:

3. Will there be retention or detention ponds?

Yes ☐ No ☒

If you answer yes, will this be an infiltration pond or a surface discharge to either a municipal storm water system or a surface water body?

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Yes ☐ No ☐

If you answer "yes" to a surface water discharge, please give the name of the waterbody that will receive the discharge:

4. Will this project require the building of any temporary or permanent roads?

Yes ☐ No ☒ *(Increased road distance may affect the timing of water reaching a stream and may impact fish habitat.)*

5. Are any new or replacement culverts or bridges proposed as part of this project? Yes ☐ No ☒

6. Will topography changes affect the duration/direction of runoff flows?

Yes ☐ No ☒ If yes, describe the changes:

7. Will the project involve any placement of fill within the ESA Potential Impact Area? Yes ☐ No ☒

If you answered yes, describe expected impacts on flood storage and/or flood conveyance and how these impacts will either be avoided or mitigated:

<u>WATER QUALITY</u>: The questions in this section will help determine if this project could adversely impact water quality for either surface or groundwater. Such impacts can cause problems for listed species. *(Water quality can be made worse by runoff from impervious surfaces, altering water temperature, discharging contaminants, etc.)*

1. Do you know of any problems with water quality in any of the streams within ESA Potential Impact Areas? Yes ☐ No ☒

(Information on impaired water bodies can be obtained from Washington Department of Ecology)

If you answered yes, describe:

2. Will your project either reduce or increase shade along or over a waterbody?

Yes ☐ No ☒ *(Removal of shading vegetation or the building of structures such as docks or floats often result in a change in shade).*

If you answered yes, please describe:

Will the project introduce any nutrients or other contaminants (fertilizers, other waste discharges, or storm water runoff) to the waterbody? Yes ☐ No ☒

3. Will turbidity be introduced to a water body by construction of the project or during operation of the project? Yes ☐ No ☒

(In-water or near water work will often increase turbidity.) If you answered yes, consult with Washington Department of Ecology to ensure compliance with water quality regulations.

4. Will your project require long term maintenance that could affect water quality in the future, e.g., bridge cleaning, highway salting, chemical sprays for vegetation management, clearing of parking lots? Yes ☐ No ☒ If yes, please describe:

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VEGETATION: The following questions are designed to determine if the project will affect riparian vegetation, thereby, adversely impacting salmon.

1. Will the project involve the removal of any vegetation from the stream banks?

Yes ☐ No ☒ If you answered yes, please describe the existing conditions, and the amount and type of vegetation to be removed:

If any vegetation is removed from a riparian area, a mitigation plan will be required, please provide a copy of the plan if available. Describe briefly what your proposed mitigation would consist of: ***No vegetation will be removed.***

NOTE: Most applicants should have the information necessary to answer most of the questions in this checklist. Additional information will need to be obtained from local and state agencies if it appears that the project is likely to affect ESA listed species.

RESOURCE AGENCIES:

Washington Department of Fish and Wildlife Website

http://wdfw.wa.gov/

This site has useful information on fish habitat.

Washington Department of Ecology Website

www.ecy.wa.gov

National Marine Fisheries Services Website

Evolutionarily Significant Unit (ESU) maps can be found at

www.nwr.noaa.gov

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NON-PROJECT SPECIFIC ACTIONS:

*Complete this section **only if your proposal involves a non-project specific action** such as a Comprehensive Plan Amendment, Zoning Code Amendment, area-wide rezone (City-wide or large sub-area),or other similar action:*

When answering these questions be aware of to what extent the proposal or the types of activities likely to result from the proposal would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to conserve energy and natural resources:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreland and land use impacts:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s):

This is not a non Project action
KB 4/30/19

PZ 19-0024
CITY USE ONLY

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

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PZ 19-0021 CITY USE ONLY

By affixing my signature hereto, I/we certify and declare under penalty of perjury that the information furnished herein is true and correct to the best of my knowledge and that I am the owner of the premises where the work is to be performed or am acting as the owner's authorized agent. I further agree to hold harmless the City of Port Angeles as to any claim (including costs, expenses and attorney's fees incurred in the investigation of such claim) which may be made by any person, including the undersigned, and filed against the City of Port Angeles, but only where such claim arises out of the reliance of the City, including its officers and employees, upon the accuracy of the information provided to the City as a part of this application.

I further agree that City of Port Angeles staff may enter upon the subject property at any reasonable time to consider the merits of the application, to take photographs and to post public notices.

SIGNED: _____

NAME: Terry Nishimoto

DATE: 3/14/19

DATE: _____

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