PHASE I ENVIRONMENTAL SITE ASSESSMENT
JENSEN'S SHIPYARD
1293 TURN POINT ROAD
FRIDAY HARBOR, WASHINGTON

prepared for:

Port of Friday Harbor
204 Front Street
Friday Harbor, Washington 98250

November 21, 2017

whatcom ENVIRONMENTAL

soil | water | air
compliance consulting

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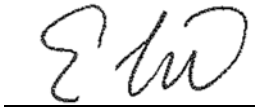
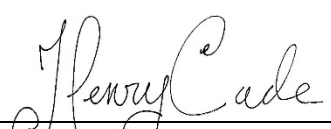


Eric Libolt
Project Manager



Henry Cade
QA/QC Reviewer

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LIST OF ACRONYMS

AHERA	-	Asbestos Hazard Emergency Response Act
AST	-	Aboveground Storage Tank
ASTM	-	American Society for Testing and Materials
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
CESQG	-	Conditionally Exempt Small Quantity Generator
CREC	-	Controlled Recognized Environmental Condition
CSCSL	-	Confirmed and Suspected Contaminated Sites List
ERNS	-	Emergency Response Notification System
ESA	-	Environmental Site Assessment
FEMA	-	Federal Emergency Management Agency
HREC	-	Historical Recognized Environmental Condition
HSL	-	Hazardous Sites List
LQG	-	Large Quantity Generator
LUST	-	Leaking Underground Storage Tank
MQG	-	Medium Quantity Generator
NFA	-	No Further Action
NFRAP	-	No Further Remedial Action Planned
NPDES	-	National Pollutant Discharge Elimination System
NPL	-	National Priority List (Superfund)
PCS	-	Petroleum Contaminated Soil
RCRA	-	Resource Conservation and Recovery Act
REC	-	Recognized Environmental Condition
SQG	-	Small Quantity Generator
TPH	-	Total Petroleum Hydrocarbons
TSDF	-	Treatment, Storage, and Disposal Facility
USDA	-	U.S. Department of Agriculture
USGS	-	U.S. Geological Survey
UST	-	Underground Storage Tank
VEC	-	Vapor Encroachment Condition
WAC	-	Washington Administrative Code
WARM	-	Washington Ranking Method. (Sites are ranked 1 to 5, with 1 as the highest relative level of concern.)
WCHD	-	Whatcom County Health Department
WSDNR	-	Washington State Department of Natural Resources

1.0 SUMMARY

This report presents the results of a Phase I Environmental Site Assessment (ESA) conducted by Whatcom Environmental Services on behalf of the Port of Friday Harbor. The ESA was conducted for the Jensen Shipyard property located at 1293 Turn Point Road in the City of Friday Harbor, Washington (the subject property). The subject property is approximately 4.88 acres in area and consists of one parcel (351341005000). This Phase I ESA was conducted in general accordance with the ASTM Designation: E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM, 2013). The ESA involved a visual inspection of the subject and adjacent properties, interviews with key personnel, a survey of relevant government and regulatory files, and preparation of this report.

A goal of the Phase I ESA process is to identify *recognized environmental conditions* (REC). The term recognized environmental condition means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment (ASTM, 2013). The term includes hazardous substances or petroleum products even under conditions in compliance with laws.

This Phase I ESA revealed evidence of several recognized environmental conditions at the subject property.

- The subject property has had several permit violations of the NPDES Boatyard General Permit including benchmark exceedances for copper, zinc, lead and total suspended solids.
- Sediment samples collected in the aquatic area northeast of the subject property exceeded the screening level for tributyltin (TBT).
- One underground storage tank was formerly located in the field south of the oil storage building. It is unknown if any soil contamination resulted from the use of the tank.

- A small dump site was identified north of the oil storage building. There is a potential that hazardous substances may have been released in the area of the dump.
- A floor drain was identified at the northwest corner of the machine shop building. Hazardous substances used in the machine shop may have made their way to the floor drain in the past, and may have infiltrated into the ground beneath the machine shop depending on the setup/terminus of the floor drain.
- The laydown area, marine railways, and stormwater detention pond are all potential areas of concern for tributyltins and other heavy metals in soil/sediments due to their use for maintenance/repair of boats. Depending on the current and historic use of the site, additional hazardous chemicals may be of concern for these areas including solvents and petroleum products.

2.0 INTRODUCTION

2.1 PURPOSE

The purpose of this Phase I ESA was to identify recognized environmental conditions in connection with the subject property, and to permit the Client to satisfy requirements of the all appropriate inquiry (AAI) standard under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) described in 40 CFR 312. The term "recognized environmental conditions" is defined in Section 2.5. The AAI standards are applicable to those seeking to establish (1) the innocent landowner defense pursuant to CERCLA, (2) the bona fide prospective purchaser liability protection pursuant to CERCLA, and (3) the contiguous property owner liability protection pursuant to CERCLA. By conducting this ESA, the Client has undertaken all appropriate inquiry into the previous ownership and uses of the subject property consistent with good commercial or customary practice in an effort to minimize liability under CERCLA.

2.2 DETAILED SCOPE OF SERVICES

The ESA of the subject property was conducted in general accordance with procedures set forth in the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation E 1527-13*. Section 312.11 of EPA's Final Rule (40 CFR 312), states that the ASTM Standard E 1527-13 is compliant with the AAI regulatory requirements.

The ESA process consists of four components: (1) an electronic review of records pertaining to environmental conditions on-site and at adjacent properties, (2) site reconnaissance by an environmental professional, (3) interviews with the current owner(s) and occupant(s) of the property and local government officials, and (4) preparation of an ESA report which documents all steps taken during the assessment.

Vapor Encroachment Screening was conducted in conjunction with this ESA to evaluate potential vapor pathways as defined in ASTM E2600-10, Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions.

2.3 SIGNIFICANT ASSUMPTIONS

Significant assumptions associated with the findings of this Phase I ESA include the understanding that all information provided by the Client and all individuals interviewed is true and correct.

The methodology used to conduct the site visit and complete the Phase I ESA generally followed common industry practices. A Phase I ESA is based on visual inspection and review of available historical records, and assessment is primarily confined to surface structures or features. The findings and conclusions presented in this report are based on reasonably ascertainable information compiled by Whatcom Environmental during the Phase I ESA. The ESA focuses on potential sources of hazardous substances, petroleum substances, and petroleum hydrocarbons that could be considered a liability due to their possible presence on-site in significant concentrations (e.g., above acceptable limits set by Federal and State government) or due to the potential for contamination migration through exposure pathways (e.g., groundwater) from off-site locations. Hazardous substances naturally occurring in plants, soil, and rocks (e.g., trace metals and naturally occurring asbestos) are not typically considered in a Phase I ESA.

2.4 LIMITATIONS AND EXCEPTIONS

The Whatcom Environmental staff that conducted the ESA meet the requirements of an environmental professional as outlined in ASTM E 1527-13. No Phase I ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this ESA by Whatcom Environmental is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the subject property. No warranty, express or implied, is given regarding the presence of hidden or unidentified sources of contamination of the subject property. In addition, no warranty, express or implied, is given regarding geotechnical or geologic hazards. This ESA did not include delineation of wetlands. This ESA did not include an asbestos or lead paint investigation.

2.5 SPECIAL TERMS AND CONDITIONS

This Phase I ESA was conducted in general accordance with the ASTM Designation: E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM, 2013).

The term *recognized environmental conditions* means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies (ASTM, 2013).

The term *controlled recognized environmental condition* (CREC) means a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

The term *historical recognized environmental condition* (HREC) means past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

The term *petroleum products* means crude oil or any fraction thereof including gasoline, kerosene, diesel oil, jet fuels, fuel oil, natural gas, natural gas liquids, liquefied natural gas, and synthetic gas.

A substance is defined as a *hazardous substance* pursuant to section 101 (14) of the Federal cleanup law 42 U.S.C., Sec. 9601(14) as interpreted by EPA and the courts. A hazardous substance means any liquid, solid, gas, or sludge that exhibits any of the hazardous physical, chemical, or biological properties described in Washington Administrative Code (WAC) 173-303-090 or 173-303-100 (Dangerous Waste Regulations).

2.6 USER RELIANCE

Whatcom Environmental prepares a report for the Client's exclusive use for a particular project and in accordance with generally accepted practices at the time of investigation. The report must be used in its entirety. This Phase I ESA report was prepared for exclusive use by Port of Friday Harbor, and may not be used, relied upon, or assigned to a third party without written consent from Whatcom Environmental. This report is not intended for use by others and the information contained herein is not applicable to other sites.

3.0 SITE DESCRIPTION

The ESA was conducted for the Jensen Shipyard property located at 1293 Turn Point Road in Friday Harbor, Washington. The site location is shown on Figure 1.

3.1 LOCATION AND LEGAL DESCRIPTION

The subject property is located approximately 0.94 miles southeast of Friday Harbor Ferry Terminal and approximately 1.05 miles east of Friday Harbor Airport in Friday Harbor, Washington (Figure 1). The property is comprised of one parcel and located in the northeast quarter of the southeast quarter of Section 13 in Township 35 North, Range 3 West. The subject property encompasses approximately 4.88 acres. The property is zoned by the City of Friday Harbor as Shore Public Accommodation. Figure 2 shows the subject property outline and adjacent parcels. The property Tax Parcel Number and legal description are as follows:

- 351341 005000 – PR GL 6 PR SE-SE EX CO RD sec 13, T 35N, R 3W

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The subject property is located in an area characterized by marina, commercial, and industrial development.

The median elevation of the site is approximately 16 feet above mean sea level. The property topography is relatively level, and the surrounding area generally slopes north towards Friday Harbor (USGS Friday Harbor, 2014).

Soils in the upland area of the subject property are described in the Soil Survey of San Juan County Area, Washington (U.S. Department of Agriculture [USDA], 2009). The average annual precipitation at the property is approximately 20 to 40 inches, the average annual air temperature is approximately 48 to 50˚F, and the average frost-free period is 200 to 240 days. The Soil Survey designates the upland soil as a mixture of Beaches-Endoaquents, tidal-Xerorthents association; Mitchellbay-Rock Outcrop-Killebrew complex; and Cady-Rock Outcrop Complex. The soil is composed of

approximately 38% Beaches-Endoaquents, tidal-Xerorthents association; 26% Mitchellbay-Rock Outcrop-Killebrew complex; and 36% Cady-Rock Outcrop Complex.

The Beaches-Endoaquents, tidal-Xerorthents association is 40% beaches; 25% Endoaquents, tidal, and similar soils; 25% Xerorthents and similar soils; and 10% dissimilar minor components. The material generally formed from beach sand and/or colluvium from glacial outwash. The material is very poorly to excessively drained, and the available water capacity is very low.

The Mitchellbay-Rock Outcrop-Killebrew complex is 45% Mitchellbay and similar soils; 25% rock outcrop; 20% Killebrew and similar soils; and 10% dissimilar minor components. The material generally formed from in glacial drift over dense glaciomarine deposits. The material is somewhat poorly drained, and the available water capacity is low to moderate.

The Cady-Rock Outcrop Complex is 45% Cady and similar soils; 35% rock outcrop; and 20% dissimilar minor components. The material generally formed in glacial drift mixed with colluvium derived from metasedimentary rock. The material is well drained, and the available water capacity is low.

The site is underlain by Marine outwash of the Everson Interstade of the Fraser Glaciation. The outwash consists of loose, moderately to well-sorted, subangular to sub-rounded gravelly sand, sandy gravel, and sand with minor interbeds of silt and silty sand. Color is brown to gray, depending on oxidation state and lithologic content. Thickness ranges to as much as 230 feet (WSDNR, 2016).

3.3 CURRENT USE OF THE PROPERTY

The subject property is currently operated as a shipyard. The property has operated as a shipyard since initial development.

3.4 DESCRIPTION OF STRUCTURES, ROADS, AND OTHER IMPROVEMENTS ON-SITE

Seven structures are currently located on the subject property (Figure 2). An abandoned cabin is located at the northeast corner of the upland portion of the property. West of the cabin is a small oil storage building. West from the oil storage building, is the

old boat building structure. A cluster of three buildings is located at the southern portion of the property. The eastern most of the three is the office/retail building. The middle of the three is a machine shop building. The western most of the three is a storage building. A laydown area is located at the northern portion of the upland portion of the property. Within the laydown area is the boat pullout and wash pad. Water from the wash pad is circulated through a treatment building located just east of the boat pullout. A dock is located east of the laydown area extending into the water. Old boat railways are located just east of the dock.

The western half of the upland portion of the property is primarily covered in gravel. The eastern half is primarily covered by grass and shrubs. Access to the property is available at the southeast corner of the property off Turn Point Road.

3.5 CURRENT USE OF THE ADJOINING PROPERTIES

The layout of the subject property and adjoining properties is shown on Figure 2. Friday Harbor is located to the north of the property. Marina operations are located adjacent to the east and west of the property. A sand and gravel pit is located to the south of the subject property, across Turn Point Road.

4.0 USER PROVIDED INFORMATION

Mr. Todd Nicholson provided user information for the subject property on October 30, 2017. A User Information Request Form and a Vapor Encroachment Screening Request Form were completed by Mr. Nicholson and are included in Appendix A.

4.1 TITLE RECORDS

A chain of title prepared by Chicago Title Insurance Company was provided by the Client. A copy of the report is included in Appendix A. A summary of the findings is provided in Section 5.5.5.

4.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

Mr. Nicholson was not aware of any environmental liens or activity or use limitations associated with the subject property.

4.3 SPECIALIZED KNOWLEDGE

Mr. Nicholson stated that the property is known to have a floor drain in the shop, a decommissioned underground storage tank, debris dumping along the shoreline, and boat painting and pressure washing activities. He stated that chemicals present at the site include gas, oil, solvents, and anti-fouling paint. He stated that the site is likely to have metals due to the use of the anti-fouling paint.

4.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

Mr. Nicholson was not aware of any valuation reduction for environmental issues associated with the subject property.

4.5 VAPOR ENCROACHMENT SCREENING INFORMATION

On the Vapor Encroachment Screening request form Mr. Nicholson noted that there are currently several structures at the site including an office, shop space, retail, marina, boat haul out. He stated that there are no plans to demolish the buildings, with the exception of the old boat builder shed potentially being torn down. He stated that they may potentially construct a new maintenance building at the property. Mr. Nicholson stated that there is one floor drain in the shop building and that the buildings are heated by electric.

4.6 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The property is owned, occupied, and managed by Jensen & Son's, Inc. One of the owners, Mike Ahrenius, can be reached at 360-378-4343.

4.7 REASON FOR PERFORMING PHASE I ESA

A Phase I ESA is required as one component of the due diligence process. The Client requested that a Phase I ESA be performed on the subject property in order to satisfy one of the requirements to qualify for (1) the innocent landowner defense pursuant to CERCLA, (2) the bona fide prospective purchaser liability protection pursuant to CERCLA, and (3) the contiguous property owner liability protection pursuant to CERCLA. This ESA was performed in order to identify recognized environmental conditions associated with the subject property through the scope reflected in the text of this report.

5.0 RECORDS REVIEW

An ASTM standard records search and regulatory profile of the subject property and adjacent properties within a one-mile minimum search distance was conducted.

5.1 STANDARD ENVIRONMENTAL RECORDS SOURCES

A regulatory profile was compiled by Environmental Data Resources, Inc. (EDR). Numerous federal, state, and proprietary databases were searched by EDR. The regulatory profile provided by EDR included searches of the ASTM-required standard environmental record sources. The EDR report reviewed by Whatcom Environmental is provided in Appendix B.

A total of 19 listed sites were identified within the ASTM required search radii of the subject property.

The subject property (1293 Turn Point Road) is listed in the EDR Exclusive National Pollutant Discharge Elimination System database (NPDES, Appendix B, p. GR-22). Records available through Ecology's Water Quality Permitting and Reporting Information System (PARIS) database was investigated for further information regarding the violations. It was noted that the subject property has had 30 permit violations since 2006. Twenty of the permit violations were late submittals of DMRs, failure to conduct analysis, and failure to submit required reports. In November of 2012, there were 2 permit violations for benchmark exceedances for copper and zinc. In January of 2011, there were 2 permit violations for benchmark exceedances for copper and total suspended solids. In April of 2009, there were 3 permit violations for benchmark exceedances for lead, zinc, and copper. In January of 2009, there were 3 permit violations for benchmark exceedances for lead, zinc, and total suspended solids.

The closest site of note is located at 1063 Turn Point Road, adjacent to the west of the subject property. The site is listed in the Reported Spill databased (SPILLS, Appendix B, p. GR-12) for a spill of 10 gallons of diesel fuel to surface water in April 2015. Documentation of the spill indicates that a 36-foot vessel sank releasing the diesel fuel

to the surface water. A spill response team was deployed and 6 bags of diesel-soaked sorbents were recovered. No evidence of a further investigation from Ecology is noted.

No sites were listed by EDR as Orphans (sites which were not mapped by EDR due to inadequate address information).

One recognized environmental condition was identified at the subject property. The subject property has had several permit violations of the NPDES permit including benchmark exceedances for copper, zinc, lead and total suspended solids.

None of the remaining sites listed by EDR are likely to have a negative impact on soil or groundwater at the subject property due to the distances from the subject property, elevation differences with the subject property, the topography and drainage of the area, and/or the occurrence of appropriate cleanup actions.

5.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

The San Juan County Public Works Department website was reviewed to locate waste disposal and recycling facilities on San Juan Island. No facilities are located within one mile of the subject property.

An online interactive map maintained by the Washington State Department of Natural Resources showing locations of active surface mine permit sites and dry oil and gas test well sites was reviewed (WSDNR, 2016). The information indicated that there were no active surface mine sites or oil or gas wells within one mile of the subject property.

A 2008 GIS database of reclaimed surface mine sites in Washington State created by the Washington State Department of Natural Resources, Division of Geology and Earth Resources was reviewed. The information indicated one sand and gravel mine is located southwest of the property across Turn Point Road.

A 2008 GIS database of oil and gas test well sites in Washington State created by the Washington State Department of Natural Resources, Division of Geology and Earth Resources, was reviewed to assess the possibility of historical drilling on the subject property. The information indicated that no drilling has occurred within one mile of the subject property.

A 2001 Department of Ecology report titled *Concentrations of Selected Chemicals in Sediments from Harbors in the San Juan Islands* was reviewed. The report was generated to determine the occurrence and extent of toxic chemicals associated with marina activities in four harbors in the San Juan Islands. The work was conducted in May 1997. All sediment samples were analyzed for total organic carbon, chromium, copper, lead, zinc, semi-volatile organics, and butyltins. The information indicated that 2 sediment samples collected within the aquatic area of the subject property (FR1 and FR3) exceeded the screening level of 73 µg/kg for tributyltin (TBT) at concentrations of 135.3 µg/kg and 74.8 µg/kg, respectively (Ecology, 2001). A copy of the report is included in appendix C. The sediment sample locations are indicated on Figure 2.

Various online databases and records available on the Department of Ecology's website were searched for the properties noted during the review of standard environmental record sources (see Section 5.1).

The review of additional environmental record sources revealed one recognized environmental condition at the subject property. Sediment samples collected in the aquatic area northeast of the subject property exceeded the screening level for TBT.

5.3 PHYSICAL SETTING SOURCES

The ASTM-required source, the U.S. Geological Survey (USGS) Friday Harbor, WA Quadrangle (USGS, 2014) and Shaw Island, WA Quadrangle (USGS, 2014), was reviewed to determine the physical setting of the subject property.

5.4 HISTORICAL SETTING SOURCES

Sanborn fire insurance maps were ordered from EDR. No coverage of the area was available. A copy of the Sanborn map report is presented in Appendix C.

A City Directory report was ordered from EDR. A copy of the report provided by EDR is included in Appendix C. A summary of the findings is provided in Section 5.5.2.

An aerial photograph report was ordered from EDR. The report provided aerial images from 1941, 1972, 1980, 1989, 1998, 2005, 2006, 2009, and 2011. A copy of the

aerial photograph report is included in Appendix C. A summary of the aerial photograph findings is provided below in Section 5.5.3.

A topographic map report was ordered from EDR. Three historical topographic map quadrangles covering the subject property were provided in the report (Orcas Island 1:62,500; Friday Harbor 1:24,000; and Shaw Island 1:24,000 series). The maps are dated 1943, 1954, 1957, 1973, 1981, 1994, and 2014. Copies of the historical topographic maps reviewed are presented in Appendix C. A summary of the historical topographic map findings is provided below in Section 5.5.4.

5.5 HISTORICAL USE INFORMATION ON THE PROPERTY

The subject property was first developed as a shipyard prior to 1941 with anecdotal evidence suggesting operation beginning in 1910. The property has remained a shipyard since development. Minor changes to structures at the property have been made over time. Adjacent properties have historically been primarily marina/commercial/industrial. A summary of historical uses of the property is included below.

5.5.1 Sanborn Maps

Sanborn Maps were ordered from EDR. No coverage of the subject property was available.

No recognized environmental conditions were noted during the Sanborn Map review.

5.5.2 City Directories

A City Directory report was ordered from EDR. EDR retrieved information from Cole Information Services from 1992 to 2013. A copy of the report is included in Appendix C. The subject property was formerly addressed 880 Turn Point Road, and was switched to 1293 Turn Point Road when San Juan County updated to a new 911 system.

The subject property was listed as a shipyard at 880 Turn Point Road from 1992 through 2003.

The subject property was listed as a shipyard at 1293 Turn Point Road in all the city directories from 2008 to 2013.

Adjacent properties have been listed as marina/commercial/industrial in all the listings searched by EDR.

No indication of a gasoline station or dry-cleaning facilities was found at or near the subject property in the city directories review.

No recognized environmental conditions were noted during the city directories review.

5.5.3 Aerial Photographs

Aerial photographs of the subject property and surrounding area were reviewed to assess prior land utilization. Aerial photographs from the years 1941, 1972, 1980, 1989, 1998, 2005, 2006, 2009, and 2011 were reviewed. Copies of the aerial photographs are included in Appendix C.

In the 1941 photograph, the first portion of the boat building structure is visible at the northeast portion of the site along the water. No other structures are visible at the property. A dock does not appear to have been constructed at the property yet, but it is possible the railways were present but not visible due to image quality.

By the 1972 photograph the property has changed dramatically. The railways are visible in the photograph, and a dock and boat pullout are visible west of the railways. A small structure is visible at the very northeast corner of the property; the structure is still located at the subject property today. The single structure originally seen in the 1941 photograph is visible with several additions having been made to the structure, making it significantly larger than the one seen in 1941. Two additional structures are located at the southern portion of the property; the structures are still located at the subject property today. One structure is located near the southwest corner of the property. Several boats are visible at the property.

The 1980 and 1989 photographs are of very low image quality making it difficult to discern specific information regarding the site.

The 1998 photograph changes from the 1972 photograph only in that the original structure at the northern center of the property appears to have decreased in size since 1972, and a new structure is visible next to the two at the southern portion of the property.

The property changes very little after the 1998 photograph. The original building at the northern center of the property decreases in size to its current size. The structure at the southwest corner of the property is no longer visible by the 2011 photograph. Indications of property usage can be discerned as a shipyard from all of the images examined.

The adjacent properties are developed with marina and/or commercial/industrial development around the same time as the subject property. The residential structure adjacent to the east is visible in all photographs reviewed. The surface mine located to the southwest across Turn Point Road appears in the 1941 photograph and appears to be mostly leveled out by the 2005 photograph.

No recognized environmental conditions were noted during the aerial photograph review.

5.5.4 Topographic Maps

Three historical topographic map quadrangles covering the subject property (Orcas Island 1:62,500; Friday Harbor 1:24,000; and Shaw Island 1:24,000 series) were reviewed as part of this ESA. The maps are dated 1943, 1954, 1957, 1973, 1981, 1994, and 2014. A structure was first noted on the subject property on the 1943 map. Several more structures are shown at the property over time. The dock is first shown on the 1973 map. The gravel pit located to the south is shown on maps from 1954 through 1994. Copies of the historical topographic maps reviewed are presented in Appendix C.

No recognized environmental conditions were noted during the historical topographic map review.

5.5.5 Title Documents

A chain of title prepared by Chicago Title Insurance Company was provided by the Client. A copy of the chain of title is provided in Appendix A. The property ownership history is summarized below:

W.H. Benson	Pre – 6/30/1940
Marguerite T. Adams, W.H. Kegley, and Ruth T. Kegley	6/30/1940 – Unknown
Julia Jensen	Unknown – 12/10/1959
Albert Jensen & Sons Inc.	12/10/1959 – Present

No recognized environmental conditions were noted during the historical title records review.

5.6 VAPOR ENCROACHMENT SCREENING RECORDS

Review of environmental, physical, and historical records did not identify any sites which may contribute to contaminant vapor encroachment upon the subject property.

5.7 HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES

The review of historical use information did not identify any recognized environmental conditions on the adjacent properties.

6.0 SITE RECONNAISSANCE

Mr. Eric Libolt of Whatcom Environmental Services conducted a site reconnaissance of the subject property on October 2, 2017, as part of the Phase I ESA. The property owner, Mr. Mike Ahrenius, accompanied Whatcom Environmental during the site reconnaissance. A photographic log showing selected views of the subject property is included in the report.

6.1 METHODOLOGY AND LIMITING CONDITIONS

Environmental professionals from Whatcom Environmental Services conducted the site reconnaissance. The interior and perimeter of the site were observed. All accessible areas of the property were viewed, including the interior of the buildings.

6.2 GENERAL SITE SETTING

The subject property is approximately 4.88 acres, located on Turn Point Road in Friday Harbor, Washington. The subject property consists of one parcel. The property is currently developed with seven structures spread throughout the property. All areas of the property were accessible, including the interior of the buildings, with the exception of the original boat building structure which was unsafe to enter due to the condition of the structure.

The owner explained to Whatcom Environmental that the site was originally used to manufacture wooden boats in the early 20th century. As wooden boats were phased out in the middle of the 20th century, the site moved to being used to pull boats for repair and maintenance. Railways are present at the northern portion of the site, east of the current dock. The railways were originally used to launch boats, but were later used to pull boats out for repair. A concrete pad is present at the location of the rails which was added at a later date and is not original to the railway area. Whatcom Environmental noted a high probability of paint or other coating materials being present in the soil/sediment at the location of the railway.

A portion of the original structure used in building the wooden boats is located at the northern portion of the site, south of the railway. The condition of the building made it unsafe to enter, but the perimeter of the building was explored. There was no evidence of dumping, tanks, or other environmental concerns around the building.

A cabin structure is located at the northeast corner of the upland portion of the site. The structure was abandoned sometime in the past and is not currently used.

Approximately 45 feet west of the abandoned cabin in a small storage building. The building is used for the storage of fuel and oil. One waste oil AST is located inside the building, along with several smaller diesel, gasoline, and waste oil drums. No evidence of spills or overtopping were noted in or around the building. Concrete flooring is used throughout the building for containment in the event of a spill. The owner reported that a small dump area was located north of the oil storage building. Whatcom Environmental observed the dump area and noted such items as tires, plastic, metal parts, two engine blocks, hoses, cables, a large battery (from a boat or heavy equipment), and other metal and wood debris. No sheen or staining was noted in the area of the debris. The large battery was damaged, and presents a risk for release of hazardous chemicals to the area.

The property owner also reported that an underground storage tank was formerly located in the field southwest of the oil storage building. The tank was used to fuel equipment onsite, and was removed in the 1980's. The owner did not recall if contamination was observed when the tank was removed.

Three structures are located in a cluster at the southern portion of the site. The eastern most structure houses offices and retail. The western most structure is used for miscellaneous storage. The structure at the center is the machine shop building. While exploring the machine shop building, Whatcom Environmental noted an approximately 3-inch hole (floor drain) at the northwest corner of the building. The owner stated that the hole was used to dispose of liquids from the machine shop. He stated that the drain for the hole was excavated near in the past, at which time it was noted that the drain appeared to flow to a holding tank or drum underground. The owner noted that the tank or drum may have been perforated or may have contained a drain line for the contents to drain, but the destination of the contents was unclear. The tank was not removed as part of the excavation in the past.

A boat pullout is located in the northwest portion of the site. A wash pad is located at the end of the pullout, and both the pullout and wash pad are paved with concrete. The owner stated that the wash water generated during washing operations is treated in a closed loop system using enzymes. A small building housing the pumping and treating equipment is located just east of the wash pad. No wash water is discharged from the site. When the washing is completed, the wash pad is cleaned and the drain on the wash pad is diverted to the onsite stormwater detention and evaporation pond.

The stormwater detention pond is located in the southwest portion of the property, west of the machine shop. The pond is equipped with a pump and fountain to facilitate evaporation. The owner stated that the pond is emptied of water annually. When emptied, the water is transported offsite and dumped on the ground and allowed to infiltrate. Ordinarily, the water is dumped on the property to the south, across Turn Point Road.

The laydown area for boat repair and maintenance is located in the northwest portion of the property. Current practices at the site include laying an impermeable membrane or tarp down prior to conducting repair or maintenance work. At the completion of the work the paint or other materials are removed from the tarp. The tarps help prevent paint or other materials from reaching the soil. Practices of the past did not include this safeguard, and resulted in unknown amounts of paint or other materials released to the soil in the laydown area.

At the northwestern corner of the property, OPALCO formerly operated an offloading ramp. There was also a storage building at the location, which burned down in the past.

The last area explored during the site visit was the docks. No environmental concerns were noted on or around the docks.

The general site setting and site reconnaissance findings are presented on Figure 2. At least one underground storage tank has been located at the site in the past, in the field south of the current oil storage building; the tank has since been removed. A second small underground tank or drum is located at the southwest corner of the machine shop, attached to the floor drain; the tank is still in place. One above ground tank and several storage drums were noted in the oil storage building.

Minor amounts of hazardous chemicals are stored on-site inside the machine shop and oil storage buildings. There was no evidence of significant spills noted during the site visit. There was no evidence of any stressed vegetation at the site.

Several recognized environmental conditions were identified during the site reconnaissance:

- One underground storage tank was formerly located in the field south of the oil storage building. The tank was used to fuel equipment at the site in the past. The tank was removed in the 1980's, but no information is available regarding the condition of the tank or soil at the time of removal. It is unknown if any contamination resulted from the use of the tank.
- A small dump site was identified north of the oil storage building. Various de-minimis debris was observed, along with a large damaged battery. Based on the condition of the battery, there is a potential that hazardous substances may have been released in the area of the dump.
- A floor drain was identified at the northwest corner of the machine shop building. Anecdotal evidence suggests that the floor drain may lead to an underground tank or drum. The destination of the contents of the tank/drum are unclear. Hazardous substances used in the machine shop may have made their way to the floor drain in the past, and may have infiltrated into the ground beneath the machine shop depending on the setup of the floor drain.
- The laydown area, marine railways, and stormwater detention pond are all potential areas of concern for tributyltins and other heavy metals in soil/sediments due to their use for maintenance/repair of boats. Depending on the current and historic use of the site, additional hazardous chemicals may be of concern for these areas including solvents and petroleum products.

7.0 INTERVIEWS

Whatcom Environmental personnel conducted two interviews as part of the ESA process.

7.1 INTERVIEW WITH OWNER

Mr. Mike Ahrenius completed an owner interview questionnaire November 1, 2017. Mr. Ahrenius is the property owner, and has been associated with the property for 28 years. He stated that there are seven buildings in total located on the property, ranging in age from 40 to 100 years old. He stated that the office/store building is heated via electric and the machine shop is heated via a wood stove. Mr. Ahrenius stated that the property has operated as a boat yard since it's development. He was not aware of any other environmental reports which have been generated for the property, aside from a NPDES permit. He stated that hazardous materials have been and are currently used and stored at the subject property. He stated that the main hazardous material generated at the site is wash pad sludge. Mr. Ahrenius stated that there are 300-gallon gasoline and diesel ASTs and a 300-gallon waste oil tank all in a concrete bunker in the oil storage building on the property. He stated that a 300-gallon gasoline UST was formerly located at the property, but was removed approximately 20 years ago. Mr. Ahrenius stated that there are no hydraulic lifts located on the property. He stated that there has not been any leaks or spills of hazardous substances at the subject property. He stated that he has never noticed any unusual odors, vent pipes, standing water, or stains associated with the subject property. He stated that, to the best of his knowledge, no fill material has been brought on-site. A record of the interview is included in Appendix D.

7.2 INTERVIEW WITH SITE MANAGER

The subject property is currently managed by the owner.

7.3 INTERVIEWS WITH OCCUPANTS

The site is currently occupied by the owner.

7.4 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

Ms. Sally Rogers, a public records clerk with San Juan County, responded to a public records request on October 11, 20017, for records of storage tanks and hazardous material responses to the subject property and adjacent properties. She stated that a permit for fuel delivery was found for the subject property, but no records of tanks. No other records were available for any of the properties.

7.5 INTERVIEWS WITH OTHERS

No other interviews were conducted as part of the ESA process.

8.0 FINDINGS

The subject property was first developed as a shipyard prior to 1941 with anecdotal evidence suggesting operation beginning in 1910. The property has remained a shipyard since development. Minor changes to structures at the property have been made over time. Adjacent properties have historically been primarily marina/commercial/industrial.

A vapor encroachment condition (VEC) at the subject property can be ruled out since no contaminated sites are located within the area of concern surrounding the subject property.

This Phase I ESA revealed evidence of several recognized environmental conditions at the subject property.

- The subject property has had several permit violations of the NPDES Boatyard General Permit including benchmark exceedances for copper, zinc, lead and total suspended solids. Sediments near the discharge points have the potential for elevated levels of metals.
- Sediment samples collected in the aquatic area northeast of the subject property exceeded the screening level for TBT. Sediments throughout the aquatic areas of the site may have elevated levels of TBT.
- One underground storage tank was formerly located in the field south of the oil storage building. The tank was used to fuel equipment at the site in the past. The tank was removed in the 1980's, but no information is available regarding the condition of the tank or soil at the time of removal. It is unknown if any contamination resulted from the use of the tank.
- A small dump site was identified north of the oil storage building. Various de-minimis waste was noted, along with a large damaged battery. Based on the condition of the battery, there is a potential that hazardous substances may have been released in the area of the dump.
- A floor drain was identified at the northwest corner of the machine shop building. Anecdotal evidence suggests that the floor drain may lead to an underground tank or drum. The destination of the contents of the tank/drum

are unclear. Hazardous substances used in the machine shop may have made their way to the floor drain in the past, and may have infiltrated into the ground beneath the machine shop depending on the setup of the floor drain.

- The laydown area, marine railways, and stormwater pond are all potential areas of concern for tributyltins and other heavy metals in soil/sediments due to their use for maintenance/repair of boats. Depending on the current and historic use of the site, additional hazardous chemicals may be of concern for these areas including solvents and petroleum products.

9.0 OPINION

Based on the results of the Phase I ESA documented in this report, further investigation regarding previous use of the subject property is recommended.

Samples collected as part of the NPDES Boatyard General Permit and Ecology sediment investigations have concluded that TBT and other heavy metals are present in sediment in the aquatic portion of the site.

Soil in several upland areas of the site (laydown area, marine railways, and stormwater detention pond) also have the potential to be contaminated with TBT and other heavy metals, along with solvents and petroleum products. The potential for contamination extends from 100+ years of use as a shipyard, many of which were prior to any environmental regulations requiring safeguards for soil at the site.

Soil in several other areas of the site (former UST location, dump site, and shop floor drain) have the potential to be contaminated with hazardous substances including petroleum products from historic use and/or handling of these products in these areas.

Further investigation of the soil and sediments at the site is needed to confirm the existence and extent of contamination.

10.0 CONCLUSIONS

A Phase I ESA was conducted in general conformance with the scope and limitations of ASTM Designation E 1527-13 for the property located at 1293 Turn Point Road in the City of Friday Harbor, Washington. Any exceptions to, or deletions from, this practice are described in Section 11 of this report.

As per ASTM 2600-10, a Tier I Vapor Encroachment Screening was conducted in conjunction with this ESA. Based on the Tier I review, contaminant vapor encroachment upon the subject property can be ruled out.

This Phase I ESA revealed evidence of several recognized environmental conditions at the subject property.

- The subject property has had several permit violations of the NPDES Boatyard General Permit including benchmark exceedances for copper, zinc, lead and total suspended solids.
- Sediment samples collected in the aquatic area northeast of the subject property exceeded the screening level for tributyltin (TBT).
- One underground storage tank was formerly located in the field south of the oil storage building. It is unknown if any soil contamination resulted from the use of the tank.
- A small dump site was identified north of the oil storage building. There is a potential that hazardous substances may have been released in the area of the dump.
- A floor drain was identified at the northwest corner of the machine shop building. Hazardous substances used in the machine shop may have made their way to the floor drain in the past, and may have infiltrated into the ground beneath the machine shop depending on the setup/terminus of the floor drain.
- The laydown area, marine railways, and stormwater detention pond are all potential areas of concern for tributyltins and other heavy metals in soil/sediments due to their use for maintenance/repair of boats. Depending on the current and historic use of the site, additional hazardous chemicals may be of concern for these areas including solvents and petroleum products.

11.0 DEVIATIONS

There were no significant deviations from the standard practice for Phase I ESAs as presented in ASTM Designation E 1527-13.

12.0 ADDITIONAL SERVICES

No additional services were rendered as part of this ESA.

13.0 REFERENCES

American Society for Testing and Materials (ASTM). 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Designation: E 1527-13). 47 pp.

American Society for Testing and Materials (ASTM). 2010. Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions (Designation: E 2600-10). 33 pp.

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Public Works Department, San Juan County. Locations. Available online at <http:// www.sanjuanco.com/publicworks/Contact-Info.aspx>. Accessed October 4, 2017.

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U.S. Geological Survey (USGS). 2014. Friday Harbor, WA Quadrangle. 7.5 minute series topographic map.

U.S. Geological Survey (USGS). 2014. Shaw Island, WA Quadrangle. 7.5 minute series topographic map.

Washington Department of Ecology. 2000. Dangerous Waste Regulations. Chapter 173-303 WAC.

Washington Department of Ecology. 2001. Concentrations of Selected Chemicals in Sediments from Harbors in the San Juan Islands.

Washington Department of Ecology. 2007. Model Toxics Control Act Cleanup Regulations. Chapter 173-340 WAC.

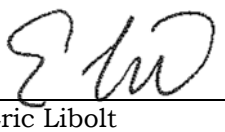
Washington State Department of Natural Resources, Division of Geology and Earth Resources (WSDNR). 2016. Earth Resource Permit Locations. <http://www.dnr.wa.gov/geologyportal>. Accessed September 29, 2017.

Washington State Department of Natural Resources, Division of Geology and Earth Resources (WSNDR). November 2016. Washington Geologic Information Portal. <https://geologyportal.dnr.wa.gov/>. Accessed October 4, 2017.

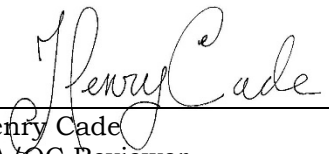
14.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental professional as defined in §312.10 of 40 CFR 312.

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Eric Libolt
Project Manager



Henry Cade
QA/QC Reviewer

15.0 QUALIFICATIONS

Whatcom Environmental Services (Whatcom Environmental) provides a wide range of environmental site assessment and remediation services to commercial, industrial, and municipal clients in Whatcom County. Whatcom Environmental was founded in 1997 and is owned and operated by Mr. Harold Cashman and Mr. Eric Libolt.

Whatcom Environmental assists clients with remedial investigation/feasibility study project management for sites regulated by the state Model Toxics Control Act (MTCA) and the federal Resource Conservation and Recovery Act (RCRA). Whatcom Environmental performs site assessments at Underground Storage Tank (UST) sites and has successfully closed a number of UST systems, including systems that have been out of service for several years. Whatcom Environmental has prepared and negotiated numerous site investigation, remediation, and closure plans with the Washington Department of Ecology. Whatcom Environmental also provides environmental site assessment services to lending institutions and municipal clients in Whatcom County.

Mr. Cashman received his Master's degree in Geology from Western Washington University in 1991. Mr. Cashman is a Professional Geologist registered in the State of Washington (Registered Geologist #341). He has worked in Whatcom County as a geologist/environmental consultant for over ten years. Mr. Cashman has performed a variety of work in Whatcom County including environmental site assessments, closure of RCRA regulated surface impoundments, delineation of dissolved hydrocarbon plumes, and preparation of MTCA Independent Remedial Action Reports. In performing his RCRA/MTCA project work, he has closely interacted with federal and state regulatory agencies. Mr. Cashman's resume is included in Appendix E.

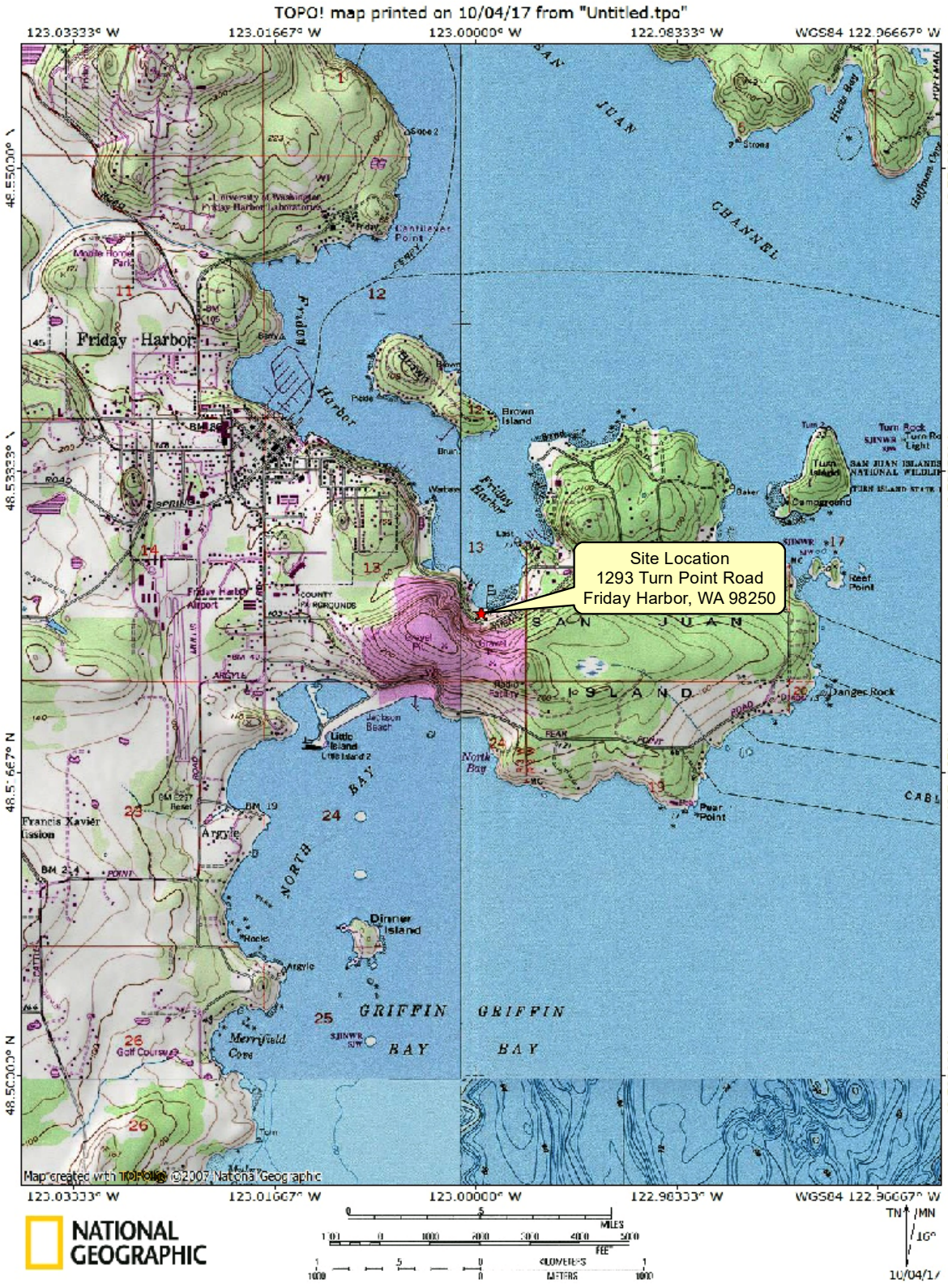
Mr. Eric Libolt his Bachelor's degree in Civil Engineering from the University of Washington in 1998. Mr. Libolt is a Professional Engineer registered in the State of Washington (Professional Engineer #51580). He has worked in Whatcom County as an environmental consultant for over ten years. Mr. Libolt has performed a variety of work in Whatcom County including environmental site assessments, closure of RCRA regulated surface impoundments, delineation of dissolved hydrocarbon plumes, and preparation of MTCA Independent Remedial Action Reports. In performing his

RCRA/MTCA project work, he has closely interacted with federal and state regulatory agencies. Mr. Libolt's resume is included in Appendix E.

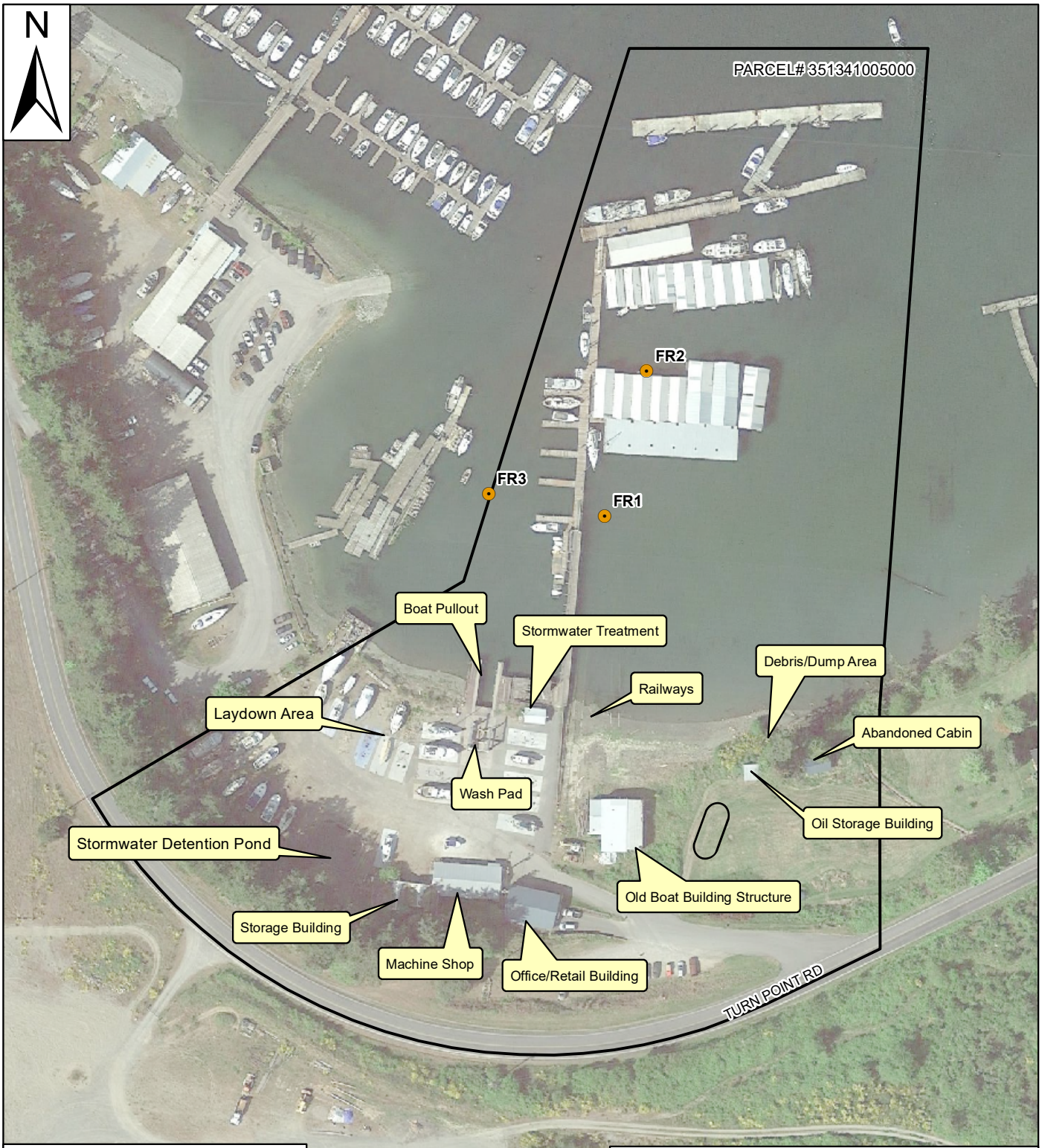
Ms. Aimee Schimelfenig received her Bachelor's degree in Environmental Science from Huxley College of the Environment at Western Washington University in 2013. She began working at Whatcom Environmental in the spring of 2013. Her projects mainly involve performing environmental site assessments and management of site remediation projects in accordance with MTCA. Ms. Schimelfenig's resume is included in Appendix E.

Mr. Henry Cade received his Bachelor's degree in Environmental Science from Huxley Collect of the Environment at Western Washington University in 2016. He began working at Whatcom Environmental in the spring of 2016. His projects mainly involved assisting with environmental site assessments and management of sampling data. Mr. Cade's resume is included in Appendix E.

Mr. Cashman, Mr. Libolt, Ms. Schimelfenig, and Mr. Cade have completed 40 hours of Hazardous Waste and Emergency Response Training in accordance with 29 CFR 1910.120. Mr. Cashman is a registered Washington State Underground Storage Tank Site Assessor.



Prepared for:	Prepared by:	Site Location Map	
PORT OF FRIDAY HARBOR	whatcom ENVIRONMENTAL	Jensen's Shipyard Phase I ESA 10/04/17	Figure 1



1997 Sediment Sample Locations

Subject Property

Former UST Location

0 70 140 210 280 Feet

1 inch = 140 feet

All data are approximate and should be used for relative location reference only. 2015 aerial photograph (GoogleEarth).

Subject Property Site Map

Prepared for: PORT OF FRIDAY HARBOR

Prepared by: whatcom ENVIRONMENTAL

1293 Turn Point Road
Friday Harbor, WA 98250

Jensen's Shipyard
Phase I ESA
11/06/17

Figure 2

Photo 1. A view looking east at the oil storage building located at the northeast corner of the upland portion of the property.

Photo 2. A view of the diesel, gasoline, and oil storage in the northern portion of the oil storage building.

Photo 3. A view of a used/waste oil drum and AST in the southern portion of the oil storage building.

Photo 4. A view of a portion of the dumping area located north of the oil storage building.

Prepared for:	Prepared by:			
PORT OF FRIDAY HARBOR	whatcom ENVIRONMENTAL	Jensen Shipyard Phase I ESA	10/02/2017	**Photograph Log**

Photo 5. A view looking north at the old boat building structure. The building's condition made it unsafe to enter.

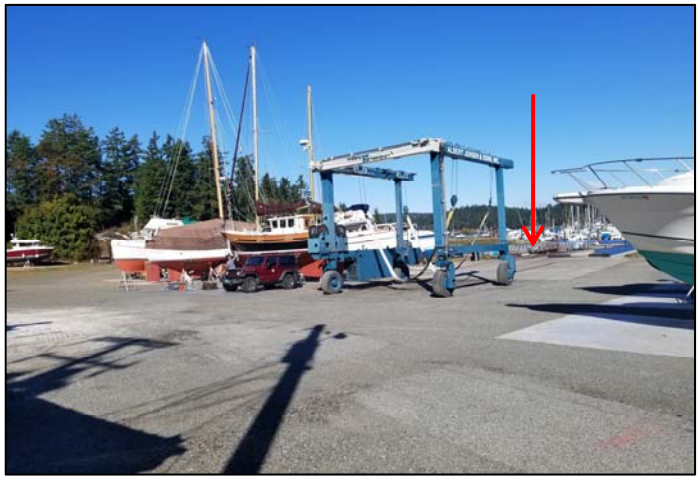


Photo 6. A view of the boat pull out and wash pad (indicated by arrow), as well as portions of the laydown area.

Photo 7. A view of a portion of the laydown area with tarps shown. The boat pull out is visible behind the boats.

Photo 8. A view looking north along the dock. The wash water treatment building is visible in the distance (indicated by arrow).

Photo 9. A view looking south at the office/retail building and machine shop building.

Photo 10. A view looking into the machine shop building. Several chemical containers were observed in the building.

Photo 11. A view of the drain hole located at the northwest corner of the machine shop (indicated by arrow).

Photo 12. A view looking west across the stormwater detention and evaporation pond.

APPENDIX A

User Provided Information

Whatcom Environmental Services
Phase I ESA User Information Request Form

Completed By (User): *Todd Nicholson*

Date: *10/30/2017*

Property Name: *Jensen's Shipyard*

Tax Parcel Numbers:	*351341005000*
Address:	*1293 Turn Point Road, Friday Harbor, WA*
Property Owner Name:	*Mike Ahrenius*
Owner Phone/E-mail:	*(360) 378-4343; mike@jensenshipyard.com*
Occupant Name:	*See Owner*
Occupant Phone/E-mail:	*See Owner*
Site Manager Name:	*See Owner*
Site Manager Phone/E-mail:	*See Owner*
Property Zoning	*Shore Public Accommodation*

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to Whatcom Environmental Services. *Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.*

1. Is the user aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?*

   No

2. Is the user aware of any activity and land use limitations (AULs), such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law? *

   No

3. Does the user have any specialized knowledge or experience related to the property or nearby properties?

   No

4. Is the user aware of any issues at the property that may reduce the value of the property?

   No

5. Is the user aware of commonly known or reasonably ascertainable information about the property that would help Whatcom Environmental Services to identify conditions indicative of releases or threatened releases? For example, is the user aware of:

a. the past uses of the property?

Old floor drain in shop; decommissioned underground gas tank; debris dumping on shoreline; boat bottom painting & pressure washing.

b. specific chemicals that are present or once were present at the property?

Gas, oil, solvents, anti-fouling paint

c. spills or other chemical releases that have taken place at the property?

None known

d. environmental cleanups that have taken place at the property?

None known

e. any other helpful information?

No

6. Based on the user's knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

Likely to have metals from anti-fouling paint in the gravel areas

Other information:

1. Has a chain of title back to 1940 or time of first development (whichever is earlier) been ordered? If so, when will it be available?

Not available, will be available on 11/3/17

2. Other comments on the subject property:

None

3. Other comments on the scope of the ESA:

None

* The user should either (1) engage a title company or title professional to undertake a review of these records, or (2) negotiate such an engagement as an addition to the scope of work to be performed by Whatcom Environmental Services.

Whatcom Environmental Services
Phase I ESA Vapor Encroachment Screening Request Form

Completed By (User): *Todd Nicholson*

Date: *10/30/2017*

Property Name: *Jensen's Shipyard*

Section 1

1. Are there any building/structures on the property? (If yes, list type – e.g. multifamily residential, office, warehouse, retail, etc.)

   Yes, office & shop space, retail, marina & haul out

2. Will all of the current building/structures on the property be demolished?

   No, potentially demolish old boat builder shed

3. Will buildings/structures be constructed on the property in the future? (If yes, list type.)

   Yes, potentially a new maintenance building

4. Does/will a gasoline station or dry cleaner operate anywhere on the property?

   No

5. Are hazardous chemicals used in relatively large quantities on the property? (If yes, describe.)

   No

6. Are the current or proposed operations on the property OSHA regulated?

   Yes

7. Are there any existing or proposed underground storage tanks (USTs) or above ground storage tanks (ASTs)?

   No

Only complete Section 2 if you answered 'Yes' to question #1 and 'No' to #2, or if you answered 'Yes' to #3.

Section 2

8. If buildings exist or are proposed, do/will they have elevators?

   No

9. Type of level below grade (existing or proposed)? (e.g. basement, crawl space, parking garage, multi-level, slab on grade, etc.)

   None

10. Is there ventilation in the level below grade?

    No

11. Are there sump pumps, floor drains, or trenches (existing or proposed)?

    One floor drain in old shop

12. Is there a radon or methane mitigation system installed?

    No

13. Type of heating system (existing or proposed)?

    Electric

14. Type of fuel energy (existing or proposed)?

    Electric

15. Have any tenants ever complained about odors in the building or experienced health-related problems that may have been associated with the building? (If yes, explain)

    No

16. Are there any sensitive receptors that occupy or will occupy the property? (e.g. children, elderly, people in poor health, etc.)

    No

CLTA CHAIN OF TITLE

Issued By:

CHICAGO TITLE INSURANCE COMPANY

Guarantee Number:

245397515

SUBJECT TO THE EXCLUSIONS FROM COVERAGE, THE LIMITS OF LIABILITY AND THE CONDITIONS AND STIPULATIONS OF THIS GUARANTEE,

CHICAGO TITLE INSURANCE COMPANY
a corporation, herein called the Company

GUARANTEES

the Assured named in Schedule A against actual monetary loss or damage not exceeding the liability amount stated in Schedule A, which the Assured shall sustain by reason of any incorrectness in the assurances set forth in Schedule A.

Chicago Title Insurance Company

By:

President

Attest:

Secretary

Chicago Title Company of Washington
315 Court Street, PO Box 790
Friday Harbor, WA 98250

Countersigned By:

Authorized Officer or Agent

ISSUING OFFICE:
Title Officer: Josh Kollmar Chicago Title Company of Washington 315 Court Street, PO Box 790 Friday Harbor, WA 98250 Phone: 360-752-6537 Fax: 866-465-1972 Main Phone: (360)378-2126 Email: Josh.Kollmar@titlegroup.fntg.com

SCHEDULE A

Liability	Premium	Tax
$50,000.00	$350.00	$29.05

1. Name of Assured: Port of Friday Harbor

2. Date of Guarantee: November 1, 2017 at 08:00 AM

The assurances referred to on the face page are:

That, according to those public records which, under the recording laws, impart constructive notice of matters relating to the interest, if any, which was conveyed to

Albert Jensen & Sons, Inc.

pursuant to a Statutory Warranty Deed

in and to the land described as follows:

That portion of Government Lot 6 and the Southeast quarter of the Southeast quarter of Section 13, Township 35 North, Range 3 West, in San Juan County, Washington, lying between two lines, the Easterly line of said tract being described as follows:

Beginning at the point of the East margin of the County Road which is 101.27 feet North and 100.39 feet East of the Southwest corner of said Government Lot 6; thence North 62°15' East 260 feet to the meander line; thence South 60° East along the meander line 152 feet; thence North 71°30' East 401 feet to the initial point of Easterly line of this description; thence due South to the North margin of County Road and the terminus of the Easterly line; the Westerly line of the said tract being described as follows:

Beginning at the point of North side and County Road marked by a 1 inch iron rod driven 6 feet in the ground around which has been driven 1 ½ inch by 3 feet iron pipe projecting about a foot above the ground and which point is 1188.4 feet South and 1244.3 feet West of the quarter section corner between said Section 13 and Section 18, Township 35 North, Range 2 West, W.M., thence North 59°31' East along the old fence line to the Northerly margin of said Government Lot 6;

Except County Roads;

Only the following matters appear in such records subsequent to July 23, 1948:

1. Statutory Warranty Deed recorded under Auditor's File No. 38956

2. Statutory Warranty Deed recorded under Auditor's File No. 51523

3. Quit Claim Deed recorded under Auditor's File No. 69691

SCHEDULE A
(continued)

4. Quit Claim Deed recorded under Auditor's File No. 69692

This Guarantee does not cover taxes, assessments, and matters related thereto except to the extent they are shown herein.

END OF SCHEDULE A

SCHEDULE OF EXCLUSIONS FROM COVERAGE OF THIS GUARANTEE

1. Except to the extent that specific assurances are provided in Schedule A of this Guarantee, the Company assumes no liability for loss or damage by reason of the following:
   (a) Defects, liens, encumbrances, adverse claims or other matters against the title, whether or not shown by the public records.
   (b) (1) Taxes or assessments of any taxing authority that levies taxes or assessments on real property; or (2) Proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not the matters excluded under (1) or (2) are shown by the records of the taxing authority or by the public records.
   (c) (1) Unpatented mining claims; (2) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (3) water rights, claims or title to water, whether or not the matters excluded under (1), (2) or (3) are shown by the public records.
2. Notwithstanding any specific assurances which are provided in Schedule A of this Guarantee, the Company assumes no liability for loss or damage by reason of the following:
   (a) Defects, liens, encumbrances, adverse claims or other matters affecting the title to any property beyond the lines of the land expressly described in the description set forth in Schedule (A) of this Guarantee, or title to streets, roads, avenues, lanes, ways or waterways to which such land abuts, or the right to maintain therein vaults, tunnels, ramps or any structure or improvements; or any rights or easements therein, unless such property, rights or easements are expressly and specifically set forth in said description.
   (b) Defects, liens, encumbrances, adverse claims or other matters, whether or not shown by the public records; (1) which are created, suffered, assumed or agreed to by one or more of the Assureds; (2) which result in no loss to the Assured; or (3) which do not result in the invalidity or potential invalidity of any judicial or non-judicial proceeding which is within the scope and purpose of the assurances provided.
   (c) The identity of any party shown or referred to in Schedule A.
   (d) The validity, legal effect or priority of any matter shown or referred to in this Guarantee.

GUARANTEE CONDITIONS AND STIPULATIONS

1. DEFINITION OF TERMS

The following terms when used in the Guarantee mean:

(a) the "Assured": the party or parties named as the Assured in this Guarantee, or on a supplemental writing executed by the Company.

(b) "land": the land described or referred to in Schedule A and improvements affixed thereto which by law constitute real property. The term "land" does not include any property beyond the lines of the area described or referred to in Schedule A, nor any right, title, interest, estate or easement in abutting streets, roads, avenues, alleys, lanes, ways or waterways.

(c) "mortgage": mortgage, deed of trust, trust deed, or other security instrument.

(d) "public records": records established under state statutes at Date of Guarantee for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without knowledge.

(e) "date": the effective date.

2. NOTICE OF CLAIM TO BE GIVEN BY ASSURED CLAIMANT

An Assured shall notify the Company promptly in writing in case knowledge shall come to an Assured hereunder of any claim of title or interest which is adverse to the title to the estate or interest, as stated herein, and which might cause loss or damage for which the Company may be liable by virtue of this Guarantee. If prompt notice shall not be given to the Company, then all liability of the Company shall terminate with regard to the matter or matters for which prompt notice is required; provided, however, that failure to notify the Company shall in no case prejudice the rights of any Assured under this Guarantee unless the Company shall be prejudiced by the failure and then only to the extent of the prejudice.

3. NO DUTY TO DEFEND OR PROSECUTE

The Company shall have no duty to defend or prosecute any action or proceeding to which the Assured is a party, notwithstanding the nature of any allegation in such action or proceeding.

4. COMPANY'S OPTION TO DEFEND OR PROSECUTE ACTIONS; DUTY OF ASSURED CLAIMANT TO COOPERATE

Even though the Company has no duty to defend or prosecute as set forth in Paragraph 3 above:

(a) The Company shall have the right, at its sole option and cost, to institute and prosecute any action or proceeding, interpose a defense, as limited in (b), or to do any other act which in its opinion may be necessary or desirable to establish the title to the estate or interest as stated herein, or to establish the lien rights of the Assured, or to prevent or reduce loss or damage to the Assured. The Company may take any appropriate action under the terms of this Guarantee, whether or not it shall be liable hereunder, and shall not thereby concede liability or waive any provision of this Guarantee. If the Company shall exercise its rights under this paragraph, it shall do so diligently.

(b) If the Company elects to exercise its options as stated in Paragraph 4(a) the Company shall have the right to select counsel of its choice (subject to the right of such Assured to object for reasonable cause) to represent the Assured and shall not be liable for and will not pay the fees of any other counsel, nor will the Company pay any fees, costs or expenses incurred by an Assured in the defense of those causes of action which allege matters not covered by this Guarantee.

(c) Whenever the Company shall have brought an action or interposed a defense as permitted by the provisions of this Guarantee, the Company may pursue any litigation to final determination by a court of competent jurisdiction and expressly reserves the right, in its sole discretion, to appeal from an adverse judgment or order.

(d) In all cases where this Guarantee permits the Company to prosecute or provide for the defense of any action or proceeding, an Assured shall secure to the Company the right to so prosecute or provide for the defense of any action or proceeding, and all appeals therein, and permit the Company to use, at its option, the name of such Assured for this purpose. Whenever requested by the Company, an Assured, at the Company's expense, shall give the Company all reasonable aid in any action or proceeding, securing evidence, obtaining witnesses, prosecuting or defending the action or lawful act which in the opinion of the Company may be necessary or desirable to establish the title to the estate or interest as stated herein, or to establish the lien rights of the Assured. If the Company is prejudiced by the failure of the Assured to furnish the required cooperation, the Company's obligations to the Assured under the Guarantee shall terminate.

5. PROOF OF LOSS OR DAMAGE

In addition to and after the notices required under Section 2 of these Conditions and Stipulations have been provided to the Company, a proof of loss or damage signed and sworn to by the Assured shall be furnished to the Company within ninety (90) days after the Assured shall ascertain the facts giving rise to the loss or damage. The proof of loss or damage shall describe the matters covered by this Guarantee which constitute the basis of loss or damage and shall state, to the extent possible, the basis of calculating the amount of the loss or damage. If the Company is prejudiced by the failure of the Assured to provide the required proof of loss or damage, the Company's obligation to such assured under the Guarantee shall terminate. In addition, the Assured may reasonably be required to submit to examination under oath by any authorized representative of the Company and shall produce for examination, inspection and copying, at such reasonable times and places as may be designated by any authorized representative of the Company, all records, books, ledgers, checks, correspondence and memoranda, whether bearing a date before or after Date of Guarantee, which reasonably pertain to the loss or damage. Further, if requested by any authorized representative of the Company, the Assured shall grant its permission, in writing, for any authorized representative of the Company to examine, inspect and copy all records, books, ledgers, checks, correspondence and memoranda in the custody or control of a third party, which reasonably pertain to the loss or damage. All information designated as confidential by the Assured provided to the Company pursuant to this Section shall not be disclosed to others unless, in the reasonable judgment of the Company, it is necessary in the administration of the claim. Failure of the Assured to submit for examination under oath, produce other reasonably requested information or grant permission to secure reasonably necessary information from third parties as required in the above paragraph, unless prohibited by law or governmental regulation, shall terminate any liability of the Company under this Guarantee to the Assured for that claim.

6. OPTIONS TO PAY OR OTHERWISE SETTLE CLAIMS: TERMINATION OF LIABILITY

In case of a claim under this Guarantee, the Company shall have the following additional options:

(a) To Pay or Tender Payment of the Amount of Liability or to Purchase the Indebtedness.

The Company shall have the option to pay or settle or compromise for or in the name of the Assured any claim which could result in loss to the Assured within the coverage of this Guarantee, or to pay the full amount of this Guarantee or, if this Guarantee is issued for the benefit of a holder of a mortgage or a lienholder, the Company shall have the option to purchase the indebtedness secured by said mortgage or said lien for the amount owing thereon, together with any costs, reasonable attorneys' fees and expenses incurred by the Assured claimant which were authorized by the Company up to the time of purchase.

Such purchase, payment or tender of payment of the full amount of the Guarantee shall terminate all liability of the Company hereunder. In the event after notice of claim has been given to the Company by the Assured the Company offers to purchase said indebtedness, the owner of such indebtedness shall transfer and assign said indebtedness, together with any collateral security, to the Company upon payment of the purchase price.

Upon the exercise by the Company of the option provided for in Paragraph (a) the Company's obligation to the Assured under this Guarantee for the claimed loss or damage, other than to make the payment required in that paragraph, shall terminate, including any obligation to continue the defense or prosecution of any litigation for which the Company has exercised its options under Paragraph 4, and the Guarantee shall be surrendered to the Company for cancellation.

(b) To Pay or Otherwise Settle With Parties Other Than the Assured or With the Assured Claimant.

To pay or otherwise settle with other parties for or in the name of an Assured claimant any claim assured against under this Guarantee, together with any costs, attorneys' fees and expenses incurred by the Assured claimant which were authorized by the Company up to the time of payment and which the Company is obligated to pay.

Upon the exercise by the Company of the option provided for in Paragraph (b) the Company's obligation to the Assured under this Guarantee for the claimed loss or damage, other than to make the payment required in that paragraph, shall terminate, including any obligation to continue the defense or prosecution of any litigation for which the Company has exercised its options under Paragraph 4.

7. DETERMINATION AND EXTENT OF LIABILITY

This Guarantee is a contract of indemnity against actual monetary loss or damage sustained or incurred by the Assured claimant who has suffered loss or damage by reason of reliance upon the assurances set forth in this Guarantee and only to the extent herein described, and subject to the Exclusions From Coverage of This Guarantee.

The liability of the Company under this Guarantee to the Assured shall not exceed the least of:

(a) the amount of liability stated in Schedule A or in Part 2;

(b) the amount of the unpaid principal indebtedness secured by the mortgage of an Assured mortgagee, as limited or provided under Section 6 of these Conditions and Stipulations or as reduced under Section 9 of these Conditions and Stipulations, at the time the loss or damage assured against by this Guarantee occurs, together with interest thereon; or

(c) the difference between the value of the estate or interest covered hereby as stated herein and the value of the estate or interest subject to any defect, lien or encumbrance assured against by this Guarantee.

8. LIMITATION OF LIABILITY

(a) If the Company establishes the title, or removes the alleged defect, lien or encumbrance, or cures any other matter assured against by this Guarantee in a reasonably diligent manner by any method, including litigation and the completion of any appeals therefrom, it shall have fully performed its obligations with respect to that matter and shall not be liable for any loss or damage caused thereby.

(b) In the event of any litigation by the Company or with the Company's consent, the Company shall have no liability for loss or damage until there has been a final determination by a court of competent jurisdiction, and disposition of all appeals therefrom, adverse to the title, as stated herein.

(c) The Company shall not be liable for loss or damage to any Assured for liability voluntarily assumed by the Assured in settling any claim or suit without the prior written consent of the Company.

9. REDUCTION OF LIABILITY OR TERMINATION OF LIABILITY

All payments under this Guarantee, except payments made for costs, attorneys' fees and expenses pursuant to Paragraph 4 shall reduce the amount of liability pro tanto.

(continued)

10. PAYMENT OF LOSS

(a) No payment shall be made without producing this Guarantee for endorsement of the payment unless the Guarantee has been lost or destroyed, in which case proof of loss or destruction shall be furnished to the satisfaction of the Company.

(b) When liability and the extent of loss or damage has been definitely fixed in accordance with these Conditions and Stipulations, the loss or damage shall be payable within thirty (30) days thereafter.

11. SUBROGATION UPON PAYMENT OR SETTLEMENT

Whenever the Company shall have settled and paid a claim under this Guarantee, all right of subrogation shall vest in the Company unaffected by any act of the Assured claimant.

The Company shall be subrogated to and be entitled to all rights and remedies which the Assured would have had against any person or property in respect to the claim had this Guarantee not been issued. If requested by the Company, the Assured shall transfer to the Company all rights and remedies against any person or property necessary in order to perfect this right of subrogation. The Assured shall permit the Company to sue, compromise or settle in the name of the Assured and to use the name of the Assured in any transaction or litigation involving these rights or remedies.

If a payment on account of a claim does not fully cover the loss of the Assured the Company shall be subrogated to all rights and remedies of the Assured after the Assured shall have recovered its principal, interest, and costs of collection.

12. ARBITRATION

Unless prohibited by applicable law, either the Company or the Assured may demand arbitration pursuant to the Title Insurance Arbitration Rules of the American Land Title Association.

Arbitrable matters may include, but are not limited to, any controversy or claim between the Company and the Assured arising out of or relating to this Guarantee, any service of the Company in connection with its issuance or the breach of a Guarantee provision or other obligation. All arbitrable matters when the Amount of Liability is One Million And No/100 Dollars ($1,000,000) or less shall be arbitrated at the option of either the Company or the Assured. All arbitrable matters when the amount of liability is in excess of One Million And No/100 Dollars ($1,000,000) shall be arbitrated only when agreed to by both the Company and the Assured. The Rules in effect at Date of Guarantee shall be binding upon the parties. The award may include attorneys' fees only if the laws of the state in which the land is located permits a court to award attorneys' fees to a prevailing party. Judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

The law of the situs of the land shall apply to an arbitration under the Title Insurance Arbitration Rules.

A copy of the Rules may be obtained from the Company upon request.

13. LIABILITY LIMITED TO THIS GUARANTEE; GUARANTEE ENTIRE CONTRACT

(a) This Guarantee together with all endorsements, if any, attached hereto by the Company is the entire Guarantee and contract between the Assured and the Company. In interpreting any provision of this Guarantee, this Guarantee shall be construed as a whole.

(b) Any claim of loss or damage, whether or not based on negligence, or any action asserting such claim, shall be restricted to this Guarantee.

(c) No amendment of or endorsement to this Guarantee can be made except by a writing endorsed hereon or attached hereto signed by either the President, a Vice President, the Secretary, an Assistant Secretary, or validating officer or authorized signatory of the Company.

14. NOTICES, WHERE SENT

All notices required to be given the Company and any statement in writing required to be furnished the Company shall include the number of this Guarantee and shall be addressed to the Company at:

Chicago Title Insurance Company
P.O. Box 45023
Jacksonville, FL 32232-5023
Attn: Claims Administration

END OF CONDITIONS AND STIPULATIONS

69691

QUIT CLAIM DEED

The grantor herein Albert Jensen & Sons, Inc.

for the consideration of one dollar

and also of benefits to accrue to it by reason of improving or establishing a public road through or along its property and which is hereafter described, convey s , release s and quit claim s to the County of San Juan, State of Washington, for use of the Public forever, as a public road and highway, all interest in the following described real estate, viz:

A strip of land 20 feet in width, lying 20 feet to the right of the following described line:
Beginning at a point 1550 feet South and 510 feet East of the ¼ section corner between Section 13, T. 35 N., R. 3 W. W.M. and Section 18, T. 35 N., R. 2 W. W.M.; thence S 64° 05' W 127 feet; thence along a 500 foot radius curve to the right, whose long chord bears N 63° 10½' W 795.91 feet, an arc distance of 765 feet more or less; including the existing county road right of way.

Unofficial Copy

When Recorded at the Request of
Bd of County Commissioners
SEP 10 1968
A.D., 19
at 2:00 P.M.
and recorded in vol. 51 of
Deeds page 667
MARJORIE C. BERGMAN, Auditor
San Juan County, Wash.
By Vera Jensen
Deputy

situated in the County of San Juan, State of Washington.

Dated this 21st day June, A.D., 19 68 ALBERT JENSEN & SONS, INC.

by Nourdine Jensen Pres.

ALBERT JENSEN & SONS, INC. CORPORATE SEAL 1945

STATE OF WASHINGTON)
) ss.
COUNTY OF SAN JUAN)

On the 21st day of June, 19 68 before me, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally came Nourdine Jensen, President of Albert Jensen & Sons, Inc.

to me known to be the individual described in and he executed the within instrument and acknowledged to me that he signed or sealed the same as his free and voluntary act and deed for the uses and purposes therein mentioned, and that he is authorized to execute this instrument.

Witness my hand and official seal the day and year first above written.

Allan F. Carter

Notary Public in and for the State of Washington, residing at Friday Harbor

667

69692

QUIT CLAIM DEED

The grantor herein Julia J. Jensen, a widow,

for the consideration of one dollar

and also of benefits to accrue to her by reason of improving or establishing a public road through or along her property and which is hereafter described, convey ... , release ... and quit claim to the County of San Juan, State of Washington, for use of the Public forever, as a public road and highway, all interest in the following described real estate, viz:

A strip of land 60 feet in width lying 20 feet on the right and 40 feet on the left of the following described line:
Beginning at a point on the east line of Section 13, T. 35 N., R. 3 W. W.M., said point being S 0° 05' 30" W 1104.97 feet of the east ¼ corner of said Sec. 13, and running thence S 64° 05' W. 459.59 feet; thence along a 500 foot radius curve to the right, whose long chord bears N 63° 10' 30" W. 795.91 feet, an arc distance of 190 feet, which includes the existing county right of way. 677.59 proj.

Filed for Record at the Request of
Bd. of County Commissioners
SEP 13 1968
at 45 min. past 2 P.M.
and recorded in Vol. 51
Deeds page 568
MARJORIE C. BERGMAN, Auditor
San Juan County, Wash.
By Vera Jensen Deputy

situated in the county of San Juan, State of Washington.

Dated this 21st day June , A.D., 1968.

Julia J. Jensen

STATE OF WASHINGTON)
) ss.
COUNTY OF SAN JUAN)

On the 21st day of June , 19 68 before me, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally came Julia J. Jensen

to me known to be the individual ... described in and she executed the within instrument and acknowledged to me that she signed or sealed the same as her free and voluntary act and deed for the uses and purposes therein mentioned.

Witness my hand and official seal the day and year first above written.

Alan F. Carter

Notary Public in and for the State of Washington, residing at Friday Harbor

Vol. 51 Page 568

VOL. 31 PAGE 511

Statutory Warranty Deed

INDEXED

Filed for Record at the Request of F. A. Genest
DEC 11 1959
A.D., 19
at 10 min. past 4 P.M
and recorded in vol. 31 of Deeds page 511
MARJORIE C. BERGMAN, Auditor
SAN JUAN COUNTY, WASH.
By V. Pearson Deputy

LAWYERS TITLE INSURANCE CORPORATION
1109 2nd AVE.
SEATTLE, WASHINGTON

Mail to

Send Tax Statement to

51523

Form L-12

Statutory Warranty Deed

SAN JUAN COUNTY WASH.
REAL ESTATE EXCISE TAX
PAID
DEC 11 1959
AMOUNT PAID $ None
COUNTY TREASURER
By Deputy

THE GRANTOR JULIA JENSEN, a widow,

for and in consideration of One and no/100 Dollars ($1.00) and other good and valuable consideration

in hand paid, conveys and warrants to Albert Jensen & Sons, Inc.

the following described real estate, situated in the County of San Juan, State of Washington:

A parcel of land situate in Government Lot 6 of Section 13, Township 35 North, Range 3 West W. M., described as follows: Commencing at the East margin of the County Road at a point which is North 101.27 feet and East 120.39 feet from the Southwest corner of Government Lot 6 in Section 13, Township 35 North, Range 3 W WM, thence North 62°15' East 260 feet to the meander line, thence South 60° East along meander line 152 feet, thence North 71°30' East 76 feet and thence Easterly and Northerly along meander line 150 feet to initial point of this description and thence along the meander line northerly and easterly 175 feet, thence due South to North line of the County Road, thence westerly along the North line of said County road to a point due South of the initial point, and thence due North to said initial point.

Dated this 10th day of December, 1959

Julia Jensen (SEAL)

(SEAL)

STATE OF WASHINGTON } ss.
County of San Juan

On this 10th day of December, 1959, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Julia Jensen, a widow

to me known to be the individual described in and who executed the foregoing instrument, and acknowledged to me that she signed and sealed this said instrument as her free and voluntary act and deed for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 10th day of December, 1959

Ann A Genest

Notary Public in and for the State of Washington, residing at Friday Harbor.

SAN JUAN COUNTY —

DEEDS VOL. 123

651

PAGE 651

38937 QUIT-CLAIM DEED
Statutory Form

THE GRANTORS W. H. Benson, widower, sole heir of B. W. Benson and Mary H. Benson, his wife, of East Sound in the County of San Juan and State of Washington, for the consideration of $1.00 and other valuable considerations in hand paid, conveys and quit-claims to Marguerite T. Adams, and W. H. Kegley and Ruth T. Kegley, his wife, of the County of San Juan in the State of Washington all interest in the following described Real Estate:

Tract Twenty-five (25), North Beach Acre Tracts, according to the recorded plat thereof on file in the records of San Juan County, Washington,

situated in the County of San Juan, State of Washington.

Dated this 28th day of February, 1948

W. H. Benson

STATE OF WASHINGTON,)
County of San Juan) ss. (INDIVIDUAL ACKNOWLEDGMENT)

I, Margaret Farrow Notary Public in and for the State of Washington, residing at East Sound, do hereby certify that on this 28th day of February, 1948, personally appeared before me W. H. Benson to me known to be the individual described in and who executed the within instrument and acknowledged that he signed and sealed the same as his free and voluntary act and deed for the uses and purposes herein mentioned.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this 28th day of February, 1948.

NOTARIAL SEAL IMPRESSED Margaret Farrow

Notary Public in and for the State of Washington, residing at East Sound in said County.

Filed for record on July 30, 1948, at 1:30 P.M., at request of E. F. Peck.

By Dorothy Taylor Deputy. Marguerite T. Bergman County Auditor.

38958 WARRANTY DEED
(Statutory Form--Individual)

THE GRANTORS...ALBERT JENSEN and JULIA F. JENSEN, husband and wife residing at Friday Harbor, Washington for and in consideration of TEN Dollars in hand paid, convey and warrant to ALBERT JENSEN & SON, Inc. a corporation the grantee the following described real estate

Beginning at a point on the East margin of the County Road which is N. 101.27 feet and East 100.39 feet from the Southwest corner of Gov't. Lot 6 in Section 18, Twp 35 N Rge 3 W WM, thence N 2° 45' East along the South or easterly margin of a right-of-way deeded to San Juan County 250 feet to the Meander Line, thence South 60° East along the Meander Line 152 feet, thence N 71° 30' East 76 feet, thence Easterly and Northerly along the Meander Line 450 feet, thence North to the North margin of County Road, thence West along North Margin of County Road to the place of the beginning, and being a portion of Gov't Lot 6 and of the SE¼ of SE¼ of Sec 18, Twp 35 North Range 3 West WM

This deed shall also operate as a Bill of Sale of all personal property of grantors thereon situate.

situated in the County of San Juan, State of Washington.

Dated June 30th, A. D., 1948.

Signed in presence of

Albert Jensen

Julia F. Jensen

STATE OF WASHINGTON,)
County of San Juan) ss. (INDIVIDUAL ACKNOWLEDGMENT)

I, Elmon A Geneste, Notary Public in and for the State of Washington residing at Friday Harbor do hereby certify that on this 30th day of June, 1948 personally appeared before me Albert Jensen and Julia F. Jensen, husband and wife to me known to be the individuals described in and who executed the within instrument and acknowledged that they signed and sealed the same as their free and voluntary act and deed for the uses and purposes herein mentioned.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this 30th day of June, 1948.

NOTARIAL SEAL IMPRESSED Elmon A Geneste

Notary Public in and for the State of Washington, residing at Friday Harbor in said County.

Filed for record on July 23, 1948, at 11:10 A.M., at request of E. A. Geneste.

By Dorothy Taylor Deputy. Marguerite T. Bergman County Auditor.

38964 QUIT CLAIM DEED

The Grantors Howard A. Crowder and Elizabeth M. Crowder, husband and wife of the City of Kent, county of King state of Washington, for the consideration of Ten ($10.00) dollars, in hand paid, convey and quitclaim to Frank Foster and Selma B. Foster, husband and wife all interest in the following described real estate, situate in the county of San Juan state of Washington:

Blocks 106, 107, 108, 109, 110, 111, 112, 113, 114, and 115; Lots 1 to 6 inclusive 8 to 14 inclusive, 17 to 24, inclusive, in Block 116; Blocks 117, 118, 119, 124; Lots 1 to 7, inclusive, and Lot 9 in Block 121; Lots 1 to 11, inclusive, and Lots 14 and 15 in Block 122, Map of Islandside Division No. 1, Lopez Island, Washington, as per plat thereof of record

APPENDIX B

Regulatory Profile

Jensens Shipyard
1293 Turn Point Rd
Friday Harbor, WA 98250

Inquiry Number: 5062208.2s
September 27, 2017

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1293 TURN POINT RD
FRIDAY HARBOR, WA 98250

COORDINATES

Latitude (North):	48.5255270 - 48° 31' 31.89''
Longitude (West):	122.9992790 - 122° 59' 57.40''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	500053.2
UTM Y (Meters):	5374494.0
Elevation:	16 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	6006532 SHAW ISLAND, WA
Version Date:	2014
Northwest Map:	6004377 FRIDAY HARBOR, WA
Version Date:	2014

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20150818
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1293 TURN POINT RD
FRIDAY HARBOR, WA 98250

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	ALBERT JENSEN & SONS	1293 TURN POINT ROAD	ALLSITES, NPDES		TP
A2	ALBERT JENSEN & SONS	1293 TURN POINT ROAD	FINDS, ECHO		TP
A3	JENSENS SHIPYARD	1293 TURN POINT RD	FINDS		TP
A4		1063 TURN POINT RD	SPILLS	Higher	4, 0.001,
A5		1063 TURN POINT ROAD	ERNS	Higher	4, 0.001,
A6	INLINE MARINE SERVIC	1063 TURN POINT RD	ALLSITES	Higher	4, 0.001,
A7	A1 MARINE SERVICES I	1063 TURN POINT RD	ALLSITES	Higher	4, 0.001,
A8		1063 TURN POINT ROAD	ERNS	Higher	4, 0.001,
A9	A1 MARINE SERVICES I	1063 TURN POINT RD	FINDS	Higher	4, 0.001,
A10		1063 TURN POINT ROAD	ERNS	Higher	4, 0.001,
11	SAN JUAN COMMUNITY H	BETWEEN TURN POINT R	ALLSITES	Lower	1214, 0.230, NW
12	FRIDAY HARBOR SAND &	4434 PEAR POINT RD	ALLSITES	Higher	1396, 0.264, WSW
13	FRIDAY HARBOR PORT F	100 FRONT ST	CSCSL, ALLSITES, SPILLS, Financial Assurance	Lower	4663, 0.883, NW
14	PETRO SAN JUAN	285 SPRING ST	CSCSL, LUST, UST, ALLSITES, Financial Assurance	Higher	4904, 0.929, NW
B15	SAN JUAN MARINA	SPRING ST	HSL, CSCSL, ALLSITES, FINDS	Higher	4985, 0.944, NW
B16	FRIDAY HARBOR FRONT	1 FRONT ST	HSL, CSCSL, ALLSITES	Higher	5038, 0.954, NW
17	NORTHWEST AUTO	370 W SPRING ST	CSCSL, LUST, UST, ALLSITES	Higher	5137, 0.973, WNW
B18	FRIDAY HARBOR MARINA	204 FRONT ST	CSCSL, LUST, ALLSITES, SPILLS	Higher	5178, 0.981, NW
19	STANDARD OIL BULK PL	151 WEST ST	CSCSL, ALLSITES	Higher	5258, 0.996, NW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
ALBERT JENSEN & SONS 1293 TURN POINT ROAD FRIDAY HARBOR, WA 98250	ALLSITES Facility Id: 8100 Facility Id: 42226979 NPDES Permit ID: WAG030001 Facility Status: Active	N/A
ALBERT JENSEN & SONS 1293 TURN POINT ROAD FRIDAY HARBOR, WA 98250	FINDS Registry ID:: 110010910611 ECHO	N/A
JENSENS SHIPYARD 1293 TURN POINT RD FRIDAY HARBOR, WA 98250	FINDS Registry ID:: 110044958560	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators
RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Facility Database

State and tribal leaking storage tank lists

LUST ..... Leaking Underground Storage Tanks Site List
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
UST ..... Underground Storage Tank Database
AST ..... Aboveground Storage Tank Locations
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ..... Institutional Control Site List

State and tribal voluntary cleanup sites

ICR ..... Independent Cleanup Reports
VCP ..... Voluntary Cleanup Program Sites
INDIAN VCP ..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ..... Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY	Recycling Facility List
SWTIRE	Solid Waste Tire Facilities
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	Open Dump Inventory
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
CDL	Clandestine Drug Lab Contaminated Site List
HIST CDL	List of Sites Contaminated by Clandestine Drug Labs
CSCSL NFA	Confirmed & Contaminated Sites - No Further Action
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees

INDIAN RESERV Indian Reservations
FUSRAP Formerly Utilized Sites Remedial Action Program
UMTRA Uranium Mill Tailings Sites
LEAD SMELTERS Lead Smelter Sites
US AIRS Aerometric Information Retrieval System Facility Subsystem
US MINES Mines Master Index File
ABANDONED MINES Abandoned Mines
UXO Unexploded Ordnance Sites
DOCKET HWC Hazardous Waste Compliance Docket Listing
FUELS PROGRAM EPA Fuels Program Registered Listing
AIRS Washington Emissions Data System
ASBESTOS ASBESTOS
COAL ASH Coal Ash Disposal Site Listing
DRYCLEANERS Drycleaner List
Financial Assurance Financial Assurance Information Listing
Inactive Drycleaners Inactive Drycleaners
MANIFEST Hazardous Waste Manifest Data
UIC Underground Injection Wells Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants
EDR Hist Auto EDR Exclusive Historic Gas Stations
EDR Hist Cleaner EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
RGA LF Recovered Government Archive Solid Waste Facilities List
RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal ERNS list

ERNS: The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

A review of the ERNS list, as provided by EDR, and dated 09/26/2016 has revealed that there are 3 ERNS sites within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	1063 TURN POINT ROAD	0 - 1/8 (0.001 mi.)	A5	10
Not reported	1063 TURN POINT ROAD	0 - 1/8 (0.001 mi.)	A8	11
Not reported	1063 TURN POINT ROAD	0 - 1/8 (0.001 mi.)	A10	12

State- and tribal - equivalent NPL

HSL: The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

A review of the HSL list, as provided by EDR, and dated 02/21/2017 has revealed that there are 2 HSL sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SAN JUAN MARINA Facility Type: Hazardous Sites List FSID Number: 2655 Facility Status: Awaiting Cleanup	***SPRING ST***	***NW 1/2 - 1 (0.944 mi.)***	***B15***	***19***
FRIDAY HARBOR FRONT Facility Type: Hazardous Sites List FSID Number: 755042 Facility Status: Awaiting Cleanup	***1 FRONT ST***	***NW 1/2 - 1 (0.954 mi.)***	***B16***	***21***

State- and tribal - equivalent CERCLIS

CSCSL: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Ecology's Confirmed & Suspected Contaminated Sites List.

A review of the CSCSL list, as provided by EDR, and dated 07/18/2017 has revealed that there are 7 CSCSL sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PETRO SAN JUAN Site Status: Cleanup Started	***285 SPRING ST***	***NW 1/2 - 1 (0.929 mi.)***	***14***	***15***

Facility ID: 7271133
Clean Up Siteid: 7735

SAN JUAN MARINA	***SPRING ST***	***NW 1/2 - 1 (0.944 mi.)***	***B15***	***19***
Site Status: Awaiting Cleanup Facility ID: 2655 Clean Up Siteid: 859				
FRIDAY HARBOR FRONT	***1 FRONT ST***	***NW 1/2 - 1 (0.954 mi.)***	***B16***	***21***
Site Status: Awaiting Cleanup Facility ID: 755042 Clean Up Siteid: 931				
NORTHWEST AUTO	***370 W SPRING ST***	***WNW 1/2 - 1 (0.973 mi.)***	***17***	***23***
Site Status: Cleanup Started Facility ID: 82918885 Clean Up Siteid: 10669				
FRIDAY HARBOR MARINA	***204 FRONT ST***	***NW 1/2 - 1 (0.981 mi.)***	***B18***	***27***
Site Status: Cleanup Started Facility ID: 53493692 Clean Up Siteid: 9595				
STANDARD OIL BULK PL	***151 WEST ST***	***NW 1/2 - 1 (0.996 mi.)***	***19***	***31***
Site Status: Cleanup Started Facility ID: 5541 Clean Up Siteid: 12562				

Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
FRIDAY HARBOR PORT F	***100 FRONT ST***	***NW 1/2 - 1 (0.883 mi.)***	***13***	***14***
Site Status: Awaiting Cleanup Facility ID: 31738935 Clean Up Siteid: 12756				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

ALLSITES: Information on facilities and sites of interest to the Department of Ecology.

A review of the ALLSITES list, as provided by EDR, and dated 08/08/2017 has revealed that there are 4 ALLSITES sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
INLINE MARINE SERVIC Facility Id: 2636054	1063 TURN POINT RD	0 - 1/8 (0.001 mi.)	A6	10
A1 MARINE SERVICES I Facility Id: 5454516	1063 TURN POINT RD	0 - 1/8 (0.001 mi.)	A7	11
FRIDAY HARBOR SAND & Facility Id: 4640566	4434 PEAR POINT RD	WSW 1/4 - 1/2 (0.264 mi.)	12	12

Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
SAN JUAN COMMUNITY H	BETWEEN TURN POINT R	NW 1/8 - 1/4 (0.230 mi.)	11	12

EXECUTIVE SUMMARY

Facility Id: 9232

Records of Emergency Release Reports

SPILLS: Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

A review of the SPILLS list, as provided by EDR, and dated 03/08/2017 has revealed that there is 1 SPILLS site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported Facility ID: 656156	1063 TURN POINT RD	0 - 1/8 (0.001 mi.)	A4	10

Other Ascertainable Records

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 07/23/2017 has revealed that there is 1 FINDS site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
A1 MARINE SERVICES I	1063 TURN POINT RD	0 - 1/8 (0.001 mi.)	A9	11

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 5062208.2S

Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

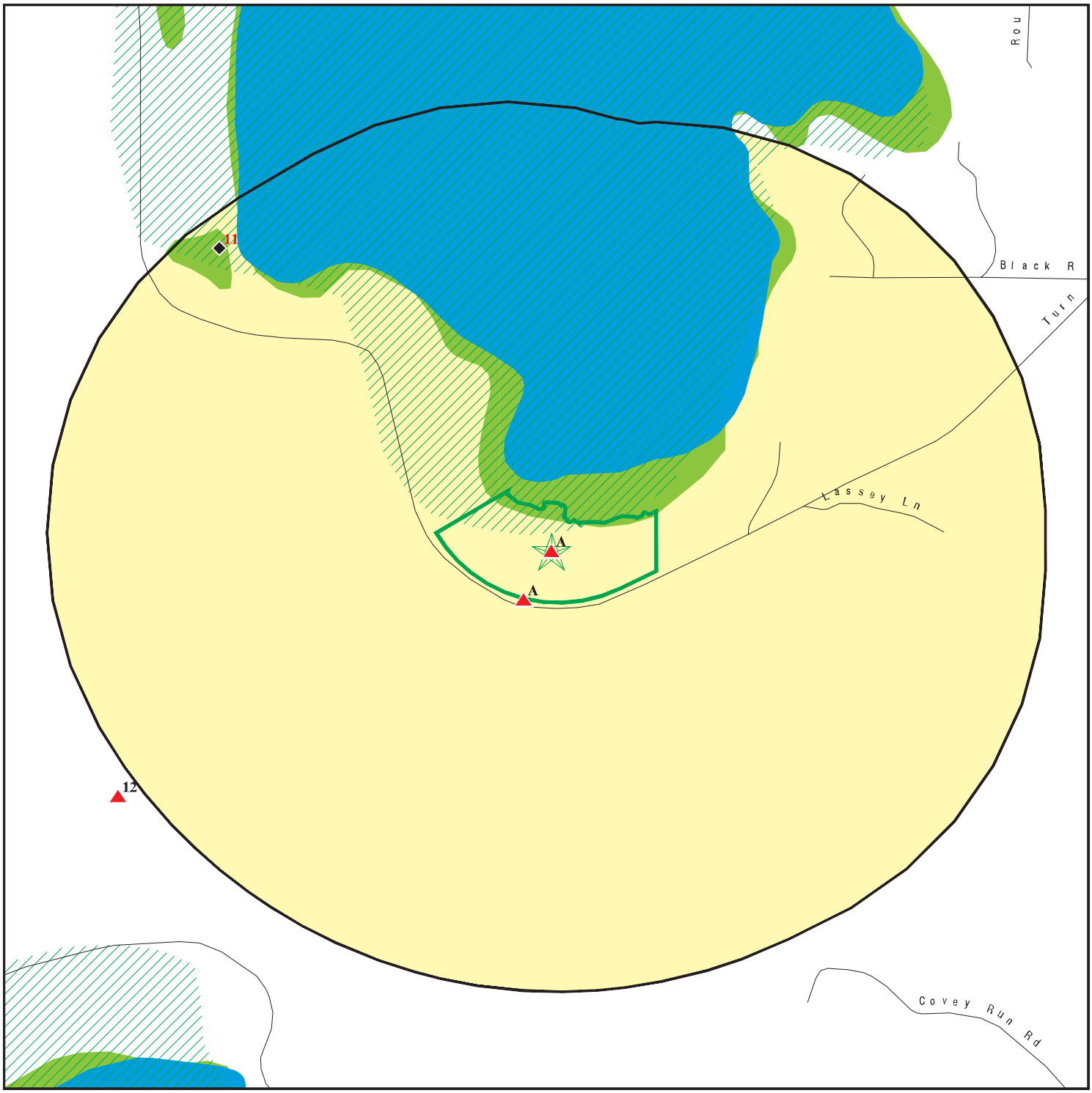
Upgradient Area

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Jensens Shipyard	CLIENT:	Whatcom Environmental Services
ADDRESS:	1293 Turn Point Rd Friday Harbor WA 98250	CONTACT:	Henry Cade
LAT/LONG:	48.525527 / 122.999279	INQUIRY #:	5062208.2s
		DATE:	September 27, 2017 7:36 pm

DETAIL MAP - 5062208.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Jensens Shipyard	CLIENT: Whatcom Environmental Services
ADDRESS: 1293 Turn Point Rd Friday Harbor WA 98250	CONTACT: Henry Cade
LAT/LONG: 48.525527 / 122.999279	INQUIRY #: 5062208.2s DATE: September 27, 2017 7:37 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		3	NR	NR	NR	NR	3
State- and tribal - equivalent NPL								
HSL	1.000		0	0	0	2	NR	2
State- and tribal - equivalent CERCLIS								
CSCSL	1.000		0	0	0	7	NR	7
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
ICR	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
SWTIRE	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
ALLSITES	0.500	1	2	1	1	NR	NR	5
CDL	0.001		0	NR	NR	NR	NR	0
HIST CDL	0.001		0	NR	NR	NR	NR	0
CSCSL NFA	0.500		0	0	0	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		1	NR	NR	NR	NR	1
SPILLS 90	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001	2	1	NR	NR	NR	NR	3
ECHO	0.001	1	0	NR	NR	NR	NR	1
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
ASBESTOS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
Inactive Drycleaners	0.250		0	0	NR	NR	NR	0
MANIFEST	0.250		0	0	NR	NR	NR	0
NPDES	0.001	1	0	NR	NR	NR	NR	1
UIC	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		5	7	1	1	9	0	23

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
Target
Property

ALBERT JENSEN & SONS INC
1293 TURN POINT ROAD
FRIDAY HARBOR, WA 98250

ALLSITES **S111770157**
NPDES **N/A**

Site 1 of 10 in cluster A

Actual:
16 ft.

ALLSITES:

Facility Name:	ALBERT JENSEN & SONS INC
Facility Id:	42226979

Interaction:	87873
Interaction 1:	A
Interaction 2:	BOATGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	ALBERT JENSEN & SONS INC
Program ID:	WAG030001
Date Interaction:	1993-02-05 00:00:00
Date Interaction 3:	Boatyard GP
Latitude:	48.525349216999999
Longitude:	-122.998854052

Interaction:	43568
Interaction 1:	I
Interaction 2:	HWG
Ecology Program:	HAZWASTE
Program Data:	TURBOWASTE
Facility Alt.:	Not reported
Program ID:	WAD009243429
Date Interaction:	1985-01-01 00:00:00
Date Interaction 3:	Hazardous Waste Generator
Latitude:	48.525349216999999
Longitude:	-122.998854052

Facility Name:	JENSENS SHIPYARD
Facility Id:	8100

Interaction:	100019
Interaction 1:	I
Interaction 2:	LSC
Ecology Program:	HAZWASTE
Program Data:	LSC
Facility Alt.:	JENSENS SHIPYARD
Program ID:	Not reported
Date Interaction:	2010-04-26 00:00:00
Date Interaction 3:	Local Source Cntrl 7/09-3
Latitude:	48.525387879999997
Longitude:	-122.99831944899999

NPDES:

Facility Status:	Active
Facility Type:	Boatyard GP
Admin Region:	Northwest
Date Issued:	07/06/2016
Latitude:	48.52843
Longitude:	-123.00462

ALBERT JENSEN & SONS INC (Continued) **S111770157**

Permit ID:	WAG030001
Permit Version:	4
Permit Status:	Active
Permit SubStatus:	Coverage Issued
Ecology Contact:	Kurt Baumgarten
WRIA:	San Juan
Permit Expiration Date:	07/31/2021
Effective Date:	08/08/2016
Days to Expiration:	1565

A2 **ALBERT JENSEN & SONS INC 1293** **FINDS** **1016284773**
Target **1293 TURN POINT ROAD** **ECHO** **N/A**
Property **FRIDAY HARBOR, WA 98250**

Site 2 of 10 in cluster A

Actual: 16 ft.

FINDS:

Registry ID: 110010910611

Environmental Interest/Information System

Washington Facility / Site Identification System (WA-FSIS) provides a means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1016284773
Registry ID:	110010910611
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110010910611

A3 **JENSENS SHIPYARD** **FINDS** **1015909017**
Target **1293 TURN POINT RD** **N/A**
Property **FRIDAY HARBOR, WA 98250**

Site 3 of 10 in cluster A

Actual: 16 ft.

FINDS:

Registry ID: 110044958560

Environmental Interest/Information System

Washington Facility / Site Identification System (WA-FSIS) provides a

JENSENS SHIPYARD (Continued) **1015909017**

means to query and display data maintained by the Washington Department of Ecology. This system contains key information for each facility/site that is currently, or has been, of interest to the Air Quality, Dam Safety, Hazardous Waste, Toxics Cleanup, and Water Quality Programs.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A4 **SPILLS** **S117896106**
1063 TURN POINT RD **N/A**
< 1/8 **FRIDAY HARBOR, WA**
0.001 mi.
4 ft. **Site 4 of 10 in cluster A**

Relative:
Higher

Actual:
54 ft.

SPILLS:

Facility ID:	656156
Medium:	SURFACE WATER-MARINE
Material Desc:	PETROLEUM - DIESEL FUEL
Material Qty:	10
Material Units:	GALLON
Date Received:	04/14/2015
Contact Name:	MORF
Incident Date:	Not reported
Incident Category Type:	Not reported
Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported

A5 **ERNS** **2015118761**
1063 TURN POINT ROAD **N/A**
< 1/8 **FRIDAY HARBOR, WA**
0.001 mi.
4 ft. **Site 5 of 10 in cluster A**

Relative:
Higher

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Actual:
54 ft.

A6 **INLINE MARINE SERVICES** **ALLSITES** **S109552993**
1063 TURN POINT RD **N/A**
< 1/8 **FRIDAY HARBOR, WA 98250**
0.001 mi.
4 ft. **Site 6 of 10 in cluster A**

Relative:
Higher

Actual:
54 ft.

ALLSITES:

Facility Name:	INLINE MARINE SERVICES
Facility Id:	2636054
Interaction:	11036

INLINE MARINE SERVICES (Continued) **S109552993**

Interaction 1:	I
Interaction 2:	LSC
Ecology Program:	HAZWASTE
Program Data:	LSC
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2008-11-20 00:00:00
Date Interaction 3:	Local Source Cntrl 7/09-3
Latitude:	48.529022409
Longitude:	-122.983647774

A7 **A1 MARINE SERVICES INC** **ALLSITES** **S109554123**
1063 TURN POINT RD **N/A**
< 1/8 **FRIDAY HARBOR, WA 98250**
0.001 mi.
4 ft. **Site 7 of 10 in cluster A**

Relative:
Higher

Actual:
54 ft.

ALLSITES:

Facility Name:	A1 MARINE SERVICES INC
Facility Id:	5454516
Interaction:	16774
Interaction 1:	I
Interaction 2:	LSC
Ecology Program:	HAZWASTE
Program Data:	LSC
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2008-12-02 00:00:00
Date Interaction 3:	Local Source Cntrl 7/09-3
Latitude:	48.529022409
Longitude:	-122.983647774

A8 **ERNS** **2015117632**
1063 TURN POINT ROAD **N/A**
< 1/8 **SAN JUAN ISLAND, WA**
0.001 mi.
4 ft. **Site 8 of 10 in cluster A**

Relative:
Higher

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Actual:
54 ft.

A9 **A1 MARINE SERVICES INC** **FINDS** **1016706213**
1063 TURN POINT RD **N/A**
< 1/8 **FRIDAY HARBOR, WA 98250**
0.001 mi.
4 ft. **Site 9 of 10 in cluster A**

Relative:
Higher

FINDS:

Registry ID: 110056478244

Actual:
54 ft.

Environmental Interest/Information System

A1 MARINE SERVICES INC (Continued) **1016706213**

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Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A10 **ERNS** **2015113570**
1063 TURN POINT ROAD **N/A**
< 1/8 **FRIDAY HARBOR, WA**
0.001 mi.
4 ft. **Site 10 of 10 in cluster A**

Relative:
Higher

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Actual:
54 ft.

---

11 **SAN JUAN COMMUNITY HOME TRUST** **ALLSITES** **S110276430**
NW **BETWEEN TURN POINT ROAD AND GROVER ROAD** **N/A**
1/8-1/4 **FRIDAY HARBOR, WA 98250**
0.230 mi.
1214 ft.

Relative:
Lower

ALLSITES:

Facility Name:	SAN JUAN COMMUNITY HOME TRUST
Facility Id:	9232
Interaction:	92225
Interaction 1:	I
Interaction 2:	CONSTSWGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	San Juan Community Home Trust
Program ID:	WAR012444
Date Interaction:	2010-03-17 00:00:00
Date Interaction 3:	Construction SW GP
Latitude:	48.528337440999998
Longitude:	-123.003922579

Actual:
9 ft.

---

12 **FRIDAY HARBOR SAND & GRAVEL** **ALLSITES** **S107862833**
WSW **4434 PEAR POINT RD** **N/A**
1/4-1/2 **FRIDAY HARBOR, WA 98250**
0.264 mi.
1396 ft.

Relative:
Higher

ALLSITES:

Facility Name:	FRIDAY HARBOR SAND & GRAVEL
Facility Id:	4640566
Interaction:	15133
Interaction 1:	A

Actual:
255 ft.

FRIDAY HARBOR SAND & GRAVEL (Continued) **S107862833**

Interaction 2:	ENFORFNL
Ecology Program:	WATQUAL
Program Data:	DMS
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2006-01-24 00:00:00
Date Interaction 3:	Enforcement Final
Latitude:	48.524637820999999
Longitude:	-123.01256568399999

Interaction:	15134
Interaction 1:	A
Interaction 2:	NONENFNL
Ecology Program:	WATRES
Program Data:	DMS
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2008-01-09 00:00:00
Date Interaction 3:	Non Enforcement Final
Latitude:	48.524637820999999
Longitude:	-123.01256568399999

Interaction:	81581
Interaction 1:	I
Interaction 2:	SANDGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	FRIDAY HARBOR SAND & GRAVEL
Program ID:	ST0003365
Date Interaction:	1981-11-20 00:00:00
Date Interaction 3:	Sand and Gravel GP
Latitude:	48.524637820999999
Longitude:	-123.01256568399999

Interaction:	81582
Interaction 1:	I
Interaction 2:	SANDGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	FRIDAY HARBOR SAND & GRAVEL
Program ID:	WAG503024
Date Interaction:	1994-09-30 00:00:00
Date Interaction 3:	Sand and Gravel GP
Latitude:	48.524637820999999
Longitude:	-123.01256568399999

Interaction:	80781
Interaction 1:	I
Interaction 2:	SANDGP
Ecology Program:	WATQUAL
Program Data:	PARIS
Facility Alt.:	Not reported
Program ID:	WAG503024

FRIDAY HARBOR SAND & GRAVEL (Continued) **S107862833**

Date Interaction: 1999-08-06 00:00:00
Date Interaction 3: Sand and Gravel GP
Latitude: 48.524637820999999
Longitude: -123.01256568399999

13
NW
1/2-1
0.883 mi.
4663 ft.

FRIDAY HARBOR PORT FUEL PIER **CSCSL** **S108022932**
100 FRONT ST **ALLSITES** **N/A**
FRIDAY HARBOR, WA 98250 **SPILLS**
Financial Assurance

Relative:
Lower

Actual:
14 ft.

CSCSL:
Facility ID: 31738935
Region: Northwest
Lat/Long: 48.539722 / -123.069725
Brownfield Status: Not reported
Rank Status: N
Clean Up Siteid: 12756
Site Status: Awaiting Cleanup
PSI?: Not reported
Contaminant Name: Petroleum-Diesel
Ground Water: Confirmed Above Cleanup Level
Surface Water: Confirmed Above Cleanup Level
Soil: Suspected
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Northwest

Facility ID: 31738935
Region: Northwest
Lat/Long: 48.539722 / -123.069725
Brownfield Status: Not reported
Rank Status: N
Clean Up Siteid: 12756
Site Status: Awaiting Cleanup
PSI?: Not reported
Contaminant Name: Petroleum-Other
Ground Water: Confirmed Above Cleanup Level
Surface Water: Confirmed Above Cleanup Level
Soil: Suspected
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Northwest

ALLSITES:
Facility Name: FRIDAY HARBOR PORT FUEL PIER
Facility Id: 31738935

Interaction: 37523
Interaction 1: A
Interaction 2: TIER2
Ecology Program: HAZWASTE
Program Data: EPCRA
Facility Alt.: Not reported

FRIDAY HARBOR PORT FUEL PIER (Continued) **S108022932**

Program ID:	CRK000041340
Date Interaction:	1995-01-01 00:00:00
Date Interaction 3:	Emergency/Haz Chem Rpt TI
Latitude:	48.539716417999998
Longitude:	-123.069709757

Interaction:	114624
Interaction 1:	A
Interaction 2:	SCS
Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	Cannery Landing
Program ID:	Not reported
Date Interaction:	2010-04-23 00:00:00
Date Interaction 3:	State Cleanup Site
Latitude:	48.539716417999998
Longitude:	-123.069709757

SPILLS:

Facility ID:	555388
Medium:	Not reported
Material Desc:	PETROLEUM - GASOLINE
Material Qty:	1
Material Units:	UNKNOWN
Date Received:	05/21/2006
Contact Name:	Not reported
Incident Date:	Not reported
Incident Category Type:	Not reported
Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported

WA Financial Assurance 1:

DOE Site ID:	6546
Site Type:	PLIA
Financial Resp Type:	Colony (GUS)
Inception Date:	06/01/2011
Expiration Date:	06/01/2012

14
NW
1/2-1
0.929 mi.
4904 ft.

PETRO SAN JUAN
285 SPRING ST
FRIDAY HARBOR, WA 98250

CSCSL **U003132484**
LUST **N/A**
UST
ALLSITES
Financial Assurance

Relative:
Higher

Actual:
62 ft.

CSCSL:

Facility ID:	7271133
Region:	Northwest
Lat/Long:	48.539722 / -123.069725
Brownfield Status:	Not reported

PETRO SAN JUAN (Continued) **U003132484**

Rank Status: N
Clean Up Siteid: 7735
Site Status: Cleanup Started
PSI?: Not reported
Contaminant Name: Petroleum-Other
Ground Water: Confirmed Above Cleanup Level
Surface Water: Not reported
Soil: Confirmed Above Cleanup Level
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Northwest

LUST:
Facility ID: 7271133
Lust Status Type: Cleanup Started
Cleanup Site ID: 7735
Cleanup Unit Type: Upland
Process Type: Independent Action
Cleanup Unit Name: Little Store
Lust Status Date: 06/01/1995
Response Section: Northwest
Lat/Long: 48.539722 / -123.06972

UST:
Facility ID: 7271133
Site Id: 100090
UBI: Not reported
Phone Number: Not reported
Decimal Latitude: 48.539722
Decimal Longitude: -123.069725

Tank Name: 1
Tag Number: A3103
Tank Status: Closed in Place
Tank Status Date: 03/12/1999
Tank Install Date: 00/01/1982
Tank Closure Date: 03/12/1999
Capacity Range: 2,001 to 4,999 Gallons
Tank Permit Expiration Date: 06/30/1999
Tank Upgrade Date: 12/31/1990
Tank Spill Prevention: 25 Gallons or Less
Tank Overfill Prevention: 25 Gallons or less
Tank Material: Steel
Tank Construction: Single Wall Tank
Tank Tightness Test: Not reported
Tank Corrosion Protection: Impressed Current and Interior Lining
Tank Manifold: Not reported
Tank Release Detection: Other
Tank SFC Type: Not reported
Pipe Material: No Piping Attached to Tank
Pipe Construction: No Piping Attached to Tank
Pipe Primary Release Detection: Not reported
Pipe Second Release Detection: Not reported
Pipe Corrosion Protection: Not reported
Pipe Pumping System: Product Removed by Reclaimer

PETRO SAN JUAN (Continued) **U003132484**

Responsible Unit:	NORTHWEST
Dispencer/Pump SFC Type:	Not reported

Tank Name:	2
Tag Number:	A3103
Tank Status:	Operational
Tank Status Date:	12/01/1982
Tank Install Date:	00/01/1982
Tank Closure Date:	Not reported
Capacity Range:	2,001 to 4,999 Gallons
Tank Permit Expiration Date:	03/31/2017
Tank Upgrade Date:	12/31/1990
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Ball Float Valve (vent line)
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Impressed Current and Interior Lining
Tank Manifold:	Not reported
Tank Release Detection:	Automatic Tank Gauging
Tank SFC Type:	Impressed Current
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detector (ALLD)
Pipe Second Release Detection:	Annual Line Tightness Test (LTT)
Pipe Corrosion Protection:	Corrosion Resistant
Pipe Pumping System:	Pressurized System
Responsible Unit:	NORTHWEST
Dispencer/Pump SFC Type:	Impressed Current

Tank Name:	3
Tag Number:	A3103
Tank Status:	Operational
Tank Status Date:	07/01/1979
Tank Install Date:	00/01/1979
Tank Closure Date:	Not reported
Capacity Range:	2,001 to 4,999 Gallons
Tank Permit Expiration Date:	03/31/2017
Tank Upgrade Date:	12/31/1990
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Ball Float Valve (vent line)
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Not reported
Tank Corrosion Protection:	Impressed Current and Interior Lining
Tank Manifold:	Not reported
Tank Release Detection:	Automatic Tank Gauging
Tank SFC Type:	Impressed Current
Pipe Material:	Fiberglass
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Automatic Line Leak Detector (ALLD)
Pipe Second Release Detection:	Annual Line Tightness Test (LTT)
Pipe Corrosion Protection:	Corrosion Resistant
Pipe Pumping System:	Pressurized System
Responsible Unit:	NORTHWEST

PETRO SAN JUAN (Continued) **U003132484**

Dispencer/Pump SFC Type: Impressed Current

Tank Name: 4
Tag Number: A3103
Tank Status: Operational
Tank Status Date: 07/01/1979
Tank Install Date: 00/01/1979
Tank Closure Date: Not reported
Capacity Range: 5,000 to 9,999 Gallons
Tank Permit Expiration Date: 03/31/2017
Tank Upgrade Date: 12/31/1990
Tank Spill Prevention: Spill Bucket/Spill Box
Tank Overfill Prevention: Ball Float Valve (vent line)
Tank Material: Steel
Tank Construction: Single Wall Tank
Tank Tightness Test: Not reported
Tank Corrosion Protection: Impressed Current and Interior Lining
Tank Manifold: Not reported
Tank Release Detection: Automatic Tank Gauging
Tank SFC Type: Impressed Current
Pipe Material: Fiberglass
Pipe Construction: Single Wall Pipe
Pipe Primary Release Detection: Automatic Line Leak Detector (ALLD)
Pipe Second Release Detection: Annual Line Tightness Test (LTT)
Pipe Corrosion Protection: Corrosion Resistant
Pipe Pumping System: Pressurized System
Responsible Unit: NORTHWEST
Dispencer/Pump SFC Type: Impressed Current

ALLSITES:
Facility Name: LITTLE STORE
Facility Id: 7271133

Interaction: 20440
Interaction 1: I
Interaction 2: TIER2
Ecology Program: HAZWASTE
Program Data: EPCRA
Facility Alt.: Not reported
Program ID: CRK000040200
Date Interaction: 1995-01-01 00:00:00
Date Interaction 3: Emergency/Haz Chem Rpt TI
Latitude: 48.539716417999998
Longitude: -123.069709757

Interaction: 20438
Interaction 1: A
Interaction 2: UST
Ecology Program: TOXICS
Program Data: UST
Facility Alt.: PETRO SAN JUAN
Program ID: 100090
Date Interaction: 1979-07-01 00:00:00
Date Interaction 3: Underground Storage Tank
Latitude: 48.539716417999998

PETRO SAN JUAN (Continued) **U003132484**

Longitude: -123.069709757

Interaction: 20439
Interaction 1: A
Interaction 2: LUST
Ecology Program: TOXICS
Program Data: ISIS
Facility Alt.: Not reported
Program ID: 100090
Date Interaction: 1990-09-11 00:00:00
Date Interaction 3: LUST Facility
Latitude: 48.539716417999998
Longitude: -123.069709757

Interaction: 91670
Interaction 1: I
Interaction 2: LSC
Ecology Program: HAZWASTE
Program Data: LSC
Facility Alt.: LITTLE STORE
Program ID: Not reported
Date Interaction: 2009-10-28 00:00:00
Date Interaction 3: Local Source Cntrl 7/09-3
Latitude: 48.539716417999998
Longitude: -123.069709757

WA Financial Assurance 1:
DOE Site ID: 100090
Site Type: PLIA
Financial Resp Type: American Safety Indemnity
Inception Date: 04/01/2011
Expiration Date: 04/01/2012

B15 **SAN JUAN MARINA** **HSL** **1007080347**
NW **SPRING ST** **CSCSL** **N/A**
1/2-1 **FRIDAY HARBOR, WA 98250** **ALLSITES**
0.944 mi. **FINDS**
4985 ft. **Site 1 of 3 in cluster B**

Relative: Higher

Actual: 18 ft.

HSL:
edr_fstat: WA
edr_fzip: Not reported
edr_fcnty: SAN JUAN
edr_zip: Not reported
Facility Type: Hazardous Sites List
Facility Status: Awaiting Cleanup
FSID Number: 2655
Rank: 4
Region: NW
EDR Link ID: 2655
Region Decode: NORTHWEST REGIONAL OFFICE

CSCSL:
Facility ID: 2655

SAN JUAN MARINA (Continued) **1007080347**

Region: Northwest
Lat/Long: 48.53552 / -123.0152
Brownfield Status: Not reported
Rank Status: 4
Clean Up Siteid: 859
Site Status: Awaiting Cleanup
PSI?: Yes
Contaminant Name: Non-Halogenated Solvents
Ground Water: Confirmed Above Cleanup Level
Surface Water: Suspected
Soil: Confirmed Above Cleanup Level
Sediment: Not reported
Air: Suspected
Bedrock: Not reported
Responsible Unit: Northwest

Facility ID: 2655
Region: Northwest
Lat/Long: 48.53552 / -123.0152
Brownfield Status: Not reported
Rank Status: 4
Clean Up Siteid: 859
Site Status: Awaiting Cleanup
PSI?: Yes
Contaminant Name: Petroleum Products-Unspecified
Ground Water: Confirmed Above Cleanup Level
Surface Water: Suspected
Soil: Confirmed Above Cleanup Level
Sediment: Not reported
Air: Suspected
Bedrock: Not reported
Responsible Unit: Northwest

Facility ID: 2655
Region: Northwest
Lat/Long: 48.53552 / -123.0152
Brownfield Status: Not reported
Rank Status: 4
Clean Up Siteid: 859
Site Status: Awaiting Cleanup
PSI?: Yes
Contaminant Name: Polycyclic Aromatic Hydrocarbons
Ground Water: Confirmed Above Cleanup Level
Surface Water: Suspected
Soil: Suspected
Sediment: Not reported
Air: Suspected
Bedrock: Not reported
Responsible Unit: Northwest

ALLSITES:
Facility Name: SAN JUAN MARINA
Facility Id: 2655

Interaction: 5016
Interaction 1: A
Interaction 2: INDPNDNT

SAN JUAN MARINA (Continued) **1007080347**

Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	SAN JUAN MARINA
Program ID:	Not reported
Date Interaction:	1900-01-01 00:00:00
Date Interaction 3:	Independent Cleanup
Latitude:	48.535514411999998
Longitude:	-123.015184766

FINDS:

Registry ID: 110015570657

Environmental Interest/Information System

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Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

B16 **FRIDAY HARBOR FRONT ST ROW** **HSL** **S108277207**
NW **1 FRONT ST** **CSCSL** **N/A**
1/2-1 **FRIDAY HARBOR, WA 98250** **ALLSITES**
0.954 mi.
5038 ft. **Site 2 of 3 in cluster B**

Relative:
Higher

Actual:
39 ft.

HSL:

edr_fstat:	WA
edr_fzip:	Not reported
edr_fcnty:	SAN JUAN
edr_zip:	Not reported
Facility Type:	**Hazardous Sites List**
Facility Status:	Awaiting Cleanup
FSID Number:	755042
Rank:	5
Region:	NW
EDR Link ID:	755042
Region Decode:	NORTHWEST REGIONAL OFFICE

CSCSL:

Facility ID:	755042
Region:	Northwest
Lat/Long:	48.535321 / -123.015807
Brownfield Status:	Not reported
Rank Status:	5
Clean Up Siteid:	931
Site Status:	Awaiting Cleanup
PSI?:	Yes
Contaminant Name:	Petroleum Products-Unspecified
Ground Water:	Confirmed Above Cleanup Level
Surface Water:	Suspected

FRIDAY HARBOR FRONT ST ROW (Continued) **S108277207**

Soil: Confirmed Above Cleanup Level
Sediment: Not reported
Air: Not reported
Bedrock: Not reported
Responsible Unit: Northwest

ALLSITES:
Facility Name: CASK & SCHOONER
Facility Id: 9961

Interaction: 99141
Interaction 1: I
Interaction 2: LSC
Ecology Program: HAZWASTE
Program Data: LSC
Facility Alt.: CASK & SCHOONER
Program ID: Not reported
Date Interaction: 2010-10-22 00:00:00
Date Interaction 3: Local Source Cntrl 7/09-3
Latitude: 48.535325010000001
Longitude: -123.01579807500001

Facility Name: FRIDAY HARBOR FRONT ST ROW
Facility Id: 755042

Interaction: 7232
Interaction 1: A
Interaction 2: SCS
Ecology Program: TOXICS
Program Data: ISIS
Facility Alt.: FRIDAY HARBOR FRONT ST ROW
Program ID: Not reported
Date Interaction: 2006-12-18 00:00:00
Date Interaction 3: State Cleanup Site
Latitude: 48.535325010000001
Longitude: -123.01579807500001

Facility Name: MALOULAS
Facility Id: 24027

Interaction: 100684
Interaction 1: I
Interaction 2: LSC
Ecology Program: HAZWASTE
Program Data: LSC
Facility Alt.: MALOULAS
Program ID: Not reported
Date Interaction: 2010-06-03 00:00:00
Date Interaction 3: Local Source Cntrl 7/09-3
Latitude: 48.535325010000001
Longitude: -123.01579807500001

17
WNW
1/2-1
0.973 mi.
5137 ft.

NORTHWEST AUTO
370 W SPRING ST
FRIDAY HARBOR, WA 98250

CSCSL
LUST
UST
ALLSITES

U003132545
N/A

Relative:
Higher

Actual:
78 ft.

CSCSL:

Facility ID:	82918885
Region:	Northwest
Lat/Long:	48.53322 / -123.01831
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	10669
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Benzene
Ground Water:	Confirmed Above Cleanup Level
Surface Water:	Not reported
Soil:	Confirmed Above Cleanup Level
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID:	82918885
Region:	Northwest
Lat/Long:	48.53322 / -123.01831
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	10669
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Gasoline
Ground Water:	Confirmed Above Cleanup Level
Surface Water:	Not reported
Soil:	Confirmed Above Cleanup Level
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID:	82918885
Region:	Northwest
Lat/Long:	48.53322 / -123.01831
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	10669
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Other
Ground Water:	Confirmed Above Cleanup Level
Surface Water:	Not reported
Soil:	Confirmed Above Cleanup Level
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

NORTHWEST AUTO (Continued) **U003132545**

LUST:

Facility ID:	82918885
Lust Status Type:	Cleanup Started
Cleanup Site ID:	10669
Cleanup Unit Type:	Upland
Process Type:	Independent Action
Cleanup Unit Name:	San Juan Grange 699
Lust Status Date:	06/01/1995
Response Section:	Northwest
Lat/Long:	48.53322 / -123.01831

UST:

Facility ID:	82918885
Site Id:	10624
UBI:	Not reported
Phone Number:	Not reported
Decimal Latitude:	48.53322
Decimal Longitude:	-123.01831
Tank Name:	1
Tag Number:	A8094
Tank Status:	Removed
Tank Status Date:	07/01/2003
Tank Install Date:	00/01/1973
Tank Closure Date:	04/22/2003
Capacity Range:	1,101 to 2,000 Gallons
Tank Permit Expiration Date:	06/30/2003
Tank Upgrade Date:	12/22/1998
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Automatic Shutoff (fill pipe)
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Every 5 Years
Tank Corrosion Protection:	Interior Lining
Tank Manifold:	Not reported
Tank Release Detection:	Manual Inventory Control (daily)
Tank SFC Type:	Not reported
Pipe Material:	Steel
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Safe Suction (No Leak Detection)
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Sacrificial Anode
Pipe Pumping System:	Safe Suction
Responsible Unit:	NORTHWEST
Dispencer/Pump SFC Type:	Not reported
Tank Name:	2
Tag Number:	A8094
Tank Status:	Removed
Tank Status Date:	07/01/2003
Tank Install Date:	00/01/1973
Tank Closure Date:	04/22/2003
Capacity Range:	1,101 to 2,000 Gallons
Tank Permit Expiration Date:	06/30/2003
Tank Upgrade Date:	12/22/1998

NORTHWEST AUTO (Continued) **U003132545**

Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Automatic Shutoff (fill pipe)
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Every 5 Years
Tank Corrosion Protection:	Interior Lining
Tank Manifold:	Not reported
Tank Release Detection:	Manual Inventory Control (daily)
Tank SFC Type:	Not reported
Pipe Material:	Steel
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Safe Suction (No Leak Detection)
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Sacrificial Anode
Pipe Pumping System:	Safe Suction
Responsible Unit:	NORTHWEST
Dispencer/Pump SFC Type:	Not reported

Tank Name:	3
Tag Number:	A8094
Tank Status:	Removed
Tank Status Date:	07/01/2003
Tank Install Date:	00/01/1973
Tank Closure Date:	04/22/2003
Capacity Range:	111 TO 1,100 Gallons
Tank Permit Expiration Date:	06/30/2003
Tank Upgrade Date:	12/22/1998
Tank Spill Prevention:	Spill Bucket/Spill Box
Tank Overfill Prevention:	Automatic Shutoff (fill pipe)
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Every 5 Years
Tank Corrosion Protection:	Interior Lining
Tank Manifold:	Not reported
Tank Release Detection:	Manual Inventory Control (daily)
Tank SFC Type:	Not reported
Pipe Material:	Steel
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Safe Suction (No Leak Detection)
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Sacrificial Anode
Pipe Pumping System:	Safe Suction
Responsible Unit:	NORTHWEST
Dispencer/Pump SFC Type:	Not reported

Tank Name:	4
Tag Number:	A8094
Tank Status:	Removed
Tank Status Date:	07/01/2003
Tank Install Date:	00/01/1973
Tank Closure Date:	04/22/2003
Capacity Range:	111 TO 1,100 Gallons
Tank Permit Expiration Date:	06/30/2003
Tank Upgrade Date:	12/22/1998
Tank Spill Prevention:	Spill Bucket/Spill Box

NORTHWEST AUTO (Continued) **U003132545**

Tank Overfill Prevention:	Automatic Shutoff (fill pipe)
Tank Material:	Steel
Tank Construction:	Single Wall Tank
Tank Tightness Test:	Every 5 Years
Tank Corrosion Protection:	Interior Lining
Tank Manifold:	Not reported
Tank Release Detection:	Manual Inventory Control (daily)
Tank SFC Type:	Not reported
Pipe Material:	Steel
Pipe Construction:	Single Wall Pipe
Pipe Primary Release Detection:	Safe Suction (No Leak Detection)
Pipe Second Release Detection:	Not reported
Pipe Corrosion Protection:	Sacrificial Anode
Pipe Pumping System:	Safe Suction
Responsible Unit:	NORTHWEST
Dispencer/Pump SFC Type:	Not reported

ALLSITES:

Facility Name:	NORTHWEST AUTO
Facility Id:	82918885

Interaction:	66842
Interaction 1:	A
Interaction 2:	LUST
Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	Not reported
Program ID:	10624
Date Interaction:	1990-03-22 00:00:00
Date Interaction 3:	LUST Facility
Latitude:	48.533214413000003
Longitude:	-123.018294767

Interaction:	66843
Interaction 1:	I
Interaction 2:	LSC
Ecology Program:	HAZWASTE
Program Data:	LSC
Facility Alt.:	Not reported
Program ID:	Not reported
Date Interaction:	2008-08-07 00:00:00
Date Interaction 3:	Local Source Cntrl 7/09-3
Latitude:	48.533214413000003
Longitude:	-123.018294767

Interaction:	66841
Interaction 1:	I
Interaction 2:	UST
Ecology Program:	TOXICS
Program Data:	UST
Facility Alt.:	Not reported
Program ID:	10624
Date Interaction:	1973-01-01 00:00:00
Date Interaction 3:	Underground Storage Tank
Latitude:	48.533214413000003

NORTHWEST AUTO (Continued) **U003132545**

Longitude: -123.018294767

B18 **FRIDAY HARBOR MARINA** **CSCSL** **U003132733**
NW **204 FRONT ST** **LUST** **N/A**
1/2-1 **FRIDAY HARBOR, WA 98250** **ALLSITES**
0.981 mi. **SPILLS**
5178 ft. **Site 3 of 3 in cluster B**

Relative: Higher

Actual: 30 ft.

CSCSL:

Facility ID:	53493692
Region:	Northwest
Lat/Long:	48.536542895 / -123.01652
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	9595
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Other
Ground Water:	Confirmed Above Cleanup Level
Surface Water:	Not reported
Soil:	Confirmed Above Cleanup Level
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

LUST:

Facility ID:	53493692
Lust Status Type:	Cleanup Started
Cleanup Site ID:	9595
Cleanup Unit Type:	Upland
Process Type:	Independent Action
Cleanup Unit Name:	SAN JUAN MARINA
Lust Status Date:	05/11/1993
Response Section:	Northwest
Lat/Long:	48.5365428 / -123.01652

ALLSITES:

Facility Name:	FRIDAY HARBOR MARINA
Facility Id:	53493692
Interaction:	100417
Interaction 1:	I
Interaction 2:	LSC
Ecology Program:	HAZWASTE
Program Data:	LSC
Facility Alt.:	FRIDAY HARBOR MARINA
Program ID:	Not reported
Date Interaction:	2011-05-24 00:00:00
Date Interaction 3:	Local Source Cntrl 7/09-3
Latitude:	48.536543233000003
Longitude:	-123.01651699200001
Interaction:	50125
Interaction 1:	A

FRIDAY HARBOR MARINA (Continued) **U003132733**

Interaction 2: UST
Ecology Program: TOXICS
Program Data: UST
Facility Alt.: Friday Harbor Port
Program ID: 6546
Date Interaction: 2000-03-20 00:00:00
Date Interaction 3: Underground Storage Tank
Latitude: 48.536543233000003
Longitude: -123.01651699200001

Interaction: 105911
Interaction 1: A
Interaction 2: CLASS4
Ecology Program: SPILLS
Program Data: SPILLS
Facility Alt.: Port of Friday Harbor, IPS
Program ID: Not reported
Date Interaction: 2006-10-26 00:00:00
Date Interaction 3: Class 4 Facility
Latitude: 48.536543233000003
Longitude: -123.01651699200001

Interaction: 50124
Interaction 1: A
Interaction 2: LUST
Ecology Program: TOXICS
Program Data: ISIS
Facility Alt.: Not reported
Program ID: 6546
Date Interaction: 1993-05-25 00:00:00
Date Interaction 3: LUST Facility
Latitude: 48.536543233000003
Longitude: -123.01651699200001

Interaction: 82867
Interaction 1: I
Interaction 2: INDSWGP
Ecology Program: WATQUAL
Program Data: PARIS
Facility Alt.: FRIDAY HARBOR MARINA
Program ID: WAR001540
Date Interaction: 1993-12-20 00:00:00
Date Interaction 3: Industrial SW GP
Latitude: 48.536543233000003
Longitude: -123.01651699200001

SPILLS:
Facility ID: 637359
Medium: SURFACE WATER-MARINE
Material Desc: PETROLEUM - GASOLINE
Material Qty: Not reported
Material Units: GALLON
Date Received: 11/02/2012

FRIDAY HARBOR MARINA (Continued) **U003132733**

Contact Name:	GUNDERSON
Incident Date:	Not reported
Incident Category Type:	Not reported
Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported
Facility ID:	533126
Medium:	Not reported
Material Desc:	PETROLEUM - DIESEL FUEL
Material Qty:	Not reported
Material Units:	Not reported
Date Received:	04/14/2003
Contact Name:	UNK
Incident Date:	Not reported
Incident Category Type:	Not reported
Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported
Facility ID:	556559
Medium:	Not reported
Material Desc:	PETROLEUM - HYDRAULIC OIL
Material Qty:	1
Material Units:	GALLON
Date Received:	07/21/2006
Contact Name:	CRANE
Incident Date:	Not reported
Incident Category Type:	Not reported
Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported
Facility ID:	647467
Medium:	VESSEL
Material Desc:	PAINT (OIL-BASED)
Material Qty:	4
Material Units:	CUBIC FT
Date Received:	03/14/2014
Contact Name:	UNKNOWN
Incident Date:	Not reported
Incident Category Type:	Not reported

FRIDAY HARBOR MARINA (Continued) **U003132733**

Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported
Facility ID:	652979
Medium:	SURFACE WATER-MARINE
Material Desc:	PETROLEUM - DIESEL FUEL
Material Qty:	Not reported
Material Units:	GALLON
Date Received:	11/18/2014
Contact Name:	RAMIREZ
Incident Date:	Not reported
Incident Category Type:	Not reported
Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported
Facility ID:	618480
Medium:	SURFACE WATER-MARINE
Material Desc:	PETROLEUM - DIESEL FUEL
Material Qty:	Not reported
Material Units:	GALLON
Date Received:	03/02/2010
Contact Name:	OLIN
Incident Date:	Not reported
Incident Category Type:	Not reported
Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported
Facility ID:	647467
Medium:	VESSEL
Material Desc:	PAINT (OIL-BASED)
Material Qty:	4
Material Units:	CUBIC FT
Date Received:	Not reported
Contact Name:	UNKNOWN
Incident Date:	Not reported
Incident Category Type:	Not reported
Incident Category:	Not reported
Latitude:	Not reported
Longitude:	Not reported

FRIDAY HARBOR MARINA (Continued) **U003132733**

Source Type:	Not reported
Source:	Not reported
Vessel Facility Name2:	Not reported
Recovered Quantity:	Not reported
Resp Party Name:	Not reported

19
NW
1/2-1
0.996 mi.
5258 ft.

STANDARD OIL BULK PLANT 307836 **CSCSL S117724282**
151 WEST ST **ALLSITES N/A**
FRIDAY HARBOR, WA 98250

Relative:
Higher

Actual:
67 ft.

CSCSL:

Facility ID:	5541
Region:	Northwest
Lat/Long:	48.535604479 / -123.01614583
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	12562
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Benzene
Ground Water:	Confirmed Above Cleanup Level
Surface Water:	Not reported
Soil:	Suspected
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID:	5541
Region:	Northwest
Lat/Long:	48.535604479 / -123.01614583
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	12562
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Lead
Ground Water:	Confirmed Above Cleanup Level
Surface Water:	Not reported
Soil:	Not reported
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID:	5541
Region:	Northwest
Lat/Long:	48.535604479 / -123.01614583
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	12562
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Diesel
Ground Water:	Confirmed Above Cleanup Level
Surface Water:	Not reported

STANDARD OIL BULK PLANT 307836 (Continued) **S117724282**

Soil:	Suspected
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID:	5541
Region:	Northwest
Lat/Long:	48.535604479 / -123.01614583
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	12562
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Gasoline
Ground Water:	Suspected
Surface Water:	Not reported
Soil:	Confirmed Above Cleanup Level
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

Facility ID:	5541
Region:	Northwest
Lat/Long:	48.535604479 / -123.01614583
Brownfield Status:	Not reported
Rank Status:	N
Clean Up Siteid:	12562
Site Status:	Cleanup Started
PSI?:	Yes
Contaminant Name:	Petroleum-Other
Ground Water:	Not reported
Surface Water:	Not reported
Soil:	Suspected
Sediment:	Not reported
Air:	Not reported
Bedrock:	Not reported
Responsible Unit:	Northwest

ALLSITES:

Facility Name:	STANDARD OIL BULK PLANT 307836
Facility Id:	5541

Interaction:	111887
Interaction 1:	A
Interaction 2:	SCS
Ecology Program:	TOXICS
Program Data:	ISIS
Facility Alt.:	Standard Oil Bulk Plant 307836
Program ID:	Not reported
Date Interaction:	2014-04-28 00:00:00
Date Interaction 3:	State Cleanup Site
Latitude:	48.535591842999999
Longitude:	-123.016141084

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/08/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 99

Source: EPA
Telephone: N/A
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: EPA
Telephone: N/A
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: EPA
Telephone: N/A
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 02/07/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/22/2017
Date Data Arrived at EDR: 06/13/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 94

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 101

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 101

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/26/2016
Date Data Arrived at EDR: 09/29/2016
Date Made Active in Reports: 11/11/2016
Number of Days to Update: 43

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

State- and tribal - equivalent NPL

HSL: Hazardous Sites List

The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 02/21/2017
Date Data Arrived at EDR: 03/09/2017
Date Made Active in Reports: 06/02/2017
Number of Days to Update: 85

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

State- and tribal - equivalent CERCLIS

CSCSL: Confirmed and Suspected Contaminated Sites List

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 07/18/2017
Date Data Arrived at EDR: 07/21/2017
Date Made Active in Reports: 09/26/2017
Number of Days to Update: 67

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facility Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/29/2017
Date Data Arrived at EDR: 09/08/2017
Date Made Active in Reports: 09/26/2017
Number of Days to Update: 18

Source: Department of Ecology
Telephone: 360-407-6132
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tanks Site List

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/15/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/26/2017
Number of Days to Update: 39

Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Semi-Annually

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/14/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Varies

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 01/31/2017
Date Data Arrived at EDR: 02/02/2017
Date Made Active in Reports: 03/20/2017
Number of Days to Update: 46
Source: Department of Ecology
Telephone: 360-407-7183
Last EDR Contact: 08/14/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Locations
A listing of aboveground storage tank locations regulated by the Department of Ecology's Spill Prevention, Preparedness and Response Program.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 02/02/2016
Date Made Active in Reports: 05/03/2016
Number of Days to Update: 91
Source: Department of Ecology
Telephone: 360-407-7562
Last EDR Contact: 07/31/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/06/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 01/14/2017
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 11/14/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/17/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Quarterly

State and tribal institutional control / engineering control registries

INST CONTROL: Institutional Control Site List
Sites that have institutional controls.

Date of Government Version: 07/18/2017
Date Data Arrived at EDR: 07/21/2017
Date Made Active in Reports: 09/26/2017
Number of Days to Update: 67

Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites
Sites that have entered either the Voluntary Cleanup Program or its predecessor Independent Remedial Action Program.

Date of Government Version: 04/18/2017
Date Data Arrived at EDR: 04/20/2017
Date Made Active in Reports: 06/30/2017
Number of Days to Update: 71

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

ICR: Independent Cleanup Reports
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree. This database is no longer updated by the Department of Ecology.

Date of Government Version: 12/01/2002
Date Data Arrived at EDR: 01/03/2003
Date Made Active in Reports: 01/22/2003
Number of Days to Update: 19

Source: Department of Ecology
Telephone: 360-407-7200
Last EDR Contact: 08/10/2009
Next Scheduled EDR Contact: 11/09/2009
Data Release Frequency: No Update Planned

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites Listing
A listing of brownfields sites included in the Confirmed & Suspected Sites Listing. Brownfields are abandoned, idle or underused commercial or industrial properties, where the expansion or redevelopment is hindered by real or perceived contamination. Brownfields vary in size, location, age, and past use -- they can be anything from a five-hundred acre automobile assembly plant to a small, abandoned corner gas station.

Date of Government Version: 01/18/2017
Date Data Arrived at EDR: 01/20/2017
Date Made Active in Reports: 03/17/2017
Number of Days to Update: 56

Source: Department of Ecology
Telephone: 360-725-4030
Last EDR Contact: 07/18/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/19/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/20/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWTIRE: Solid Waste Tire Facilities

This study identified sites statewide with unauthorized accumulations of scrap tires.

Date of Government Version: 11/01/2005
Date Data Arrived at EDR: 03/16/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 28

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

SWRCY: Recycling Facility List

A llisting of recycling center locations.

Date of Government Version: 04/26/2017
Date Data Arrived at EDR: 04/27/2017
Date Made Active in Reports: 06/30/2017
Number of Days to Update: 64

Source: Department of Ecology
Telephone: 360-407-6105
Last EDR Contact: 07/24/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137
Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/24/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 08/29/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/09/2017
Date Data Arrived at EDR: 03/08/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 93
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

ALLSITES: Facility/Site Identification System Listing
Information on facilities and sites of interest to the Department of Ecology.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 09/26/2017
Number of Days to Update: 46
Source: Department of Ecology
Telephone: 360-407-6423
Last EDR Contact: 07/31/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Quarterly

CDL: Clandestine Drug Lab Contaminated Site List
Illegal methamphetamine labs use hazardous chemicals that create public health hazards. Chemicals and residues can cause burns, respiratory and neurological damage, and death. Biological hazards associated with intravenous needles, feces, and blood also pose health risks.

Date of Government Version: 08/31/2017
Date Data Arrived at EDR: 09/11/2017
Date Made Active in Reports: 09/26/2017
Number of Days to Update: 15
Source: Department of Health
Telephone: 360-236-3380
Last EDR Contact: 09/05/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

HIST CDL: List of Sites Contaminated by Clandestine Drug Labs
This listing of contaminated sites by Clandestine Drug Labs includes non-remediated properties. The current CDL listing does not. This listing is no longer updated by the state agency.

Date of Government Version: 02/08/2007
Date Data Arrived at EDR: 06/26/2007
Date Made Active in Reports: 07/19/2007
Number of Days to Update: 23
Source: Department of Health
Telephone: 360-236-3381
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

CSCSL NFA: Confirmed and Contaminated Sites - No Further Action

This report contains information about sites that are undergoing cleanup and sites that are awaiting further investigation and/or cleanup. Sites on the Hazardous Sites List (see above) are included in this data set.

Date of Government Version: 07/18/2017
Date Data Arrived at EDR: 07/21/2017
Date Made Active in Reports: 09/26/2017
Number of Days to Update: 67

Source: Department of Ecology
Telephone: 360-407-7170
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Semi-Annually

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/09/2017
Date Data Arrived at EDR: 03/08/2017
Date Made Active in Reports: 06/09/2017
Number of Days to Update: 93

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/26/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/28/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 37

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

SPILLS: Reported Spills

Spills reported to the Spill Prevention, Preparedness and Response Division.

Date of Government Version: 03/08/2017
Date Data Arrived at EDR: 03/09/2017
Date Made Active in Reports: 06/05/2017
Number of Days to Update: 88

Source: Department of Ecology
Telephone: 360-407-6950
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 05/23/2006
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/12/2016
Date Data Arrived at EDR: 12/28/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/25/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/12/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/14/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63
Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 05/10/2017
Date Data Arrived at EDR: 05/17/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 121
Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88
Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6
Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14
Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133
Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/23/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74
Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2017
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 57
Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/24/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/08/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2016
Date Data Arrived at EDR: 04/28/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 127
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2017
Next Scheduled EDR Contact: 07/24/2017
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/28/2017
Next Scheduled EDR Contact: 11/08/2017
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/04/2017
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 35
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/12/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 11/18/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 77

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/11/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/22/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/07/2017
Next Scheduled EDR Contact: 10/16/2017
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/08/2017
Date Data Arrived at EDR: 02/28/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 38

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/14/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 21

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/23/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 9

Source: EPA
Telephone: (206) 553-1200
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 03/19/2017
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 05/12/2017
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/17/2017
Date Data Arrived at EDR: 08/17/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 29

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/17/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

AIRS (EMI): Washington Emissions Data System

Emissions inventory data.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2017
Date Made Active in Reports: 03/17/2017
Number of Days to Update: 66

Source: Department of Ecology
Telephone: 360-407-6040
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Annually

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 11/16/2016
Date Data Arrived at EDR: 02/24/2017
Date Made Active in Reports: 09/11/2017
Number of Days to Update: 199

Source: Department of Labor & Industries
Telephone: 360-902-6209
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Site Listing

A listing of coal ash disposal site locations.

Date of Government Version: 03/13/2017
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 06/01/2017
Number of Days to Update: 72

Source: Department of Ecology
Telephone: 360-407-6933
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

DRYCLEANERS: Drycleaner List

A listing of registered drycleaners who registered with the Department of Ecology (using the SIC code of 7215 and 7216) as hazardous waste generators.

Date of Government Version: 04/18/2017
Date Data Arrived at EDR: 04/20/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 85

Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/24/2012
Date Data Arrived at EDR: 02/24/2012
Date Made Active in Reports: 03/27/2012
Number of Days to Update: 32

Source: Department of Ecology
Telephone: 360-586-1060
Last EDR Contact: 08/25/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/02/2017
Date Data Arrived at EDR: 05/16/2017
Date Made Active in Reports: 09/20/2017
Number of Days to Update: 127

Source: Department of Ecology
Telephone: 360-407-6754
Last EDR Contact: 08/14/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/19/2007
Number of Days to Update: 44

Source: Department of Ecology
Telephone: 360-407-6136
Last EDR Contact: 08/14/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

INACTIVE DRYCLEANERS: Inactive Drycleaners

A listing of inactive drycleaner facility locations.

Date of Government Version: 04/18/2017
Date Data Arrived at EDR: 04/20/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 85

Source: Department of Ecology
Telephone: 360-407-6732
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Annually

WA MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/27/2017
Date Made Active in Reports: 06/05/2017
Number of Days to Update: 39

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Annually

NPDES: Water Quality Permit System Data

A listing of permitted wastewater facilities.

Date of Government Version: 04/18/2017
Date Data Arrived at EDR: 04/20/2017
Date Made Active in Reports: 06/05/2017
Number of Days to Update: 46

Source: Department of Ecology
Telephone: 360-407-6073
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Quarterly

UIC: Underground Injection Wells Listing

A listing of underground injection wells.

Date of Government Version: 04/18/2017
Date Data Arrived at EDR: 04/20/2017
Date Made Active in Reports: 06/05/2017
Number of Days to Update: 46

Source: Department of Ecology
Telephone: 360-407-6143
Last EDR Contact: 07/21/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Ecology in Washington.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Ecology
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

KING COUNTY:

Abandoned Landfill Study in King County

The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/1985
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE COUNTY:

Abandoned Landfill Study in the City of Seattle

The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/1984
Date Data Arrived at EDR: 11/07/1994
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 10/21/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SEATTLE/KING COUNTY:

Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project

This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/1986
Date Data Arrived at EDR: 08/18/1995
Date Made Active in Reports: 09/20/1995
Number of Days to Update: 33

Source: Department of Public Health
Telephone: 206-296-4785
Last EDR Contact: 08/14/1995
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SNOHOMISH COUNTY:

Solid Waste Sites of Record at Snohomish Health District

Solid waste disposal and/or utilization sites in Snohomish County.

Date of Government Version: 11/16/2011
Date Data Arrived at EDR: 03/29/2012
Date Made Active in Reports: 05/03/2012
Number of Days to Update: 35

Source: Snohomish Health District
Telephone: 206-339-5250
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Semi-Annually

TACOMA/PIERCE COUNTY:

Closed Landfill Survey

Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 09/01/2002
Date Data Arrived at EDR: 03/24/2003
Date Made Active in Reports: 05/14/2003
Number of Days to Update: 51

Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Last EDR Contact: 03/19/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/30/2017
Date Data Arrived at EDR: 02/01/2017
Date Made Active in Reports: 02/13/2017
Number of Days to Update: 12

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/17/2017
Next Scheduled EDR Contact: 10/30/2017
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/11/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Daycare Center Listing
Source: Department of Social & Health Services
Telephone: 253-383-1735

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Ecology
Telephone: 360-407-6121

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

JENSENS SHIPYARD
1293 TURN POINT RD
FRIDAY HARBOR, WA 98250

TARGET PROPERTY COORDINATES

Latitude (North):	48.525527 - 48° 31' 31.90''
Longitude (West):	122.999279 - 122° 59' 57.40''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	500053.2
UTM Y (Meters):	5374494.0
Elevation:	16 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	6006532 SHAW ISLAND, WA
Version Date:	2014
Northwest Map:	6004377 FRIDAY HARBOR, WA
Version Date:	2014

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

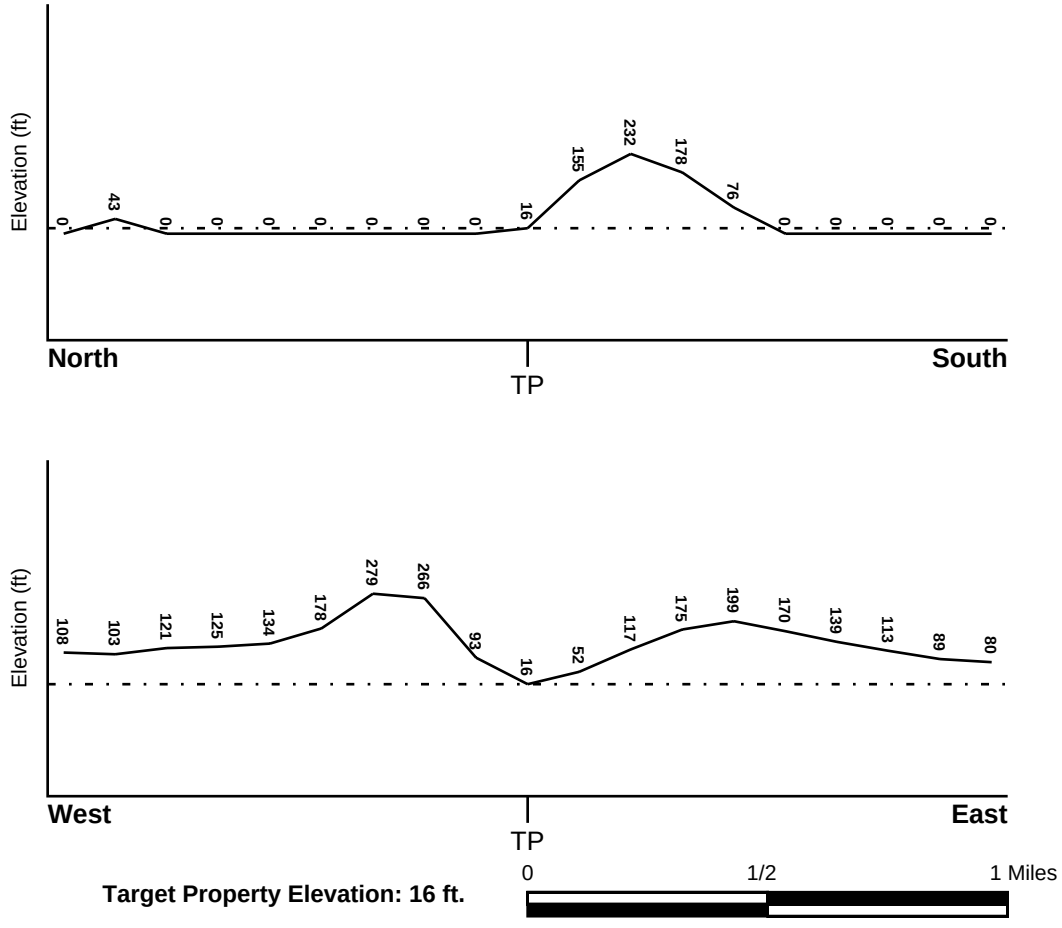
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
5301490005B	FEMA Q3 Flood data

Additional Panels in search area:	FEMA Source Type
5301500001A	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
SHAW ISLAND	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

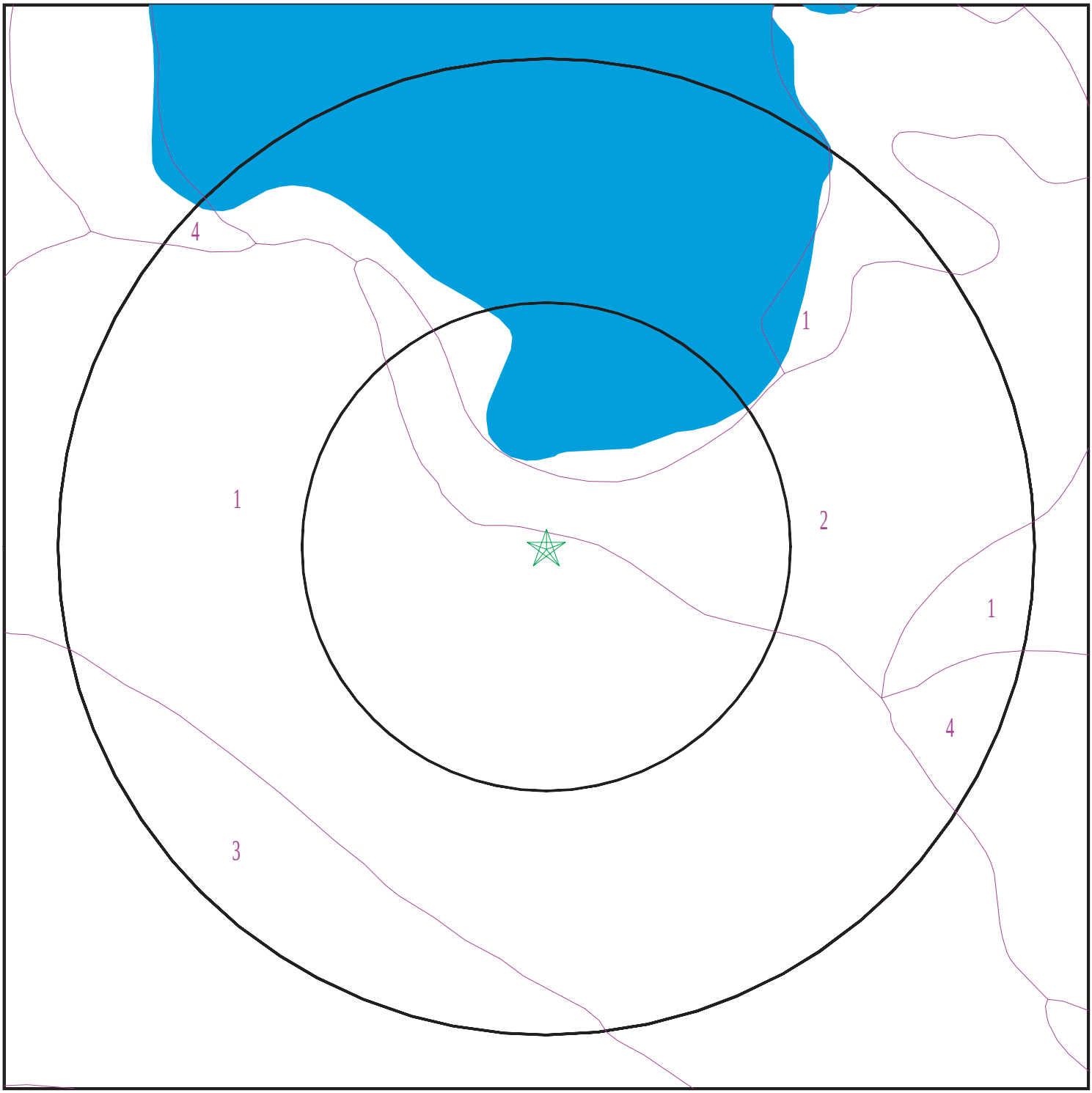
Era:	Mesozoic
System:	Cretaceous
Series:	Upper Mesozoic
Code:	uMze*(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5062208.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Jensens Shipyard	CLIENT:	Whatcom Environmental Services
ADDRESS:	1293 Turn Point Rd Friday Harbor WA 98250	CONTACT:	Henry Cade
LAT/LONG:	48.525527 / 122.999279	INQUIRY #:	5062208.2s
		DATE:	September 27, 2017 7:37 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Roche

Soil Surface Texture: gravelly loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 46 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 6.1
2	9 inches	16 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 6 Min: 5.6
3	16 inches	24 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 6 Min: 5.6
4	24 inches	59 inches	gravelly fine sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0.01	Max: 6.5 Min: 6.1

Soil Map ID: 2

Soil Component Name: Everett

Soil Surface Texture: gravelly sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	gravelly sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 141 Min: 42	Max: 6 Min: 5.6
2	7 inches	24 inches	gravelly fine sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 141 Min: 42	Max: 6.5 Min: 5.6
3	24 inches	59 inches	very gravelly coarse sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 141 Min: 42	Max: 6.5 Min: 5.6

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 3

Soil Component Name: San Juan

Soil Surface Texture: stony sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		**Soil Reaction (pH)**
1	0 inches	9 inches	stony sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 141 Min: 42	Max: 6 Min: 5.6
2	9 inches	20 inches	gravelly loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 141 Min: 42	Max: 6.5 Min: 6.1
3	20 inches	59 inches	gravelly loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 141 Min: 42	Max: 7.3 Min: 6.1

Soil Map ID: 4

Soil Component Name: Roche

Soil Surface Texture: gravelly loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 46 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 6.5 Min: 6.1
2	9 inches	16 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 5.6
3	16 inches	24 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 14 Min: 4	Max: 7.3 Min: 5.6
4	24 inches	59 inches	gravelly fine sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0.01	Max: 6.5 Min: 6.1

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	USGS40001290127	1/4 - 1/2 Mile NNE
4	USGS40001290134	1/2 - 1 Mile NE
6	USGS40001290123	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

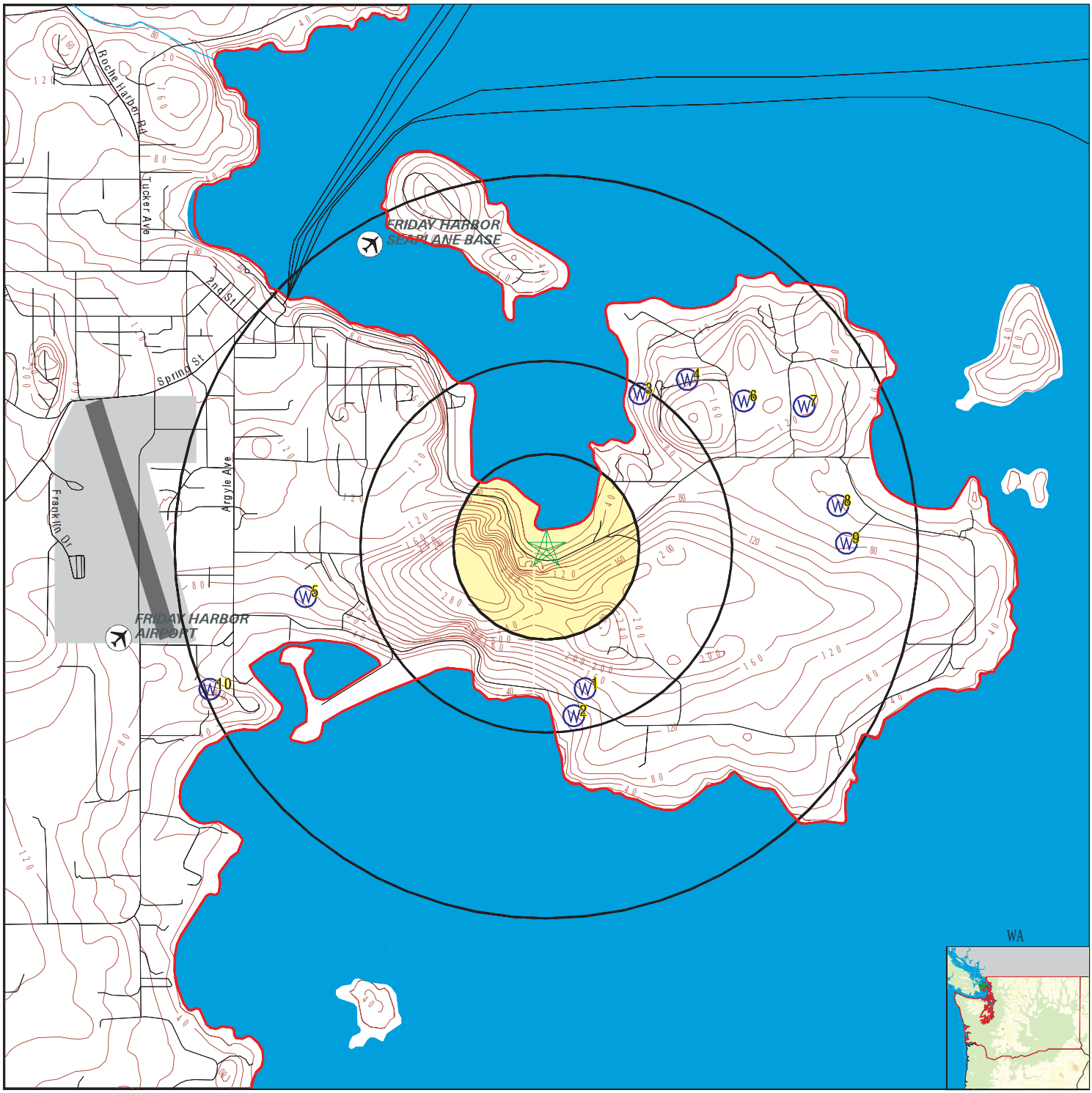
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	WA8000000010059	1/4 - 1/2 Mile SSE
2	WA8000000009190	1/4 - 1/2 Mile South
5	WA8000000000992	1/2 - 1 Mile WSW
7	WA8000000001270	1/2 - 1 Mile ENE
8	WA8000000020805	1/2 - 1 Mile East
9	WA8000000001029	1/2 - 1 Mile East
10	WA8000000002154	1/2 - 1 Mile WSW

PHYSICAL SETTING SOURCE MAP - 5062208.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

N

SITE NAME:	Jensens Shipyard	CLIENT:	Whatcom Environmental Services
ADDRESS:	1293 Turn Point Rd Friday Harbor WA 98250	CONTACT:	Henry Cade
LAT/LONG:	48.525527 / 122.999279	INQUIRY #:	5062208.2s
		DATE:	September 27, 2017 7:37 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
SSE
1/4 - 1/2 Mile
Higher

WA WELLS **WA8000000010059**

Fid:	10058	Lerootid:	68411
Srcrootid:	27564	Pwsid:	AA006
Srcnum:	01	Pwssrcid:	AA00601
Systemname:	ARTHUR MILLER WATER SYSTEM	Systemgrou:	B
Systemtype:	GRPB	Region:	NW
County:	SAN JUAN	Smaid:	Not Reported
Ftrespopul:	1	Resconnect:	1
Totalconne:	2	Srcname:	WELL 1 ABO703
Srctype:	W	Srcusecode:	P
Srcwelldep:	15	Township:	35
Range :	03W	Section:	24
Qtrqtrsect:	NENE		
Longitude:	-122.997		
Latitude:	48.52		
Latlongmet:	QtrQtrSe	Srcsuscept:	U
Srcvulnioc:	Not Reported	Srcvulnvoc:	Not Reported
Srcvulnsoc:	Not Reported	Doewelltag:	ABO703
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	3603785604
Priconta 1:	Not Reported	Priconta 2:	4214 PEAR POINT RD
Priconta 3:	FRIDAY HARBOR	Priconta 4:	WA
Priconta 5:	98250		
Priconta 6:	Not Reported		
Pwseffecti:	28-OCT-04	Pwsstatusi:	I
Pwsinactiv:	28-OCT-04	Srcstatusi:	I
Srceffecti:	29-MAY-02	Srcinactiv:	28-OCT-04
Floodzonei:	N	Priconta 7:	ARTHUR MILLER
Srcswinflu:	N	Latlongdat:	Not Reported
Site id:	WA8000000010059		

2
South
1/4 - 1/2 Mile
Higher

WA WELLS **WA8000000009190**

Fid:	9189	Lerootid:	52228
Srcrootid:	6032	Pwsid:	05456
Srcnum:	01	Pwssrcid:	0545601
Systemname:	VENTANA WATER SYSTEM	Systemgrou:	B
Systemtype:	GRPB	Region:	NW
County:	SAN JUAN	Smaid:	Not Reported
Ftrespopul:	2	Resconnect:	3
Totalconne:	3	Srcname:	WELL #1 AGA040
Srctype:	W	Srcusecode:	P
Srcwelldep:	23	Township:	35

Range :	03W	Section:	24
Qtrqtrsect:	Not Reported		
Longitude:	-122.997666		
Latitude:	48.518943		
Latlongmet:	GPS	Srcsuscept:	H
Srcvulnioc:	H	Srcvulnvoc:	H
Srcvulnsoc:	U	Doewelltag:	AGA040
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	36078-663
Priconta 1:	Not Reported	Priconta 2:	PO BOX 2536
Priconta 3:	FRIDAY HARBOR	Priconta 4:	WA
Priconta 5:	98250		
Priconta 6:	Not Reported		
Pwseffecti:	29-AUG-96	Pwsstatusi:	A
Pwsinactiv:	Not Reported	Srcstatusi:	A
Srceffecti:	29-AUG-96	Srcinactiv:	Not Reported
Floodzonei:	N	Priconta 7:	LEIGHANNE HARRIS
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000009190		

3
NNE **FED USGS** **USGS40001290127**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-483154122593301		
Monloc name:	35N/02W-18E01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17110003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	48.5314887
Longitude:	-122.9937902	Sourcemap scale:	62500
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	60
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19680110	Welldepth:	180
Welldepth units:	ft	Wellholedepth:	180
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1968-01-10	22	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

4
NE
1/2 - 1 Mile
Higher | **FED USGS** | **USGS40001290134**

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-483156122592301		
Monloc name:	35N/02W-18F02		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17110003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	48.5320443
Longitude:	-122.9910125	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	190
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19790213	Welldepth:	305
Welldepth units:	ft	Wellholedepth:	305
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 14

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1988-09-22	146.04				
Note: The site had been pumped recently.					
1988-04-06	139.12		1987-12-23	144.94	
1986-09-25	158.9		1986-04-17	150.9	
1984-09-13	148.0		1983-09-14	137.04	
1982-12-10	131.69		1981-11-04	149.97	
1981-09-11	134.77		1981-07-15	120.3	
1981-06-10	134.0		1981-05-14	115.71	
1981-04-08	111.6				

5
WSW
1/2 - 1 Mile
Higher | **WA WELLS** | **WA8000000000992**

Fid:	991	Lerootid:	48791
Srcrootid:	2249	Pwsid:	02019
Srcnum:	01	Pwssrcid:	0201901
Systemname:	GRIFFIN VIEW TERRACE WATER SYSTEM	Systemid:	B
Systemtype:	GRPB	Region:	NW
County:	SAN JUAN	Smaid:	Not Reported
Ftrespopul:	17	Resconnect:	7
Totalconne:	7	Srcname:	WELL #1
Srctype:	W	Srcusecode:	P
Srcwelldep:	170	Township:	35

Range :	03W	Section:	13
Qtrqtrsect:	SWSW		
Longitude:	-123.013391		
Latitude:	48.523587		
Latlongmet:	GPS	Srcsuscept:	U
Srcvulnioc:	Not Reported	Srcvulnvoc:	Not Reported
Srcvulnsoc:	Not Reported	Doewelltag:	ABO765
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	3603786978
Priconta 1:	Not Reported	Priconta 2:	PO BOX 623
Priconta 3:	FRIDAY HARBOR	Priconta 4:	WA
Priconta 5:	98250		
Priconta 6:	Not Reported		
Pwseffecti:	22-OCT-92	Pwsstatusi:	A
Pwsinactiv:	Not Reported	Srcstatusi:	A
Srceffecti:	22-OCT-92	Srcinactiv:	Not Reported
Floodzonei:	N	Priconta 7:	CHRIS EDLEN
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000000992		

6
NE **FED USGS** **USGS40001290123**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-WA		
Formal name:	USGS Washington Water Science Center		
Monloc Identifier:	USGS-483153122591101		
Monloc name:	35N/02W-18F01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	17110003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	48.531211
Longitude:	-122.987679	Sourcemap scale:	62500
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	115
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19680119	Welldepth:	142
Welldepth units:	ft	Wellholedepth:	142
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1968-01-19	18	

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

7
ENE
1/2 - 1 Mile
Higher

WA WELLS **WA8000000001270**

Fid:	1269	Lerootid:	49383
Srcrootid:	2913	Pwsid:	02611
Srcnum:	01	Pwssrcid:	0261101
Systemname:	CHANNEL VIEW HEIGHTS WATER SYSTEM	Systemgrou:	B
Systemtype:	GRPB	Region:	NW
County:	SAN JUAN	Smaid:	Not Reported
Ftrespopul:	4	Resconnect:	3
Totalconne:	3	Srcname:	WELL #1 AGK197
Srctype:	W	Srcusecode:	P
Srcwelldep:	140	Township:	35
Range :	02W	Section:	18
Qtrqtrsect:	SWNE		
Longitude:	-122.984158		
Latitude:	48.531005		
Latlongmet:	GPS	Srcsuscept:	H
Srcvulnioc:	H	Srcvulnvoc:	H
Srcvulnsoc:	U	Doewelltag:	AKG197
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	3603784482
Priconta 1:	Not Reported	Priconta 2:	PO BOX 2302
Priconta 3:	FRIDAY HARBOR	Priconta 4:	WA
Priconta 5:	98250		
Priconta 6:	Not Reported		
Pwseffecti:	16-AUG-93	Pwsstatusi:	A
Pwsinactiv:	Not Reported	Srcstatusi:	A
Srceffecti:	16-AUG-93	Srcinactiv:	Not Reported
Floodzonei:	N	Priconta 7:	CLAUDIA SALQUIST
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000001270		

8
East
1/2 - 1 Mile
Higher

WA WELLS **WA8000000020805**

Fid:	20804	Lerootid:	48242
Srcrootid:	1645	Pwsid:	01470
Srcnum:	01	Pwssrcid:	0147001
Systemname:	CHANNEL ESTATES	Systemgrou:	B
Systemtype:	GRPB	Region:	NW
County:	SAN JUAN	Smaid:	Not Reported
Ftrespopul:	12	Resconnect:	5
Totalconne:	5	Srcname:	WELL AKM706
Srctype:	W	Srcusecode:	P
Srcwelldep:	142	Township:	35

Range :	02W	Section:	18
Qtrqtrsect:	SENW		
Longitude:	-122.98217		
Latitude:	48.52713		
Latlongmet:	QtrQtrSection	Srcsuscept:	H
Srcvulnioc:	H	Srcvulnvoc:	H
Srcvulnsoc:	U	Doewelltag:	AKM706
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	3603783407
Priconta 1:	Not Reported	Priconta 2:	PO BOX 913
Priconta 3:	FRIDAY HARBOR	Priconta 4:	WA
Priconta 5:	98250		
Priconta 6:	Not Reported		
Pwseffecti:	12-JUN-92	Pwsstatusi:	A
Pwsinactiv:	Not Reported	Srcstatusi:	A
Srceffecti:	12-JUN-92	Srcinactiv:	Not Reported
Floodzonei:	N	Priconta 7:	ROBERT PETERSON
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000020805		

9
East
1/2 - 1 Mile
Higher

WA WELLS **WA8000000001029**

Fid:	1028	Lerootid:	48626
Srcrootid:	2069	Pwsid:	01854
Srcnum:	01	Pwssrcid:	0185401
Systemname:	CHANNEL VISTA ESTATES	Systemgrou:	B
Systemtype:	GRPB	Region:	NW
County:	SAN JUAN	Smaid:	Not Reported
Ftrespopul:	9	Resconnect:	3
Totalconne:	3	Srcname:	WELL/AER028
Srctype:	W	Srcusecode:	P
Srcwelldep:	110	Township:	35
Range :	02W	Section:	18
Qtrqtrsect:	NESE		
Longitude:	-122.981672		
Latitude:	48.525662		
Latlongmet:	GPS	Srcsuscept:	H
Srcvulnioc:	H	Srcvulnvoc:	H
Srcvulnsoc:	U	Doewelltag:	AER028
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	3603784507
Priconta 1:	Not Reported	Priconta 2:	2192 TURN POINT RD
Priconta 3:	FRIDAY HARBOR	Priconta 4:	WA
Priconta 5:	98250		
Priconta 6:	Not Reported		
Pwseffecti:	23-NOV-92	Pwsstatusi:	A
Pwsinactiv:	Not Reported	Srcstatusi:	A
Srceffecti:	23-NOV-92	Srcinactiv:	Not Reported
Floodzonei:	N	Priconta 7:	MARY ANN GREWOHL
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000001029		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
10 WSW 1/2 - 1 Mile Higher	**WA WELLS**	**WA8000000002154**

Fid:	2153	Lerootid:	47876
Srcrootid:	1239	Pwsid:	01104
Srcnum:	01	Pwssrcid:	0110401
Systemname:	ASPEN BEACH WATER SYSTEM	Systemgrou:	B
Systemtype:	GRPB	Region:	NW
County:	SAN JUAN	Smaid:	Not Reported
Ftrespopul:	8	Resconnect:	2
Totalconne:	2	Srcname:	WELL
Srctype:	W	Srcusecode:	P
Srcwelldep:	345	Township:	35
Range :	03W	Section:	23
Qtrqtrsect:	NENE		
Longitude:	-123.019		
Latitude:	48.51998		
Latlongmet:	QtrQtrSe	Srcsuscept:	H
Srcvulnioc:	H	Srcvulnvoc:	H
Srcvulnsoc:	U	Doewelltag:	Not Reported
Srctot6mo:	0	Srctot1yr:	0
Srctot5yr:	0	Srctot10yr:	0
Protection:	Assigned	Pricontact:	3603782746
Priconta 1:	Not Reported	Priconta 2:	200 ASPEN BEACH LANE
Priconta 3:	FRIDAY HARBOR	Priconta 4:	WA
Priconta 5:	98250		
Priconta 6:	Not Reported		
Pwseffecti:	09-SEP-09	Pwsstatusi:	I
Pwsinactiv:	09-SEP-09	Srcstatusi:	I
Srceffecti:	08-NOV-91	Srcinactiv:	27-MAR-09
Floodzonei:	N	Priconta 7:	PATRICK MALLOY
Srcswinflu:	U	Latlongdat:	Not Reported
Site id:	WA8000000002154		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for SAN JUAN County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Ecology
Telephone: 360-407-6121

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Wells
Source: Department of Health
Telephone: 360-236-3148
Group A and B well locations.

Water Well Listing
Source: Public Utility District
Telephone: 206-779-7656
A listing of water well locations in Kitsap County.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Listing
Source: Department of Natural Resources
Telephone: 360-902-1450
Locations that represent oil and gas test well sites in Washington State from 1890 to present.

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

APPENDIX C

Historical Use Information

2001 Ecology Report

Concentrations of Selected Chemicals in Sediments from Harbors in the San Juan Islands

March 2001

Publication No. 01-03-007

printed on recycled paper

This report is available on the Department of Ecology home page on the World Wide Web at http://www.ecy.wa.gov/biblio/0103007.html

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Concentrations of Selected Chemicals in Sediments from Harbors in the San Juan Islands

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Abstract

The Washington State Department of Ecology (Ecology) conducted a screening level survey of sediment quality in four harbors in the San Juan Islands during May 1997. The primary objective of this investigation was to assess the occurrence and extent of toxic chemicals associated with marina activities in the four harbors. A secondary objective was to determine if chemical concentrations exceed marine Sediment Quality Standards (SQS) under the Sediment Management Standards or the Puget Sound Dredge Disposal Analysis (PSDDA) interim screening level for tributyltin.

Sampling was conducted in Friday Harbor and Roche Harbor (San Juan Island), West Sound (Orcas Island), and Fisherman Bay (Lopez Island). Sediments were collected from four to eight locations within each harbor to represent boat slips, boat moorage areas, and areas slightly beyond the moorage perimeter to assess drift of the target chemicals. Sediments potentially influenced by boatyard activities were also sampled, except in Roche Harbor which does not have a boatyard. Two locations from Mud Bay were sampled to establish background levels for the target chemicals. All samples were analyzed for the following parameters: total organic carbon, chromium, copper, lead, zinc, semivolatile organics, and butyltins.

Overall metals concentrations were low. More than half the results were below mean values obtained at the Mud Bay (Lopez Island) reference site. Mean concentration of metals at all harbors were an order of magnitude below the SQS. The highest metals concentrations (lead, copper, and zinc) were found in West Sound.

Total LPAH and HPAH (low and high molecular weight PAHs) concentrations were elevated above reference sediment values at all four harbors, although none exceeded the SQS. Similarly, individual PAHs were elevated at all four harbors but also below SQS. One exceedance of SQS occurred for fluoranthene, in West Sound.

Friday Harbor sediments were the most contaminated with the target semivolatiles; 76% of the highest concentrations were found in this harbor. None of the concentrations exceeded SQS, however.

TBT concentrations were generally elevated above reference levels in all four harbors. Elevated TBT concentrations were most evident in West Sound sediments, and the two highest values were from this harbor. Concentrations were up to 67 times the PSDDA interim screening level. It is recommended that biological testing of sediments from these locations be considered, to determine the potential for adverse biological effects.

Acknowledgments

The authors of this report would like to thank the following people for their contribution to this study:

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- Nigel Blakley for technical editing of the report.

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Introduction

Background

Washington's San Juan Islands (San Juans) are a group of islands and islets located at the union of the Strait of Georgia and the Strait of Juan de Fuca. Their location and scenic beauty make them a popular boating destination for both American and Canadian recreational boaters as well as commercial fishers. Five boatyards, including a shipyard in Friday Harbor, currently operate under permit in the San Juans. There are also a number of defunct boatyards.

Few data exist on concentrations of toxic chemicals in harbor sediments of the San Juans. Due to the San Juans' popularity for boating and the lack of sediment chemistry data, the San Juan/Nooksack Watershed Needs Assessment identified potential water and sediment quality impacts from San Juans harbors as an issue of concern. Potential problems include impacts due to pumpouts and land-based sources of bacterial contamination, as well as toxic contaminants from vessel-related activities (e.g., vessel repair, spillage of petroleum products, and sloughing and ablation of anti-fouling paints). This report focuses on toxic contaminants in San Juans harbor sediments.

A review of the literature indicates that toxic contaminants of concern in harbor areas include chromium, copper, lead, zinc, tributyltin (TBT), and polycyclic aromatic hydrocarbons (PAH) (e.g., Young *et al*., 1979; Crecelius *et al*., 1989; Tay *et al*., 1992). Copper and TBT are major components of anti-fouling paints applied to vessel bottoms. Although TBT has been banned for most pleasure boat applications in the U.S. since 1988, its widespread historic use has made it a chemical of concern in harbor sediments, especially those with vessel repair and maintenance facilities (Krone *et al*., 1989a). Chromium, lead, and zinc also have the potential to contaminate harbors due to their use in boat paints, corrosion of fittings and from batteries (lead), and from electrolysis of sacrificial anodes (zinc). Incompletely combusted and uncombusted petroleum products may be a source of PAHs in marine environments (PTI Environmental Services, 1991). Creosote-treated pilings may also be a source of PAH contamination.

Objectives

The primary objective of this survey was to assess the occurrence and extent of toxic chemicals in sediments from four San Juans harbors. A secondary objective was to determine if chemical concentrations exceed marine Sediment Quality Standards (SQS) under the Sediment Management Standards (Ecology, 1991) or the Puget Sound Dredge Disposal Analysis (PSDDA) interim screening level for TBT (Michelsen *et al*., 1996).

Methods

Site Selection and Sampling Strategy

Four harbor areas were selected for sampling: Friday Harbor and Roche Harbor (San Juan Island), West Sound (Orcas Island), and Fisherman Bay (Lopez Island) (Figures 1-6). These sites were selected after reviewing NPDES permit applications for boatyards in the San Juans, and consultation with John Drabek, Bob Newman, and Greg Cloud of Ecology's Water Quality Program. Mud Bay (Lopez Island) was sampled for reference sediments.

The major criterion for site selection was a large marina or boat moorage area with substantial vessel traffic. Friday Harbor, Roche Harbor, and West Sound probably represent the busiest marina and moorage areas within the San Juans, receiving boat traffic from both Canada and the U.S. All four sites, except Roche Harbor, have boatyards covered under the NPDES boatyard general permit. Aside from boatyards, upland activities were not considered in the selection of sites.

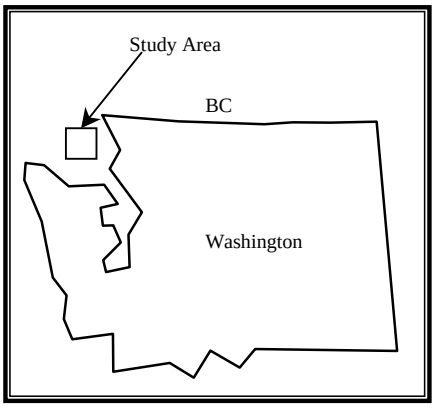
EPA's *Assessment of Potential Toxic Problems in Non-Urban Areas of Puget Sound* (EPA, 1988) prioritizes areas for study based on known or potential contaminant sources, chemical data, and biological data. Except for West Sound, all four sites in the San Juans were ranked as a low priority. West Sound received a "medium" rank due to the Victim Island military installation, a suspected storage site for hazardous wastes.

Appendix A shows sampling locations and descriptions for each sample. Sediments were collected from four to eight locations within each harbor to represent boat slips, boat moorage areas, and areas slightly beyond the moorage perimeter to assess drift of the target chemicals. Sediments potentially influenced by boatyard activities were also sampled except in Roche Harbor which does not have boatyard. Two samples from Mud Bay were collected to represent background levels of the target chemicals. All samples were analyzed for the following parameters:

- Total organic carbon (TOC)
- Chromium, copper, lead, and zinc
- Semivolatile organics (SVOs)
- Butyltins

Sampling Procedures

Sampling procedures were consistent with Puget Sound Estuary Program (PSEP) protocols (EPA, 1996a) and recommendations by Ecology's Sediment Management Unit (Ecology, 1995-Draft). Bottom sediments were collected from Ecology's 20-foot skiff equipped with a 0.1 m^2 stainless steel van Veen grab. Station positions were recorded using a differentially corrected Magellan® global positioning system receiver. Visual sightings from nearby landmarks were also recorded. All sampling was conducted during May 1997.



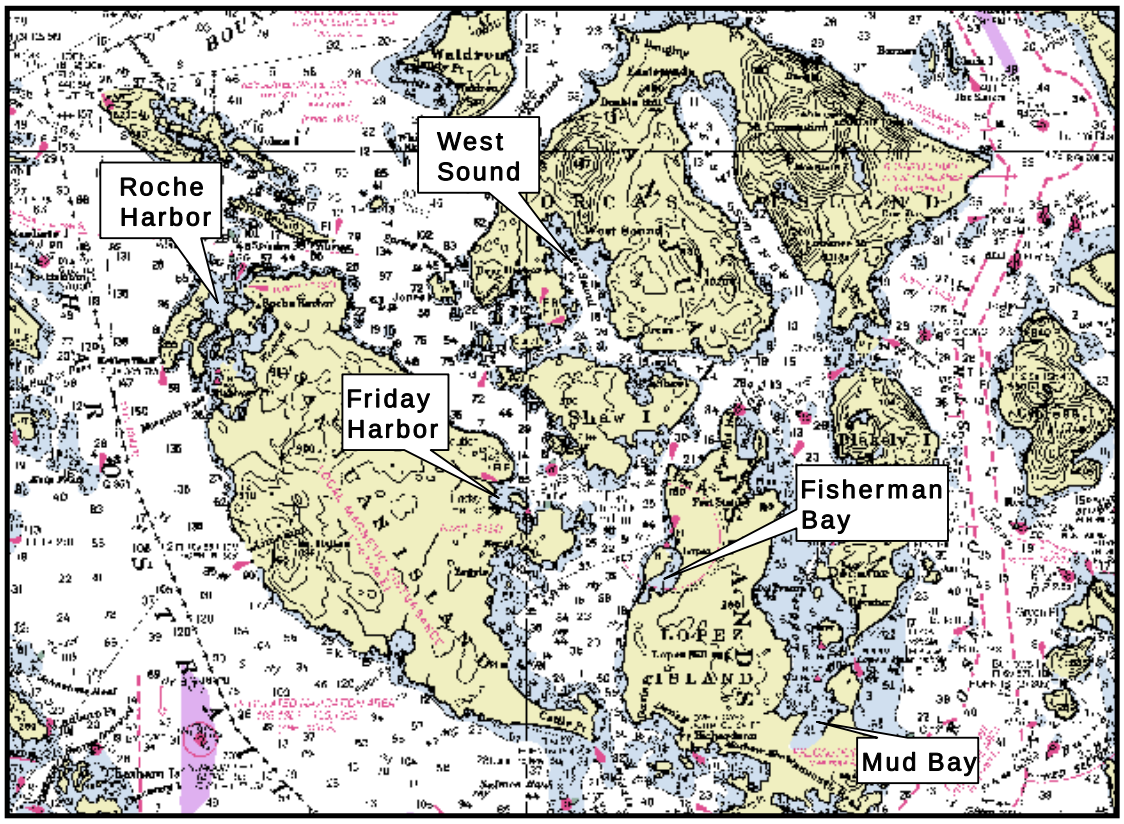


Figure 1. San Juan Islands Study Area Locations

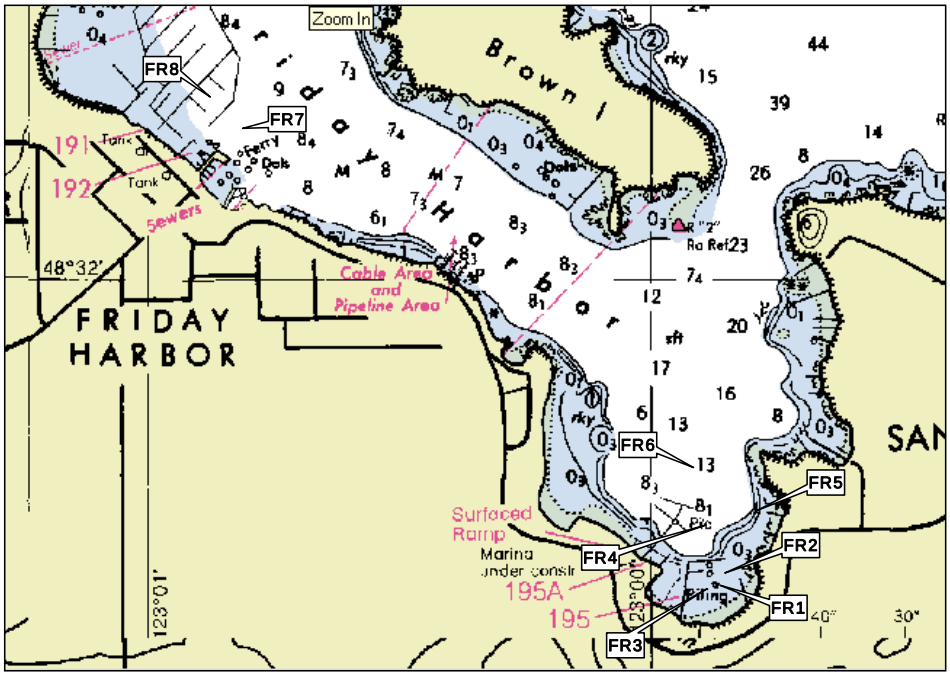


Figure 2. Friday Harbor Sampling Locations.

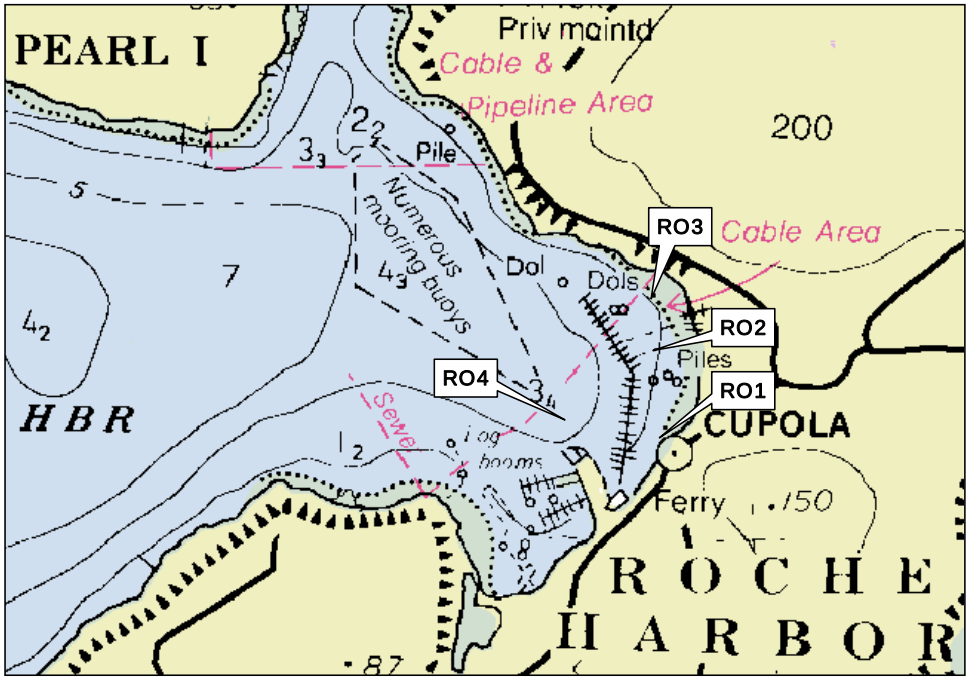


Figure 3. Roche Harbor Sampling Locations.

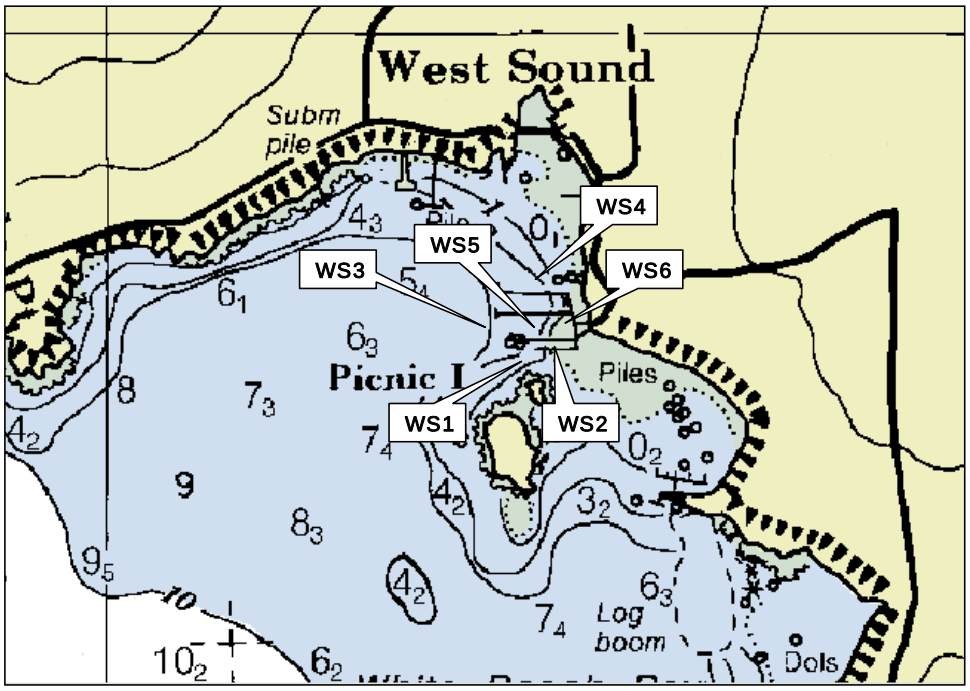


Figure 4. West Sound Sampling Locations.

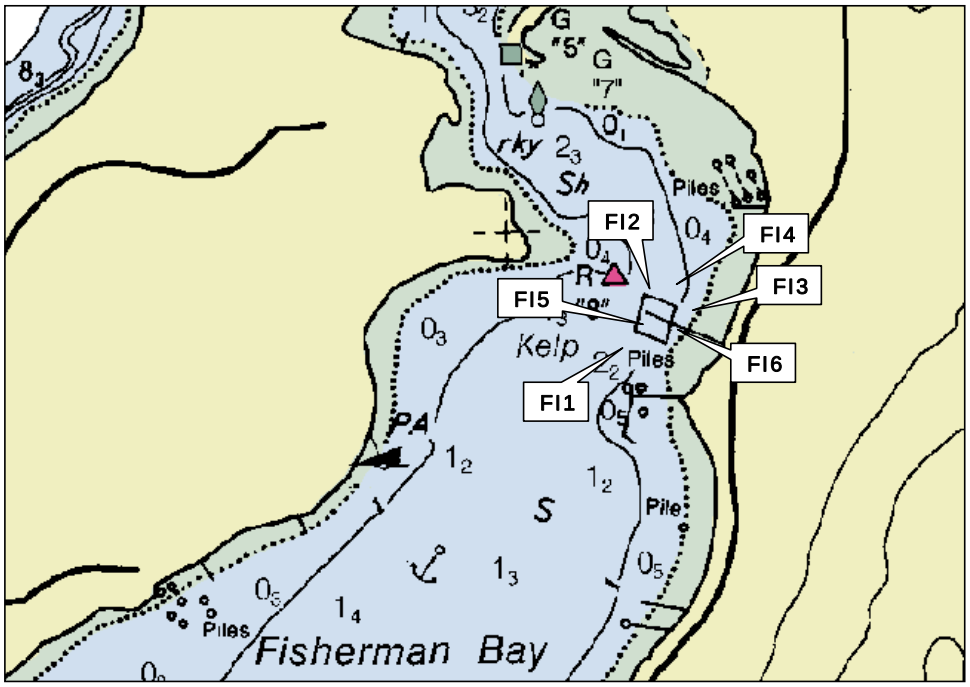


Figure 5. Fisherman Bay Sampling Locations.

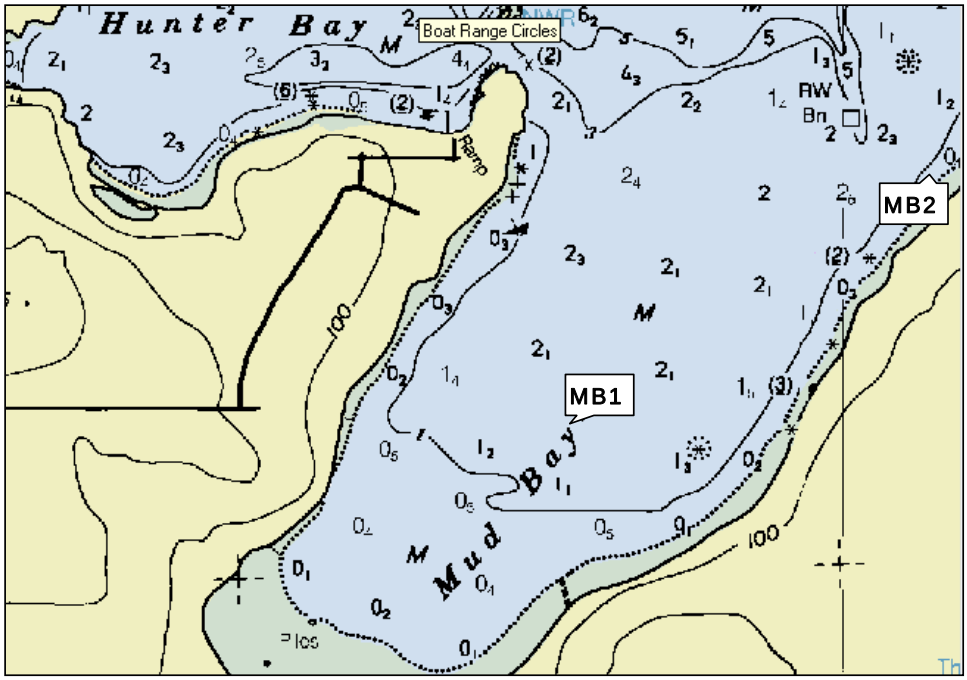


Figure 6. Mud Bay (Reference Area) Sampling Locations.

A grab sample was collected at each station. Sample grabs were considered adequate if the van Veen was filled with sediment, and both the grab and access doors were closed tightly. Upon retrieving a successful grab, the overlying water was siphoned off and the top 10 cm of sediment not touching the walls of the grab was scooped out through the top doors and placed in a stainless steel beaker. The grab was thoroughly brushed and rinsed with on-site water between samples.

All stainless steel tools (grab, beakers, and spoons) were decontaminated prior to sampling using the following procedure: wash in hot water and Liquinox® detergent, rinse in tap water, rinse in 10% nitric acid, rinse with deionized water, rinse with pesticide analysis grade acetone, air dry, and wrap in aluminum foil.

The beaker contents were homogenized, and subsamples for metals and organics analysis were dispensed into separate 8-oz priority pollutant-clean jars capped with Teflon lid liners. Samples for organic carbon analysis were placed in 4-oz jars.

Chemical Analysis and Data Quality

Samples were analyzed at the Ecology/EPA Manchester Environmental Laboratory using the methods in Table 1.

Table 1. Methods for Chemical Analysis

Analysis	Approximate Detection Limit	Method	Reference
TOC	0.1 %	PSEP Method	EPA, 1986a
Chromium	0.5 mg/kg, dw	ICAP - EPA Method 200.7	EPA, 1986b
Copper	0.4 mg/kg, dw	ICAP - EPA Method 200.7	EPA, 1986b
Lead	2 mg/kg, dw	ICAP - EPA Method 200.7	EPA, 1986b
Zinc	2 mg/kg, dw	ICAP - EPA Method 200.7	EPA, 1986b
SVOs (low-level)	20-100 µg/kg, dw	GC/MS - EPA Method 8270	EPA, 1986b
Butyltins	3-60 µg/kg, dw	GC/MS - NOAA Method	Krone *et al*., 1989b

Precision of the data was assessed through analysis of field replicates, laboratory duplicates, and matrix spike duplicates (Appendix B). For metals, duplicate analysis of matrix spikes and laboratory samples showed a high degree of precision. The relative percent differences (RPDs, difference relative to the mean) of these results were generally less than 10%, although there was poor agreement in the recovery of one set of copper spikes (RPD of 71%). One sediment sample split in the field (field split) also showed poor agreement for copper but good precision for other metals, suggesting copper was unevenly distributed in this sample.

Bias of the metals data was assessed through analysis of matrix spikes and laboratory blanks. High recoveries were obtained for all matrix spikes and spike duplicates except for one copper sample with a mean recovery of 16%. Therefore, some copper results are qualified (J) and should be viewed as potentially biased low. No metals were detected in laboratory blanks, indicating laboratory contamination was not a source of bias.

Precision of the semivolatile organics analysis was poor in terms of RPDs, but this was influenced by the low native analyte concentrations found in the samples. Precision of duplicate matrix spikes was very high (mean RPD of 6%), yet laboratory replicates showed an average RPD of 61% and field replicates had a 56% RPD. These results suggest that 1) good precision estimates were difficult with the low native analyte concentrations, and 2) most of the variability stemmed from poor analytical precision.

Matrix spike analyses for semivolatile organics had an average recovery of 75% suggesting the results were biased slightly low. Results were qualified (J) for analytes with recoveries below 50% for one or both spikes (Table B-3 in Appendix B). Hexachlorocyclopentadiene results were rejected due to the lack of recovery from either matrix spike. Several target analytes were detected in blanks below concentrations considered to influence the results. However, many tentatively identified compounds were detected in blanks at substantial concentrations, and these data should be viewed with caution.

All butyltin data should be considered estimates. All measures of precision showed poor results. Analysis of National Research Council of Canada PACS-2 standard reference material indicated poor accuracy (Appendix B). Results are qualified (J).

Results and Discussion

Total Organic Carbon

TOC concentrations were generally similar for the four harbors sampled and comparable to values from the Mud Bay reference site (Table 2). The three lowest values were all from Fisherman Bay (Stations F11, F12, and F16) and this is reflected in the lower mean and median concentrations for this harbor. The two highest concentrations were from West Sound (WS2) and Friday Harbor (FR8) stations. Complete results for each station are shown in Appendix C.

Table 2. Summary of Total Organic Carbon Concentrations (%) in Four San Juans Harbors

	Mean	Median	Min.	Max.
Reference (Mud Bay)	1.5	1.5	1.4	1.5
Fisherman Bay	0.6	0.5	0.3	1.2
Roche Harbor	1.1	1.0	0.7	1.6
West Sound	1.5	1.2	0.6	3.2
Friday Harbor	1.5	1.6	0.6	2.7

Metals

Concentrations of chromium, copper, lead, and zinc are plotted in Figure 7. Complete results for each station are shown in Appendix C.

Overall concentrations of all metals were low (Table 3). More than half the results were below mean values obtained at the Mud Bay reference site. Mean concentration of metals at all harbors were an order of magnitude below the marine Sediment Quality Standards (SQS), which are shown in Table 4.

Table 3. Summary of Sediment Metals Concentrations (mg/kg) in Four San Juans Harbors

Metal	Roche Harbor		Friday Harbor		West Sound		Fisherman Bay		Reference (Mud Bay)	
	Median	*Maximum*	*Median*	*Maximum*	*Median*	*Maximum*	*Median*	*Maximum*	*Median*	*Maximum*
Chromium	17.9	20.2	22.8	29.3	16.3	24.9	11.4	20.4	27.5	29.2
Copper	17.7	70.0	34.5	82.9	25.2	136.0	7.1	23.1	18.2	19.1
Lead	9.9	40.9	10.9	43.0	7.2	76.4	2.1	4.0	5.6	6.3
Zinc	53.3	59.9	76.4	127.0	44.6	272.0	24.2	38.2	57.7	62.4

Table 4. Marine Sediment Quality Standards[1] and Guidelines

CHEMICAL PARAMETER	CONCENTRATION
Metals	**mg/Kg, dry**
Lead	450
Chromium	260
Copper	390
Zinc	410
PAHs	**mg/Kg OC**
Anthracene	220
Acenaphthylene	66
Acenaphthene	16
Phenanthrene	100
Fluorene	23
Naphthalene	99
2-Methylnaphthalene	38
LPAH[2]	370
Pyrene	1,000
Benzo(g,h,i)perylene	31
Indeno(1,2,3-c,d)pyrene	34
Benzofluoranthene(s)	230
Fluoranthene	160
Chrysene	110
Benzo(a)pyrene	99
Dibenzo(a,h)anthracene	12
Benzo(a)anthracene	110
HPAH[3]	960
Phthalates and Other SVOs	**mg/Kg OC**
Bis(2-ethylhexyl)phthalate	47
Dimethylphthalate	53
Diethylphthalate	61
Butylbenzylphthalate	4.9
1,4-Dichlorobenzene	3.1
Dibenzofuran	15
	µg/Kg, dry
Benzyl alcohol	57
4-Methylphenol	670
Phenol	420
Benzoic acid	650
Pentachlorophenol	360
Organotins	**µg/Kg, dry**
Tributyltin[4]	73

[1]Sediment Management Standards, WAC 173-204.

[2]Represents the sum of Anthracene, Acenaphylene, Acenaphthene, Phenanthrene, Fluorene, and Naphthalene. The LPAH criterion is not the sum of the criterion values for the individual LPAH as listed.

[3]Represents the sum of Pyrene, Benzo(g,h,i)perylene, Indeno(1,2,3-c,d)pyrene, Benzofluoranthene(s), Fluoranthene, Chrysene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, and Benzo(a)anthracene. The HPAH criterion is not the sum of the criterion values for the individual HPAH as listed.

[4]Puget Sound Dredge Disposal Analysis Interim Screening Level.

Chromium concentrations were highest in the Mud Bay samples, although they did not appear to be especially enriched (mean concentration was 28 mg/kg). The lead concentration in Station WS2 from West Sound was the only metals result substantially higher (14×) than reference sediments. This station also had the highest copper concentration, and zinc from WS2 was the only metals result approaching the SQS. Overall metals concentrations suggest West Sound has the greatest lead, copper, and zinc enrichment compared to other harbors.

Inner marina sediments (i.e., near docks, slips, boathouses, haulouts) appear to be more metals-rich than those from beyond the marina perimeter. Figure 8 shows metals concentrations pooled by location among harbors. There seems to be no difference in chromium concentrations. However, median lead and copper concentrations are substantially higher in sediments collected from inner harbors. Differences were smaller for zinc. Most of the inner harbor sediments have lead, copper, and zinc concentrations elevated above reference sediments, whereas outer harbor sediments are generally lower than the Mud Bay results.

Semivolatile Organics

Complete results of SVO analyses are shown in Appendix C. Forty-six SVOs were detected in sediments (Figure 9). Polycyclic aromatic hydrocarbons (PAHs) and alkyl-substituted PAHs comprised 96% of the most commonly detected (>90%) compounds. Phthalates, phenols, and several miscellaneous compounds were detected less frequently.

Total LPAH and HPAH (low and high molecular weight PAHs) concentrations were elevated above reference sediment values at all four harbors (Figure 10), although not exceeding SQS. Similarly, concentrations of some individual PAHs were elevated at all four harbors but below SQS, except at Station WS6 where the fluoranthene standard was exceeded (168 mg/kg OC vs. 160 mg/kg OC SQS).

Friday Harbor sediments were the most contaminated with the target SVOs; 76% of the highest concentrations were found at this harbor. Station FR7, located off the Texaco fuel dock, was particularly contaminated with PAHs. Overall, there was no apparent difference between inner and outer harbor sediments in PAH concentrations (Figure 11).

Tributyltin

The toxicity and bioaccumulation of TBT is a complex process that is affected by a number of factors, including organic carbon levels in sediment and water, pH, salinity, clay content, and the presence of inorganic constituents such as iron oxides (EPA, 1996b). Due to its complex behavior in the aquatic environment, no sediment quality criteria have been adopted for TBT in marine sediments. In 1988, the Puget Sound Dredge Disposal Analysis (PSDDA) agencies developed an interim screening level (ISL) for use in the PSDDA program, based on best available knowledge of the chemical and its properties (Michelsen *et al*., 1996). The ISL was set at 30 ug/kg (as Sn). This corresponds to a concentration of 73 ug/kg (reported as TBT-ion). Exceedance of the ISL requires biological testing to be performed.

Concentrations of TBT are shown in Figure 12. Results for each station are provided in Appendix C. Concentrations were generally elevated above reference levels in all four harbors (Figure 12). Elevated TBT concentrations were most evident in West Sound sediments and the two highest values were from this harbor. Both values exceeded the PSDDA ISL of 73 ug/kg (67× for sample WS5, and 5× for WS2). Except for these two results, TBT sediment concentrations were near or below the ISL. Overall, TBT concentrations tended to be higher in samples from inner harbor sediments than from outer harbor sediments (Figure 13).

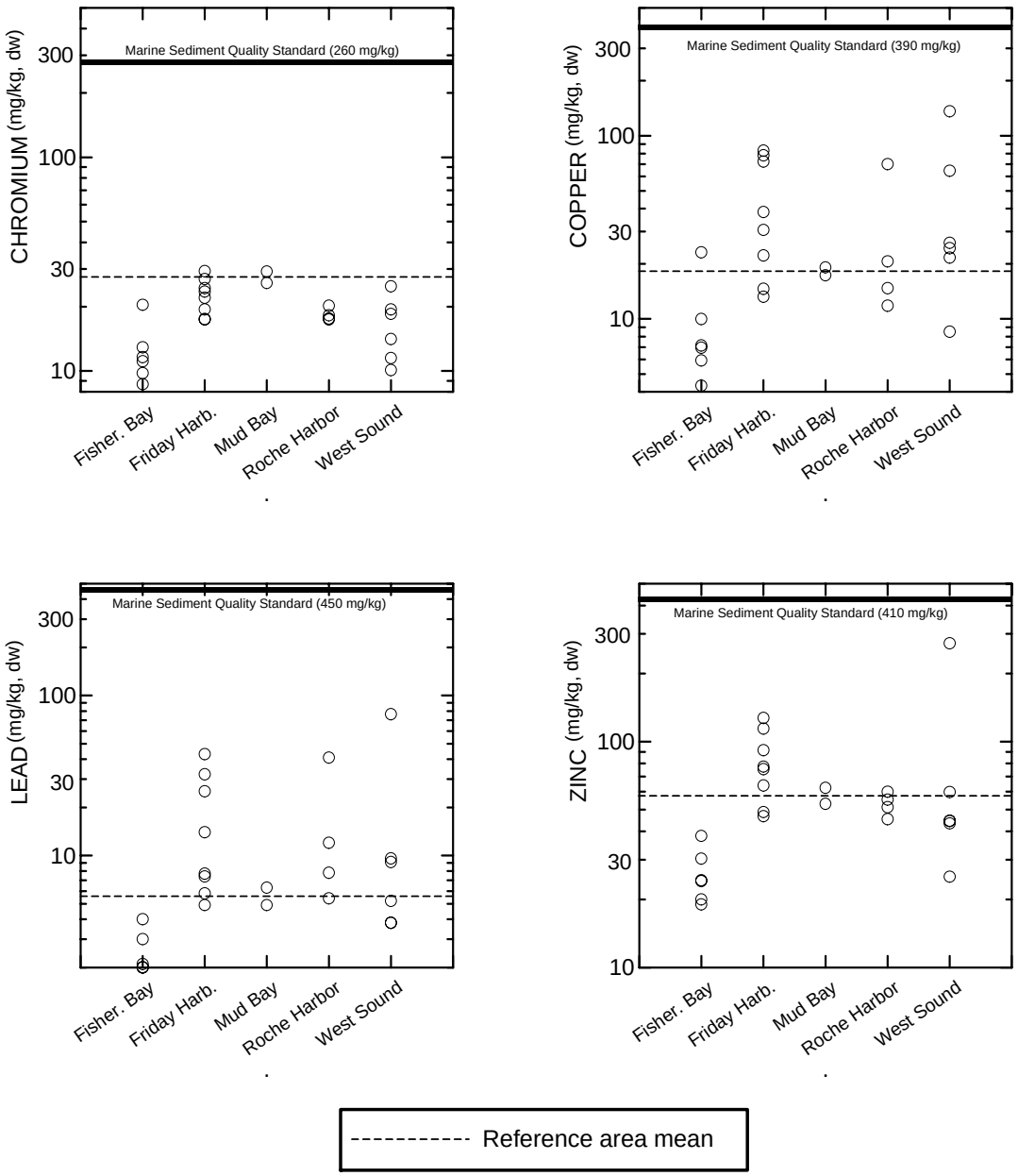


Figure 7. Metals Concentrations in San Juans Harbor Sediments.

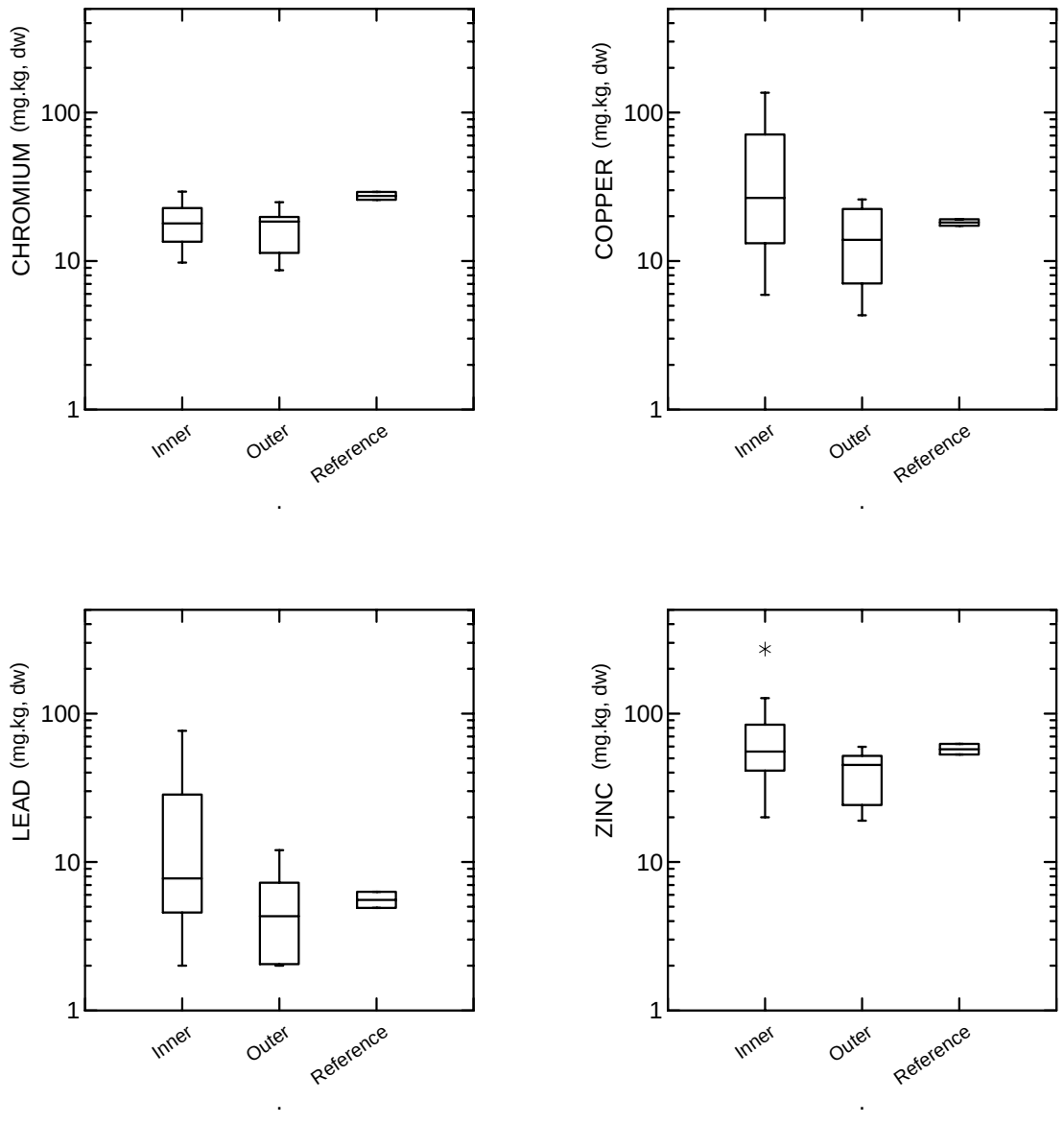


Figure 8. Box Plots Comparing Metals Concentrations in Inner and Outer San Juans Harbor Sediments.

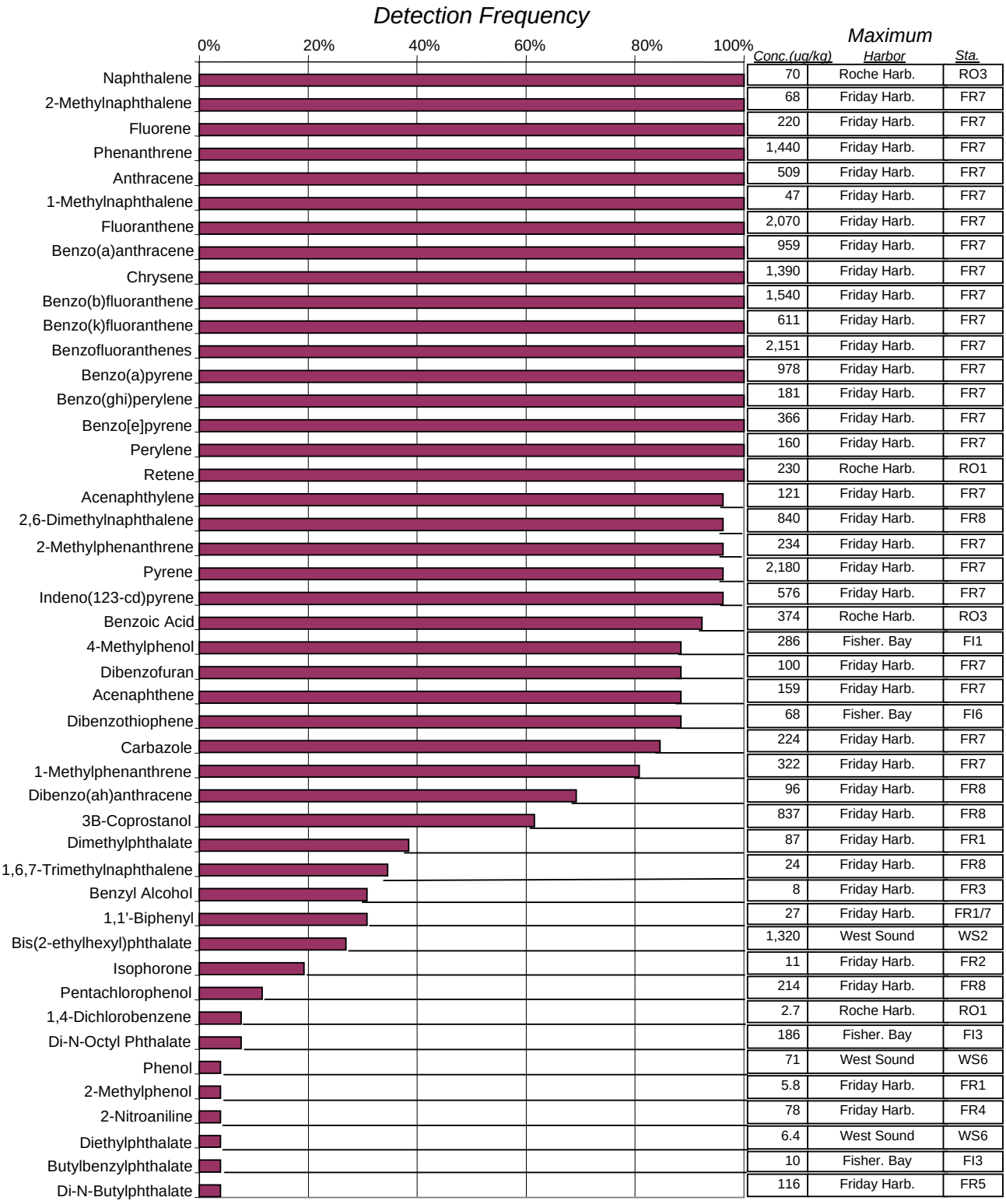


Figure 9. Detection Frequency and Maximum Concentrations of Organics in San Juans Harbor Sediments.

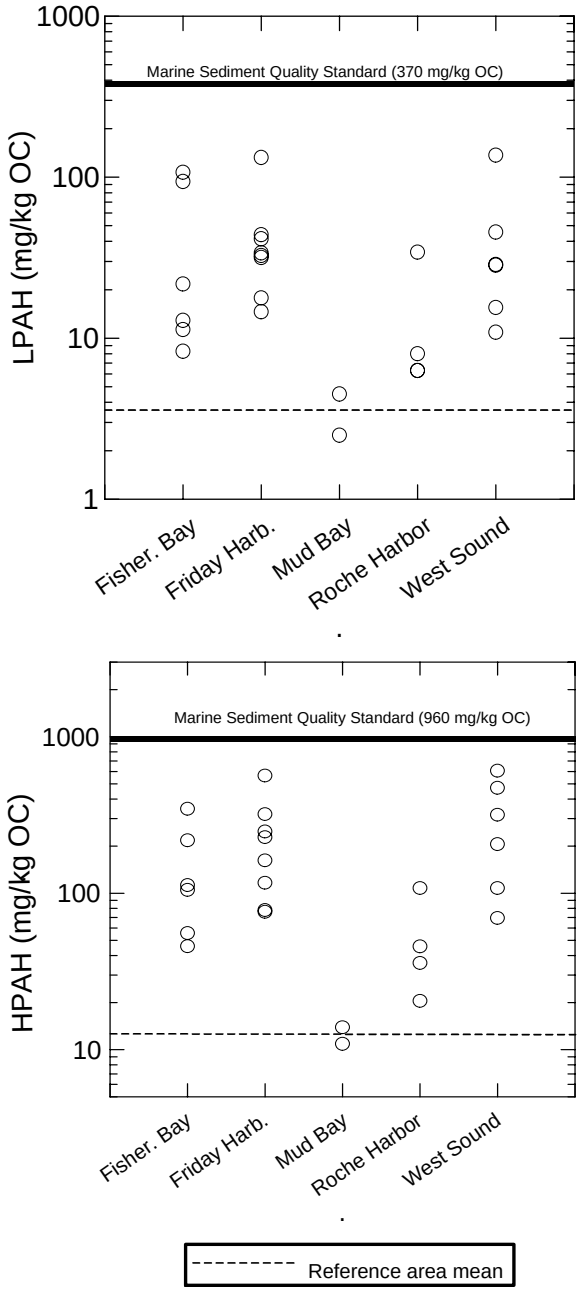


Figure 10. LPAH and HPAH Concentrations in San Juans Harbor Sediments.

LPAH Concentrations are sum of Anthracene, Acenaphthylene, Acenaphthene, Phenanthrene, Fluorene, and Naphthalene. HPAH Concentrations are sum of Pyrene, Benzo(g,h,i)perylene, Indeno(1,2,3-c,d)pyrene, Benzofluoranthene(s), Fluoranthene, Chrysene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, and Benzo(a)anthracene.

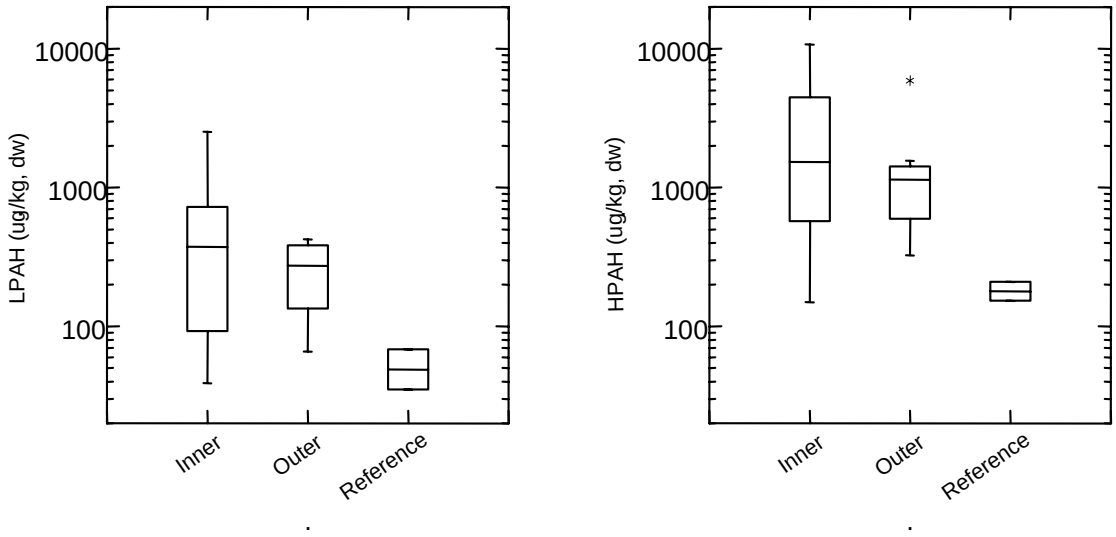


Figure 11. Box Plots Comparing PAH Concentrations in Inner and Outer San Juans Harbor Sediments.

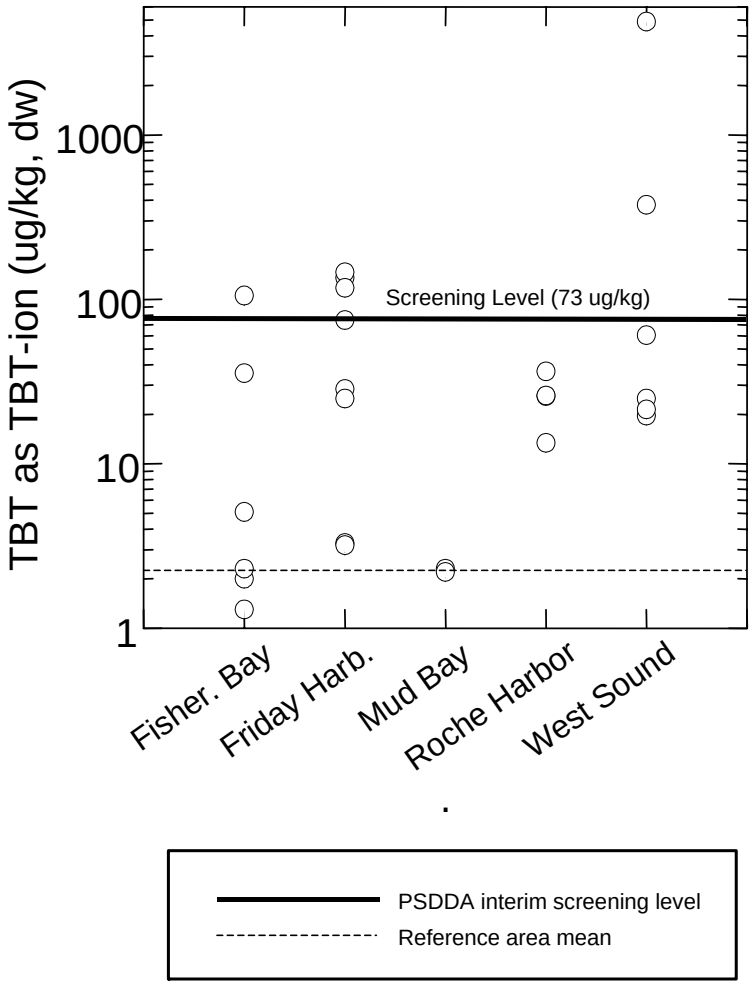


Figure 12. TBT Concentrations in San Juans Harbor Sediments.

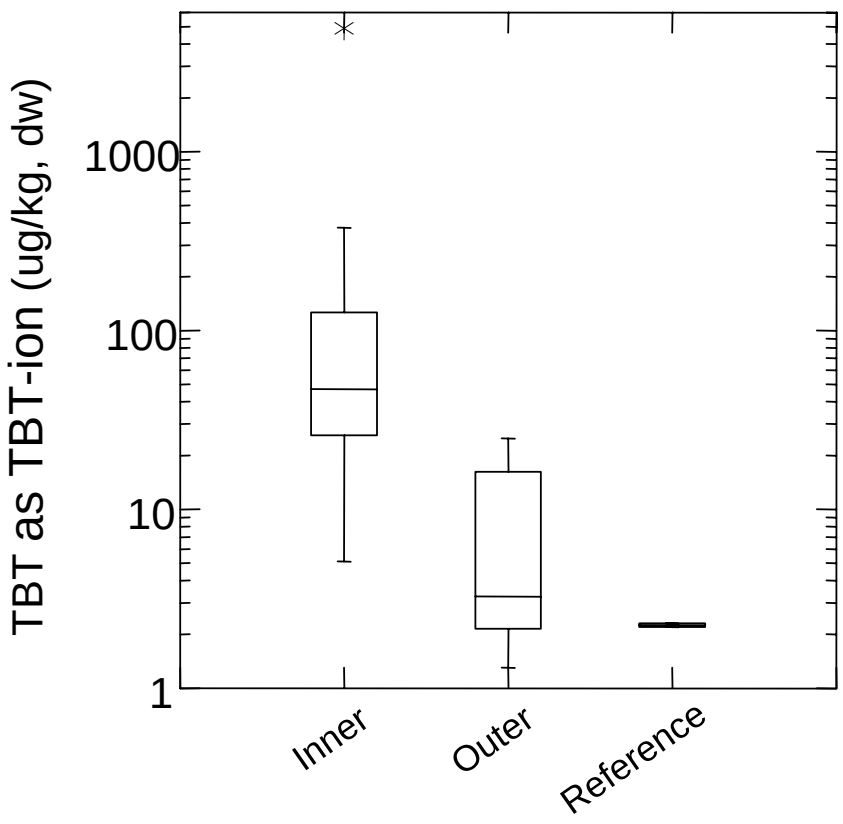


Figure 13. Box Plots Comparing TBT Concentrations in Inner and Outer San Juans Harbor Sediments.

Conclusions and Recommendations

Conclusions

Sediment chemical concentrations seen in this study are similar to Puget Sound reference areas (EPA, 1991). Sediment Quality Standards for organics and metals were not exceeded in sediment samples from the four San Juan Islands harbors surveyed, except for one sample from West Sound that exceeded the standard for fluoranthene. A Sediment Quality Standard has not been established for tributyltin. However, most samples were near or below the tributyltin PSDDA interim screening level. Two West Sound samples did exceed this level substantially.

For some organics there was a consistent elevation of concentrations above reference sediments in all four harbors. Examples include LPAHs, HPAHs, some individual PAH compounds (e.g., fluoranthene and anthracene), and tributyltin. However, the harbors were not consistently enriched relative to the reference area for other organics or for metals.

There were some differences between the harbors in sediment quality. For many of the SVOs, the highest concentrations were from Friday Harbor. For metals and tributyltin, the highest concentrations were from West Sound. The highest concentrations of PAHs (both LPAHs and HPAHs) were from Friday Harbor and West Sound.

In all four harbors, average inner harbor concentrations were higher than outer harbor concentrations for the majority of analytes. However, the differences were generally small in comparison with the variability within inner and outer harbor areas.

Recommendations

Tributyltin concentrations in bulk sediments from two stations in the West Sound marina area (WS2, WS5) substantially exceeded the PSDDA interim screening level of 73 μgTBT/kg. Biological testing of sediments from these locations should be considered to determine the potential for adverse biological effects.

Sampling of sediments in the vicinity of older defunct boatyards would give a more comprehensive representation of sediment quality in the San Juan Islands.

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Appendices

Appendix A

Station Locations and Descriptions

Table A-1. Station Locations for Survey of San Juans Harbor Sediments.

Location	Station	Sample No.	Date	Depth (ft. above MLLW)	Latitude (deg)	Latitude (min)	Latitude (sec)	Longitude (deg)	Longitude (min)	Longitude (sec)
Mud Bay	MB1	97228230	27-May-97	9.6	48	27	8.6	122	50	34.6
Mud Bay	MB2	97228231	27-May-97	nr	48	27	29.5	122	49	48.4
Fisherman Bay	FI1	97228232	29-May-97	14	48	30	51.1	122	54	54.3
Fisherman Bay	FI2	97228233	29-May-97	17	48	30	54.7	122	54	52.5
Fisherman Bay	FI3	97228234/5	29-May-97	-0.5	48	30	53.4	122	54	48.1
Fisherman Bay	FI4	97228236	29-May-97	7	48	30	54.8	122	54	49.6
Fisherman Bay	FI5	97228237	29-May-97	18	48	30	52.7	122	54	53.0
Fisherman Bay	FI6	97228256	29-May-97	2	48	30	52.2	122	54	48.7
Roche Harbor	RO1	97228238	28-May-97	12.5	48	36	32.9	123	9	5.3
Roche Harbor	RO2	97228239	28-May-97	20.5	48	36	38.2	123	9	6.8
Roche Harbor	RO3	97228240	28-May-97	12.5	48	36	41.1	123	9	5.0
Roche Harbor	RO4	97228241	28-May-97	19.5	48	36	34.8	123	9	13.5
West Sound	WS1	97228244	28-May-97	5	48	37	43.9	122	57	24.4
West Sound	WS2	97228245	28-May-97	8	48	37	44.6	122	57	21.5
West Sound	WS3	97228246	28-May-97	30	48	37	47.5	122	57	27.4
West Sound	WS4	97228247	28-May-97	6	48	37	48.7	122	57	21.4
West Sound	WS5	97228248	28-May-97	23	48	37	46.7	122	57	24.5
West Sound	WS6	97228249	28-May-97	11	48	37	45.7	122	57	21.9
Friday Harbor	FR1	97228250	27-May-97	4	48	31	35.5	122	59	51.2
Friday Harbor	FR2	97228251	27-May-97	7	48	31	36.9	122	59	50.6
Friday Harbor	FR3	97228252	27-May-97	4	48	31	35.7	122	59	52.9
Friday Harbor	FR4	97228253	27-May-97	38	48	31	40.7	122	59	53.3
Friday Harbor	FR5	97228254	27-May-97	42	48	31	41.9	122	59	47.2
Friday Harbor	FR6	97228255	27-May-97	60	48	31	45.1	122	59	54.9
Friday Harbor	FR7	97228242	28-May-97	29.5	48	32	12.0	123	0	49.3
Friday Harbor	FR8	97228243	28-May-97	7.5	48	32	14.6	123	0	53.1

nr=not recorded
Datum= NAD83

Table A-2. Location and Sample Descriptions for Survey of San Juans Harbor Sediments.

Location	Station	Sample No.	Location Description	Sample Description
Mud Bay	MB1	97228230	center of bay	greenish-brown muck, strong sulfide odor
Mud Bay	MB2	97228231	NE end of bay near Pier E of rocks	dark brown/green, somewhat gritty with peices of clamshell
Fisherman Bay	FI1	97228232	outside marina perimeter, 100' off 3rd outer slip	nr
Fisherman Bay	FI2	97228233	outside marina perimeter, 100' off main entrance to marina	nr
Fisherman Bay	FI3	97228234	off boat ramp 100' N of pier end.	gritty silt
Fisherman Bay	FI3	97228235	off boat ramp 100' N of pier end.	replicate of 97228234
Fisherman Bay	FI4	97228236	100' off northermost set of slips	nr
Fisherman Bay	FI5	97228237	inside southern group of slips	nr
Fisherman Bay	FI6	97228256	200' off haulout (travel lift) pier	nr
Roche Harbor	RO1	97228238	30' off fuel dock	nr
Roche Harbor	RO2	97228239	off harbormaster's dock	nr
Roche Harbor	RO3	97228240	outside marina perimeter, off northernmost dock in Roche Harbor	nr
Roche Harbor	RO4	97228241	inside slips on SW side of marina	nr
West Sound	WS1	97228244	outside marina perimeter, 50' off northern end of Picnic Island	fine material with shell fragments
West Sound	WS2	97228245	inside 1st dock	nr
West Sound	WS3	97228246	outside marina perimeter, 100' off main entrance to marina	nr
West Sound	WS4	97228247	200' E of travel lift	nr
West Sound	WS5	97228248	center of main channel, 300' off travel lift	nr
West Sound	WS6	97228249	at end of travel lift	oil sheen, sulfide odor, numerous amphipods
Friday Harbor	FR1	97228250	off AJ marina railway25' off pier	silty, dark brown, sulfide odor
Friday Harbor	FR2	97228251	between first 2 (boathouse slips	mud/silt, some metal and plastic debris, sulfide odor
Friday Harbor	FR3	97228252	150' off travel lift	nr
Friday Harbor	FR4	97228253	between 2nd and 3rd slips	nr
Friday Harbor	FR5	97228254	outside NE marina perimeter	silty, dark brown
Friday Harbor	FR6	97228255	outside W marina perimeter	nr
Friday Harbor	FR7	97228242	50' off Texaco fuel dock, W of ferry landing	nr
Friday Harbor	FR8	97228243	along main pier W of fuel dock and ferry landing, 300' off of bathrooms/showers	nr

nr=not recorded

Appendix B

Summary of Data Quality Results

1. Total Organic Carbon
2. Metals
3. Semivolatile Organics
4. Butyltin

Table B-1. Precision of TOC Analysis.

LAB REPLICATES

Sample No.	Analysis	Units	Result	LDP1	REP1	Mean	RSD
97228241	TOC104	mg/kg, dw	0.7	0.8	0.7	0.7	3%
97228241	TOC70	mg/kg, dw	0.7	0.7	0.7	0.7	3%
97228249	TOC104	mg/kg, dw	0.9	0.8	0.8	0.9	6%
97228249	TOC70	mg/kg, dw	0.9	0.8	0.8	0.8	6%

FIELD SPLITS

Sample No.	Analysis		No. -34	No. -35	Mean	RPD
97228234/5	TOC104	mg/kg, dw	1.3	1.1	1.2	17%
97228234/5	TOC70	mg/kg, dw	1.3	1.1	1.2	17%

LDP1=Lab duplicate
REP1=Replicate
RSD=Relative standard deviation
RPD=Relative percent difference

Table B-2. Data Quality of Metals Analysis.

LAB REPLICATES

Sample No.	Analysis	Units	Result	LDP1	Mean	RPD
97228232	Lead	mg/Kg dw	2 U	2 U		
97228232	Chromium	mg/Kg dw	11.8	10.4	11	13%
97228232	Copper	mg/Kg dw	7.05	6.87	7	3%
97228232	Zinc	mg/Kg dw	25.4	22.7	24	11%
97228255	Lead	mg/Kg dw	5.8	5.7	6	2%
97228255	Chromium	mg/Kg dw	19.4	20	20	3%
97228255	Copper	mg/Kg dw	13.2 J	13.3 J	13	1%
97228255	Zinc	mg/Kg dw	48.7	49.8	49	2%

MATRIX SPIKES

Sample No.	Analysis	Units	LMX1	LMX2	Mean	RPD
97228241	Lead	% recov.	94	92	93	2%
97228241	Chromium	% recov.	93	89	91	4%
97228241	Copper	% recov.	93	91	92	2%
97228241	Zinc	% recov.	90	88	89	2%
97228249	Lead	% recov.	92	95	94	3%
97228249	Chromium	% recov.	102	101	102	1%
97228249	Copper	% recov.	10	21	16	71%
97228249	Zinc	% recov.	89	100	95	12%

BLANKS

Sample No.	Analysis	Units	Result
M7162SB1	Lead	mg/Kg dw	2 U
M7162SB1	Chromium	mg/Kg dw	0.5 U
M7162SB1	Copper	mg/Kg dw	0.4 U
M7162SB1	Zinc	mg/Kg dw	2 U
M7162SB2	Lead	mg/Kg dw	2 U
M7162SB2	Chromium	mg/Kg dw	0.5 U
M7162SB2	Copper	mg/Kg dw	0.4 U
M7162SB2	Zinc	mg/Kg dw	2 U

FIELD SPLITS

Sample No.	Analysis	Units	No. -34	No. -35	Mean	RPD
97228234/5	Lead	mg/Kg dw	3.5	4.4	4.0	23%
97228234/5	Chromium	mg/Kg dw	21.2	19.5	20.4	8%
97228234/5	Copper	mg/Kg dw	30.5	15.6	23.1	65%
97228234/5	Zinc	mg/Kg dw	38.7	37.7	38.2	3%

LDP1=Lab duplicate
RPD=Relative percent difference
LMX=Laboratory matrix spike
U=Undetected at detection limit shown
J=Estimated concentration

Table B-3. Data Quality of Semivolatile Organics Analysis.

LAB REPLICATES (ug/kg, dry)							
Sample No.	**Analysis**	**Result**		**LDP1**		**Mean**	**RPD**
97228241	4-Nitroaniline	79	U	76	U		
97228241	4-Nitrophenol	79	U	76	U		
97228241	Benzyl Alcohol	16	U	15	U		
97228241	4-Bromophenyl-Phenylether	16	U	15	U		
97228241	Phenol, 4-Nonyl-	79	U	76	U		
97228241	2,4-Dimethylphenol	16	U	15	U		
97228241	4-Methylphenol	6.8	J	4	J	5	52%
97228241	1,4-Dichlorobenzene	16	U	15	U		
97228241	4-Chloroaniline	16	UJ	15	UJ		
97228241	2,2'-Oxybis[1-chloropropane]	16	U	15	U		
97228241	Phenol	17	U	15	U		
97228241	Pyridine	31	U	30	U		
97228241	Bis(2-Chloroethyl)Ether	16	U	15	U		
97228241	Bis(2-Chloroethoxy)Methane	16	U	15	U		
97228241	Undecanoic acid	171	NJ	nd			
97228241	Bis(2-Ethylhexyl) Phthalate	31	U	30	U		
97228241	Di-N-Octyl Phthalate	16	U	15	U		
97228241	Hexachlorobenzene	16	U	15	U		
97228241	Anthracene	7.1	J	3.9	J	6	58%
97228241	1,2,4-Trichlorobenzene	16	U	15	U		
97228241	2,4-Dichlorophenol	31	U	30	U		
97228241	2,4-Dinitrotoluene	31	U	30	U		
97228241	1,2-Diphenylhydrazine	16	U	15	U		
97228241	Pyrene	53		25		39	72%
97228241	Dimethylphthalate	16	U	15	U		
97228241	Dibenzofuran	6.2	J	3	J	5	70%
97228241	Dibenzothiophene	6.1	J	2.4	J	4	87%
97228241	Phytol	1000	NJ	770	NJ	885	26%
97228241	Ethanethioic acid, S-methyl ester	375	NJ	210	NJ	293	56%
97228241	Benzo(ghi)perylene	8.9	J	4.3	J	7	70%
97228241	Benzo[e]pyrene	13	J	6.2	J	10	71%
97228241	Indeno(1,2,3-cd)pyrene	4.2	J	0.47	J	2	160%
97228241	Perylene	31		13	J	22	82%
97228241	Benzo(b)fluoranthene	30		14	J	22	73%
97228241	Fluoranthene	46	J	22		34	71%
97228241	Benzo(k)fluoranthene	8.4	J	3.8	J	6	75%
97228241	Acenaphthylene	2.6	J	1.6	J	2	48%
97228241	Chrysene	25		12	J	19	70%
97228241	1,6,7-Trimethylnaphthalene	13	J	5.4	J	9	83%
97228241	2-Methylphenanthrene	12	J	6.6	J	9	58%
97228241	3-Penten-2-one, (E)-	54		366	NJ	210	149%
97228241	3B-Coprostanol	53		115	U		
97228241	Retene	226		25		126	160%
97228241	Benzo(a)pyrene	12	J	6.1	J	9	65%
97228241	2,4-Dinitrophenol	314	UJ	304	UJ		
97228241	4,6-Dinitro-2-Methylphenol	79	UJ	76	UJ		
97228241	Dibenzo(a,h)anthracene	1.4	J	30	U		
97228241	1,3-Dichlorobenzene	16	UJ	15	UJ		

LDP1=Lab duplicate

RPD=Relative percent difference

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

Table B-3 - p.2. Data Quality of Semivolatile Organics Analysis.

LAB REPLICATES (ug/kg, dry)							
Sample No.	**Analysis**	**Result**		**LDP1**		**Mean**	**RPD**
97228241	Benzo(a)anthracene	1200	NJ	7.8	J	604	197%
97228241	Cholesterol	15	J	430	NJ	223	187%
97228241	Caffeine	16	U	15	U		
97228241	2,6-Dimethylnaphthalene	34		24		29	34%
97228241	Pentanoic acid, butyl ester	16	U	168	NJ		
97228241	4-Chloro-3-Methylphenol	79	U	15	U		
97228241	2,6-Dinitrotoluene	16	U	76	U		
97228241	N-Nitroso-Di-N-Propylamine	16	UJ	15	U		
97228241	Aniline	16	U	15	UJ		
97228241	N-Nitrosodimethylamine	346	J	15	U		
97228241	Benzoic Acid	16	UJ	149	J		
97228241	Hexachloroethane	16	U	15	UJ		
97228241	4-Chlorophenyl-Phenylether		REJ	15	U		
97228241	Hexachlorocyclopentadiene	16	U		REJ		
97228241	Isophorone	12	J	15	U		
97228241	1-Methylphenanthrene	2	J	5.4	J	4	92%
97228241	Acenaphthene	16	U	1.3	J		
97228241	Diethylphthalate	58	U	15	U		
97228241	Di-N-Butylphthalate	33	J	15	U		
97228241	Phenanthrene	16	U	15	J		
97228241	Butylbenzylphthalate	16	U	15	U		
97228241	N-Nitrosodiphenylamine	7	J	15	U		
97228241	Fluorene	3.5	J	3.6	J	4	3%
97228241	Carbazole	16	UJ	2.4	J		
97228241	Hexachlorobutadiene	79	U	15	UJ		
97228241	Pentachlorophenol	16	U	76	U		
97228241	2,4,6-Trichlorophenol	31	UJ	15	U		
97228241	2-Nitroaniline	79	U	30	UJ		
97228241	2-Nitrophenol	13	J	76	U		
97228241	1-Methylnaphthalene	8.9	J	6.5	J	8	31%
97228241	Naphthalene	17		5	J	11	109%
97228241	2-Methylnaphthalene	16	U	9.7	J		
97228241	2-Chloronaphthalene	63	U	15	U		
97228241	3,3'-Dichlorobenzidine	16	U	61	U		
97228241	1,1'-Biphenyl	157	UJ	15	U		
97228241	Benzidine	57		152	UJ		
97228241	2-Methylphenol	16	U	15	U		
97228241	1,2-Dichlorobenzene	16	U	15	U		
97228241	2-Chlorophenol	16	U	15	U		
97228241	2,4,5-Trichlorophenol	16	U	15	U		
97228241	Nitrobenzene	16	U	15	U		
97228241	3-Nitroaniline	31	UJ	30	UJ		
97228249	4-Nitroaniline	65	U	65	U		
97228249	4-Nitrophenol	163	UJ	161	UJ		
97228249	Benzyl Alcohol	65	U	65	U		
97228249	4-Bromophenyl-Phenylether	33	U	32	U		
97228249	Phenol, 4-Nonyl-	65	U	65	U		

LDP1=Lab duplicate

RPD=Relative percent difference

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

REJ=Data are unusable for all purposes

Table B-3 - p.3. Data Quality of Semivolatile Organics Analysis.

LAB REPLICATES (ug/kg, dry)							
Sample No.	**Analysis**	**Result**		**LDP1**		**Mean**	**RPD**
97228249	2,4-Dimethylphenol	33	U	32	U		
97228249	4-Methylphenol	24	J	33		29	32%
97228249	1,4-Dichlorobenzene	163	U	161	U		
97228249	4-Chloroaniline	33	U	32	U		
97228249	2,2'-Oxybis[1-chloropropane]	163	U	161	U		
97228249	Phenol	71		65	U		
97228249	Pyridine	163	U	161	U		
97228249	Bis(2-Chloroethyl)Ether	163	U	161	U		
97228249	Bis(2-Chloroethoxy)Methane	33	U	32	U		
97228249	Bis(2-Ethylhexyl) Phthalate	95	UJ	90	UJ		
97228249	Di-N-Octyl Phthalate	33	U	32	U		
97228249	Hexachlorobenzene	33	U	32	U		
97228249	Anthracene	144		387		266	92%
97228249	1,2,4-Trichlorobenzene	65	U	65	U		
97228249	2,4-Dichlorophenol	65	U	65	U		
97228249	2,4-Dinitrotoluene	65	U	65	U		
97228249	1,2-Diphenylhydrazine	33	U	32	U		
97228249	Pyrene	745		1270		1008	52%
97228249	Dimethylphthalate	33	U	32	U		
97228249	Dibenzofuran	31	J	66		49	72%
97228249	Dibenzothiophene	18	J	66		42	114%
97228249	Phytol	2060	NJ	1860	NJ	1960	10%
97228249	Ethanethioic acid, S-methyl ester	474	NJ	557	NJ	516	16%
97228249	Benzo(ghi)perylene	113	J	94	J	104	18%
97228249	Benzo[e]pyrene	284		293		289	3%
97228249	Indeno(1,2,3-cd)pyrene	175		159		167	10%
97228249	Perylene	83		73		78	13%
97228249	Benzo(b)fluoranthene	735		732		734	0%
97228249	Fluoranthene	940	J	1910	J	1425	68%
97228249	Benzo(k)fluoranthene	246		267		257	8%
97228249	Acenaphthylene	34		47		41	32%
97228249	9-Hexadecenoic acid	9070	NJ	11100	NJ	10085	20%
97228249	Chrysene	743		946		845	24%
97228249	1,6,7-Trimethylnaphthalene	33	U	32	U		
97228249	2-Methylphenanthrene	56		129		93	79%
97228249	3B-Coprostanol	130	U	129	U		
97228249	Naphthalene, 1,2,3,4-tetrahydro-1,1	27	J	278	NJ	153	165%
97228249	Retene			41		41	100%
97228249	Benzo(a)pyrene	304		254		279	18%
97228249	Heptadecanoic acid	675	NJ	351	NJ	513	63%
97228249	2,4-Dinitrophenol	652	UJ	646	UJ		
97228249	4,6-Dinitro-2-Methylphenol	163	U	161	U		
97228249	Dibenzo(a,h)anthracene	75	UJ	68	UJ		
97228249	1,3-Dichlorobenzene	163	U	161	U		
97228249	Tetradecanoic acid	4090	NJ	3340	NJ	3715	20%
97228249	11-Hexadecenoic acid, methyl ester			354	NJ	354	100%
97228249	Benzo(a)anthracene	329		337		333	2%
97228249	Hexadecanoic acid	9770	NJ	9110	NJ	9440	7%

LDP1=Lab duplicate

RPD=Relative percent difference

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

Table B-3 - p.4. Data Quality of Semivolatile Organics Analysis.

LAB REPLICATES							
(ug/kg, dry)							
Sample No.	**Analysis**	**Result**		**LDP1**		**Mean**	**RPD**
97228249	Octadecanoic acid	2140	NJ	1400	NJ	1770	42%
97228249	Tetradecanoic acid, 12-methyl-, (S)-	3600	NJ	3610	NJ	3605	0%
97228249	Cholesterol	1670	NJ	834	NJ	1252	67%
97228249	Caffeine	33	U	32	U		
97228249	2,6-Dimethylnaphthalene	129		120		125	7%
97228249	4-Chloro-3-Methylphenol	33	U	32	U		
97228249	2,6-Dinitrotoluene	163	U	161	U		
97228249	N-Nitroso-Di-N-Propylamine	33	U	32	U		
97228249	Aniline	163	U	161	U		
97228249	N-Nitrosodimethylamine	163	U	161	U		
97228249	Benzoic Acid	222		217		220	2%
97228249	Hexachloroethane	163	U	161	U		
97228249	4-Chlorophenyl-Phenylether	33	U	32	U		
97228249	Hexachlorocyclopentadiene		REJ		REJ		
97228249	Isophorone	33	U	32	U		
97228249	1-Methylphenanthrene	33	U	32	U		
97228249	Acenaphthene	21	J	42		32	67%
97228249	gamma-Sitosterol	2940	NJ	2010	NJ	2475	38%
97228249	Diethylphthalate	6.4	J	32	U		
97228249	Di-N-Butylphthalate	187	UJ	145	UJ		
97228249	Phenanthrene	299	J	1090	J	695	114%
97228249	Butylbenzylphthalate	33	U	32	U		
97228249	N-Nitrosodiphenylamine	33	U	32	U		
97228249	Fluorene	50		130		90	89%
97228249	Carbazole	50		132		91	90%
97228249	Hexachlorobutadiene	163	U	161	U		
97228249	Pentachlorophenol	163	U	161	U		
97228249	2,4,6-Trichlorophenol	65	U	65	U		
97228249	2-Nitroaniline	65	U	65	U		
97228249	2-Nitrophenol	65	U	65	U		
97228249	1-Methylnaphthalene	10	J	16	J	13	46%
97228249	Naphthalene	17	J	65	U		
97228249	2-Methylnaphthalene	20	J	23	J	22	14%
97228249	2-Chloronaphthalene	33	U	32	U		
97228249	3,3'-Dichlorobenzidine	130	U	129	U		
97228249	1,1'-Biphenyl	16	J	19	J	18	17%
97228249	Benzidine	326	U	323	U		
97228249	2-Methylphenol	65	U	65	U		
97228249	1,2-Dichlorobenzene	163	U	161	U		
97228249	2-Chlorophenol	163	U	161	U		
97228249	2,4,5-Trichlorophenol	33	U	32	U		
97228249	Nitrobenzene	65	U	65	U		
97228249	3-Nitroaniline	65	U	65	U	65	0%

LDP1=Lab duplicate

RPD=Relative percent difference

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

REJ=Data are unusable for all purposes

Table B-3 - p.5. Data Quality of Semivolatile Organics Analysis.

MATRIX SPIKES (% recovery)					
Sample No.	**Analysis**	**LMX1**	**LMX2**	**Mean**	**RPD**
97228233	Benzo(e)pyrene-d12	71	68	70	4%
97228233	4-Nitroaniline	53	62	58	16%
97228233	4-Nitrophenol	61	62	62	2%
97228233	Benzyl Alcohol	68	70	69	3%
97228233	4-Bromophenyl-Phenylether	68	66	67	3%
97228233	Phenol, 4-Nonyl-	75	72	74	4%
97228233	2,4-Dimethylphenol	70	71	71	1%
97228233	4-Methylphenol	53	55	54	4%
97228233	1,4-Dichlorobenzene	48	48	48	0%
97228233	4-Chloroaniline	11	16	14	37%
97228233	2,2'-Oxybis[1-chloropropane]	68	64	66	6%
97228233	Phenol	66	66	66	0%
97228233	Pyridine		NAF	NAF	
97228233	Bis(2-Chloroethyl)Ether	69	69	69	0%
97228233	Bis(2-Chloroethoxy)Methane	71	70	71	1%
97228233	Bis(2-Ethylhexyl) Phthalate	79	74	77	7%
97228233	Di-N-Octyl Phthalate	83	80	82	4%
97228233	Hexachlorobenzene	67	65	66	3%
97228233	Anthracene	63	63	63	0%
97228233	1,2,4-Trichlorobenzene	56	56	56	0%
97228233	2,4-Dichlorophenol	64	65	65	2%
97228233	2,4-Dinitrotoluene	69	68	69	1%
97228233	1,2-Diphenylhydrazine	66	68	67	3%
97228233	Pyrene	58	57	58	2%
97228233	Dimethylphthalate	65	67	66	3%
97228233	Dibenzofuran	60	64	62	6%
97228233	Dibenzothiophene	66	65	66	2%
97228233	D14-Terphenyl	83	80	82	4%
97228233	D10-Pyrene	87	82	85	6%
97228233	Benzo(ghi)perylene	51	49	50	4%
97228233	Benzo[e]pyrene	60	58	59	3%
97228233	Indeno(1,2,3-cd)pyrene	65	62	64	5%
97228233	Perylene	52	51	52	2%
97228233	Benzo(b)fluoranthene	68	73	71	7%
97228233	Fluoranthene	49	51	50	4%
97228233	Benzo(k)fluoranthene	65	62	64	5%
97228233	Acenaphthylene	63	66	65	5%
97228233	Chrysene	63	61	62	3%
97228233	1,2-Dichlorobenzene-D4	49	47	48	4%
97228233	1,6,7-Trimethylnaphthalene	71	70	71	1%
97228233	2-Methylphenanthrene	62	59	61	5%
97228233	2-Fluorobiphenyl	64	63	64	2%
97228233	3B-Coprostanol		NAF	NAF	
97228233	2-Fluorophenol	69	70	70	1%
97228233	D5-Nitrobenzene	68	67	68	1%
97228233	D5-Phenol	71	70	71	1%
97228233	Retene		NAF	NAF	
97228233	Benzo(a)pyrene	61	61	61	0%
97228233	2,4-Dinitrophenol	59	57	58	3%
97228233	4,6-Dinitro-2-Methylphenol	63	64	64	2%
97228233	Dibenzo(a,h)anthracene	61	61	61	0%
97228233	1,3-Dichlorobenzene	45	46	46	2%

LMX=Laboratory matrix spike

RPD=Relative percent difference

NAF=Not analyzed for

Table B-3 - p.6. Data Quality of Semivolatile Organics Analysis.

MATRIX SPIKES (% recovery)								
Sample No.	**Analysis**	**LMX1**		**LMX2**		**Mean**	**RPD**
97228233	Benzo(a)anthracene	63		61		62	3%
97228233	Caffeine		NAF		NAF		
97228233	2,6-Dimethylnaphthalene		NAF		NAF		
97228233	4-Chloro-3-Methylphenol	67		68		68	1%
97228233	2,6-Dinitrotoluene	67		68		68	1%
97228233	N-Nitroso-Di-N-Propylamine	67		68		68	1%
97228233	Aniline	12		21		17	55%
97228233	N-Nitrosodimethylamine	55		52		54	6%
97228233	Benzoic Acid	56		40		48	33%
97228233	Hexachloroethane	23		23		23	0%
97228233	4-Chlorophenyl-Phenylether	64		65		65	2%
97228233	Hexachlorocyclopentadiene	0		0		0	
97228233	Isophorone	68		67		68	1%
97228233	1-Methylphenanthrene	62		60		61	3%
97228233	Acenaphthene	64		65		65	2%
97228233	Diethylphthalate	65		67		66	3%
97228233	Di-N-Butylphthalate	70		68		69	3%
97228233	Phenanthrene	43		43		43	0%
97228233	Butylbenzylphthalate	85		85		85	0%
97228233	N-Nitrosodiphenylamine	82		85		84	4%
97228233	Fluorene	61		60		61	2%
97228233	Carbazole		NAF		NAF		
97228233	Hexachlorobutadiene	46		44		45	4%
97228233	Pentachlorophenol	70		69		70	1%
97228233	2,4,6-Trichlorophenol	66		66		66	0%
97228233	2-Nitroaniline	35		41		38	16%
97228233	2-Nitrophenol	71		72		72	1%
97228233	1-Methylnaphthalene		NAF		NAF		
97228233	Naphthalene	58		59		59	2%
97228233	2-Methylnaphthalene	62		62		62	0%
97228233	2-Chloronaphthalene	62		63		63	2%
97228233	3,3'-Dichlorobenzidine		NAF		NAF		
97228233	1,1'-Biphenyl	69		68		69	1%
97228233	Benzidine		NAF		NAF		
97228233	D4-2-Chlorophenol	71		71		71	0%
97228233	2-Methylphenol	70		70		70	0%
97228233	1,2-Dichlorobenzene	50		51		51	2%
97228233	2-Chlorophenol	68		69		69	1%
97228233	2,4,5-Trichlorophenol	65		68		67	5%
97228233	Nitrobenzene	64		64		64	0%
97228233	3-Nitroaniline	37		41		39	10%
97228255	Benzo(e)pyrene-d12	94		98		96	4%
97228255	4-Nitroaniline	52		49		51	6%
97228255	4-Nitrophenol	89		95		92	7%
97228255	Benzyl Alcohol	99		108		104	9%
97228255	4-Bromophenyl-Phenylether	100		106		103	6%
97228255	Phenol, 4-Nonyl-	115		112		114	3%
97228255	2,4-Dimethylphenol	95		99		97	4%
97228255	4-Methylphenol	91		100		96	9%
97228255	1,4-Dichlorobenzene	73		75		74	3%
97228255	4-Chloroaniline	25		21		23	17%
97228255	2,2'-Oxybis[1-chloropropane]	83		87		85	5%

LMX=Laboratory matrix spike

RPD=Relative percent difference

NAF=Not analyzed for

Table B-3 - p.7. Data Quality of Semivolatile Organics Analysis.

MATRIX SPIKES (% recovery)								
Sample No.	**Analysis**	**LMX1**		**LMX2**		**Mean**	**RPD**
97228255	Phenol	89		98		94	10%
97228255	Pyridine		NAF		NAF		
97228255	Bis(2-Chloroethyl)Ether	77		88		83	13%
97228255	Bis(2-Chloroethoxy)Methane	86		96		91	11%
97228255	Bis(2-Ethylhexyl) Phthalate	99		116		108	16%
97228255	Di-N-Octyl Phthalate	109		119		114	9%
97228255	Hexachlorobenzene	92		101		97	9%
97228255	Anthracene	95		103		99	8%
97228255	1,2,4-Trichlorobenzene	81		87		84	7%
97228255	2,4-Dichlorophenol	98		105		102	7%
97228255	2,4-Dinitrotoluene	88		92		90	4%
97228255	1,2-Diphenylhydrazine	93		97		95	4%
97228255	Pyrene	89		102		96	14%
97228255	Dimethylphthalate	99		99		99	0%
97228255	Dibenzofuran	98		97		98	1%
97228255	Dibenzothiophene	96		96		96	0%
97228255	D14-Terphenyl	94		105		100	11%
97228255	D10-Pyrene	96		101		99	5%
97228255	Benzo(ghi)perylene	94		97		96	3%
97228255	Benzo[e]pyrene	92		94		93	2%
97228255	Indeno(1,2,3-cd)pyrene	101		104		103	3%
97228255	Perylene	99		124		112	22%
97228255	Benzo(b)fluoranthene	91		103		97	12%
97228255	Fluoranthene	99		106		103	7%
97228255	Benzo(k)fluoranthene	94		105		100	11%
97228255	Acenaphthylene	85		88		87	3%
97228255	Chrysene	87		95		91	9%
97228255	1,2-Dichlorobenzene-D4	65		68		67	5%
97228255	1,6,7-Trimethylnaphthalene	104		107		106	3%
97228255	2-Methylphenanthrene	98		97		98	1%
97228255	2-Fluorobiphenyl	87		90		89	3%
97228255	3B-Coprostanol		NAF		NAF		
97228255	2-Fluorophenol	84		88		86	5%
97228255	D5-Nitrobenzene	88		86		87	2%
97228255	D5-Phenol	88		93		91	6%
97228255	Retene		NAF		NAF		
97228255	Benzo(a)pyrene	97		101		99	4%
97228255	2,4-Dinitrophenol	86		85		86	1%
97228255	4,6-Dinitro-2-Methylphenol	85		82		84	4%
97228255	Dibenzo(a,h)anthracene	102		106		104	4%
97228255	1,3-Dichlorobenzene	71		74		73	4%
97228255	Benzo(a)anthracene	92		101		97	9%
97228255	Caffeine		NAF		NAF		
97228255	2,6-Dimethylnaphthalene		NAF		NAF		
97228255	4-Chloro-3-Methylphenol	96		105		101	9%
97228255	2,6-Dinitrotoluene	82		90		86	9%
97228255	N-Nitroso-Di-N-Propylamine	75		85		80	13%
97228255	Aniline	20		17		19	16%
97228255	N-Nitrosodimethylamine	61		67		64	9%
97228255	Benzoic Acid	66		83		75	23%
97228255	Hexachloroethane	20		19		20	5%
97228255	4-Chlorophenyl-Phenylether	90		95		93	5%
97228255	Hexachlorocyclopentadiene		REJ		REJ		

LMX=Laboratory matrix spike

RPD=Relative percent difference

REJ=Data are unusable for all purposes

NAF=Not analyzed for

Table B-3 - p.8. Data Quality of Semivolatile Organics Analysis.

MATRIX SPIKES (% recovery)							
Sample No.	**Analysis**	**LMX1**		**LMX2**		**Mean**	**RPD**
97228255	Isophorone	86		96		91	11%
97228255	1-Methylphenanthrene	96		102		99	6%
97228255	Acenaphthene	88		89		89	1%
97228255	Diethylphthalate	95		98		97	3%
97228255	Di-N-Butylphthalate	118		89		104	28%
97228255	Phenanthrene	95		102		99	7%
97228255	Butylbenzylphthalate	105		123		114	16%
97228255	N-Nitrosodiphenylamine	100		110		105	10%
97228255	Fluorene	94		98		96	4%
97228255	Carbazole		NAF		NAF		
97228255	Hexachlorobutadiene	78		84		81	7%
97228255	Pentachlorophenol	94		85		90	10%
97228255	2,4,6-Trichlorophenol	104		105		105	1%
97228255	2-Nitroaniline	40		38		39	5%
97228255	2-Nitrophenol	72		77		75	7%
97228255	1-Methylnaphthalene		NAF		NAF		
97228255	Naphthalene	83		93		88	11%
97228255	2-Methylnaphthalene	95		106		101	11%
97228255	2-Chloronaphthalene	94		94		94	0%
97228255	3,3'-Dichlorobenzidine		NAF		NAF		
97228255	1,1'-Biphenyl	101		96		99	5%
97228255	Benzidine		NAF		NAF		
97228255	D4-2-Chlorophenol	81		88		85	8%
97228255	2-Methylphenol	88		94		91	7%
97228255	1,2-Dichlorobenzene	75		79		77	5%
97228255	2-Chlorophenol	84		94		89	11%
97228255	2,4,5-Trichlorophenol	102		108		105	6%
97228255	Nitrobenzene	95		96		96	1%
97228255	3-Nitroaniline	44		39		42	12%

LMX=Laboratory matrix spike

RPD=Relative percent difference

NAF=Not analyzed for

Table B-3 - p.9. Data Quality of Semivolatile Organics Analysis.

BLANKS (ug/kg, dry)			
Sample No.	**Analysis**	**Result**	
OBS7279A1	4-Nitroaniline	100	U
OBS7279A1	4-Nitrophenol	100	U
OBS7279A1	Benzyl Alcohol	20	U
OBS7279A1	4-Bromophenyl-Phenylether	20	U
OBS7279A1	Phenol, 4-Nonyl-	100	U
OBS7279A1	2,4-Dimethylphenol	20	U
OBS7279A1	4-Methylphenol	20	U
OBS7279A1	1,4-Dichlorobenzene	20	U
OBS7279A1	4-Chloroaniline	20	U
OBS7279A1	Heptane, 2,6-dimethyl-	**42**	NJ
OBS7279A1	2,2'-Oxybis[1-chloropropane]	20	U
OBS7279A1	Toluene	**27**	NJ
OBS7279A1	Phenol	**11**	J
OBS7279A1	2,5-Hexanedione	**30**	NJ
OBS7279A1	Pyridine	40	U
OBS7279A1	Bis(2-Chloroethyl)Ether	20	U
OBS7279A1	Bis(2-Chloroethoxy)Methane	20	U
OBS7279A1	Bis(2-Ethylhexyl) Phthalate	**6**	J
OBS7279A1	Di-N-Octyl Phthalate	20	U
OBS7279A1	Hexachlorobenzene	20	U
OBS7279A1	Anthracene	20	U
OBS7279A1	1,2,4-Trichlorobenzene	20	U
OBS7279A1	2,4-Dichlorophenol	40	U
OBS7279A1	2,4-Dinitrotoluene	40	U
OBS7279A1	1,2-Diphenylhydrazine	20	U
OBS7279A1	2-Pentanone, 4-hydroxy-4-methyl-	**3440**	NJ
OBS7279A1	Pyrene	0.95	J
OBS7279A1	Dimethylphthalate	20	U
OBS7279A1	Dibenzofuran	20	U
OBS7279A1	Dibenzothiophene	20	U
OBS7279A1	3-Penten-2-one, 4-methyl-	**43**	NJ
OBS7279A1	Benzo(ghi)perylene	20	U
OBS7279A1	Benzo[e]pyrene	20	U
OBS7279A1	Indeno(1,2,3-cd)pyrene	100	U
OBS7279A1	Perylene	20	U
OBS7279A1	Benzo(b)fluoranthene	20	U
OBS7279A1	Fluoranthene	**0.83**	J
OBS7279A1	Benzo(k)fluoranthene	20	U
OBS7279A1	Acenaphthylene	20	U
OBS7279A1	Chrysene	20	U
OBS7279A1	Heptane, 2,4-dimethyl-	**52**	NJ
OBS7279A1	Heptane, 2,5-dimethyl-	**119**	NJ
OBS7279A1	Octane, 3-methyl-	**65**	NJ
OBS7279A1	Octane, 4-methyl-	**54**	NJ
OBS7279A1	1,6,7-Trimethylnaphthalene	20	U
OBS7279A1	2-Methylphenanthrene	20	U
OBS7279A1	7-Oxabicyclo[4.1.0]heptane	**274**	NJ
OBS7279A1	3B-Coprostanol	80	U
OBS7279A1	Retene	20	U
OBS7279A1	Benzo(a)pyrene	20	U
OBS7279A1	2,4-Dinitrophenol	400	UJ
OBS7279A1	4,6-Dinitro-2-Methylphenol	100	UJ

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

Table B-3 - p.10. Data Quality of Semivolatile Organics Analysis.

BLANKS (ug/kg, dry)			
Sample No.	**Analysis**	**Result**	
OBS7279A1	Dibenzo(a,h)anthracene	40	U
OBS7279A1	1,3-Dichlorobenzene	20	U
OBS7279A1	Benzo(a)anthracene	20	U
OBS7279A1	Hexadecanoic acid	**57**	NJ
OBS7279A1	Caffeine	20	U
OBS7279A1	2,6-Dimethylnaphthalene	20	U
OBS7279A1	2-Hexanone	**66**	NJ
OBS7279A1	4-Chloro-3-Methylphenol	20	U
OBS7279A1	2,6-Dinitrotoluene	100	U
OBS7279A1	N-Nitroso-Di-N-Propylamine	20	U
OBS7279A1	Aniline	20	U
OBS7279A1	N-Nitrosodimethylamine	20	U
OBS7279A1	Benzoic Acid	200	UJ
OBS7279A1	Hexachloroethane	20	U
OBS7279A1	4-Chlorophenyl-Phenylether	20	U
OBS7279A1	Hexachlorocyclopentadiene		REJ
OBS7279A1	Isophorone	20	U
OBS7279A1	2-Cyclohexen-1-ol	**52**	NJ
OBS7279A1	1-Methylphenanthrene	20	U
OBS7279A1	Acenaphthene	20	U
OBS7279A1	Diethylphthalate	2.3	J
OBS7279A1	Di-N-Butylphthalate	5.1	J
OBS7279A1	Phenanthrene	20	U
OBS7279A1	Butylbenzylphthalate	20	U
OBS7279A1	N-Nitrosodiphenylamine	20	U
OBS7279A1	Fluorene	20	U
OBS7279A1	Carbazole	20	U
OBS7279A1	Hexachlorobutadiene	20	U
OBS7279A1	Pentachlorophenol	100	U
OBS7279A1	2,4,6-Trichlorophenol	20	U
OBS7279A1	2-Nitroaniline	40	U
OBS7279A1	2-Nitrophenol	100	U
OBS7279A1	1-Methylnaphthalene	20	U
OBS7279A1	Naphthalene	20	U
OBS7279A1	2-Methylnaphthalene	20	U
OBS7279A1	2-Chloronaphthalene	20	U
OBS7279A1	3,3'-Dichlorobenzidine	80	U
OBS7279A1	1,1'-Biphenyl	**1.2**	J
OBS7279A1	Benzidine	200	UJ
OBS7279A1	2-Cyclohexen-1-one	**55**	NJ
OBS7279A1	2-Methylphenol	20	U
OBS7279A1	1,2-Dichlorobenzene	20	U
OBS7279A1	2-Chlorophenol	20	U
OBS7279A1	2,4,5-Trichlorophenol	20	U
OBS7279A1	Nitrobenzene	20	U
OBS7279A1	3-Nitroaniline	40	U
OBS7279A2	4-Nitroaniline	100	U
OBS7279A2	4-Nitrophenol	100	U
OBS7279A2	Benzyl Alcohol	20	U
OBS7279A2	4-Bromophenyl-Phenylether	20	U
OBS7279A2	Phenol, 4-Nonyl-	100	U
OBS7279A2	2,4-Dimethylphenol	20	U

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

REJ=Data are unusable for all purposes

Table B-3 - p.11. Data Quality of Semivolatile Organics Analysis.

BLANKS (ug/kg, dry) **Sample No.**	**Analysis**	**Result**	
OBS7279A2	4-Methylphenol	20	U
OBS7279A2	1,4-Dichlorobenzene	20	U
OBS7279A2	4-Chloroaniline	20	U
OBS7279A2	Heptane, 2,6-dimethyl-	**23**	NJ
OBS7279A2	2,2'-Oxybis[1-chloropropane]	20	U
OBS7279A2	Toluene	**30**	NJ
OBS7279A2	Phenol	**7.6**	J
OBS7279A2	2,5-Hexanedione	**38**	NJ
OBS7279A2	Pyridine	40	U
OBS7279A2	Bis(2-Chloroethyl)Ether	20	U
OBS7279A2	Bis(2-Chloroethoxy)Methane	20	U
OBS7279A2	Bis(2-Ethylhexyl) Phthalate	**25**	J
OBS7279A2	Di-N-Octyl Phthalate	20	U
OBS7279A2	Hexachlorobenzene	20	U
OBS7279A2	Anthracene	20	U
OBS7279A2	1,2,4-Trichlorobenzene	20	U
OBS7279A2	2,4-Dichlorophenol	40	U
OBS7279A2	2,4-Dinitrotoluene	40	U
OBS7279A2	1,2-Diphenylhydrazine	20	U
OBS7279A2	2-Pentanone, 4-hydroxy-4-methyl-	**5080**	NJ
OBS7279A2	Pyrene	20	U
OBS7279A2	Dimethylphthalate	20	U
OBS7279A2	Dibenzofuran	20	U
OBS7279A2	Dibenzothiophene	20	U
OBS7279A2	3-Penten-2-one, 4-methyl-	**45**	NJ
OBS7279A2	Benzo(ghi)perylene	20	U
OBS7279A2	Benzo[e]pyrene	20	U
OBS7279A2	Indeno(1,2,3-cd)pyrene	100	U
OBS7279A2	Perylene	20	U
OBS7279A2	Benzo(b)fluoranthene	20	U
OBS7279A2	Fluoranthene	20	U
OBS7279A2	Benzo(k)fluoranthene	20	U
OBS7279A2	Acenaphthylene	20	U
OBS7279A2	Chrysene	20	U
OBS7279A2	Heptane, 2,4-dimethyl-	**67**	NJ
OBS7279A2	Heptane, 2,5-dimethyl-	**148**	NJ
OBS7279A2	Octane, 3-methyl-	**76**	NJ
OBS7279A2	Octane, 4-methyl-	**60**	NJ
OBS7279A2	1,6,7-Trimethylnaphthalene	20	U
OBS7279A2	2-Methylphenanthrene	20	U
OBS7279A2	Cyclotetradecane	**57**	NJ
OBS7279A2	Heptane, 2,3-dimethyl-	**201**	NJ
OBS7279A2	Octane, 2-methyl-	**56**	NJ
OBS7279A2	3B-Coprostanol	80	U
OBS7279A2	Retene	20	U
OBS7279A2	Benzo(a)pyrene	20	U
OBS7279A2	2,4-Dinitrophenol	400	UJ
OBS7279A2	2-Butanol, 3-methyl-, acetate	**23**	NJ
OBS7279A2	4,6-Dinitro-2-Methylphenol	100	UJ
OBS7279A2	Dibenzo(a,h)anthracene	40	U
OBS7279A2	1,3-Dichlorobenzene	20	U

LDP1=Lab duplicate

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

Table B-3 - p.12. Data Quality of Semivolatile Organics Analysis.

BLANKS (ug/kg, dry) **Sample No.**	**Analysis**	**Result**	
OBS7279A2	Benzo(a)anthracene	20	U
OBS7279A2	2-Pentanone, 3-methyl-	**263**	NJ
OBS7279A2	Hexadecanoic acid	**107**	NJ
OBS7279A2	Caffeine	20	U
OBS7279A2	2,6-Dimethylnaphthalene	20	U
OBS7279A2	4-Chloro-3-Methylphenol	20	U
OBS7279A2	2,6-Dinitrotoluene	100	U
OBS7279A2	N-Nitroso-Di-N-Propylamine	20	U
OBS7279A2	Aniline	20	U
OBS7279A2	N-Nitrosodimethylamine	20	U
OBS7279A2	Benzoic Acid	200	UJ
OBS7279A2	Hexachloroethane	20	U
OBS7279A2	4-Chlorophenyl-Phenylether	20	U
OBS7279A2	Hexachlorocyclopentadiene		REJ
OBS7279A2	Isophorone	20	U
OBS7279A2	1-Methylphenanthrene	20	U
OBS7279A2	Acenaphthene	20	U
OBS7279A2	Diethylphthalate	**2.2**	J
OBS7279A2	Di-N-Butylphthalate	13	J
OBS7279A2	Phenanthrene	20	U
OBS7279A2	Butylbenzylphthalate	20	U
OBS7279A2	N-Nitrosodiphenylamine	20	U
OBS7279A2	Fluorene	20	U
OBS7279A2	Carbazole	20	U
OBS7279A2	Hexachlorobutadiene	20	U
OBS7279A2	Pentachlorophenol	100	U
OBS7279A2	2,4,6-Trichlorophenol	20	U
OBS7279A2	2-Nitroaniline	40	U
OBS7279A2	2-Nitrophenol	100	U
OBS7279A2	1-Methylnaphthalene	20	U
OBS7279A2	Naphthalene	20	U
OBS7279A2	2-Methylnaphthalene	20	U
OBS7279A2	2-Chloronaphthalene	20	U
OBS7279A2	3,3'-Dichlorobenzidine	80	U
OBS7279A2	1,1'-Biphenyl	**2.1**	J
OBS7279A2	Benzidine	200	UJ
OBS7279A2	2-Methylphenol	20	U
OBS7279A2	1,2-Dichlorobenzene	20	U
OBS7279A2	2-Chlorophenol	20	U
OBS7279A2	2,4,5-Trichlorophenol	20	U
OBS7279A2	Nitrobenzene	20	U
OBS7279A2	3-Nitroaniline	40	U
OBS7323A1	C1-Naphthalenes	**36**	NJ
OBS7323A1	C2 -Naphthalenes	**36**	NJ
OBS7323A1	C3 -Naphthalenes	**36**	NJ
OBS7323A1	C4 -Naphthalenes	**36**	NJ
OBS7323A1	C1-Fluorenes	**36**	NJ
OBS7323A1	C2-Fluorenes	**36**	NJ
OBS7323A1	C3-Fluorenes	**36**	NJ
OBS7323A1	C1-Dibenzothiophenes	**36**	NJ
OBS7323A1	C2-Dibenzothiophenes	**36**	NJ
OBS7323A1	C3-Dibenzothiophenes	**36**	NJ
OBS7323A1	C1-Phenanthrenes/Anthracenes	**36**	NJ

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

REJ=Data are unusable for all purposes

Table B-3 - p.13. Data Quality of Semivolatile Organics Analysis.

BLANKS (ug/kg, dry)			
Sample No.	**Analysis**	**Result**	
OBS7323A1	C2-Phenanthrenes/Anthracenes	**36**	NJ
OBS7323A1	C3-Phenanthrenes/Anthracenes	**36**	NJ
OBS7323A1	C4-Phenanthrenes/Anthracenes	**36**	NJ
OBS7323A1	C1-Fluoranthene/Pyrene	**36**	NJ
OBS7323A1	C1-Chrysenes	**36**	NJ
OBS7323A1	C2-Chrysenes	**36**	NJ
OBS7323A1	C3-Chrysenes	**36**	NJ
OBS7323A1	C4-Chrysenes	**36**	NJ
OBS7323A1	4-Nitroaniline	29	U
OBS7323A1	4-Nitrophenol	71	U
OBS7323A1	Benzyl Alcohol	14	U
OBS7323A1	4-Bromophenyl-Phenylether	14	U
OBS7323A1	Phenol, 4-Nonyl-	71	U
OBS7323A1	2,4-Dimethylphenol	14	U
OBS7323A1	4-Methylphenol	14	U
OBS7323A1	1,4-Dichlorobenzene	14	U
OBS7323A1	4-Chloroaniline	14	U
OBS7323A1	2,2'-Oxybis[1-chloropropane]	14	U
OBS7323A1	Toluene	**61**	NJ
OBS7323A1	Phenol	**16**	
OBS7323A1	2,5-Hexanedione	**66**	NJ
OBS7323A1	Pyridine	29	U
OBS7323A1	Bis(2-Chloroethyl)Ether	14	U
OBS7323A1	Ethanol, 2-butoxy-	**52**	NJ
OBS7323A1	Bis(2-Chloroethoxy)Methane	14	U
OBS7323A1	1-Octadecanol	**123**	NJ
OBS7323A1	Bis(2-Ethylhexyl) Phthalate	**14**	J
OBS7323A1	Di-N-Octyl Phthalate	29	U
OBS7323A1	Hexachlorobenzene	14	U
OBS7323A1	Anthracene	14	U
OBS7323A1	1,2,4-Trichlorobenzene	14	U
OBS7323A1	2,4-Dichlorophenol	29	U
OBS7323A1	2,4-Dinitrotoluene	29	U
OBS7323A1	1,2-Diphenylhydrazine	14	U
OBS7323A1	2-Pentanone, 4-hydroxy-4-methyl-	**8740**	NJ
OBS7323A1	Pyrene	14	U
OBS7323A1	Dimethylphthalate	71	U
OBS7323A1	Dibenzofuran	14	U
OBS7323A1	Dibenzothiophene	14	U
OBS7323A1	3-Penten-2-one, 4-methyl-	**65**	NJ
OBS7323A1	Heptane	**110**	NJ
OBS7323A1	Hexane, 3-ethyl-2-methyl-	**359**	NJ
OBS7323A1	Benzo(ghi)perylene	71	U
OBS7323A1	Benzo[e]pyrene	14	U
OBS7323A1	Indeno(1,2,3-cd)pyrene	29	U
OBS7323A1	Perylene	14	U
OBS7323A1	Benzo(b)fluoranthene	71	U
OBS7323A1	Fluoranthene	14	U
OBS7323A1	Benzo(k)fluoranthene	14	U
OBS7323A1	Acenaphthylene	14	U
OBS7323A1	Chrysene	14	U
OBS7323A1	Heptane, 2,5-dimethyl-	**382**	NJ
OBS7323A1	Octane, 3-methyl-	**204**	NJ
OBS7323A1	Octane, 4-methyl-	**142**	NJ
OBS7323A1	1,6,7-Trimethylnaphthalene	14	U

U=Undetected at detection limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

Table B-3 - p.14. Data Quality of Semivolatile Organics Analysis.

BLANKS (ug/kg, dry) **Sample No.**	**Analysis**	**Result**	
OBS7323A1	2-Methylphenanthrene	14	U
OBS7323A1	Heptane, 2,3-dimethyl-	**176**	NJ
OBS7323A1	Octane, 2-methyl-	**59**	NJ
OBS7323A1	3B-Coprostanol	71	U
OBS7323A1	Retene	14	U
OBS7323A1	Benzo(a)pyrene	14	U
OBS7323A1	2,4-Dinitrophenol	286	U
OBS7323A1	4,6-Dinitro-2-Methylphenol	71	U
OBS7323A1	Dibenzo(a,h)anthracene	29	U
OBS7323A1	1,3-Dichlorobenzene	14	U
OBS7323A1	Benzo(a)anthracene	14	U
OBS7323A1	Hexadecanoic acid	**157**	NJ
OBS7323A1	Caffeine	14	U
OBS7323A1	2,6-Dimethylnaphthalene	14	U
OBS7323A1	4-Chloro-3-Methylphenol	29	U
OBS7323A1	2,6-Dinitrotoluene	71	U
OBS7323A1	N-Nitroso-Di-N-Propylamine	14	U
OBS7323A1	Aniline	14	U
OBS7323A1	N-Nitrosodimethylamine	14	U
OBS7323A1	Benzoic Acid	143	U
OBS7323A1	Hexachloroethane	14	U
OBS7323A1	17-Pentatriacontene	**55**	NJ
OBS7323A1	4-Chlorophenyl-Phenylether	14	U
OBS7323A1	Hexachlorocyclopentadiene		REJ
OBS7323A1	Isophorone	14	U
OBS7323A1	1-Methylphenanthrene	14	U
OBS7323A1	Acenaphthene	14	U
OBS7323A1	Diethylphthalate	71	U
OBS7323A1	Di-N-Butylphthalate	**8.4**	J
OBS7323A1	Phenanthrene	**1**	J
OBS7323A1	Butylbenzylphthalate	14	U
OBS7323A1	N-Nitrosodiphenylamine	14	U
OBS7323A1	Fluorene	14	U
OBS7323A1	Carbazole	14	U
OBS7323A1	Hexachlorobutadiene	14	U
OBS7323A1	Pentachlorophenol	71	U
OBS7323A1	2,4,6-Trichlorophenol	29	U
OBS7323A1	2-Nitroaniline	71	U
OBS7323A1	2-Nitrophenol	71	U
OBS7323A1	1-Methylnaphthalene	14	U
OBS7323A1	Naphthalene	14	U
OBS7323A1	2-Methylnaphthalene	14	U
OBS7323A1	2-Chloronaphthalene	14	U
OBS7323A1	3,3'-Dichlorobenzidine	29	U
OBS7323A1	1,1'-Biphenyl	**3.2**	J
OBS7323A1	Benzidine	143	U
OBS7323A1	2-Methylphenol	14	U
OBS7323A1	1,2-Dichlorobenzene	14	U
OBS7323A1	2-Chlorophenol	14	U
OBS7323A1	2,4,5-Trichlorophenol	14	U
OBS7323A1	Glycine, N-methyl-N-(1-oxododecyl)	**44**	NJ
OBS7323A1	Nitrobenzene	14	U
OBS7323A1	3-Nitroaniline	71	U
OBS7323A2	4-Nitroaniline	29	U

U=Undetected at detection limit shown

J=Estimated concentration

NJ=There is evidence the analyte is present. The associated value is an estimate.

REJ=Data are unusable for all purposes

Table B-3 - p.15. Data Quality of Semivolatile Organics Analysis.

BLANKS (ug/kg, dry) **Sample No.**	**Analysis**	**Result**	
OBS7323A2	4-Nitrophenol	71	U
OBS7323A2	Benzyl Alcohol	14	U
OBS7323A2	4-Bromophenyl-Phenylether	14	U
OBS7323A2	Phenol, 4-Nonyl-	**71**	
OBS7323A2	2,4-Dimethylphenol	14	U
OBS7323A2	4-Methylphenol	14	U
OBS7323A2	1,4-Dichlorobenzene	14	U
OBS7323A2	4-Chloroaniline	14	U
OBS7323A2	2,2'-Oxybis[1-chloropropane]	14	U
OBS7323A2	Phenol	**12**	J
OBS7323A2	2,5-Hexanedione	**55**	NJ
OBS7323A2	Pyridine	29	U
OBS7323A2	Bis(2-Chloroethyl)Ether	14	U
OBS7323A2	Ethanol, 2-butoxy-	**46**	NJ
OBS7323A2	Bis(2-Chloroethoxy)Methane	14	U
OBS7323A2	Bis(2-Ethylhexyl) Phthalate	**36**	
OBS7323A2	Di-N-Octyl Phthalate	29	U
OBS7323A2	Hexachlorobenzene	14	U
OBS7323A2	Anthracene	14	U
OBS7323A2	1,2,4-Trichlorobenzene	14	U
OBS7323A2	2,4-Dichlorophenol	29	U
OBS7323A2	2,4-Dinitrotoluene	29	U
OBS7323A2	1,2-Diphenylhydrazine	14	U
OBS7323A2	2-Pentanone, 4-hydroxy-4-methyl-	**6260**	NJ
OBS7323A2	Pyrene	**5.5**	J
OBS7323A2	Dimethylphthalate	71	U
OBS7323A2	Dibenzofuran	14	U
OBS7323A2	Dibenzothiophene	14	U
OBS7323A2	3-Penten-2-one, 4-methyl-	**57**	NJ
OBS7323A2	Isopropyl Palmitate	**111**	NJ
OBS7323A2	Benzo(ghi)perylene	71	U
OBS7323A2	Benzo[e]pyrene	14	U
OBS7323A2	Indeno(1,2,3-cd)pyrene	29	U
OBS7323A2	Perylene	14	U
OBS7323A2	Benzo(b)fluoranthene	71	U
OBS7323A2	Fluoranthene	**1.4**	J
OBS7323A2	Benzo(k)fluoranthene	14	U
OBS7323A2	Acenaphthylene	14	U
OBS7323A2	Chrysene	14	U
OBS7323A2	Octane, 3-methyl-	**127**	NJ
OBS7323A2	Octane, 4-methyl-	**76**	NJ
OBS7323A2	1,6,7-Trimethylnaphthalene	14	U
OBS7323A2	2-Methylphenanthrene	**1.4**	J
OBS7323A2	Heptane, 2,3-dimethyl-	**306**	NJ
OBS7323A2	Pyrrolidine, 3-methyl-	**92**	NJ
OBS7323A2	3B-Coprostanol	71	U
OBS7323A2	1,2-Benzenedicarboxylic acid, dihep	**47**	NJ
OBS7323A2	Retene	14	U
OBS7323A2	Benzo(a)pyrene	14	U
OBS7323A2	2,4-Dinitrophenol	286	U
OBS7323A2	4,6-Dinitro-2-Methylphenol	71	U
OBS7323A2	Dibenzo(a,h)anthracene	29	U
OBS7323A2	1,3-Dichlorobenzene	14	U
OBS7323A2	Benzo(a)anthracene	14	U

U=Undetected at detection limit shown

J=Estimated concentration

NJ=There is evidence the analyte is present. The associated value is an estimate.

Table B-3 - p.16. Data Quality of Semivolatile Organics Analysis.

BLANKS (ug/kg, dry)			
Sample No.	**Analysis**	**Result**	
OBS7323A2	Caffeine	14	U
OBS7323A2	2,6-Dimethylnaphthalene	14	U
OBS7323A2	4-Chloro-3-Methylphenol	29	U
OBS7323A2	2,6-Dinitrotoluene	71	U
OBS7323A2	N-Nitroso-Di-N-Propylamine	14	U
OBS7323A2	Aniline	14	U
OBS7323A2	N-Nitrosodimethylamine	14	U
OBS7323A2	1-Pentadecanol	**136**	NJ
OBS7323A2	Benzoic Acid	143	U
OBS7323A2	Hexachloroethane	14	U
OBS7323A2	4-Chlorophenyl-Phenylether	14	U
OBS7323A2	Hexachlorocyclopentadiene		REJ
OBS7323A2	Isophorone	14	U
OBS7323A2	1-Methylphenanthrene	**1.2**	J
OBS7323A2	Acenaphthene	14	U
OBS7323A2	Diethylphthalate	**1.1**	J
OBS7323A2	1,2-Benzenedicarboxylic acid, bis(2·	**64**	NJ
OBS7323A2	Di-N-Butylphthalate	**36**	
OBS7323A2	Phenanthrene	**1.2**	J
OBS7323A2	Butylbenzylphthalate	14	U
OBS7323A2	N-Nitrosodiphenylamine	14	U
OBS7323A2	Fluorene	14	U
OBS7323A2	Carbazole	14	U
OBS7323A2	Hexachlorobutadiene	14	U
OBS7323A2	Pentachlorophenol	71	U
OBS7323A2	2,4,6-Trichlorophenol	29	U
OBS7323A2	2-Nitroaniline	71	U
OBS7323A2	2-Nitrophenol	71	U
OBS7323A2	1-Methylnaphthalene	14	U
OBS7323A2	Naphthalene	14	U
OBS7323A2	2-Methylnaphthalene	14	U
OBS7323A2	2-Chloronaphthalene	14	U
OBS7323A2	3,3'-Dichlorobenzidine	29	U
OBS7323A2	1,1'-Biphenyl	**2.8**	J
OBS7323A2	Benzidine	143	U
OBS7323A2	2-Cyclohexen-1-one	**85**	NJ
OBS7323A2	2-Methylphenol	14	U
OBS7323A2	1,2-Dichlorobenzene	14	U
OBS7323A2	2-Chlorophenol	14	U
OBS7323A2	2,4,5-Trichlorophenol	14	U
OBS7323A2	Nitrobenzene	14	U
OBS7323A2	3-Nitroaniline	71	U

U=Undetected at detection limit shown

J=Estimated concentration

NJ=There is evidence the analyte is present. The associated value is an estimate.

REJ=Data are unusable for all purposes

Table B-3 - p.17. Data Quality of Semivolatile Organics Analysis.

FIELD SPLITS (ug/kg, dry)							
Sample No.	**Analysis**	**No. -34**		**No. -35**		**Mean**	**RPD**
97228234/5	4-Nitroaniline	30	U	80	U		
97228234/5	4-Nitrophenol	75	U	80	U		
97228234/5	Benzyl Alcohol	15	U	7.2	J		
97228234/5	4-Bromophenyl-Phenylether	15	U	16	U		
97228234/5	Phenol, 4-Nonyl-	75	U	80	U		
97228234/5	2,4-Dimethylphenol	15	U	16	U		
97228234/5	4-Methylphenol	150		7	J	79	182%
97228234/5	1,4-Dichlorobenzene	15	U	16	U		
97228234/5	4-Chloroaniline	15	UJ	16	UJ		
97228234/5	2,2'-Oxybis[1-chloropropane]	15	U	16	U		
97228234/5	Phenol	34	U	31	U		
97228234/5	Pyridine	30	U	32	U		
97228234/5	Bis(2-Chloroethyl)Ether	15	U	16	U		
97228234/5	Bis(2-Chloroethoxy)Methane	15	U	16	U		
97228234/5	Bis(2-Ethylhexyl) Phthalate	30	UJ	266			
97228234/5	Di-N-Octyl Phthalate	186	J	16	U		
97228234/5	Hexachlorobenzene	15	U	16	U		
97228234/5	Anthracene	13	J	15	J	14	14%
97228234/5	1,2,4-Trichlorobenzene	15	U	16	U		
97228234/5	2,4-Dichlorophenol	30	U	32	U		
97228234/5	2,4-Dinitrotoluene	30	U	32	U		
97228234/5	1,2-Diphenylhydrazine	15	U	16	U		
97228234/5	Pyrene	126	J	146		136	15%
97228234/5	Dimethylphthalate	6.8	J	6.4	J	7	6%
97228234/5	Dibenzofuran	2.2	J	5.6	J	4	87%
97228234/5	Dibenzothiophene	15	U	4.9	J		
97228234/5	Phytol	454	NJ	nd			
97228234/5	Ethanethioic acid, S-methyl ester	91	NJ	nd			
97228234/5	3-Penten-2-one, 4-methyl-	nd		1400	NJ		
97228234/5	Benzo(ghi)perylene	21	J	20	J	21	5%
97228234/5	Benzo[e]pyrene	18	J	34		26	62%
97228234/5	Indeno(1,2,3-cd)pyrene	19	J	20	J	20	5%
97228234/5	Perylene	7.2	J	13	J	10	57%
97228234/5	Benzo(b)fluoranthene	58	J	81		70	33%
97228234/5	Fluoranthene	93	J	153	J	123	49%
97228234/5	Benzo(k)fluoranthene	19	J	31		25	48%
97228234/5	Acenaphthylene	4.6	J	8.1	J	6	55%
97228234/5	Chrysene	91	J	77		84	17%
97228234/5	1,6,7-Trimethylnaphthalene	15	U	16	U		
97228234/5	2-Methylphenanthrene	30		14	J	22	73%
97228234/5	3-Penten-2-one, (E)-	nd		549	NJ		
97228234/5	Cholesta-5,22-dien-3-ol, (3.beta.)-	584	NJ	874	NJ	729	40%
97228234/5	3B-Coprostanol	260	J	204	J	232	24%
97228234/5	Ergost-5-en-3-ol, (3.beta.)-	nd		604	NJ		
97228234/5	Ergosta-5,22-dien-3-ol, (3.beta.,22E	nd		928	NJ		
97228234/5	Retene	15	UJ	30			

RPD=Relative percent difference

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

Table B-3 - p.18. Data Quality of Semivolatile Organics Analysis.

FIELD SPLITS (ug/kg, dry)							
Sample No.	**Analysis**	**No. -34**		**No. -35**		**Mean**	**RPD**
97228234/5	Benzo(a)pyrene	21	J	38		30	58%
97228234/5	Isophytol	nd		1100	NJ		
97228234/5	2,4-Dinitrophenol	298	U	320	UJ		
97228234/5	4,6-Dinitro-2-Methylphenol	75	U	80	UJ		
97228234/5	Dibenzo(a,h)anthracene	30	U	3.8	J		
97228234/5	1,3-Dichlorobenzene	15	UJ	16	UJ		
97228234/5	Tetradecanoic acid	424	NJ	409	NJ	417	4%
97228234/5	Benzo(a)anthracene	36	J	39		38	8%
97228234/5	Caffeine	15	U	16	U		
97228234/5	2,6-Dimethylnaphthalene	7.1	J	19		13	91%
97228234/5	4-Chloro-3-Methylphenol	30	U	16	U		
97228234/5	2,6-Dinitrotoluene	75	U	80	U		
97228234/5	N-Nitroso-Di-N-Propylamine	15	U	16	U		
97228234/5	Aniline	15	UJ	16	UJ		
97228234/5	3-Penten-2-one	92	NJ	nd			
97228234/5	N-Nitrosodimethylamine	15	U	16	U		
97228234/5	Benzoic Acid	141	J	590	J	366	123%
97228234/5	Hexachloroethane	15	UJ	16	UJ		
97228234/5	4-Chlorophenyl-Phenylether	15	U	16	U		
97228234/5	Hexachlorocyclopentadiene		REJ		REJ		
97228234/5	Isophorone	15	U	16	U		
97228234/5	1-Methylphenanthrene	22		8.3	J	15	90%
97228234/5	Acenaphthene	1.7	J	4.4	J	3	89%
97228234/5	Diethylphthalate	75	U	16	U		
97228234/5	1,2-Benzenedicarboxylic acid, bis(2·	560	NJ	nd			
97228234/5	Di-N-Butylphthalate	15	U	23	U		
97228234/5	Phenanthrene	44	J	76	J	60	53%
97228234/5	Butylbenzylphthalate	15	UJ	10	J		
97228234/5	N-Nitrosodiphenylamine	15	U	16	U		
97228234/5	Fluorene	6.7	J	7.6	J	7	13%
97228234/5	Carbazole	11	J	10	J	11	10%
97228234/5	Octadecanedioic acid	nd		240	NJ		
97228234/5	Hexachlorobutadiene	15	UJ	16	UJ		
97228234/5	Pentachlorophenol	75	U	80	U		
97228234/5	2,4,6-Trichlorophenol	30	U	16	U		
97228234/5	2-Nitroaniline	75	UJ	32	UJ		
97228234/5	2-Nitrophenol	75	U	80	U		
97228234/5	1-Methylnaphthalene	2.2	J	7.4	J	5	108%
97228234/5	Naphthalene	3.9	J	15	J	9	117%
97228234/5	2-Methylnaphthalene	4.9	J	10	J	7	68%
97228234/5	2-Chloronaphthalene	15	U	16	U		
97228234/5	3,3'-Dichlorobenzidine	30	UJ	64	U		
97228234/5	1,1'-Biphenyl	15	U	16	U		
97228234/5	Benzidine	149	U	160	UJ		
97228234/5	2-Methylphenol	15	U	16	U		
97228234/5	1,2-Dichlorobenzene	15	U	16	U		
97228234/5	2-Chlorophenol	15	U	16	U		
97228234/5	2,4,5-Trichlorophenol	15	U	16	U		
97228234/5	Nitrobenzene	15	U	16	U		
97228234/5	3-Nitroaniline	75	UJ	32	UJ		

RPD=Relative percent difference

U=Undetected at detection limit shown

J=Estimated concentration

UJ=Undetected at the estimated limit shown

NJ=There is evidence the analyte is present. The associated value is an estimate.

REJ=Data are unusable for all purposes

nd=Not detected, quantitation limit not established

Table B-4. Data Quality of Butyltin Analysis.

LAB REPLICATES

(ug/kg, dry)

Sample No.	Analysis	Result	LDP1	Mean	RPD
97228241	Monobutyltin Chloride	24 UJ	68 UJ		
97228241	Tributyltin Chloride	3.4 J	55 J	29	177%
97228241	Tetrabutyltin Chloride	3.9 UJ	3.8 UJ		
97228241	Dibutyltin Chloride	4 UJ	71 J		
97228249	Monobutyltin Chloride	63 UJ	62 J		
97228249	Tributyltin Chloride	68 J	100 J	84	38%
97228249	Tetrabutyltin Chloride	3.3 UJ	3.3 UJ		
97228249	Dibutyltin Chloride	30 J	35 J	33	15%

MATRIX SPIKES

(% recovery)

Sample No.	Analysis	LMX1	LMX2	Mean	RPD
97228233	Monobutyltin Chloride	8	27	18	109%
97228233	Tributyltin Chloride	33	85	59	88%
97228233	Tetrabutyltin Chloride	31	75	53	83%
97228233	Dibutyltin Chloride	81	173	127	72%

FIELD SPLITS

(ug/kg, dry)

Sample No.	Analysis	No. -34	No. -35	Mean	RPD
97228234/5	Monobutyltin Chloride	176 J	42 UJ		
97228234/5	Tributyltin Chloride	198 J	39 J	119	134%
97228234/5	Tetrabutyltin Chloride	1.5 J	0.58 J	1	88%
97228234/5	Dibutyltin Chloride	81 J	21 J	51	118%

STANDARD REFERENCE MATERIAL (PACS-2)

(ug/kg, dry)

Sample No.	Analysis	No. -02	No. -03	Mean	RPD	Certified Values
PAC72402/3	Monobutyltin Chloride	1000 UJ	1560 J			450+/-50
PAC72402/3	Tributyltin Chloride	808 J	2180 J	1494	92%	980+/-130
PAC72402/3	Tetrabutyltin Chloride	173 UJ	143 UJ			nc
PAC72402/3	Dibutyltin Chloride	640 J	1410 J	1025	75%	1090+/-150

LDP1=Lab duplicate

UJ=Undetected at the estimated limit shown

J=Estimated concentration

LMX=Laboratory matrix spike

RPD=Relative percent difference

=Outside of certified value range

Appendix C

Summary of Analytical Results

1. Metals
2. Semivolatile Organics
3. Butyltin

Table C-1. Metals Concentrations in San Juans Harbor Sediments (mg/kg, dw).

Harbor	Station	Chromium	Copper	Lead	Zinc
Mud Bay	MB1	25.8	17.3	4.9	53.0
Mud Bay	MB2	29.2	19.1	6.3	62.4
Fisherman Bay	FI1	11.1	7.0	2.0 U	24.1
Fisherman Bay	FI2	8.7	4.3	2.0 U	19.0
Fisherman Bay	FI3	20.4	23.1	4.0	38.2
Fisherman Bay	FI4	11.6	7.2	2.1	24.3
Fisherman Bay	FI5	12.9	10.0	3.0	30.3
Fisherman Bay	FI6	9.8	5.9	2.0 U	20.0
Roche Harbor	RO1	17.6	70.0	40.9	59.9
Roche Harbor	RO2	18.2	14.7	7.8	51.2
Roche Harbor	RO3	20.2	20.6	12.0	55.3
Roche Harbor	RO4	17.4	11.8	5.4	45.3
West Sound	WS1	19.4	26.0	3.8	43.4
West Sound	WS2	18.5	136.0	76.4	272.0
West Sound	WS3	24.9	24.3 J	9.1	59.7
West Sound	WS4	10.1	8.5 J	3.8	25.2
West Sound	WS5	14.1	21.6 J	9.6	44.6
West Sound	WS6	11.5	64.4 J	5.2	44.5
Friday Harbor	FR1	17.4	82.9 J	43.0	75.4
Friday Harbor	FR2	23.5	30.6 J	7.7	91.5
Friday Harbor	FR3	24.4	72.3 J	25.2	77.4
Friday Harbor	FR4	22.0	22.2 J	7.4	63.9
Friday Harbor	FR5	17.5	14.6 J	4.9	46.7
Friday Harbor	FR6	19.4	13.2 J	5.8	48.7
Friday Harbor	FR7	26.9	78.2	32.2	114.0
Friday Harbor	FR8	29.3	38.3	14.0	127.0

J=Estimated concentration
U=Undetected at detection limit shown

Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	*Pyridine*	*N-Nitrosodimethylamine*	*Aniline*	*Phenol*	*Bis(2-Chloroethyl)Ether*	*2-Chlorophenol*	*1,3-Dichlorobenzene*	*1,4-Dichlorobenzene*	*1,2-Dichlorobenzene*
Mud Bay	97228230	MB1	50 U	25 U	25 UJ	53 U	25 U	25 U	25 UJ	25 U	25 U
Mud Bay	97228231	MB2	41 U	20 U	20 UJ	33 U	20 U	20 U	20 UJ	20 U	20 U
Fisherman Bay	97228232	FI1	27 U	14 U	14 UJ	31 U	14 U	14 U	14 UJ	14 U	14 U
Fisherman Bay	97228233	FI2	26 U	13 U	13 UJ	24 U	13 U	13 U	13 UJ	13 U	13 U
Fisherman Bay	97228234/5	FI3	30 U	15 U	15 UJ	31 U	15 U	15 U	15 UJ	15 U	15 U
Fisherman Bay	97228236	FI4	27 U	13 U	13 UJ	36 U	13 U	13 U	13 UJ	13 U	13 U
Fisherman Bay	97228237	FI5	29 U	15 U	15 UJ	15 U	15 U	15 U	15 UJ	15 U	15 U
Fisherman Bay	97228256	FI6	24 U	12 U	12 UJ	15 U	12 U	12 U	12 UJ	12 U	12 U
Roche Harbor	97228238	RO1	34 U	17 U	17 UJ	26 U	17 U	17 U	17 UJ	2.7 J	17 U
Roche Harbor	97228239	RO2	33 U	17 U	17 UJ	17 U	17 U	17 U	17 UJ	17 U	17 U
Roche Harbor	97228240	RO3	34 U	17 U	17 UJ	31 U	17 U	17 U	17 UJ	1.1 J	17 U
Roche Harbor	97228241	RO4	30 U	15 U	15 UJ	15 U	15 U	15 U	15 UJ	15 U	15 U
West Sound	97228244	WS1	34 U	17 U	17 UJ	18 U	17 U	17 U	17 UJ	17 U	17 U
West Sound	97228245	WS2	214 U	214 U	214 U	85 U	214 U	214 U	214 U	214 U	214 U
West Sound	97228246	WS3	39 U	20 U	20 UJ	21 U	20 U	20 U	20 UJ	20 U	20 U
West Sound	97228247	WS4	27 U	14 U	14 UJ	17 U	14 U	14 U	14 UJ	14 U	14 U
West Sound	97228248	WS5	148 U	148 U	148 U	59 U	148 U	148 U	148 U	148 U	148 U
West Sound	97228249	WS6	161 U	161 U	161 U	71 LDU	161 U	161 U	161 U	161 U	161 U
Friday Harbor	97228250	FR1	178 U	178 U	178 U	71 U	178 U	178 U	178 U	178 U	178 U
Friday Harbor	97228251	FR2	39 U	19 U	19 UJ	33 U	19 U	19 U	19 UJ	19 U	19 U
Friday Harbor	97228252	FR3	40 U	20 U	20 UJ	20 U	20 U	20 U	20 UJ	20 U	20 U
Friday Harbor	97228253	FR4	167 U	167 U	167 UJ	33 UJ	167 U	167 U	167 U	167 U	167 U
Friday Harbor	97228254	FR5	31 U	15 U	15 UJ	15 U	15 U	15 U	15 UJ	15 U	15 U
Friday Harbor	97228255	FR6	153 U	153 U	153 UJ	61 U	153 U	153 U	153 U	153 U	153 U
Friday Harbor	97228242	FR7	211 U	211 U	211 U	38 UJ	211 U	211 U	211 U	211 U	211 U
Friday Harbor	97228243	FR8	238 U	238 U	238 U	95 U	238 U	238 U	238 U	238 U	238 U

U=Undetected at detection limit shown
J=Estimated concentration
UJ=Undetected at the estimated limit shown
REJ=Data are unusable for all purposes
LDU=Lab duplicate undetected
FSU=Field split undetected

Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	*Benzyl Alcohol*	*2-Methylphenol*	*2,2'-Oxybis[1-chloropropane]*	*N-Nitroso-Di-N-Propylamine*	*4-Methylphenol*	*Hexachloroethane*	*Nitrobenzene*	*Isophorone*	*2-Nitrophenol*	*2,4-Dimethylphenol*
Mud Bay	97228230	MB1	25 U	25 U	25 U	25 U	81	25 UJ	25 U	25 U	126 U	25 U
Mud Bay	97228231	MB2	20 U	20 U	20 U	20 U	11 J	20 UJ	20 U	5.2 J	102 U	20 U
Fisherman Bay	97228232	FI1	14 U	14 U	14 U	14 U	286	14 UJ	14 U	2.8 J	69 U	14 U
Fisherman Bay	97228233	FI2	13 U	13 U	13 U	13 U	208	13 UJ	13 U	13 U	65 U	13 U
Fisherman Bay	97228234/5	FI3	7.2 JFSU	15 U	15 U	15 U	80 J	15 UJ	15 U	15 U	75 U	15 U
Fisherman Bay	97228236	FI4	13 U	13 U	13 U	13 U	154	13 UJ	13 U	13 U	67 U	13 U
Fisherman Bay	97228237	FI5	5.2 J	15 U	15 U	15 U	6.7 J	15 UJ	15 U	15 U	73 U	15 U
Fisherman Bay	97228256	FI6	12 U	12 U	12 U	12 U	4.6 J	12 UJ	12 U	12 U	61 U	12 U
Roche Harbor	97228238	RO1	17 U	17 U	17 U	17 U	20	17 UJ	17 U	17 U	86 U	17 U
Roche Harbor	97228239	RO2	17 U	17 U	17 U	17 U	5 J	17 UJ	17 U	17 U	84 U	17 U
Roche Harbor	97228240	RO3	7.8 J	17 U	17 U	17 U	21	17 UJ	17 U	7.9 J	86 U	17 U
Roche Harbor	97228241	RO4	15 U	15 U	15 U	15 U	5 J	15 UJ	15 U	15 U	76 U	15 U
West Sound	97228244	WS1	7.9 J	17 U	17 U	17 U	13 J	17 UJ	17 U	17 U	86 U	17 U
West Sound	97228245	WS2	85 U	85 U	214 U	43 U	23 J	214 U	85 U	43 U	85 U	43 U
West Sound	97228246	WS3	4.9 J	20 U	20 U	20 U	31	20 UJ	20 U	20 U	97 U	20 U
West Sound	97228247	WS4	5.4 J	14 U	14 U	14 U	17	14 UJ	14 U	14 U	68 U	14 U
West Sound	97228248	WS5	59 U	59 U	148 U	30 U	22 J	148 U	59 U	30 U	59 U	30 U
West Sound	97228249	WS6	65 U	65 U	161 U	32 U	28 J	161 U	65 U	32 U	65 U	32 U
Friday Harbor	97228250	FR1	71 U	5.8 J	178 U	36 U	27 J	178 U	71 U	36 U	71 U	36 U
Friday Harbor	97228251	FR2	19 U	19 U	19 U	19 U	11 J	19 UJ	19 U	11 J	97 U	19 U
Friday Harbor	97228252	FR3	8 J	20 U	20 U	20 U	12 J	20 UJ	20 U	4.8 J	100 U	20 U
Friday Harbor	97228253	FR4	67 U	67 U	167 U	33 U	33 U	167 UJ	67 U	33 U	67 U	33 U
Friday Harbor	97228254	FR5	6.2 J	15 U	15 U	15 U	3.2 J	15 UJ	15 U	15 U	77 U	15 U
Friday Harbor	97228255	FR6	61 U	61 U	153 U	31 U	31 U	153 UJ	61 U	31 U	61 U	31 U
Friday Harbor	97228242	FR7	84 U	84 U	211 U	42 U	39 J	211 U	84 U	42 U	84 U	42 U
Friday Harbor	97228243	FR8	95 U	95 U	238 U	48 U	48 U	238 U	95 U	48 U	95 U	48 U

U=Undetected at detection limit shown
J=Estimated concentration
UJ=Undetected at the estimated limit shown
REJ=Data are unusable for all purposes
LDU=Lab duplicate undetected
FSU=Field split undetected

Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	Bis(2-Chloroethoxy)Methane	Benzoic Acid	2,4-Dichlorophenol	1,2,4-Trichlorobenzene	Naphthalene	4-Chloroaniline	Hexachlorobutadiene	4-Chloro-3-Methylphenol	2-Methylnaphthalene
Mud Bay	97228230	MB1	25 U	213 J	50 U	25 U	6.1 J	25 UJ	25 UJ	50 U	8.8 J
Mud Bay	97228231	MB2	20 U	337 J	41 U	20 U	10 J	20 UJ	20 UJ	20 U	15 J
Fisherman Bay	97228232	FI1	14 U	138 J	27 U	14 U	15	14 UJ	14 UJ	27 U	11 J
Fisherman Bay	97228233	FI2	13 U	132 J	26 U	13 U	6.9 J	13 UJ	13 UJ	26 U	13 J
Fisherman Bay	97228234/5	FI3	15 U	366 J	30 U	15 U	9 J	15 UJ	15 UJ	16 U	7 J
Fisherman Bay	97228236	FI4	13 U	150 J	27 U	13 U	5 J	13 UJ	13 UJ	27 U	4.4 J
Fisherman Bay	97228237	FI5	15 U	292 J	29 U	15 U	11 J	15 UJ	15 UJ	15 U	16
Fisherman Bay	97228256	FI6	12 U	172 J	24 U	12 U	2.3 J	12 UJ	12 UJ	12 U	2.8 J
Roche Harbor	97228238	RO1	17 U	116 J	34 U	17 U	19	17 UJ	17 UJ	17 U	28
Roche Harbor	97228239	RO2	17 U	130 J	33 U	17 U	3.5 J	17 UJ	17 UJ	17 U	7 J
Roche Harbor	97228240	RO3	17 U	374 J	34 U	17 U	70	17 UJ	17 UJ	17 U	52
Roche Harbor	97228241	RO4	15 U	248 J	30 U	15 U	7 J	15 UJ	15 UJ	15 U	13 J
West Sound	97228244	WS1	17 U	279 J	34 U	17 U	6.2 J	17 UJ	17 UJ	17 U	7.5 J
West Sound	97228245	WS2	43 U	306	85 U	85 U	25 J	43 U	214 U	43 U	29 J
West Sound	97228246	WS3	20 U	230 J	39 U	20 U	10 J	20 UJ	20 UJ	20 U	14 J
West Sound	97228247	WS4	14 U	212 J	27 U	14 U	4.2 J	14 UJ	14 UJ	14 U	4.7 J
West Sound	97228248	WS5	30 U	201	59 U	59 U	36 J	30 U	148 U	30 U	37
West Sound	97228249	WS6	32 U	220	65 U	65 U	41 JLDU	32 U	161 U	32 U	22 J
Friday Harbor	97228250	FR1	36 U	247	71 U	71 U	40 J	36 U	178 U	36 U	31 J
Friday Harbor	97228251	FR2	19 U	194 J	39 U	19 U	14 J	19 UJ	19 UJ	19 U	19 J
Friday Harbor	97228252	FR3	20 U	178 J	40 U	20 U	8.9 J	20 UJ	20 UJ	20 U	14 J
Friday Harbor	97228253	FR4	33 U	193	67 U	67 U	21 J	33 UJ	167 U	33 U	34
Friday Harbor	97228254	FR5	15 U	223 J	31 U	15 U	7.8 J	15 UJ	15 UJ	15 U	13 J
Friday Harbor	97228255	FR6	31 U	162	61 U	61 U	13 J	31 UJ	153 U	31 U	24 J
Friday Harbor	97228242	FR7	42 U	211 U	84 U	84 U	69 J	42 U	211 U	42 U	68
Friday Harbor	97228243	FR8	48 U	238 U	95 U	95 U	30 J	48 U	238 U	48 U	42 J

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Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	1-Methylnaphthalene	Hexachlorocyclopentadiene	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	1,1'-Biphenyl	2-Chloronaphthalene	2,6-Dimethylnaphthalene	2-Nitroaniline	Dimethylphthalate
Mud Bay	97228230	MB1	7.1 J	REJ	50 U	25 U	25 U	25 U	62	126 UJ	126 U
Mud Bay	97228231	MB2	11 J	REJ	20 U	20 U	20 U	20 U	63	41 UJ	20 U
Fisherman Bay	97228232	FI1	7 J	REJ	27 U	14 U	14 U	14 U	28	69 UJ	69 U
Fisherman Bay	97228233	FI2	19	REJ	26 U	13 U	13 U	13 U	29	65 UJ	65 U
Fisherman Bay	97228234/5	FI3	4.8 J	REJ	16 U	15 U	15 U	15 U	13 J	32 UJ	6.6 J
Fisherman Bay	97228236	FI4	3.4 J	REJ	27 U	13 U	13 U	13 U	28	67 UJ	67 U
Fisherman Bay	97228237	FI5	7.5 J	REJ	15 U	15 U	15 U	15 U	41	29 UJ	11 J
Fisherman Bay	97228256	FI6	1.4 J	REJ	12 U	12 U	12 U	12 U	8.5 J	24 UJ	12 U
Roche Harbor	97228238	RO1	17 J	REJ	17 U	17 U	17 U	17 U	55	34 UJ	17 U
Roche Harbor	97228239	RO2	5.2 J	REJ	17 U	17 U	17 U	17 U	26	33 UJ	17 U
Roche Harbor	97228240	RO3	38	REJ	17 U	17 U	16 J	17 U	73	34 UJ	17 U
Roche Harbor	97228241	RO4	10 J	REJ	15 U	15 U	15 U	15 U	29	30 UJ	15 U
West Sound	97228244	WS1	4.8 J	REJ	17 U	17 U	17 U	17 U	46	34 UJ	4.8 J
West Sound	97228245	WS2	15 J	REJ	85 U	43 U	18 J	43 U	196	85 U	20 J
West Sound	97228246	WS3	9.6 J	REJ	20 U	20 U	20 U	20 U	55	39 UJ	20 U
West Sound	97228247	WS4	2.4 J	REJ	14 U	14 U	14 U	14 U	17	27 UJ	14 U
West Sound	97228248	WS5	16 J	REJ	59 U	30 U	19 J	30 U	97	59 U	31
West Sound	97228249	WS6	13 J	REJ	65 U	32 U	18 J	32 U	124	65 U	32 U
Friday Harbor	97228250	FR1	18 J	REJ	71 U	36 U	27 J	36 U	144	71 U	87
Friday Harbor	97228251	FR2	13 J	REJ	19 U	19 U	10 J	19 U	72	39 UJ	21
Friday Harbor	97228252	FR3	11 J	REJ	20 U	20 U	20 U	20 U	75	40 UJ	23
Friday Harbor	97228253	FR4	21 J	REJ	67 U	33 U	17 UJ	33 U	67 UJ	78	18 J
Friday Harbor	97228254	FR5	9.8 J	REJ	15 U	15 U	15 U	15 U	24	31 UJ	15 U
Friday Harbor	97228255	FR6	17 J	REJ	61 U	31 U	13 UJ	31 U	55	61 UJ	31 U
Friday Harbor	97228242	FR7	47	REJ	84 U	42 U	27 J	42 U	182	84 U	42 U
Friday Harbor	97228243	FR8	32 J	REJ	95 U	48 U	24 J	48 U	840	95 U	46 J

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LDU=Lab duplicate undetected
FSU=Field split undetected

Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	2,6-Dinitrotoluene	Acenaphthylene	3-Nitroaniline	Acenaphthene	2,4-Dinitrophenol	4-Nitrophenol	1,6,7-Trimethylnaphthalene	Dibenzofuran	2,4-Dinitrotoluene	Diethylphthalate
Mud Bay	97228230	MB1	126 U	25 U	126 UJ	25 U	504 U	126 U	25 U	4 J	50 U	126 U
Mud Bay	97228231	MB2	102 U	3.3 J	41 UJ	2.2 J	408 UJ	102 U	8.2 J	5.2 J	41 U	20 U
Fisherman Bay	97228232	FI1	69 U	17	69 UJ	15	274 U	69 U	14 U	18	27 U	69 U
Fisherman Bay	97228233	FI2	65 U	12 J	65 UJ	12 J	259 U	65 U	13 U	4.8 J	26 U	65 U
Fisherman Bay	97228234/5	FI3	75 U	6.4 J	32 UJ	3.0 J	298 U	75 U	15 U	3.9 J	30 U	16 U
Fisherman Bay	97228236	FI4	67 U	6.2 J	67 UJ	3.1 J	268 U	67 U	13 U	3.1 J	27 U	67 U
Fisherman Bay	97228237	FI5	73 U	14 J	29 UJ	19	292 UJ	73 U	15 U	15	29 U	15 U
Fisherman Bay	97228256	FI6	61 U	4.2 J	24 UJ	1.7 J	244 UJ	61 U	12 U	2.1 J	24 U	12 U
Roche Harbor	97228238	RO1	86 U	8.5 J	34 UJ	4.8 J	343 UJ	86 U	20	10 J	34 U	17 U
Roche Harbor	97228239	RO2	84 U	2.6 J	33 UJ	2.1 J	334 UJ	84 U	5.2 J	3.4 J	33 U	17 U
Roche Harbor	97228240	RO3	86 U	16 J	34 UJ	18	344 UJ	86 U	17	21	34 U	17 U
Roche Harbor	97228241	RO4	76 U	2.1 J	30 UJ	2 J	304 UJ	76 U	9 J	5 J	30 U	15 U
West Sound	97228244	WS1	86 U	23	34 UJ	10 J	342 UJ	86 U	17 U	14 J	34 U	17 U
West Sound	97228245	WS2	214 U	71	85 U	22 UJ	854 UJ	214 UJ	12 J	29 UJ	85 U	19 UJ
West Sound	97228246	WS3	97 U	13 J	39 UJ	8.6 J	390 UJ	97 U	20 U	12 J	39 U	20 U
West Sound	97228247	WS4	68 U	4.7 J	27 UJ	5 J	272 UJ	68 U	14 U	8.2 J	27 U	14 U
West Sound	97228248	WS5	148 U	30	59 U	50	592 UJ	148 UJ	30 U	42	59 U	30 U
West Sound	97228249	WS6	161 U	40	65 U	32 J	646 UJ	161 UJ	32 U	48 J	65 U	6.4 JLDU
Friday Harbor	97228250	FR1	178 U	59	71 U	33 J	712 UJ	178 UJ	36 U	24 UJ	71 U	36 U
Friday Harbor	97228251	FR2	97 U	15 J	39 UJ	7 J	388 UJ	97 U	19 U	12 J	39 U	19 U
Friday Harbor	97228252	FR3	100 U	24	40 UJ	9.5 J	399 UJ	100 U	4.5 J	10 J	40 U	20 U
Friday Harbor	97228253	FR4	167 U	42	67 UJ	18 J	667 UJ	167 UJ	33 UJ	67 U	33 U	33 U
Friday Harbor	97228254	FR5	77 U	6.6 J	31 UJ	2.9 J	308 UJ	77 U	4.2 J	6.3 J	31 U	15 U
Friday Harbor	97228255	FR6	153 U	9.2 J	61 UJ	9.8 J	611 UJ	153 UJ	31 U	13 J	61 U	17 UJ
Friday Harbor	97228242	FR7	211 U	121	84 U	159	843 UJ	211 UJ	42 U	100	84 U	42 U
Friday Harbor	97228243	FR8	238 U	83	95 U	29 UJ	953 UJ	238 UJ	24 J	40 J	95 U	17 UJ

U=Undetected at detection limit shown
J=Estimated concentration
UJ=Undetected at the estimated limit shown
REJ=Data are unusable for all purposes
LDU=Lab duplicate undetected
FSU=Field split undetected

Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	*Fluorene*	*4-Chlorophenyl-Phenylether*	*4-Nitroaniline*	*4,6-Dinitro-2-Methylphenol*	*N-Nitrosodiphenylamine*	*1,2-Diphenylhydrazine*	*4-Bromophenyl-Phenylether*	*Hexachlorobenzene*	*Pentachlorophenol*
Mud Bay	97228230	MB1	5 J	25 U	50 U	126 U	25 U	25 U	25 U	25 U	126 U
Mud Bay	97228231	MB2	7.2 J	20 U	102 U	102 UJ	20 U	20 U	20 U	20 U	102 U
Fisherman Bay	97228232	FI1	25	14 U	27 U	69 U	14 U	14 U	14 U	14 U	69 U
Fisherman Bay	97228233	FI2	37	13 U	26 U	65 U	13 U	13 U	13 U	13 U	65 U
Fisherman Bay	97228234/5	FI3	7.2 J	15 U	30 U	75 U	15 U	15 U	15 U	15 U	75 U
Fisherman Bay	97228236	FI4	5.9 J	13 U	27 U	67 U	13 U	13 U	13 U	13 U	67 U
Fisherman Bay	97228237	FI5	17	15 U	73 U	73 UJ	15 U	15 U	15 U	15 U	73 U
Fisherman Bay	97228256	FI6	2.5 J	12 U	61 U	61 UJ	12 U	12 U	12 U	12 U	61 U
Roche Harbor	97228238	RO1	11 J	17 U	86 U	86 UJ	17 U	17 U	17 U	17 U	86 U
Roche Harbor	97228239	RO2	5.4 J	17 U	84 U	84 UJ	17 U	17 U	17 U	17 U	84 U
Roche Harbor	97228240	RO3	33	17 U	86 U	86 UJ	17 U	17 U	17 U	17 U	86 U
Roche Harbor	97228241	RO4	5 J	15 U	76 U	76 UJ	15 U	15 U	15 U	15 U	76 U
West Sound	97228244	WS1	31	17 U	86 U	86 UJ	17 U	17 U	17 U	17 U	86 U
West Sound	97228245	WS2	76	43 U	85 U	214 U	43 U	43 U	43 U	43 U	214 U
West Sound	97228246	WS3	18 J	20 U	97 U	97 UJ	20 U	20 U	20 U	20 U	97 U
West Sound	97228247	WS4	9.3 J	14 U	68 U	68 UJ	14 U	14 U	14 U	14 U	68 U
West Sound	97228248	WS5	59	30 U	59 U	148 U	30 U	30 U	30 U	30 U	148 U
West Sound	97228249	WS6	90	32 U	65 U	161 U	32 U	32 U	32 U	32 U	161 U
Friday Harbor	97228250	FR1	41	36 U	71 U	178 U	36 U	36 U	36 U	36 U	178 U
Friday Harbor	97228251	FR2	24	19 U	97 U	97 UJ	19 U	19 U	19 U	19 U	97 U
Friday Harbor	97228252	FR3	23	20 U	100 U	100 UJ	20 U	20 U	20 U	20 U	110
Friday Harbor	97228253	FR4	34	33 U	67 U	167 U	33 U	33 U	33 U	33 U	167 U
Friday Harbor	97228254	FR5	8.7 J	15 U	77 U	77 UJ	15 U	15 U	15 U	15 U	81
Friday Harbor	97228255	FR6	20 J	31 U	61 UJ	153 U	31 U	31 U	31 U	31 U	153 U
Friday Harbor	97228242	FR7	220	42 U	84 U	211 U	42 U	42 U	42 U	42 U	211 U
Friday Harbor	97228243	FR8	70	48 U	95 U	238 U	48 U	48 U	48 U	48 U	214 J

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Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	*Dibenzothiophene*	*Phenanthrene*	*Anthracene*	*Caffeine*	*Carbazole*	*Phenol, 4-Nonyl-*	*2-Methylphenanthrene*	*1-Methylphenanthrene*	*Di-N-Butylphthalate*	*Fluoranthene*
Mud Bay	97228230	MB1	25 U	19 J	4.9 J	25 U	25 U	126 U	25 U	25 U	25 U	22 J
Mud Bay	97228231	MB2	4.2 J	36 J	9.3 J	20 U	2.6 J	102 U	13 J	8.3 J	28 U	38 J
Fisherman Bay	97228232	FI1	15	284 J	67	14 U	31	69 U	27	18	14 U	513 J
Fisherman Bay	97228233	FI2	11 J	252 J	34	13 U	3.8 J	35 U	26	22	13 U	141 J
Fisherman Bay	97228234/5	FI3	10 JFSU	60 J	14 J	15 U	10 J	75 U	22 J	15 J	15 U	123 J
Fisherman Bay	97228236	FI4	3 J	35 J	11 J	13 U	13 U	67 U	10 J	13 J	13 U	71 J
Fisherman Bay	97228237	FI5	9.7 J	87 J	31	15 U	9.4 J	73 U	11 J	6.3 J	109 U	256 J
Fisherman Bay	97228256	FI6	68	18 J	10 J	12 U	4.5 J	61 U	3.6 J	1.8 J	28 U	43 J
Roche Harbor	97228238	RO1	17 U	61 J	23	17 U	8.6 J	86 U	18	26	42 U	131 J
Roche Harbor	97228239	RO2	2.3 J	25 J	9.6 J	17 U	3.2 J	84 U	8.2 J	8.6 J	85 U	42 J
Roche Harbor	97228240	RO3	16 J	214 J	59	17 U	27	86 U	37	31	79 U	252 J
Roche Harbor	97228241	RO4	4.2 J	24 J	5.5 J	15 U	3.0 J	76 U	9 J	8.7 J	15 U	34 J
West Sound	97228244	WS1	23	194 J	95	17 U	34	86 U	46	45	52 U	1780 E
West Sound	97228245	WS2	24 J	353 J	383	43 UJ	132	73 UJ	66	43 U	73 UJ	1260 J
West Sound	97228246	WS3	8 J	85 J	61	20 U	21	97 U	19 J	16 J	87 U	206 J
West Sound	97228247	WS4	6 J	44 J	18	14 U	6.2 J	68 U	6.7 J	5.2 J	47 U	101 J
West Sound	97228248	WS5	20 J	256 J	116	30 U	38	59 U	41	30 U	105 UJ	943 J
West Sound	97228249	WS6	42 J	694 J	266	32 U	91	65 U	92	32 U	145 UJ	1425 J
Friday Harbor	97228250	FR1	21 J	235 J	131	36 U	55	71 U	61	36 U	203 UJ	906 J
Friday Harbor	97228251	FR2	10 J	99 J	421	19 U	42	97 U	26	16 J	58 U	217 J
Friday Harbor	97228252	FR3	15 J	198 J	75	20 U	28	100 U	43	29	105 U	431 J
Friday Harbor	97228253	FR4	12 J	190	108	33 U	33 U	67 U	45	68	205 UJ	792
Friday Harbor	97228254	FR5	4.5 J	46 J	20	15 U	11 J	77 U	13 J	10 J	116	82 J
Friday Harbor	97228255	FR6	5.9 J	88 J	70	31 U	31 U	61 U	25 J	23 J	300 UJ	184 J
Friday Harbor	97228242	FR7	42 U	1440 J	509	42 U	224	84 U	234	322	358 UJ	2070 J
Friday Harbor	97228243	FR8	27 J	457	259	48 U	89	95 U	91	205	124 UJ	1680 J

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Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	*Benzidine*	*Pyrene*	*Retene*	*Butylbenzylphthalate*	*Benzo(a)anthracene*	*3,3'-Dichlorobenzidine*	*Chrysene*	*Bis(2-Ethylhexyl) Phthalate*	*Di-N-Octyl Phthalate*
Mud Bay	97228230	MB1	252 U	25 UJ	18 J	25 UJ	13 J	50 UJ	11 J	50 UJ	50 UJ
Mud Bay	97228231	MB2	204 UJ	49	22	20 U	18 J	82 U	21	41 U	20 U
Fisherman Bay	97228232	FI1	137 U	422	28	14 U	88	27 U	181	32 U	27 U
Fisherman Bay	97228233	FI2	130 U	217 J	11 J	13 UJ	65 J	26 UJ	63 J	64 UJ	26 UJ
Fisherman Bay	97228234/5	FI3	149 U	136 J	30 FSU	10 JFSU	38 J	30 UJ	84 J	266 FSU	186 JFSU
Fisherman Bay	97228236	FI4	134 U	68 J	12 J	13 UJ	25 J	27 UJ	36 J	27 UJ	27 UJ
Fisherman Bay	97228237	FI5	146 UJ	236	7.5 J	15 U	73	58 U	156	54 U	15 U
Fisherman Bay	97228256	FI6	122 UJ	47	6.8 J	12 U	29	49 U	59	77 U	56
Roche Harbor	97228238	RO1	172 UJ	167	230	17 U	49	69 U	109	61 U	17 U
Roche Harbor	97228239	RO2	167 UJ	52	62	17 U	23	67 U	61	77 U	17 U
Roche Harbor	97228240	RO3	172 UJ	314	192	17 U	105	69 U	156	129 U	17 U
Roche Harbor	97228241	RO4	152 UJ	39	126	15 U	11 J	61 U	18 J	30 U	15 U
West Sound	97228244	WS1	171 UJ	1370	19	17 U	305	69 U	944	71 U	17 U
West Sound	97228245	WS2	427 U	1560	43 U	43 U	432	171 U	1190	1320	43 U
West Sound	97228246	WS3	195 UJ	278	32	20 U	123	78 U	215	66 U	20 U
West Sound	97228247	WS4	136 UJ	125	12 J	14 U	47	54 U	106	27 U	14 U
West Sound	97228248	WS5	296 U	731	36	30 U	307	118 U	562	119	30 U
West Sound	97228249	WS6	323 U	1008	34 J	32 U	333	129 U	844	90 UJ	32 U
Friday Harbor	97228250	FR1	356 U	827	65	36 U	299	142 U	521	121	36 U
Friday Harbor	97228251	FR2	194 UJ	241	30	19 U	80	78 U	172	67 U	19 U
Friday Harbor	97228252	FR3	200 UJ	570	35	20 U	176	80 U	328	77 U	20 U
Friday Harbor	97228253	FR4	334 U	854	48	33 U	222	133 U	372	47 UJ	33 U
Friday Harbor	97228254	FR5	154 UJ	129	29	15 U	45	62 U	74	64 U	15 U
Friday Harbor	97228255	FR6	306 U	186	38	31 U	120	122 U	152	29 J	31 U
Friday Harbor	97228242	FR7	421 U	2180	99	42 U	959	168 U	1390	436	42 U
Friday Harbor	97228243	FR8	476 U	1370	53	48 U	511	191 U	920	642	48 U

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FSU=Field split undetected

Table C-2. Semivolatile Organic Compounds in San Juans Harbor Sediments, including Tentatively Identified Coumpounds (ug/kg, dw).

Harbor	Sample No.	Station	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo[e]pyrene	Benzo(a)pyrene	Perylene	3B-Coprostanol	Indeno(1,2,3-cd)pyrene	Dibenzo(a,h)anthracene	Benzo(ghi)perylene
Mud Bay	97228230	MB1	44 J	5.9 J	8.3 J	8.9 J	22 J	126 UJ	20 J	50 UJ	28 J
Mud Bay	97228231	MB2	26	12 J	13 J	20 J	44	213 J	8.8 J	2 J	14 J
Fisherman Bay	97228232	FI1	145	48	54	64	20 J	80	42	19 J	36 J
Fisherman Bay	97228233	FI2	67 J	20 J	31 J	59 J	14 J	102 J	35 J	15 J	36 J
Fisherman Bay	97228234/5	FI3	70 J	25 J	26 J	30 J	10 J	232 J	20 J	3.8 JFSU	20 J
Fisherman Bay	97228236	FI4	44 J	12 J	14 J	21 J	8.6 J	106 J	17 J	12 J	19 J
Fisherman Bay	97228237	FI5	99	35	38	41	17	184 J	15 J	3.1 J	14 J
Fisherman Bay	97228256	FI6	49	21	20	25	8.5 J	84 J	8.4 J	24 U	9.3 J
Roche Harbor	97228238	RO1	131	51	54	44	28	276 J	23 J	4 J	22 J
Roche Harbor	97228239	RO2	47	16 J	19	18	17	135 J	4.8 J	1.6 J	8.4 J
Roche Harbor	97228240	RO3	160	64	77	111	57	298 J	65 J	12 J	55 J
Roche Harbor	97228241	RO4	22 J	6.1 J	10 J	9 J	22 J	63 U	2.3 J	1.4 JLDU	6.6 J
West Sound	97228244	WS1	849	267	325	178	44	274 J	96	29 J	67 J
West Sound	97228245	WS2	979	367	379	391	99	171 U	240	102 UJ	160 J
West Sound	97228246	WS3	200	67	80	81	48	78 U	37 J	9.8 J	32 J
West Sound	97228247	WS4	112	36	46	34	11 J	116 J	14 J	4.1 J	13 J
West Sound	97228248	WS5	609	184	240	237	63	118 U	142	61 UJ	85 J
West Sound	97228249	WS6	734	256	288	279	78	129 U	167	68 UJ	104 J
Friday Harbor	97228250	FR1	564	189	215	247	94	142 U	190	78 UJ	132 J
Friday Harbor	97228251	FR2	159	54	66	65	59	319 J	35 J	7.3 J	33 J
Friday Harbor	97228252	FR3	317	103	129	136	60	257 J	76 J	15 J	59 J
Friday Harbor	97228253	FR4	353	153	137	190	82	133 U	133 UJ	133 UJ	71
Friday Harbor	97228254	FR5	67	25	27	34	32	88 J	16 J	3.5 J	16 J
Friday Harbor	97228255	FR6	137	47	52	79	55	122 U	61 J	45 J	34 J
Friday Harbor	97228242	FR7	1540	611	618	978	301	168 U	576	172 UJ	419 J
Friday Harbor	97228243	FR8	844	336	366	384	160	837	247	96	181 J

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FSU=Field split undetected

Table C-3. Comparison of Semivolatile Organics in San Juans Marina Sediments to Sediment Management Standards.

			mean TOC %	Phenol (ug/Kg dw)	2-Methylphenol (ug/Kg dw)	4-Methylphenol (ug/Kg dw)	Benzoic Acid (ug/Kg dw)	Benzyl Alcohol (ug/Kg dw)	Pentachlorophenol (ug/Kg dw)
Marine Sediment Quality Standard				420	63	670	650	57	360
Harbor	Sample No.	Station							
Mud Bay	97228230	MB1	1.4	53 U	25 U	81	213 J	25 U	126 U
Mud Bay	97228231	MB2	1.5	33 U	20 U	11 J	337 J	20 U	102 U
Fisherman Bay	97228232	FI1	0.5	31 U	14 U	286	138 J	14 U	69 U
Fisherman Bay	97228233	FI2	0.3	24 U	13 U	208	132 J	13 U	65 U
Fisherman Bay	97228234/5	FI3	1.2	31 U	15 U	80 J	366 J	7.2 JFSU	75 U
Fisherman Bay	97228236	FI4	0.6	36 U	13 U	154	150 J	13 U	67 U
Fisherman Bay	97228237	FI5	0.8	15 U	15 U	6.7 J	292 J	5.2 J	73 U
Fisherman Bay	97228256	FI6	0.3	15 U	12 U	4.6 J	172 J	12 U	61 U
Roche Harbor	97228238	RO1	1.6	26 U	17 U	20	116 J	17 U	86 U
Roche Harbor	97228239	RO2	0.8	17 U	17 U	5 J	130 J	17 U	84 U
Roche Harbor	97228240	RO3	1.2	31 U	17 U	21	374 J	7.8 J	86 U
Roche Harbor	97228241	RO4	0.7	15 U	15 U	5 J	248 J	15 U	76 U
West Sound	97228244	WS1	1.3	18 U	17 U	13 J	279 J	7.9 J	86 U
West Sound	97228245	WS2	3.2	85 U	85 U	23 J	306	85 U	214 U
West Sound	97228246	WS3	1.8	21 U	20 U	31	230 J	4.9 J	97 U
West Sound	97228247	WS4	0.6	17 U	14 U	17	212 J	5.4 J	68 U
West Sound	97228248	WS5	1.2	59 U	59 U	22 J	201	59 U	148 U
West Sound	97228249	WS6	0.9	71 LDU	65 U	28 J	220	65 U	161 U
Friday Harbor	97228250	FR1	1.7	71 U	5.8 J	27 J	247	71 U	178 U
Friday Harbor	97228251	FR2	1.4	33 U	19 U	11 J	194 J	19 U	97 U
Friday Harbor	97228252	FR3	1.9	20 U	20 U	12 J	178 J	8 J	110
Friday Harbor	97228253	FR4	0.9	33 UJ	67 U	33 U	193	67 U	167 U
Friday Harbor	97228254	FR5	0.6	15 U	15 U	3.2 J	223 J	6.2 J	81
Friday Harbor	97228255	FR6	0.6	61 U	61 U	31 U	162	61 U	153 U
Friday Harbor	97228242	FR7	1.9	38 UJ	84 U	39 J	211 U	84 U	211 U
Friday Harbor	97228243	FR8	2.7	95 U	95 U	48 U	238 U	95 U	214 J

U=Undetected at detection limit shown
J=Estimated concentration
UJ=Undetected at the estimated limit shown
JFSU=Field split - undetected at the estimated limit shown
LDU=Lab duplicate - undetected at detection limit shown

Table C-3. Comparison of Semivolatile Organics in San Juans Marina Sediments to Sediment Management Standards.

			1,4-Dichlorobenzene (ug/Kg dw)	1,4-Dichlorobenzene (mg/Kg OC)	Dimethylphthalate (mg/Kg OC)	Dibenzofuran (mg/Kg OC)	Diethylphthalate (mg/Kg OC)
Marine Sediment Quality Standard				3.1	53	15	61
Harbor	Sample No.	Station					
Mud Bay	97228230	MB1	25 U			0.3 J	
Mud Bay	97228231	MB2	20 U			0.3 J	
Fisherman Bay	97228232	FI1	14 U			4.0	
Fisherman Bay	97228233	FI2	13 U			1.5 J	
Fisherman Bay	97228234/5	FI3	15 U		0.6 J	0.3 J	
Fisherman Bay	97228236	FI4	13 U			0.5 J	
Fisherman Bay	97228237	FI5	15 U		1.3 J	1.8	
Fisherman Bay	97228256	FI6	12 U			0.7 J	
Roche Harbor	97228238	RO1	2.7 J	0.2 J		0.6 J	
Roche Harbor	97228239	RO2	17 U			0.4 J	
Roche Harbor	97228240	RO3	1.1 J	0.1 J		1.8	
Roche Harbor	97228241	RO4	15 U			0.7 J	
West Sound	97228244	WS1	17 U		0.4 J	1.1 J	
West Sound	97228245	WS2	214 U		0.6 J		
West Sound	97228246	WS3	20 U			0.7 J	
West Sound	97228247	WS4	14 U			1.5 J	
West Sound	97228248	WS5	148 U		2.6	3.5	
West Sound	97228249	WS6	161 U			5.6 J	0.8 JLDU
Friday Harbor	97228250	FR1	178 U		5.1		
Friday Harbor	97228251	FR2	19 U		1.5	0.9 J	
Friday Harbor	97228252	FR3	20 U		1.2	0.5 J	
Friday Harbor	97228253	FR4	167 U		1.9 J		
Friday Harbor	97228254	FR5	15 U			1.0 J	
Friday Harbor	97228255	FR6	153 U			2.0 J	
Friday Harbor	97228242	FR7	211 U			5.3	
Friday Harbor	97228243	FR8	238 U		1.7 J	1.5 J	

U=Undetected at detection limit shown
J=Estimated concentration
JLDU=Lab duplicate - undetected at the estimated limit shown

Table C-3. Comparison of Semivolatile Organics in San Juans Marina Sediments to Sediment Management Standards.

			Butylbenzylphthalate (mg/Kg OC)	Bis(2-Ethylhexyl) Phthalate (mg/Kg OC)	Naphthalene (mg/Kg OC)	2-Methylnaphthalene (mg/Kg OC)	Acenaphthylene (mg/Kg OC)
Marine Sediment Quality Standard			4.9	47	99	38	66
Harbor	Sample No.	Station					
Mud Bay	97228230	MB1			0.4 J	0.6 J	
Mud Bay	97228231	MB2			0.7 J	1.0 J	0.2 J
Fisherman Bay	97228232	FI1			3.3	2.4 J	3.8
Fisherman Bay	97228233	FI2			2.1 J	3.9 J	3.6 J
Fisherman Bay	97228234/5	FI3	0.8 JFSU	22 FSU	0.8 J	0.6 J	0.5 J
Fisherman Bay	97228236	FI4			0.9 J	0.8 J	1.1 J
Fisherman Bay	97228237	FI5			1.3 J	1.9	1.7 J
Fisherman Bay	97228256	FI6			0.8 J	0.9 J	1.4 J
Roche Harbor	97228238	RO1			1.2	1.8	0.5 J
Roche Harbor	97228239	RO2			0.5 J	0.9 J	0.3 J
Roche Harbor	97228240	RO3			5.8	4.3	1.3 J
Roche Harbor	97228241	RO4			1.0 J	1.8 J	0.3 J
West Sound	97228244	WS1			0.5 J	0.6 J	1.8
West Sound	97228245	WS2		41	0.8 J	0.9 J	2.2
West Sound	97228246	WS3			0.6 J	0.8 J	0.7 J
West Sound	97228247	WS4			0.8 J	0.9 J	0.9 J
West Sound	97228248	WS5		10	3.0 J	3.1	2.5
West Sound	97228249	WS6			4.8 JLDU	2.5 J	4.7
Friday Harbor	97228250	FR1		7	2.4 J	1.8 J	3.5
Friday Harbor	97228251	FR2			1.0 J	1.4 J	1.1 J
Friday Harbor	97228252	FR3			0.5 J	0.7 J	1.3
Friday Harbor	97228253	FR4			2.2 J	3.6	4.5
Friday Harbor	97228254	FR5			1.2 J	2.1 J	1.0 J
Friday Harbor	97228255	FR6		4 J	2.0 J	3.7 J	1.4 J
Friday Harbor	97228242	FR7		23	3.6 J	3.6	6.4
Friday Harbor	97228243	FR8		24	1.1 J	1.6 J	3.1

J=Estimated concentration
JLDU=Lab duplicate - undetected at the estimated limit shown
JFSU=Field split - undetected at the estimated limit shown

Table C-3. Comparison of Semivolatile Organics in San Juans Marina Sediments to Sediment Management Standards.

			Acenaphthene (mg/Kg OC)	Fluorene (mg/Kg OC)	Phenanthrene (mg/Kg OC)	Anthracene (mg/Kg OC)	LPAH (mg/Kg OC)	Fluoranthene (mg/Kg OC)	Pyrene (mg/Kg OC)
Marine Sediment Quality Standard			16	23	100	220	370	160	1000
Harbor	Sample No.	Station							
Mud Bay	97228230	MB1		0.4 J	1.4 J	0.4 J	3	2 J	
Mud Bay	97228231	MB2	0.1 J	0.5 J	2.4 J	0.6 J	5	3 J	3
Fisherman Bay	97228232	FI1	3.3	5.6	63.1 J	14.9	94	114 J	94
Fisherman Bay	97228233	FI2	3.6 J	11.2	76.4 J	10.3	107	43 J	66 J
Fisherman Bay	97228234/5	FI3	0.3 J	0.6 J	5.0 J	1.2 J	8	10 J	11 J
Fisherman Bay	97228236	FI4	0.5 J	1.0 J	6.0 J	1.9 J	11	12 J	12 J
Fisherman Bay	97228237	FI5	2.3	2.1	10.5 J	3.8	22	31 J	29
Fisherman Bay	97228256	FI6	0.6 J	0.8 J	6.0 J	3.3 J	13	14 J	16
Roche Harbor	97228238	RO1	0.3 J	0.7 J	3.8 J	1.4	8	8 J	10
Roche Harbor	97228239	RO2	0.3 J	0.7 J	3.3 J	1.3 J	6	5 J	7
Roche Harbor	97228240	RO3	1.5	2.8	17.8 J	4.9	34	21 J	26
Roche Harbor	97228241	RO4	0.3 J	0.7 J	3.3 J	0.8 J	6	5 J	5
West Sound	97228244	WS1	0.8 J	2.5	15.5 J	7.6	29	142 E	110
West Sound	97228245	WS2		2.4	11.0 J	12.0	28	39 J	49
West Sound	97228246	WS3	0.5 J	1.0 J	4.7 J	3.4	11	11 J	15
West Sound	97228247	WS4	0.9 J	1.7 J	8.0 J	3.3	15	18 J	23
West Sound	97228248	WS5	4.2	4.9	21.3 J	9.7	46	79 J	61
West Sound	97228249	WS6	3.8 J	10.6	81.6 J	31.3	137	168 J	119
Friday Harbor	97228250	FR1	1.9 J	2.4	13.8 J	7.7	32	53 J	49
Friday Harbor	97228251	FR2	0.5 J	1.7	7.1 J	30.1	41	16 J	17
Friday Harbor	97228252	FR3	0.5 J	1.2	10.4 J	3.9	18	23 J	30
Friday Harbor	97228253	FR4	1.9 J	3.6	20.2	11.5	44	84	91
Friday Harbor	97228254	FR5	0.5 J	1.4 J	7.3 J	3.2	15	13 J	20
Friday Harbor	97228255	FR6	1.5 J	3.1 J	13.6 J	10.9	33	29 J	29
Friday Harbor	97228242	FR7	8.4	11.6	75.8 J	26.8	133	109 J	115
Friday Harbor	97228243	FR8		2.6	17.2	9.8	34	63 J	52

J=Estimated concentration

=Exceeds Sediment Quality Standard

Table C-3. Comparison of Semivolatile Organics in San Juans Marina Sediments to Sediment Management Standards.

			Benzo(a)anthracene (mg/Kg OC)	Chrysene (mg/Kg OC)	Benzo(k)fluoranthene (ug/Kg dw)	Benzofluoranthenes (mg/Kg OC)	Benzo(a)pyrene (mg/Kg OC)	Indeno(1,2,3-cd)pyrene (mg/Kg OC)
Marine Sediment Quality Standard			110	110	na	230	99	34
Harbor	Sample No.	Station						
Mud Bay	97228230	MB1	0.9 J	0.8 J	5.9 J	4 J	0.6 J	1.4 J
Mud Bay	97228231	MB2	1.2 J	1.4	12 J	3 J	1.3 J	0.6 J
Fisherman Bay	97228232	FI1	19.6	40.2	48	43	14.2	9.3
Fisherman Bay	97228233	FI2	19.7 J	19.1 J	20 J	26 J	17.9 J	10.6 J
Fisherman Bay	97228234/5	FI3	3.2 J	7.0 J	25 J	8 J	2.5 J	1.7 J
Fisherman Bay	97228236	FI4	4.3 J	6.2 J	12 J	10 J	3.6 J	2.9 J
Fisherman Bay	97228237	FI5	8.8	18.9	35	16	5.0	1.8 J
Fisherman Bay	97228256	FI6	9.7	19.7	21	23	8.3	2.8 J
Roche Harbor	97228238	RO1	3.1	6.8	51	11	2.8	1.4 J
Roche Harbor	97228239	RO2	3.0	8.0	16 J	8 J	2.4	0.6 J
Roche Harbor	97228240	RO3	8.8	13.0	64	19	9.3	5.4 J
Roche Harbor	97228241	RO4	1.5 J	2.5 J	6.1 J	4 J	1.2 J	0.3 J
West Sound	97228244	WS1	24.4	75.5	267	89	14.2	7.7
West Sound	97228245	WS2	13.5	37.2	367	42	12.2	7.5
West Sound	97228246	WS3	6.8	11.9	67	15	4.5	2.1 J
West Sound	97228247	WS4	8.5	19.3	36	27	6.2	2.5 J
West Sound	97228248	WS5	25.6	46.8	184	66	19.8	11.8
West Sound	97228249	WS6	39.2	99.3	256	116	32.8	19.6
Friday Harbor	97228250	FR1	17.6	30.6	189	44	14.5	11.2
Friday Harbor	97228251	FR2	5.7	12.3	54	15	4.6	2.5 J
Friday Harbor	97228252	FR3	9.3	17.3	103	22	7.2	4.0 J
Friday Harbor	97228253	FR4	23.6	39.6	153	54	20.2	
Friday Harbor	97228254	FR5	7.1	11.7	25	15	5.4	2.5 J
Friday Harbor	97228255	FR6	18.6	23.6	47	29	12.2	9.5 J
Friday Harbor	97228242	FR7	50.5	73.2	611	113	51.5	30.3
Friday Harbor	97228243	FR8	19.3	34.7	336	45	14.5	9.3

J=Estimated concentration

Table C-3. Comparison of Semivolatile Organics in San Juans Marina Sediments to Sediment Management Standards.

			Dibenzo(a,h)anthracene (mg/Kg OC)	Benzo(ghi)perylene (mg/Kg OC)	HPAH (mg/Kg OC)	Di-N-Octyl Phthalate (mg/Kg OC)
Marine Sediment Quality Standard			12	31	960	58
Harbor	Sample No.	Station				
Mud Bay	97228230	MB1		2.0 J	11	3.6 UJ
Mud Bay	97228231	MB2	0.1 J	0.9 J	14	1.3 U
Fisherman Bay	97228232	FI1	4.2 J	8.0 J	346	6.0 U
Fisherman Bay	97228233	FI2	4.5 J	10.9 J	218	7.9 UJ
Fisherman Bay	97228234/5	FI3	0.3 JFSU	1.7 J	46	15.5 JFSU
Fisherman Bay	97228236	FI4	2.1 J	3.2 J	56	4.6 UJ
Fisherman Bay	97228237	FI5	0.4 J	1.7 J	112	1.8 U
Fisherman Bay	97228256	FI6	8.0 U	3.1 J	105	18.7
Roche Harbor	97228238	RO1	0.3 J	1.4 J	46	1.1 U
Roche Harbor	97228239	RO2	0.2 J	1.1 J	36	2.2 U
Roche Harbor	97228240	RO3	1.0 J	4.6 J	108	1.4 U
Roche Harbor	97228241	RO4	0.2 JLDU	0.9 J	21	2.1 U
West Sound	97228244	WS1	2.3 J	5.4 J	471	1.4 U
West Sound	97228245	WS2		5.0 J	206	1.3 U
West Sound	97228246	WS3	0.5 J	1.8 J	69	1.1 U
West Sound	97228247	WS4	0.7 J	2.4 J	108	2.5 U
West Sound	97228248	WS5		7.1 J	317	2.5 U
West Sound	97228249	WS6		12.2 J	606	3.8 U
Friday Harbor	97228250	FR1		7.8 J	228	2.1 U
Friday Harbor	97228251	FR2	0.5 J	2.4 J	76	1.4 U
Friday Harbor	97228252	FR3	0.8 J	3.1 J	116	1.1 U
Friday Harbor	97228253	FR4		7.6	320	3.5 U
Friday Harbor	97228254	FR5	0.6 J	2.5 J	78	2.4 U
Friday Harbor	97228255	FR6	7.0 J	5.3 J	162	4.8 U
Friday Harbor	97228242	FR7		22.1 J	564	2.2 U
Friday Harbor	97228243	FR8	3.6	6.8 J	248	1.8 U

U=Undetected at detection limit shown
J=Estimated concentration
UJ=Undetected at the estimated limit shown
JFSU=Field split - undetected at the estimated limit shown

Table C-4. Butyltin Compounds in San Juan Harbor Sediments

			Monobutyltin Chloride		Dibutyltin Chloride		Tributyltin Chloride		Tetrabutyltin Chloride		TBT+	
			ug/Kg dw		ug/Kg dw		ug/Kg dw		ug/Kg dw		ug/Kg dw	
Mud Bay	97228230	MB1	60	UJ	5.9	UJ	2.6	J	5.8	UJ	2.3	J
Mud Bay	97228231	MB2	40	UJ	3.9	J	4.9	UJ	4.9	UJ	4.4	UJ
Fisherman Bay	97228232	FI1	25	UJ	4.4	J	2.2	J	3.2	UJ	2.0	J
Fisherman Bay	97228233	FI2	22	UJ	3	UJ	2.9	UJ	2.9	UJ	2.6	UJ
Fisherman Bay	97228234/5	FI3	176	JFSU	51	J	119	J	1.0	J	105.5	J
Fisherman Bay	97228236	FI4	27	UJ	2.6	J	2.6	J	2.4	UJ	2.3	J
Fisherman Bay	97228237	FI5	67	J	10	J	40	J	2.6	UJ	35.6	J
Fisherman Bay	97228256	FI6	14	UJ	2.1	J	5.7	J	3	UJ	5.1	J
Roche Harbor	97228238	RO1	97	J	67	J	41	J	3.4	UJ	36.5	J
Roche Harbor	97228239	RO2	25	UJ	5	J	29	J	3.2	UJ	25.8	J
Roche Harbor	97228240	RO3	39	UJ	5.9	J	15	J	3.3	UJ	13.4	J
Roche Harbor	97228241	RO4	24	UJ	71	JLDU	29	J	3.8	UJ	26.0	J
West Sound	97228244	WS1	22	UJ	9.3	J	28	J	3.6	UJ	24.9	J
West Sound	97228245	WS2	145	J	74	J	422	E	2.1	J	375.6	E
West Sound	97228246	WS3	54	UJ	24	J	22	J	4.7	UJ	19.6	J
West Sound	97228247	WS4	38	UJ	11	J	24	J	2.9	UJ	21.4	J
West Sound	97228248	WS5	95	J	138	E	5500	E	17	J	4895.0	E
West Sound	97228249	WS6	63	UJ	30	J	68	J	3.3	UJ	60.5	J
Friday Harbor	97228250	FR1	220	J	199	E	152	J	2.9	J	135.3	J
Friday Harbor	97228251	FR2	61	UJ	27	J	32	J	4.5	UJ	28.5	J
Friday Harbor	97228252	FR3	137	J	65	J	84	J	4.9	UJ	74.8	J
Friday Harbor	97228253	FR4	44	UJ	6.6	J	28	J	4.1	UJ	24.9	J
Friday Harbor	97228254	FR5	20	UJ	6.1	J	3.7	J	3.6	UJ	3.3	J
Friday Harbor	97228255	FR6	20	UJ	3.8	UJ	3.6	J	3.7	UJ	3.2	J
Friday Harbor	97228242	FR7	108	J	35	J	164	J	4	J	146.0	J
Friday Harbor	97228243	FR8	67	UJ	35	J	132	J	5.7	UJ	117.5	J

U=Undetected at detection limit shown
J=Estimated concentration
UJ=Undetected at the estimated limit shown
E=Estimate; exceeds calibration range
LDU=Lab duplicate undetected
FSU=Field split undetected

Sanborn Fire Insurance Maps

Jensens Shipyard
1293 Turn Point Rd
Friday Harbor, WA 98250

Inquiry Number: 5062208.3
September 27, 2017

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/27/17

Site Name:

Jensens Shipyard
1293 Turn Point Rd
Friday Harbor, WA 98250
EDR Inquiry # 5062208.3

Client Name:

Whatcom Environmental Services
228 East Champion Street
Bellingham, WA 98225
Contact: Henry Cade

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The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 3E4F-445C-AB07

PO # NA

Project Jensen s Shipyard Phase I ESA

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: 3E4F-445C-AB07

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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City Directories

Jensens Shipyard
1293 Turn Point Rd
Friday Harbor, WA 98250

Inquiry Number: 5062208.5
September 28, 2017

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2013	☑	☐	Cole Information Services
2008	☑	☐	Cole Information Services
2003	☑	☑	Cole Information Services
1999	☑	☑	Cole Information Services
1995	☑	☑	Cole Information Services
1992	☑	☑	Cole Information Services

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FINDINGS

TARGET PROPERTY STREET

1293 Turn Point Rd
Friday Harbor, WA 98250

Year	*CD Image*	*Source*

TURN POINT RD

2013	pg A1	Cole Information Services
2008	pg A2	Cole Information Services
2003	pg A4	Cole Information Services
1999	pg A6	Cole Information Services
1995	pg A8	Cole Information Services
1992	pg A10	Cole Information Services

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
BERESFORD RD			
2013	-	Cole Information Services	Target and Adjoining not listed in Source
2008	-	Cole Information Services	Target and Adjoining not listed in Source
2003	pg. A3	Cole Information Services	
1999	pg. A5	Cole Information Services	
1995	pg. A7	Cole Information Services	
1992	pg. A9	Cole Information Services	

City Directory Images

Target Street	Cross Street	Source
✓	-	Cole Information Services

TURN POINT RD 2013

630	OCCUPANT UNKNOWN
929	OCCUPANT UNKNOWN
949	BARBARA BUCK
1063	A 1 MARINE SERVICES INC
	BENTZEN MARINE
1293	ALBERT JENSEN
	J & R UPHOLSTERY
	JENSEN SHIPYARD
1919	MARK NELSON
2106	DAVID CARLSTROM
2175	GLENN LEFEVER-BUTTON

Target Street	Cross Street	Source
✓	-	Cole Information Services

TURN POINT RD 2008

840	A W BEYERS INC
929	MARK WHITNEY
1063	A1 MARINE SERVICES CORP
	ARNE BENTZEN MARINE SURVENG
	SHIPYARD COVE MARINA
	WESTON CALLENDER
1293	LYLE MANN
2106	ONA RICE
2175	GLENN LEFEVER-BUTTON

Target Street	Cross Street	Source
-	✓	Cole Information Services

BERESFORD RD 2003

19 MICHAEL AHRENIUS

Target Street	Cross Street	Source
✓	-	Cole Information Services

TURN POINT RD 2003

880	J & R UPHOLSTERY
	JENSEN ALBERT & SON SHIPYARD
949	BARBARA BUCK
1063	ARNE BENTZEN
	ARNE BENTZEN
1293	LYLE MANN
1919	VICTOR GIGLIO
2106	GB GIFFORD & ASSOCS
	MBETH KELLNER
2175	GLENN LEFEVER-BUTTON

Target Street	Cross Street	Source
-	✓	Cole Information Services

BERESFORD RD 1999

660 DB SERVICES FAX LINE
STEVEN MILLER
711 MICHAEL AHRENIUS

Target Street	Cross Street	Source
✓	-	Cole Information Services

TURN POINT RD 1999

630	MARIELLA INN
700	ROBERT BUCK
740	SHIPYARD COVE MARINA
880	J & R UPHOLSTERY
	JENSEN ALBERT & SON SHIPYARD
	JENSEN ALBERT & SON SHIPYARD PROPELLRS
	STEVE BARNES
	WILLIAM LOWELL
1001	KARL LASSEY
1050	JOHN BENTZEN
1460	VICTOR GIGLIO
1657	LEONARD LAKIN
1660	LEFEVER BUTTON GLENN & SUZIE
1661	ALAN VAINES
1670	ANDREW DUKE
	BOB SCHOTZ
	GEORGE STEINER
1690	WINSTON ROGERS
1710	ROBERT HANNAH
1720	RICHARD LOTHROP
1750	JOE FANJUL
1790	E DAGRADI
1825	DAVID PRETZ
1840	ART TIMMONS
2005	WILLIAM RUCKELSHAUS

Target Street	Cross Street	Source
-	✓	Cole Information Services

BERESFORD RD 1995

660 BENTZEN, DAN
711 FELTHOUS, DEAN

Target Street	Cross Street	Source
✓	-	Cole Information Services

TURN POINT RD 1995

630	MARIELLA INN
700	BUCK, ROBERT F
740	BARNHILL, A V
	MARSHALL, CAROLYN
	RICHARDS, F S
	SHIPYARD COVE MARINA
	WOLLBERG, ROBERT
755	ANDERSON, MARK
880	J & R UPHOLSTERY
	LOWELL, WILLIAM F
	MANN, LYLE
	SHAWNLEE SAILS
1050	BENTZEN, JOHN
1261	CAMPBELL, LADDIE
1460	GIGLIO, VICTOR J
1657	EAGAN, LIN L
1660	PROVCHY, ANDREW
1661	VAINES, ALAN
1670	SCHOTZ, BOB
1681	CORRIE, JAMES R
1690	ROGERS, WINSTON
1710	HANNAH, ROBERT S
1720	LOTHROP, RICHARD
1750	FANJUL, JOE
1790	DAGRADI, DONALD
1840	SEELS, ARTHUR F
2005	RUCKELSHAUS, WILLIAM

Target Street	Cross Street	Source
-	✓	Cole Information Services

BERESFORD RD 1992

660 BENTZEN, DAN

Target Street	Cross Street	Source
✓	-	Cole Information Services

TURN POINT RD 1992

630	JOHNSTON, ALISON
	LOHREY, ARTHUR
740	BARNHILL, A V
	BENTZEN, ARNE
	RICHARDS, STAN F
755	ANDERSON, MARK
880	LOWELL, WILLIAM F
	MANN, LYLE
1001	KELLY, FRANK
1050	BENTZEN, JOHN
1660	PROVCHY, ANDREW
1661	VAINES, ALAN B
1670	SCHOTZ, BOB
1720	LOTHROP, RICHARD
1760	ERTTER, ROSS
1790	DAGRADI, DONALD
1840	SEELS, ARTHUR F
2004	LANGE, CARL R
2005	RUCKELSHAUS, WILLIAM

Aerial Photographs

Jensens Shipyard
1293 Turn Point Rd
Friday Harbor, WA 98250

Inquiry Number: 5062208.9
September 29, 2017

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

09/29/17

Site Name:

Jensens Shipyard
1293 Turn Point Rd
Friday Harbor, WA 98250
EDR Inquiry # 5062208.9

Client Name:

Whatcom Environmental Services
228 East Champion Street
Bellingham, WA 98225
Contact: Henry Cade

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2011	1"=500'	Flight Year: 2011	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1998	1"=500'	Acquisition Date: July 21, 1998	USGS/DOQQ
1989	1"=500'	Flight Date: September 08, 1989	USGS
1980	1"=1000'	Flight Date: July 29, 1980	USGS
1972	1"=500'	Flight Date: May 26, 1972	USGS
1941	1"=500'	Flight Date: June 27, 1941	USDA

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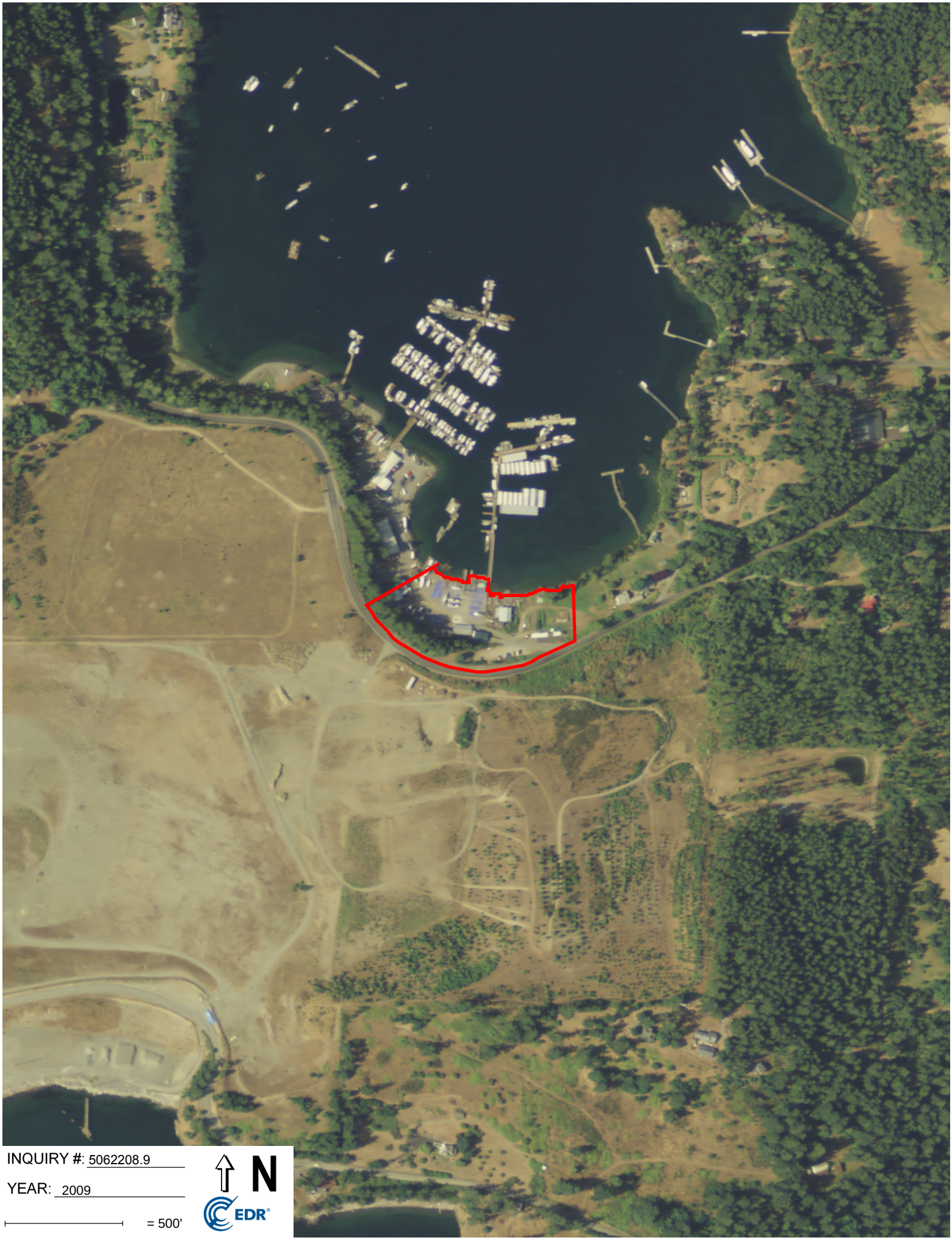
INQUIRY #: 5062208.9

YEAR: 2011

= 500'

N

EDR



INQUIRY #: 5062208.9

YEAR: 2009

= 500'

N

EDR

INQUIRY #: 5062208.9

YEAR: 2006

= 500'

N

EDR

INQUIRY #: 5062208.9

YEAR: 2005

= 500'

N

EDR

INQUIRY #: 5062208.9

YEAR: 1998

= 500'

N

EDR

INQUIRY #: 5062208.9

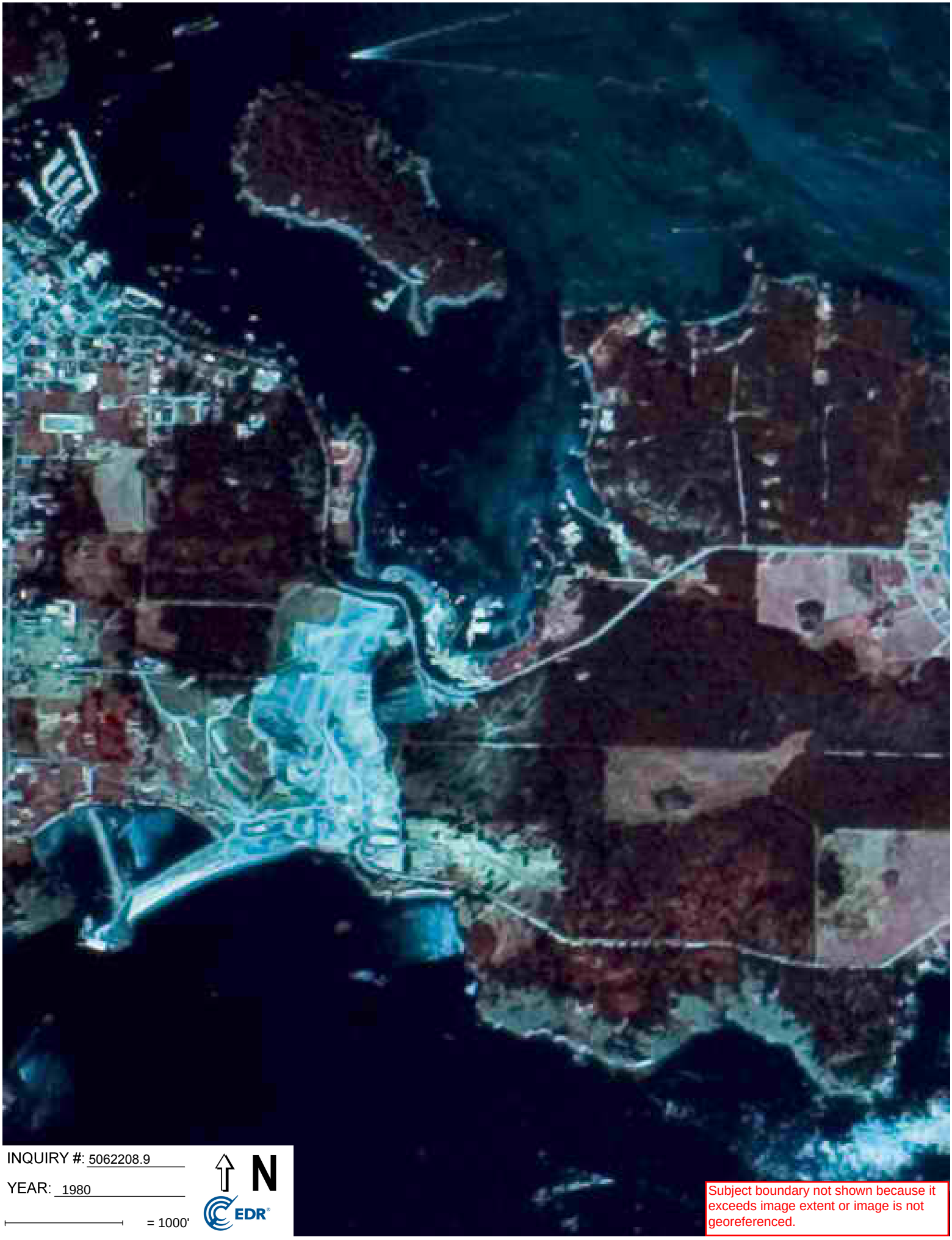
YEAR: 1989

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 5062208.9

YEAR: 1980

= 1000'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.

INQUIRY #: 5062208.9

YEAR: 1972

= 500'

N

EDR


INQUIRY #: 5062208.9
YEAR: 1941
= 500'
N
EDR

Topographic Maps

Jensens Shipyard
1293 Turn Point Rd
Friday Harbor, WA 98250

Inquiry Number: 5062208.4
September 27, 2017

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

09/27/17

Site Name:

Jensens Shipyard
1293 Turn Point Rd
Friday Harbor, WA 98250
EDR Inquiry # 5062208.4

Client Name:

Whatcom Environmental Services
228 East Champion Street
Bellingham, WA 98225
Contact: Henry Cade

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Whatcom Environmental Services were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA

Project: Jensen s Shipyard Phase I ES/

Coordinates:

Latitude:	48.525527 48° 31' 32" North
Longitude:	-122.999279 -122° 59' 57" West
UTM Zone:	Zone 10 North
UTM X Meters:	500053.23
UTM Y Meters:	5374713.05
Elevation:	15.07' above sea level

Maps Provided:

2014
1994
1981
1973
1957
1954
1943

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2014 Source Sheets

Shaw Island
2014
7.5-minute, 24000

Friday Harbor
2014
7.5-minute, 24000

1994 Source Sheets

Friday Harbor
1994
7.5-minute, 24000
Aerial Photo Revised 1989

Shaw Island
1994
7.5-minute, 24000
Aerial Photo Revised 1989

1981 Source Sheets

Friday Harbor
1981
7.5-minute, 24000
Aerial Photo Revised 1978

1973 Source Sheets

Shaw Island
1973
7.5-minute, 24000
Aerial Photo Revised 1972

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1957 Source Sheets

Orcas Island
1957
15-minute, 62500

1954 Source Sheets

Friday Harbor
1954
7.5-minute, 24000
Aerial Photo Revised 1949

1943 Source Sheets

Orcas Island
1943
15-minute, 62500

Historical Topo Map

2014

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

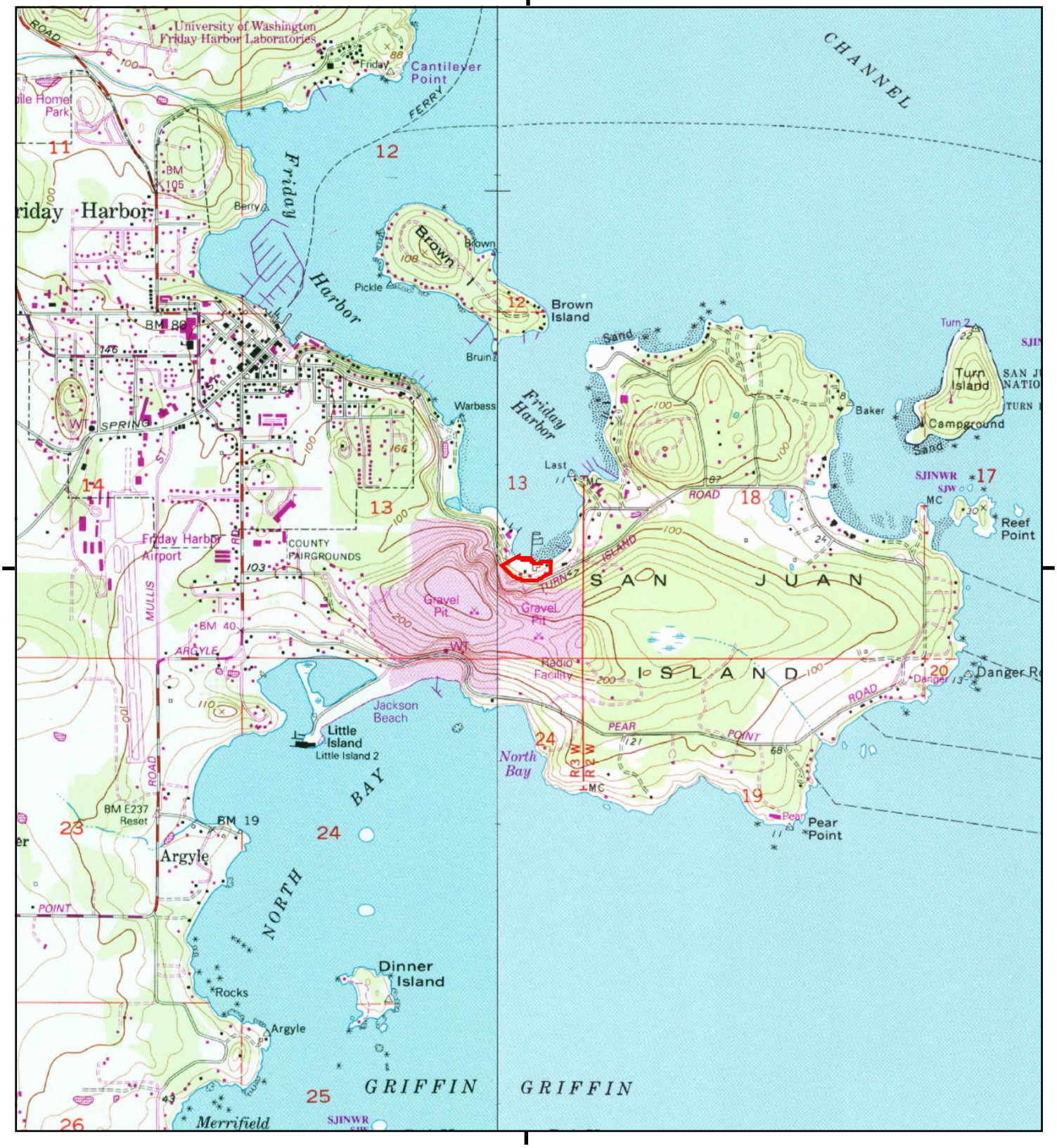
TP, Shaw Island, 2014, 7.5-minute
NW, Friday Harbor, 2014, 7.5-minute

SITE NAME: Jensens Shipyard
ADDRESS: 1293 Turn Point Rd
Friday Harbor, WA 98250
CLIENT: Whatcom Environmental Services

N

Historical Topo Map

1994



This report includes information from the following map sheet(s).

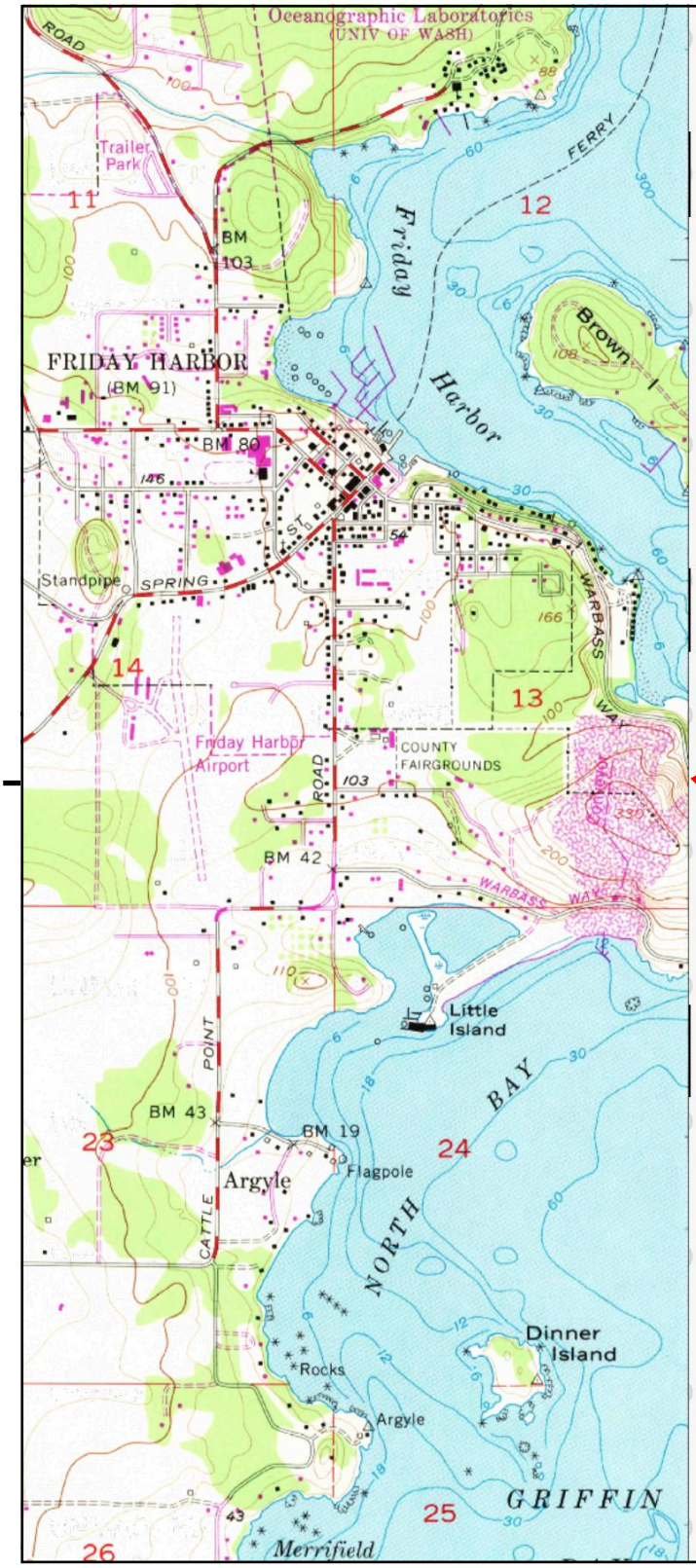
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Shaw Island, 1994, 7.5-minute
NW, Friday Harbor, 1994, 7.5-minute

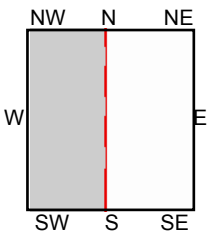
SITE NAME: Jensens Shipyard
ADDRESS: 1293 Turn Point Rd
Friday Harbor, WA 98250
CLIENT: Whatcom Environmental Services

N



This report includes information from the following map sheet(s).

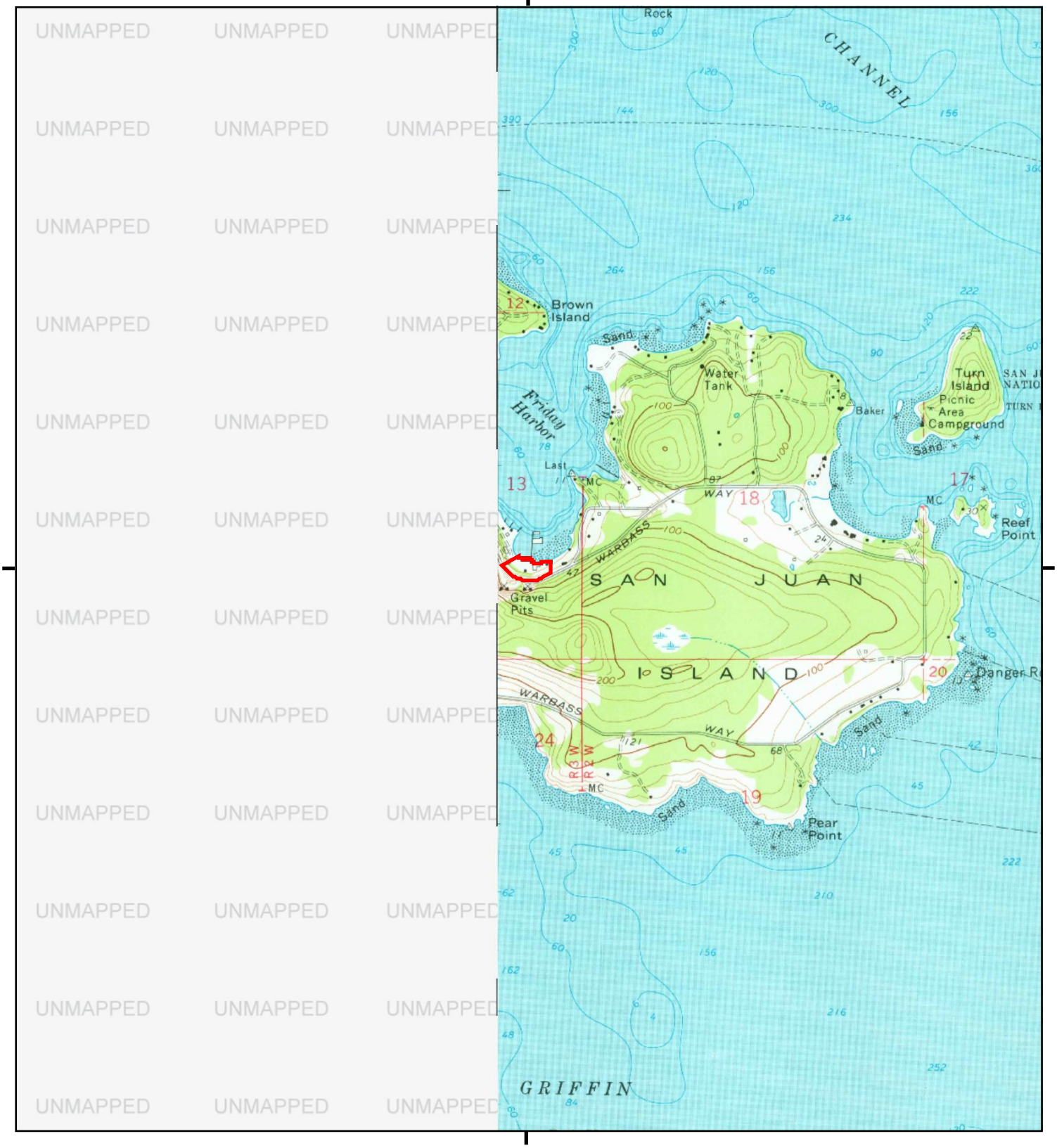
0 Miles 0.25 0.5 1 1.5



NW, Friday Harbor, 1981, 7.5-minute

SITE NAME: Jensens Shipyard
ADDRESS: 1293 Turn Point Rd
Friday Harbor, WA 98250
CLIENT: Whatcom Environmental Services

N



This report includes information from the following map sheet(s).

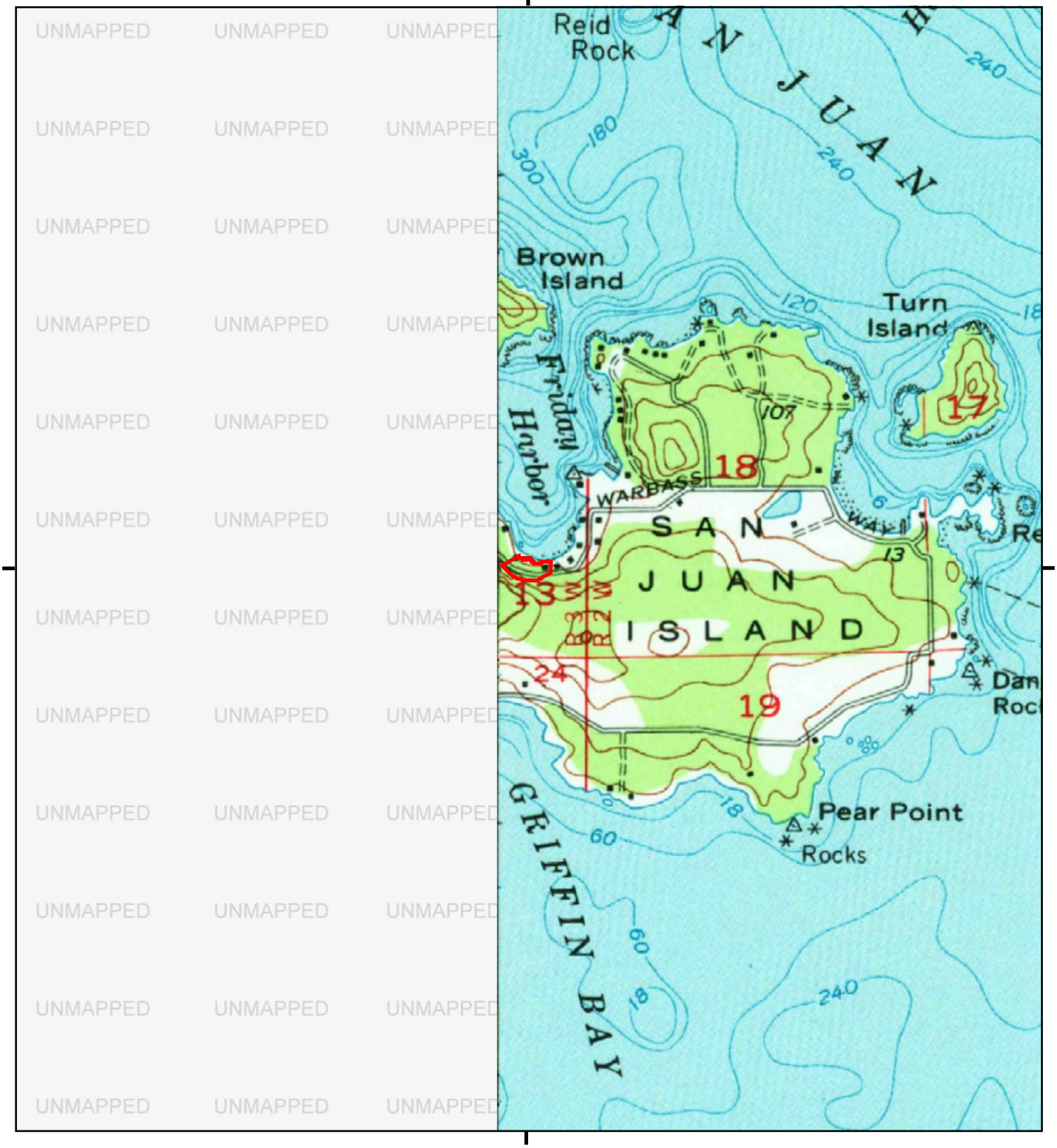
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Shaw Island, 1973, 7.5-minute

SITE NAME: Jensens Shipyard
ADDRESS: 1293 Turn Point Rd
Friday Harbor, WA 98250
CLIENT: Whatcom Environmental Services

N



This report includes information from the following map sheet(s).

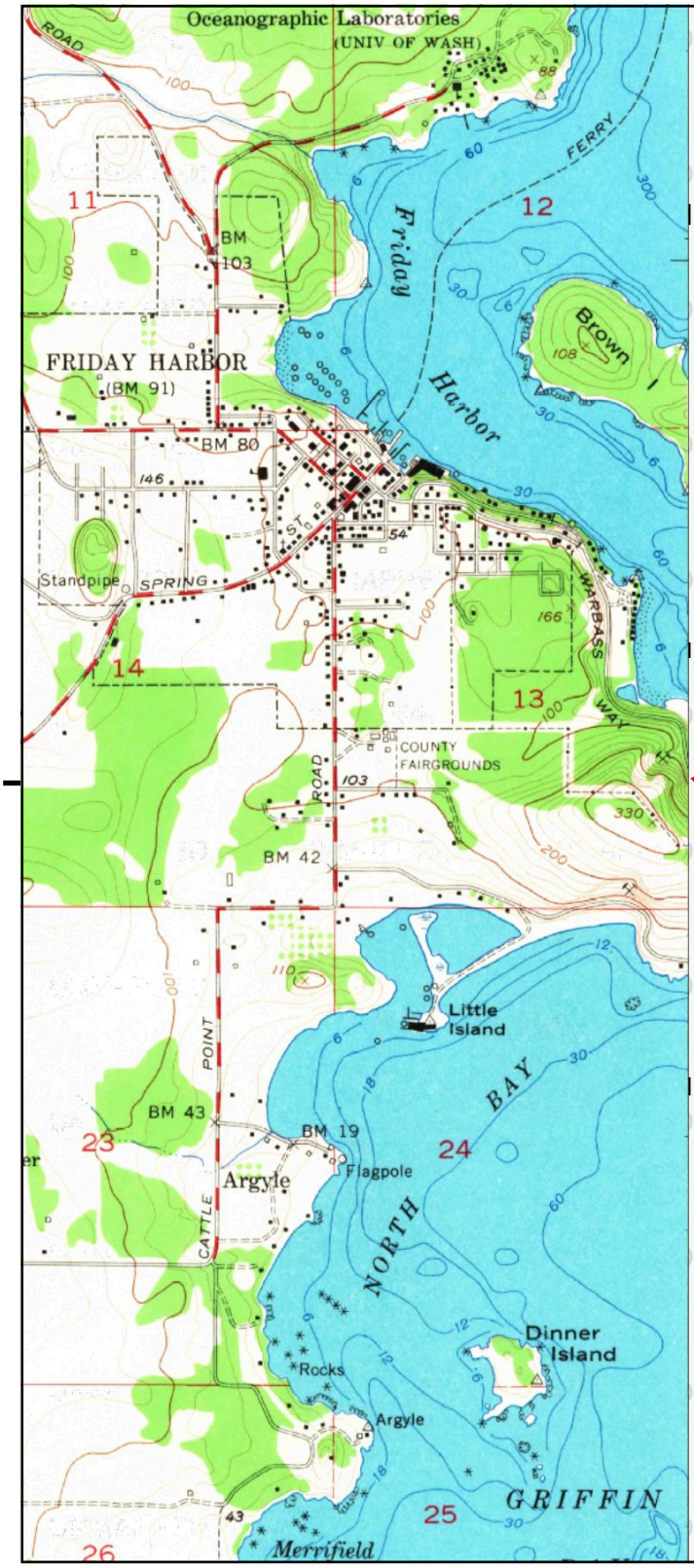
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Orcas Island, 1957, 15-minute

SITE NAME: Jensens Shipyard
ADDRESS: 1293 Turn Point Rd
Friday Harbor, WA 98250
CLIENT: Whatcom Environmental Services

N



This report includes information from the following map sheet(s).

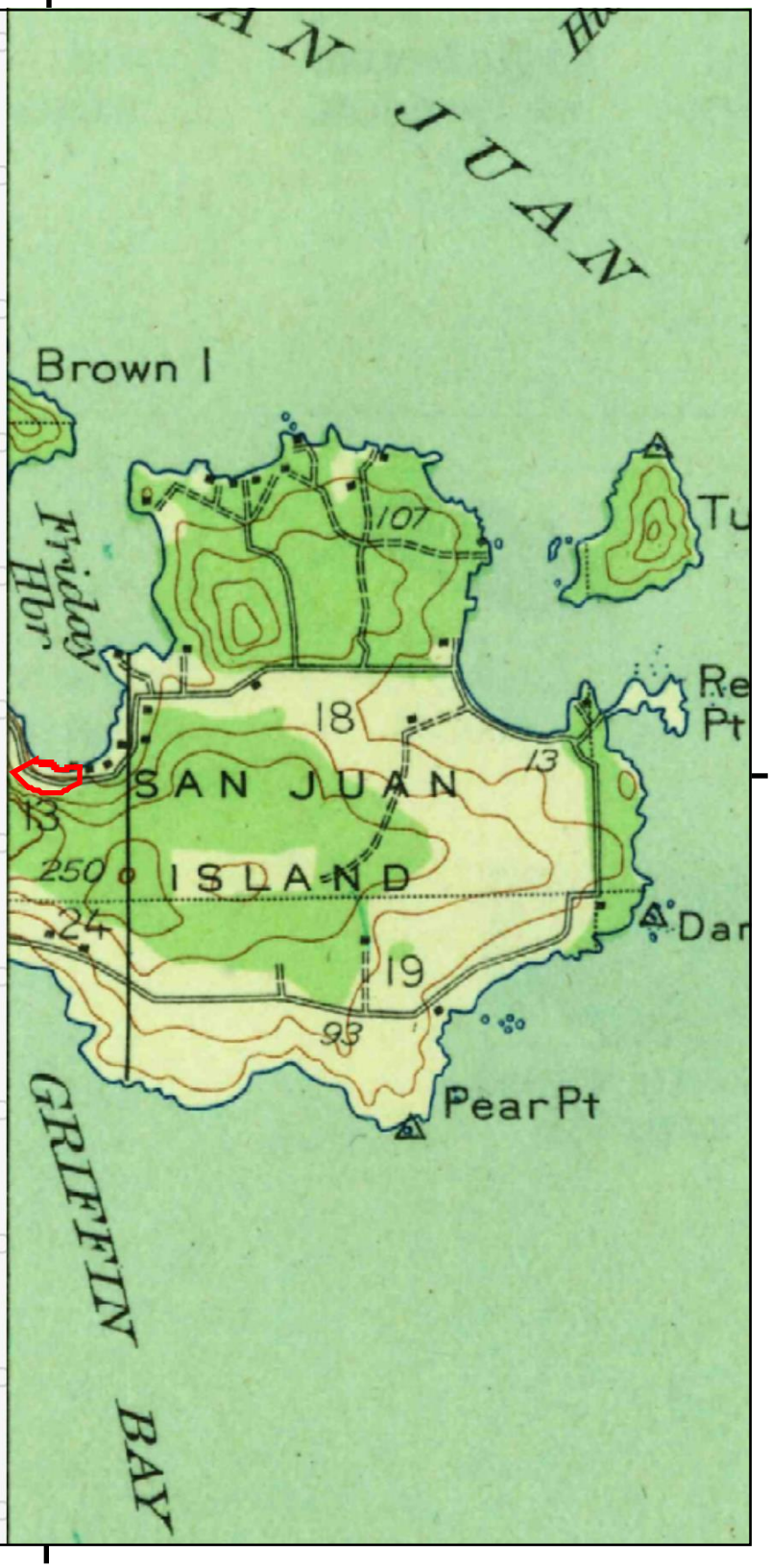
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

NW, Friday Harbor, 1954, 7.5-minute

SITE NAME: Jensens Shipyard
ADDRESS: 1293 Turn Point Rd
Friday Harbor, WA 98250
CLIENT: Whatcom Environmental Services

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Orcas Island, 1943, 15-minute

SITE NAME: Jensens Shipyard
ADDRESS: 1293 Turn Point Rd
Friday Harbor, WA 98250
CLIENT: Whatcom Environmental Services

N

APPENDIX D

Interview Documentation

Phase I ESA Interview Questionnaire

PROJECT: *Jensen Shipyard Phase I ESA*

Interview Information

Date, Time, Location: 11-1-17, 1:00pm, 1293 Turn Point Rd., Friday Harbor

Interviewer:

Person being interviewed: Mike Ahrenius

Connection with property: Owner

Length of time associated with property: 28 years

Do any helpful documents exist?

1) ESA reports: No
2) Environmental Audit reports: No
3) Environmental Permits (solid waste, hazardous waste, wastewater, NPDES, etc.): Yes
4) Registration for above or underground storage tanks: *n/a*
5) Safety plans, SPCC plans, community right-to-know plans, etc.: *No*
6) Correspondence from govt. agencies concerning past or current violations: *No*
7) Hazardous waste generator notices: *No*
8) Geologic or hydrogeologic reports: See Port of Friday Harbor/Todd Nicholson
9) Geotechnical reports: *No*
10) MSDS: *Yes*
11) Archaeological assessments: *No*

Current Subject Property Use

12) What is the current use of the property? Boat Yard
13) What was the past use of the property? Boat Yard
14) Please describe all structures located on the property (size, age, basement, etc.): 7 buildings total, varied sizes, stick frame and metal. 10,410sq.ft. +- Ranging in age from 40 to 100 years. No Basements.
15) Are building drawings available? No

16) What are the means of heating and cooling the structures? (including fuel sources on the subject property): Electric baseboard in Store and Office, wood stove in the shop.

17) What is the source of the potable water supply? Town of Friday Harbor

18) Are the structures plumbed to a municipal sewer system? No

19) Are floor drains or sumps located in the buildings? Yes

20) Is there a septic system located on the property? Yes

Adjacent Property Use

21) What are the current uses of adjoining properties?

North: Moorage

South: Gravel & Sand

East: Residential

West: Marina

22) What are the past uses of adjoining properties?

North: As above

South: " "

East: " "

West: Log dump, shipyard, herring fishery

Hazardous Materials

23) Would any current uses of the property involve the use, treatment, storage, disposal, or generation of hazardous substances? Yes

24) Are there any hazardous substances currently onsite? Yes

a) Type/Quantity: Wash Pad Sludge

b) How stored (containers and conditions)? New Barrels

25) Have there been any hazardous substances onsite in the past? (If so, describe.) Same as above.

26) Are there/have there been any above ground storage tanks located onsite? Yes

a) Content, capacity, age: 300 gallon gasoline and diesel ASTs and 300 gallon waste oil tank, all in concrete bunker (forholding contents in case of leak) in a small building.

27) Are there/have there been any below ground storage tanks located onsite? Yes

a) Content, capacity, age: Gas, 300 Gallon, taken out 20 years ago

28) Are there/have there been any drums stored on the subject property? *Yes*

a) Type/quantity: *See #24*

29) Have there been any leaks/spills of hazardous substances/petroleum products on the subject property? If so, describe. *No*

30) Have there been any leaks/spills of hazardous substances/petroleum products on any adjacent properties? If so, describe and list available reports if known. No

31) Have any tenants ever complained about odors in the building or experienced health-related problems that may have been associated with the building? If yes, explain. No

32) Are there/have there been any containers holding PCB's located on the subject property? No

33) Are there/have there been any hydraulic lifts onsite? If so, describe (e.g. above/below ground, number, location). No

Property Conditions

34) On the subject property, have you ever observed/noticed…

a) … any stressed vegetation? *No*

b) … water in standing surface water or sumps? *No*

c) … vent pipes or other types of pipes? *No*

d) … any odors coming from the site? *No*

e) … stains or corrosion on soil or pavement? *No*

35) Are there pits, ponds, or lagoons located on the subject property? Yes

36) Are drywells or sumps located on the subject property? No

37) Are drinking water or groundwater monitoring wells located on the subject property? No

38) Is there any fill material from an unknown or a contaminated source located onsite? No

APPENDIX E

Resumes of Environmental Professionals

Harold J. Cashman

Whatcom Environmental Services Inc.
228 East Champion Street, Suite 101
Bellingham, WA 98225
(360) 752-9571
hjcashman@whatcomenvironmental.com

Position

President
Years of professional experience: 26

Education

M.S., Geology, Western Washington University, 1991
B.S., Geology/Environmental Studies, St. Lawrence University, 1986
Indiana University Geological Field Mapping Techniques, 1986

Professional History

1997-Present: President, Whatcom Environmental Services
1991-1997: Project Manager/Geologist, K. W. Brown Environmental Services
1989-1991: Graduate Research Assistant, Western Washington University

Certifications/Training/Professional Organizations

Licensed Washington Professional Geologist #341 (Hydrogeologist Specialty)
Registered Washington State Underground Storage Tank Site Assessor
8-hour HAZWOPER for Supervisors and Managers (29 CFR 1910.120)
40-hour Personal Protection and Safety Training (29 CFR 1910.120)
RCRA Hazardous Waste Management Training (40 CFR 260-281)
Pacific Northwest Refinery Safety Orientation certified
Model Toxics Control Act Law Seminar, Law Seminars International, 2015
Mold Awareness and Risk Management, 2002
Model Toxics Control Act Workshop, Washington Dept. of Ecology, 2001
Monitored Natural Attenuation for Groundwater, EPA, 1998
Natural Attenuation for Remediation of Contaminated Sites, NGWA, 1997
In-Situ and On-Site Bioreclamation, Battelle, 1995
Project Management Seminar, Skillpath, 1992
Applied Groundwater Modeling, IGWMC, 1992
Member Association of Ground Water Scientists and Engineers (AGWSE/NGWA)

Areas of Expertise

Geologic mapping and hydrogeologic investigation of surficial stratigraphic units

Hydrogeologic site characterizations/monitoring well installation/development/sampling

Voluntary Cleanup Program alternatives for Model Toxic Control Act sites

RCRA corrective action at SWMUs/ *in situ* closure of waste management units

Interaction and negotiation with environmental regulatory agencies

Bioremediation of hydrocarbon-impacted soils

Underground storage tank site assessment

Monitored natural attenuation of hydrocarbon-impacted groundwater

NPDES Permitting and Monitoring

SEPA Permitting

Presentations and Publications

Miller, M., H.J. Cashman, and E.D. Libolt. 2004. Acme Fuel Tanker Spill: Interagency Cooperation and Cleanup. Presented at the 2004 Environmental Health: Leading the Way Annual Educational Conference.

Lindsay, C. S., H. J. Cashman, and M. D. Watkins. 1995. Stratigraphy and Hydrogeology of the Mountain View Upland, Whatcom County, Washington. Presented at the 1st Symposium on the Hydrogeology of Washington State.

Engebretson, D. C., K. P. Kelley, H. J. Cashman, and M. A. Richards. 1992, 180 Million years of subduction, *GSA Today*, 2, 93-100.

Cashman, H. J. 1990. A New Determination of Pacific-Kula Relative Motions. Unpublished Master of Science thesis, Western Washington University, Bellingham, WA.

Engebretson, D. C., K. P. Kelley, and H. J. Cashman. 1990. Estimates for global subduction parameters since 180 Ma, *EOS, Trans. AGU*, 71, 1575.

Cashman, H. and D. Engebretson. 1989. Evaluation of possible asymmetric spreading in the vicinity of the Pacific-Farallon-Kula triple junction. *EOS, Trans. AGU*, 70,1342.

Engebretson, D., H. Cashman, and K. Kelley, 1989. Review and implications of global patterns in asymmetric seafloor accretion, *Geol. Soc. Amer. Abstracts with Programs*, 21, 35.

Eric D. Libolt, P.E.

Whatcom Environmental Services
228 East Champion Street, Suite 101
Bellingham, WA 98225
(360) 752-9571
elibolt@whatcomenvironmental.com

Position

Vice-President/Senior Project Manager
Years of Experience: 19

Education

B.S., Civil Engineering, University of Washington, 1998

Professional History

1998-Present: Project Manager, Whatcom Environmental Services

Certifications

Professional Engineer-Washington State #51580 (Water Resources and Environmental)
HAZWOPER (29 CFR 1910.120)
Transportation Worker Identification Credential (TWIC)
Pacific Northwest Refinery Safety Orientation certified
Certified Erosion and Sediment Control Lead (CESCL)
Certified Opacity Observer (EPA Method 9)
Benzene Sample Collection (EPA Method 25D)
Low Level Mercury Sampling (EPA Method 1631)

Areas of Expertise

NPDES industrial permitting and compliance
Title V air permitting and compliance
RCRA permitting and compliance
Stormwater control and treatment
Hazardous waste sampling and disposal
Washington State Model Toxics Control Act (MTCA) compliance
Installation and maintenance of groundwater remediation systems
Management of soil and water remediation projects
Emissions calculation and reporting (SARA 312, TRI 313, Greenhouse Gas reporting, WEDS reporting)
Management of air monitoring programs

Typical Projects

- Environmental compliance assessment of a large industrial client including review of air, waste and water programs.
- Administration of Leak Detection and Repair (LDAR) monitoring programs at major sources.
- Implementation of a LDAR program under the Miscellaneous Organic NESHAPS (MON) program.
- Preparation of a Title V Air Permit application for a Portland Cement facility.
- Preparation of a NPDES permit application for an industrial site.
- Preparation of EPCRA Section 311 and Section 312 reports for a petroleum refinery.
- Preparation of TRI 313 reports for petroleum refinery.
- Management of the waste handling, sampling, and disposal program at a petroleum refinery.
- Management of Benzene Waste NESHAPS program at a petroleum refinery. Management includes sampling, inspections, reporting, studies, and general consulting.
- Oversight and coordination of soil removal action at a residence in Whatcom County. Soil was treated onsite saving over $100,000. Site was given a "No Further Action" letter by Ecology.
- Preparation and submittal of data requested by EPA for the Petroleum Refinery Information Collection Request (Section 114).
- Implementation of LDAR program at a pipeline facility.
- Phase I Environmental Site Assessment for a commercial property located on a municipal landfill.
- Excavation oversight at MTCA independent remedial action site where gasoline had leaked beneath an above ground storage tank.
- Characterization and delineation of a dissolved hydrocarbon plume beneath a gasoline storage facility.
- Soil and groundwater sampling and project management at RCRA regulated surface impoundments and dangerous waste land treatment facility. Sites were brought to closure.
- Installation of an air sparging/vapor extraction system for remediating hydrocarbon-contaminated groundwater.
- Low level mercury water sampling (EPA Method 1631E) for an industrial client in Whatcom County.
- PBT and Dioxin sampling for an industrial client in Whatcom County.

Presentations and Publications

Libolt, E.D. 2008. BWON Best Practices. Presented at the 2008 ConocoPhillips BWON Network Meeting.

Miller, M., H.J. Cashman, and E.D. Libolt. 2004. Acme Fuel Tanker Spill: Interagency Cooperation and Cleanup. Presented at the 2004 Environmental Health: Leading the Way Annual Educational Conference.

Aimee P. Schimelfenig

Whatcom Environmental Services
228 East Champion Street, Suite 101
Bellingham, WA 98225
(360) 752-9571
aschimelfenig@whatcomenvironmental.com

Position

Environmental Professional
Years of Experience: 4

Education

B.S., Environmental Science, Western Washington University, 2013

Professional History

2013 - Present: Environmental Professional, Whatcom Environmental Services

Certifications/Training

Pacific Northwest Refinery Safety Orientation certified

40-hr Hazardous Waste Operations & Emergency Response (HAZWOPER) trained

RCRA Hazardous Waste Management Trained

The Vapor Intrusion Pathway: A Practical Guide – Seattle, WA

Areas of Expertise

Environmental Toxicology

Environmental Site Assessment Phase I and II

Environmental remediation documentation for petroleum hydrocarbon-impacted soil and groundwater

Vapor Intrusion assessment, sampling, and data analysis

Typical Projects

- Preparation of Remedial Investigation Reports, Feasibility Studies, and Cleanup Action Plans in accordance with MTCA.
- Preparation of Phase I and Phase II Environmental Site Assessments.
- Analysis of vapor intrusion pathways including site assessment, sampling, and data analysis in accordance with Ecology and EPA.
- Interaction with local, state, and national environmental regulatory agencies including Washington State Department of Ecology and Washington State Pollution Liability Insurance Agency.
- Management and analysis of soil and groundwater chemical analytical data.
- Preparation of site maps and figures using ESRI GIS software from field notes and imported datasets.

- Assist in management of company safety training.
- Assist western Washington refinery with EPA SARA 312 and TRI reporting
- Sampling of contaminated groundwater using EPA low-flow methods and contaminated soil using method 5035A

Henry Cade

Whatcom Environmental Services
228 East Champion Street, Suite 101
Bellingham, WA 98225
(360) 752-9571
hcade@whatcomenvironmental.com

Position

Environmental Scientist
Years of Experience: 1

Education

B.S., Environmental Science, Western Washington University, 2016

Professional History

2016 - Present: Environmental Scientist, Whatcom Environmental Services

Certifications/Training

Pacific Northwest Refinery Safety Orientation certified
40-hr Hazardous Waste Operations & Emergency Response (HAZWOPER) trained
RCRA Hazardous Waste Management Trained

Areas of Expertise

Environmental Toxicology

Typical Projects

- Assists in preparation of Phase I Environmental Site Assessments.
- Management of soil and groundwater data using Microsoft Excel
- Assist in management of company safety training.
- Assist western Washington refinery with EPA SARA 312 and TRI reporting
- Sampling of contaminated groundwater using EPA low-flow methods