JEN–JAY, INC.

Benthic Sediment Sampling
West Sound Marina
5 June 2020

LOCATION: Western shore of West Sound, Orcas Island, San Juan County.

PURPOSE: To conduct benthic sediment sampling as required for the WA DNR Aquatic Lands Lease associated with the marina.

TIME: 7:30am

DEPTH CALCULATIONS: Depth was not recorded at the sampling sites.

BOTTOM TYPE: Substrate was primarily thick mud, with areas of dense shell fragments as recorded on the chain of custody paperwork (copy attached).

VEGETATION: The sampled sites were void of submerged aquatic vegetation.

SURVEY METHODS AND PATTERN: Pre-determined sampling locations and GPS coordinates were provided by the marina management personnel (attached). These locations were accessed as closely as possible, but where feasible, GPS coordinates were also taken at the time of the sampling. Sampling coordinates were recorded are as follows:

Site 1. 48.62899°, -122.95724°
Site 2. 48.62935°, -122.95703°
Site 3. 48.62932°, -122.95723°
Site 4. 48.62930°, -122.95707°
Site 5. 48.62945°, -122.95702°
Site 6. 48.62985°, -122.95727°
Site 7. 48.62941°, -122.95790°
Site 8. 48.62917°, -122.95824°
Site 9. 48.62975°, -122.95792°
Site 10. 48.6294°, -122.95889°
Site 11. 48.6292°, -122.95873°
Site 12. 48.6298°, -122.95905°

Methods for acquiring the samples, as described in the attached Sampling and Analysis Plan, were not feasible due to the nature of the substrate and the functionality of the Core N One sampler. The sampler would not collect sediment over the course of several attempts.

Alternatively, a diver used Ziplock bags to collect the sample at each site. A clean stainless-steel spoon was used to obtain three individual sediment scoops from the top 10 cm of the substrate at each site. Sediment was placed into the clean bag. Upon return of the sediment sample to the boat, a biologist used another clean stainless-steel spoon to remove sediment directly from the bag and place it into the laboratory-provided glass jars. After sufficiently filling the jars, the sampled sediment was discarded overboard, the used bag was discarded in the trash bin, and the stainless-steel spoons were washed with Dawn soap and rinsed with distilled water. The procedure was repeated at each sampling location.

Once all samples were placed in their jars and were appropriately labeled using the chain of custody labels and sample data as written on the chain of custody form (attached), the jars were carefully packed into a cooler with ice for shipping to the laboratory. The cooler then was passed off to West Sound Marina personnel for shipping.

VISIBILITY: 10'±.

Any questions regarding this survey should be addressed to:

Chris Betcher
JEN-JAY DIVING, INC.

WEST SOUND MARINA, INC

P.O. BOX 119 / 525 Deer Harbor Road
ORCAS, WA 98280

Sampling and Analysis Plan
for West Sound Marina, West Sound, Orcas Island, San Juan County, Washington

Objective: To provide baseline screening level for the renewed Tideland Lease
20-B12555

Location: West Sound Marina is located in West Sound Bay in West Sound, the middle of 3 large inlets on Orcas Island. Orcas Island is the largest of the San Juan Island archipelago. San Juan County is the northwestern most county in Washington State, bounded by Haro Strait to the West, Rosario Strait to the East, the Strait of Georgia to the North and the Strait of Juan de Fuca to the South. Washington State is the northwestern most state in the contiguous United States. It borders British Columbia, Canada to the North, The State of Idaho to the East, the Pacific Ocean to the West and the State of Oregon to the South. The united States are the middle country in North America in the Western Hemisphere of the planet Earth. See Appendix A, Attachments #1 Washington State Map, and Attachment #2 West Sound Bay Satellite Photo.

Background: Salish Tribes (mostly Lummi) inhabited West Sound for many generations.
European Explorers reached the region as early as the 1500's but major exploration particularly in the San Juan Islands came in the late 1700. Along with the European explorers came smallpox. This, exacerbated by raids from northern tribes, began a decline of the Lummi and other Coast Salish people in the Islands. A devastating raid in 1858 wiped out an entire village of Lummi in West Sound (Hence the names Massacre Bay, Skull and Victim Islands) Meanwhile the Hudson's Bay Company established Fort Victoria on Vancouver Island and fur trappers and hunters were canvassing the San Juan Islands, including Orcas. Some of those hunters became the early settlers of Orcas Island. After the boundary between the US and Canada was established in 1872, more homesteaders moved into the area, clearing land for both farming and to feed the lime kilns that were used to make cement. Turtleback mountain was heavily forested at one time. There is a lime quarry in West Sound that was active into the 1950's, mostly quarrying "paper rock" for the pulp mills. West Sound, and Orcas Island in general was well known for its fruit orchards. Fruit from Orcas was shipped to Seattle directly from West Sound. There was a box factory and a large pier, for loading steamers in West Sound. Both of which were destroyed by fires. West Sound was also the home of a large log dump in White Beach Bay which ran from the 1960's until approximately 2000. There are two creeks of note that run int West Sound in the vicinity of West Sound Marina. Directly to the north, Crow Creek which drains the Crow Valley watershed. During winter rains there is high run off from this water source, while in the summer it is down to a trickle. The same can be said for the creek that drains into White Beach Bay to the SE of the Marina, though it is not nearly as robust as Crow Creek. There are "mudflats" associated with both these streams, that extend quite far from the shore. Additionally there is drainage from the Deer Harbor Road with outfalls into West Sound Bay, two of note, one near Orcas Island Yacht Club, to

the West of Crow Creek, and one near the north boundary of the West Sound upland property. See Appendix A, Attachment#2
West Sound Marina was established in it's current location, in 1950. Ray Van Moorhem had his repair shop here with a small tidal grid and added moorage that year. Dave Hutchins purchased the Marina in 1966 and added a 10 ton travelift, and increased the size of the Marina. The Wareham Family has owned and operated the Marina since 1974. There are currently approximately 180 moorage spaces, a fuel dock dispensing gas and diesel, and a pump-out station. West Sound Marina also has a complete repair facility with a Haulout for boats up to 30 tons. WSM cleans and paints the bottom of boats, on the pressure wash pad. There are 3 drains to collect pressure wash water.

Sampling: 12 sampling stations will be placed within the leased area. Locations where boats are refueled or maintained have been emphasized in our SAP. There is one sampling station at the fuel dock, an areas where there may have been fuel spillage. And three stations adjacent to the pressure wash pad. There is one station in the Boathouse per DNR request. The remaining stations are spread out through the Marina, to give an overall picture. All water depths are in feet, approximated for zero (0.0) tide level. GPS coordinates to be finalized at actual testing. Approximate locations are also shown on Figure 1, DNR Lease Survey, in Appendix A.

1. Adjacent to the fuel pump, depth 8ft, GPS N 48.62906 degrees W122.95720 degrees
2. Directly adjacent to the power wash pad in the Travelift area. Depth 6ft, GPS coordinates N 48.62932 W 122. 95713 degrees
3. Approximately 50 ft WSW of location #2, at the termination of the Travelift Apron. Depth 12ft, GPS N 48.62934, W 122.957230 Degrees
4. Approximately 25ft South from location #2, at a depth of 6ft, GPS coordinates N48.6292,W 122.9570
5. Approximately 25ft North of Station #2, Depth 6 ft, GPS coordinates N 48.6294, W122.9571
6. In the Boathouse, midway near West walkway, Depth 8ft, GPS N48.6297, W122.9573
7. Approximately 200ft W from Station #2, Depth 22ft, GPS N 48.62942, W 122.95800 degrees
8. Following Depth contour of Station #7, SW between the Guest Dock and A Dock, GPS N 48.62916, W 122.95816
9. Following the Depth contour of Station # 7, to the North between Docks B & C, GPS N 48.629746. W 122.95790
10. At the Southwest corner of the last slip on B Dock, Depth 29ft, GPS N 48.629473, W 122.95888
11. Following the Depth contour of Station #10, to the SE off of A Dock, GPS N48.62919, W 122.958716
12. Following the 29ft depth contour from Station#10 to the NW, inboard of the C Dock breakwater, GPS coordinates N 48.629833, W 122.95905

Sampling Schedule: Sampling collection dates will be determined on acceptance of this SAP. Sample times and dates will also be weather (will not operate in high wind conditions), and tide (optimal would be low tide) dependent. There is very little current activity in West Sound.

Sampling Collection: Sampling will be carried out by Jen-Jay Diving of Orcas Island, using hand held grab samplers by scuba divers. Samples will be collected from the top 10 cm of surface sediment. Samples will be placed in laboratory-prepared glass containers. Sampling equipment will be one time use, disposable, Core N One samplers. 3 Core N One samples collected within a 1 meter circle, will compose one sampling station. These three samples will be homogenized in a stainless steel bowl using stainless steel spoons before being placed into containers. Sampling field activity and observations, along with environmental conditions will be recorded in a field log book, by Jen-Jay biologists. The bottom sediment is homogeneous "West Sound Mud" light silty covering, over thick clay or bedrock. There is shell debris closer to shore. Jen-Jay biologists will carefully inspect to determine acceptability of samples, using criteria recommended in SCUM2 Chapter 4.5.3. The Dive Tender will be able to tie to the floats to easily maintain position. Unused or rejected samples will be returned to the water where they were collected.

Sampling Label: Each sample will be assigned an alpha-numeric code that will be used to identify West Sound Marina, the date, and the sample location. A designation of "WSM" will be used to identify the site. The site designation will be followed by the month, day and year of collection. Finally a numbered sequence indicating the specific sample location will be added. For example WSM-040120-1 would indicate a sample collected from station #1 on April 1. 2020.
Sample container labels will be completed before or immediately after sample collection. Container labels will include the following information:

- Project name
- Sample numbered
- Date and Time of Collection
- Analysis requested
- Initials of the collector

Sample Analysis: Samples will be analyzed for the forty seven (47) Sedimentary Management Standard Chemicals listed in WAC 173-204, plus tributyltin. Analysis
will be carried out by a Washington Certified Laboratory. See Appendix A, Attachment#3, Limits for Project

Sample Shipping: Sediment samples will be shipped to the laboratory within 24 hours of collection as follows:

- Sample containers will be transported in a sealed, iced cooler or other suitable container.
- In each container, glass bottles will be separated by shock-absorbing and absorbent material to prevent breakage and leakage.
- Ice, double sealed in separate plastic bags, will be placed in each shipping container with the samples.
- Sample shipments will be accompanied by a Chain of Custody/ Laboratory Analysis Request Form. See Appendix A, Attachment #4 Chain of Custody

Summary Report: Once the analytical reports are received, a summary report will be submitted to the Department of Natural Resources (DNR). The summary will include documentation of the sampling

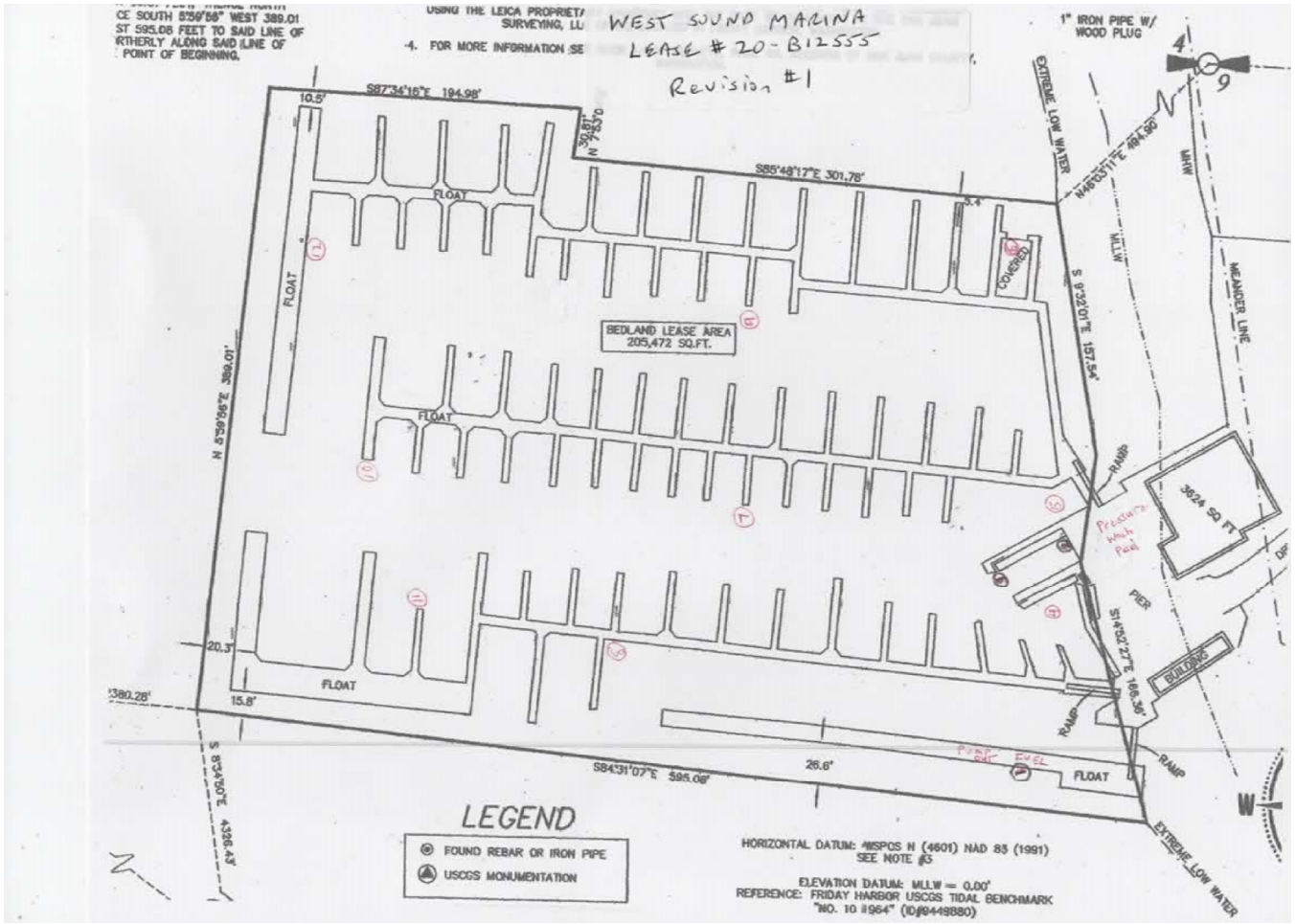
process (field log), a map of sample locations, a summary of analytical methods and a table of results tied to the sampling sites. The laboratory report(s) and chain of custody forms will be included as attachments.

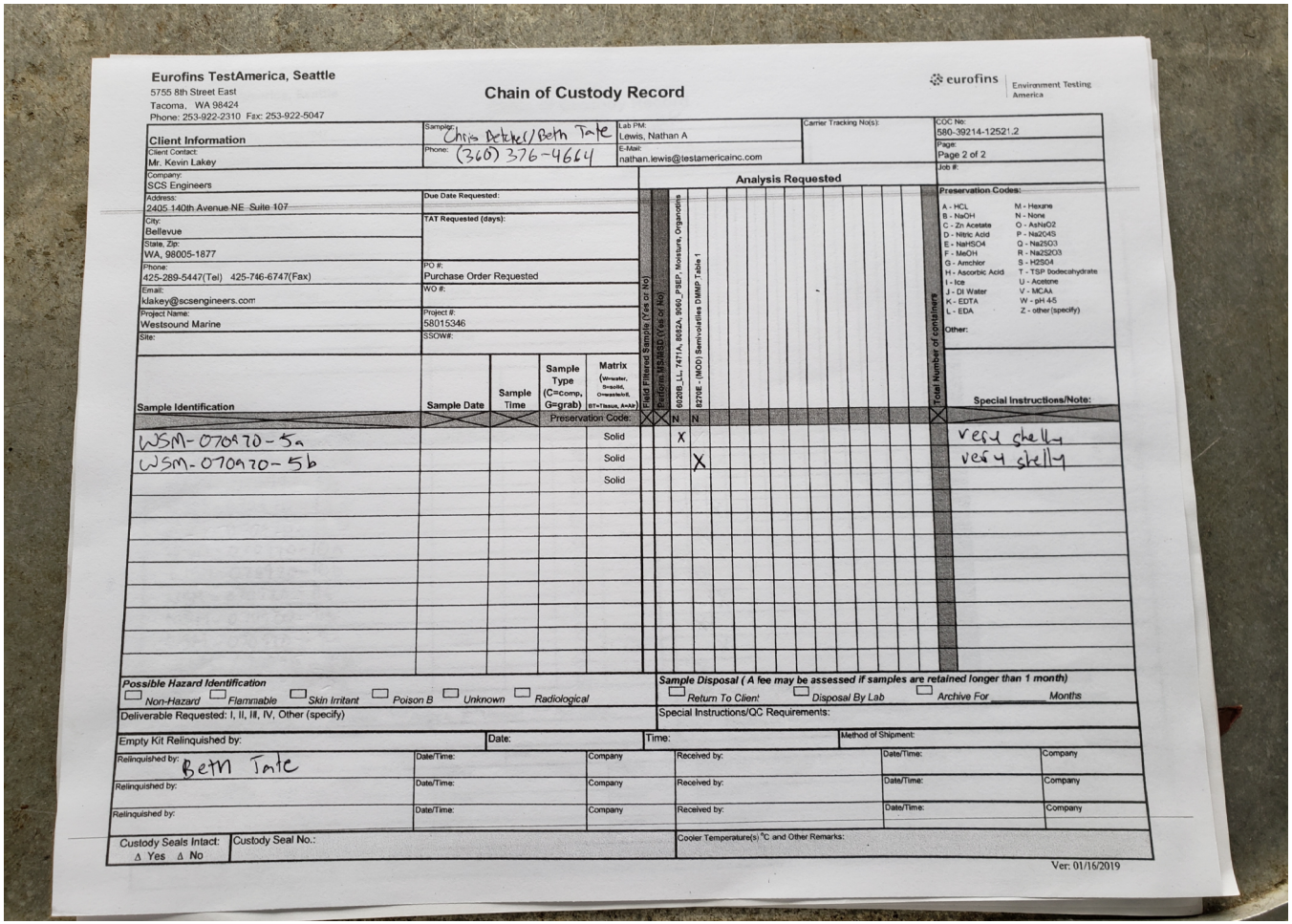
Health and Safety: Health and Safety of the sampling team is a primary concern during sampling operations. While there is little likelihood of chemical contamination at this site, safety procedures will include the following:
The sampling team is made up of three people; The certified open water diver (who is also a biologist), The boat operator/dive tender, who monitors and assists the diver from the surface. And a biologist, on the surface who will receive, inspect and handle the samples.
Additionally there will be a "spotter" to watch and direct any boat traffic away from the operating area.
All personnel are required to wear an approved PFD
Anyone handling samples will wear gloves
Emergency contact information will be recorded for all personnel, in the Field Notebook.
In addition to 911 Emergency Services, West Sound Marina Office can be reached at 360-376-2314 and VHF Ch 16, The USCG at 206-217-6200 and VHF Ch16. Poison Control Center 800-222-1222
Attached are emergency procedures for Jen-Jay Diving. Appendix A, Attachment#5, Diving Procedures and Safety Practices Manual.

List of Figures
Appendix A
Figure 1 West Sound Marina Tideland Lease Survey, with Sampling Stations

List of Attachments
Appendix A
Attachment #1 Washington State Map
Attachment #2, West Sound Bay Satellite Photo
Attachment #3, Project limits
Attachment #4 Chain of Custody/Analysis Request
Attachment #5 Diving Procedures and Safety Practices Manual

May 7, 2020


WEST SOUND MARINA
LEASE # 20-B12555
Revision #1
USING THE LEICA PROPRIETA
SURVEYING, LL
-4. FOR MORE INFORMATION SE
CE SOUTH 8750'58" WEST 389.01
ST 595.08 FEET TO SAID LINE OF
RTHERLY ALONG SAID LINE OF
POINT OF BEGINNING.
1" IRON PIPE W/
WOOD PLUG
S87°34'16"E 194.98'
10.5'
30.81'
N 7°53'0
S85°48'17"E 301.78'
5.4'
EXTREME LOW WATER
N46°03'17"E 484.90'
MHW
MLLW
MEANDER LINE
FLOAT
FLOAT
FLOAT
FLOAT
FLOAT
COVERED
BEDLAND LEASE AREA
205,472 SQ.FT.
S 9°32'01"E 157.54'
N 3°39'56"E 389.01'
380.28'
20.3'
15.8'
RAMP
3824 SQ FT
Pressure Wash Pad
PIER
S14°52'27"E 166.36'
BUILDING
RAMP
S84°31'07"E 595.08'
26.6'
Pump Out
FUEL
FLOAT
RAMP
EXTREME LOW WATER
S 8°34'00"E 4326.43'
LEGEND
FOUND REBAR OR IRON PIPE
USCGS MONUMENTATION
HORIZONTAL DATUM: #8SPOS N (4601) NAD 83 (1991)
SEE NOTE #3
ELEVATION DATUM: MLLW = 0.00'
REFERENCE: FRIDAY HARBOR USCGS TIDAL BENCHMARK
"NO. 10 1964" (ID#9449880)



Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Chris Bethel / Beth Tate	Lab PM: Lewis, Nathan A	Carrier Tracking No(s):	COC No: 580-39214-12521.2
Client Contact: Mr. Kevin Lakey	Phone: (360) 376-4664	E-Mail: nathan.lewis@testamericainc.com		Page: Page 2 of 2
Company: SCS Engineers				Job #:
Address: 2405 140th Avenue NE Suite 107	Due Date Requested:			
City: Bellevue	TAT Requested (days):			
State, Zip: WA, 98005-1877				
Phone: 425-289-5447(Tel) 425-746-6747(Fax)	PO #: Purchase Order Requested			
Email: klakey@scsengineers.com	WO #:			
Project Name: Westsound Marine	Project #: 58015346			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8020B_LL_7471A, 8082A, 9060_PSEP_Moisture, Organotins	8270E - (MOD) Semivolatiles DMMP Table 1	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N		
WSM-070920-5a				Solid			X			very shelly
WSM-070920-5b				Solid				X		very shelly

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Beth Tate					
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_LL_7471A, 8082A, 9060_PSEP_Moisture, Organotins	8270E - (MOD) Semivolatiles DMMP Table 1	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N		
WSM-070920-1a			G	Solid			X			very shelly/lots of debris
WSM-070920-1b			G	Solid				X		very shelly/lots of debris
WSM-070920-12a			G	Solid			X			
WSM-070920-12b			G	Solid				X		
WSM-070920-10a			G	Solid			X			
WSM-070920-10b			G	Solid				X		
WSM-070920-11a			G	Solid			X			
WSM-070920-11b			G	Solid				X		
WSM-070920-8a			G	Solid			X			
WSM-070920-8b			G	Solid				X		
WSM-070920-7a			G	Solid			X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Beth Tate					
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_LL; 7471A; 8082A; 9060_PSEP; Moisture; Organotins	8270E - (MOD) Semivolatiles DMMP Table 1	Total Number of containers	Special Instructions/Note:
Preservation Code:					N	N				
WSM-070920-7b				Solid				X		
WSM-070920-9a				Solid			X			
WSM-070920-9b				Solid				X		
WSM-070920-6a							X			
WSM-070920-6b								X		
WSM-070920-3a							X			very shelly / lots of debris
WSM-070920-3b								X		very shelly / lots of debris
WSM-070920-4a							X			
WSM-070920-4b								X		very shelly
WSM-070920-2a							X			very shelly
WSM-070920-2b								X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

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