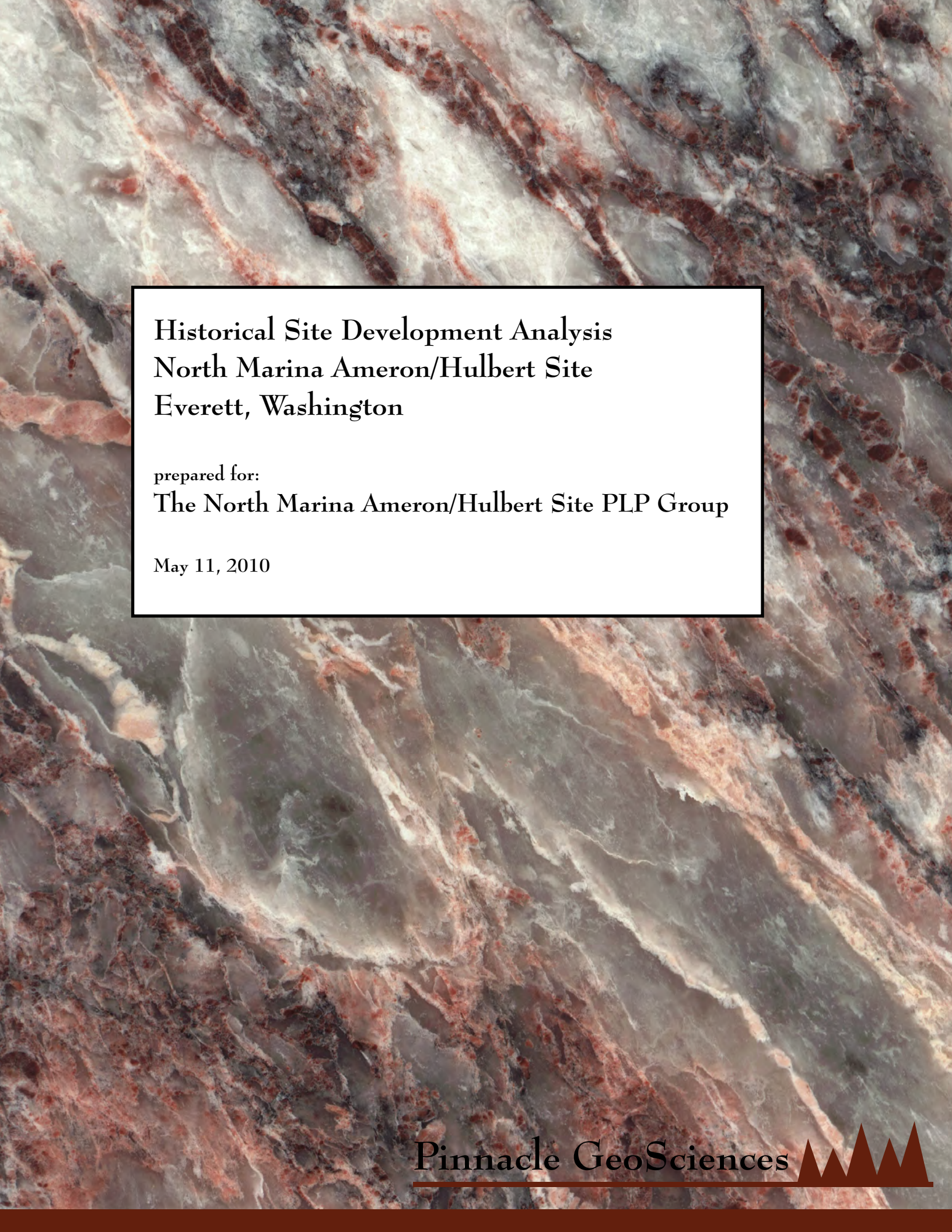
APPENDIX B

Site Historical Development Analysis



Historical Site Development Analysis
North Marina Ameron/Hulbert Site
Everett, Washington

prepared for:
The North Marina Ameron/Hulbert Site PLP Group

May 11, 2010

Pinnacle GeoSciences

HISTORICAL SITE DEVELOPMENT ANALYSIS
NORTH MARINA AMERON/HULBERT SITE
EVERETT, WASHINGTON
FOR
THE NORTH MARINA AMERON/HULBERT SITE PLP GROUP

MAY 11, 2010

TABLE OF CONTENTS

Figures

List of Appendices (appendices are not included in the digital report)

HISTORICAL SITE DEVELOPMENT ANALYSIS
NORTH MARINA AMERON/HULBERT SITE
EVERETT, WASHINGTON
FOR
THE NORTH MARINA AMERON/HULBERT SITE PLP GROUP

MAY 11, 2010

1.0 INTRODUCTION

This report summarizes Pinnacle GeoSciences' historical site development analysis of the North Marina Ameron/Hulbert site in Everett, Washington. The upland portion of the site consists entirely of fill soils placed over the past century. The site was originally occupied by a sawmill, a shingle mill, and a casket manufacturing business. Its use has changed over the years and it is now occupied by industrial and commercial businesses. The site has undergone several episodes of significant fill placement and a number of episodes of localized fill placement events. Not all historic site development is well documented so evidence of many past activities is inferred from interpretation of aerial photographs.

The purpose of this study is to assist the PLP Group (the Port of Everett, Ameron and Hulbert), and their respective consultants, the PLP Consultants (Landau Associates, Aspect Consulting and Pacific Groundwater Group) in understanding the history and progressive development of the site, particularly as it may relate to contamination concerns.

The site is presently under an Agreed Order with Ecology and further site evaluation is planned. The Agreed Order defines the currently estimated limits of the site although the site boundary will ultimately be determined based on where hazardous substances have come to be located.

2.0 SCOPE OF SERVICES

2.1 PURPOSE

The purpose of this study is to assist the PLP Group (The North Marina Ameron/Hulbert Site PLP Group) in understanding the site development history and past activities that may have contributed to contamination issues documented at the site. The PLP Group consists of The Port of Everett, Ameron Corporation and the Hulbert Trust. These three entities are represented by their respective consultants Landau Associates, Aspect Consulting, and Pacific Groundwater Group which are collectively referred to as the PLP Consultants. This study does not address or examine evidence of contamination directly (such as analytical data) but rather is intended to identify past practices and activities that may have contributed to the presence of contaminants at the site.

2.2 SCOPE

The scope of services for this study is clearly set forth in our contract and is repeated below with one correction referencing a portion of Area G. Our scope of services completed includes:

> *The purpose of this historical analysis is to define the Site development history with emphasis on potential sources of contamination and Site filling history. The work will be used by a group of Site potentially liable parties (PLPs) and is to be conducted in an unbiased manner. We anticipate that the historical review will consist of reviewing available aerial photographs, historical fire insurance maps, topographic maps, city or county maps and street directories, U.S. Army Corps of Engineers (ACOE) records, and other historical documents and records to assess past uses of, and the history of fill activities at, the Site and on adjacent properties, from current conditions back to the Site's first developed use. Selected areas of interest to the PLPs include:*
>
> ***Site Filling History**: Identify time periods when Site filling and earth moving activities occurred including an assessment of the potential sources of fill. In addition to general Site filling history, Site filling within the following time periods is of particular interest:*
>
> - *Prior to construction of the concrete products manufacturing facility in the northeast portion of the Site (circa 1972)*
> - *Between 1972 and 1988*
> - *Between 1991 and 2006.*
>
> ***Summary of Site Uses and Potential Releases**: Identify and summarize past operators on the Site including the following information about each: name, location on the Site, nature of operations, time period on the Site, and manner through which it ceased operations on the Site (i.e., closed, changed or sold business). Identify any activities, structures, or other features that may have resulted in the release of hazardous substances at the Site (e.g., fuel tanks, boilers, transformers, stained soil, ponds, drums, fuel pumps, wood treating, other manufacturing, etc.)*

Areas of Known Contamination: *Identify activities (including history of any filling) in specific areas where the PLPs have identified contamination. The area designations (i.e., Areas G, I, J, and M) are provided in Exhibit A to the Agreed Order. The specific items of interest include:*

- *When the fence separating Areas I and G was constructed*
- *When fill was placed in Area I and the ~~northeast~~ northwest corner of Area G that resulted in the ground surface in these areas increasing to elevations significantly greater than adjacent grades to the east.*
- *When the landfarming area in the northeast corner of Area I was created, when it was decommissioned, and where the treated soil was placed (if discernable from aerial photographs).*
- *When construction debris was placed as fill in Area J-3 and the source and nature of the buried structures found in western portion of Area J*
- *Activities or structures along the north boundary of Area G that could have caused the petroleum hydrocarbon and polychlorinated biphenyls (PCB) contamination identified in this area (See 2005 Landau Associates document below)*
- *Whether the operations in Areas G or I extended across the Site boundary to the north at any time during the Site operational history and, vice versa, whether operations to the north extended onto Areas G or I and may have impacted these areas*
- *Whether operations in Areas J, I, or M extended across the Site boundaries to the south or southwest at any time during the Site operational history and, vice versa, whether the operations to the south or southwest of Areas J, I, or M extended across the Site boundaries and impacted these areas.*

This report is organized consistent with the structure of the Scope of Services cited above.

2.3 COMMENTS ABOUT DATA COLLECTION

A number of documents were provided to us at the onset of this study by the PLP Consultants. As our review progressed we identified several additional studies referenced in the documents provided and we requested those documents. Aerial photographs were provided to us in paper and digital form by Landau Associates and Pacific Groundwater Group. All paper aerial photographs have been scanned and digitized and are included in Appendix A – Aerial Photographs.

Shortly after we began our review we were provided the opportunity to review and request copies from a considerable repository of pertinent information (title and lease records, photographs, aerial photography and engineering drawings) at Nadler's offices (The Nadler Law Group, PLLC). We understand that Nadler also provided copies of all information we requested to the PLP Consultants.

Part of our scope of services was to obtain additional aerial photography. We obtained a considerable number of additional aerial photographs including photographs to complete stereo pairs with photographs already in the collection. When we first discussed this project with the PLP Group we contacted various aerial photograph providers to confirm costs and responsiveness. We were informed (in December 2009) that WSDOT (Washington State Department of Transportation) was the repository for DNR (Washington Department of Natural Resources) photographs and that requests for photographs from both agencies could be made through the WSDOT. Our requests for aerial photographs were delayed because of the considerable amount of supplemental aerial photography and other pertinent documents from Nadler that we needed to review before finalizing our requests. Once we did request photography, we initially found WSDOT to be non-responsive. When they finally did respond they informed us that as of the end of 2009 the custody of the DNR photography reverted back to DNR. DNR informed us that they didn't have the resources to respond to our request for photographs. We informed the PLP Group of this as it occurred. Fortunately, through the combined resources of AeroMetric (formerly Walker & Associates) and the Corps of Engineers we were able to obtain most of the aerial photography coverage we had previously identified as being useful to support this project.

We reviewed the aerial photography in digital format. This allowed us to adjust contrast and other image settings to enhance features not readily visible in the original image. We did not apply modifications to any images that would alter or change the image content.

The combined sets of aerial photographs provided extensive stereo coverage of the site. We prepared over 25 stereo image sets spanning 1947 through 2006 and numerous additional stereo pair enlargements of specific areas. Some people find it difficult to view stereo pairs so viewing of the stereo pairs may not be accessible to all reviewers of this report. Because of this we have not included stereo imagery in any of the report figures. The stereo image PDFs are included in Appendix A – Aerial Photography.

2.4 COMMENTS ABOUT FIGURES

Nearly all figures in this report employ aerial photography for the underlying image. Because of the photographic process, there is parallax in all images which can cause distortion of scale, particularly when the area viewed is at the edge of the image. Because of this inherent distortion, all locations shown should be considered to be approximate. Furthermore, the site plans provided in various reports do not always precisely agree with respect to the boundary of the site subject to the Agreed Order or the boundaries of the "Areas" within it. When an overlay showing boundaries is included as part of a graphic, it is based on the site definition as presented in Exhibit A – Figure 8 of the Agreed Order. Figure 1 shows a reduced copy of this exhibit which formed the basis for our reference to areas of the site.

All of the figures employ the use of color to convey information. Only figures viewed in color (on paper or digitally) should be relied upon when using this report.

2.5 REFERENCES TO FEATURES

This report refers to site features using their most recent or current names. For example the "Collins Building" refers to that structure even though in the past it may have been referred to otherwise. Likewise, the "Ameron Building" refers to the large building constructed by Centrecon beginning in 1972.

3.0 SITE FILLING AND PAVING HISTORY

3.1 LARGE-SCALE FILLING

This section discusses large-scale filling events at the site which can be documented or supported by aerial photograph interpretation or other records. Small-scale filling and temporary stockpiling is discussed to a lesser extent in this section, and in greater detail in the "Areas of Known Contamination" section of this report.

3.1.1 Original Shoreline

The earliest photographic documentation of the site reviewed showed that the initial shoreline in the vicinity of the site was immediately west of the current rail alignment to the east of the site. The entire site is constructed on tidelands. Photographs from the 1920s clearly show that the high water line was immediately west of the mainline rail alignment at the foot of the bluff, and that the road that was the predecessor of Marine View Drive and all buildings and facilities west of the road were constructed on pilings. The body of historic aerial photographs for the site and vicinity show that the intertidal zone extended west to what is currently the western end of the piers at the north and south of the site.

An undated photograph, circa the mid-1930s or later, shows that little or no large-scale filling had occurred at those portions of the site occupied by the shingle mill, the southern lumber sheds, and the planing mill through at least the 1930s.

3.1.2 Pre-1947 Filling

The earliest document we reviewed showing development on the site is the 1914 Sanborn Map. The site was first occupied by the Fred K. Baker Company's Shingle Mill which later became the William Hulbert Mill Company's Saw, Planing and Shingle Mill. William Hulbert was the son-in-law of Fred Baker. The mill grew in size through additions, until the 1960s when it was demolished. The early filling of the site was related to its use in lumber milling. Figure 2 shows the locations of mill structures interpreted from Sanborn Maps and Figure 3 shows those locations with respect to current site features.

A photograph from the mid 1930s (shown in part in Figure 11) shows small-scale, non-systematic filling around the bases of the smokestack and refuse burner with several different materials, including a very dark, comparatively fine-grained material, and a lighter-colored rubble material with pieces visible up to 1 or 2 feet in diameter. A square feature is visible at the base of the water tower with a smooth upper surface about 8 feet below dock level, probably a concrete pile cap. Four smaller concrete footings are visible on top of this structure, each supporting one leg of the water tower (Figure 11).

The November 28, 2001 Phase I ESA prepared by Landau Associates cites the Port of Everett, 1995 with the following: "In 1944, 40 acres of the 14th Street Pier were filled in by the Port." We did not observe evidence of this large scale of filling in the 1947 aerial photographs, and believe that the 1944 date is erroneous and should have read "In 1947," as discussed in the next section. Fill is visible in the 1947 aerial photographs along the eastern boundary of the site extending about 330 feet west of the main rail alignment, about to the east wall of the Collins Building. This westward extension of fill into the intertidal zone also corresponds to the alignment of a rail spur that enters the property from the north and extends onto the subject property. This filled area covers the eastern portion of Area M and a small portion on the east side of Area G. The western boundary of this fill area is shown in Figure 4. We found no information as to when the pre-1947 fill was placed other than that it occurred after the photograph dated to the mid 1930s discussed above, nor any information as to whether the fill was placed in a single filling event or multiple events.

A 1944 Corps of Engineers photomosaic map we reviewed is based upon a July 1941 aerial photograph. Because of the scale of the map, the resolution at the subject site is poor. Despite the poor resolution, it seems to show that the easternmost fill is in place at the time of the 1941 photograph. The information we reviewed suggests it is likely that this fill was primarily of dredge fill rather than imported upland fill or debris generated on site, but this could not be confirmed. This interpretation is supported by our observation that there was no nearby source of upland fill evident in the general area of the site and that the one boring log from this area that we reviewed (Earth Consultants: ECI-MW-3) identifies the deeper soils as dredge material covered by four feet of non-dredge fill. A Landau Associates site plan shows additional explorations in this area which may provide further information about fill conditions, these are exploration numbers M-1, M-2, M-2B, M-2C and M-GC-1. Boring logs for these explorations were not included in the information we reviewed.

Review of the 1947 stereo pair of aerial photographs suggests that the upper several feet of fill (thickness based on boring log ECI-MW-3) was placed after the 1947 photograph, at a significantly later date than the dredge fill.

A small, irregularly shaped area of debris and granular fill is visible around the bases of the Hulbert Mill smokestack, the refuse burner and the water tower in the 1947 photographs. A very similar accumulation of fill is evident in the same photograph at the base of the refuse burner at the mill to the north of the subject site. This fill is also clearly visible in the photograph from the mid 1930s (see Figure 11). This fill may be comprised, in part, by bottom ash from the refuse burner. Refuse burners were primarily used for burning sawdust, bark, edgings and other wood debris associated with milling operations.

3.1.3 1947 to 1955 Filling Events

Two significant filling events occurred during this time period – the 1947-1953 dredge filling of the North Marina Peninsula area and the structural fill encompassing parts of Areas J, M and G placed in 1955.

Dredge Filling of the North Marina Peninsula Area. Hart Crowser stated that "in 1947, a sheetpile wall was constructed to form the fill area south of the mill." This sheetpile wall is visible in the 1947 aerial photographs. It encompasses the area of the North Marina

Peninsula as shown in Figure 1. The calculated area enclosed by the sheetpile wall is approximately 40 acres, and in our opinion corresponds to Landau's reference to filling in 1944 mentioned in the previous section. The completed fill can be seen distinctly in two 1953 oblique aerial photographs. We discovered no other information that indicated more precisely when the fill occurred. The filled area encompassed the remainder of Area M, the southern portion of Area G, the southern majority of Area J, and the remainder of the North Marina Peninsula which is not within the site boundaries, as shown in Figure 4.

Additional 1953 and 1954 oblique aerial photographs show the North Marina Peninsula fill area and also show that the majority of the mill facilities and the Collins Building are still supported on pilings and that filling is not completed to final (present) grade. The photographs suggest that the surface elevation of the North Marina Peninsula dredge fill at this time was about 3 to 5 feet below floor grades of the Collins Building and the decking surrounding the mill structures. The extent of the 1947 to 1953 fill area is readily visible in the 1955 aerial photograph.

Dredge fill drains, dewaters and consolidates after it is placed. This consolidation or settling can take place over several years. Dredge fill can be placed under pile-supported buildings and docks using hydraulic placement methods, but voids tend to form beneath the structures as the hydraulic fill consolidates and settles. We would expect that there would always be a void beneath the pile-supported structures after placement of fill.

Two oblique 1953 photographs both show 13th Street completed on the fill area, but it appears as if the majority of the 1947 to 1953 fill area may be several feet lower than the 13th Street grade. This is likely because of consolidation of the fill. The fill has some minor vegetation on it.

Structural Fill Encompassing Parts of Areas J, M and G. By 1953 an area immediately west of the Collins Building, comprising small portions of Areas M and G, and most of Area J, appears to be graded differently than other parts of the 1947 to 1953 dredge fill. In 1953 aerial photographs a non-dredge fill soil importing operation is also evident at the end of the North Marina Peninsula, at the end of 13th street. It consisted of barges loaded with soil, a conveyor system for unloading the barges, and facilities for loading fill into trucks.

By 1955, the area west of the Collins Building has been filled and graded. This area, identified as the "Structural Fill" in the 1955 aerial photograph in Figure 4 encompasses an area that is slightly larger than the area visible in the 1953 oblique aerial photographs, and marks are visible that suggest that active filling and grading may still be ongoing (Figure 4). The west side of this fill area is formed by a sharp line on the 1955 aerial photographs which may be a wall several feet high. Later aerial photographs, such as the 1989 oblique air photo, show this wall. Exhibit A – Figure 7 of the Agreed Order identifies this newly filled area west of the Collins Building as a "Sawdust/Wood Chip Pile." Based on our review of a stereo pair of aerial photographs and other aerial photography we believe this feature is inconsistent with the sawdust pile interpretation, and interpret this feature to be a structural fill. The walls bounding this fill establish the final grade.

Exploration logs from six soil borings in the 1947 to 1953 fill area (Earth Consultants: ECI-MW-1; Hart Crowser: HC-MW-1 & HC-MW-4; and Landau Associates P10, J-1 & J-2)

indicate non-dredge fill extending from near the current surface to depths of 2 to 5 feet, and dredge fill extending from the base of the non-dredge fill to the maximum depth explored of 16 feet. Both the upper non-dredge fill unit and the deeper dredge fill unit were fairly consistent in nature between borings. This tends to indicate large-scale filling events rather than multiple small-scale events.

Other Fill (1947-1955). A 1953 oblique photograph shows limited filling between the saw mill and the shingle mill, and possibly beneath these structures, but the fill was significantly below final grade. This fill area is shown in Figure 4. We could not identify the source of this fill material. The 1953 oblique photograph also shows continued filling with waste materials southwest of the smokestack and refuse burner.

3.1.4 1955 to 1965 Filling

The 1961 aerial photograph shows most of Area G has been filled by this period, as shown in Figure 4. No other aerial photographs show this area in the intervening period between 1955 and 1961 at useful resolution. The aerial photograph did not provide any insight into whether this fill was placed in a large-scale filling event or several smaller-scale events. In the 1955 air photo, most of Area G was covered by mill buildings or docks which were originally supported on pilings. These buildings were still visible in the 1956 air photo, although not at a useful resolution. The 1961 aerial photograph is the first photograph with the buildings and docks removed, and showing fill at their location. The fill visible in the 1961 aerial photographs could have been placed after the buildings and docks were removed, or it could have been hydraulically placed beneath the pile-supported buildings and docks while they were still in existence. The additional area identified as being filled during this period includes the area that burned in a mill fire in 1956. The fire encompassed the lumber docks, lumber sheds, two planing mills and part of the kiln. The actual sawmill and shingle mill were not destroyed by the fire. Close examination of the 1961 aerial photograph suggests that the fire consumed nearly all the structural elements where it occurred, possibly even including the decking on the docks. This area appears to be filled in the 1961 photograph, although not up to the final grade, and it is not clear how close to the west end of the lumber storage docks the fill extended. Photographs from the 1920s and 1930s show that this filling did not occur before the mill was constructed. It is unknown whether this fill was placed hydraulically under the docks while they existed, or if it was placed after the fire. The 1953 oblique photographs show that there is no fill visible under the western end of the lumber storage docks. There are no records of the placement of this fill. Our review of exploration logs in the area of the mill fire did not identify evidence of a burn or ash layer.

The 1961 aerial photograph shows a bulkhead on the north side of Area G, the north side of the eastern third of Area I, and along the west side of the former dock frontage. The bulkhead generally follows the alignment of the lumber storage docks that burned in 1956. The 1961 aerial photograph shows the bulkhead piles extend into the air at varying lengths. This is typical for an area where piling may have been recently driven and not yet cut off to a finished level. A rough count of the piling suggests that there were about twice the number of piling along the western face of the bulkhead as there were for the prior dock structure. A 1992 test pit next to the bulkhead reported the presence of 12"x12" treated wood which we interpret as lagging that was used to construct the bulkhead. This information suggests that

the bulkhead and subsequent fill was likely constructed some time after the mill fire and before 1961.

The fill behind the bulkhead extends westward approximately to the western boundary of Area G. It is not clear in the 1961 aerial photograph whether the surface visible between the western boundary of Area G and the western bulkhead is dock or fill.

Two 1965 aerial photographs show that all of the lumber docks have definitely been removed, and the filled area has extended westward across almost all of Area G, into the northeast portion of Area I, and slightly further in the north end of Area J as shown in Figure 4. It is not clear in the 1961 photograph whether all of this area was filled by that time. The bulkhead discussed in the second paragraph of this section is more distinctly visible in these photographs. The sawmill, shingle mill and remaining kilns have been demolished since the 1961 aerial photograph. The portion of Area G beneath the east end of the recently demolished sawmill building is only partially filled; the surface of the fill is not up to the grade behind the bulkhead.

Exploration logs from test pits and borings in this area (Earth Consultants ECI-MW-2, ECI-K-1, ECI-J-1, ECI-J-2 and ECI-TP-1 through ECI-TP-8) apparently indicate a fairly homogenous non-dredge fill unit in these explorations extending to a depth of about 11 feet below current surface, and dredge fill beneath the upper non-dredge fill unit. The upper non-dredge fill unit contained significant wood and concrete debris in localized areas. Localized inconsistencies in soil type were present in several of the test pits. One exploration near the northern boundary of Area G (Earth Consultants ECI-TP-6) exposed a vertical wall of treated 12-inch by 12-inch timber extending to the base of the test pit at 8 feet below current grade. This wall may be the bulkhead behind which the fill was placed, as visible in the 1961 aerial photograph. In our experience, timbers and pilings of the time period when the wall was constructed were oftentimes untreated cedar, although frequently mistaken as treated.

3.1.5 1973 Filling Events

Two large filling events affecting the subject site occurred in 1973. A large, engineered dredge spoil fill encompassed most of Area I, parts of Areas J and G, and extended onto the property to the north. A separate filling event over a large part of the North Marina Peninsula extended onto the western part of Area J.

Three 1973 aerial photographs show a large-scale filling event occurring over the entirety of Area I, small portions of Areas G and J, and onto the adjacent property to the north of the site, as shown in Figure 4. Two of the photographs show fill being hydraulically placed on Area I and the northern portion of Area J. Records indicate that this dredge fill was spoils from the "12th Street Channel" dredging project, authorized by the Army Corps of Engineers in February 1972. Design drawings for the fill show the filled area to be identical to the filled area visible in the 1973 aerial photograph as discussed above. The source of the material was approximately 176,000 cubic yards of dredge spoils generated by dredging a channel westward from the southern portion of Area I and the northern portion of Area J. The design drawings indicate that the dredge fill was held behind a shore dike which was constructed along the west side of the fill. A berm was constructed around the north, east and south sides of the area to be filled. A drawing dated January 2, 1973 and stamped "As Built"

indicates that the top of the dike was about 14 to 16 feet above MLLW (Mean Lower Low Water), the top of the dredge fill was about 19 feet above MLLW, and the bottom of the dredged channel was 20 feet below MLLW. The January 2, 1973 drawing shows an "exist. timber bulkhead" corresponding to the wall visible in the 1965 aerial photographs discussed above. The January 2, 1973 drawing labels the area behind the "exist. timber bulkhead" (within Area I) as "borrow area for north dike," and states that the northern half of the shore dike is constructed from this soil, while the southern half of the shore dike is constructed of "imported quarry waste." The northern dike extends onto the property to the north. The January 2, 1973 drawing also shows that the surface elevation of the 1973 fill was as much as 5 to 7 feet higher than the ground surface of Area G to the east, probably to allow for substantial dewatering and settlement of the dredge fill.

The September 1973 aerial photographs show that the 1973 dredge fill in Area I was hydraulically placed. The surface of the fill is higher in the northern portion of Area I, and lower in the southern portion of Area I where ponded water is visible.

A 1974 stereo pair of photographs shows the hydraulically placed portion of the 1973 fill dewatering and apparently consolidating, with the dewatering water causing visible sedimentation in the 12th Street channel at the approximate location of the current barge dock.

The 1973 as-built drawing does not show an engineered dike on the eastern side of the dredge fill. Aerial photographs show a significant berm on the east side of the fill with a maximum elevation exceeding the height of the fill. This berm extends onto Area G. We could not ascertain the source of the fill used to construct this berm.

A photograph from 1973 or early 1974 shows fill on the north half of the North Marina Peninsula to the southwest of the site and a small portion of Area J placed by end dump truck, and small localized areas of end dump piles are visible elsewhere in the hydraulically filled area.

Exploration logs for numerous test pits and borings in the area filled in 1973 (Earth Consultants ECI-Q-1 through ECI-Q-8, Hart Crowser HC-MW-3 and Landau Associates P11 & P12) indicate that the soils observed in the explorations consisted of an upper unit extending from the current surface to a depth of 1.5 to 3 feet below grade consisting of fill with wood, brick and shells, with an underlying unit of dredge fill extending from the base of the upper fill unit to at least 16 feet, the maximum depth explored. The upper unit was not homogenous. We interpret that this lower dredge fill unit is the 1973 dredge fill and that the upper unit was placed later as generally described in the next section of this report.

3.1.6 1974 to 1982 Filling

The berm around the eastern portion of the 1973 fill remains readily visible in all photographs through a 1981 aerial photograph. The dredge fill has consolidated and settled, leaving the berm as an elevated soil structure separating the active Centrecon facility from the log sorting operations to the west.

A 1976 stereo pair of photographs also show that the southern 120 feet of Area I, adjacent to the barge wharf, has been graded and paved. We do not have documentation of this feature being constructed so it is unclear whether a structural fill underlies the pavement.

This pavement is the extension of the fill and final grading of the eastern part of the North Marina Peninsula and appears to be constructed for the use of tenants southwest of the subject site. A trench is visible excavated on the east and north sides of this paved area, with trench spoils stockpiled along its length. The trench appears to be a drainage ditch which slopes to and discharges to a point at the northern edge of the dock structure. This trench and associated stockpiles are visible in aerial photographs until 1981, and then have been filled by 1982. This feature acts as a barrier to most vehicular traffic between the paved area east of the dock and Area I until it is filled and graded in 1982 with one exception. There appears to be a lightly used unpaved roadway along the top of the former berm, providing access between the site to the southwest and the Centrecon site. This roadway is most clearly seen in the 1977 oblique photograph.

The majority of the 1973 fill area continues to be occupied by log storage in the 1976, 1977 and 1978 photographs. Accumulation of wood debris appears to be developing.

1979 aerial photographs show that the majority of the logs in the 1973 fill area of Area I have been removed. However, a log pile at the northeastern corner of Area I remains. A network of roads that were originally used to access the log piles remain and the locations formerly occupied by log piles appear to contain some slash, debris and vegetation. The major road access to Area I at this time appears to be from across the northern property line, although a possible road access may be present from Area G to Area I. At this time, any previous access from the southwest to Area I is blocked. Bright white soil patches are evident in three parts of Area I, two in the south central portion and one in the northeast part of Area I. The northeastern white soil patch was first visible in the 1978 aerial photograph.

Two 1980 aerial photographs show significant active regrading and some possible filling occurring in the northern part of Area J. It appears that Area I and the northern part of Area J is being regraded for a change in use. There are piles of slash that have been consolidated and most of area I shows evidence of recent grading but not necessarily the placement of additional fill. A pile of metal pipes is present at the northeastern corner of Area I, at the location of a former log pile and miscellaneous equipment and debris remain at the northwestern edge of Area I in a location that has not been graded.

A large area of the previously described bright white-colored material is visible near the middle of Area I, and several smaller areas of light-colored material are visible on the west side of Area G, west of Centrecon's polishing building. The patch of light-colored material on Area I appears to have been pushed into a 125 by 50 foot stockpile with earth moving equipment. This pile is several feet high. There are features suggesting that this white-colored material may emerge from a westward draining pipe from the Centrecon polishing building. Road access to the fill area on Area I appears to be predominantly from across the northern property line of Area I, but a possible minor road access also is visible from Area G to Area I west of the Centrecon building.

Significant filling along the north side of Area G with what appears to be concrete debris is visible in the photographs. This is discussed in greater detail in Section 5.5 of this report.

Very similar conditions are visible in the 1981 aerial photograph except that the road access between Area I and the property to the north has been eliminated with the construction of a barrier along the entire northern property line of Area I. The resolution of the 1981 aerial photograph is not adequate to see whether active grading is occurring on Area I.

Two 1982 aerial photographs show that Area I has been graded flat and appears to be at roughly similar grade as Area J and about two feet higher than the paved portion of Area G. The ground surface is covered with a uniform, light colored fill. Exploration logs show the fill to be a gravel fill which is generally 0.5 to 1.0 feet in thickness. No signs remain of the eastern berm around the 1973 fill except for a remnant mound on the northwest corner of Area G (Area G-1). A settling pond has been constructed on this berm remnant. This is discussed in more detail in section 5.2.3.

3.1.7 Post-1982 Fill

After 1982 there was no wide-spread filling on the subject property.We reviewed three survey drawings of Areas G and I that provided elevation data. These drawings were dated 1985, 1987 and 2004. We compared surface elevations in these three drawings, which suggest that the ground surface topography in Areas G and I has not changed significantly from 1985 to 2004. Furthermore, based on aerial photographs, it appears that the surface elevation in Area I illustrated in the 1985 and 1987 surveys is very similar to the final elevation of Area I in 1982 as discussed above.

Absolute comparison of elevations was not possible since the 2004 drawing represented elevations with contours and the others showed spot elevations. Generally, all three of these drawings show the ground surface of Area I to be about 1 to 2 feet higher in elevation than the paved ground surface in Area G on the west side of the Ameron Building. The 1985 and 1987 survey drawings do not document the presence of the one or more small stockpiles which the 2004 survey drawing documents in Area I. The 1985 survey shows the small mound and associated pond on Area G-1 which is mentioned in the previous section and discussed in more detail in Section 5.2.3 of this report

The 1985 and 2004 surveys appear to use similar datums, while the 1987 survey appears to use a datum that is approximately 6 feet lower. The 2004 and 1987 surveys are shown on Figure 5. The 1987 elevations in the figure have been adjusted by adding 6.0 feet to the mapped value shown in parenthesis so they can be generally compared to the 2004 survey. The 1985 survey is not shown on Figure 5 because its results are very similar those shown in the 1987 survey except for the small mound in Area G-1.

3.2 OFF-SITE FILLING

The property to the north of the site was filled independently of the subject site with the exception of the 1973 dredge fill which extended well on to the property to the north. An area of the property to the north of the site was filled extending approximately 400 feet west of the mainline rail alignment at some time between the early 1930s and 1947, similar to the first fill described on the subject site.

In the mid-1960s the area to the north was partially filled. The fill supported an access road that started just north of the northeastern corner of Area G and headed W-NW toward

the refuse burner at the mill. The irregular shape, color and texture of this fill suggests an irregular surface created by multiple small-scale filling events. The zone just north of the property line was not filled and remained an incised drainage between the properties.

When the large dredge fill was constructed in 1973 it appears that its northern margin was excavated to augment drainage of the fill. One 1973 aerial photograph shows standing water (at high tide) in the drainage along the north side of Areas I and G. The open water in this drainage extends nearly to the northeastern corner of Area G.

The off-site area northwest of Area I was filled in the late 1970s. A 1976 aerial photograph shows the intertidal area currently occupied by the boat launch to the north of the site surrounded by a bulkhead or sheetpile wall. A 1977 oblique aerial photograph shows the area enclosed by the wall to be completely filled.

Various photographs from 2005 and 2006 show structural fill being placed along the south side of the 10th Street boat launch property to the northwest of the site, in association with the 12th Street Yacht Basin project.

3.3 PAVING

We evaluated the progression of pavement and building construction at the site by interpreting air photos and where possible confirming with information from site surveys and other engineering drawings. For the purpose of this evaluation, we defined "pavement" as any surface which is low permeability and provides a physical barrier to mixing of materials with underlying soil. Practically, this is limited to either asphalt or Portland cement concrete surfaces. Our understanding of the progression of paving at the site is interpretive, and should not be considered definitive. Our understanding of the progression of paving is shown in Figures 6 and 7. For ease of presentation, we have divided it into four periods, 1947 through 1974, 1974 through 1982, 1982 through 1991, and 1991 through 2005. Figures 6 and 7 also show the year of the aerial photograph in which each building is first evident.

4.0 SUMMARY OF SITE USES AND POTENTIAL RELEASES

4.1 PROPERTY OWNERSHIP

We reviewed property ownership records obtained by Nadler Law Offices, Snohomish County records provided by Pacific Ground Water Group, information from technical reports provided to us, Sanborn maps, and our own research of Snohomish County records and on-line business records. For the purposes of this report, we have noted ownership and occupant information only until 2006, just after redevelopment of the subject site began to take place and buildings and businesses were beginning to be demolished or relocated. Many of the business concerns listed as being present up to the 2006 date currently remain on site.

4.1.1 William Hulbert Mill Co.

William Hulbert Mill Co. purchased the existing shingle and lumber mills on site in 1923. The Limits of the Hulbert Mill Co. holdings are shown in Figure 8. The William Hulbert Mill Co. liquidated and dissolved in 1986, and transferred its assets to the William

Hulbert Mill Company Limited Partnership. In 1990, part of the 30 acre property was transferred to the William G. Hulbert, Jr. and Clare Mumford Hulbert Revocable Living Trust; William Hulbert, III; Tanauan Hulbert Martin and David Francis Hulbert; who all owned the property as Tenants in Common. The Hulbert Mill Company Limited Partnership retained the remaining part of the property. In 1991, the entire 30 acre parcel was sold to the Port of Everett. During the period from 1923 to 1991, the various Hulbert-related ownership interests leased portions of the property to various commercial and industrial tenants.

4.1.2 The Port of Everett

The Port of Everett owned the portion of Area M adjacent to the former Northern Pacific right-of-way and the current Marine View Drive from 11th Street to 13th Street, and a small portion of Area G, since at least 1940. Our research was unable to determine the initial ownership of that property. The limits of the Port of Everett holding are shown in Figure 8.

The Port of Everett has owned the entire subject site since acquisition of the Hulbert property in 1991.

In addition to lease agreements with others on the site, the Port of Everett also had its own activities on the property.

4.2 MAJOR TENANTS

Tenant information was derived from leases and subleases obtained from Snohomish County records, records from the Nadler Law Group offices, technical reports, Polks Directories and Sanborn maps. Figure 8 shows the areas occupied by primary tenants at different times in the history of the site.

4.2.1 Tenants on Hulbert Property

4.2.1.1 Collins Casket Company

Collins Casket Co., originally North Coast Casket, leased a portion of Area M and a small portion of Area G from the Hulbert Mill Company from 1926 to 1991. The Collins Casket Co. lease holding is shown in Figure 8. Collins Casket Company leased its property from Hulbert until the Port purchased the property in 1991, and continued as a casket business owned by Keys International leasing from the Port of Everett until 1996. The company remained in the original building throughout its existence. The operation included a boiler house with related oil house, a "smoke shack" employee area and storage area, and an open-sided storage building.

A concrete warehouse building was built for the casket company operation in 1961 adjacent to the east of the main building. The concrete building was on leased land from the Port of Everett. In the late 1970s the original boiler was replaced by a new boiler and diesel AST located on the east side of the Collins Building, between the Collins Building and Building A (Figure 8). The original boiler house was demolished in about 1984.

Subtenants of Collins Casket Company:

RL Enterprises: 1989-1991. RL Enterprises leased the second and third floors of the Collins building for construction of cabinetry.

Michael's Woodcraft: ca.1990-1991. Michael's Woodcraft leased the second floor of the Collins building for furniture making.

4.2.1.2 Centrecon / Utility Vault (now Oldcastle Precast Company)

Centrecon initially leased property from Hulbert in 1972. The lease area included all of the Hulbert property less the area occupied by the Collins Casket lease, including an extended area westward to the tidelands after the filling of 1973-74. The Centrecon lease holding is shown in Figure 8. The lease holding of Centrecon was reduced to Area G only in 1991, as shown in Figure 8. The Port of Everett assumed the Centrecon lease and its sublease agreements when it purchased the Hulbert property in 1991.

Over the period from 1986 to 1994 Centrecon ownership names changed from Centrecon to Utility Vault Company to Oldcastle Precast Company. Centrecon is the name of reference used in this report through 1988. After 1988, Ameron purchased the assets of Centrecon from Utility Vault as discussed below.

Subtenants of Centrecon / Utility Vault:

Washington Stone Corporation: 1979-1982? On May 1, 1979 Centrecon entered into a ten-year lease with Washington Stone Corporation allowing then to import and process aggregate and similar products in parts of Areas I, J and M. The lease agreement included references to improvements to be made to the site by Centrecon for Washington Stone Corporation. In 1982 the same property was leased to Jenson Reynolds Construction (below). Our review of aerial photography found no evidence that the agreed to improvements were ever constructed or any evidence that the lease area was ever occupied by a business involved with aggregate handling. The area of the lease is shown in Figure 8. A termination of lease document dated December 19, 1989 verifies that the lease had previously been terminated although a specific termination date was not cited.

Jensen Reynolds Construction: 1982-1990. Jensen Reynolds Construction subleased the majority of Areas I and J and a small portion of Area M from Centrecon. Their sublease holding is shown in Figure 8. Jensen Reynolds made pre-fabricated metal waterfront buildings. They constructed three permanent buildings on the property — an open shed/warehouse/fabrication building, an equipment repair shop, and an office. These features are shown in Figure 8. Other improvements included security fencing and a fueling area with three underground storage tanks and fuel dispensers.

Ameron: 1988-2006. In 1988 Ameron bought the assets of Centrecon and subleased Area G and a small portion of Area M from Utility Vault for the purpose of utility pole manufacturing. Ameron subleased from Utility Vault until 2005 when the Port of Everett purchased the lease from Utility Vault. The name Ameron is used in this report to reference activities on Area G after 1988.

4.2.1.3 Commercial Steel Fabricators

Commercial Steel Fabricators leased the western half of Area I from Hulbert in 1991. The Commercial Steel Fabricators lease holding is shown in Figure 8. Commercial Steel Fabricators used the property for the purpose of fabrication and assembly of metal modules, storage and warehousing for shipment. No permanent buildings were constructed. The original lease was for 2 acres with a first right of refusal option for 2 more acres. Whether the option to lease the additional 2 acres was ever exercised is unverified. The lease from Hulbert commenced in January of 1991 and extended through the beginning of March. The Port of Everett assumed the lease after it purchased the property from Hulbert in March of 1991, and the lease continued through the end of 1991.

4.2.2 Tenants on Port of Everett Property Through 2006

The Port of Everett initially owned the narrow section of Area M adjacent to Marine View Drive, and purchased the 30 acre Hulbert property in 1991. The leases of existing Hulbert tenants assumed by the Port in 1991 are shown below with dates of tenancy beginning in 1991. The relationship of owner, tenants and subtenants becomes complicated. In this section all tenants and subtenants of the Port of Everett are simply referred to as "occupants" except as noted. Occupants of Port of Everett-owned portions of the site are described below. Only occupants before 2006 are addressed, we did not investigate leases after 2006. Their locations-of-occupation are shown in Figure 8. For convenience, the buildings and structures on the eastern portion of the site owned by the Port of Everett before 1991 are referred to as the "Northern Building" and the "Other Buildings/Structures" -- "A," "B" "C", "D" and "E" as shown in Figure 8. Port of Everett occupants are as follows.

Hulbert Mill Company: 1962-1991. Hulbert Mill Company leased the eastern-most portion of the site owned by the Port of Everett during this period, including the buildings in Area M as shown in Figure 8. Building E was used as the mill office and then later used by Hulbert in the early 1960sfor the log brokering business after the closure of the mill. The remaining buildings (the northern building and buildings "A", "B" and "C" were leased by Hulbert to various subtenants.

The northern building was built in 1979 by Hulbert and subleased to Centrecon.

Building A was constructed in 1961 by Hulbert and leased to the Collins Casket Company who used it for fabrication of metal caskets and casket interiors. The building was later leased to Nalleys for use in warehousing foods.

Building B was constructed in 1974.

Building C was constructed in 1972 for Hulbert and subleased to Washington Belt as described below.

Collins Casket Company: 1991-1996. Collins Casket Company's lease with Hulbert Mill Company was assumed by the Port of Everett.

Ameron: 1991-2006. Ameron's lease of Area G and sublease of the northern portion of Area M, including the Northern Building, were assumed by the Port of Everett in 1991.

Marine Spill Response Company: 1994(?)-2006. MSRC leased portions of Areas J and M, and replaced Jensen Reynolds' warehouse with a new facility to store supplies.

Commercial Steel Fabricators: 1991. Commercial Steel Fabricators' lease and right of first refusal in Area I was assumed from Hulbert by the Port of Everett through 12/31/91.

Veco: 1991. Veco occupied a portion of Jensen Reynolds Construction's former warehouse to store construction and welding supplies and containers.

Snohomish County Public Utility District: 1954-1969. Snohomish County PUD operated an electrical substation in the southeast corner of Area M.

Nalley's: ca. 1990s. Nalley's occupied or partially occupied Southern Building A, using it for warehousing and distribution of food products.

Shaugnessey Company: Shaugnessey Company stored industrial moving equipment and containers on Area I after 1991.

RL Enterprises: 1991-1994. RL Enterprises continued their occupation of portions of the Collins Building through 1994.

Michael's Woodcraft: 1991. Michael's Woodcraft continued their occupation of portions of the Collins Building through 1991.

Tri-Coatings, Inc: 1981-1991. Tri-Coatings occupied a portion of the Northern Building, and provided commercial paints and stripping services. Tri-Coatings expanded into two buildings on adjacent property to the north, and became TC Systems.

Sunset Body Works: 1980-2006. Sunset Body Works occupied a portion of the Northern Building, and provided vehicle auto body repair. Sunset Body Works is now North Central Collision.

Dunlap Wire Rope (aka Dunlap Industrial Hardware): 1980-2006. Dunlap Wire Rope occupies a portion of the Northern Building, and manufactures wire rope, rigging, hydraulic assemblies and other hardware supplies.

Performance Marine: 1981-1985. Performance Marine occupies a portion of the Northern Building, and provides boat repair and service.

BESCO: 1981-1988. BESCO occupied a portion of the Northern Building, and provided wholesale and retail vehicle and machine parts, along with some minor vehicle maintenance.

Churchill Bros. Marine/Churchill Bros. Sail Loft: 1981-2006 Churchill Bros. occupy a portion of the Northern Building, and fabricate boat covers and canvasses.

Sandy's Boat House: 1990-2006. Sandy's Boat House occupied a Southern Building B, and provided boat sales and repair.

Washington Belt and Drive: 1972-2006. Washington Belt and Drive occupies Southern Building C, and provides retail rubber belt sales and services.

Railmakers NW: ca. 1975-87: Railmakers NW occupied a portion of Southern Building B, and fabricated rails for marine vessels.

Sound Propeller: 1972-1976. Sound Propeller occupied a portion of Southern Building B, and provided propeller sales and repair

Prop Shop Propeller Repair: ca. 1982. Prop Shop Propeller Repair occupied a portion of Southern Building B, and provided propeller repair.

Excel Transportation: 1990 at 1200 Marine View Drive. Possibly only an office, but the location and nature of other operations or activities is unknown.

Weathermaster Insulated Glass Manufacturers: 1982-1984 at 1200 Marine View Drive. Possibly only an office, but the location and nature of other operations or activities is unknown.

Hyman-Michael's Scrap Salvage: ca. 1960s. The location and nature of operations is unknown.

Christian Construction: 1968. Barge construction. The precise location and nature of their operations is unknown. They appear to have occupied an area within the northeastern part of the North Marina Peninsula which could have extended onto the western part of Area J.

Tidewater Plywood: 1965 (one year only). Plywood mill, log rafting and storage. Tidewater Plywood most recently occupied the area later occupied by Mid-Mountain Contractors and ABW. The extent of their lease area is unknown but could have extended onto the western part of Area J.

Columbia Hardboard: Prior to 1965. Columbia Hardboard occupied an area within the northeastern part of the North Marina Peninsula, including the former ABW Building southwest of the site. Based on Sanborn maps from 1957 and 1968 buried concrete structures on the western part of Area J may be attributed to Columbia Hardboard.

American Tow Boat: 1961. Log rafting. The precise location and nature of their operations is unknown.

Mid-Mountain Contractors: 1975- 1983. Mid-Mountain leased the northeastern part of the North Marina Peninsula for their operations related to shipping of oil drilling pipe to North Slope Alaska destinations. The western part of Area J was used to store and stage pipe for loading at the 12th Street dock. Mid-Mountain also had an agreement for use of the former ABW building (west of the subject site) for machining and sandblasting of pipe for a 45 day period in 1980. Notation on the rental agreement shows the building was occupied for only 30 days.

4.3 SITE USES THAT COULD RESULT IN RELEASES

Table 1 provides a summary of historic operators on the site and features of concern associated with their operations that might result in environmental contamination concerns. The table is organized by operator, i.e. the entity that was using an area of the site at the time a structure, feature or activity of concern was present. The table provides a brief description of structures or features of concern, separating them based on whether they were identified in reports, lease information, or historical documents observations. Concerns in the "From Reports" column are identified by other consultants as described in the body of reports provided to Pinnacle GeoSciences. Concerns in the "From Leases" column are formally

included in the lease and sublease documents which we have obtained. Concerns in the "From Observations" column are ones which we observed on air photos, Sanborn maps, other historical maps, or other documents.

5.0 AREAS OF KNOWN CONTAMINATION

5.1 FENCE BETWEEN AREAS I AND G

The specific item of interest is: "*When the fence separating Areas I and G was constructed.*"

The fence referred to extends from the northern site boundary southward for about 480 feet and then has a short section extending about 25 feet to the east. These measurements are approximate. Aerial photography suggests that the fence is likely a chain-link fence.

The absence and presence of the fence is best documented by aerial photographs as discussed below. However, lease documents also help place a contextual time frame for the construction of the fence. A 1988 Trustee's Deed between Jensen Reynolds and SeaFirst Bank cites improvements on the land including chain-link security fencing. It cites a lease date of March 1, 1982 between Centrecon and Jensen Reynolds Construction and details the improvements made by Jensen Reynolds during the occupancy of the property. The implication is that fence (an improvement by Jenson & Reynolds) that would have been placed at some time after the effective date of their lease which was March 1, 1982.

The northern part of the area occupied by the fence originally appeared to contain surficial fill and/or vegetation that spanned across the future location of the fence. The fence appears to be a chain-link fence which makes its visibility in aerial photographs problematic unless the lighting is ideal and the resolution is sufficient. The most recent aerial photograph in which the fence is clearly not present is dated 2/27/1981. The 6/16/1982 aerial photograph shows Area I as being recently filled and graded, likely in preparation for site use as discussed in Section 3.1.6. Examination of the photography in stereo shows the fence to be present at that date. The northern part of the fence passes through a small wedge of vegetation that spans Areas G and I and that lineation feature through the vegetation could not be readily attributed to any feature other than the fence. The southern-most short section of the fence toward the east is also evident in that photograph as is the continued extension of the fence to the south after the jog to the east.

A 5/22/1983 aerial photograph is inconclusive and could appear to be contradictory regarding the presence of the fence. However, in our opinion it does not lend evidence either way because of the high sun angle (and subsequent lack of shadows) and the poor resolution of that photograph.

Our conclusion is that the fence was constructed no earlier than February 27, 1981 and that it was present on June 16, 1982. Furthermore, lease documents suggest it was constructed sometime after March 1, 1982 by Jensen Reynolds. Figure 9 shows the aerial photography supporting this conclusion.

5.2 FILL IN AREA I AND THE NORTHWEST PART OF AREA G

The specific item of interest is: *"When fill was placed in Area I and the ~~northeast~~ northwest corner of Area G that resulted in the ground surface in these areas increasing to elevations significantly greater than adjacent grades to the east."*

The northeastern part of Area I and the northwestern part of area G (also referred to as Area G-1 have both been areas of episodic fill accumulation. The areas were non-differentiated before the construction of the fence in the early 1980s which is discussed above. After the fence was constructed, filling or stockpiling activities occurred independently on both sides of the fence. In 2006 the fence was removed and excavation activities included the removal of fill or stockpiles from both sides of the fence. The original fill extending above surrounding grade in this area was from the construction of a berm prior to the placement of the dredge spoil fill in 1973.

5.2.1 Aerial Photograph Review

The sequential history of these areas, based upon review of stereo aerial photography, is described below. Figure 10 shows the sequence of filling illustrated on eight aerial photographs in the date range of 1973 to 1999. Aerial photograph dates that are underlined in the table below are shown in Figure 10. We do not have a specific flight date for those aerial photographs identified by year only.

Date	Area I	Area G (and G-1)
1966-70	No fill above grade to the east.	No fill above grade to the east.
6/2/1970	Same as above.	Same as above.
9/13/1973	Area I is bermed and filled with dredge fill.	Berm supporting dredge fill extends onto Area G. Berm height appears consistent with the height indicated on drawing of 8 feet. Area between building a berm is unused.
6/11/1974	Same as above.	Same as above except that area between the building and berm is used for storage. Some vegetation is emerging on the berm.

Date	Area I	Area G (and G-1)
1976	Dredge fill has consolidated and has been graded. The area is being used for log sorting. The southern part of Area I, directly east of the newly constructed barge dock, has been graded smooth and paved. A drainage ditch or trench has been excavated along the north and east side of this graded area and the excavation spoils are piled alongside the trench.	Minor fill in Area G-1, several feet maximum. Possible berm remnant in Area G-1 and small fill piles are evident on top of the former berm. The northern margin of Area G and the bordering property to the north as well as the northern part of the fence between Areas G-1 and I contain dark colored, dense vegetation which is best discerned in oblique photographs.
9/12/1977	Area I is being used for log sorting, no fill. There has possibly been some minor grading of the eastern dredge fill berm to make it a roadway.	Fill in Area G-1 is heavily vegetated and extends eastward along the northern property line of Area G.
1978	Same as above. A small area of white material is visible in the northeast quadrant Area I.	Same as above.
7/19/1979	Significant large log piles. Three areas of white material are visible in the eastern part of Area I. They appear to be in low areas rather than stockpiles.	Minimal fill. Vegetation present that may mask fill

Date	Area I	Area G (and G-1)
4/11/1980	Log piles gone. Small slash and debris piles are present. A pile of steel pipe is present near the northeast corner of Area I. White material noted in the 1979 aerial photograph is now limited to the southeast quadrant of Area I. A pipe or hose is visible running along the ground surface from the west side of the Centrecon pole polishing building westward. The pipe/hose appears to go underneath the berm and then discharges at the west side of the berm into a low area characterized by the white coloration. At the outfall the white material appears to spread into low areas and eventually enter the trench/drainage ditch on the north side of the paved area east of the barge dock. Some grading appears to be occurring, apparently pushing the white material into a stockpile west of the discharge point. The stockpile measures approximately 125 by 50 feet in plan dimension.	Vegetation is still present on the eastern part of Area G-1. Clearing and grading on Area I has encroached into the western part of Area G-1 where vegetation has been removed.
6/16/1982	Area I is cleared and graded flat – no fill piles. The fence is now present separating Areas G and I. There is no longer evidence of the white material. The trench/drainage ditch along the margin of the pavement east of the dock has been filled.	Most of the fill has been removed. Only a few feet of fill extending up to 50 feet from the fence line remain. A settling pond is present – it is oval and approximately 40 by 80 feet. The northern-most 50 feet of Area G has been cleared, graded and paved; no fill is present in this portion of Area G.
6/17/1987	No significant fill on Area I, minimal vegetation is growing next to the fence bordering Area G.	Minimal fill on northwestern Area G. The pond is still present. Much of the area is being used for equipment storage.
7/3/1991	Minimal fill or vegetation accumulation along the northern property line next to fence bordering Area G.	Part of Area G-1 is used for pole storage. The pond is gone. Minimal fill is present. A small pile of additional fill is present at the location of the former pond.

Date	Area I	Area G (and G-1)
8/19/1991	Vegetation increasing along the fence bordering Area G. Small piers are set in a grid pattern over much of Area I – possibly used to hold items being sandblasted. Pier areas have black material around them.	Minimal fill still present. Small pile of additional fill present at fenceline.
8/10/1992	Area I is graded again. The landfarm is present at the northeastern corner of Area I. No fill is present next to the fence adjoining Area G.	Pole storage is gone. The quantity of fill may be less. A vestige of the former pond is evident.
9/9/1993	Area I is used intensely for log storage. Most of the logs are blackened on one end. They could either be treated poles with a creosote butt treatment or salvaged piling with the embedded end stained black by mud and reducing conditions. There are also piles of what appear to be smaller pieces of salvaged wood which suggests the latter (pile salvaging) is the source of the stockpiled timber. Vegetation is increasing along the eastern and northern border. A possible fill pile is present near the northern fence about 40 feet west of the fence bordering Area G.	The southern fence that "defines Area G-1 is now present. It extends about 50-60 feet to the east from the fence separating Areas G and I. The volume of fill present in G-1 has increased significantly. The fill is several feet deep and extends to 50 feet from the fence. The volume of fill is likely in excess of 500 CY. Vegetation is gone from the fill indicating recent accumulation or movement of soil. There is no pole or equipment storage.
1995	Area I is largely unused. Minor accumulation at the northeastern corner that may be equipment or fill surrounded by vegetation.	A significant volume of fill is still present in Area G-1. The area is also used for pole storage again.
9/22/1999	A significant volume of fill has been placed next to the fence separating Areas G and I. The fill piles are 5 or more feet high.	Fill is still present in Area G-1. Some fill has been excavated near the northern end of the fill pile, next to the northern property line.
2000	Significant accumulations of fill are still present on the northeastern corner of Area I. Some vegetation is present on the fill.	Same as above.

Date	Area I	Area G (and G-1)
7/21/2002	Same as above. The fill is covered with vegetation.	More fill has been placed at the northern end of Area G-1. Vegetation is gone from the surface of parts of the fill in Area G-1 suggesting that it has been reworked or partially removed.
2006	Area I is cleared and possible filled again. A pond is present on the south central part of Area I.	All fill has been removed and the area leveled. Some equipment is stored in Area G-1. A small pond borders the fence.

5.2.2 Summary of Filling on Area I

Area I was originally filled in 1973 as part of the 12th Street Channel dredging project. In preparation for the fill placement, a dike was constructed along the west side of Area I and a berm constructed on the north, east and south sides to contain the dredge fill. Figure 15 shows the location of the dike and berm. The portion of the engineering drawing reproduced on Figure 15 also shows that the northeastern corner of Area I served as a borrow source for construction of the northwestern part of the dike. The engineering drawing does not specify the source or character of the fill used to construct the berm on the north, east and south sides of the fill.

It appears to have taken over one year for the fill to settle and consolidate enough for the site to be graded and used. The eastern berm did not settle and remained higher than the surrounding areas to the east and west. By 1976, most of Area I had been graded and was being used for log sorting. By 1982 the area had been graded and a fence erected between Areas I and G as described in Section 5.1 of this report. With the exception of the engineered landfarm observed in the August 10, 1992 photograph (described in Section 5.3) there was no evidence of significant accumulation of fill in the northeastern corner of Area I until after 1995. The 1999 aerial photograph shows a significant accumulation of fill placed on Area I near the fence separating Areas G and I (Area I-1). This fill is still present in 2000, 2002 and 2006. By mid-2006 it has been removed. The 1999 aerial photograph also shows a smaller pile of fill at the northeastern corner of Area I, abutting the northern and eastern fences. The 2004 survey indicates that there was no fill against the fence separating Areas I and G-1 at that time.

5.2.3 Summary of Filling on Area G (G-1)

Area G-1 occupies the northwestern corner of Area G, bordering Area I, and is the location of two extended periods of fill accumulation. Area G-1 was first filled by the construction of the berm to contain the 12th Street Channel dredge material in 1973. Engineering drawings indicate that the berm was about eight feet above the Centrecon yard grade in this area. Sometime between 1974 and 1976 Area I was graded but the remaining berm in Areas I and G-1 area was not removed although it was apparently lowered. The

remnant of the dredge berm remained and was probably only several feet high. Aerial photographs from 1976 through 1979 show vegetation emerging on top of the berm remnant. The 1980 aerial photograph shows that the eastern side of the fill retained the vegetation seen in prior years and western side of the fill on Area G-1 was cleared and graded.

A fence was constructed between Areas G-1 and I sometime between March and June of 1982 as described in Section 5.1. After this fence was constructed there was no direct access between Areas G-1 and I and all subsequent fill placement and/or movement activities within Area G-1 would have been by access from the east.

By 1982 most of the fill (the portion of the former berm that was above site grade to the east) had been removed from Area G-1, only 1 to 2 feet of fill remained and it extended from just west of the newly constructed fence to about 50 feet east of the fence, covering about 40 percent of Area G-1 and several feet of the adjoining part of Area I. The northern 50 feet of Area G-1 had been cleared of fill by 1982. A large pond is evident on G-1 in the 1982 photograph. The pond is constructed on top of the fill and is roughly 40 by 80 feet in size. The pond and surrounding fill in Area G-1 is shown in the 1985 survey map discussed in Section 3.1.6. The pond is still present in 1987 and the amount of fill present is about the same. By July, 1991 the pond is gone. A photograph from 1992 suggests that the quantity of fill might be slightly less.

In 1993 the volume of fill present in Area G-1 has increased. The fill is several feet deep and extends up to 50 feet eastward from the fence, covering about 60 percent of Area G-1. The volume of fill likely exceeds 500 cubic yards. This fill remains until sometime after 2002. Several photographs show the fill was moved around at times but the volume remained approximately the same. The fill was removed in early 2006.

5.2.4 Continuous Fill Across Areas I and G

Aerial photography showed that filling spanning the boundary between Areas G and I took place primarily by construction of the berm to contain the 1973 dredge fill. By 1976 we see the fill area being used for log sorting. It is likely that once the dredge fill dewatered and consolidated, the entire area was regraded to create a level surface for the log sorting activities we see in the 1976 aerial photograph. Most of the activity across the boundary between Areas I and G-1 between 1973 and 1982 appears to consist of regrading of the berm material. Minor amounts of dark material apparently originating from the Centrecon sandblasting area are evident crossing the boundary in the 1977 and 1980 aerial photographs, however the visible evidence of this dark fill suggests it extended only slightly onto Area I.

By 1982 the fence had been established between the two areas and after that, cross boundary filling was not feasible.

5.3 LANDFARM ON AREA I

The specific item of interest is: *"When the landfarming area in the northeast corner of Area I was created, when it was decommissioned, and where the treated soil was placed (if discernable from aerial photographs)."*

The landfarm was clearly evident in the aerial photograph dated August 10, 1992. ECI (Earth Consultants, Inc.) sampled the location of the landfarm in September-October 1991 and

did not mention or show a landfarm. AGI (Applied GeoTechnology, Inc.) visited the site on 6/30/1992 and observed the landfarm (they had intended to sample the soil in that area and were not aware of the presence of the landfarm). The next aerial photograph available, chronologically, was August 1, 1993 and the landfarm was not present in this photograph. Based on this information, the landfarm was constructed sometime between October 1991 and June 30, 1992 and was removed some time between August 10, 1992 and August 1, 1993.

The only mention of a landfarm in the literature is included in reports by Landau Associates that refer to a landfarm of soils from the removal of three tanks from 1100 – 13th Street in 1991. The Landau Phase I ESA refers to 50 CY (cubic yards) of soil being "placed in a bermed area and aerated". The description goes on to state that the soil was then placed on Port property to the north. The specific location of the soil placement was not noted. This description is included in a letter received by Ecology in August 1991. The Landau Data Gaps Investigation for the subject site corrects the information in the Phase I ESA and states that the tank removal was from Area M, on the north side of 13th Street, not the south side as previously reported.

We considered the likelihood of the landfarm in the 1992 photograph being the landfarm cited by Landau even though the dates differ. The Landau report describing the landfarming activity seems to be clear that the date associated with that landfarm is in the summer of 1991. We have confirmed that the date of the aerial photograph showing the landfarm on Area I is indeed August 10, 1992 which conflicts with the dates reported by Landau. The landfarm in the photograph is approximately 80 by 90 feet. This landfarm is significantly larger than a landfarm needed to treat 50 CY of soil. Fifty CY would be spread to a thickness of two to three inches in a landfarm of this size. Notwithstanding, we reviewed aerial photography for July 2, 1991 and found no evidence of landfarming activities in the general area of the subject site or properties to the south.

The 1993 aerial photograph shows Area I being heavily used for log sorting. There is a possible fill pile located near the northern fence of Area I about 40 to 50 feet from the fence bordering Area G. This pile could be the consolidated landfarm material but we found no information to further support or refute that possibility.

While we can bracket the dates of the presence of the landfarm on Area I we cannot resolve any information about the source, character or final destination of this soil. The anecdotal information about the treatment of soil from a tank removal from Area M reportedly one year earlier could match this feature if the dates reported were incorrect and if additional soil was landfilled as well. Any further conclusions would be speculative given the information we have reviewed.

5.4 CONSTRUCTION DEBRIS AND BURIED STRUCTURES IN AREA J

The specific item of interest is: *"When construction debris was placed as fill in Area J-3 and the source and nature of the buried structures found in western portion of Area J."*

5.4.1 Area J-3 Fill

Area J-3 encompasses the part of the former Hulbert Mill that contained what were likely the most permanent structures associates with the mill operation. Those structures are the boiler house and associated boiler stack, the refuse burner (an 85 foot tall cylindrical iron structure), and the water tower. The 1950 Sanborn map describes these facilities as a "concrete chimney," an "iron refuse burner – 85 feet high" and a "steel water tank on steel trestle – El. 85' – 75,000 gallons." All of these structures would have required substantial foundations which were likely concrete pile caps since all of these structures were constructed over the intertidal area. These three structures were also the last removed after demolition of the mills. The mills were reportedly removed in the early 1960s and the last photograph showing the mill buildings is dated 1961. The 1970 deposition of Mr. William Hulbert, Jr. (father of William G. Hulbert, III) cited the removal of the mill and associated structures as having occurred in 1962. By 1965 all of the mill structures and buildings had been removed except the boiler stack, the refuse burner, and the water tower. By 1967 the refuse burner had been removed and by 1976 the remaining two structures had been removed.

A photograph of the operating mills from the 1930s and subsequent photographs through the 1960s show that debris and granular material was dumped in the area of Area J-3. Based on the proximity, it is possible that bottom ash from the refuse burner was also dumped at this location. The area south of these three structures was gradually filled up until the early 1970s when the large, engineered dredge fill of Area I and parts of Area J was completed.

The extent of structures demolished in 1962 was significant. Historical accounts describe the sawmill fire in 1956 which left it inoperable. Many of the accounts refer to the sawmill "burning down." Aerial photographs show the sawmill structure still present in 1961, five years after the fire. Review of aerial photography shows that the fire actually consumed the lumber storage docks, lumber sheds, one stream dry kiln and two planing mills – all features located north and east of the sawmill.

All mill activities ceased in the early 1960s and all of the mill structures were removed except for the three tall structures. We would expect that a large amount of non-salvageable materials were burned in the refuse burner as the two mills were demolished. This could have included painted wood and possibly treated wood. Residues from these burned materials would accumulate in bottom ash.

Significant changes occurred at the site between two sets of photographs we have of the site - 1956 and 1961. The 1956 photographs show the entire mill in operation and the 1961 shows the area after the mill fire. As discussed in the filling section, it appears that significant filling occurred in this intervening period. A bulkhead is evident surrounding the west and north sides of the burned area in 1961 that was not present in 1953. One test pit on the north side of the property encountered this bulkhead and reported that the lagging was 12"x12" treated wood. The type of treatment was not noted. In our experience, timber and piling of the time period when the wall was constructed were oftentimes untreated cedar, although

frequently mistaken as treated. The 1961 photograph show that the piling supporting this bulkhead extend at different lengths above grade. Construction of this bulkhead would have likely generated significant amounts of cutoffs, both from the piling and lagging. These cutoffs could have been burned in the refuse burner as well. If so, the bottom ash from the refuse burner could also contain residues from the wood treatment.

After cessation of all mill activities Hulbert continued to use the intertidal area for storage of log rafts and it appears that some log handling continued. The excavated log pond remained in use and the area immediately to the south and east of it remained near its original intertidal elevation. This is the area to the south of the three structures described above and within Area J. By 1973 this entire area was filled.

The locations of the smokestack, the refuse burner and the water tower structures relative to Area J and J-3 and historical photographs are shown in Figure 11. Since the pile cap foundations for these structures would have been at least ten feet below the filled grade it is unlikely that they were removed. The foundation for the refuse burner would have encroached upon the northwestern corner of area J-3.

The buried "construction debris" which reportedly extends to a significant depth in Area J-3 may also include debris and wastes from past operations. There is no evidence of significant filling in this area after 1976.

5.4.2 Buried Structures in the Western Part of Area J

The Landau Interim Action Report (2009) discusses two buried concrete structures located on or near the western part of Area J. One of these structures which we'll refer to as the "irregular vault", was removed by Kleinfelder in October, 1993. The other structure is portrayed as a "square vault" on Figure 8 of the 2009 Landau report. We understand that both structures were removed from the site. We have identified the origin and actual location of both of these structures. The identification was complicated by errors in the Kleinfelder report that resulted in their reporting of an incorrect location of the irregular vault in their site plan and the same error in subsequent site plans that relied upon the original Kleinfelder plan.

The 1959 Sanborn map identifies a west to east oriented metal overhead conveyor structure which terminates at a square concrete vault at its eastern end. The labeling of the concrete structure is "CONC. PIT" and the pit is partially overlain by a feature that appears to be labeled "SOIL SHED" except that the word "soil" is difficult to read and has been partially inferred. Nearby to the southeast of this structure is an irregular shaped vault, similar to the shape of the vault documented by Kleinfelder. This irregular vault is titled "CONC. PIT" and "LOG DUMP." The 1967 Sanborn map only shows the irregular vault which is labeled as "CONC.PIT" and "WASTE BURNER DUMP." Both of these features are faintly visible in photographs dating from 1961 to 1967. They are not visible in the 1955 aerial photograph which shows the 12th Street Pier fill shortly after its initial construction, nor are they visible in the 1974 aerial photograph taken after the second fill of this portion of the 12th Street Pier fill was completed. It is likely that both of these structures were buried by the second fill.

A 1974 engineering drawing shows a square feature at the location of the square foundation structure identified in the Landau figure. That engineering drawing, which was

prepared by Reid Middleton Associates for the 12th Street Channel Barge Terminal, identifies this feature, along with other features as "Old concrete foundations to be removed." This drawing places that feature at the same location of the irregular vault shown in the Sanborn map and in the aerial photography. Figure 12 provides an overlay of these locations on the pertinent part of Figure 8 from the Landau 2009 report.

The final confirmation of the mistaken location of the irregular vault by Kleinfelder comes from their own report. Photo Plate 1 in the Kleinfelder report shows several photographs taken during the removal of the vault. One photograph, taken looking to the southeast, shows the MSRC building in the background. Features on the side of the building (a bay door and windows) confirm that the irregular vault was actually located approximately 150 feet north of the location shown in their report.

The actual locations of both of these concrete structures is shown in Figure 12. Both features lie within Area J. The source of the waste materials buried within the irregular vault was not identified but they were likely placed in the vault prior to it being covered over in late 1973 to early 1974. Section 5.7 of this report documents that activities in this part of Area J were largely related to and under the control of business to the west of Area J at that time.

Pertinent portions of the aerial photographs and documents cited in this discussion are shown in Figure 12.

5.5 NORTHERN BOUNDARY OF AREA G

The specific item of interest is: *"Activities or structures along the north boundary of Area G that could have caused the petroleum hydrocarbon and polychlorinated biphenyls (PCB) contamination identified in this area (See 2005 Landau Associates document)."*

5.5.1 Background

The northern boundary of Area G is presently occupied by an underground storm sewer line. In late 2004 a repair was made to a storm drain line and evidence of contamination was noted in excavated soils. The location of this repair is shown in Figure 13. Analytical testing of the soil stockpile from the excavation showed low concentrations of mid-range to heavy-range petroleum hydrocarbons, several PCB aroclors and cPAHs. Furthermore, the soils encountered included concrete fragments and mixed fill suggesting that this area was used for disposal of demolition debris. Follow up testing by Landau Associates shortly after the repair (early 2005) encountered the mixed fill and found the contamination to be localized to the general area of the repair excavation. Samples tested by Landau found evidence of PCBs, PAHs and low concentration petroleum contamination. PCBs and PAHs were found in a soil sample from the initial excavation stockpile. Relatively high concentrations of volatile organic compounds were found in a sample obtained from a depth at or near the top of the storm drain line, close to the repair area. The suite of analyses performed was not consistent from sample to sample so it is difficult to identify patterns between different samples evaluated.

Although the requested scope of this task is to identify possible sources of petroleum hydrocarbons and PCBs in the fill it is important to consider all contaminants detected as indicators of a source area, including contaminants at concentrations well below action levels. Other contaminants observed in the fill stockpile and soil samples collected and analyzed by

Landau include chlorinated solvents (methylene chloride, 1,1,1-trichloroethane and tetrachloroethene) and methyl ethyl ketone (2-butanone). The petroleum distillate volatile organic hydrocarbons in one sample were suggestive of a kerosene or kerosene/gasoline type mix. These solvents and volatile petroleum products are not uncommon to encounter in automotive or truck shop/repair facilities. The PCB aroclors suggest two sources. Aroclors 1254 and 1260 are commonly associated with electrical equipment, specifically transformers. Aroclor 1248 is commonly associated with hydraulic oils. The metals identified are found at many locations across the subject site and as such may not be useful for considering a specific source of the organic chemicals identified in the fill. Based on the chemistry, the likely sources include shop wastes and releases from electrical equipment.

The area of concern lies between the Ameron Building and the northern property line. Figure 13 shows the succession of change in the area of concern between 1967 and 2005. This area was originally tide land and the first construction there was a pile supported dock used for storage. We do not know specifically when this area was initially filled, but by the 1960s the former mill dock structures appeared to be largely underlain by fill, including this area. Until mid-1977, the northern property line along most of Area G is clearly identified by the piling at the edge of the former dock and the much lower grade on the adjacent property to the north. Although the property to the north had been partially filled, a drainage ditch remained along its southern margin – just north of Area G. By mid-1978 the property to the north was filled to approximately the same grade as area G, including this drainage ditch. The storm line, which was likely installed in about 1981-1982, lies several feet south of the northern property line and discharges at the northwestern corner of Area I. The catchment for the portion of the drain line upgradient of the release location encompasses the building east of the Ameron Building and the eastern-most building on the property to the north. The basis for our estimate of the 1981-1982 date range for the installation of the storm sewer system is based on a combination of site development factors evident in aerial photographs including the presence and subsequent removal of substantial fill along the northern margin of Area G and the paving of areas where the storm sewer is now present.

5.5.2 Contaminant Source Scenarios

Four possible scenarios could have led to the presence of soil contamination in the vicinity of the storm line break, these are: 1. Contaminants were already contained within the fill soil surrounding the storm line at the time of placement, 2. The fill soil became contaminated from local releases to the ground surface, 3. Contaminants originated from stormwater leaking from the damaged storm line, and 4. Contaminants migrated to their present location from the property to the north. Each of these scenarios requires a different approach to evaluate. A brief discussion of each scenario is needed to focus on the potential source areas.

Contaminants Contained Within Backfill or Originating from a Surficial Release

The area between the north side of the Ameron Building and the Property line is approximately 80 feet wide. The 30 feet closest to the building is presently paved and the remaining northerly 50 feet has historically been used for storage of fill and equipment storage. As previously mentioned, the original filling of this area appears to have been complete sometime prior to the mid-1960s. Prior to then the area had been a pile supported

dock used for the storage of lumber. This area was largely unused until the area was graded for construction of the large manufacturing building in 1972. Through the 1970s and early 1980s the fifty-foot zone next to the property line was at times occupied by piles of fill material. Based on our aerial photograph review it appears that there was no substantial post-sawmill fill placement on the subject area. We observed no evidence that the occupants of the property to the north used the subject property for fill disposition. It is likely that any fill or equipment storage in this area was under the control of the occupants of the manufacturing building. We have not been fully briefed on the historical industrial activities that occurred in and around the manufacturing building but we would expect that the activities could have generated shop wastes and waste hydraulic oil. We would also expect that electrical demand could have necessitated on-site electrical infrastructure. There is other evidence of electrical equipment on the subject property. A small substation occupied the southeastern corner of the entire property (the southeastern corner of Area M) between 1954 and 1969. Aerial photography from 1980 shows pole-mounted transformers on a utility pole at the northeastern corner of Area G. Furthermore, one oblique photograph from 1977 shows a feature that was possibly a small substation and/or electrical switching facility at the northeastern corner of Area M, however, the quality of the photograph prevented confirmation of this observation and there is no other account of such a feature.

Through the sequence of fill and debris accumulation, excavation and placement of the storm drain line, and periodic regrading and reorganization of the area north of the Ameron Building, the conditions observed in the excavation (buried concrete debris and mixed fill), could have accumulated in this area. We cannot, however, rule out the possibility that the debris and mixed fill in this area is comprised of debris from the former sawmill which could have been used as fill behind the bulkhead. Close examination of the debris would likely allow the distinction of the relative age of the concrete material.

Since contaminant sources consistent with the contaminants found in the soils in the northern part of Area G are likely present in Areas G and M, the source of the contaminants in the soil could have been from the subject site.

Contaminants Originating from the Property to the North

The area north of the large manufacturing building was always separate from the adjoining property to the north. It was filled in the 1960s or earlier. This area was subsequently used for the storage of materials and what appear to be soil and/or debris piles. The progression of site development activity suggests that the storm sewer system was installed in 1982. This would have required excavation and filling. The potential for cross-over activities from the property to the north were minimal prior to mid-1977 because of the significant grade difference – the northern property line was characterized by a vertical wall corresponding to the northern edge of the bulkhead structure. The property to the north was finally filled to the approximate grade of the property to the south between mid-1977 and mid-1978. A fence may have been constructed between the two properties as early as 1978 but it is not visible in aerial photographs until the 1990s. Even though the fence may not be visible in earlier photographs, the land use on the two adjoining properties since 1978 is consistent with a fence being present. We observed no evidence of filling activities in this area that may have crossed the property boundary.

After filling in 1978, the land use on the southern margin of the property to the north in the general vicinity of the storm line repair was associated with vehicle parking, boat parking/storage, and container storage. It is possible that drums were stored here but we saw no evidence of drum storage along the fence in the photographs evaluated. Structures on the property to the north are set back approximately 80-100 feet from the property line, consistent with the set back of the manufacturing building from the northern property line. This area was paved as early as 1979. The aerial photographs provide no evidence of specific on-going activities along the property margin that might have resulted in a localized release. However, aerial photograph review is not likely to identify a small release, intentional or unintentional, that might have occurred at the property line.

Contaminants Originating from a Break in the Storm Sewer Line

The portion of the sewer line upgradient to the contaminated area of the northern part of Area G collects storm water from portions of Areas M and G and from the east and west side of the eastern-most building on the property to the north. Figure 14 shows the drainage system configuration in this area.

The area drained on the property to the north is occupied by TC Systems (1032 West Marine Drive). The two eastern-most buildings and likely the third are all occupied by TC Systems. In 2009 Ecology (The Washington State Department of Ecology) fined TC Systems for multiple hazardous waste violations. The fines applied to violations found in 2007 and 2008, most of which were repeat violations found in prior inspections dating back to 1997. Ecology cited spilled compressor oil entering a storm drain, paint solvents set out to evaporate and numerous other housekeeping and procedural issues. Aerial photography from 1995 to 2005 shows that the area between the two eastern-most buildings was heavily used for equipment, materials and possibly waste material storage. This photograph is shown in Figure 14. This photograph coincides with the time frame for the discovery of the contaminated soil in the area of the sewer line break. The full scope of possible contaminants from this facility is unknown but the Ecology documentation identifies possible contaminants consistent with some of those observed in the soil.

As mentioned in the previous section, there are also likely sources for these contaminants on the subject property (Areas G and M) which also drain into the storm drain system. In addition to active business operations areas, the 1995 photograph shown in Figure 14 shows that the northeastern corners of both Areas M and G were used for storage of equipment and waste accumulation (note the blue dumpster).

In October, 1992 ECI sampled and analyzed sediment from the storm sewer outfall at the northwestern corner of Area I. The sample was analyzed for petroleum, selected metals and organochlorine pesticides and PCBs. Petroleum hydrocarbons were present (undifferentiated) and PCBs were not detected although matrix interference resulted in an elevated reporting limit such that the data are of limited use in comparison to Landau's finding at the subject area.

It is possible that the source of some of the organic contaminants observed in the fill soil are from the break in the storm sewer line. This could be further evaluated by additional analysis of residue in the storm drain line and at the outfall. However, it is unlikely that metals

contamination noted in the soil is related to the break in the storm sewer line. There is insufficient information to indicate a relationship between the metals contamination and the organic chemical contamination.

5.6 ACTIVITIES CROSSING THE NORTHERN PROPERTY BOUNDARY

The specific item of interest is: *"Whether the operations in Areas G or I extended across the Site boundary to the north at any time during the Site operational history and, vice versa, whether operations to the north extended onto Areas G or I and may have impacted these areas."*

The boundary between Area G and the property to the north has always been a physical barrier preventing physical movement across the property line. Until the property to the north was filled, the northern margin of Area G was the northern edge of a former sawmill dock structure which was ten of more feet higher than the adjoining property. The intertidal zone beneath the dock structure appeared to have filled by the 1960s and a bulkhead replaced the dock structure.

The northern property line between Area G and the property to the north was an incised drainage until the eastern part of the property to the north was filled to its present grade. In 1973 when the large dredge fill was placed, an intertidal drainage channel extended nearly to Marine View Drive.

The boundary between Area I and the property to the north was also partially characterized by the same dock structure. The western-most part, however, was common intertidal land until a major dredge fill placement in 1973. This engineered dredge fill placed in 1973 spanned the subject property, including parts of Areas J, I and G. Figure 15 shows the engineered fill placed in 1973. As as-built drawing by Reid Middleton Associates shows the dike and berm structures that were constructed on Areas J, I and G and extended onto the property to the north, as did the dredge spoil fill. The dike was constructed, at least in-part, from soils excavated from the northeastern corner of Area I and described in the 1973 engineering drawing. Furthermore, log and timber debris from the fill project was stockpiled north of the fill on the property to the north. This is also shown on the engineering drawing.

In 1976 a dike structure was built on the property to the north in preparation for its filling. The eastern-most extension of that dike structure was approximately even with the boundary between areas G and I. This dike structure prevented movement across the property line between Area I and the property to the north.

Once the property to the north was filled, the boundary between Area I and the property to the north was not distinguishable. By 1977 there was evidence of cross-over between the properties as is evidenced by a dirt road. Between 1977 and 1982 when Area I was filled and graded there was opportunity to move across the property line. During this period Area I was used for log storage and there are there are multiple examples of movement across the property line visible in aerial photographs as dirt roads and vehicle tracks. However, use of the property to the north for storage of logs or soil appeared to be minimal and also appeared to just straddle the property line.

With the filling of Area I in 1982 the boundary between Area I and the property to the north was established and no cross-over occurred until 2005 when construction, presumably by the Port of Everett, spanned the two properties.

5.7 ACTIVITIES CROSSING THE SOUTHERN AND SOUTHWESTERN PROPERTY BOUNDARY

The specific item of interest is: *"Whether operations in Areas J, I, or M extended across the Site boundaries to the south or southwest at any time during the Site operational history and, vice versa, whether the operations to the south or southwest of Areas J, I, or M extended across the Site boundaries and impacted these areas."*

In about 1955 a large non-dredge fill was placed that encompassed much of Area J. This fill was incorrectly interpreted to be a sawdust pile in Exhibit A – Figure 7 of the Final Agreed Order. This fill was bounded on the west by a low wall structure, possibly a constructed soil berm. This structure is clearly visible in early aerial photographs of the fill. Another, less obvious berm was constructed near the eastern margin of the fill and a wedge of fill was placed east of this berm, likely intended to merge the new grade into the site grade east of the Collins Building. The newly filled area had its own access road from 13th Street as did the area just west of the wall.

The west wall of this fill formed a natural division of the site which then continued to propagate through future uses of this part of the site. The 1957 and 1968 Sanborn maps describe an eight foot high wire fence at the western margin of this wall (see Figure 12). Land use of the area west of this wall was tied to the activities of businesses west of Area J and west of the Agreed Order site. The area immediately next to the west side of this wall became a parking and equipment laydown area apparently associated with the business activities to the west. The two areas, east and west of the boundary had their own separate access roads from 13th Street. Traffic flow patterns and visual evidence of site access suggests that activities in Area I and the filled part of Area J did not encroach on the part of Area J west of the wall and fence.

When the 12th Street pier received additional fill in late 1973 to early 1974 the newly filled site grade may have then approximated the grade at the top of the wall. Despite this, the division of site use appears to have persisted with the division formed by the fence, vegetation and use of this area for storage. With the completion of site development associated with the construction of the MSRC Building in 1993 a drainage swale was constructed at the alignment of the former berm and fence.

After construction of the 12 Street Barge Wharf in the mid-1970s the road access between the area west of the boundary opened up to allow access to the wharf. To accommodate this, parts of Area J and I were graded and paved. From this date forward, Area I was generally accessible from this route. From 1982 to about 1993 the part of Area J east of the boundary was also accessible by this route but only by passing through Area I. With the construction of the MSRC Building in 1993 Area J became even more limited from Area I.

Business activities on Area I appeared to use the area west of the wall for access purposes starting in about 1982. It appears that this area was used for through truck access but there did not seem to be evidence of industrial activity associated with this site use.

There is no evidence of active industrial features on the western part of Area J, west of the fill constructed in 1955 except for the concrete structures discussed in Section 5.4.2 of this report. This area was used for traffic, parking and equipment storage and laydown which, for the most part, was associated with businesses to the west of the Agreed Order area. The use of the area for equipment storage and laydown could have resulted in localized contaminant release events. The land use in this area, spanning 55 years, is shown in the series of 21 aerial photographs shown in Figure 16.

6.0 THE REFERENCES USED

We relied upon references provided to us by the PLP Consultants, documents provided by The Nadler Group and documents found through our own research and inquiries. The attached list of references differentiates between documents provided to us by the PLP Group and documents we obtained through the Nadler Group and our own research. A considerable number of aerial photographs were provided to us in both paper and digital form. We obtained additional aerial photographs including photographs to create stereo pairs with individual photographs provided to us. Appendix A includes an inventory of aerial photography collected and reviewed for this study. The attached DVD includes digital copies of all aerial photographs including PDFs of stereo pairs arranged for viewing.

7.0 LIMITATIONS

Pinnacle GeoSciences, Inc. prepared this report for use by (the PLP Group). This report may be made available to regulatory agencies and to other parties authorized by (the PLP Group). The report is not intended for use by others and the information contained herein is not applicable to other sites.

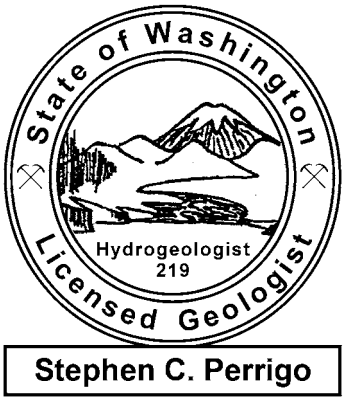
Pinnacle GeoSciences has relied upon information provided by others in our description of historical conditions and prior studies. The available data does not provide definitive information with regard to all past uses, operations, incidents or conditions at the site and the vicinity of the site. Our interpretations of site conditions are based solely on review of reports and historical documents. We have not visited the site.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices for environmental services of this type in Washington at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

8.0 CLOSING

Pinnacle GeoSciences appreciates the opportunity to provide environmental consulting services to the PLP Consultants. Please contact us if you have any questions concerning this report.

Sincerely,
Pinnacle GeoSciences, Inc.



Stephen C. Perrigo, LHG, LG
Principal

List of References

Note: *Sources* are identified in parenthesis after citations. The document number refers to the document number as it is identified in the project digital file.)

Nadler Law Group, : (Nadler 0000xxx.pdf),

(Nadler) : source of technical drawings not scanned to digital file

Pacific Groundwater Group (PGG): (xxxxxxx), and (oprxxxxx.pdf)

Landau Associates: All technical reports

Pinnacle GeoSciences: all other documents

Photographs:

A detailed summary of all photographs and sources is included in Appendix A of the report.

Maps and Technical Drawings: (listed chronologically)

General Land Office Plat Map Cadastral Survey 29-5e-A
Township 29 North, Range 5 East, Willamette Meridian, WA, T29, R5, February 18, 1884

Plat Map, Section 18, Township 29 Route 5, n.d. (ca. 1890s) (Nadler)

USGS Topographic Map, Adjoining Quad, Seattle, 1897

USGS Topographic Map, Mt. Vernon Quad, 1911

USGS Topographic Map, Marysville Quad, 1947, 1956, 1968, 1973

USGS Topographic Map, Adjoining Quad, Everett, WA 1944, 1947, 1953, 1968, 1973

Sanborn Insurance Maps, 1914, 1950, 1968 (Landau)

Sanborn Insurance Map, 1957 (Seattle Public Library)

Plat of Everett Division "R", Snohomish County, WA, 1906 (opr111342-1-1.pdf)

Map showing boundaries of Everett, Washington, December 7, 1915 (opr216733-1-1.pdf)

Anderson, Bjornstad, Kane, Jacobs conceptual industrial development drawing, n/d (Nadler 000304.pdf)

Hulbert/Port of Everett easement area drawing and legal description , n/d. (Nadler 000028.pdf)

Great Northern Railroad Everett Section, Everett #7, Snohomish, Washington, Section 7 & 18, May 1960 (Nadler)

Reid, Middleton & Associates, *Proposed Channel Dredging, RipRap and Hydraulic Fill areas,* dwg no. 7.76.D, March 1971 (Nadler 000368.pdf)

Record of Survey for Port of Everett, Sec 18/29/5, September 28, 1973 (opr21315537-1-1.pdf))

Reid, Middleton & Associates, *Port of Everett 12th Street Channel Diking & Landfill*, January 2, 1973 (Nadler)

Engineering drawing of Proposed Concrete Pier and Bulkhead, 12th Street Channel, Everett, WA prepared by Reid, Middleton & Associates, July 11, 1974 (Nadler 00009.pdf)

List of References (continued)

Engineering drawing of proposed concrete wharf and fill at 12th Street Channel, Everett, WA prepared by Reid, Middleton, August 27, 1974 (Nadler 00004.pdf)

Reid, Middleton & Associates *Partial Topographic Survey Vicinity East Endof 12th Street Channel with Proposed Grading of Stockpile,* for Port of Everett, August 30, 1974 (Nadler 000371.pdf)

___, *Port of Everett 12th Street Channel Barge Terminal Site Preparation Sub-Grade Plan and Details,* December 27, 1974 (Nadler)

___, *Port of Everett 12th Street Barge Terminal Storm Sewer Plan and Details,* December 27, 1974 (Nadler)

___, *Port of Everett 12th Street Barge Terminal Final Grading Plan and Details,* December 27, 1974 (Nadler)

___, *Port of Everett 12th Street Channel Barge Terminal Concrete Pier Approach Fill and Location Map,* January 6, 1975 (Nadler)

U.S. Army Corps of Engineers Maintenance Dredging of Everett Harbor and Snohomish River, February 13, 1976 (Nadler)

___, Everett Harbor and Snohomish River Condition, March & April 1979 E-2-8-179 (Nadler)

___, Everett Harbor and Snohomish River Condition, March & April 1979 General Layout (Nadler)

___, Everett Harbor and Snohomish River Condition March 1979 (Nadler)

Lease area map of Centrecon property by Reid, Middleton & Associates drawn 11/19/1982 (Nadler 00007.pdf)

Survey of 1028 Norton Avenue, Everett, March 12, 1984 (8403125019)

Survey of 1028 Norton Avenue, March 12, 1984 (opr8403125019-1-2.pdf)

Plat of Survey for Port of Everett, SW1/4 SE ¼ 18/29/5, March 13, 1985 (opr8504155001-1-1)

Reid Middleton & Associates, *Ownership and Lease Map for MarDev Properties,* April 16, 1985 (Nadler)

Reid, Middleton & Associates, Topographic Map for MarDev Properties, April 18, 1985 (Nadler)

Walker & Associates Aerial Topographic Map, City of Everett, 18/29/5, March 2, 1987 (Nadler)

Record of Survey for Marine Spill Response Corp., February 16, 1993 (opr9302165001-1-2)

Binding Site Plan, Norton Industries 1210 Marine View Drive, April 1, 1994 (opr9404015002-1-5)

Binding Site Plan, Norton Industries, 13 May 1994 (opr9405185001-1-5)

Reid, Middleton, Inc. *North Marina Utility Map, Schematic Storm Sewer System,* for Port of Everett, June 1996 (Nadler 000372.pdf)

Survey, Port of Everett North Marina, August 2, 2005 (opr200508025005-1)

David Evans Associates *North Marina Development Site Topographic Survey* for the Port of Everett, December 2005 (Nadler 000369.pdf)

___, *North Marina Development Site Topographic Survey* for the Port of Everett, December 2005 (Nadler 000370.pdf)

Binding Site Plan, Division 1 Port of Everett North Marina, January 22, 2007 (opr200703285001-1)

List of References (continued)

Street Vacation Ordinance for vacation of portions of 12th Street, 13th Street, and 14th Street lying west of Marine View Drive at Everett Marina, March 26, 2007 (opr200702030777-1)

Binding Site Plan for Division 2 Port of Everett North Marina, July 12, 2007 (opr200708105298-1)

Distribution Easement Underground, Snohomish County parcel number 29 0518 001022 00, September 27, 2007 (opr200710300577-1)

Technical Reports

Applied Geotechnology, Inc., *Additional Site Observations and Testing, Hulbert Mill Property, 13th Street and W. Marine View Drive, Everett, WA* August 19, 1992

Cornerstone Geotechnical, Inc. *Preliminary Findings from Review of Geotechnical Reports, North Marina Development, Everett, Washington,* prepared for Maritime Trust Company, March 24, 2004

Earth Consultants, Inc. *Supplemental Site Investigation, Jensen Reynolds Property, 1305 13th St., Everett, WA,* December 6, 1988

Earth Consultants, Inc., *Phase 2 Environmental Site Assessment, Hulbert Mill Property, Everett, Washington,* February 7, 1992

Earth Consultants, Inc., *Preliminary Environmental Audit, Jensen Reynolds Property, 1105 13th Street, Everett, WA* July 14, 1987

Hart Crowser, Inc. *Environmental Engineering Services, Proposed MRSC Facility, Port of Everett, WA*, correspondence to Keith Moore of HNTB, Bellevue, Washington, November 26, 1991

Kleinfelder, Inc., *Independent Cleanup Action Report, Area West of MRSC Warehouse Building, Port of Everett Property, Everett, WA*, December 7, 1993

Kleinfelder, Inc. *Phase I Environmental Site Assessment and Phase I Environmental Audit, Business on Thirty Acres, Northwest Corner of 13th Street and Marine View Drive, Everett, WA.,* May 29, 1991

Landau Associates, *Phase I Environmental Site Assessment, North Marina Redevelopment Project, Port of Everett, Washington* prepared for Maritime Trust, Ocean Shores, WA, November 28, 2001

Landau Associates, Technical Memorandum from Eric Russell, Port of Everett to Larry Beard and Erik Gerking, *Ameron International Leasehold Environmental Investigation of Oil Affected Area, Port of Everett, WA.,* June 20, 2005

Landau Associates, *Ecology Review Draft Interim Action Report, North Marina Ameron/Hulbert Site, Everett, WA,* October 29, 2009

PSM International, Inc., *Report on Investigations Conducted at Ameron (Centrecon) Plant in Everett, Washington,* January 9-13 and February 7-10, 1989

Washington Department of Ecology, *Agreed Order Remedial Investigation/Feasibility Study and Draft Cleanup Action Plan – North Marina Ameron/Hulbert Site, No DE 677*

List of References (continued)

Publications:

Andrews, Ralph, This Was Sawmilling, Schiffer Publishing, Atglen, PA, 1994

Clark, Norman H., Mill Town, University of Washington Press, 1970

Dehm, M.L. Downtown Everett, Arcadia Publishing, 2005

Polk's Directories, City of Everett, 1941-1990 (Kleinfelder, Pinnacle GeoSciences)

Property Documents

Chicago Title Insurance *Property History Guarantee* (incomplete), Hulbert property (Nadler 000209.pdf)

Legal Description, Wm. Hulbert Mill Property (Nadler 000220.pdf)

Snohomish County Tax Assessor's Parcel Map for NE 18/29/5, produced April 9, 2009 (#290518-1)

___, Tax Assessor's Parcel Map for NE 18/29/5 produced April 18, 2008 (Snohomish Co. File No. 290518-2)

Listed Chronologically:

Warranty Deed, Everett Improvement Company to Everett Shingle Company, September 12, 1917 (Nadler 000223.pdf)

Warranty Deed, First National Bank of Everett to Wm. Hulbert Mill Co., December 31, 1921(Nadler 000226.pdf)

Quit Claim Deed, BH Vollans and Laura M Vollans and Wm Hulbert Mill Co., December 31, 1921(Nadler 000225.pdf)

Warranty Deed for Wm. Hulbert Mill Co., filed September 18, 1923 (322109)

Warranty Deed, William Hulbert Mill Co. to North Coast Casket Co., August 26, 1926 (Nadler 000227.pdf)

Sheriff's Deed, Ray Ryan to Everett Trust and Savings Bank, January 25, 1940 (Nadler 000228.pdf)

Statutory Warranty Deed, Everett Trust and Savings Bank, Trustee, to Wm. Hulbert Mill Co., February 17, 1940 (Nadler 000231.pdf)

Satisfaction of Real and Chattel Mortgage filed for William Hulbert Mill Co., February 29, 1940 (667310)

Warranty Deed, North Coast Casket Company to Wm Hulbert Mill Co., May 27, 1941 (Nadler 000232.pdf)

Lease, Wm. Hulbert Mill Co. and Port of Everett, January 2, 1962 (Nadler 000050.pdf)

Lease, Wm. Hulbert Mill Co., and W.G. Hulbert, Jr., July 28, 1971 (Nadler 000238.pdf)

Agreement between Port of Everett and William Hulbert Mill, 1972 (2291703)

List of References (continued)

Lease Agreement between William Hulbert Mill and Centrecon, August 8, 1972 (2288020)

Agreement, Port of Everett and Wm Hulbert Mill Company, September 12, 1972 (Nadler 000348.pdf)

Lease Amendment, Assignment and Waiver between William Hulbert Mill and Centrecon, 5 January, 1973 (2291250)

Lease Addendum and Correction of Description between William Hulbert Mill and Centrecon, 24 April 1973 (2291620)

Lease, Wm. Hulbert Jr., and Washington Belt, March 6, 1973 (Nadler 000243.pdf)

Lease Amendment, Assignment and Waiver, between William Hulbert Company and Centrecon, March 8, 1973 (2291705)

Lease Amendment, Assignment and Waiver, between William Hulbert Company and Centrecon, March 28, 1973 (2293754)

Authorization by Mid-Mountain Contractors to lease property at 13th St. barge terminal, January 7, 1975 (Nadler 000032.pdf)

Statutory Warranty Deed, Wm. Hulbert Mill Co. and Port of Everett, May 1, 1975 (Nadler 000259.pdf)

Agreement between William Hulbert Mill Company and Port of Everett, 1975 (2376608)

Statutory Warranty Deed between William Hulbert Mill Company and Port of Everett, 1975 (2387897)

Sublease, Centrecon and Washington Stone Corporation, May 1, 1979 (Nadler 000143.pdf)

Amendment to Lease between William Hulbert Mill Company and Centrecon, October 1, 1979 (7911300209)

Supplement to Lease and Consent to Sublease between William Hulbert Mill Company and Centrecon, September 6, 1979 (7911300210)

Rental Agreement between Mid-Mountain Contractors and Port of Everett to use space in former Everett Plywood Corporation building, February 25, 1980 (Nadler 000034.pdf)

Sublease, Centrecon and Jensen Reynolds Corporation, March 1, 1982 (Nadler 000155)

Agreement, Jensen Reynolds and (City of Everett?), December 29, 1982 (8301110186)

Lease, Port of Everett and Centrecon, February 8, 1983 (Nadler 000055.pdf)

Quit Claim Deed, Wm. Hulbert Jr., June 12, 1986 (Nadler 000262.pdf)

Articles of Merger, Utility Vault Co., Inc. and Centrecon, October 31, 1986 (Nadler 000067.pdf)

Quit Claim Deed, Wm Hulbert Mill Co. to Wm Hulbert Limited Partnership, December 29, 1986 (Nadler 000265.pdf)

Trustee's Deed, Sea-First/Jensen Reynolds Construction, August 15, 1988 (Nadler 0000272,pdf)

List of References (continued)

Memorandum of Lease between Utility Vault Company and Ameron, September 30, 1988 (8810110398)

Purchase Agreement, Utility Vault Co., Inc. and Ameron, Inc., September 16, 1988 (Nadler 000068.pdf)

Sublease, Utility Vault Co. and Ameron, September 30, 1988 (Nadler 000105.pdf)

Assignment of Lease, Utility Vault Co. and Ameron, September 30, 1988 (Nadler 000157.pdf)

Bill of Sale, Utility Vault Co., and Ameron, September 30, 1988 (Nadler 000132.pdf)

Industrial Lease, RL Enterprises and Wm. Hulbert Mill Co., July 1, 1989 (Nadler 000038.pdf)

Industrial Lease, Hulbert Trust and Sandy's Boat House, November 1, 1990 (Nadler 000158.pdf)

Industrial Lease, William Hulbert Mill Co. and Commercial Steel Fabricators, December 1, 1990 (Nadler 000169.pdf)

Memorandum of Lease between William Hulbert Mill Company and Utility Vault Company, January 31, 1991 (9103120124)

Statutory Warranty Deed for successor Trustees of William G. Hulbert, Jr. and Claire Mumford Hulbert Revocable Living Trust Agreement, March 8, 1991 (opr9103120125 1-8)

Statutory Warranty Deed grantor William Hulbert Mill Company to Port of Everett, March 8, 1991(opr9103120126-1-8)

Assignment of Lease, Collins Casket Company to Keys International, July 9, 1991 (Nadler 000195.pdf)

Lease, Port of Everett and Keys International, August 1, 1991, (Nadler 000180.pdf)

Articles of Amendment of July 21, 1994 for Utility Vault Co. changing name to Oldcastle Precast, Inc., December 5, 2003. (Nadler 000135.pdf)

Sublease, Marine Spill Response Corporation and American Boiler Works, December 1, 1996 (Nadler 000197.pdf)

Statutory Warranty Deed, Hook Investments to Port of Everett, February 13, 2006 (opr200602160146-1)

QuitClaim Deed, Old Castle PreCast to Port of Everett, April 17, 2006 (opr200604260526-1)

Memorandum of Assignment and Assumption of Sublease, Oldcastle Precast to Port of Everett, April 19, 2006 (opr200604260527-1)

Correspondence: (listed chronologically)

Correspondence from Reid, Middleton & Associates to Port of Everett re. 12th Street Barge Channel, August 30, 1974 (Nadler 00002.pdf)

Correspondence between James H. Reid of Reid, Middleton & Associates and Seattle Corps of Engineers, September 25, 1974 (Nadler 00008.pdf)

List of References (continued)

Correspondence and permit from Corps of Engineers to Port of Everett to dredge, fill and construct wharf, December 17, 1974, (Nadler 000011.pdf)

Correspondence between Mid-Mountain Contractors and Port of Everett re. use of 13th Street barge dock, December, 1974. (Nadler 000017.pdf)

Letter to City of Everett from Reid, Middleton re. plans and specifications for a barge terminal, January 7, 1975 (Nadler 000033.pdf)

Correspondence between Reid, Middleton and Mid-Mountain Contractors re. improvements to area adjacent to 12th St. basin, September 19, 1975 (Nadler 000030.pdf)

Correspondence between Centrecon, Mid-Mountain Contractors and Port of Everett re. lease exchange of portion of property, May, 1979 (Nadler 000020.pdf)

Correspondence from Mid-Mountain Contractors to Port of Everett exercising option to re-lease property, December, 1979 (Nadler 000027.pdf)

Correspondence between John Schack of Centrecon and John Belford of Port of Everett re.desire to purchase property, June 8, 1982 (Nadler 00006.pdf)

Correpondence between Port of Everett and Mid-Mountain Contractors re. removal of portion of property from Mid-Mountain lease in favor of Jensen-Reynolds/Centrecon. January, 1983 (Nadler 000035.pdf)

Permits:

Correspondence and permit from US Army Corps of Engineers and Reid, Middleton, Inc. to dredge and berm adjacent area to Hulbert and Port of Everett property, February 29, 1972

Other:

"Deposition upon oral examination of William Hulbert," No. 97671 in the Superior Court of the State of Washington In and For the County of Snohomish, February 16, 1970

EDR Radius Map Report for Ameron/Hulbert property, 1130 W. Marine View Drive, Everett, Wa, June 25, 2009

EDR City Directory Abstract, Ameron/Hulbert property, 1130 W. Marine View Drive, Everett, WA, June 29, 2009

EDR Property Tax Map Report, Ameron/Hulbert property, 1130 W. Marine View Drive, Everett, WA, June 25, 2009

http://ecy.wa.gov/news/2009news/2009-074.html "Everett Company fined $24,000 for hazardous waste violations" March 30, 2009

http://www.oldcastle.com.pdf/anniv.pdf "Oldcastle, Inc. Marks Its 30th Anniversary"

"Talking Shop with Ted Hathaway, CEO of Oldcastle Glass" US Glass Magazine 2008

List of References (continued)

http://www.historiceverett.org/Collins-History.html
http://www.historylink.org/index.cfm?DisplayPage=cybertour.cfm&fileId=8467&frame=5 "Point 5, The Collins Building 1210 W Marine View Drive"
http://ir.library.oregonstate.edu/jspui/bitstream/1957/11319/1/ind_sel_jou_art_1960_.pdf "Index of Selected Journal Articles Pertaining to the Forest Products Industry, 1960-62."
Everett *Herald, "Hearing Held on Plans to Improve Port"* pages 1 & 9, December 2, 1947

Aerial Photograph Inventory - North Marina Ameron / Hulbert Site

February 16, 2010

Year	Pair?	File Name (without year prefix)	Image Source	Acquired by:	Photo Date	Oblique?	Color?	Comment
1920c		Everett Waterfront.jpg	www.Historylink.org	PGS-online	estimated	X		
1920s		Collins Casket - Historylink.org	www.Historylink.org	PGS-online	estimated	X		
1925		Mill and Casket Co - Historylink.jpg	www.Historylink.org	PGS-online	1925	X		
1928		1928 - Everett Library Digital Collection.jpg	Everett Library Digital Collection	PGS-online	1928	X		
1928		1928-2 - Everett Library Digital Collection.jpg	Everett Library Digital Collection	PGS-online	1928	X		
1930s		1930s - Sawmill.jpg	"Morrison Photo" in ink	Nadler	estimated	X		date estimated from cars (newest: 1935 Ford)
1947	Pair	D47-294.jpg	AeroMetric	L-H	1947			
1947		Hulbert_aerial_1947.tif	AeroMetric	PGWG-D	1947			Pair with other 1947 pic, this is D47-293
1953		1953 - Sawmill Oblique	unknown	Nadler	1953	X		year noted on back
1953c		1953c - Clark's Aerial		Nadler	estimated	X		Clarks Aerial Broadcasting & Photography
1953		1953-08-18 - Western Ways	Western Ways	Nadler	8/18/1953	X		Western Ways Inc. - stamped on back
1954		1954-10-01 - Western Ways.jpg	Western Ways	Nadler	10/1/1954	X		Western Ways Inc. stamped on back
1955	Pair	D55-9N-34.jpg	AeroMetric	L-H	1955			
		D55-9N-35.jpg						
1955		Hulbert_aerial_1955.tif	AeroMetric	PGWG-D	1955			
1956		EDR Aerial Photo 1956.jpg	EDR	L-EDR	4/9/1956			
1960		1960 - Oblique - Everett Reynolds.jpg	Everett Reynolds	Nadler	early 1960 in pencil	X		Everett Reynolds
1961		8-11-1961-crop2.jpg			8/11/1961			
1965		K-SN-65 15B-32.jpg	WDNR	L-H	7/6/1965			
	Pair	K-SN-65 15B-34.jpg						
		K-SN-B 15B-33.jpg						
1966	Pair	7-29-66_1-5-2-22_north 400dpi.jpg	Unknown	L-D				
		7-29-66_1-5-2-20_south 400dpi.jpg						
1967	Pair	Hulbert_aerial_1967.tif	AeroMetric	PGWG-D	1967			SN-C
		SNC-1967, 6-25	AeroMetric	PGS-AM				
1968		EDR Aerial Photo 1968.jpg	EDR	L-EDR	9/2/1968			
1969		1969-08-02 - Pete Kinch - 422-1-69.jpg	Pete Kinch	Nadler	8/2/1969	X		
1969		1969-08-02 - Pete Kinch - 422-1-70.jpg	Pete Kinch	Nadler	8/2/1969	X		
1969		1969-08-02 - Pete Kinch - 422-2-69.jpg	Pete Kinch	Nadler	8/2/1969	X		annotated with fill location
1970	Pair	NW-69 235 48A-31.jpg	WDNR	L-H	6/2/1970			
		NW-69 235 48A-32.jpg						
1971		EDR Aerial Photo 1971.jpg	EDR	L-EDR	9/18/1971			False Color
1973	Pair	S73027-6-4	Army Corps of Engineers	PGS-AC	9/13/1973			digital enlargement
		S73027-6-5						
1974	Pair	S74047-56-3	Army Corps of Engineers	PGS-AC	6/11/1974			digital enlargement
		S74047-56-4						
1976	Pair	Hulbert_aerial_1976.tif	AeroMetric	PGWG-D	1976			76-4011 SNC 5-26
		SNC-1976, 5-27	AeroMetric	PGS-AM				
1977		1977_SNO0677_105.jpg	Ecology Coastal Atlas	PGWG-D	6/17/1977	X		
		1977_SNO0677_120.jpg				X	C	

Aerial Photograph Inventory - North Marina Ameron / Hulbert Site

February 16, 2010

Year	Pair?	File Name (without year prefix)	Image Source	Acquired by:	Photo Date	Oblique?	Color?	Comment
		~~1977_SNO0677_108.jpg~~				X		does not include site
1977	Pair	S77025-56-4	Army Corps of Engineers	PGS-AC	9/12/1977			digital enlargement
		S77025-56-5						
1978		NW-78 61A-144.jpg	WDNR	L-H	6/2/1978			
	Pair	NW-78 61A-143.jpg						
		NW-78 61A-145.jpg						
1978	Pair	S78044-56-3	Army Corps of Engineers	PGS-AC	7/22/1978			digital enlargement
		S78044-56-4						
1979		Block 32-854.jpg		L-H	6/26/1979			
1979	Pair	S79004-56-3 19 Jul 79.jpg	Army Corps of Engineers	PGS-AC	7/19/1979			digital enlargement
		S79004-56-4 19 Jul 79.jpg						
1980		1980 - Kelly O'Neil.jpg	Kelly O'Neil	Nadler	1980	X		pencil on back: "Photo by Kelly O'Neil 80"
1980		1980-04-11 - Walker-a and -b.jpb	AeroMetric	Nadler	4/11/1980			Two copies - one is cropped
1980	Pair	80-5511(1-3)	AeroMetric	PGS-AM	4/11/1980			digital enlargement
		80-5511(1-4)						
1981		Hulbert_aerial_1981.tif	AeroMetric	PGWG-D	2/27/1981			SS1-81 16B-22
1981		EDR Aerial Photo 1981.jpg	EDR	L-EDR	7/26/1981			False Color
1982		Hulbert_aerial_1982.tif	AeroMetric	PGWG-D	6/16/1982			KS8-42
1982	Pair	KS-1982,8-42	AeroMetric	PGS-AM	6/16/1982			digital enlargement
		KS-1982,8-43						
1983c		1983c - Source Unknown	unknown	Nadler	1983			post-it with "83?" on back
1983		NW C83 11 48-283.jpg	WDNR	L-H	5/22/1983		C	
1983		S83020-56-2	Army Corps of Engineers	PGS-AC	7/17/1983			
1985		8-14-85-crop.tif		L-D	8/14/1985			
1987	Pair	12300 12 NW87 1 48-60.jpg	WDNR	L-H	6/17/1987			
		12300 12 NW87 1 48-61.jpg						
1988		7-20-88-crop1.tif		L-D	7/20/1988			
1989		PS-89 18600 ASL Z6 15 11.jpg	AeroMetric	L-H	9/19/1989		C	Low res of site
1990		EDR Aerial Photo 1990.jpg	EDR	L-EDR	7/10/1990			
1990	Pairs	1990-08-28 - NEIS Mapping - 1-1.jpg 1990-08-28 - NEIS Mapping - 1-2.jpg 1990-08-28 - NEIS Mapping - 1-3.jpg 1990-08-28 - NEIS Mapping - 1-4.jpg 1990-08-28 - NEIS Mapping - 2-3.jpg 1990-08-28 - NEIS Mapping - 2-4.jpg	NEIS Mapping Group Inc.	Nadler	8/28/1990			
1991		S91003-56-13.jpg	Army Corps of Engineers	L-H	1991		C	
		S91003-56-14.jpg						
	Pair	S91003-56-13.x10.jpg						
		S91003-56-14.x10.jpg						
1991		EDR Aerial Photo 1991.jpg	EDR	L-EDR	2/28/1991			

Aerial Photograph Inventory - North Marina Ameron / Hulbert Site

February 16, 2010

Year	Pair?	File Name (without year prefix)	Image Source	Acquired by:	Photo Date	Oblique?	Color?	Comment
1991		1991-07-02 - Northwest Air Photos.jpg	Northwest Air Photos	Nadler	7/2/1991	X	C	
1991		12400 12 NW91 14 48-110.jpg	WDNR	L-H	7/3/1991			
	Pair	12400' 12 NW91 14 48-111.jpg						
		12400' 12 NW91 14 48-112.jpg						
1992		8-10-92-crop1.tif	Army Corps of Engineers	L-D	8/10/1992			date fits features
1992	Pair	S92006-56-12 10 Aug 92.jpg	Army Corps of Engineers	PGS-AC	8/10/1992			digital enlargement
		S92006-56-13 10 Aug 92.jpg						
1993		1993_SNO0168_mr.jpg	Ecology Coastal Atlas	PGWG-D	1993			Low resolution
		1993_SNO0199_mr.jpg				X	C	Small image
1993		1000 HI-SPEED RAIL 32-348.jpg		L-H	8/1/1993		C	
1993		KIS-93 1''=2000' 17 19.jpg	AeroMetric	L-H	9/9/1993		C	small part of southern part of site.
1993	Pair	KIS-93, 17-17	AeroMetric	PGS-AM	9/9/1993			digital enlargement
		KIS-93, 17-18						
1995		S95006-56-4.jpg	Army Corps of Engineers	L-H	1995		C	
		S95006-56-5.pg.jpg						
	Pair	S95006-56-4.x10.jpg						
		S95006-56-5.x10.jpg						
1999	Pair	S99016-241-74	Army Corps of Engineers	PGS-AC	9/22/1999			digital enlargement
		S99016-241-75						
2000		S00007-241-75.jpg	Army Corps of Engineers	L-H	2000		C	
		S00007-241-76.jpg						
	Pair	S00007-241-75.x10.jpg						
		S00007-241-76.x10.jpg						
2000?		2000_000925_114918_lg.jpg	Ecology Coastal Atlas	PGWG-D	2000	X	C	
		2000_000925_122320_lg.jpg				X		
		2000_000925_122332_lg.jpg				X		
2002	Pair	S02008-241-74	Army Corps of Engineers	PGS-AC	7/21/2002			digital enlargement
		S02008-241-75						
2004		Hulbert_aerial_2004.tif		PGWG-D	6/4/2004		C	SND-04 6-23
2005		11-25-05.JPG		L-D	11/25/2005	X	C	
		11-25-05A.JPG				X	C	
		11-25-05B.JPG				X	C	
2006		EDR Aerial Photo 2006.jpg	EDR	L-EDR			C	
2006		2-7-06.JPG		L-D		X	C	
2006		3-3-06.JPG		L-D	3/3/2006	X	C	
2006		4-29-06.JPG		L-D	4/29/2006	X	C	
2006		2006_060627_03687.jpg	Ecology Coastal Atlas	PGWG-D	6/27/2006	X	C	
2006		9-24-06.JPG		L-D	9/24/2006	X	C	
2006	Pair	12-02-06.JPG		L-D	12/2/2006			
		12-02-06A.JPG						

Aerial Photograph Inventory - North Marina Ameron / Hulbert Site

February 16, 2010

Year	Pair?	File Name (without year prefix)	Image Source	Acquired by:	Photo Date	Oblique?	Color?	Comment
Unusable - either site is not shown or resolution makes it of no value								
1971		~~NW-H-71-343-11A-32.jpg~~	WDNR	L-H	7/3/1971			Very high flight - marginal use
2002		~~2002_000925_122326_lg.jpg~~	Ecology Coastal Atlas	PGWG-D	2002	X		
1940s		~~1940s_15-25.jpg~~	Ecology Coastal Atlas	PGWG-D				
1983		~~NW C83 11 48-281.jpg~~	WDNR	L-H	5/22/1983		C	
Photos within Report Figures								
1884		t29nr05e_a.tif		PGWG-D	02/28/1884			1884 Plat Map
		t29nr05e_a_clip.tif		PGWG-D				
1947		1947_aerial.pdf	AeroMetric	PGWG-D	1947			
1955		1955_aerial.pdf	AeroMetric	PGWG-D	1955			
1967		1967_aerial.pdf	AeroMetric	PGWG-D	1967			
1976		1976_aerial.pdf	AeroMetric	PGWG-D	1976			
1981		1981_aerial.pdf	AeroMetric	PGWG-D	1981			
1982		1982_aerial.pdf	AeroMetric	PGWG-D	1982			
		ExhibitA_02_Fig02.tif						
1990		1990_Ortho.jpg		PGWG-D	1990			
2002		2002_Ortho.jpg	?Terraserver	PGWG-D	2002			
		2002_Ortho_zoom.jpg		PGWG-D				
2003		2003_Ortho.jpg	PGE - Snohomish County	PGWG-D	2003			
2004		2004_Aerial.jpg	AeroMetric	PGWG-D	2004			
2006		2006_Ortho.jpg	PGE - No Source Cited	PGWG-D	2006			
2007		2007_ortho.jpg	PGE - No Source Cited	PGWG-D				
		2007_Ortho_zoom.jpg	PGE - No Source Cited	PGWG-D	2007			
		July2008Parcels.jpg						

Key to "Acquired By:

L-H	Hardcopy received from Landau Associates. Scanned at 600 dpi.
L-D	Digital image received from Landau Associates.
L-EDR	Digital image from EDR report provided by Landau, images embedded in a PDF.
PGWG-D	Digital image received from Pacific Grounwater Group (via Landau).
Nadler	Provided by the Nadler Law Group PLLC as digital copies embedded in a PDF
PGS-AC	Army Corps of Engineers digital image purchased by Pinnacle GeoSciences.
PGS-AM	AeroMetric hardcopy purchased by Pinnacle GeoSciences and scanned at 600 dpi, original provided to Landau.
PGS-online	Acquired from on-line sources

Table 1 - Historic Operators and Features of Concern
North Marina Ameron/Hulbert Site
Everett, Washington

						Structure or Feature of Concern		
Operator	**Feature**	**Area**	**Period**	**How Operations Ceased**	**General Activity**	**From Reports (references cited are listed below)**	**From Leases**	**From Observations**
Hulbert Mill		G, M, I, J	1920s through 1962	Terminated operations and demolished above-grade structures.	Saw, shingle and planing mills			Steam turbine generator, blacksmith shop, boiler house, oil house, refuse burner, boiler stack, possible oil/PCB-containing electrical devices associated with electrical power generation and use. (Sanborn maps). Mixed, unusually colored fill and debris around burner and stack (air photos). Potential contaminants from mill fire.
Centrecon/Utility Vault/Oldcastle Precast	Plant Building	G	1972 - Sept. 1988	Purchased by Ameron	Concrete pole production, finishing and storage.	Dust collection system. (7) Drum storage inside and outside building, with drums in poor condition and visible soil staining. Three lined settling ponds. Outside sumps and catch basins. Sand blasting area with sand blasting grit accumulations on west side of building. Compressor room with oil staining on floor, and sump inside building. Unsafely stored flammables inside building. (6)		Settling ponds, sand blasting area with visible blasting sand accumulations on west side of building (air photos). Outside catch basins (engineering drawings). Fill area north of building (air photos).
Ameron			Sept. 1988 - present	Ongoing		Dust collection system. (7) Drum storage inside and outside building, with drums in poor condition and visible soil staining. Three lined settling ponds. Outside sumps and catch basins. Sand blasting area with sand blasting grit accumulations on west side of building. Compressor room with oil staining on floor, and sump inside building. Unsafely stored flammables inside building. (6) 350-gallon hydraulic oil AST. Exact location not identified. (1) Broken storm drain repaired in 2005. Concrete debris, discolored soil, and soil with petroleum odor observed. (5)	Same facilities as Centrecon	Settling ponds, sand blasting area with visible blasting sand accumulations on west side of building (air photos). Outside catch basins (engineering drawings). Fill area north of building (air photos).
Centrecon/Utility Vault/Oldcastle Precast	Lab/Storage Building	G	1986 - Sept. 1988	Purchased by Ameron	Lab, storage	12,000-gallon diesel UST. (7)		
Ameron			Sept. 1988 - present	Ongoing		12,000-gallon diesel UST, removed December 1988. (7)		
Centrecon/Utility Vault/Oldcastle Precast	Pole Polishing Building	G	1979 - Sept. 1988	Purchased by Ameron	Sandblasting, polishing, storage	Unlined holding pond [removed by 1991 (6)], three lined settling ponds. Discharge from lined settling ponds to storm drain system from about 1979 to at least early 1989. (7) Settling ponds were filled at the time that they were taken out of service. Two were filled with soil, one was filled with concrete dust and sand blasting grit. (8) Drum storage inside and outside building. Visible evidence of sand blasting. Air pollution control equipment outside building. (6)		Holding pond [removed by 1989 (air photo)] and settling ponds. Possible discharge of white slurry material to Area I 1978 to 1981 (air photos).
Ameron		G	Sept. 1988 - present	Ongoing		Unlined holding pond, three lined settling ponds. Discharge from lined settling ponds to storm drain system from about 1979 to at least early 1989. (7) Drum storage inside and outside building. Visible evidence of sand blasting. Air pollution control equipment outside building. (6)		Holding pond and settling ponds (air photos).
Centrecon/Utility Vault/Oldcastle Precast	Warehouse and Spray Booth Building	G	1979 - Sept. 1988	Purchased by Ameron	Concrete sealant spraying	Improper flammables storage, application of spray sealant on west side of building, evidence of sand blasting grit. (6)		
Ameron		G	Sept. 1988 - present	Ongoing		Improper flammables storage, application of spray sealant on west side of building, evidence of sand blasting grit. (6)		
Centrecon/Utility Vault/Oldcastle Precast	Laydown Area	J, M	1972 - 1982	Subleased area	Pole storage	No areas of concern documented.		
Collins Casket/Keys International	Main Building	M	1926-1996	Business closed	Casket fabrication	Boiler, and diesel AST with secondary containment. Waste paint containers and soil staining visible in vicinity of "smoke shack." (6)		Collins Casket boilers (2) and AST (Sanborn maps and air photos).
Collins Casket	Warehouse	M	1961 - ?	unknown	Casket warehouse	No references in reports.		Metal fabrication, spray painting (Sanborn maps).
Dunlap Towing		I	1987		Storage	Crane and metal scrap in far northwest corner of Area I, owned by Dunlap Towing and stored with Jensen Reynolds' permission. (9)		Metal scrap (air photos).

Table 1 - Historic Operators and Features of Concern
North Marina Ameron/Hulbert Site
Everett, Washington

						Structure or Feature of Concern		
Operator	**Feature**	**Area**	**Period**	**How Operations Ceased**	**General Activity**	**From Reports** (references cited are listed below)	**From Leases**	**From Observations**
Nalley's		M	? - 2005	unknown	Food warehouse and distribution.	No areas of concern documented.		
Michael's Woodcraft		M	1990-91	unknown	Furniture fabrication	Spray booth, flammable liquids storage room, on second floor of Collins Building. (6)		
Marine Spill Response Co.		J	1994 - 2005		Spill equipment storage	No areas of concern documented.		
RL Enterprises		M	1989-94	unknown	Cabinetry construction	Spray booth on third floor of Collins Building. (6)	Manufacturing and light commercial construction.	
Jensen Reynolds Construction		J, M, I	1982-1990	Foreclosure	Metal building fabrication	Unprotected drum storage in multiple locations, with observed leakage onto pavement and onto bare ground. Spent sand blasting grit deposits on bare ground. Fuel AST inside warehouse, with visible spillage to floor. Visible petroleum spillage to ground surface. Storage of large quantities of scrap metal. Pile of "painted metal chips" in yard, with discolored soil beneath. Deposits of foam pipe insulation in yard. (3) Three fuel USTs (gasoline and diesel fuel, estimated volume two at 2,500 gallons and one at 1,000 gallons) and three dispensers. (reference 6 citing 1987 ECI report) RCRA LQG. (6) Crane and metal scrap in far northwest corner of Area I, owned by Dunlap Towing and stored with Jensen Reynolds' permission. "Large" diesel AST southwest of USTs. (9)	Gasoline and diesel USTs and dispensers.	Metal fabrication, scrap and debris, dismantling of truss bridge and remaining debris, USTs and fueling (air photos).
Commercial Steel Fabricators		I	1991	One year lease only	Metal module fabrication; welding, sandblasting	Drum storage of diesel and gasoline, with soil staining observed; sand blast grit. (6)	Metal fabrication and materials storage.	
Snohomish Co. PUD Substation		M	1954-1969	Removed	Electrical infrastructure	No references in reports.		
Railmakers NW		M	Ca. 1975-87	Relocated	Fabricated rails for marine use			
Sound Propeller		M	1972-76	Relocated	Propeller sales/repair			
Sandy's Boat House		M	1990-present	Ongoing	Boat repair	Minor solvent and waste oil use and storage. (6) Waste oil AST. (1)	Boat sales and service.	
Tri-Coatings		M	1979-91	Relocated to adjacent property north as TC Systems	Commercial paints & stripping	RCRA LQG. Floor sump for stripping coatings, stripping machine, two degreasers, hazardous materials and hazardous waste storage. (6)		
Sunset Body Works		M	1988 - present	Now North Central Collision	Vehicle body repair	RCRA SQG. Paint booths, solvent still, flammables storage areas. (6)		
Port of Everett Maintenance Shop		M	Early 1990s	Facility demolished 2007	Maintenance area	Vehicle maintenance in maintenance shop building. Catch basins inside maintenance shop building possibly plumbed to storm drain system. Unprotected storage of drums and small AST containing petroleum and unknown products, with leakage to ground observed. Sand blasting grit on ground surface. (2) Storm drains inside building may, alternatively, be plumbed to sanitary sewer system. (8)		
Port of Everett Storage		J	1991	Temporary location at Jensen Reynolds building	Warehouse building	Unprotected storage of drums and small tank containing petroleum and unknown products, with leakage to ground observed. Sand blasting grit on ground surface. (2)		
Unknown operator		J, I	Ca 1991		Open yard area	Sludge-like material on ground surface. (2)		
Veco		J	Ca 1991	unknown	Storage of welding, construction supplies and containers	Sumps in building. (reference 6 citing 1987 ECI report) Three fuel USTs (two gasoline and one diesel) and a dispenser island southwest of building, removed in June 1991. Drum storage inside building, and staining around catch basin. (6) Catch basin may be plumbed to sanitary sewer system. (8).		

Table 1 - Historic Operators and Features of Concern
North Marina Ameron/Hulbert Site
Everett, Washington

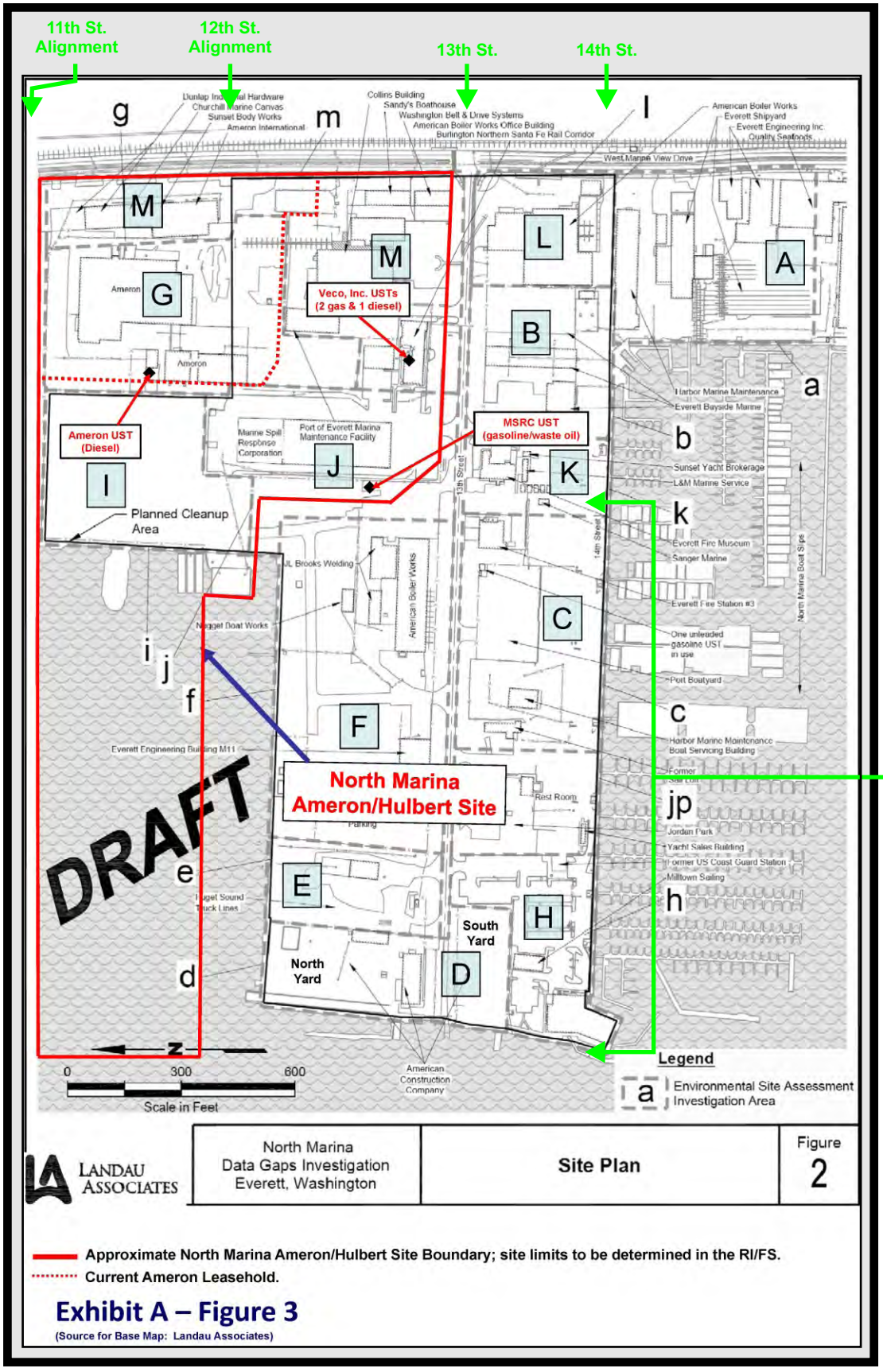
						Structure or Feature of Concern		
Operator	**Feature**	**Area**	**Period**	**How Operations Ceased**	**General Activity**	**From Reports** (references cited are listed below)	**From Leases**	**From Observations**
Mid Mountain Contractors		I , J ?	1974 - 1983		"Unloading, sand blasting, painting, loading" (per lease agreement)		A short-term lease for an off-site building cites "unloading, sandblasting, painting, loading" as allowed activities. No lease information was identified for portion of Mid Mountain lease that overlaps the subject site (Area J).	The portion of Mid Mountain's activities occurring on Area J appears to be limited primarily to pipe storage, with storage of other unidentified materials visible in some air photos. (air photos)
Columbia Hardboard Company/Tidewater Plywood Company	Log Dump/Waste Burner Dump/Conveyor System	J	pre-1957 - post 1965			Abandoned underground concrete structure filled with wood waste, soil, and drums apparently containing oil. (4)		Underground concrete structures shown on Sanborn map and visible in air photos. (Sanborn Maps, air photo)
Unknown operator		I	1991			Unprotected storage of drums containing petroleum and unknown products at fenceline with Ameron. (2)		
Unknown operator	Log storage/sorting	I	1976 - 1978					Unclear from air photos whether stacked timbers are unmilled logs, poles, or piles. Simultaneous storage of log rafts in the adjacent 12th Street Channel is evident throughout this period. (air photo)
Unknown operator	Log storage/sorting	I	1993					Stockpiles of of wood poles or piling with dark colored ends (air photos). The poles/piling are either treated poles or are salvaged piling. In the latter case they could also be treated wood.

Notes:

1. "Structures or Feature of Concern" provides a summary from three sources -- Reports, Leases and Observations. Observations include features visible in aerial photographs and features shown in engineering drawings or Sanborn maps. These comments do not include opinions based on our experience at similar sites or with similar industries.

References cited in this table:

1. Landau Associates. Phase I ESA North Marina Redevelopment Project. Port of Everett, WA for Maritime Trust. November 28, 1001.
2. Hart Crowser. Environmental Engineering Services - Proposed MSRC Facility. For the Port of Everett. November 26, 1991.
3. Earth Consultants, Inc. Supplemental Site Investigation, Jensen Reynolds Property. For the Hulbert Mill Company. December 6, 1988.
4. Kleinfelder. Independent Action Report - Area West of MSRC Warehouse Building. For the Port of Everett. December 7, 1993.
5. Landau Associates. Ameron International Leasehold Environmental Investigation of Oil Affected Area. Memo to the Port of Everett. June 20, 2005.
6. Kleinfelder. Phase I ESA, Phase I Envionmental Audit, Business on 30 acres NW Corner of 13th Street & Marine View Drive. May 29, 1991.
7. PSM International. Report on Investigation conducted at Ameron (Centrecon) Plant in Everett, WA, January 9-13 & February 7-10, 1989. March 1989.
8. Earth Consultants, Inc. Phase II ESA, Hulbert Mill Property. For the Hulbert Mill Company. February 7, 1992.
9. Earth Consultants, Inc. Preliminary Environmental Audit, Jensen Reynolds Property. For the Hulbert Mill Company. July 14, 1987.

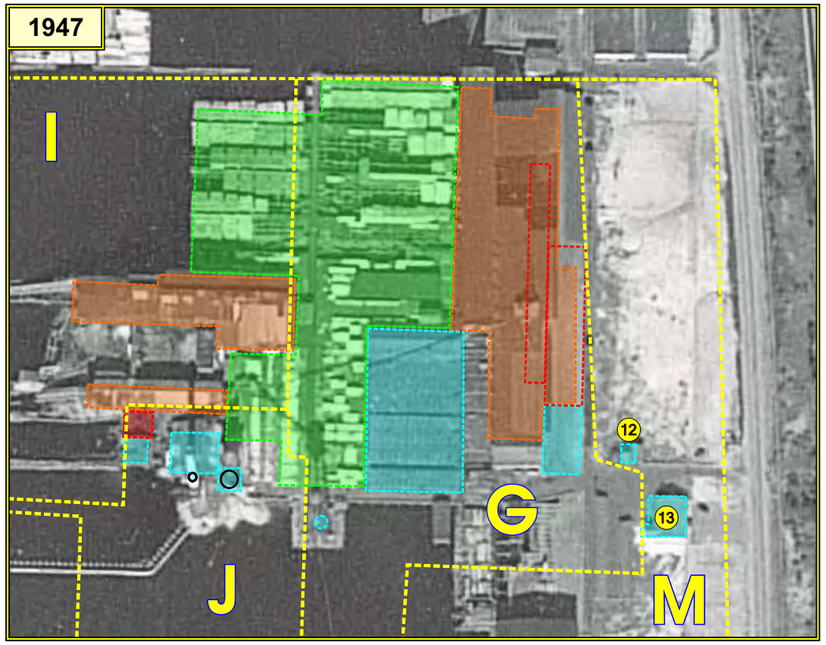


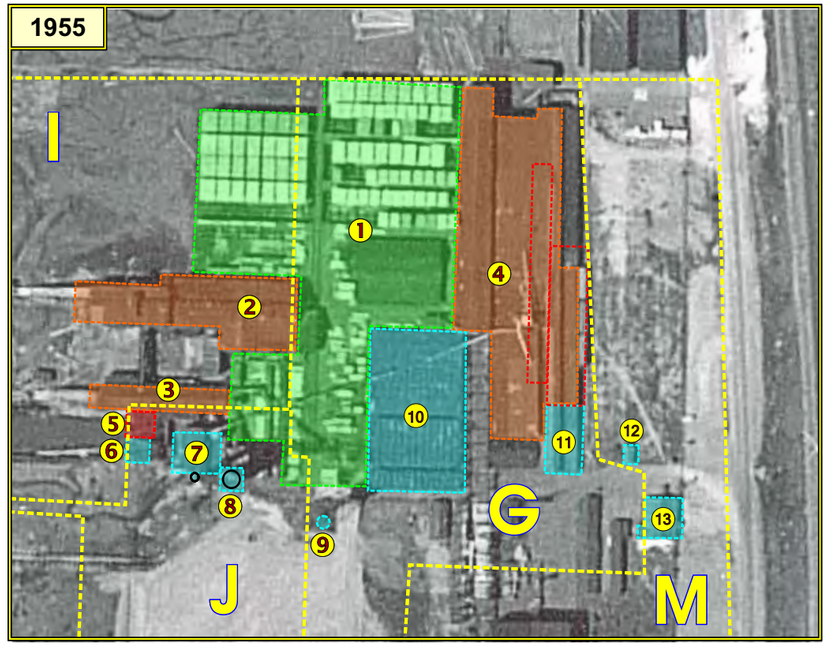
This figure, taken from the Agreed Order, was used as our site definition model describing property boundaries, the limits of the site, and the limits of Areas G, I, J and M. The green annotations are by Pinnacle GeoSciences.

Figure 1

Site Definition
North Marina Ameron/Hulbert Site
Everett, Washington

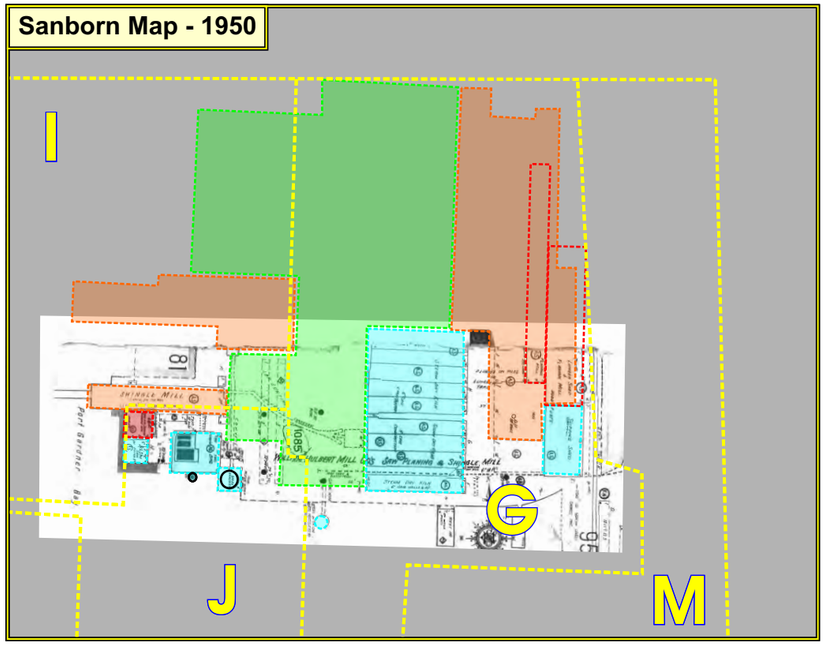
Pinnacle GeoSciences

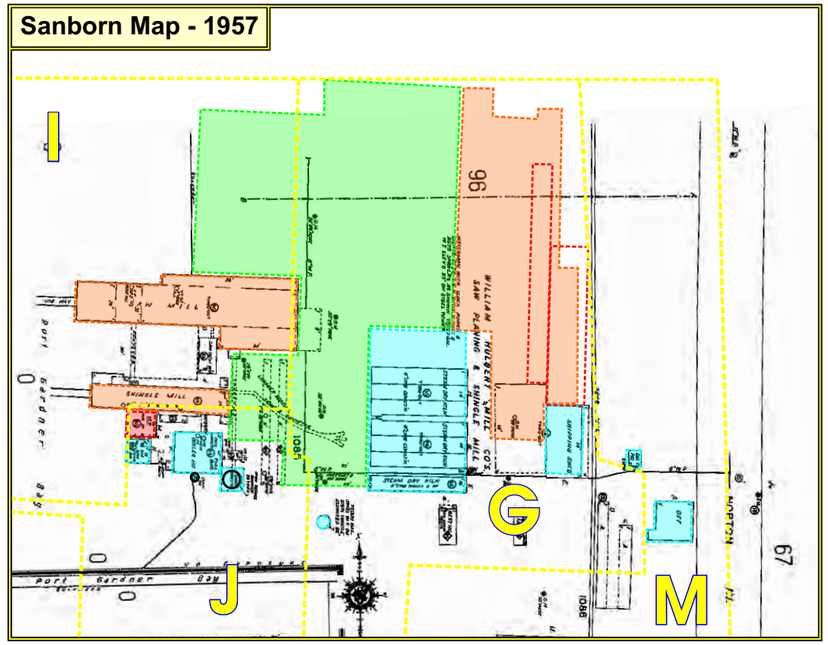




Legend

1. Lumber Storage Areas
2. Sawmill
3. Shingle Mill
4. Lumber Shed and Planing Mills
   Note: The red outline shows the planing mills as identified in the 1957 Sanborn map.
5. 1000 KW Turbine Generator
6. Blacksmith Shop
7. Boiler House and Stack
8. Refuse Burner
9. Water Tower
10. Steam Dry Kilns
11. Shipping Shed
12. Oil House
13. Office





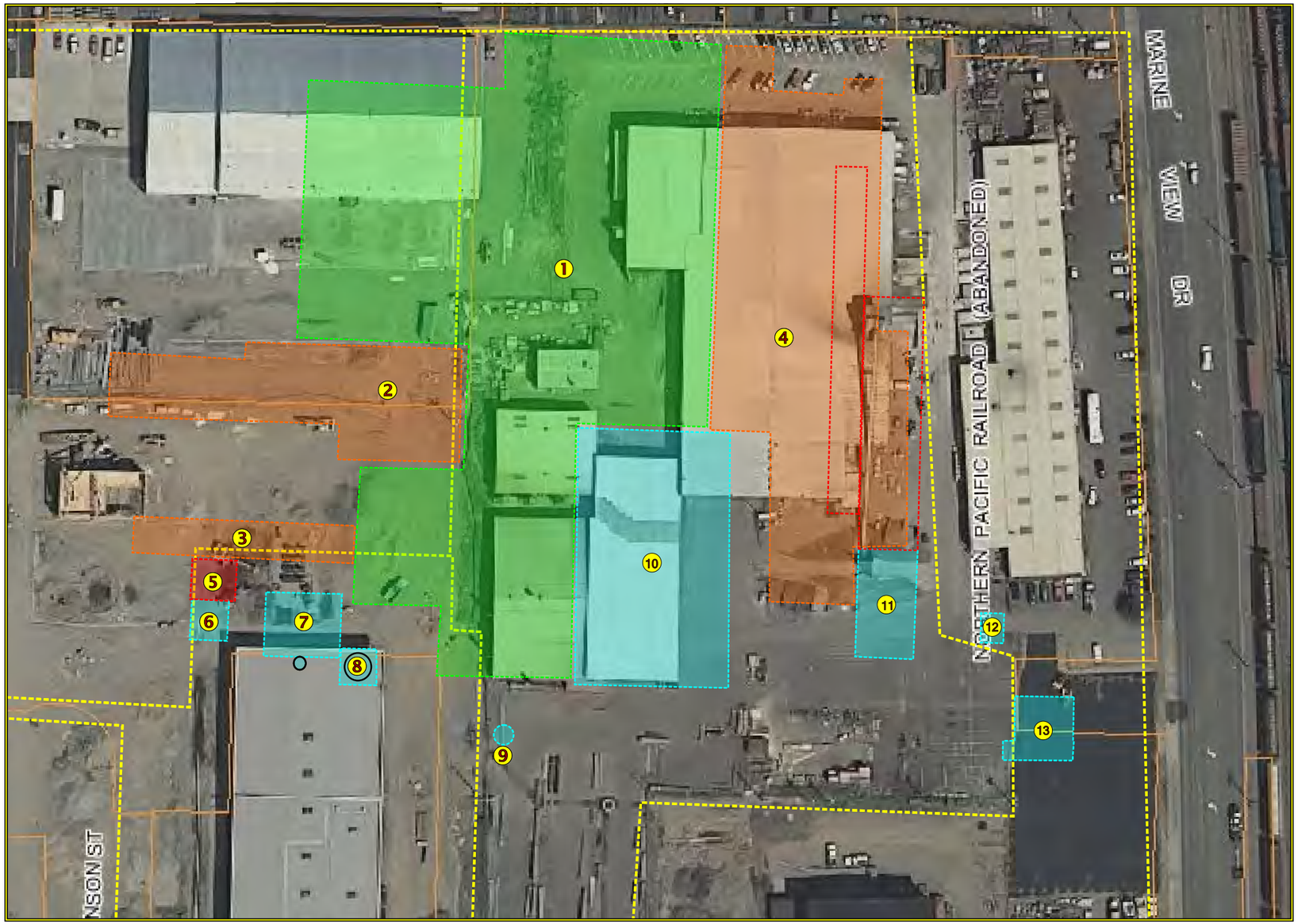
N

0 200 400 feet

Approximate Scale: 1-inch = 200 feet
The locations of all features are approximate.

Figure 2
Mill-Related Features
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences



Legend

1. Lumber Storage Areas
2. Sawmill
3. Shingle Mill
4. Lumber Shed and Planing Mills
   Note: The red outline shows the planing mills as identified in the 1957 Sanborn map.
5. 1000 KW Turbine Generator
6. Blacksmith Shop
7. Boiler House and Stack
8. Refuse Burner
9. Water Tower
10. Steam Dry Kilns
11. Shipping Shed
12. Oil House
13. Office

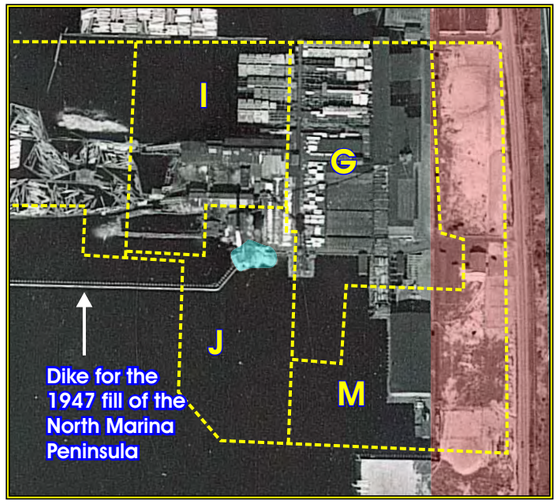
N

0 100 200 feet

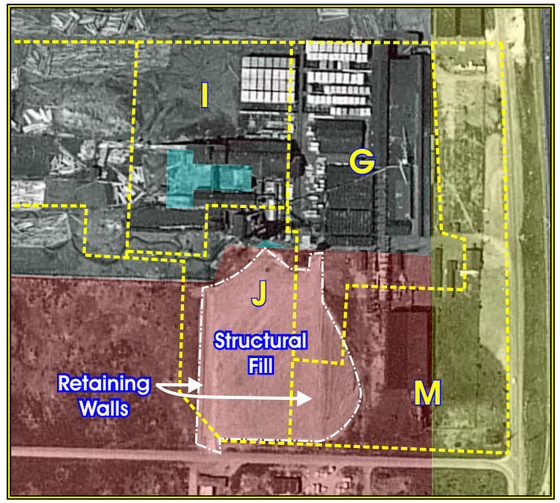
Approximate Scale: 1-inch = 100 feet
The locations of all features are approximate.

Figure 3
Mill-Related Features
2007 Base Photograph
North Marina Ameron/Hulbert Site
Everett, Washington

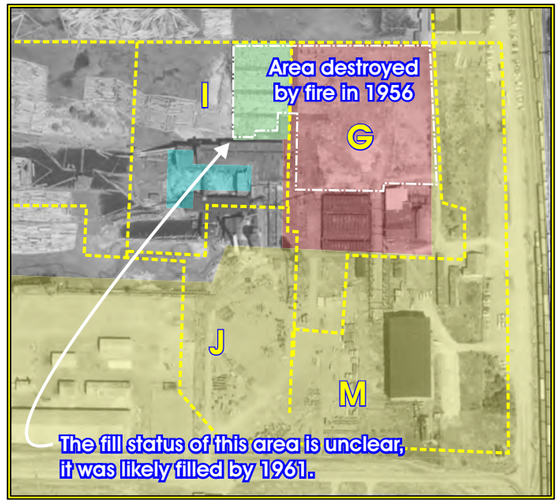
Pinnacle GeoSciences



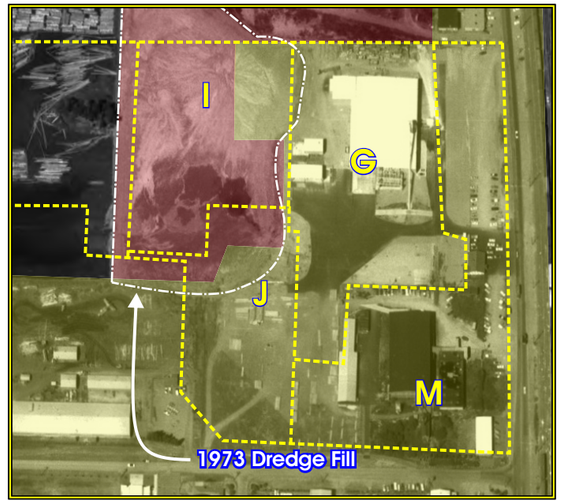
Filling Prior to 1947
Photograph: 1947



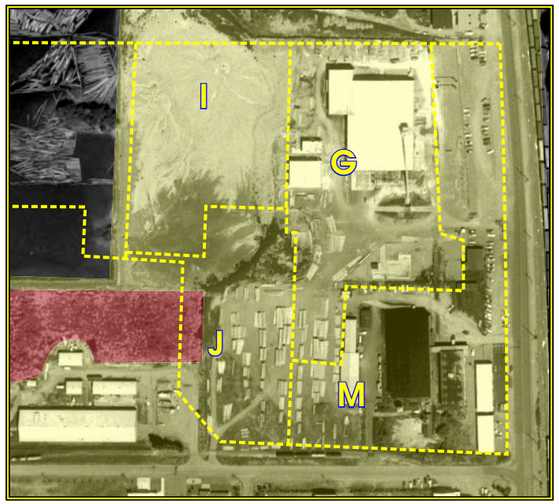
Filling 1947 - 1955
Photograph: 1955



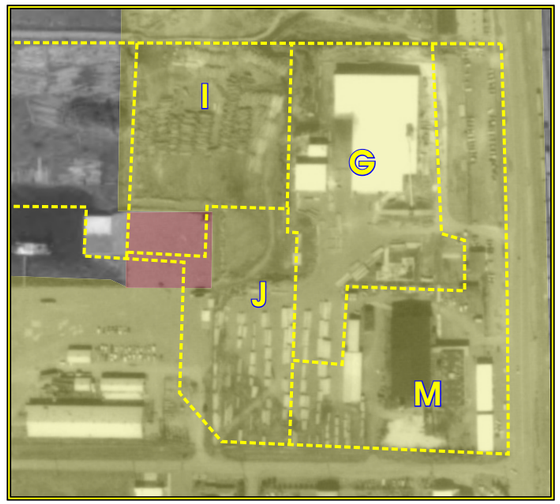
Filling 1955 to 1965
Photograph: 1961



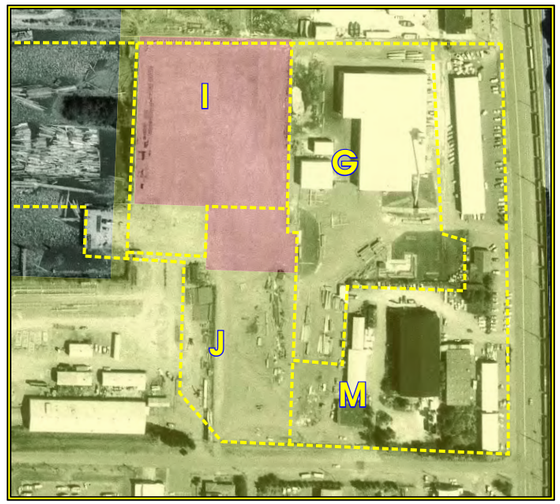
Filling 1973
Photograph: 1973



Filling Late 1973 to Early 1974
Photograph: June, 1974



Filling 1976
Photograph: 1976



Filling 1982
Photograph: 1982

Filled during the stated period, to within about five feet of current grade.

Minimal fill, not approaching current grade.

Special fill areas (annotated).

Filled described in prior periods.

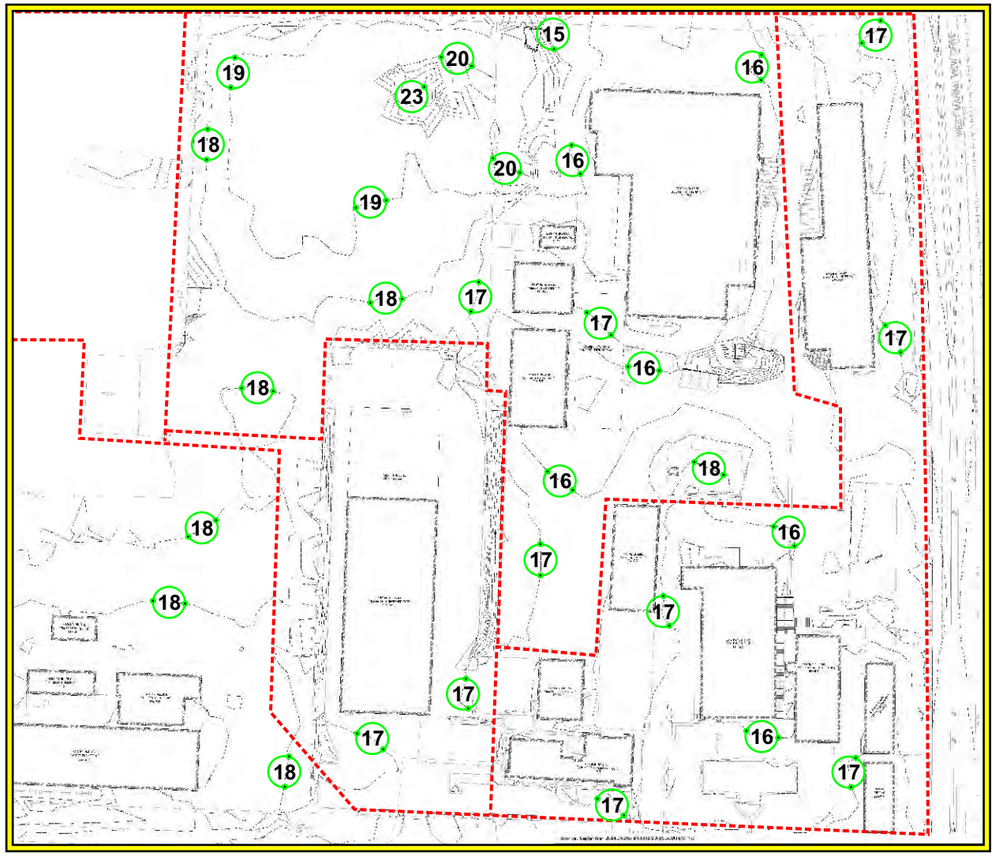
N

0 400 800 feet

Approximate Scale: 1-inch = 400 feet
The locations of all features are approximate.

Figure 4
Filling History
North Marina Ameron/Hulbert Site
Everett, Washington

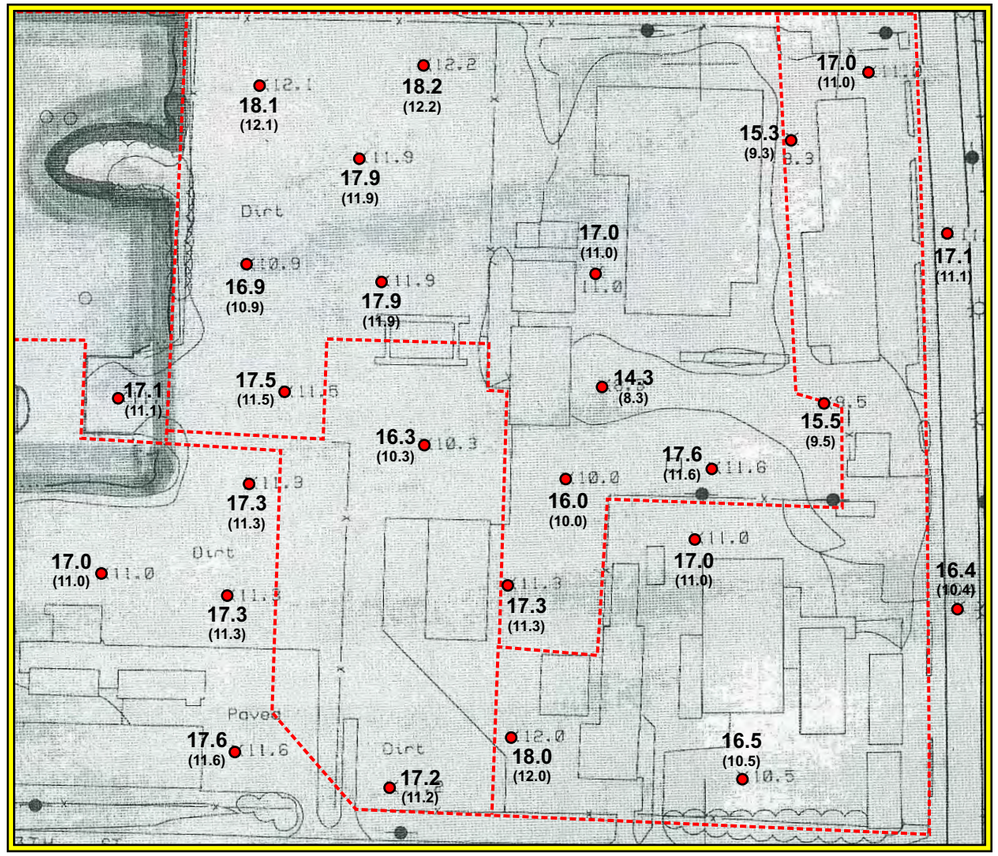
Pinnacle GeoSciences



2004 Elevation Survey Data

Figure C-1, Draft, Ameron/Hulbert Site Interim Action Report, Port of Everett, Washington
Landau Associates, 2009
Based on a map by David Evans & Associates, September, 2004. No datum given.
Original Scale: 1 inch = 60 feet. Reduced to 1 inch = 200 feet.

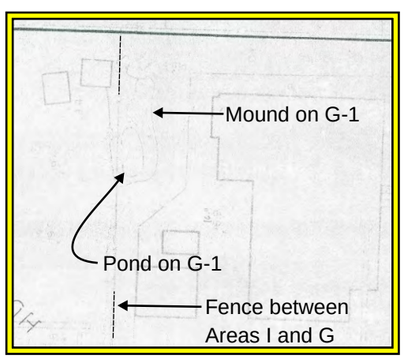
17 Elevation of underlying black contour line - dots show locations where contour line intercepts the green circle.



1987 (or later)

Aerial Topographic Map of the City of Everett, Section 18, T29M, R5E W.M., Walker and Associates
Undated Drawing, underlying photograph dated 3/2/1987
Scale: 1 inch = 200 feet, Datum: USC&GS, Mean Sea Level, 1929
Required some distortion to match features on 2004 Figure
Spot elevations shown in parenthesis are approximately 6 feet lower than those in 2004 plan

17.2 Adjusted elevation (approximate)
(11.2) Mapped elevation



1985 Elevation Survey Data

Sheet 2, Topographic Map for MARDEV PROPERTIES
Reid Middleton & Associates, Inc.
Topographic data from Walker & Associates, 2/3/1985.
Datum: MLLW
Reproduction was very faint and data largely unreadable.
Original Scale: 1 inch = 100 feet. Reduced to 1 inch = 200 feet.

N

0 200 400 feet

Approximate Scale: 1-inch = 200 feet
The locations of all features are approximate.

Figure 5

Site Elevation Data
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences

Pavement - through 1974
Photograph: June, 1974

Pavement - through 1982
Photograph: June, 1982

Pavement placed from 1956 to 1961

Pavement added from 1961 to 1974

Pavement present in 1974

Pavement added from 1974 to 1979

Pavement added from 1979 to 1980

Pavement added from 1980 to 1982

Legend

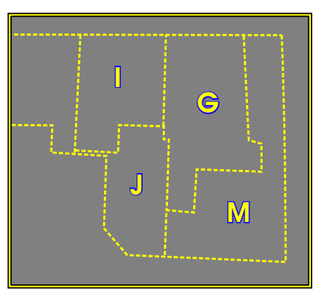
1982 Location of buildings and the date they first appear in aerial photos.

Shaded areas surrounded by dashed lines show areas of paving within the dates noted below each figure. Refer to notes at right.

N

0 200 400 feet

Approximate Scale: 1-inch = 200 feet
The locations of all features are approximate.



Yellow dash lines show the approximate locations of areas of the site defined in the Agreed Order.

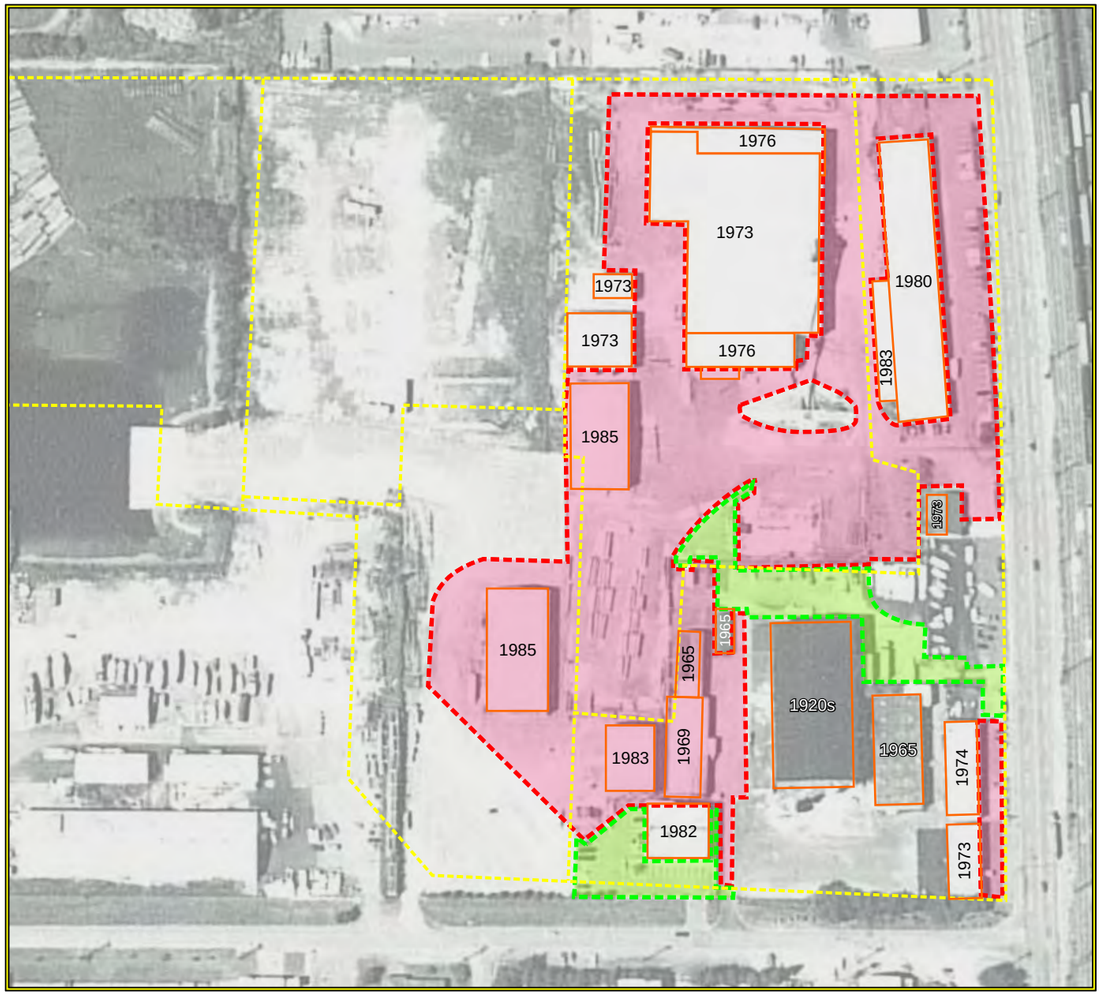
Notes:

1. All locations shown should be considered approximate. The areas shown have been adapted to the features shown on the underlying aerial photograph. Aerial photographs do not exhibit true scale. Camera angle and parallax induce distortions into the image. The outlined areas should be compared to known site features to accurately place them on the site.

2. The areas shown are based on an interpretation of aerial photography. We have not visited the site. The determination of surface conditions from aerial photography is difficult because the imagery can be affected by lighting conditions, precipitation, and material colors. The areas shown should be considered an interpretation and not a determination of surface conditions. Our interpretations are based on obvious features as well subtle features such as evidence of vegetation or pavement makings. We used multiple aerial photographs to develop our opinions. Some areas may actually be different than interpreted here.

Figure 6
Pavement History 1956 through 1982
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences



Pavement - through 1991
Photograph: July, 1991

Pavement present in 1982

Pavement added from 1982 to 1990

Pavement - through 2005
Photograph: July, 2002

Pavement present in 1991

Pavement added from 1991 to 1993

Pavement added from 1993 to 1995

No pavement added between 1995 and 2005

Legend

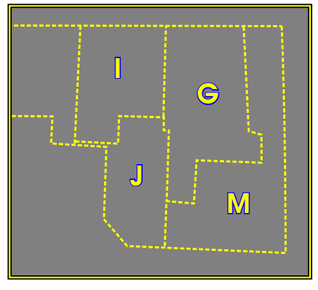
1982 — Location of buildings and the date they first appear in aerial photos.

Shaded areas surrounded by dashed lines show areas of paving within the dates noted below each figure. Refer to notes at right.

N

0 200 400 feet

Approximate Scale: 1-inch = 200 feet
The locations of all features are approximate.



Yellow dash lines show the approximate locations of areas of the site defined in the Agreed Order.

Notes:

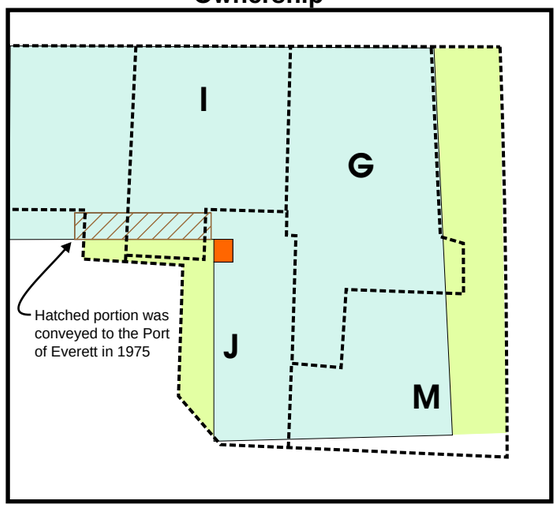
1. All locations shown should be considered approximate. The areas shown have been adapted to the features shown on the underlying aerial photograph. Aerial photographs do not exhibit true scale. Camera angle and parallax induce distortions into the image. The outlined areas should be compared to known site features to accurately place them on the site.

2. The areas shown are based on an interpretation of aerial photography. We have not visited the site. The determination of surface conditions from aerial photography is difficult because the imagery can be affected by lighting conditions, precipitation, and material colors. The areas shown should be considered an interpretation and not a determination of surface conditions. Our interpretations are based on obvious features as well subtle features such as evidence of vegetation or pavement makings. We used multiple aerial photographs to develop our opinions. Some areas may actually be different than interpreted here.

Figure 7
Pavement History 1982 through 2005
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences

Ownership



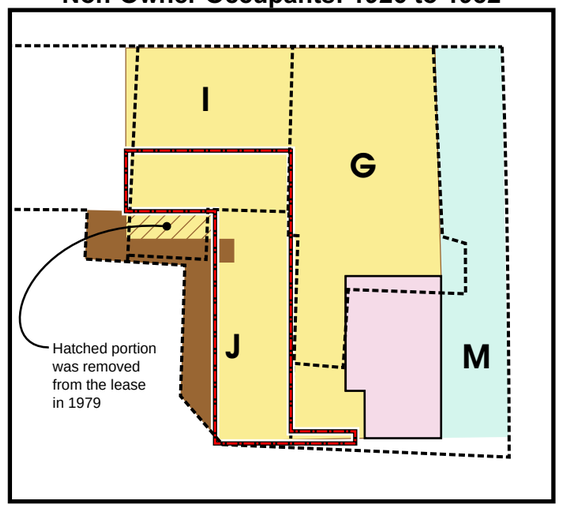
Hulbert - 1923-1991, Hatched portion was conveyed to the Port of Everett in 1975

Port of Everett, 1940 or earlier to present

50' x 60' Hulbert 1923-1975. Sold to Port of Everett in 1975

After 1991 the entire area was owned by the Port of Everett.

Non-Owner Occupants: 1926 to 1982



Centrecon / Utility Vault: 1972-1988
Hatched portion removed from lease in 1979

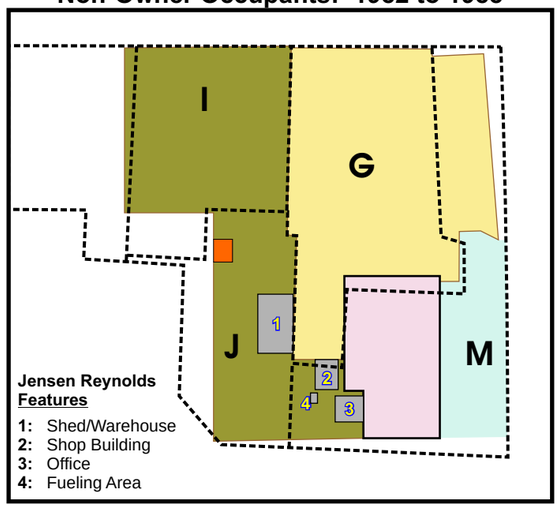
North Cascade Casket / Collins Casket: 1926-1996

Mid-Mountain Contractors 1975 to approx. 1983
Refer to text for prior tenants.

Hulbert: 1962 -1991

Area of Washington Stone 1979 lease.
(no evidence of occupancy)

Non-Owner Occupants: 1982 to 1988



Centrecon / Utility Vault: 1972-1988

Centrecon / Utility Vault: 1972-1988
Sublet to Jensen Reynolds: 1982-1988 (features labeled)

North Cascade Casket / Collins Casket: 1926-1996

50' x 60' leased to Centrecon in 1983 and then sublet to Jensen Reynolds

Hulbert: 1962 -1991

N

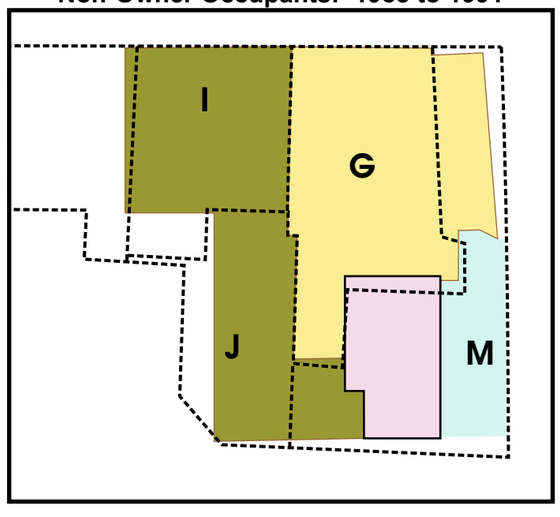
0 400 800 feet

Approximate Scale: 1-inch = 400 feet
The locations of all features are approximate.

Notes:

1. This figure employs the use of color to convey important information.
2. Boundaries shown are approximate. Refer to the text for further information about boundaries and property lines.

Non-Owner Occupants: 1988 to 1991



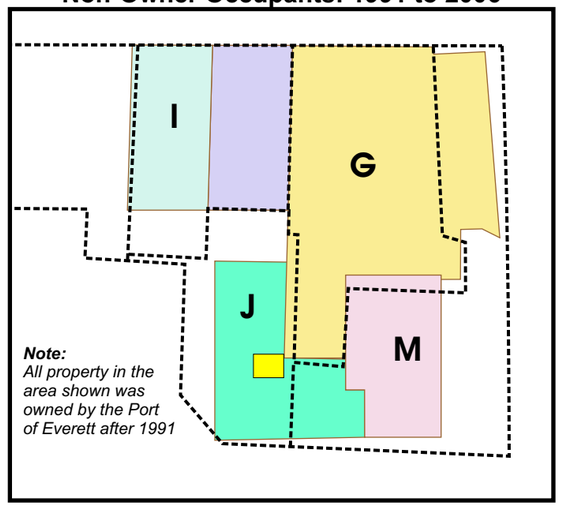
Ameron: 1988 - present

North Cascade Casket / Collins Casket: 1926-1991

Jensen Reynolds: 1988-1990 (leased from Hulbert)

Hulbert: 1962 -1991

Non-Owner Occupants: 1991 to 2006



Ameron: 1988-present

North Cascade Casket/Collins Casket: 1928-1996

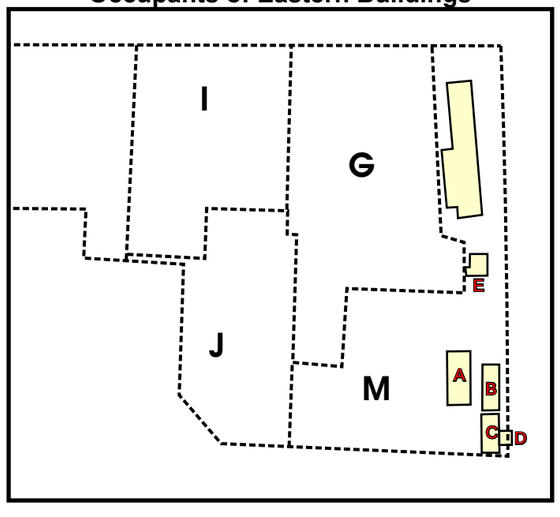
Commercial Steel - through 12/31/1991

Commercial Steel - first right of refusal in 1991 (unknown if executed)

MSRC: 1993-2005

Veco (building lease only) 1991

Occupants of Eastern Buildings



See text at right.

Northern Building

Centrecon: 1972 - 1988
Ameron: 1988 to present
Churchill Brothers: 1970s-present
Sunset Auto: 1976 - 2007
Dunlap Wire Rope: 1978 - present
Performance Marine: 1979-1985
Tri-Coatings: 1979 - 1991

Other Buildings/Structures

A: Collins Casket: 1926-1991
Nalleys: 1990s

B: Sandy's Boathouse: 1990 - present
The Propellor Shop: 1982
Sound Propellor: 1972-1976
Railmakers NW: 1975-1989

C: Washington Belt: 1972 - present

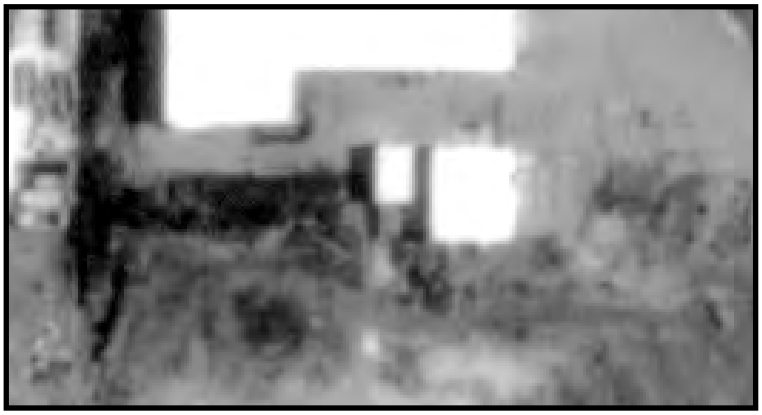
D: Snohomish PUD: 1954 - 1969

E: Hulbert Office: 1923 - ?

Figure 8

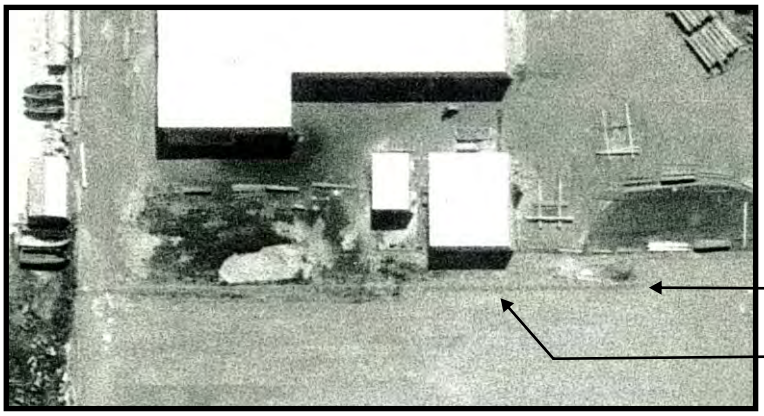
Ownership and Occupants
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences



2/27/1981

No fence is evident in this photograph, undisturbed vegetation and fill cross the future alignment of the fence.

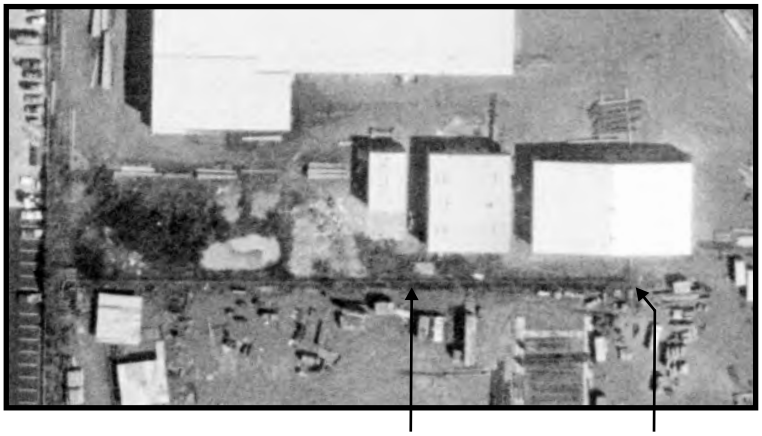


6/16/1982

The fence is clearly evident in this photograph. When viewed in stereo the presence of the fence is more striking.

5/11/1983

There is no clear evidence of the fence in this photograph. This is because of the poor resolution and the high sun angle. As a result this example is inconclusive even though the fence is preset at the time of this photograph.



8/14/1985

The fence is clearly evident in this photograph.

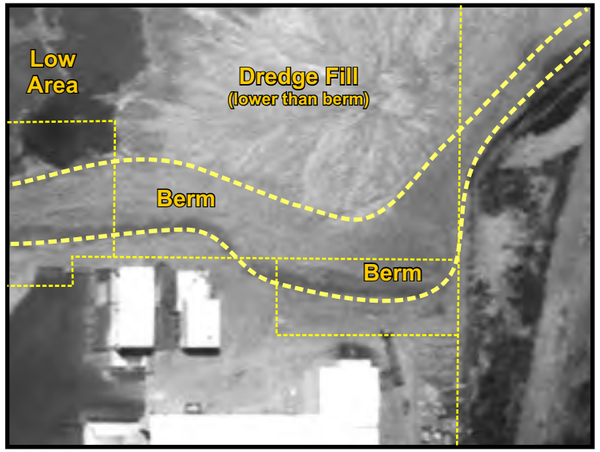
N

No Scale

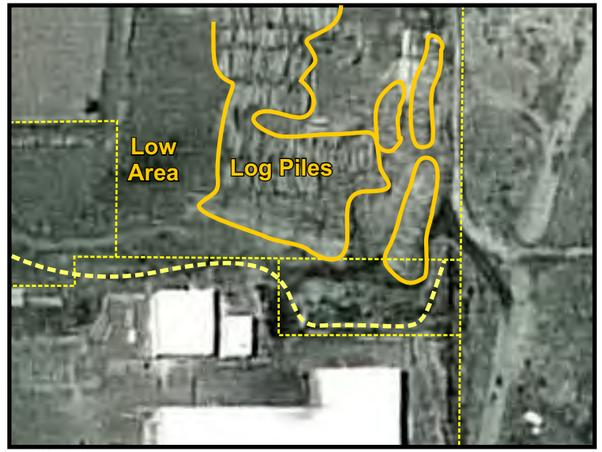
Figure 9

Fence Between Areas G and I
North Marina Ameron/Hulbert Site
Everett, Washington

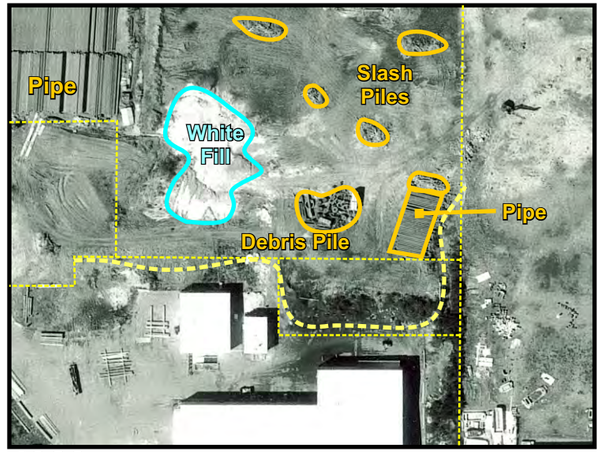
Pinnacle GeoSciences



1973



1976



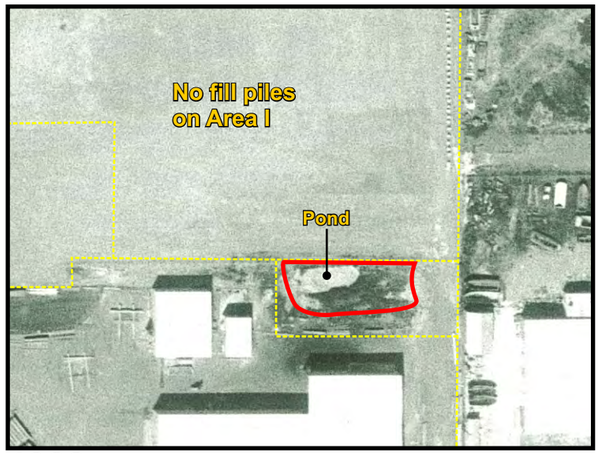
1980

No Scale.
The locations of all features are approximate and subject to interpretation.

N

Key to Outlines

- Margins of dredge fill berm in 1973 and eastern margin of berm remnant thereafter.
- Log / Pipe / Slash / Debris piles.
- Fill piles on Area I on top of dredge fill.
- Approximate extent of fill on G-1 after 1982.



1982

1987

This figure illustrates the extent of fill in the northeastern part of Area I and the northwestern part of Area G (G-1). The comments below provide additional information about each aerial photograph:

1973: The berm is on the east side of the dredge fill and is several feet higher than the fill..

1976: The dredge berm in Area G-1 and on I has been flattened and has scattered vegetation.

1980: West half of Area G-1 has been graded and the vegetation removed. Minor fill may be present beneath the poles in Area I.

1982: Area I has been graded and 0.5 to 1.0 feet of gravel placed over the entire area. The dredge berm remnant remains in Area G-1 A settling pond is evident in Area G-1. The amount of fill in Area G-1 is reduced.

1987: The settling pond is still present.

1991: Nearly all of the fill in Area G-1 has been removed. The settling pond is no longer present.

1993: A small stockpile is present near the northeastern corner of Area I but it is not against the fence. The amount of fill in G-1 has increased and is clear of vegetation.

1999: Stockpile I-1 is present on Area I. A stockpile covered with vegetation is present at the northeastern corner of Area I. The fill on Area G-1 has been moved some and vegetation has grown over most of it. This fill remains at the site until 2006.

1991

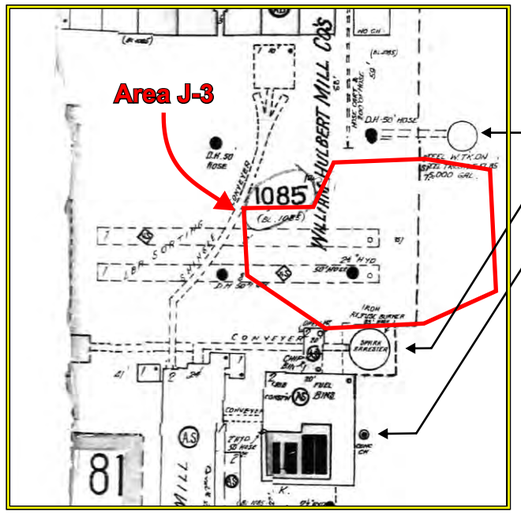
1993

1999

Figure 10

Fill on Areas G and I
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences



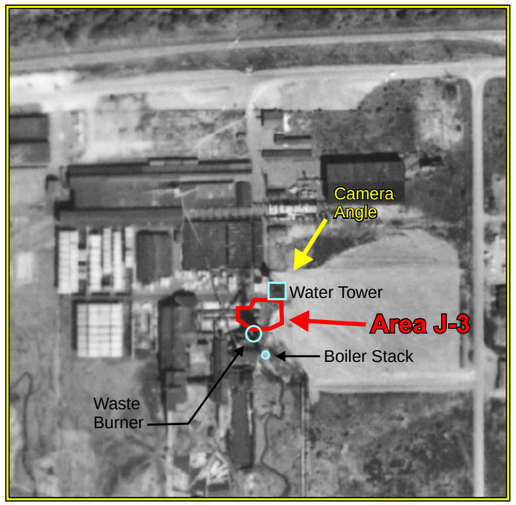
N
No Scale

1950 Sanborn Map

75,000 gallon steel water tank

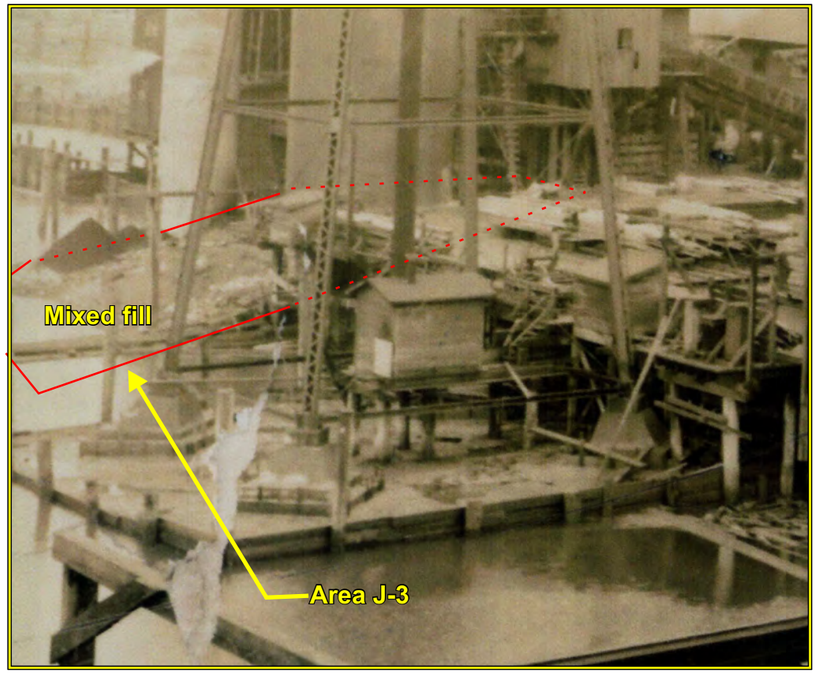
Iron Refuse Burner, 85 feet high

Concrete Chimney

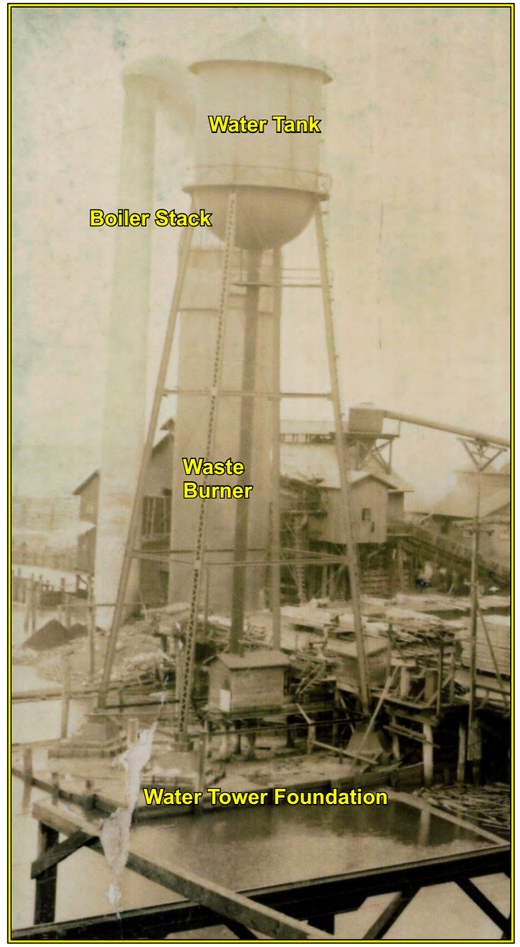


N
No Scale

1955 with annotations showing orientation of photograph to right

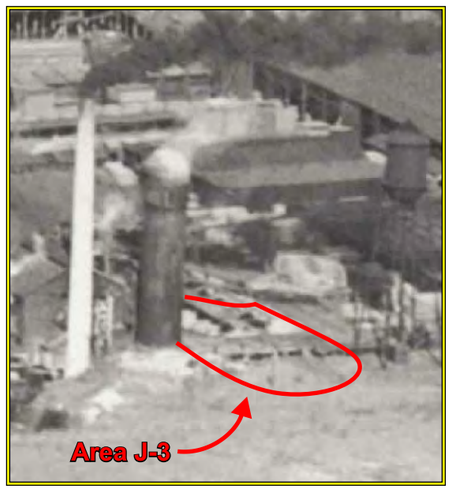


Mid- to Late-1930s

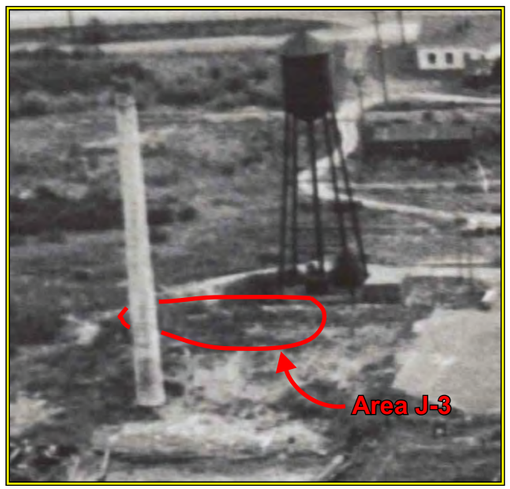


1953

1953



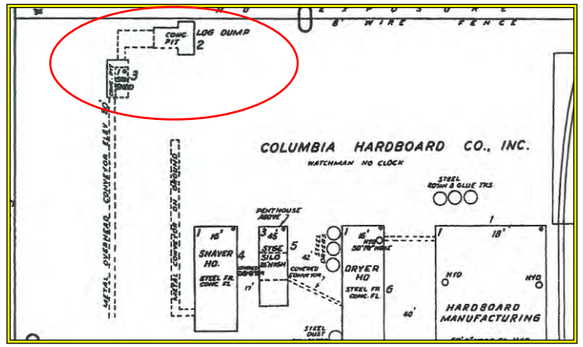
1954

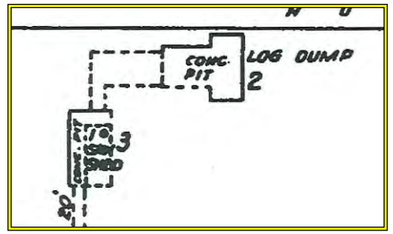


1969

Figure 11
Historic Features in Area J-3
North Marina Ameron/Hulbert Site
Everett, Washington

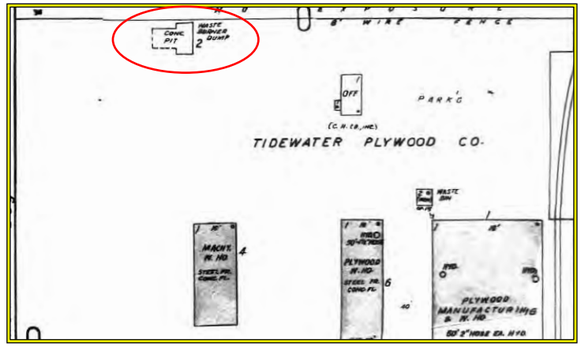
Pinnacle GeoSciences

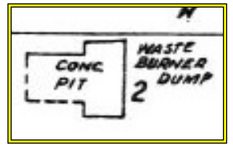




N No Scale

Sanborn Map - 1957 (Circled area shown at right)

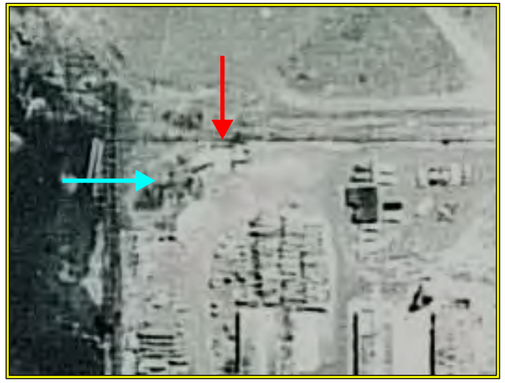




N No Scale

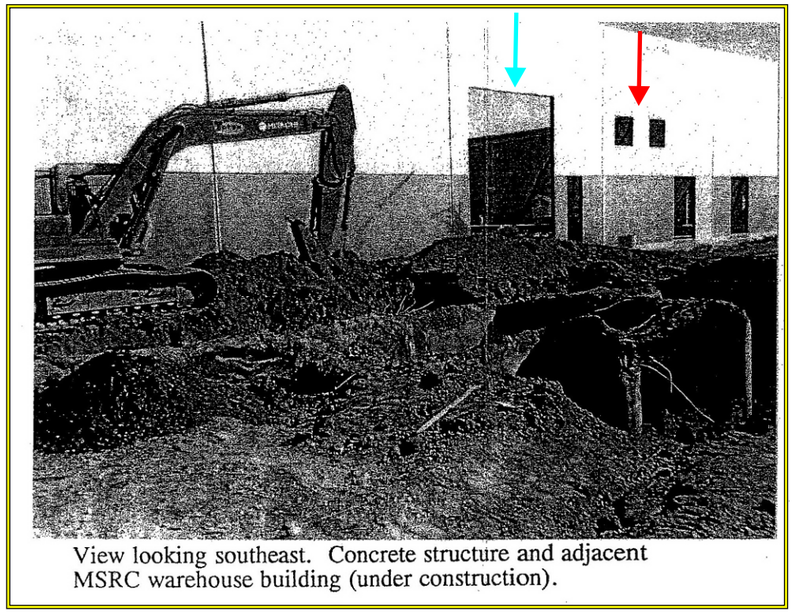
Sanborn Map - 1968 (Circled area shown at right)

1961 Aerial Photo N No Scale



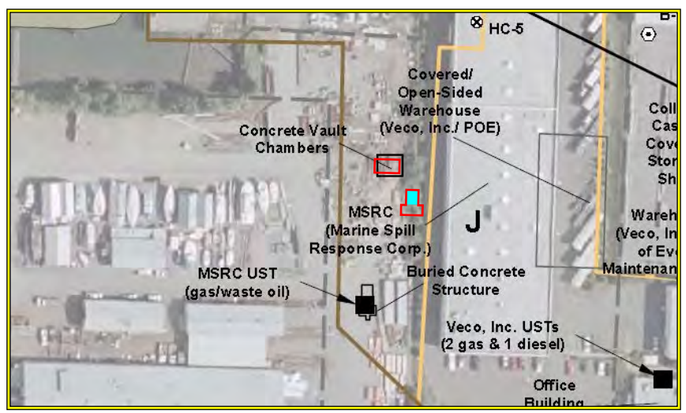
1965 Aerial Photo N No Scale

Recent photograph with features from Kleinfelder photograph identified as well as view angle and the location of the vault that was removed.



View looking southeast. Concrete structure and adjacent MSRC warehouse building (under construction).

Kleinfelder Photograph - door and windows shown in the photograph at top

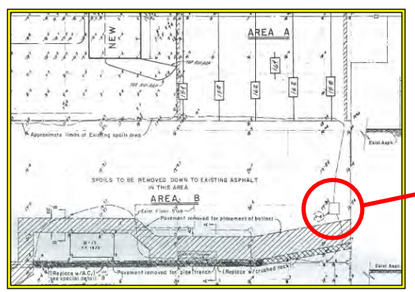


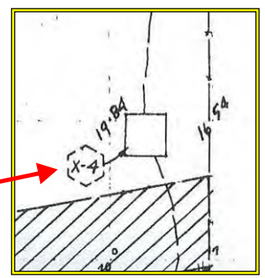
Segment of Figure 3 from Landau Interim Action Report (2009)with the following overlays scaled from common mapped features:

Red: Concrete pit locations as shown in the 1957 Sanborn Map.

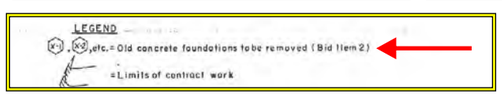
Blue: Concrete foundation to be removed (Reid Middleton drawing).

N No Scale





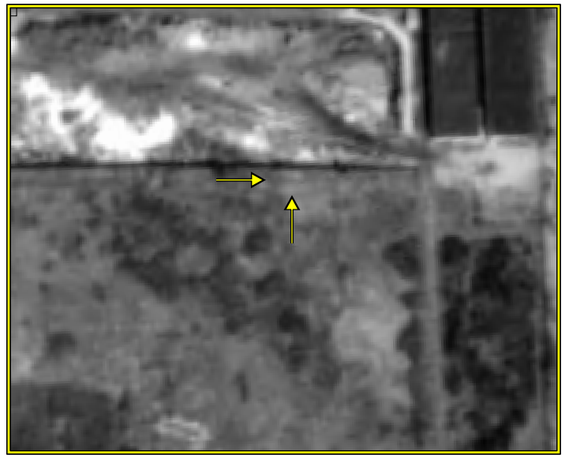
N No Scale



Reid Middleton & Associates 1974 engineering drawing

Figure 12
Concrete Structures in Area J
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences



1967

1973

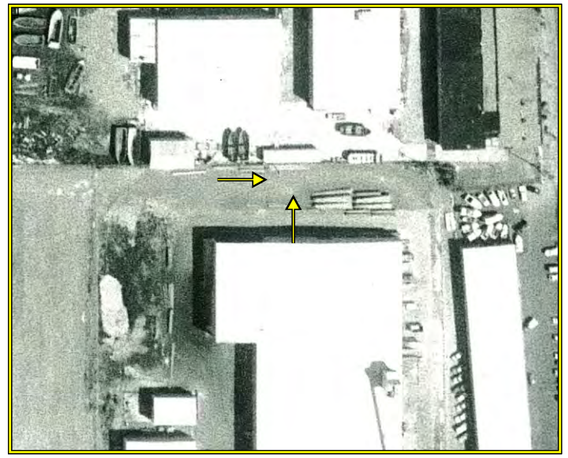
1974

1974 - Enlargement

1976

1977

1980



1982

1995

2005

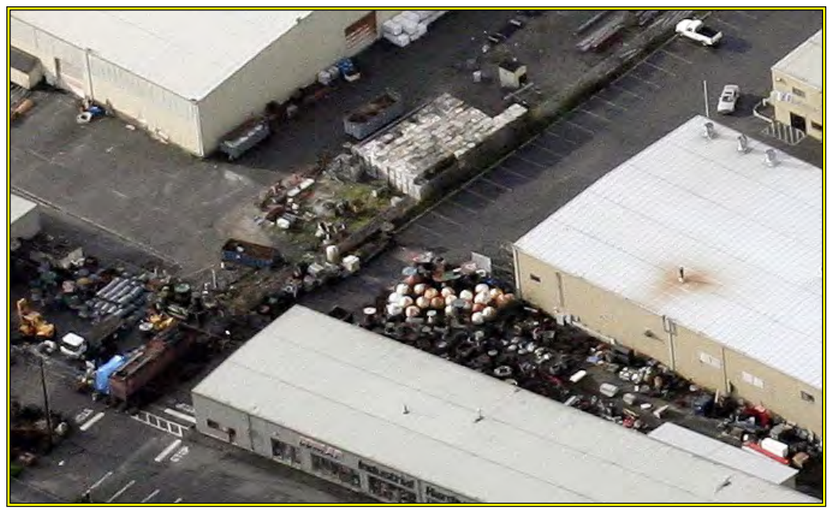
These aerial photographs shows a series of differing uses of the property north of the current Ameron building where the storm drain break occurred. The first photograph shows the original fill placed at the time the site was occupied by the sawmill. Subsequently the area has been used for storage of fill, laydown of equipment, and as a roadway. The buried storm drain line was installed in about 1982. The approximate location of the repair is identified by the two arrows in each photograph.

N

No scale.
The locations of all features are approximate.

Figure 13
Sewer Line Repair Area on Northern Area G
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences



Left:

The upper two photographs are oblique photographs taken on November 25, 2005. The general alignment of the storm drain system that discharges past the sewer line break location is shown in yellow on the upper two photographs. The lower photograph is an enlargementfrom the upper photograph of the areas on the subject property and the adjoining property where considerable items are stored on the ground surface.

Below:

This shows part of Figure 3a from Landau's November 28, 2001 Environmental Site Assessment for the North Marina Redevelopment Project. The figure illustrates the storm drain system. The yellow highlighted portion discharges past the sewer line break location.

Right:

The 1977 photographs show a structure that might be an electrical substation-type structure. The photographs are not suitable to clearly identify the item. The 1980 photograph documents the presence of pole mounted transformers at the northeastern corner of the subject property.

1977 **(both oblique views)**

1980

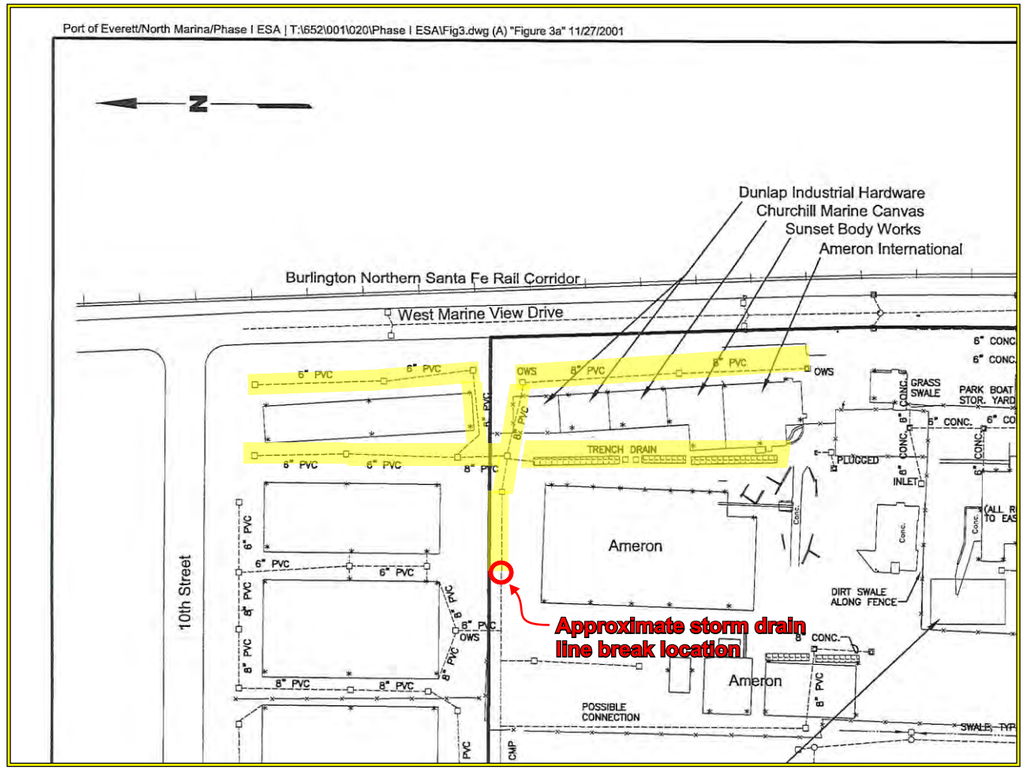
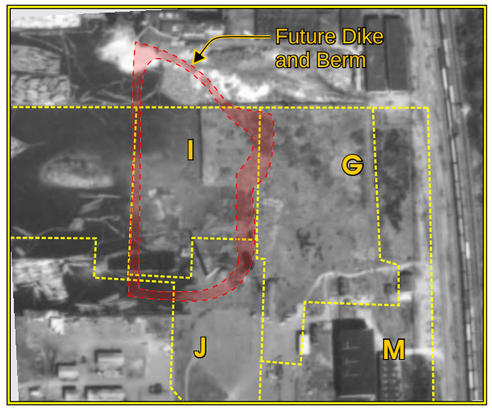


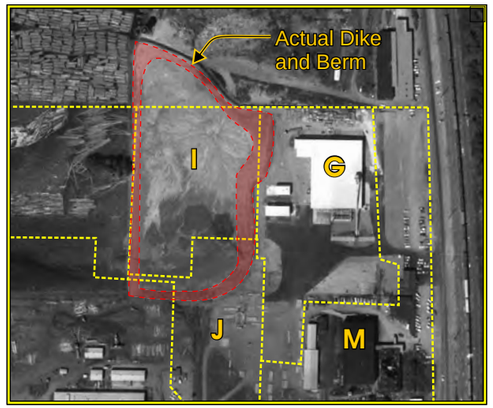
Figure 14
Storm Sewer System on
Northern Area G
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences

Large Dredge Disposal Fill - 1973

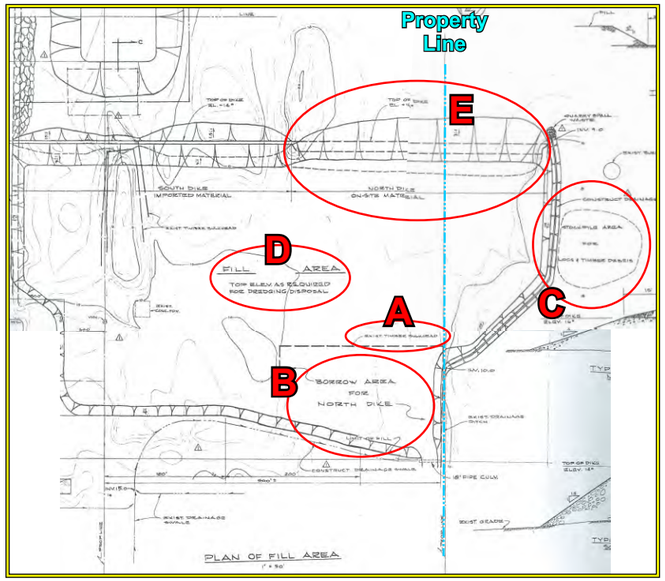


1967



1973, September

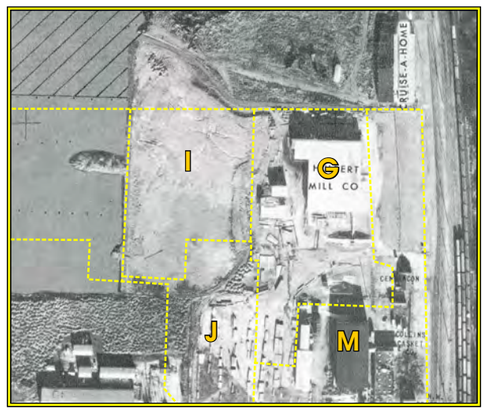
1973, September (without overlays)



From Drawing Dated 1/2/1973 and stamped "As-Built"
By Reid Middleton Associates, File 7.76.1-01
Reproduced here at 1 inch = 250 feet

Annotations shown in Red, Above:

A: Existing timber bulkhead
B: Borrow area for north dike
C: Stockpile area for logs and timber debris
D: Fill area, top elevation as required for dredging disposal
E: Northern Dike



Undated Photo on engineering drawing
circa 1973-1974

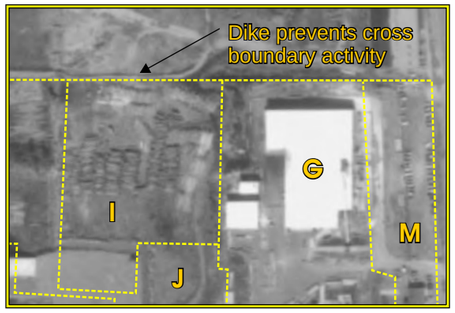
Scale for Aerial Photographs

N

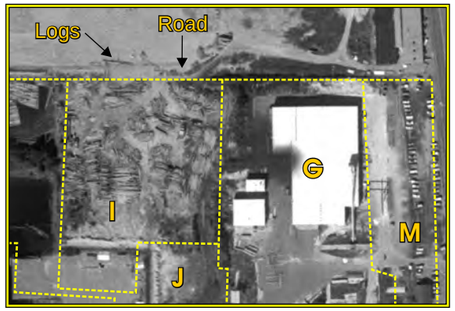
0 500 1,000 feet

Approximate Scale: 1-inch = 500 feet
The locations of all features are approximate.

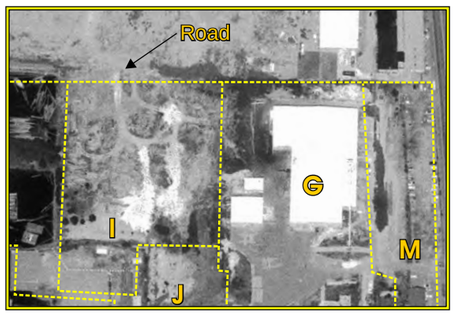
Activity Crossing the North Property Line After Fill Placement



1976



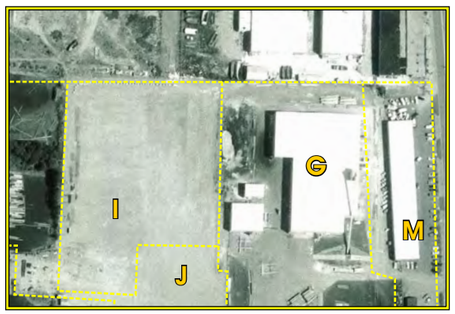
1977



1979

1977- Oblique view - no scale

1980



1982 - No cross property line activity

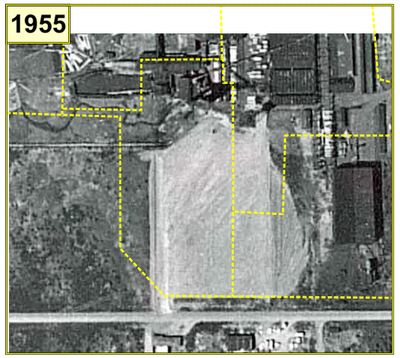
N

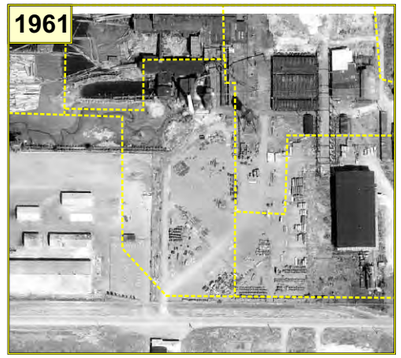
0 400 800 feet

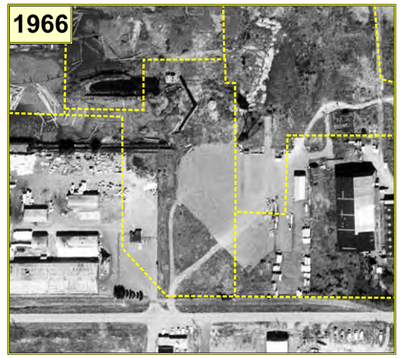
Approximate Scale: 1-inch = 400 feet
The locations of all features are approximate.

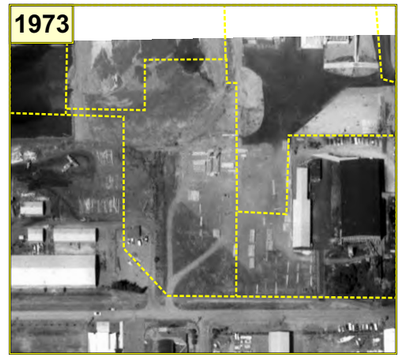
Figure 15
Cross Property Activity to the North
North Marina Ameron/Hulbert Site
Everett, Washington

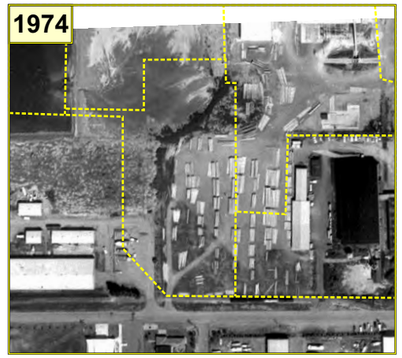
Pinnacle GeoSciences

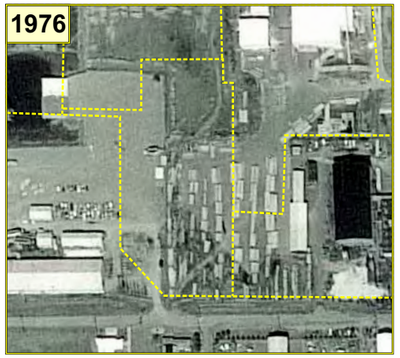


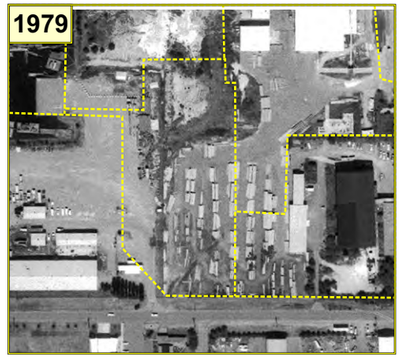


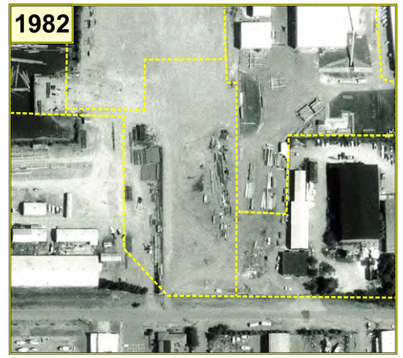


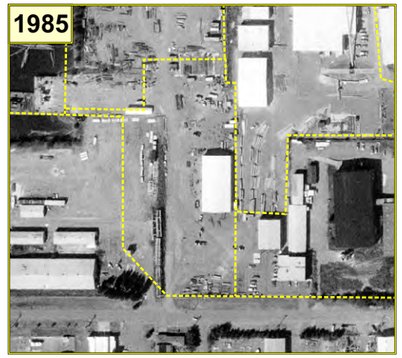


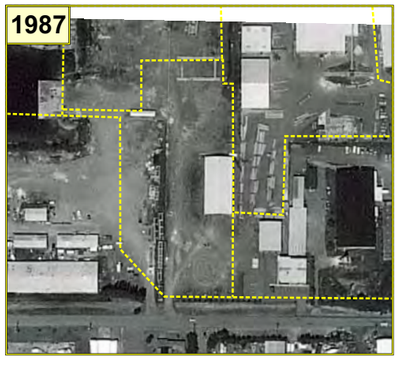


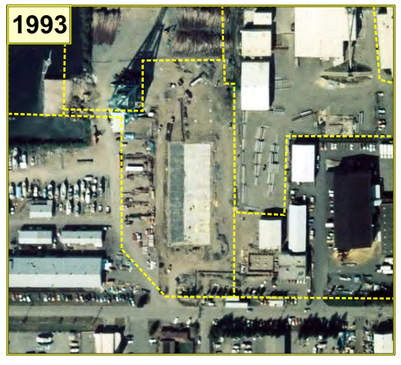


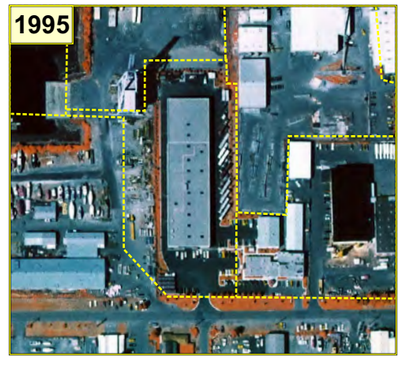


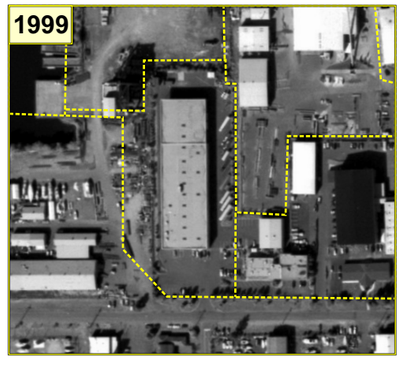


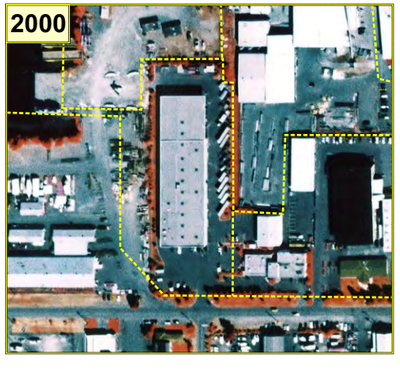


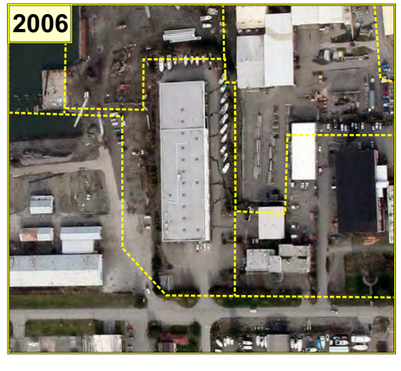


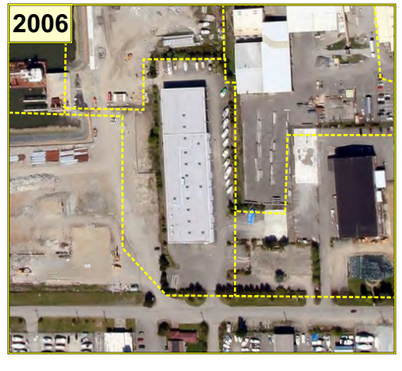












These images are intended to support the text of the report by providing illustrative examples of on-going, long term land use within and around the western part of Area J.

N

No Scale.
The locations of all boundaries are approximate.
The 1969 and 1977 images are oblique photos, both of these photographs are taken with the view toward the east.

Figure 16

Activity West of Area J
North Marina Ameron/Hulbert Site
Everett, Washington

Pinnacle GeoSciences