



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

**Department of  
Environmental Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

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File No.: 2100.26.072

September 29, 2016

Carel Nagata  
Development Finance Officer  
Cook Inlet Housing Authority  
3510 Spenard Road, Suite 100  
Anchorage, AK 99503

Re: Tesoro- Olson Gas Services Store #2- Cleanup Action and Remedial Design Approval

Dear Ms. Nagata:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program has reviewed the Cleanup Action Plan and associated Remedial Design Document for 3607 and 3609 Spenard Road. The ADEC Contaminated Sites program database lists the site under the name referenced above, which is also referred to as the former Alpina site.

Thank you for addressing my comments on the draft documents. I have reviewed the final documents and have no further comments. The Cleanup Action Plan and Remedial Design Document are approved.

If you have any questions regarding this request or if you would like to discuss this site further you may contact me at (907) 269-3057 or via email at [bill.oconnell@alaska.gov](mailto:bill.oconnell@alaska.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Bill O'Connell".

Bill O'Connell  
Environmental Program Manager

cc: Veronica Henzi, EPA Region X Brownfields Program

**CLEANUP ACTION PLAN  
COOK INLET HOUSING AUTHORITY  
3607 & 3609 SPENARD ROAD  
ANCHORAGE, ALASKA**

**OCTOBER 7, 2016**

Prepared By:

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Prepared For:

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Approvals			
Name	Title	Signature	Date
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Trevor Crosby	S&W Project Manager		

Shannon & Wilson Project Number: 32-1-17785-084

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**CLEANUP ACTION PLAN  
COOK INLET HOUSING AUTHORITY  
3607 & 3609 SPENARD ROAD  
ANCHORAGE, ALASKA**

**1.0 PURPOSE**

This Cleanup Action Plan (CAP) was prepared to document the selected alternative to conduct cleanup activities using Environmental Protection Agency (EPA) Brownfield Cleanup grant funds at 3607 & 3609 Spenard Road, Anchorage, Alaska (Property). The master plan for the Property is to achieve beneficial re-use of the site as a residential mixed-use property, and on a larger scale to use this project to promote revitalization of the surrounding Spenard neighborhood and transit corridor. To facilitate this goal, Cook Inlet Housing Authority (CIHA) has conducted multi-phased site characterization and cleanup efforts to mitigate exposure pathways that have the potential to impact human health for the proposed land use(s) and to otherwise progress towards a site closure determination from the Alaska Department of Environmental Conservation (ADEC), with or without institutional controls.

The specific objective of the EPA Brownfield grant-funded work is to dispose of soil, wood chips, and organic soil/peat that are impacted with petroleum hydrocarbons and/or chlorinated compounds. The soil was generated during preceding project phases, largely from the 2016 fill and grading work at the Property.

The basis for the selection of the proposed remedial alternative is described in Shannon & Wilson's August 2016 *Analysis of Brownfield Cleanup Alternatives* (ABCA). The ABCA was made available for public review and comment beginning August 24, 2016; comments were accepted through September 22, 2016. Though a portion of this project has been funded by EPA, the contents of this CAP do not necessarily reflect the views and policies of the EPA.

**2.0 SITE HISTORY AND BACKGROUND**

Historically, the western half of the site has been used as a fueling station, car wash, and auto repair facility. A residential structure was located near the south central portion of the Property. Other historical uses included vehicle storage and a firewood supply company. In preparation for the proposed development, the former structures and pavements on the property were removed in 2015.

The Property is relatively flat with a gentle downward slope to an approximately 350-foot section of open stream on the eastern Property boundary. This waterway is depicted on

Municipality of Anchorage (MOA) Watershed Management maps and identified as “Fish Creek” (US Army Corps of Engineers [USACE] jurisdictional review pending in 2016). Based on topographic contours provided by the MOA, it appears that there is about 5 to 6 feet of relief from the west end of the Property to the east end. Currently, the contaminated soils are placed in a total of 15 individual stockpiles located on the Property and adjacent parcels owned by CIHA. Several of the areas excavated in 2015 and 2016 remain unfilled or partially filled.

### **3.0 POTENTIAL BENEFICIAL REUSE**

CIHA’s proposed preliminary property development is consistent with the West Anchorage District Plan and the Anchorage 2020 Comprehensive Plan, and may comprise a mixed-use development with retail facilities and residential units. The plan includes a single retail facility on the Property’s west end, multiple residential units in the center and east end, and paved parking and access areas. A similar mixed-use facility is under construction across Spenard Road, and multiple residential properties east of the subject site will likely be redeveloped into duplex and townhouse style units in the future, for a total estimated redevelopment of 50 to 70 residential units.

With the exception of utilities, CIHA anticipates the development will entail minimal underground components (i.e. no basements, etc.) which will help to reduce the expenses associated with cleanup of impacted soil disturbed during development. In addition, CIHA plans to use existing utilities to the extent practicable; however, it is anticipated that new utilities may be required in any new development, requiring excavation and cleanup in select areas. Connections to the future development to the Anchorage Water and Wastewater Utility sewer and water system are anticipated, thereby eliminating the need for groundwater extraction on site.

Impacted soil containing Contaminant of Concern (COC) concentrations greater than the most stringent cleanup levels will likely remain in place following completion of the Brownfield grant-funded cleanup. Therefore, site closure goals are directed at achieving a Cleanup Complete with Institutional Controls (CCIC) to facilitate Property development. Institutional Controls (ICs) for this Property may include a notice of environmental contamination (NEC) on the deed, restrictions on soil excavation or other specific site activities, a ban on installing new drinking water wells, and/or vapor intrusion (VI) mitigation controls. To mitigate the VI pathway, CIHA plans to implement and install vapor intrusion mitigation measures beneath the site’s future vertical structures where appropriate.

In addition to ICs, future land reuse/redevelopment planning may need to incorporate contingencies for impacted soil and/or groundwater commensurate with the specific development plan (e.g., excavating soil for building foundations) and/or desired land use.

#### 4.0 INVESTIGATION AND RISK EVALUATION

The Property is listed on the ADEC's Contaminated Sites database under File Number 2100.26.072. Numerous site characterization, assessment, and/or cleanup efforts have been conducted on the Property between 1995 and 2016. Potential source areas include the former USTs and associated dispenser systems and piping, chemical storage areas, floor drains, former hydraulic ram units, and surface stains on both paved and unpaved ground surfaces. Data from these efforts have consistently indicated the highest remaining petroleum hydrocarbon concentrations in soil are located at or below the observed groundwater interface, which was typically encountered between 11 and 13 feet below ground surface, and are generally confined to the immediate vicinity of the former UST/dispenser source area(s) extending beneath the former garage structure and potentially into the Spenard Road right of way (ROW).

The following sections summarize the primary site assessment and cleanup actions completed to date. The approximate extent of the 2015 and 2016 soil excavations, approximate locations of the remaining on-Property wells, and inferred extent of chlorinated compound-impacted soil prior to the 2016 fill and grading project are shown on Figure 1.

##### 4.1 UST Removal and Remedial Action

Tesoro Olson Gas Services Store #1 began operation as a fueling station in approximately 1964. At the time, nine underground storage tanks (USTs) ranging in capacity from 500 gallons to 12,000 gallons were used on the Property. The USTs reportedly contained diesel fuel; unleaded, premium, and regular gasoline; and used oil. The UST systems (nine USTs, associated piping and dispensers) were removed between September 13 and 19, 1995.

Approximately 100 tons of petroleum-impacted soil were excavated during the UST removal effort and were thermally treated at an off-site facility. An additional 1,120 tons of petroleum-impacted soil were excavated in 2001 and treated off-site. To conduct additional in-situ treatment, an air sparge (AS) and soil vapor extraction (SVE) system were installed in 2003. The operational history and effectiveness of the AS/SVE system is not well-documented, and the system was fully dismantled by 2016.

## 4.2 Hydraulic Ram Removal and Soil Excavation

During site demolition activities in September 2015, two metal hydraulic ram units were discovered beneath the former on-site garage building. Between September and November 2015, approximately 110 cubic yards (cy) of chlorinated compound-impacted soil were excavated from beneath the former garage structure to remove contaminant concentrations greater than cleanup levels for human health exposure (i.e., direct contact and outdoor air inhalation). Details regarding the extent of impacted media, as known at that time, are provided in Shannon & Wilson, Inc.'s March 2016 document "*Additional Site Characterization and Interim Removal Action, 3607 & 3609 Spenard Road, Anchorage, Alaska.*"

An additional 350 cy of chlorinated compound-impacted soils were excavated as part of a limited removal action (LRA) in April-May 2016. Based on stockpile soil sample results, the soil was disposed of at the Anchorage Regional Landfill (approximately 195 cy) and at a RCRA Subtitle D-permitted landfill in Arlington, Oregon (approximately 155 cy). Confirmation soil samples from the excavation bases and sidewalls contained tetrachloroethene (PCE) concentrations greater than the ADEC Method Two migration to groundwater cleanup level but less than the ADEC Method Two human health level. However, one excavation sample (a duplicate sample) exceeded the ADEC Method Two human health level for trichloroethene (TCE).

## 4.3 Groundwater Assessment and Plume Delineation

Sixteen (16) on- and off-Property monitoring wells were installed between 1996 and 2013 to investigate the direction and extent of the impacted groundwater plume. In March and April 2016, Shannon & Wilson decommissioned eight groundwater monitoring wells that were removed from the site's groundwater monitoring program.

The most recent sampling event was conducted in July 2016 by Shannon & Wilson. The results indicated the petroleum hydrocarbon plume is stable, with concentrations greater than ADEC Table C values remaining in on-site source area Well MW-15 and off-site Well MW-14. The leading edge of the plume appears to be between off-site Wells MW-14 and MW-17, with a decreasing trend observed in Well MW-14.

Selected samples from the July 2016 monitoring event were also tested for volatile organic compounds (VOC) compounds. The sample from MW-15 contains two VOCs (trimethylbenzene and 1,2-DCA) greater than Table C levels, however the sample from off-site and downgradient well MW-5 (not shown on Figure 1) does not contain VOC compound concentrations greater than Table C levels. PCE and TCE were not detected in either sample.

The groundwater contaminant plume and July 2016 results are consistent with expectations and our current understanding of the impacted groundwater plume dimensions and stability.

#### 4.4 2016 Fill and Grading

In 2016 a fill and grading was conducted to excavate potentially impacted soil that could potentially be disturbed in future site development from the surface to 5 feet below ground surface (bgs) and to safely grade the site for future development and use. As part of this project, an Environmental Management Plan (EMP) was developed to guide handling and remediating/disposing potentially contaminated soil. Approximately 2,100 cy of soil were generated and stockpiled during the fill and grading activities. An estimated 500 cy were re-used on site to backfill excavated areas, leaving about 1,600 cy requiring additional treatment and/or disposal. Characterization of the stockpiles will be completed prior to the implementation of the EPA Brownfield grant-funded work.

#### 5.0 ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES

The specific objective of the work to be funded by the EPA Brownfield cleanup grant is disposal of the petroleum hydrocarbon and chlorinated compound-impacted materials stockpiled during the 2016 fill and grading work and to safely grade/backfill the site. No additional sampling will be conducted for this project phase; therefore a Quality Assurance Project Plan was not necessary.

The August 2016 ABCA contains a comparative analysis of the treatment/disposal options listed below. The alternatives were selected based on pre-screening for applicability to the site and general effectiveness for the site-specific COCs and impacted media.

- **Alternative 1: No Action.** No remedial activities would be implemented for this alternative. Risks to human health and the environment would not be directly addressed and stockpiles of impacted soil would remain, leaving the Property unsuitable for re-use or redevelopment.
- **Alternative 2: On-site Treatment using Landfarming and/or Landspreading.** Consists of remediating the impacted soil using landfarming and/or landspreading methodologies.
- **Alternative 3: On-site Treatment with Chemical Oxidant Additive.** This alternative consists of a combination of treating the source soils containing organic contamination (both hydrocarbon and HVOCs) using an oxidant addition to chemically transform the contaminants to inert compounds and transporting and disposing of wood chips and organic soil/peat at a landfill facility.

- **Alternative 4: Off-site Treatment and/or Disposal.** This alternative consists of transporting and disposing of impacted soil at a thermal treatment and/or landfill facilities.

Based on overall consideration of effectiveness, implementability, and cost, Alternative 4 was selected as the preferred option. Alternative 4 consists of disposing 1,600 cy of petroleum hydrocarbon-impacted and/or chlorinated compound-impacted materials at off-site facilities. Alternative 4 facilitates immediate re-use of areas occupied by the stockpiled soil; results in permanent removal of contaminants within the targeted stockpiles; has a high level of certainty in achieving the cleanup objectives; and has a moderate cost. Approximately 460 cy and 1,140 cy of stockpiled soils are assumed to be disposed of at the Anchorage Regional Landfill (ARL) and Alaska Soil Recycling, Inc. (ASR) respectively. The total estimated cost to implement Alternative 4 is **\$375,000**. Note that this cost is dependent on the assumed soil volume distribution to the disposal facilities; the actual distribution will be based on the final analytical soil data and negotiations with the facilities regarding acceptance criteria.

## 6.0 PUBLIC NOTICE AND COMMENT

As part of the Public Information Plan, an Information Repository (IR) was set up at CIHA's main office and is available for public review in person or through CIHA's web site on a web page set up for the Brownfield Cleanup project. Documents currently contained in the IR are the proposal selection letter from EPA, Project Fact Sheet, Public Involvement Plan and the ABCA. The ABCA document was posted on August 24, 2016 for a 30 day comment period. Public notice was issued via press release to the local Anchorage area newspaper, Alaska Dispatch News on August 24, 2016. The deadline to receive public comments was September 22, 2016. Project Partners were directly notified of the public comment period for the ABCA and requested to share the announcement as well as the Project Fact Sheet with their colleagues or membership. Project Partners include:

State of Alaska, Department of Environmental Conservation  
State of Alaska, Department of Health and Social Services  
Municipality of Anchorage, Office of Economic and Community Development  
Spenard Community Council  
Spenard Chamber of Commerce  
Anchorage Economic Development Corporation

The project information flyers were distributed to the community through the Spenard Community Council regular meeting on September 9, 2016, and a CIHA representative was in attendance at the meeting. No comments were received during the public comment period.

## **7.0 NEXT STEPS**

CIHA will use a competitive selection process to retain a contractor to implement Alternative 4 soil disposal work. Other tasks to be conducted by CIHA or its contractors prior to field work include preparing Remedial Design and Site-Specific Health and Safety Plan documents, and obtaining necessary plan approvals and disposal authorizations from ADEC and EPA.