

STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

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File: 1529.38.004

November 3, 2009

Ms. Bev Niemann
Delta Western, Inc
P.O. Box 79018
Seattle, WA 98119

Mr. Daniel L. Carrier
Chevron Environmental Management Company
145 S. State College Blvd.
P.O. Box 2292
Brea, CA 92822-2292

Re: ADEC Determination Cleanup Complete with Institutional Controls – Delta Western
Wrangell

Dear Ms. Niemann and Mr. Carrier:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program, has reviewed the cleanup records for the referenced property, including the September 2008 *Final Site Report and Request for No Further Action* prepared by Conestoga-Rovers & Associates (CRA). This letter documents the department's decision regarding site closure under 18 AAC 75 regulations.

This decision is based on the administrative record for this site which is located in the ADEC office in Juneau, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the ADEC determination.

Introduction

Site name and location:

Delta Western/ Former Chevron Bulk Terminal 100-1467
1417 Peninsula Street
Wrangell, Alaska 99929

Database Record Key and CS file number:

Hazard ID: 2001

CS File No: 1529.38.004

Regulatory authorities under which the site is being cleaned up:

18 AAC 75

Background

This site is an operating Delta Western Terminal located at 1417 Peninsula Street in Wrangell, Alaska. It was developed as a fuel storage facility by Chevron in the late 1930s and is currently operated by Delta Western. The original construction of the site facility has not changed significantly. Infrastructure includes eight aboveground storage tanks (AST's) that contain various petroleum products. Other site facilities include one underground storage tank, a fuel loading rack, pump house, a marine fueling dock, several covered and uncovered drum storage areas, warehouse, and office buildings.

Groundwater Use

Potable water to the city of Wrangell originates from a surrounding watershed east of the city at approximately 250 feet above sea level. The city processes the water obtained by two associated reservoirs through the city treatment plant prior to local distribution. A 2001 assessment was conducted in order to identify the nature of the groundwater flow path and the potential petroleum hydrocarbon migration over surficial and bedrock interfaces across the surrounding properties. The site does not meet groundwater use criteria in accordance with 18 AAC 75.350 because the groundwater beneath the site is not used, zoned, or within a recharge area for public or private drinking water systems.

Site Investigation and Cleanup Chronology

In October 1994, four test pits were excavated on the property located adjacent to the Delta Western bulk fuel facility. Two of the excavations were found to contain petroleum hydrocarbons in the soil layer above the bed rock.

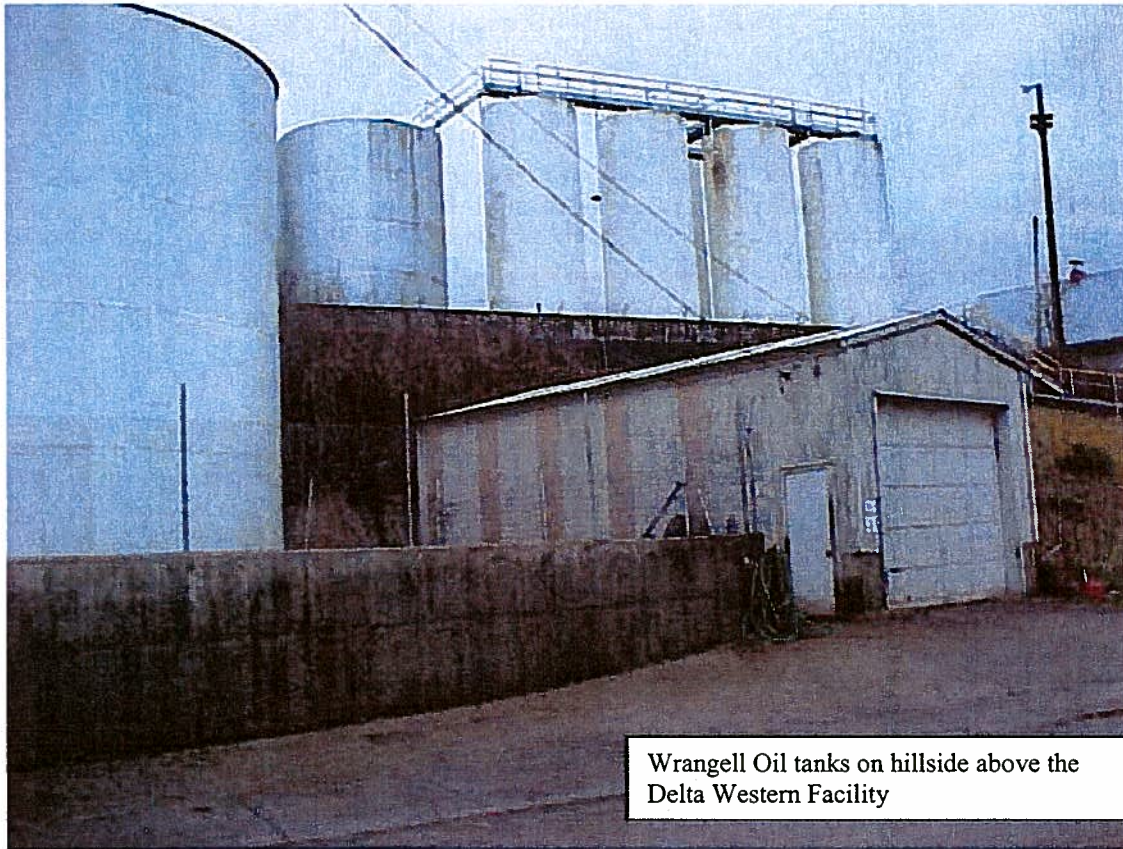
As a result of off-site contaminant migration, the facility was listed as a contaminated site on ADEC's database in 1999 and scheduled for further environmental investigations and analysis. In 1999, the adjacent property owner, David Mork, initiated a site visit due to concerns of contamination on his property believed to be an attribute of prior releases that occurred at the bulk fuel facility, now owned by Delta Western. During this visit, Mr. Mork excavated soil on his property near the boundary adjacent to the fuel facility. Upon visual and olfactory observations of the test pit, it was determined that petroleum contaminated soil was present. As

a result, ADEC requested a site characterization work plan from Delta Western as the potentially responsible party to identify the full extent of contamination on both the Delta Western property

and the adjacent property, as specified in 18 AAC 75.335 of the ADEC Oil and Hazardous Substances Regulations. ADEC has worked closely with Delta Western, interim owner Tosco, and Chevron Environmental Management to investigate the off-site migration of contamination to the adjacent properties.

A 1999 report submitted by Chevron's consultant, RRM, indicated the presence of petroleum hydrocarbons in soil and groundwater samples collected from excavation test pits and soil borings. Soil and groundwater samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), benzene, toluene, ethylbenzene and xylenes (BTEX) using approved methods and laboratory. Contaminants identified in the samples were GRO, DRO, RRO, and benzene.

A possible contributor to down gradient contaminant migration onto Delta Western and the Mork property was thought to be Wrangell Oil. Located to the north in relation to Delta Western and the Mork property, Wrangell Oil sits on a steeply risen flat-cut terrace at an elevation approximately 60 feet/ MSL (mean sea level). Delta Western and the Mork properties are 40 and 20 feet/ MSL respectively. Surface and groundwater flow is inferred to follow topographic trends north to south. ADEC concluded additional investigation was warranted to determine if the contamination was migrating onto adjacent properties from the Wrangell Oil facility. The Wrangell Oil facility performed soil sampling activities in July 2000. Laboratory analysis indicated the presence of GRO and DRO. It was inconclusive to determine whether Wrangell Oil contributed to the down gradient migration of contamination onto Delta Western's property and adjacent property owner, Mr. Mork. The Wrangell Oil facility was upgraded in 2003, thereby minimizing the risk of future spills and leaks.



In September 2003, remediation efforts were conducted by Chevron/Delta Western along the southern wall of the earthen berm surrounding the facility. Approximately 65 tons (\approx 110 cubic yards) of soil was excavated to bedrock and laterally to the Mork property in order to remove soil contaminated with petroleum hydrocarbons found above ADEC regulatory soil cleanup levels for ingestion/inhalation. There was also an effort to further assess soil conditions within the facility prior to liner installation and tank upgrades.

Between the fall of 2003 and July 2004 Delta Western upgraded infrastructure and installed an impermeable liner under the ASTs. Upon project completion, additional excavation in vicinity of the southern berm removed approximately 85 tons of soil. The contaminated soil from both excavations was transported to the Rabanco Waste Facility in Washington.

At the request of ADEC, CRA, Chevron's new environmental contractor, conducted shallow soil sampling across the Mork property in the fall of 2007 to assess current soil quality and evaluate the potential for site closure. The *Subsurface Investigation and Well Decommissioning Report*, submitted by CRA in February 2008, reported locations of known contamination above the ADEC regulatory cleanup level for migration to groundwater, over 40- inch zone. CRA found that petroleum hydrocarbons have naturally attenuated to below ADEC criteria in soil samples collected from TP-2, TP-4, TP-5, TP-6, TP-7. Benzene was detected in soil samples approximately four (4) feet bgs from test pits TP-1 and TP-8 at 0.217 milligrams per kilogram

(mg/kg) and 0.126 mg/kg, respectively. A soil sample collected at TP-3, located at the toe of the earthen berm on the south side of the facility, slightly exceeded the migration to groundwater cleanup level for DRO. However, the concentration was below the migration to groundwater threshold when analyzed using silica gel cleanup to account for biogenic interference.

In conclusion, residual soil contamination above ADEC migration to groundwater levels is present south of the Delta Western facility in the vicinity of the 2003-2004 remedial efforts. The residual contamination is defined by test pits TP-1, TP-3 and TP-8. In particular, benzene levels exceeded migration to groundwater soil cleanup levels by a factor of ten in TP-1, and by a factor of five in TP-8. However, the concentrations were well below risk-based levels for human health.

Figure 3 (CRA, Attachment B), shows sample locations and results from the 2007 study.

Groundwater and Surface Water Monitoring Program

The semi-annual groundwater monitoring report received in August 2007 recommended decommissioning all monitoring wells. A second semi-annual groundwater monitoring report was received in November 2007 reporting concentrations below laboratory detection limits of DRO, RRO, and semi-volatile contaminants in the monitoring wells. All previously detected GRO and BTEX concentrations in groundwater were found to be below ADEC groundwater cleanup levels. However, total aromatic hydrocarbon (TAH) and total aqueous hydrocarbon (TAqH) were still elevated above surface water quality standards (18 AAC 70) collected from MW-6 (see Attachment B). The ADEC concluded these elevated concentrations were likely from a localized source rather than from the tank farm situated cross-gradient to the well. Down-gradient surface water seep monitoring documented no violations of surface water quality standards.

The ADEC granted groundwater closure and permission to decommission site wells in September 2007 as a result of groundwater monitoring well data and surface water seep data having been below cleanup levels for at least four consecutive sampling events. All groundwater wells were decommissioned in accordance with standard practices on September 12, 2007.

Approved Cleanup Levels

Cleanup levels were formally approved in May 2007. For off-site properties, the soil cleanup levels were set at the most stringent levels for the over 40-inch precipitation zone found at 18 AAC 75.341, Tables B1 and B2 for detected contaminants.

Soil

<u>Contaminant</u>	<u>Cleanup Level (mg/kg)</u>
Gasoline Range Hydrocarbons (GRO)	300
Diesel Range Hydrocarbons (DRO)	250

Residual Range Hydrocarbons (RRO)	11,000
Benzene	0.02
Toluene	5.4
Ethylbenzene	5.5
Total Xylenes	78

Cleanup levels within the tank farm boundaries were set at 18 AAC 75.341, Tables B1 and B2 ingestion (now referred to as direct contact).

Soil

<u>Contaminant</u>	<u>Cleanup Level (mg/kg)</u>
Gasoline Range Hydrocarbons (GRO)	1,400
Diesel Range Hydrocarbons (DRO)	8,250
Residual Range Hydrocarbons (RRO)	8,300
Benzene	230
Toluene	17,000
Ethylbenzene	8,300
Total Xylenes	166,000

The groundwater cleanup levels for the site were established in 18 AAC 75.345, Table C.

<u>Contaminant</u>	<u>Cleanup Level (mg/L)</u>
Gasoline Range Hydrocarbons (GRO)	1.3
Diesel Range Hydrocarbons (DRO)	1.5
Residual Range Hydrocarbons (RRO)	1.1
Benzene	0.005
Toluene	1.0
Ethylbenzene	0.7
Total Xylenes	10.0

Note that the soil and groundwater cleanup levels presented above reflect those in effect in 2007. Minor revisions occurred when the cleanup levels were updated in October 2008.

Exposure Pathway Analysis

Exposure pathways are the conduits by which contamination may reach human or ecological receptors. Potential exposure pathways, presented in Table 1, were evaluated using ADEC's Exposure Tracking Model.

All potential exposure pathways are either de-minimis, incomplete, or controlled. "De-minimis exposure" means that in ADEC's judgment humans or wildlife will be minimally affected by the small volume of remaining contamination. "Pathway incomplete" means that in ADEC's judgment contamination has no potential to contact humans or wildlife. "Exposure controlled"

means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

Table 1 – Exposure Tracking Model Results

Pathway	Result	Explanation
Surface Soil Contact	De-minimis exposure	Cleanup has been completed. Contamination above approved cleanup levels likely remains under the new liner. Minor off-site contamination remains on the adjacent property below human health levels.
Sub-Surface Soil Contact	De-minimis exposure	Cleanup has been completed. Contamination above approved cleanup levels likely remains under the new liner. Minor off-site contamination remains on the adjacent property below human health levels.
Inhalation – Outdoor Air	Exposure Controlled	Weathered diesel; no volatilization expected.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Residual contamination beneath adjacent residence is de minimis volume; volatilization not expected.
Groundwater Ingestion	Pathway Incomplete	City water is available. This site is located on a bedrock island. Shallow groundwater is unlikely to be used for drinking water purposes.
Surface Water Ingestion	Pathway Incomplete	Surface water in the area is not used for drinking water purposes.
Wild Foods Ingestion	Pathway Incomplete	The adjacent marine shoreline is used minimally (if at all) for shellfish harvesting. Surface water seep monitoring has shown no presence of contaminants above water quality standards.
Exposure to Ecological Receptors	Pathway Incomplete	Exposure to ecological receptors is not a concern due to the cleanup actions and monitoring. Surface water seep monitoring has shown no presence of contaminants above water quality standards.

Determination

The investigation and cleanup of the Delta Western Wrangell facility has met the substantive requirements specified in 18 Alaska Administrative Code (AAC) 75, Article 3 - Discharge, Reporting, Cleanup, and Disposal of Oil and Other Hazardous Substances. The cleanup actions employed at the Delta Western facility were effective in removing a majority of the contaminant source material. Based on the information provided to date, ADEC has determined that the residual contamination remaining on site poses no unacceptable risk to human health or the environment and no further remedial action is required.

This determination is subject to the following conditions:

1. This information will be recorded on the ADEC database to document the likely presence of residual contamination above approved cleanup levels underneath the secondary containment liner and tanks. The information is publically accessible through the Contaminated Sites Program web site.
2. Any proposal to transport contaminated soil or groundwater off site requires ADEC approval in accordance with 18 AAC 75.325(i). A "site" [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.
3. Soil containing residual contamination may not be placed in surface water or other environmentally sensitive areas.
4. The soil contamination located beneath the secondary containment liner and tanks is currently inaccessible. If the soil becomes accessible in the future, contamination must be addressed in accordance with an ADEC approved work plan.
5. The owner or operator must report to ADEC every five years from the date of this determination to document land use status, or as soon as there is any change in land ownership and/or use. The report, in brief letter format, can be sent to the Juneau ADEC office at the address listed on this correspondence, or electronically to DEC.ICUnit@alaska.gov

Upon receipt of attachment A, the ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. Institutional Controls will be terminated when contaminant concentrations are below applicable ADEC cleanup levels, or when the site meets the requirements for a Cleanup Complete as determined by ADEC.

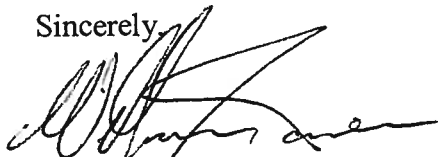
This determination is in accordance with 18 AAC 75.380(d) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

Appeal

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195-340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, P.O. Box 111800, Juneau, Alaska 99811-1800 within 15 days of the decision date. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, P.O. Box 111800, Juneau, Alaska 99811-1800, within 30 days of the decision date. The right to appeal is waived if a hearing is not requested within 30 days.

If you have questions about this closure decision, please contact me at (907) 465-5208.

Sincerely,



William Janes
Project Manager

cc: Mr. David Mork
Tyman Comstock

Attachment A: Cleanup Complete – ICs Agreement Signature Page
Attachment B: Site Figure

Attachment A: Cleanup Complete-Institutional Controls (IC's) Agreement and Signature Page

File Number 1529.38.004

Delta Western, Inc. agrees to the terms of this Cleanup Complete-ICs determination. Failure to comply with the terms of this agreement may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 75.380(d)(2).

Signature of Authorized Representative
Delta Western, Inc.

Printed Name of Authorized Representative
Bev Niemann

Note to Responsible Person:

After making a copy for your records, please return a signed copy of this form to Denise Elston at the address on this correspondence within 30 days of receipt of this letter.

Attachment B
Site Figure

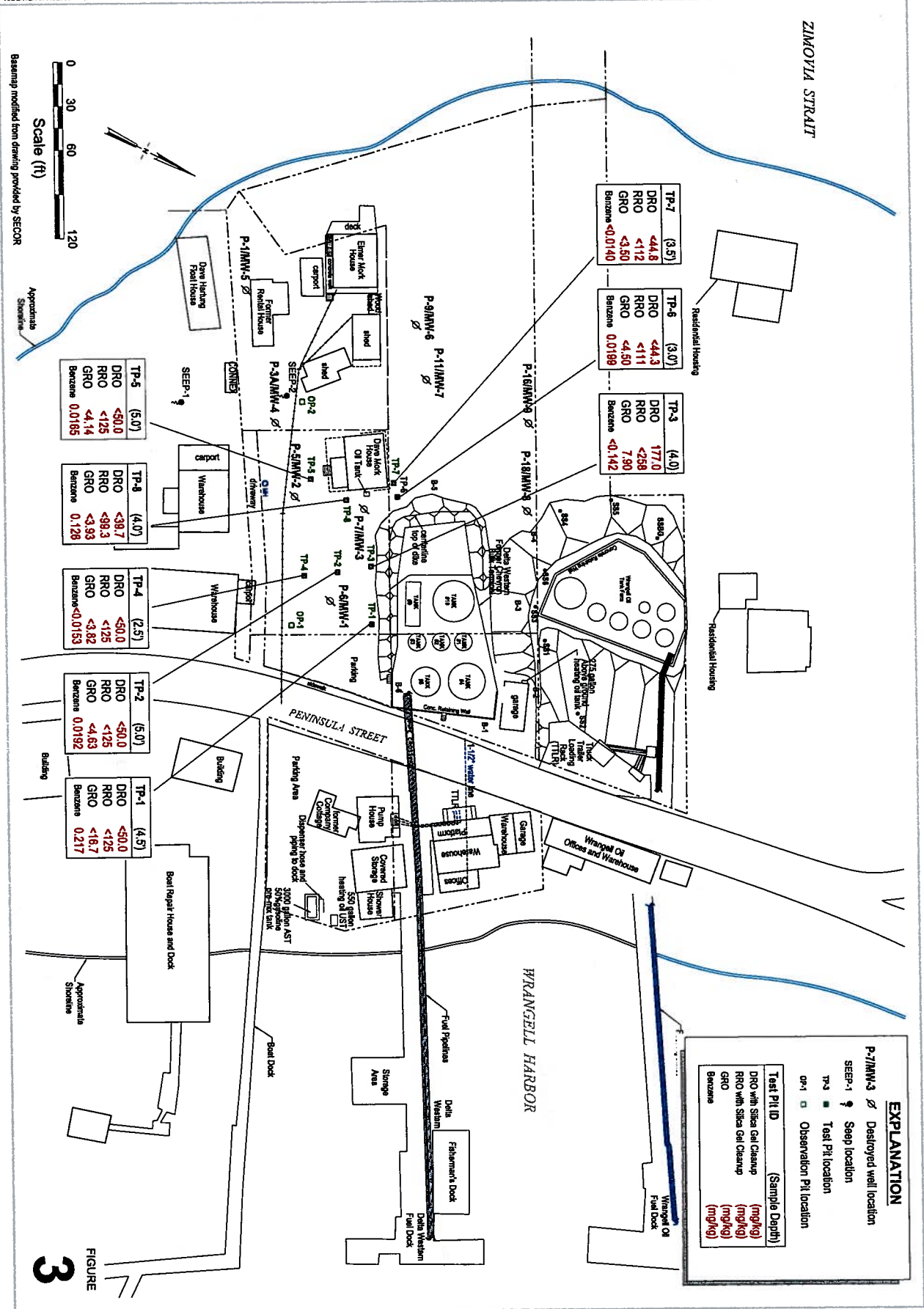


FIGURE 3

Delta Western / Former Chevron Bulk Terminal 100-1467
 1417 Peninsula Drive
 Wrangell, Alaska



Petroleum Hydrocarbon Concentrations Map

October 6, 2007

Attachment A: Cleanup Complete-Institutional Controls (IC's) Agreement and Signature Page

File Number 1529.38.004

Delta Western, Inc. agrees to the terms of this Cleanup Complete-ICs determination. Failure to comply with the terms of this agreement may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 75.380(d)(2).



Signature of Authorized Representative
Delta Western, Inc.

Printed Name of Authorized Representative
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