SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [HELP]

1. Name of proposed project, if applicable:

Port of Longview Maintenance Facility Area (MFA) Cleanup Action

2. Name of applicant:

International Paper Company (International Paper)

3. Address and phone number of applicant and contact person:

Applicant:
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4. Date checklist prepared:

December 4, 2020

5. Agency requesting checklist:

Washington State Department of Ecology (Ecology)

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

Ecology has prepared a draft Cleanup Action Plan (dCAP) for the Port of Longview MFA (Site). It is anticipated that Ecology will issue a public notice in January 2021 inviting public review and comment on the dCAP. Once the comment period ends, Ecology will review and consider all

public comments and may make changes to the dCAP. If warranted based on changes to the dCAP, Ecology will notify the public of any additional public comment periods.

Once the Cleanup Action Plan (CAP) is final, Ecology will develop a formal legal document, most likely an Agreed to Order (AO), that will detail how the cleanup action will be carried out, and an Engineering Design Report (EDR) containing detailed design information and construction documents for the cleanup action will be prepared. The cleanup action will be implemented once Ecology approves the EDR.

The dCAP provides a time frame for soil and groundwater components of the cleanup action. The anticipated implementation schedule for the cleanup action is summarized as follows:

Implement CAP----------Approximately 4 years
Soil Component ----------Within 2 years of CAP approval
Groundwater Component ----------Within 4 years of CAP approval
Compliance Monitoring
Soil Component (groundwater monitoring)----10 years following soil cleanup action
Groundwater Component----------6 years following groundwater cleanup action

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

The cleanup action includes institutional controls in the form of a restrictive covenant on the property to protect human health and the environment from exposure to soil remaining at the Site exceeding applicable Model Toxic Control Act (MTCA) cleanup levels. The restrictive covenant will, at a minimum, prohibit intrusive activities at the Site within the solidified soil that may interfere with the performance or integrity of the cleanup action. The use of Site groundwater as a drinking water source will also be prohibited. The restrictive covenant will be recorded prior to completion of the soil and groundwater cleanup actions. An Institutional Controls (IC) Plan will be developed prior to completion of the soil cleanup action. The IC Plan will prescribe periodic inspections of the Site, including evaluations of the integrity of asphalt pavement. The IC Plan will be reviewed and updated every 5 years as part of the periodic review process.

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

The following studies and reports have been prepared directly related to the proposed cleanup action:

- AECOM. 2016. *Public Review Draft Remedial Investigation/Feasibility Study (RI/FS) Report*. Prepared for International Paper Company. July 12.
- Ecology. 2020. *Draft Cleanup Action Plan for Former International Paper Facility, Port of Longview Maintenance Facility Area, Longview, Washington*. Prepared for Washington State Department of Ecology. May 1.
- Ecology. 2018. *Ecology Comments Embedded in Public Review Draft Remedial Investigation/Feasibility Study Report, Port of Longview, Maintenance Facility Area, Longview, Washington*. June 27.
- URS. 2013. *Final In Situ Soil Remediation Treatability Study Report, Port of Longview's Maintenance Facility Area, Longview, Washington.* June 28.
- URS. 2012. *Mechanics Shop Investigation Report, Port of Longview's Maintenance Facility Area, Longview, Washington.* April 10.

- URS. 2011. *Draft Revised Remedial Investigation/Feasibility Study (RI/FS) Report, Port of Longview, Maintenance Facility Area, Longview, Washington.* May.
- URS. 2008. *Additional Investigation Workplan Port of Longview's Maintenance Facility Area, Longview, Washington.* June 27.
- URS. 2007. *Draft Remedial Investigation/Feasibility Study, Port of Longview, Maintenance Facility Area*. January.
- URS. 2003. *As-Built Report/Operation and Maintenance Manual – Biosparging/ Bioventing System, Maintenance Facility Area, Former International Paper Facility, Longview, Washington*. March.
- URS. 2002. *Work Plan, Additional Action for Port of Longview Maintenance Facility Area, Longview, Washington*. February.
- URS. 2000. *Soil and Groundwater Investigation of Western Area, International Paper, Longview.* February 21.
- URS. 2000. *Soil and Groundwater Investigation of Eastern Area, International Paper, Longview.* February 7.
- URS. 2000. *Additional Perimeter Boring Investigation Report and Maintenance Facility Work Plan, International Paper, Longview.* February 4.
- URS. 2000. *Offsite Investigation Report and Additional Action Feasibility Study, Port of Longview Maintenance Facility.* September.
- URS. 1998. *Investigation of Areas of Soils Impact Outside the Containment Area*. December 17.

A final CAP will be prepared/issued following the public comment period on the dCAP. Upon approval of the final CAP, an EDR will be prepared for the proposed soil and groundwater cleanup actions. A site-specific health and safety plan (HASP) will be developed that will govern site safety during implementation of the remedy. A compliance monitoring plan (CMP) will be developed for the soil and groundwater cleanup actions, and compliance monitoring reports will be prepared following monitoring events or periods. A construction completion report will be prepared after the completion of the soil cleanup action, and a groundwater completion report will be prepared after completion of the long-term groundwater monitoring.

As noted in A.7, an IC Plan will be developed prior to completion of the soil cleanup action. This plan will be reviewed and updated every 5 years as part of the periodic review process.

9. 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 applications pending for governmental approvals of other proposals directly affecting the property covered by this proposal.

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

The proposed cleanup action will be implemented by International Paper under a formal legal document, most likely a new AO, developed by Ecology pursuant to the authority of the MTCA, Revised Code of Washington (RCW) 70.105D.050(1). Per the AO, and pursuant to RCW 70.105D.090(1), International Paper will be exempt from the procedural requirements of Chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 RCW and from any laws requiring or authorizing local government permits or approvals. However, International Paper will comply with the substantive requirements of such permits or approvals.

At this time, other than stormwater permits under 90.48 RCW, no federal, state, or local permits have been identified as being applicable to the actions that will be required by the AO.

11. 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.)

International Paper will implement and complete the cleanup action prescribed in the final CAP. The cleanup action includes a soil component and a groundwater component. The soil component includes limited excavation, removal, and off-site disposal of shallow soil to allow for the expansion of subsurface soils that will be treated by *in situ* soil solidification. Shallow soil will be disposed of at an approved landfill. Following soil excavation and removal, *in situ* soil solidification will be used to treat areas containing Dense Non-Aqueous Phase Liquid (DNAPL) and areas with chemicals of concern (COCs) at concentrations exceeding MTCA cleanup levels. Based on currently available information, the following soil remediation depths have been developed:

Zone 1:

- Non-impacted surface soil: Excavation from existing grade to 3 feet below ground surface (bgs). Stockpile soil for re-use after solidification.
- Impacted soil excavation: Excavation from 3 to 4.5 feet bgs. Dispose of impacted soil.
- Impacted soil solidification: *In situ* solidification from 4.5 to 9 feet bgs. Import soil as necessary to restore existing grade.

Zone 2:

- Non-impacted surface soil: Excavation from existing grade to 3 feet bgs. Stockpile soil for re-use after solidification.
- Impacted soil excavation: Excavation from 3 to 5 feet bgs. Dispose of impacted soil.
- Impacted soil solidification: *In situ* solidification from 5 to 9 feet bgs. Import soil as necessary to restore existing grade.

The soil cleanup action will require temporary removal of approximately 2,500 square feet of the Port of Longview's Mechanics Shop to access soil cleanup action areas within the building footprint and an approximately 220-foot-long section of nearby concrete retaining wall near Paper Way topped with a chain link fence. The building, retaining wall, Paper Way and chain link fence will be reconstructed following completion of the *in situ* solidification. The soil cleanup action will also require temporary disturbance of a stormwater ditch on the east side of Paper Way that is within the cleanup action area, including the temporary removal of a 42-inch-diameter stormwater culvert. The ditch will be regraded and the culvert will be replaced following completing of the soil cleanup action.

After soil removal, disposal, solidification, and regrading, groundwater treatment will be implemented. Groundwater treatment will involve *in situ* chemical oxidation (ISCO) followed by monitored natural attenuation (MNA). ISCO and MNA are treatment technologies that detoxify contaminants through processes that alter the contaminants to less toxic or non-toxic chemicals. Groundwater monitoring will continue until groundwater cleanup levels are achieved.

ISCO will be conducted by using a drilling rig to push an approximately 2-inch-diameter steel rod to depth, injecting a chemical reagent (oxidant), withdrawing the rod, then grouting the

borehole to seal it. Oxidants will be injected during multiple events, as necessary, to meet groundwater cleanup goals based upon periodic reviews. MNA will be implemented during and after ISCO and continue until cleanup levels are achieved.

In 2002, an *in situ* remediation system consisting of bioventing and biosparging wells was installed in the MFA as part of an "additional action" to the cleanup action on the adjacent Treated Wood Products (TWP) Area. This system operated until 2008, when it was shut down. As part of the proposed cleanup action in the MFA, existing bioventing and biosparging wells will be decommissioned by grouting in place. One horizontal bioventing well, four vertical bioventing wells, and three horizontal biosparging wells on the Site will be decommissioned.

Figures 1 through 6 from the dCAP identify the general project location in Longview near the Columbia River (Figure 1), the Site location on the former International Paper facility (Figure 2), the MFA Site (Figure 3), the extent of contaminated soil at the Site (Figure 4), the extent of contaminated groundwater at the Site and location of existing bioventing, biosparging, and monitoring wells (Figure 5), and proposed soil treatment zones (Figure 6). Figure 7-16 from the RI/FS shows the proposed groundwater treatment area.

12. 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.

The Site is located at the Port of Longview on the north side of Terminal Way, on Cowlitz County tax parcel 10171 (located inside Longview city limits) and tax parcel 6161401 (located outside Longview city limits). The Site is located in Sections 8 and 9 of Township 7 North, Range 2 West. The Site is located on the north side of the Columbia River approximately 66 river miles upstream (east) from the Pacific Ocean and less than 2 river miles downstream (west) of the confluence of the Columbia River and Cowlitz River (Figure 1 and Figure 2).

B. Environmental Elements [HELP]

1. *Earth* [help]

a. General description of the site:

(circle one) Flat, rolling, hilly, steep slopes, mountainous, other _____

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

The Site has a relatively flat topography with an average elevation of approximately 10-15 feet. The property drops slightly toward the Columbia River, which is roughly 700 feet south of the Site.

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

agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Site geological and hydrogeological conditions have been determined based upon multiple investigations conducted at the Site and surrounding areas. The Site is situated on a reclaimed floodplain of the Columbia River, and surficial soils consist of gravelly sandy fill and hydraulic/dredged sand fill. The thickness of the fill layer varies in the Site area and ranges from 1 foot to approximately 10 feet. Native alluvium underlies the fill and consists of interbedded sands and silts, which vary laterally because of the constantly changing nature of the depositional environment associated with the Columbia River.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

The Washington Department of Natural Resources online geologic information portal indicates the entire Site is within a "moderate to high" liquefaction zone.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The total area of the MFA is approximately 5 acres. As noted in A.11, the following soil remediation depths have been developed based on currently available information:

Zone 1:

- Non-impacted surface soil: Excavation from existing grade to 3 feet bgs. Stockpile soil for re-use after solidification.
- Impacted soil excavation: Excavation from 3 to 4.5 feet bgs. Dispose of impacted soil.
- Impacted soil solidification: *In situ* solidification from 4.5 to 9 feet bgs. Import soil as necessary to restore existing grade.

Zone 2:

- Non-impacted surface soil: Excavation from existing grade to 3 feet bgs. Stockpile soil for re-use after solidification.
- Impacted soil excavation: Excavation from 3 to 5 feet bgs. Dispose of impacted soil.
- Impacted soil solidification: *In situ* solidification from 5 to 9 feet bgs. Import soil as necessary to restore existing grade.

The soil cleanup action will involve the excavation and removal of approximately 2,100 cubic yards of contaminated soil. *In situ* solidification of approximately 5,600 cubic yards will cause expansion of existing soils, reducing the amount of imported fill necessary to return the project area to existing grades after removal of contaminated soils.

Following excavation and solidification activities, the solidified soil will be overlaid with new geotextile fabric and covered with reused clean fill and imported soil, as needed. It is anticipated that imported fill material will be sourced from the Longview or Kelso area. Fill material will be sampled prior to importing to confirm that soil concentrations are below the applicable MTCA cleanup levels. The surface of the clean fill will be graded, and new asphalt pavement will be replaced over the excavation, solidification, and transition areas to minimize potential exposure to the solidified soil and restore the Site to pre-remediation grades.

As part of the cleanup action, the existing bioventing and biosparging wells will be decommissioned by grouting in place.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Excavation and removal of non-impacted and impacted soils, on-site stockpiling of non-impacted soils, and *in situ* mechanical mixing of solidifying agents into the subsurface soils could result in temporary erosion and sediment transport via stormwater runoff. A Temporary Erosion and Sediment Control (TESC) plan will be developed and implemented during the cleanup action to prevent the escape and transport of Site soils via stormwater runoff.

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

The MFA contains the Port of Longview's Mechanics Shop and a paved storage yard and is almost entirely covered with impervious surfaces. All impervious surfaces disturbed during the cleanup action will be replaced. Additionally, all solidified areas outside of existing impervious surfaces will be paved. Because of this, the cleanup action will result in approximately 4,000 square feet of new impervious surfaces on the Site.

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

A TESC plan will be developed and implemented during cleanup action activities to prevent the escape and transport of Site soils via stormwater runoff. Following soil excavation/removal and solidification activities, engineering controls will include replacement of asphalt pavement over the excavation, solidification, and transition areas, which will prevent erosion following completion of the cleanup action.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction activities have the potential to create temporary fugitive dust emissions from materials handling and earth-moving activities. Also, mobile and stationary equipment will be used during construction, generating typical exhaust emissions (that is, carbon monoxide, sulfur, and particulates) due to the combustion of gasoline and diesel fuels. These dust and exhaust emissions are expected to be minimal, localized, and temporary. The project will also generate greenhouse gas emissions through materials usage, construction activity, and periodic monitoring. Total emissions are assumed to be negligible and have not been quantified.

As summarized in the dCAP, the RI/FS evaluated potential human exposure pathways for the COCs present in the MFA, including: potential exposure to dust or volatile emissions, inhalation of volatile compounds in affected shallow groundwater during construction or remediation, potential exposure to vapors emitted to the outdoor air from affected subsurface soil during daily work activities, potential inhalation exposure to volatile chemicals in vapors mitigating into indoor air. The RI/FS concluded that potential exposure to COCs in soil and groundwater through inhalation of fugitive dust emissions was "incomplete" because the existing asphalt

pavement limits particulate exposure routes from impacted subsurface soils and groundwater supply wells are not present in the vicinity of the Site.

The soil cleanup action will require removing the existing asphalt pavement covering affected subsurface soils, removing this barrier. As part of the CAP for the MFA, a soil management plan will be developed describing existing institutional controls at the Site and procedures to be used when excavating, handling and disposing of contaminated soil. Construction and remediation workers are expected to follow all institutional controls, the soil management plan, and health and safety plans to prevent exposure to air emissions during implementation of the cleanup action.

Because the remedy for contamination at the Site will result in contamination remaining at the Site above unrestricted cleanup levels, institutional controls will be required to prohibit activities that might interfere with the remedy and expose future industrial workers to COCs. Future site industrial workers will be expected to follow all institutional controls and applicable worker health regulations.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no known off-site sources of emissions or odor that will affect this proposal.

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

The Southwest Clean Air Agency is responsible for enforcing federal, state, and local air pollution standards and governing air pollutant emissions from new sources in Cowlitz, Lewis, Wahkiakum, Clark, and Skamania Counties. As required by Southwest Clean Air Agency regulations, emissions will be controlled by using reasonably available control technologies and best management practices.

3. Water [help]

a. Surface Water: [help]

1) 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)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The Columbia River (a type “S” and fish-bearing stream) is located approximately 700 feet south of the MFA. No other surface water bodies are in the vicinity of the project.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The project will not require any work over, in, or adjacent to (within 200 feet) the Columbia River.

3) 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 and/or dredge material will be placed in/removed from surface waters or wetlands.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

The project will not require surface water withdrawals or diversions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The Site is not located within a 100-year floodplain. The Site lies within Federal Emergency Management Agency (FEMA)-mapped "Flood Zone X," in an area with reduced risk of flood due to levee. FEMA FIRM Map Panel 0677G, with an Effective Date of December 16, 2015, indicates that the project area "is shown as being protected from the 1-percent-annual-chance or greater flood hazard by a levee system that has been provisionally accredited."

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

The project will not include any discharge of waste materials to surface waters.

b. Ground Water: [help]

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn from a well, and no water will be discharged to groundwater. As noted in A.11, groundwater treatment during the cleanup action will involve ISCO injections of a liquid reagent (oxidant) into groundwater.

Some groundwater may be encountered during excavation activities and if necessary, will be pumped directly from the open excavation into temporary storage tanks for treatment and/or off-site disposal. Groundwater elevations in the alluvium generally range between zero and 12 feet above mean sea level in the Site area. Groundwater elevations vary in response to the stage of the adjacent Columbia River, which fluctuates in response to tidal effects as well as flow quantity variations. Four general stratigraphic units are evident at the Site: Upper Sand (Gravelly Sand/Sand Fill), Upper Silt, Lower Sand, and Lower Silt. The top of the Upper Silt unit is generally encountered in the MFA at depths ranging from approximately 5 to 12 feet bgs.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; 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.

Waste material will not be discharged into the ground. However, both *in situ* solidification (used to solidify any contaminated soil remaining after excavation) and groundwater treatment will

involve mixing/injecting chemicals into the ground. The solidification process will involve application of a preferred “Mix 28” containing 8 percent NewCem® slag cement, 2 percent bentonite, and 0.5 percent caustic soda into soil.

The groundwater treatment uses ISCO followed by MNA. Chemical oxidation and MNA are treatment technologies that detoxify COCs through chemical processes that alter the COCs to less toxic or non-toxic chemicals. Chemical oxidation, using an oxidant such as persulfate or Fenton’s reagent, will be performed during sequential injection events using temporary push-probe injection points or short-term injection wells throughout the area in which diesel-range organic (DRO) concentrations in groundwater exceed MTCA Method A cleanup levels. Oxidants will be injected during multiple events, as necessary, to meet groundwater cleanup goals based upon periodic reviews.

Additionally, the existing bioventing and biosparging wells will be decommissioned by grouting in place.

c. Water runoff (including stormwater):

1) 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 this water flow into other waters? If so, describe.

Stormwater runoff at the Site currently travels as sheet flow to nearby catch basins and stormwater pipelines that connect to the Port of Longview’s stormwater system, except on the eastern edge of the MFA, where stormwater runoff from Paper Way likely flows into the open stormwater ditch on the east side of the road.

As part of the TESC plan for the cleanup action, temporary stormwater control structures will be installed to manage stormwater on the Site during excavation and solidification and will be used to prevent sediment or COCs from entering the existing stormwater system.

Following excavation and solidification activities, the solidified soil will be overlaid with new geotextile fabric and covered with imported or reused clean fill. The surface of the clean fill will be graded, and new asphalt pavement will be placed over the excavation, solidification, and transition areas to minimize potential exposure to the solidified soil. As noted previously, the cleanup action will result in approximately 4,000 square feet of new impervious surfaces on the Site. Stormwater runoff from the restored and new pavement will drain in a similar manner to the existing stormwater system.

2) Could waste materials enter ground or surface waters? If so, generally describe.

This project will not generate waste materials that could enter groundwater or surface waters. Non-impacted surface soils will be stockpiled on-site for re-use after solidification, and impacted soils will be removed and disposed of off-site. There is potential for contaminated soils to escape and be transported via stormwater runoff if not properly contained.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

Soil cleanup action activities in the stormwater ditch adjacent to Paper Way and under Paper Way will likely require a temporary bypass or diversion of stormwater runoff. The completed cleanup action will not alter or otherwise affect drainage patterns in the project vicinity. Stormwater runoff from the restored and new pavement will drain in a similar manner to the existing stormwater system.

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

A TESC plan will be developed and implemented during cleanup action activities to prevent the escape and transport of Site soils via stormwater runoff. Following soil excavation/removal and solidification activities, engineering controls will include replacement of asphalt pavement over the excavation, solidification, and transition areas, which will prevent erosion following completion of the cleanup action.

4. Plants [help]

a. Check the types of vegetation found on the site:

____deciduous tree: alder, maple, aspen, other
____evergreen tree: fir, cedar, pine, other
____shrubs
_X__grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops.
____ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

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

The majority of the MFA is covered in impervious surfaces. However, mowed and unmowed grasses occur in and adjacent to a stormwater drainage ditch along the southeast edge of the MFA, adjacent to Paper Way. An estimated 4,000 square feet of vegetation in this area will be disturbed or removed during implementation of *in situ* solidification in Zone 2 of the soil cleanup action area. This area will be paved following solidification.

c. List threatened and endangered species known to be on or near the site.

According to a review of the Washington Department of Natural Resources' Natural Heritage Program's data set for rare plants current as of November 2020 (accessed at https://data-wadnr.opendata.arcgis.com/), there are no documented occurrences of sensitive, threatened, or endangered plant species in the project vicinity. The Site has been intensively disturbed by development. Essentially, the entire project area has been excavated, filled, paved, and/or occupied by built structures. There is no habitat for threatened or endangered plants.

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

As noted previously, the cleanup action requires that all solidified soils be paved to protect future workers from potential exposure to COCs remaining on the Site. Because of this, no landscaping, native plantings, or restoration of disturbed vegetation is included in this proposal.

e. List all noxious weeds and invasive species known to be on or near the site.

Given the industrial nature of the Site vicinity, noxious and invasive species are likely to occur in the vegetated area associated with the ditch along the southeast edge of the MFA. However, no weed surveys have been conducted at the Site as part of this proposal.

5. Animals [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

b. List any threatened and endangered species known to be on or near the site.

The U.S. Fish and Wildlife Service IPaC tool maps Columbian white-tailed deer (*Odocoileus virginianus leucurus*), marbled murrelet (*Brachyramphus marmoratus*), streaked-horned lark (*Eremophila alpestris strigata*), yellow-billed cuckoo (*Coccyzus americanus*), and bull trout (*Salvelinus confluentus*) as threatened or endangered species that are potentially present in the area.

However, given that the Site is nearly entirely paved and devoid of surface waters, habitat for these listed species is not present at the Site.

c. Is the site part of a migration route? If so, explain.

The Site is within the Pacific Flyway, one of four principal north-south migration routes in North America.

d. Proposed measures to preserve or enhance wildlife, if any:

Given the existing conditions at the Site, which are not conducive to wildlife habitat, no direct or indirect impacts to wildlife are anticipated. Therefore, no measures are proposed.

e. List any invasive animal species known to be on or near the site.

No invasive animal species have been documented at the Site. However, it is likely that invasive species such as Norway rats (*Rattus norvegicus*) occur in the project area.

6. Energy and Natural Resources [help]

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 completed project will not require additional energy or natural resources.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The project will have no effect on solar energy.

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:

There are no conservation features or proposed measures to reduce or control energy impacts because there will be no such impacts.

7. Environmental Health [help]

a. 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.

1) Describe any known or possible contamination at the site from present or past uses.

Between 1937 and 1982, wood treatment operations were conducted in the TWP Area adjacent to the MFA. Between 1947 and 1953, these operations discharged liquid wastes into a trench that formerly went from the northwest TWP Area into the area now identified as the MFA. Operational changes were made in 1953 that included discontinuing the discharge of liquid wastes outside of the TWP Area. These liquid wastes were subsequently discharged into ponds within the TWP Area. Operations at the TWP Area were discontinued in 1982.

In 1985, the most impacted surface soils at the TWP Area were excavated and removed. In 1989, the remaining impacted soils were capped with a low permeability cover system. Additional cleanup actions were conducted in the TWP Area in 1997 and 1998. These actions included constructing a subsurface barrier wall around the area formerly occupied by treatment operations, capping the area with an additional low permeability cover system, and treating contaminants *in situ* within the area bounded by the subsurface barrier wall.

During installation of the subsurface barrier wall, impacted soils were observed in three areas outside the wall alignment within the MFA. Investigations within the area of contamination outside the barrier wall were conducted between 1998 and 2012. The activities, findings, and results of these investigations are described in the Final Remedial Investigation/Feasibility Study (RI/FS; Ecology 2018).

The following COCs were identified in the MFA in soil and groundwater:

- Carcinogenic polycyclic aromatic hydrocarbons
    - Benzo[a]pyrene
    - Benzo[a]anthracene
    - Benzo[b]fluoranthene
    - Benzo[k]fluoranthene
    - Chrysene
    - Dibenzo[a,h]anthracene
    - Indeno[1,2,3-cd]pyrene
- 2-Methylnaphthalene
- Naphthalene
- DRO
- Pentachlorophenol
- Dibenzofuran

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Hazardous chemicals and conditions at the MFA have been well defined in the Site investigations listed in A.8. Cleanup alternatives were developed and evaluated in the RI/FS. The cleanup action alternatives analysis and selected remedy are summarized in the dCAP.

No underground hazardous liquid transmission pipelines have been identified at the Site. The Mechanics Shop is served by a natural gas transmission pipeline that is located within the project area.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Materials likely to be present during construction include gasoline and diesel fuels, hydraulic fluids, oils, lubricants, and other chemical products including selected solidification mixing additives (“Mix 28” of the RI/FS treatability study containing 8 percent NewCem® slag cement, 2 percent bentonite, and 0.5 percent caustic soda) and selected groundwater treatment chemicals (an oxidant such as persulfate or Fenton’s reagent). A spill of one of these chemicals could potentially occur during construction as a result of either equipment failure or worker error. A spill prevention plan and TESC plan will be prepared and implemented during construction.

4) Describe special emergency services that might be required.

There is potential that fire or medical services could be required during implementation of the cleanup action. However, the completed cleanup action will not require higher levels of emergency services than already exist at the project location. Typical fire or medical emergency services are provided by the Longview Fire Department. Typical public safety services are provided by the Longview Police Department. The contractor will provide security services during implementation of the cleanup action.

5) Proposed measures to reduce or control environmental health hazards, if any:

The selected cleanup action alternatives are described in the dCAP. *In situ* solidification and *in situ* chemical oxidation followed by monitored natural attenuation were chosen as the preferred alternatives for soil and groundwater treatment, respectively. The selected alternative for soil treatment consists of soil excavation from 3 to 4.5 feet bgs throughout the treatment areas (Zone 1), except within a predetermined utility corridor within which soils will be excavated from 3 to 5 feet bgs (Zone 2). This will allow for future installation of underground utilities. The contaminated soils will be removed, transported, and disposed of at an approved landfill. Once the excavation and removal are complete, *in situ* mechanical mixing of solidifying agents into the subsurface soils of the treatment areas will be conducted. New and stockpiled clean fill material will be used to return the Site to approximate original surface elevations and grades. The post-treatment Site conditions after implementation will include approximately 3 feet of clean surface soils above a permeable geotextile fabric layer in Zone 1 and 3.5 feet of clean surface soils above a permeable geotextile fabric layer in Zone 2. Groundwater treatment will be used to address groundwater contamination after soil removal and treatment.

A solidification pilot test on a 1,600-square-foot area of the Site will be implemented prior to full-scale implementation. The pilot test will provide field data and experience to refine the mix design, determine the preferred mixing tools and techniques, and verify the expansion estimate prior to full-scale remediation. Mechanical mixing will be used to effect the solidification. The pilot test will include strength and leachability testing, similar to bench-scale testing, and will provide data about the cure time for solidified soil. During the pilot test, soil sampling will be conducted to determine whether soil located below 3 feet of the Site surface contains concentrations of COCs that exceed preliminary cleanup levels and, if not, whether segregating soils below this level will benefit the project by reducing the volume of soil requiring solidification. Also, if the solidification expansion factor is determined to be substantially different from the bench-scale test results, excavation depths could be modified to account for expected soil expansion.

After soil removal, disposal, solidification, and regrading, *in situ* chemical oxidation followed by MNA will be used to treat groundwater at the Site. Chemical oxidation and MNA are treatment technologies that detoxify COCs through chemical processes that alter the COCs to less toxic or non-toxic chemicals. Groundwater monitoring will continue until groundwater cleanup levels are achieved.

Chemical oxidation, using an oxidant such as persulfate or Fenton's reagent, will be performed during sequential injection events using temporary push-probe injection points or short-term injection wells throughout the area in which DRO concentrations in groundwater exceed MTCA Method A cleanup levels. Oxidants will be injected during multiple events, as necessary, to meet groundwater cleanup goals based upon periodic reviews. MNA will be implemented during and after chemical oxidation and continue until cleanup levels are achieved.

b. Noise

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

Noises that exist in the area will not affect the project.

2) 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.

Sources of construction noise will include traffic, excavation, mechanical mixing, stockpiling, and grading at the Site. For this project, construction typically will take place between 7 am to 6 pm. The completed project will not include new sources of noise or contribute noise above ambient levels.

3) Proposed measures to reduce or control noise impacts, if any:

Construction equipment will be muffled in accordance with the applicable laws, and construction will generally occur during normal working hours (7 am to 6 pm).

8. Land and Shoreline Use [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The Port of Longview currently uses the MFA for vehicle maintenance. The area north of the MFA is paved and currently used to store steel products. The area east of the MFA is currently unpaved and vacant. The area southeast of the MFA was historically used for treating wood products until 1982. The TWP Area was closed in 1989, which included the placement of a 6-foot-tall chain link fence, and access was controlled by a locked gate. The TWP Area has remained unoccupied since then. Additional Port of Longview facilities are located south and west of the MFA, including terminals along the shore of the Columbia River. The proposal will not affect current land uses on nearby or adjacent properties.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

The Site has not been used as working farmland or forest land.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

There is no surrounding working farm or forest land.

c. Describe any structures on the site.

The MFA contains the Port of Longview's Mechanics Shop, Paper Way, and a paved storage yard.

d. Will any structures be demolished? If so, what?

Yes. The soil cleanup action will require temporary removal of approximately 2,500 square feet of the Port of Longview's Mechanics Shop to access soil cleanup action areas within the building footprint and an approximately 220-foot-long section of nearby concrete retaining wall near Paper Way topped with a chain link fence. The building, retaining wall, Paper Way and chain link fence will be reconstructed following completion of the *in situ* solidification.

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

The majority of the MFA is located within Longview city limits and is currently zoned Heavy Industrial. A narrow strip of the MFA east of Paper Way is located outside city limits in unincorporated Cowlitz County and is zoned Heavy Manufacturing.

f. What is the current comprehensive plan designation of the site?

The majority of the MFA is located within Longview city limits, and the current comprehensive plan designation is Heavy Industrial. A narrow strip of the MFA east of Paper Way is located outside city limits in unincorporated Cowlitz County and is designated Economic Resource Land (ERL)-Industrial.

g. If applicable, what is the current shoreline master program designation of the site?

The Site is not within any current shoreline master program (SMP) designation, as the Site is approximately 700 feet north of the nearest water body (the Columbia River) and is outside the 200-foot shoreline jurisdiction of the City of Longview's 2015 SMP and Cowlitz County's SMP.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

City of Longview critical areas maps are not available online. However, based on a November 30, 2020, phone discussion with the City of Longview Planning Department, the Site is not known to contain any critical areas. Cowlitz County critical areas maps indicate that the Site is within a "Moderate to High" liquefaction area and a critical aquifer recharge area of Severe Sensitivity.

i. Approximately how many people would reside or work in the completed project?

No people will reside at the completed project. Approximately 10 people work at the Port of Longview's Mechanic Shop in the MFA. The cleanup action will not affect the number of people who work at the Site once the cleanup action is completed.

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

The soil cleanup action will require closure of a section of Paper Way and the Mechanic Shop. The Port of Longview will temporarily relocate work currently conducted at the Mechanic Shop to another location during the soil cleanup action. This will temporarily relocate 8 employees. This cannot be avoided. Operations at the Mechanic Shop and Paper Way will resume after the building is reconstructed following completion of the soil cleanup action.

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

Temporary relocation of the Mechanic Shop operations and employees and temporary closure of a section of Paper Way cannot be reduced or avoided.

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

The proposal will return the Site to existing conditions after project completion, in addition to treating and/or removing soil and groundwater contaminants.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

No impacts will occur to agricultural or forest lands of long-term commercial significance. Consequently, no mitigation measures are proposed.

9. Housing [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing will be provided.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing units will be eliminated.

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

No mitigation is proposed because there will be no adverse impacts related to housing.

10. Aesthetics [help]

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

The soil cleanup action will require temporary removal of approximately 2,500 square feet of the Port of Longview's Mechanics Shop to access soil cleanup action areas within the building footprint and an approximately 220-foot-long section of nearby concrete retaining wall topped with a chain link fence. The building, retaining wall, and chain link fence will be reconstructed following completion of the *in situ* solidification. The reconstructed structures will be the same height as the existing structures and exterior building materials will be the same or similar.

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

No views will be altered.

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

The project will have no aesthetic impacts so no measures to reduce or control impacts are proposed.

11. Light and Glare [help]

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

No light or glare will be produced by the project.

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

No light or glare will be produced by the project.

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

There are no existing off-site sources of light and glare that will affect the project.

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

No measures are proposed.

12. Recreation [help]

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

The majority of the Site is fenced and not accessible to the public. There are no designated or informal recreational areas in the immediate vicinity. The nearby Columbia River is used for fishing, boating, and other water sports.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The project will not displace any recreation.

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

There will be no impacts on recreation.

13. Historic and cultural preservation [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

A review of records using the Washington Department of Archaeology and Historic Preservation (DAHP) Washington Information System for Architectural and Archaeological Records Data (WISAARD) database (last accessed November 19, 2020) indicates that there are no historic structures on the Site that are listed in or eligible for listing in the National Register of Historic Places (NRHP).

There are several structures located on Port of Longview property south of Terminal Way associated with a historical grain elevator complex that are over 45 years old. These include a 1927 grain elevator and silo complex, a 1945 grain elevator and silo complex, a 1951 grain elevator and silo complex, a 1952 rail car dump complex, and a 1954 bulk storage building. These structures appear to meet criteria for the NRHP, but no determination has been made. These structures are located over 300 feet from the proposed remediation work.

The Longview Bridge across the Columbia River (1929), approximately 0.25 mile west of the Site, has been determined to be eligible for the NRHP. No remediation work will occur within 500 feet of the bridge.

There are no other historic resources mapped within 500 feet of the MFA in the WISAARD database.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

There are no known landmarks, features, or other evidence of Indian or historic use or occupation on the Site. Material evidence or artifacts, if present, would likely be covered under several feet of fill.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

The DAHP WISAARD database was consulted for cultural resources reports and historic properties listed in or eligible for listing in the NRHP or Washington Heritage Register within 1 mile of the Site.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Should archaeological materials (e.g., bones, shell, stone tools, beads, ceramics, old bottles, hearths, etc.) or human remains be observed during project activities, all work in the immediate vicinity would stop, and the State Historic Preservation Officer would be contacted.

14. Transportation [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Vehicle and pedestrian access to the Site is by means of Paper Way and Terminal Way, which serve the industrial areas surrounding the Site, south of Longview and adjacent to the Columbia River. A section of Paper Way near the Mechanic Shop will be temporarily closed during the soil cleanup action. Off-road parking is available at the Site.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The closest bus stop (operated by RiverCities Transit) is at Beech Street and 15th Avenue, roughly 1 mile north of the Site.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

No parking spaces will be created or eliminated as a result of the project.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

The project will not require any improvements to transportation facilities.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project will not use water or air transportation. The project will be located at the Port of Longview, which supports rail lines and bulk shipping terminals, and this project could potentially use rail lines for transport of excavated soil.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

It is estimated that the cleanup action will require approximately 250 haul truck trips total to transport materials on and off the Site over a 10-week heavy construction period, equating to an average of five roundtrip haul truck trips per day. It is also estimated that the cleanup action will require a five-person work crew on average for the 10-week heavy construction period, adding up to five personal vehicle round trips per day. Generally, trips will occur between the hours of 7 am and 6 pm. Truck trips will occur throughout the day, while worker vehicle trips will be concentrated in the early morning and late afternoon hours. Specific timing of peak truck trips is unknown.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

Agricultural and forest products are not transported in the local area.

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

The cleanup action will generate increased truck traffic on local roads during the construction period. However, the Site is in an industrial area, and no adverse transportation impacts on

public roads are anticipated. The construction contractor will coordinate with the Port of Longview to manage traffic on the property during the cleanup action.

15. Public Services [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

The proposed project will not create increased need for public services.

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

No measures are proposed.

16. Utilities [help]

a. Circle 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 required for the project. However, electricity will be required to power job-site trailers and power various tools used for demolition and reconstruction of the shop, decommissioning of the bioventing wells and piping, demolition and replacement of underground utilities, and demolition and reconstruction of the concrete retaining wall and fencing. A temporary power hookup to existing the on-site electrical system or a large generator will provide the needed electricity for the work. Water will be needed for performing *in situ* solidification. It is anticipated that municipal water will be used.

C. Signature [HELP]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee Thomas C. Richardson

Position and Agency/Organization Remediation Manager / International Paper

Date Submitted: 12/16/2020