



THE STATE  
of **ALASKA**  
GOVERNOR SEAN PARNELL

**Department of  
Environmental Conservation**

DIVISION OF SPILL PREVENTION & RESPONSE  
Contaminated Sites Program

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File No.: 2106.38.005

March 4, 2014

Heritage Holding Company LLC  
c/o Claire Morton  
18619 Old Glenn Hwy  
Chugiak, AK 99567-6843

Re: Decision Document: Chugiak Groundwater Contamination<sup>1</sup>  
Cleanup Complete Determination

Dear Ms. Morton;

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the Chugiak Groundwater Contamination site at 21626 Swanee Court in Chugiak. This decision letter memorializes the site history, cleanup actions, and standard conditions for long-term site management. No further remedial action is required. ADEC understands that 21625 Swanee Court is being acquired by the Heritage Holding Company LLC (Heritage) and is no longer owned by Cathy Morton.

**Site Names and Locations:**

Chugiak Groundwater Contamination  
21625 Swanee Court  
Chugiak, AK 99567

**Name and Mailing Address of Contact Party:**

Heritage Holding Company LLC  
c/o Claire Morton  
18619 Old Glenn Hwy  
Chugiak, AK 99567-6843

**DEC Site Identifiers:**

File No.: 2106.38.005  
Hazard ID: 3161

**Regulatory Authority for Determination:**

18 AAC 75

**Site Description and Background**

In late 1999 gasoline contamination was documented in three drinking water wells in a Chugiak, Alaska neighborhood adjacent to the Old Glenn Highway. The residential well at 21625 Swanee Court was the most heavily contaminated by gasoline range organics (GRO) and benzene. Although the source of the contamination was never determined, following investigation it was determined that the source of the contamination was likely outside of and up gradient from the area where contaminated wells were identified. Site closure is granted based on monitoring events showing

<sup>1</sup> ADEC's Contaminated Sites database entries for site can be accessed online at  
[http://dec.alaska.gov/Applications/SPAR/CCReports/Site\\_Report.aspx?Hazard\\_ID=3161](http://dec.alaska.gov/Applications/SPAR/CCReports/Site_Report.aspx?Hazard_ID=3161)

decreasing contaminant levels that dropped below detection levels in the impacted wells by January 2001 after a year of quarterly monitoring.

### Contaminants of Concern

#### Groundwater:

The following petroleum contaminants of concern were identified in groundwater during the course of the site investigations summarized above.

- Gasoline Range Organics (GRO)
- Benzene

Contamination was not documented in site soils during the site investigations and no contaminants remain in site soils at concentrations exceeding the migration to groundwater cleanup level.

### Cleanup Levels

Applicable site cleanup levels are the Table C, 18 AAC 75.345 groundwater cleanup levels for benzene and GRO. No contaminants exceeding current site cleanup levels were detected in soil in the four borings completed in 1999 as monitoring wells at the site.

**Table 1 – Approved Groundwater Cleanup Levels**

Contaminant	Groundwater (mg/L)
GRO	2.2
Benzene	0.005

mg/L = milligrams per liter

### Characterization and Cleanup Activities

On October 29, 1999 Cathy Morton of 21625 Swanee Court in Chugiak reported that her residential drinking water well was contaminated by gasoline. Analytical results for samples collected on October 25, 1999, after the family noticed a gasoline taste and odor in their well water, exceeded the cleanup levels for benzene and GRO. The results showed benzene present at a concentration of 1.3 mg/L and a GRO concentration of 6.1 mg/L.

Based on levels of contamination in the groundwater, the unknown source and extent of the contamination, and the fact that homes and businesses in the immediate vicinity of the impacted water well were on individual or community water wells, ADEC's Contaminated Sites and Drinking Water Programs responded by sampling six nearby water systems and wells serving nearby homes. Sampling by ADEC staff took place on November 12, 1999. Cathy Morton's well was not resampled. The wells were sampled for GRO and the lighter components of gasoline; benzene, toluene, ethylbenzene and xylenes (BTEX). Only one of the six wells exceeded the cleanup level for any compound; the Claire Morton residence drinking water well at 21635 Swanee Court, adjacent to and southwest of the Cathy Morton residence, contained 0.0126 mg/L benzene.

ADEC issued a potentially responsible party letter to Cathy Morton on December 2, 1999 and requested additional area well water sampling. Morton's consultant TERRASAT submitted and

ADEC approved a work plan dated December 8, 1999 that proposed sampling nine additional wells by EPA Method 524.2. Prior to sampling the nine wells, TERRASAT purged the water system at the Cathy Morton home on December 3, 1999 and sampled the pressure tank and bathroom sink tap. Results for benzene exceeded the cleanup level at 0.018 mg/L in the sample from the pressure tank.

On December 3, 1999 ADEC distributed copies of an *Advisory to Area Residents and Businesses (Advisory)*. The *Advisory* notified area residents and businesses that petroleum hydrocarbons were detected in three area domestic wells and of ADEC's intention to expand the investigation to determine whether other wells were impacted.

In December 1999 Chevron became involved with the investigation through its consultant SECOR after receiving the *Advisory*. Chevron took action because of the proximity of the Chugiak Chevron site which was a closed regulated underground storage tank site at 18631 Old Glenn Highway. The Chevron station was closed in the early 1990s and the tanks removed and associated contamination cleaned up with oversight by ADEC's Leaking Underground Storage Tank (LUST) Program. After the tanks were removed Golden Wheel Amusements purchased the property and former station building, and was the owner at the time of the groundwater contamination event. Heritage is the current owner.

On December 13, 1999 TERRASAT sampled nine area wells including the Claire Morton and Cathy Morton residences and the Golden Wheel Amusements (GWA) office building well at 18619 Old Glenn Highway. The only analytical result that exceeded cleanup levels was the sample from the GWA well that had a concentration of 0.0128 mg/L benzene. TERRASAT's results for all three sampling events, including the ADEC-sponsored sampling and analysis, were reported in TERRASAT's *Site Investigation of Cathy Morton Water Well and the Surrounding Area, Chugiak, AK...March 2000*, received by ADEC on March 31, 2000.

TERRASAT's *Geophysical Investigation and Monitoring Well Installation for Cathy Morton Swanee Slopes Subdivision, Chugiak, AK...August 2000* reported the results of a two-phase geophysical investigation and May 3-5, 2000 installation and May 8, 2000 monitoring of four monitoring wells installed within the site area. Results of the geophysical investigation suggested no sources for the contamination that impacted three wells including Cathy Morton's drinking water well. Groundwater sampling results were either non-detect or below cleanup levels and no soil contamination was detected in the borings based on field screening readings and analytical results for the two samples collected from each boring.

SECOR reported its actions and investigation on behalf of Chevron in a report dated March 19, 2001 with subject line "Request for No Further Action Status." SECOR's report documented the collection of water samples from nine local domestic wells including the two Morton residential wells, the GWA well and a residential well adjacent to the former Chevron station at 18692 Amonson Road. These four wells were sampled on four occasions, on March 21, 2000, August 8, 2000, November 10, 2000 and January 6, 2001. The remaining five wells were sampled on the first three dates only. No wells exceeded the cleanup level for any compound at the conclusion of the sampling events. SECOR also summarized and discussed the results of TERRASAT's monitoring well installation work reported in TERRASAT's August 2000 report.

In response to Chevron's request for no further action status, ADEC issued a letter dated February 19, 2002 informing Chevron that it was no longer considered a potentially responsible party with

respect to the Chugiak groundwater contamination site and incident. ADEC's letter states that there was no evidence that sources on, or associated with, the former Chevron station at 18631 Old Glenn Highway were the source of the area groundwater contamination.

On October 1, 2001 TERRASAT requested approval to decommission the four monitoring wells constructed within the site. ADEC approved the request and received confirmation that the wells had been decommissioned on August 29, 2002.

No contaminant source was ever identified and the impacted drinking water well sampling results showed contaminant levels decreasing over the course of the quarterly monitoring events by SECOR and dropping below ADEC's 18 AAC 75 Table C groundwater cleanup levels<sup>2</sup> for all compounds of concern (benzene and GRO) by the time monitoring was concluded in January 2001.

Both consulting firms that investigated the groundwater contamination event, TERRASAT for Cathy Morton and SECOR for Chevron, concluded that the contamination was likely a transient event that resulted from a point source release of gasoline based on the presence of GRO and BTEX in the water samples.

SECOR noted that the location of the point source may not have been within the boundaries of the investigation because TERRASAT was unable to identify an area containing elevated concentrations of petroleum hydrocarbons in soil or groundwater. Further, SECOR hypothesized that a point source release may have occurred up-gradient and east of the investigation boundary, resulting in the widespread low level hydrocarbon contamination found within the site vicinity. According to SECOR this scenario was further supported by the rapid onset of hydrocarbon impact to area domestic wells. Because site lithology is characterized by high "permeability gravels underlain by bedrock, SECOR noted that groundwater contaminants would have travelled quickly from the up-gradient source area to the site vicinity.

### **Cumulative Risk Evaluation**

Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

### **Exposure Pathway Evaluation**

Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De-Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

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<sup>2</sup> See 18 AAC 75.345. Groundwater and surface water cleanup levels, Table C. Groundwater Cleanup Levels. (18 AAC 75, Oil and Other Hazardous Substances Pollution Control Revised as of October 1, 2011).

**Table 2**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Direct Contact with Surface Soil	Pathway Incomplete	No soil contamination above ADEC migration to groundwater cleanup levels was identified at either site.
Outdoor Air Inhalation	Pathway Incomplete	No subsurface soil contamination was documented at the site, and no groundwater contaminants are present above cleanup levels.
Groundwater Ingestion	De-Minimis Exposure	Contaminants of concern in groundwater are below 18 AAC 75.345 Table C groundwater cleanup levels.
Surface Water Ingestion	Pathway Incomplete	Surface water contamination was not documented at the site.
Wild or Farmed Foods Ingestion	Pathway Incomplete	No contamination remains and therefore there would be no impact to wild or farmed foods.
Indoor Air Inhalation (Vapor Intrusion)	Pathway Incomplete	Contaminants do not remain in site soil or groundwater at levels above the most stringent ADEC cleanup levels.
Other Human Health	Pathway Incomplete	Contaminants do not remain in site soil or groundwater at levels above the most stringent ADEC cleanup levels.
Ecological	Pathway Incomplete	There are no complete exposure pathways to ecological receptors at the site.

**Notes to Table 2:** "De-Minimis Exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in ADEC's judgment contamination has no potential to contact receptors. "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.

### **ADEC Decision**

Groundwater contamination in the water wells at the subject sites are below approved cleanup levels. This site will receive a "Closed" designation on the Contaminated Sites Database, subject to the following standard conditions.

### **Standard Conditions**

1. Any proposal to transport soil or groundwater off-site requires ADEC approval in accordance with 18 AAC 78.600(h). 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. (See attached site figure.)
2. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

This determination is in accordance with 18 AAC 75.380 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 – 18 AAC 15.340 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, Juneau, Alaska 99801, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have questions about this closure decision, please feel free to contact me at (907) 269-7527.

Sincerely,



Eileen Olson  
Environmental Program Specialist

cc: Dan Young, TERRASAT (by email)