



RESPONSIVENESS SUMMARY

Port of Tacoma Kaiser

August 4 – September 5, 2016 Public Comment Period

Consent Decree

Remedial Investigation/Feasibility Study Report,

Draft Cleanup Action Plan

Prepared by
Washington State Department of Ecology
Southwest Regional Office
Toxics Cleanup Program
Lacey, Washington

October, 2016

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Site Information

Address: 3400 Taylor Way, Tacoma

Site Manager: Marv Coleman

Public Involvement Coordinator: Megan MacClellan

The Department of Ecology (Ecology) held a public comment period on a proposed Consent Decree, Remedial Investigation (RI) report, feasibility study (FS), and a draft Cleanup Action Plan (CAP) for the Port of Tacoma Kaiser site from August 4 – September 5, 2015. Public comments and Ecology's responses for this comment period are summarized in this document. Ecology would like to thank those who commented or expressed interest in the work.

Site Background

The 96-acre Port of Tacoma Kaiser (Kaiser) site is located at 3400 Taylor Way, in the Tacoma Tideflats. Kaiser Aluminum operated an aluminum smelter and manufacturing plant there for over 60 years. The mill closed in 2002. In 2003, the Port of Tacoma bought the property. Since then, the port took down the plant and cleaned up most of the contamination at the site.

The port plans to redevelop the property for other uses. Cleaning up the existing Kaiser site is Ecology's first priority for the property. Cleanup efforts at the site are handled separately from the Port's proposed development plans.

Studies found the site polluted with:

- Carcinogenic polycyclic aromatic hydrocarbon (cPAH) in soil, fill, and groundwater.
- Petroleum, polychlorinated biphenyls (PCBs), copper, and zinc in groundwater.
- Arsenic and cyanide in soil and groundwater.

In 2003 and 2004, the port removed wood waste and Asarco slag from the Former Log Yard Area (see map). They then added several feet of clean fill material on top to cap remaining contamination.

The port removed about 24,000 cubic yards of contaminated soil and waste material from the Spent Pot Liner Area (SPL) in 2013. The port filled in this 4.1-acre area during dry weather in 2014. The port also removed about 14,000 tons of waste and contaminated soil from the Rod Mill Landfill Area.

Sampling after excavating the SPL and Rod Mill areas confirmed soil contamination was below state cleanup levels.

Next Steps

Ecology will finalize the Consent Decree and Cleanup Action Plans. The potentially liable parties (PLPs) will do the cleanup and monitoring work described in the plans. After cleanup, the property owner will record an environmental covenant (EC). An EC will prohibit activities that may result in the release of contaminants remaining on site after cleanup.

Changes to the Consent Decree and Cleanup Action Plan

No changes have been made to the Consent Decree.

The following changes have been made to the Cleanup Action Plan:

- Figures 2 and 3 have been updated. Adjacent properties, vegetated areas, and wet areas have been labeled as Attachments A and B.
- The cleanup level for cyanide was changed to adhere to the newly released Water Quality Standards as Attachment C.
- A Technical Memo explaining how the cleanup criteria was established has been added to accompany Attachment C.

Comment # 1: Ann Locsin

From: Ann Locsin, Tacoma

Sent: 8/15/16

To: Marv Coleman

Subject: Port of Tacoma Kaiser

I am writing to provide public comments regarding the cleanup plan for Kaiser. As a resident who lives 1/2 mile away I would like to see tax resources dedicated to a full cleanup of this site so it can be used for other purposes. The methanol plant truly demonstrated that the people of Tacoma want to move beyond heavy polluting petrochemical projects on our waterfront. The only way to stop the vicious cycle is to clean it up once and for all. The residents of NE Tacoma are very upset about the proposed dangerous projects for the Hylebos waterway. Our tax dollars paid for the cleanup of the Foss waterway and we demand the same for the Hylebos.

Sincerely,

Ann Locsin

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.

~ Margaret Mead

Ecology Response

Thank you for expressing your concern about the Hylebos Waterway. The approaches to cleaning up the areas around the Thea Foss Waterway and the Hylebos Waterway are different because the two areas are zoned differently. Ecology does cleanup to a level that is appropriate to how the relevant city has zoned the relevant property or properties.

The west side and part of the east side of Thea Foss Waterway is zoned S-8 – Downtown Waterfront. According to the Consent Decree that the Thea Foss Waterway is subject to, cleanups have to follow the Residential Standards (Method B) described in the Model Toxics Control Act, as is appropriate to the S-8 designation. Please refer to Chapters 5 and 6 of the Tacoma Municipal Code for more detail about Tacoma Municipal Zoning.

The area that encompasses the Port of Tacoma is zoned either PMI – Port Maritime Industrial, or M2 – Heavy Industrial. Parties that are responsible for doing environmental cleanups under the

Model Toxics Control Act (MTCA) in areas zoned as industrial have the choice of doing the cleanup to Industrial Standards or, the more stringent, Residential Standards.

In the industrially zoned area of the Tideflats there are considerations that we take into account when deciding what level of cleanup will be done:

- Cleaning up to Residential Standards in areas that have been highly contaminated by past uses would be immensely more expensive.
- The Tideflats are home to some of our state's most contaminated sites. In some cases, conducting a "full cleanup" of those sites is not possible given the tools, technology, and capacity for contaminated soil storage available today in the United States.
- Since the Port and local government earn much more revenue and incur less cost for infrastructure with industrial/commercial development than with residential development, it is very unlikely that the area will ever be used for anything other than industrial/commercial activities.
- Since the current environmental regulations that drive Ecology's work allow for such industrial land use, Ecology does not have the power to require the land use changes that you suggest.
- Sites that have been cleaned up to Industrial Standards are required in all cases to have Environmental Covenants placed on them. These covenants dictate what can & cannot be done on the property (e.g., can't build a residential development, can't use the groundwater, have to let Ecology review and approve any changes to the property, etc.).
- If a future proposal to change land use and zoning occurs, the Environmental Covenant requires the Port to notify Ecology so that we can be sure the cleanup will continue to do its job of being protective of the new proposed land use. If non-industrial zoning is proposed (e.g., mixed commercial/redevelopment), then additional cleanup work will be required by Ecology that is appropriate for the change in land use and is protective of human health and the environment.

There is one other consideration when contemplating the prospect of industrial re-development in an area with a long history of industrial use. As a result of our modern regulatory structure, the toxic legacies of the past will not be repeated legally because we now have laws that prohibit the kinds of practices that produced those problems. When these historical problems were created, there were no laws and no regulatory agencies to enforce clean practices.

Now, before businesses can even begin operations, or if their operations change, they have to provide health & safety plans, waste water management plans, air quality management plans, and waste materials management plans. Each of these have to be approved by the various regulatory agencies, at local, county, state & federal levels, and in most cases require obtaining enforceable

permits. In the case of the Port of Tacoma, the port also requires similar waste management scrutiny in their leases to port tenants.

Comment #2: Citizens for a Healthy Bay



September 6, 2016

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Re: Proposed Cleanup Action Plan for the Port of Tacoma Kaiser Cleanup Site

Dear Mr. Coleman:

Thank you for providing Citizens for a Healthy Bay the opportunity to comment on the proposed Cleanup Action Plan (CAP) for the Port of Tacoma Kaiser Cleanup site.

Executive Director
Melissa Malott

Citizens for a Healthy Bay (CHB) is a 25-year-old environmental organization whose mission is to represent and engage citizens in the cleanup, restoration and protection of Commencement Bay, the surrounding waters and natural habitat. We are a 501(c)3 nonprofit providing practical, solutions-based environmental leadership in the Puget Sound area. We work side-by-side with local citizens, businesses and governments to prevent water pollution and make our community more sustainable.

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Staff and expert members of the Policy and Technical Advisory Committee with CHB have reviewed the proposed cleanup documents for the Port of Tacoma Kaiser Cleanup Site (the site) in Tacoma, Washington. The documents reviewed include the Consent Decree, July 2016; the Remedial Investigation/Feasibility Study, August 2012; the draft Cleanup Action Plan (CAP), July 2016; and the Public Participation Plan, June 2016.

General Background

The Kaiser Aluminum site is located at 3400 Taylor Way in Tacoma, Washington. The site encompasses approximately 96 acres of the Blair Hylebos peninsula and the property is owned by the Port of Tacoma. From the early 1940s to 2002, an aluminum smelter and production facility was operated on the property.

A tax-exempt
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nonprofit corporation

Smelting and production operations and hazardous waste handling resulted in contamination of soil and groundwater at the site. Contamination included

carcinogenic polycyclic aromatic hydrocarbons (cPAHs), petroleum, polychlorinated biphenyls (PCBs), metals (copper, zinc, arsenic), and cyanide. Contamination at the site has been removed through several interim cleanup actions.

Interim cleanup actions included excavation of contaminated soils and removal of wastes. Some contaminated soil remains on site and has been capped with several feet of clean fill material.

To complete the cleanup at the site, the draft CAP proposes to conduct groundwater monitoring for at least five years; use institutional controls such as the existing engineered caps covering the contaminated soil; and record an environmental covenant that restricts certain types of land use at the site and requires inspection and maintenance of the engineered caps. A materials management plan has been developed to ensure the contamination is not accidentally released to the environment through future development activities at the site.

General Comments

In general, the draft CAP and supporting cleanup documents are thorough and well-written, providing the reader with adequate information to make an informed assessment of proposed cleanup actions at the site. The following provides a set of high-level comments that more specifically address the information provided in the draft CAP and proposed cleanup actions.

Specific Comments

- Confirm that the cleanup actions and cleanup levels comply with the recently revised water quality standards.
- Label adjacent properties on the draft CAP figures.
- Provide a description of other cleanup actions or contamination that exists at adjacent properties that may impact the cleanup of the Kaiser Aluminum site.
- Label vegetated and wet areas shown on the draft CAP figures, including onsite and off-site areas.
- Provide a description of the vegetated and wet areas shown on the draft CAP figures, including onsite and off-site areas.
- Ensure that any future construction, including placement of foundations and footings, does not adversely affect the cleanup of the Kaiser Aluminum site. We recommend the Port involve interested parties and community groups in decisions about future development and construction activities that may adversely impact the capped areas of the site, and specifically review placement of foundations and footings that may affect the cleanup of the Kaiser Aluminum site.

- Ensure that existing contaminants from the site will not be re-dispersed during future construction and/or future industrial operations at the Kaiser Aluminum site.
- Ensure that adequate long term protections are in place, for onsite and off-site properties that may be affected by the contaminated groundwater at the Kaiser Aluminum site.

Please contact our office if there are questions regarding our comments. Thank you for the opportunity to provide comments on the proposed CAP. We look forward to our continued partnership with the Port on our shared vision of a healthy and vibrant Commencement Bay.

Sincerely,



Melissa Malott
Executive Director, Citizens for a Healthy Bay

Ecology Response

New Water Quality Standards for Protecting Human Health

The cleanup actions and cleanup levels in the Cleanup Action Plan comply with the new standards that were approved by Ecology as of August 1, 2016. As with complying with any new rule, there are some complexities to implementing it that are described below.

The [new water quality standards](#) (WAC 173-201A) have yet to be approved by the US Environmental Protection Agency (EPA). Generally, the EPA has 60 days in which to approve them or 90 days to disapprove them and override them with their own cleanup levels.

Until approved by the EPA, they are not approved for Clean Water Act purposes (e.g., National Pollutant Discharge Elimination System and 401 permits).

However, because they were approved at the state level, they are applicable or relevant and appropriate requirements (ARARs)¹ for state law purposes like Revised Code of Washington 90.48 and the Model Toxics Control Act.²

For most of the contaminants on the Kaiser site, the concentrations determined to protect human and environmental health³ are so small that standard measurement techniques are not reliable. In those cases, we use the level at which measurements are reliable, called the practical quantitation limit or PQL. Kaiser's cleanup action plan used PQLs for most contaminants both before and after the new standards were issued.

Similarly, some contaminants are present outside of a cleanup site, in the environment at large. In these cases, using established cleanup levels would mean that the cleanup site would be quickly re-contaminated. For example, arsenic is naturally present in Washington soils at a higher concentration than the established cleanup levels. For arsenic at the Kaiser site, the CAP refers to the natural background as the cleanup goal.⁴ Please refer to Table 3 in the RI/FS Report for a listing of preliminary groundwater cleanup levels for the contaminants found at the Kaiser site.

1 Applicable or relevant and appropriate requirement/ARAR: A federal or state legal standard outside the immediate purview of the Model Toxics Control Act that must be met (applicable) or should be met (relevant and appropriate) when cleaning up a site. An example of an ARAR under MTCA are drinking water standards, Maximum Contaminant Levels (MCLs), as specified by the Safe Drinking Water Act.

2 MTCA being where the state sets groundwater cleanup standards that protect the surface water that groundwater flows into that are protective of receiving surface waters that have organisms subject to human consumption (i.e., human health criteria).

3 Cleanup level/CUL: The concentration of hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

4 Natural background: The concentration of a hazardous substance consistently present in the environment that has not been influenced by localized human activities.

Our monitoring data show that groundwater has met cleanup criteria as it leaves the site boundaries at the conditional point of compliance (CPOC).⁵ The CPOC is the Kaiser property boundary, at its closest point approximately 975 feet from the closest surface water. This tells us that there is no current connection between groundwater and surface water, so marine organisms have not been exposed.

It is worthwhile to note that Ecology is required to conduct periodic reviews of post-cleanup site conditions, and the review criteria includes any new applicable state and federal laws and criteria that have since gone into effect (WAC 173-340-420). Whether the EPA approves Ecology's proposed new standards or implements different ones of their own in the future, the standards in effect at the time of the review will be what governs the review by Ecology and will be compared to the most recent monitoring data.

Draft Cleanup Action Plan Figures & Adjacent Site Activity

The two figures showing the site and adjacent properties have been modified in response to your request. These updated figures are attached here as Attachments A and B.

Most of the adjacent properties are owned by the Puyallup Tribe and any cleanups that are affecting them would be managed by EPA. Ecology is not aware of any ongoing conditions that would be affected by these properties.

At the southeast corner of the Kaiser site is the "BPA Occidental Sludge" site. It consists of a Confined Disposal Facility that is lined and monitored and was built to contain Occidental Sludge and U.S. Gypsum lead and arsenic waste that was dumped on the property. Bonneville Power Administration (BPA) and the Port sample the groundwater monitoring wells regularly and there have been no reports of any releases.

Across Taylor Way to the northwest are the former Dunlop Log Yard and the Arkema Chlor-alkali sites. Lead and arsenic contaminated soil and wood debris that was once confined on the Dunlop site was completely removed and disposed of off-site by the Port recently. The Arkema site is as yet unresolved, but groundwater flows from Kaiser toward Arkema.

Across Taylor Way to the southeast is the former Pony Lumber site where lead and arsenic contaminated soil and wood debris are confined under an asphalt cap. Groundwater is monitored regularly and there have been no reports of releases. The Port recently repaved and patched some cracks in the pavement.

The only significant vegetation adjacent to the site is the parcel to the northeast of Kaiser that is owned by the Puyallup Tribe. There is brush and weeds on the BPA property south of Kaiser. There remains a jurisdictional stormwater pond on the west side of the site next to Taylor Way

⁵ Conditional point of compliance/CPOC: Where it can be demonstrated that it is not practicable to meet the ground water cleanup levels at the standard point of compliance within a reasonable restoration time frame, Ecology may approve a conditional point of compliance as close as practicable to the source of the contamination, typically not to exceed the property boundary.

and a jurisdictional stormwater pond just to the northwest of the BPA property. A regulated intertidal wetland is a shallow wet area part of the year at the west side of the BPA property. Other vegetation and water related structures on-property have been eliminated by the excavations and subsequent filling of the site with several feet of soil.

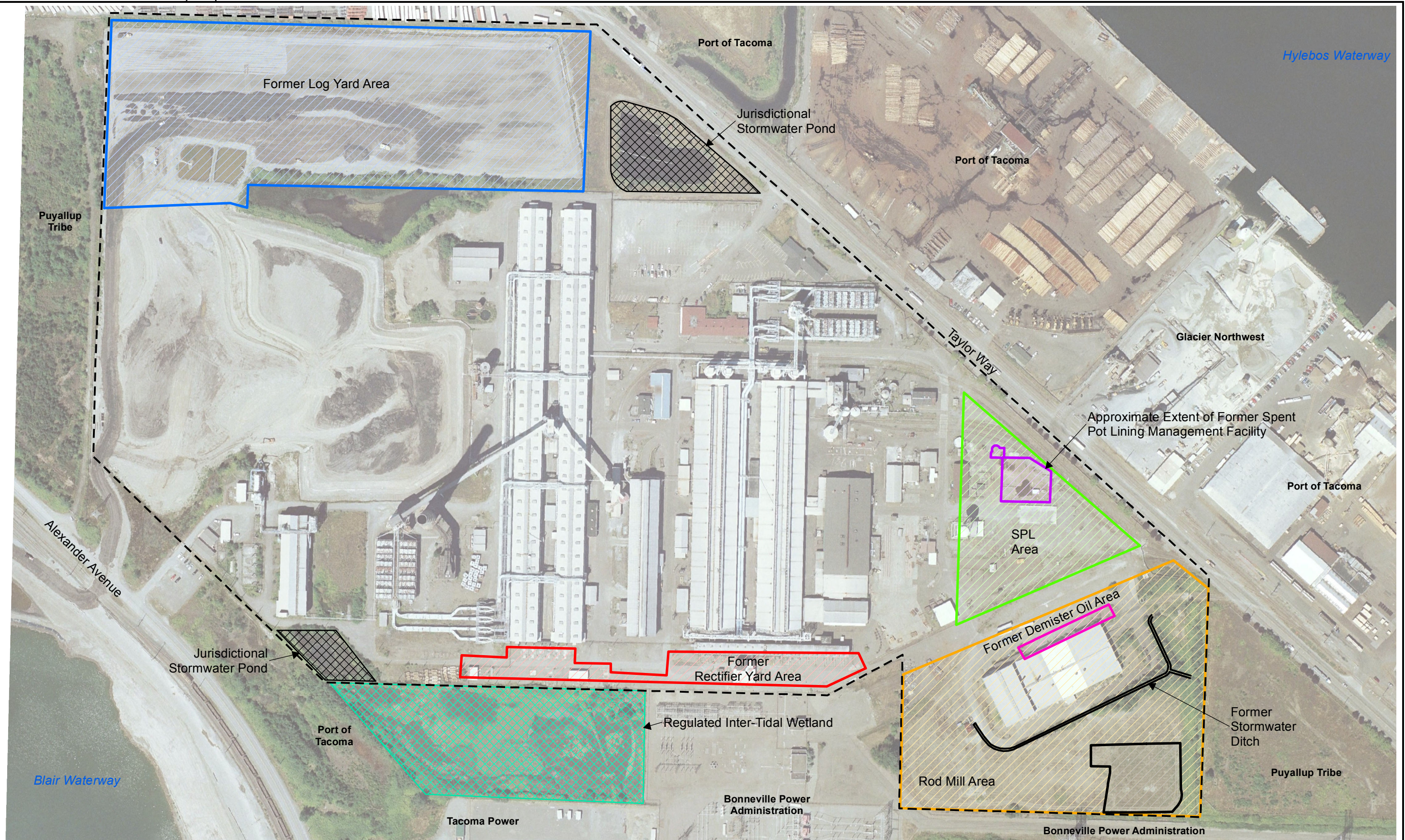
Managing Existing Contaminants and Long-Term Site Protections

Future development on the site will be tightly controlled by the Materials Management Plan and the Environmental Covenant, both of which are enforceable elements of the Consent Decree and CAP. Any new construction proposed will have to be reviewed and approved by Ecology as required by the documents.

As above, per the directions of the Materials Management Plan and the Environmental Covenant, soil that is contaminated above MTCA cleanup levels and has been excavated must be appropriately managed so that it is not re-dispersed during future construction and/or future industrial operations.

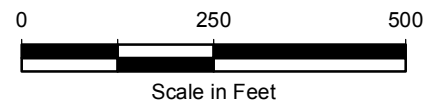
Groundwater will be monitored at several points, particularly at the down-gradient extent of the site (toward Hylebos Waterway). Per the CAP, Ecology and the port will discuss sampling frequency once the next round of data for groundwater from the SPL area is obtained. Groundwater from the former log yard area will be sampled annually.

G:\Projects\118\032\020\006\CAP\Figure 2 Kaiser Facility 2005.mxd 9/14/2016 NAD 1983 StatePlane Washington South FIPS 4602 Feet



Legend

Site Boundary



Note

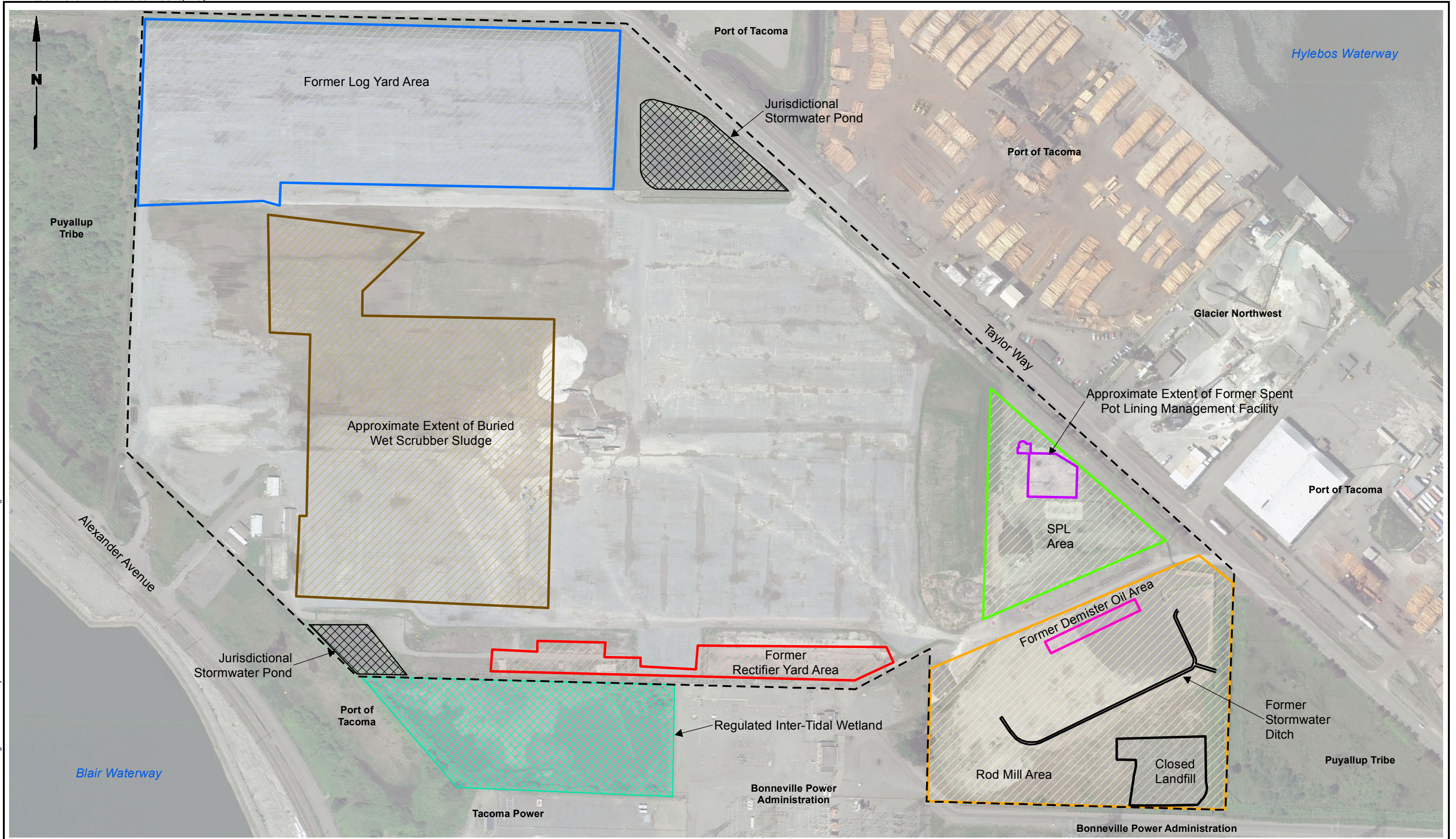
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Bing Aerials 2005; Pierce County Assessor

Kaiser CAP Report
Tacoma, Washington

**Site Plan with
Historical Site Features**

Figure
2



G:\Projects\118\032\020\006\CAP\Figure 3 Kaiser Facility 2010.mxd 9/14/2016 NAD 1983 StatePlane Washington South FIPS 4602 Feet

Legend

Site Boundary



Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Jacobs Engineering; Pierce County Assessor; Google Earth Pro 2010



Kaiser CAP Report Tacoma, Washington	Current Site Plan	Figure 3
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