STATE OF ALASKA

SEAN PARNELL, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

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File: 2265.38.038

November 7, 2011

Michael Downs Estate
Attn: Katharine Dernocoeur
P.O. Box 100
Lowell, MI 49331

Re: Decision Document; Residence – 6701 North En Dove Road
Cleanup Complete Determination – Institutional Controls

Dear Ms. Dernocoeur:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with Residence – 6701 North En Dove Road. Based on the information provided to date, it has been determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment and no further remedial action will be required.

This decision is based on the administrative record for Residence – 6701 North En Dove Road which is located in the offices of the ADEC in Anchorage, 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 Cleanup Complete – Institutional Controls determination.

Introduction

Site Name and Location:
Residence – 6701 North En Dove Road
6701 North En Dove Road
Wasilla, Alaska 99654
Lot D12, Section 7, Township 18N, Range 1E, Seward Meridian

Name and Mailing Address of Contact Party:
Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs
P.O. Box 100
1200 Fero Road
Lowell, MI 49331

ADEC Site Identifiers
File: 2265.38.038
Hazard ID: 25648

Regulatory authority under which the site is being cleaned up:
18 AAC 75

Background
This subject property is roughly 5-acres in size, consisting of a private single family residence, a barn, and an auto repair shop. According to Matanuska-Susitna Borough records, the single-family home was built in 1982 and is a 3,158 square feet two story building. The home is connected to an adjacent on-property water-supply well and a septic system. The home is heated with a pellet stove and a heating-oil heater connected to a heating oil above ground 200 gallon storage tank. The auto repair shop was built in 1998, and is 2,592 square feet in size and contains two floor drains that drain to the ground surface. A portion of the property located west of the auto repair shop had been used to dispose of household waste. This disposal pit apparently was excavated in 1985 and is roughly 48 feet in length by 40 feet in width and 20 feet deep. This disposal pit was reported in March 2011 having been excavated to approximately 20 feet below ground surface (bgs) and allegedly filled in 1985 though 2010 with household wastes originating on-site before being backfilled to grade with the removed soils. Native soils consist primarily of glacial till which includes a mixture of gravel, sand, and silt. Unconfined groundwater is found at depths greater than 50 feet below ground surface (bgs). A review of nearby groundwater contaminant site data and ADEC drinking water protection areas suggests groundwater flows south to southwest in this area. Soil samples have been analyzed for, gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs) and metals. The on-site drinking water well is located roughly 400 feet northwest of the disposal pit.

Site Characterization and Cleanup Actions
In December 2010, BGES Inc. (BGES) conducted a *Phase I and II Environmental Site Assessment* of the subject site which initially included a historical review, federal and state regulatory database review, aerial photograph review, and interviews with affiliated parties. Based on their findings, BGES conducted a site assessment to evaluate potential contamination associated with a trash pit and the auto repair shop. Three soil borings were advanced by a direct push drill rig within the disposal pit, and two were advanced within the auto repair shop near the two floor drains. During the advancement of the soil borings, BGES selectively collected soil samples based on elevated photoionizing detector headspace readings. Three samples were collected from the borings advanced within the disposal pit at depths of 10 to 20 feet bgs and one soil sample was collected from the boring advanced within the auto repair shop to a depth of 0.5 feet bgs directly underneath the shop's foundation. Soil samples were analyzed for GRO, DRO, RRO, VOCs, PAHs, and metals by ADEC approved methods. In the sample collected adjacent to the floor drain in the auto repair shop, arsenic was detected at a level of 4.2 mg/kg. In this sample, no other contaminants of concern were detected above 18 AAC 75.341 Table B1 or B2 migration to groundwater cleanup levels. In the samples collected within the disposal pit, arsenic, chromium, and tetrachloroethene (PCE) were detected at maximum levels of 4.5 mg/kg, 49 mg/kg, and 0.048 mg/kg, respectively. The detections for these three compounds of concern were above their 18 AAC 75.341 cleanup levels, i.e., 3.9 mg/kg, 25.0 mg/kg and 00.024 mg/kg, respectively.

In February 2011, BGES advanced four additional borings (SB9 through SB11) within the disposal pit. A total of nine soil samples were collected from the soil borings at depths ranging from 5 to 52 feet bgs. Soil samples were selected for analysis based on field screen readings and prior analytical results and were analyzed for VOCs by EPA method 8260B. PCE was again detected at elevated levels in depths from 15 to 20 feet bgs. From 15 to 20 feet bgs, PCE levels ranged from 0.031 mg/kg to 0.0437 mg/kg. PCE was not detectable in samples collected at depths ranging from 5 to 10 feet bgs and 25 to 52 feet bgs. Soil boring SB9 was advanced to 52 feet bgs and was intended to be installed as a groundwater monitoring well; however, this effort was abandoned when groundwater was not encountered.

In August 2011, BGES advanced four additional borings (SB-12 through SB-15) on the perimeter of the disposal pit. Soil boring SB-12 was advanced approximately 12 feet north of disposal pit; SB-13 was advanced 13 feet east of the disposal pit; SB-14 was advanced 8 feet south of the garbage pit; and SB-15 was advanced 9 feet west of the disposal pit. All four of the borings were advanced to depths of 15 to 20 feet bgs, where PCE had been detected within the disposal pit, and samples were collected at this depth to be analyzed for VOCs by EPA method 8260B. No VOCs were detected in these samples. Based on the evaluation of the field screening results, visual and olfactory evaluation of soils near the floor drains, and the results of the soil sample near one of the floor drains, BGES concluded that soil near the floor drains had not been impacted from past spills in the auto repair shop. The floor drains are classified by the Environmental Protection Agency (EPA) as Class V Wells under the Underground Injection Control Program.

Contaminants of Concern

During the investigations at this site, soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), VOCs, metals, and polynuclear aromatic hydrocarbons (PAHs). Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Arsenic
- Chromium
- Tetrachloroethene (PCE)

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2 Under 40 inch Zone, Migration to Groundwater.

Contaminant	*Site Cleanup Level (mg/kg)*
• Arsenic	3.9
• Chromium	25
• Tetrachloroethylene	0.024

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels.

Contaminant	*Site Cleanup Level (mg/L)*
• Arsenic	0.010
• Chromium	0.10
• Tetrachloroethylene	0.005

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, and Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	PCE was not detected in surface soil. Measured arsenic and chromium concentrations are within the range of metal background levels for the region.
Sub-Surface Soil Contact	De Minimis Exposure	PCE was not detected in subsurface soil above 18 AAC 75.341 Table B1 or B2 Direct Contact Levels. Measured arsenic and chromium concentrations are within the range of metal background levels for the region.
Inhalation – Outdoor Air	De Minimis Exposure	Contaminants were not detected in soil above 18 AAC 75.341 Table B1 or B2 Outdoor Inhalation Levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Volatile organic compounds have not been detected within 100 feet of any occupied buildings; hence, this pathway is currently incomplete. Construction of any building within 100 feet of known contamination will require ADEC review and approval.
Groundwater Ingestion	Pathway Complete	Contaminants have not been detected below 25 feet bgs and groundwater is deeper than 50 feet bgs. The on-site drinking water well serving the residential house is located more than 400 feet northeast of the garbage pit and is screened at depths greater than 300 feet deep.
Surface Water Ingestion	Pathway Incomplete	It is unlikely that surface water is impacted because the nearest surface water body is more that ¼ mile away and groundwater is not believed to be contaminated
Wild Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.

Exposure to Ecological Receptors	Pathway Incomplete	No terrestrial or aquatic exposure routes are present.

Notes to Table 1: "De-minimis exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. "Pathway incomplete" means that in ADEC's judgment contamination has no potential to contact receptors.

ADEC Decision

PCE contamination above established default cleanup levels in soil remains on-site at 15 to 20 feet below ground surface within a disposal pit that is located on the southwest corner of the property. The disposal pit is roughly 48 feet in length by 40 feet in width by 20 feet deep. Groundwater is not believed to be impacted from past activities at the site including from two drain pipes and from the disposal of household waste into the garbage pit. ADEC has determined there is no unacceptable risk to human health or the environment since current site exposure pathways that are complete have been determined to be minimis. Therefore, this site will be issued a Cleanup Complete- ICs determination subject to the following.

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use, tenant and/or ownership changes, current ICs may not be protective and ADEC may require additional remediation and/or ICs. Therefore, Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs or future owners shall report to ADEC every five years to document land use, or report as soon as Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs or future owners becomes aware of any change in land ownership and/or use, if earlier. The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov. For example, if any buildings are proposed to be constructed or demolished within 100 feet of the known remaining soil contamination as shown on Figure 1, Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs or future owners must notify ADEC prior to construction to allow ADEC to review the plans and perhaps modify the ICs because the vapor intrusion risk that is now considered de minimis risk due to current land use may show a potential exposure risk.

2. The two floor drains are currently classified as Class V Wells under EPA's Underground Injection Control Program. The floor drains need to be properly decommissioned by removing them or filled with cement or other impermeable substance to eliminate their ability to serve as a conduit for contaminant migration to the subsurface. Photographic proof that the floor drains no longer drain to the subsurface must be provided to ADEC and EPA by November 30, 2011.

3. A Notice of Environmental Contamination (deed notice) shall be recorded in the State Recorder's Office within 30 days of issuance of this decision document that identifies the nature and extent of contamination at the property and any

conditions that the owners and operators are subject to in accordance with this decision document. A copy of the recorded Notice must be provided to ADEC within 30 days of the day it was recorded.

4. Any proposal to transport 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. (See attached site figure.) (See Note 19.)

5. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

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. When the site meets the requirements for a Cleanup Complete determination, Institutional Controls will be terminated.

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 -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 contact the ADEC project manager, Todd Blessing at (907) 269-7699.

Approved By,

Rich Sundet
Environmental Program Manager

Recommended By,

Todd Blessing
Environmental Program Specialist

Attachment A: Cleanup Complete-ICs Agreement Signature Page
Attachment B: Notice of Environmental Contamination

Attachment C: Site Figure

Cc: Jennifer Parker, Region 10 Underground Injection Control Program
Bob Braunstein, BGES Inc
Phil Shephard

Attachment A: Cleanup Complete-ICs Agreement and Signature Page*

Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs agrees to the terms of this Complete Determination-Institutional Controls determination as stated in this Record of Decision (ROD) document dated November 10, 2011 for the 6701 North En Dove Road, Hazard ID: 25648. 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 18 AAC 78.276(f).

_____

Signature of Authorized Representative, Title
Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs

_____

Printed Name of Authorized Representative, Title
Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs

Note to Responsible Person (RP):
After making a copy for your records, please return a signed copy of this form to the ADEC project manager, Todd Blessing at the address on this correspondence within 30 days of receipt of this letter.

***Attention ADEC Administration Staff:** Please do not file this form until the ADEC project manager has updated the database.

File No: 2265.38.038

Attachment B: NOTICE OF ENVIRONMENTAL CONTAMINATION

Recording District: Palmer

Pursuant to 18 AAC 75.375, 6701 North En Dove Road as the owner of the subject property, hereby provides public notice that the property located at: 6701 North En Dove Road Wasilla, Alaska 99654, and more particularly described as follows: **Lot D12, Section 7, Township 18N, Range 1E, Seward Meridian** has been subject to a discharge or release and subsequent cleanup of oil or other hazardous substances, regulated under 18 AAC 75, Article 3, as amended October 9, 2008. This release and cleanup are documented in the Alaska Department of Environmental Conservation (ADEC) contaminated sites database at http://www.dec.state.ak.us/spar/csp/db_search.htm under Hazard ID number 25648, ADEC File No: 2265.38.038

ADEC reviewed and approved, subject to this and other institutional controls, the cleanup as protective of human health, safety, welfare, and the environment. No further cleanup is necessary at this site unless new information becomes available that indicates to ADEC that the site may pose an unacceptable risk to human health, safety, welfare, or the environment. ADEC determined, in accordance with 18 AAC 75.325 – 390 site cleanup rules, that cleanup has been performed to the maximum extent practicable even though residual fuel in soil and groundwater exists on-site.

The ADEC has determined there is no unacceptable risk to human health or the environment. Therefore, this site will be issued a Cleanup Complete – Institutional Controls determination subject to the following.

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use, tenant and/or ownership changes, current ICs may not be protective and ADEC may require additional remediation and/or ICs. Therefore, Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs or future owners shall report to ADEC every five years to document land use, or report as soon as Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs or future owners becomes aware of any change in land ownership and/or use, if earlier. The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov. For example, if any buildings are proposed to be constructed or demolished within 100 feet of the known remaining soil or groundwater contamination as shown on Figure 1, Katharine Dernocoeur as Personal Representative to the Estate of Mike Downs or future owners must notify ADEC prior to construction to allow ADEC to review the plans and

perhaps modify the ICs because the vapor intrusion risk that is now considered de minimis risk due to current land use may show a potential exposure risk.

2. Any proposal to transport 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. (See attached site figure.) (See Note 19.)
3. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

In the event that the remaining contaminated soil becomes accessible or other information becomes available which indicates that the site may pose an unacceptable risk to human health, safety, welfare or the environment, the land owner and/or operator are required under 18 AAC 75.300 to notify ADEC and evaluate the environmental status of the contamination in accordance with applicable laws and regulations; further site characterizations and cleanup may be necessary under 18 AAC 75.325-.390.

This NEC remains in effect until a written determination from ADEC is recorded that states that soil and groundwater at the site has been shown to meet the most stringent soil cleanup levels in method two of 18 AAC 75.340 and that off-site transportation of soil and/or groundwater is not a concern.

Please return original copy of this NEC to the address below:

Signature(s):(operator of property of interest)

_____

Printed Name(s): _____

Mailing Address(s): _____

_____

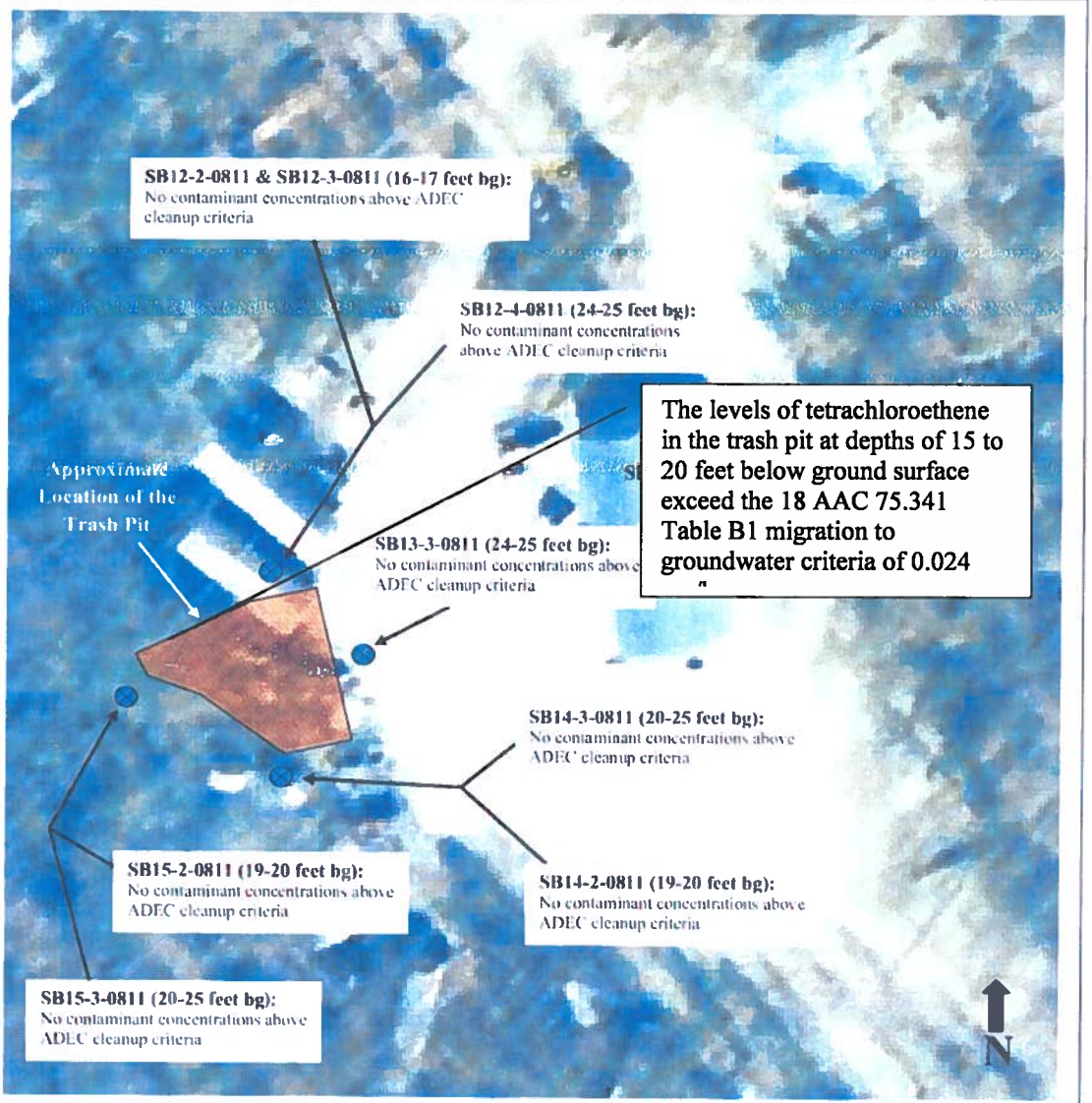
(Notarization seal)

Subscribed and sworn to before me this ___ day of _____, 20___.

Notary Public in and for the State of _____

My commission expires:_____

Attachment C: Figure 1.



LEGEND

- = Sample did not exceed ADEC Cleanup Criteria
- = Approximate Location of Trash Pit

bg = below grade

6701 North En Dove Road
Wasilla, Alaska
August 2011 Soil Borings Locations & Sample Results

BGES, INC.	September 2011	Figure 4