SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

T E C H N I C A L M E M O R A N D U M

TO: **JING SONG, WASHINGTON STATE DEPARTMENT OF ECOLOGY**

DATE: December 10, 2021

FROM: Clare Tochilin and Ryan Bixby, SoundEarth Strategies, Inc.

SUBJECT: Response to Ecology Opinion Letter Dated June 23, 2021
Southgate Oil Property
23428 Pacific Highway South, Kent, Washington 98032
Ecology Facility/Site No. 84946863

SoundEarth Strategies, Inc. (SoundEarth) has prepared this Technical Memorandum in response to the opinion letter issued by the Washington State Department of Ecology (Ecology) on June 23, 2021, for the Muscatel Midway site, which is situated at 23418 Pacific Highway South in Kent, Washington (the Muscatel Property). In that opinion letter, Ecology stated that impacts from the Southgate Oil site, which is situated on a parcel that adjoins the Muscatel Property to the south at 23428 Pacific Highway South (the Southgate Oil Property), have migrated to the Muscatel Property. SoundEarth, as a representative of the prior owners of the south-adjoining Southgate Oil Property, respectfully disagrees with Ecology's conclusion. Rather, it is apparent from SoundEarth's review of the previous subsurface investigations and the remedial actions conducted on both properties between 2000 and 2020 that petroleum hydrocarbon contamination has not migrated from the Southgate Oil Property to the Muscatel Property. This is based on the following lines of evidence discussed in this Technical Memorandum:

- There is clear spatial separation between the extent of contamination associated with petroleum hydrocarbon releases on the Southgate Oil Property and the extent of contamination associated with petroleum hydrocarbon releases on the Muscatel Property.
- The depths of contamination encountered along the shared property boundary of the Southgate Oil and Muscatel Properties strongly suggest that the petroleum hydrocarbon impacts in this location originated from a release on the Muscatel Property.
- The chemical composition of petroleum hydrocarbon impacts observed on the Muscatel Property is distinctly different than the chemical composition of the petroleum hydrocarbon impacts observed on the Southgate Oil Property.
- Groundwater beneath the Property is present at depths of greater than 30 feet below ground surface (bgs). As such, there is no transport mechanism for petroleum hydrocarbon contamination, at the depths where it has been encountered on the Southgate Oil Property, to have migrated the necessary lateral distance to the locations where it has been encountered on the Muscatel Property.

SoundEarth has reviewed the letter regarding Summary Report Subsurface Investigations and Cleanup Action, Muscatel Midway Property, 23418 Pacific Highway South, Kent, Washington dated March 5, 2021,

from Javan Ruark and Peter Jewett of Farallon Consulting, LLC (Farallon) to Sonia Fernandez of Department of Ecology (2021 Summary Report) and the previous reports by others that provide the basis for Ecology's 2021 opinion letter. The opinion letter states that the opinion is void if any of the information contained in these documents is materially false or misleading. SoundEarth's review of the available documents indicates that there are multiple instances of false and misleading assertions regarding the origin of the petroleum hydrocarbon contamination on the Muscatel Property. As such, SoundEarth requests that Ecology reconsider its opinion and address the impacts that are present on the Muscatel and Southgate Oil Properties as separate sites.

BACKGROUND

The Southgate Oil Property was initially developed in 1931 with a single-family residence with an associated heating oil tank. An automotive repair shop operated on the Southgate Oil Property beginning in the late 1940s, and a former fuel distribution facility operated on the Southgate Oil Property for approximately 75 years. The Muscatel Property was occupied by a single-family residence and a gasoline service station on the southwestern portion of the property between the 1930s and 1962. A multi-tenant retail building was constructed on the Muscatel Property in 1962. This building was reportedly occupied by a dry-cleaning facility for approximately 40 years. A retaining wall runs west along the shared property boundary for 80 feet from the southeastern corner of the Muscatel Property; the footing of the retaining wall extends to a depth of 7 feet beneath the surface of the Southgate Oil Property and to a depth of 3 feet beneath the surface of the Muscatel Property. There is an approximate 4-foot elevation change between the Southgate Oil Property and the Muscatel Property along the retaining wall; the Southgate Oil Property is situated at the higher elevation.

In October and November 2000, nine underground storage tanks (USTs) ranging from 275 to 10,000 gallons in capacity and suspected of containing gasoline, diesel fuel, and heating oil were removed from the Southgate Oil Property. Soil samples collected from the vicinities of the removed USTs were analyzed for gasoline-, diesel-, and oil-range petroleum hydrocarbons (GRPH, DRPH, and ORPH, respectively) and benzene, toluene, ethylbenzene, and total xylenes (BTEX). None of the analyzed soil samples contained detectable concentrations of GRPH. Approximately 550 cubic yards of DRPH-contaminated soil was excavated and removed during tank decommissioning and associated remediation activities.

In 2002, two heating oil USTs, one with a 20,000-gallon capacity and one with a 25,000-gallon capacity (USTs 1 and 2, respectively; Figure 1), were removed from the Southgate Oil Property. During tank decommissioning activities, petroleum-contaminated soil was only observed in the vicinity of UST 1, which was formerly located near the east-central portion of the northern boundary of the Southgate Oil Property. DRPH at concentrations of up to 6,500 milligrams per kilogram (mg/kg) was detected in performance soil samples collected in the vicinity of UST 1 during remedial excavation activities. Analytical results from 29 confirmation samples collected at the final extents of this excavation area indicated that soil on the excavation bottom and sidewalls did not contain DRPH at concentrations exceeding the Washington State Model Toxics Control Act (MTCA) Method A cleanup level, including every sample taken in the vicinity of UST 2, with the exception of three samples collected at depths of 6, 8, and 17 feet bgs at the western end of the northern sidewall (Figure 1). It was this residual contamination and the failure to investigate its extent that led Ecology to issue its Further Action determination for the Southgate Oil Property in 2006.

In 2017 and 2018, multiple subsurface investigations were conducted on the Muscatel and Southgate Oil Properties, including the following:

- **2017 EcoCon, Inc. (ECI) Focused Subsurface Investigation, Muscatel Property.** This investigation included the advancement of 12 soil borings in three areas of the Muscatel Property, including the vicinity of the former gasoline service station, the vicinity of the former dry-cleaning facility, and along the southern boundary of the Muscatel Property. Concentrations of GRPH and DRPH exceeding MTCA Method A cleanup levels were detected in a soil sample collected at a depth of 8 feet bgs in soil boring ECI-B13 (referred to as B13 in ECI's 2017 Focused Subsurface Investigation Report), located on the southeastern portion of the Muscatel Property.
- **2018 GeoEngineers, Inc. (GeoEngineers) Phase II Environmental Site Assessment, Muscatel Property.** This investigation included the advancement of 13 soil borings throughout the southern and eastern portions of the Muscatel Property. Concentrations of DRPH and/or ORPH exceeding MTCA Method A cleanup levels were detected in soil borings FL207-B16 and FL207-B18, located on the southern portion of the Muscatel Property, at depths of 2.5 to 3.5 feet bgs and 0.5 to 1 foot bgs, respectively. Additionally, a concentration of benzene exceeding the MTCA Method A cleanup level was detected in soil boring FL207-B22, located on the southeastern portion of the Muscatel Property, at a depth of 2.5 to 3.5 feet bgs.
- **2018 GeoEngineers Phase II Environmental Site Assessment, Southgate Oil Property.** This investigation included the advancement of 12 soil borings throughout the Southgate Oil Property. Concentrations of DRPH and/or ORPH exceeding MTCA Method A cleanup levels were detected in soil samples collected at depths between 0.5 and 21 feet bgs in soil borings FL209-B3 through FL209-B8, located on the central portion of the Southgate Oil Property, and at a depth of 3 to 4 feet bgs in soil boring FL209-B11, located on the eastern portion of the Southgate Oil Property. The only detection of GRPH was in the sample from soil boring FL209-B4, located on the western portion of the property, at a depth of 0 to 1.5 feet bgs (Figure 1).

In January 2019, ECI conducted a remedial excavation of petroleum-contaminated soil on the southeastern portion of the Muscatel Property in the vicinity of soil boring ECI-B13. The excavation extended approximately 30 feet east to west and approximately 18 feet north to south from the retaining wall on the shared property boundary. The extent of petroleum-contaminated soil was observed to extend approximately 7 feet to the north of the retaining wall on the Muscatel Property. During the excavation activities, confirmation soil samples were collected from the bottom and sidewalls of the excavation for analysis of DRPH and ORPH. Confirmation soil samples collected in January 2019 were not analyzed for GRPH. In February 2019, ECI conducted a supplemental subsurface investigation that consisted of the advancement of test pits and the removal of petroleum-contaminated soil in three localized areas of the Muscatel Property.

Between February and August 2020, O'Neill Service Group (OSG) and GeoEngineers, on behalf of Sound Transit, observed remedial excavations conducted by Kiewit Infrastructure West Co. (Kiewit) in six areas of the Southgate Oil Property where petroleum hydrocarbon impacts had been identified in soil, including two excavation areas on the eastern portion of the Southgate Oil Property in the vicinity of the southeastern excavation on the Muscatel Property. The purpose of the northernmost of the two eastern excavations was not to address impacts originating on the Southgate Oil Property, but rather to remove

the residual petroleum-contaminated soil remaining in place beneath the retaining wall on the Muscatel Property. The petroleum-contaminated soil extended no more than approximately 2 to 3 feet south onto the Southgate Oil Property based on confirmation soil sample results. The results of confirmation soil sampling during the remedial excavations on the Southgate Oil and Muscatel Properties indicated that all identified petroleum-contaminated soil had been removed from both properties.

FALSE AND MISLEADING ASSERTIONS

During the previous subsurface investigations conducted by ECI and GeoEngineers at the Muscatel Property, four localized areas of petroleum hydrocarbon impacts were identified. Each of these areas of impacts has been incorrectly attributed by others to a release on the Southgate Oil Property, despite the fact that the available data do not confirm a connection between these locations and releases that may have occurred on the Southgate Oil Property. These false assertions are discussed in the following sections.

FALSE ASSERTION #1 – RESIDUAL IMPACTS FROM FORMER USTs AT THE SOUTHGATE OIL PROPERTY MIGRATED BENEATH THE MUSCATEL PROPERTY

In the previous reports prepared for the Muscatel Property, there are multiple references to the petroleum-contaminated soil that was left in place along the northern boundary of the Southgate Oil Property during the 2002 decommissioning and removal of USTs 1 and 2 on the Southgate Oil Property. The previous reports falsely suggest that this contamination has migrated beneath the Muscatel Property. It is accurate that DRPH-contaminated soil was left in place along the northern sidewall of the former UST excavation in the vicinity of the Muscatel Property. However, the 2021 Summary Report submitted on behalf of the owners of the Muscatel Property fails to mention that during the 2017 subsurface investigation conducted by ECI and the 2018 subsurface investigation conducted by GeoEngineers at the Muscatel Property, concentrations of DRPH exceeding the cleanup level were not detected in soil samples collected from three soil borings (ECI-B9, ECI-B12, and FL207-B19) advanced approximately 5 to 10 feet north of the southern boundary of the Muscatel Property, directly adjacent to the residual contamination left in place during the 2002 excavation (Figure 1). These findings are expected given the relative immobility of diesel, the lack of groundwater beneath the properties to a depth of at least 30 feet bgs, and the sandy and gravelly soil conditions, all of which suggest that petroleum hydrocarbon impacts would be more likely to migrate vertically rather than laterally onto the Muscatel Property. As such, the results of investigations performed on the Muscatel Property clearly demonstrate that the DRPH impacts left in place on the Southgate Oil Property did not migrate north onto the Muscatel Property.

FALSE ASSERTION #2 – IMPACTS ENCOUNTERED IN THE VICINITY OF SOIL BORING ECI-B13 ARE THE RESULT OF RELEASES AT THE SOUTHGATE OIL PROPERTY

During ECI's 2017 investigation at the Muscatel Property, a DRPH concentration of 8,800 mg/kg was detected in a sample collected at a depth of 8 feet bgs from soil boring ECI-B13, which is located to the north of the shared property boundary and approximately 50 feet to the east of the soil contamination left in place following the 2002 remedial excavation of UST 1 on the Southgate Oil Property. ECI's 2017 Focused Subsurface Investigation Report states that "based on the location of soil boring [ECI-]B13 and its proximity to the remediation work completed on the southern adjacent property, the contamination identified appears to be originating from the southern property." However, there are multiple lines of evidence indicating that there is no connection between the residual petroleum hydrocarbon impacts that

were left in place during the 2002 Southgate Oil remediation activities and the impacts observed in samples from soil boring ECI-B13, including:

- Soil boring ECI-B13 is located approximately 50 feet to the east of the residual petroleum hydrocarbon impacts left in place along the shared property boundary in 2002. Groundwater has not been encountered beneath the Muscatel Property or the Southgate Oil Property to depths of at least 30 feet bgs. Based on the absence of groundwater at the depths where contamination was encountered and the relative immobility of DRPH in soil, there is no transport mechanism to explain how DRPH contamination at the relevant depths would migrate more than 50 lateral feet to the location of soil boring ECI-B13.
- Soil borings FL209-B10 on the Southgate Oil Property and FL207-B20 on the Muscatel Property were advanced in locations directly between the residual petroleum hydrocarbon impacts left in place during the 2002 UST decommissioning activities and the impacts observed in soil boring ECI-B13 (Figure 1). Petroleum hydrocarbons were not detected above laboratory reporting limits in soil samples collected at corresponding depths from either of these soil borings, indicating that there is a clear separation between the residual impacts left in place in 2002 and the impacts observed in soil boring ECI-B13 on the Muscatel Property. The results of the 2020 remedial excavations conducted on the Southgate Oil Property further confirm this spatial separation of petroleum hydrocarbon impacts between the Southgate Oil and Muscatel Properties.

In addition to these lines of evidence, which indicate there is no connection between the residual petroleum hydrocarbon impacts left in place during the 2002 Southgate Oil remediation activities and the impacts observed on the Muscatel Property, it is also clear based on the results of the remedial excavations conducted on both properties that there is no connection between impacts observed on the Southgate Oil Property in the vicinity of soil boring FL209-B11 and the impacts observed on the Muscatel Property. In January 2019, a remedial excavation was conducted by ECI on the Muscatel Property in the vicinity of soil boring ECI-B13 along the shared property boundary (Figures 1 and 2). This excavation extended approximately 30 feet east to west and 18 feet north to south and had a maximum depth of approximately 15 feet bgs. According to ECI's field documentation from January 21, 2019 (Attachment A), two plumes of contaminated soil were observed during excavation activities: one plume was encountered at a depth between approximately 1 and 1.5 feet bgs and a second plume was encountered beginning at a depth of approximately 6 feet bgs. As shown on the cross section in Figure 2, the footing of the retaining wall between the two properties extends to a depth of approximately 3 feet bgs on the Muscatel Property. Although the lateral extent of the petroleum hydrocarbon impacts at a depth of 1 to 1.5 feet bgs on the Muscatel Property is unknown, the depth at which these impacts were observed is above the base of the retaining wall footing. It is not possible to connect these impacts to a release on the Southgate Oil Property, because any petroleum hydrocarbon impacts migrating from the Southgate Oil Property would be found at depths below the footing of the retaining wall rather than at depths above the base of the footing. The presence of these shallower impacts strongly suggests that the petroleum hydrocarbon impacts in the vicinity of soil boring ECI-B13 are the result of a release that occurred on the Muscatel Property, rather than migration from the Southgate Oil Property.

At the completion of its January 2019 remedial excavation activities, ECI collected confirmation soil samples from the sidewalls and bottom of the excavation, and the excavation area was backfilled with imported clean material. DRPH was detected in several confirmation soil samples at concentrations below

the MTCA Method A cleanup level. Confirmation samples collected during the January 2019 excavation activities were not analyzed for GRPH. ECI subsequently conducted a trench excavation along the northern side of the retaining wall in September 2019 to access and characterize the impacted soil remaining in place beneath the retaining wall (Figures 1 and 2). Following the collection of six soil samples beneath the retaining wall, the trench excavation was backfilled to the original surface grade. GRPH, DRPH, ethylbenzene, and total xylenes were detected in these soil samples, and GRPH and/or DPRH concentrations exceeded MTCA Method A cleanup levels in three of the six analyzed samples.

The contaminants present in soil samples collected in the vicinity of soil boring ECI-B13 on the Muscatel Property are inconsistent with the contaminants present in the soil samples collected in the vicinity of soil boring FL209-B11 on the Southgate Oil Property. The soil samples collected by ECI beneath the retaining wall on the southern portion of the Muscatel Property in September 2019 (samples S2-8, S3-11, and S6-6.5) contained concentrations of both DRPH and GRPH that exceeded MTCA Method A cleanup levels (Figure 2). Unlike some of the samples collected during ECI's 2017 investigation, these samples were not flagged by the laboratory as carryover from the diesel range; therefore, these laboratory findings confirm the presence of gasoline in the soil that was excavated from the Muscatel Property. Soil samples collected from the Southgate Oil Property during the parcel line excavation in 2020 (discussed below) and from soil boring FL209-B11 did not contain detectable concentrations of GRPH, and there is no history of gasoline storage on the eastern portion of the Southgate Oil Property. GRPH has only been detected in two soil samples collected on the Southgate Oil Property. One of these samples was collected during GeoEngineers' 2018 Phase II Environmental Site Assessment from soil boring FL209-B4, which was located in the vicinity of the former automotive repair garage and near the ground surface on the western portion of the Southgate Oil Property, more than 100 feet away from what would become the parcel line excavation area in 2020. The second of these samples (PH209-15-10) was collected during the 2020 remedial excavation activities conducted on the Southgate Oil Property (discussed below) from beneath the demolished garage building on the western portion of the Southgate Oil Property (Figure 1). The presence of GRPH and associated volatile organic compounds on the Muscatel Property that were not found on the Southgate Oil Property, along with the findings described above, conclusively demonstrate that contamination on the Muscatel Property is not associated with a release on the Southgate Oil Property.

In 2020, OSG and GeoEngineers observed remedial excavation activities conducted by Kiewit on behalf of Sound Transit on impacted areas of the Southgate Oil Property, including two areas located directly south of the 2019 ECI remedial and trench excavations on the Muscatel Property. The southernmost of these two excavations (identified by OSG as the east excavation) was conducted in May 2020 to remove petroleum-contaminated soil identified at a depth of 3 to 4 feet bgs in soil boring FL209-B11, located approximately 25 feet south of soil boring ECI-B13 on the Muscatel Property. The northernmost of the two excavations on the Southgate Oil Property (identified by OSG as the parcel line excavation) was conducted in August 2020 to remove the residual petroleum-contaminated soil remaining on the Muscatel Property beneath the retaining wall (Figures 1 and 2).

The maximum depth of the east excavation in the vicinity of soil boring FL209-B11 was approximately 6 feet bgs. As shown on Figures 1 and 2, confirmation soil samples collected from the bottom and sidewalls of the soil boring FL209-B11 excavation area at depths between 3 and 6 feet bgs (corresponding to 1 foot aboveground and 2 feet bgs on the Muscatel Property, respectively) did not contain concentrations of petroleum hydrocarbons exceeding MTCA Method A cleanup levels and/or laboratory

reporting limits, which demonstrates that the impacts encountered in the vicinity of soil boring FL209-B11 were limited to the Southgate Oil Property.

Additionally, confirmation soil samples collected from the sidewalls of the parcel line excavation below the retaining wall did not contain concentrations of petroleum hydrocarbons exceeding laboratory reporting limits. Confirmation soil samples results clearly show that soil contamination extended a maximum of 2 to 3 feet to the south onto the Southgate Oil Property, whereas the contaminated soil on the Muscatel Property was observed to extend at least 7 feet to the north of the retaining wall. These confirmation soil sample results clearly indicate that there was no connection between the impacts observed on the Muscatel Property and the impacts observed in the vicinity of soil boring FL209-B11 on the Southgate Oil Property. These results further support SoundEarth's conclusion that the petroleum hydrocarbon contamination in the vicinity of soil boring ECI-B13 on the Muscatel Property was the result of a release that occurred on the Muscatel Property.

FALSE ASSERTION #3 – IMPACTS ENCOUNTERED IN THE VICINITY OF SOIL BORING FL207-B16 ARE THE RESULT OF RELEASES AT THE SOUTHGATE OIL PROPERTY

During GeoEngineers' 2018 investigation at the Muscatel Property, ORPH was detected at a concentration (4,200 mg/kg) exceeding the MTCA Method A cleanup level in a soil sample collected at a depth of 2.5 to 3.5 feet bgs from soil boring FL207-B16, located on the western portion of the Muscatel Property, approximately 13 feet north of the shared property boundary (Figure 1). This soil boring was advanced in the approximate vicinity of the former gasoline service station on the Muscatel Property. Although GeoEngineers' 2018 Phase II Environmental Site Assessment Report and Farallon's 2021 Summary Report both conclude that the ORPH impacts observed in samples from soil boring FL207-B16 are most likely the result of a release from the former gasoline service station on the Muscatel Property or from a surface release associated with vehicle traffic on the Muscatel Property, Ecology's 2021 opinion letter states that "this soil contamination could be associated with the former service station, or a result of surface release from on-or off-Property operations, or migration from the south property." However, as documented in ECI's 2019 Supplemental Focused Subsurface Investigation Report, a test pit excavation was conducted in this location, and the analytical results of samples collected from the excavation confirmed that DRPH and ORPH concentrations were below laboratory reporting limits on the bottom and sidewalls of the test pit excavation and did not extend up to or beyond the southern boundary of the Muscatel Property. Based on the results of ECI's test pit investigation, the ORPH impacts in this location were limited to the direct vicinity of soil boring FL207-B16 on the Muscatel Property and could not have migrated from the Southgate Oil Property.

FALSE ASSERTION #4 – IMPACTS ENCOUNTERED IN THE VICINITY OF SOIL BORING FL207-B18 ARE THE RESULT OF RELEASES AT THE SOUTHGATE OIL PROPERTY

During GeoEngineers' 2018 investigation at the Muscatel Property, DRPH was detected at a concentration exceeding the MTCA Method A cleanup level (3,000 mg/kg) in a soil sample collected at a depth of 0.5 to 1 feet bgs from soil boring FL207-B18, located on the central portion of the Muscatel Property, approximately 13 feet north of the shared property boundary (Figure 1). Farallon's 2021 Summary Report and GeoEngineers' 2018 Environmental Site Assessment Report suggest that the source of these impacts is the residual petroleum-contaminated soil left in place on the Southgate Oil Property. However, as documented in ECI's 2019 Supplemental Focused Subsurface Investigation Report, a test pit excavation was conducted in this location, and the analytical results of samples collected from the southern extent

of the test pit confirmed the contaminated soil had been previously removed during utility trenching work and that the soil samples collected did not contain detectable concentrations of DRPH. In its 2019 Supplemental Focused Subsurface Investigation Report, ECI concluded that the claims previously made by GeoEngineers that the contamination in this area was a result of migration from the Southgate Oil Property could not be confirmed. Additionally, if DRPH impacts observed in samples from boring FL207-B18 had migrated from the Southgate Oil Property, these impacts would have been found at depths greater than 0.5 feet bgs given the lack of groundwater at these depths and the likelihood that petroleum contamination would migrate vertically rather than laterally. Therefore, it is apparent that the impacts encountered in the vicinity of soil boring FL201-B18 are the result of a release on the Muscatel Property and that the suggestion by Farallon and GeoEngineers that these impacts originated from the Southgate Oil Property is false.

FALSE ASSERTION #5 – IMPACTS ENCOUNTERED IN THE VICINITY OF SOIL BORING FL207-B22 ARE THE RESULT OF RELEASES AT THE SOUTHGATE OIL PROPERTY

During GeoEngineers' 2018 investigation at the Muscatel Property, benzene was detected at a concentration (0.087 mg/kg) exceeding the MTCA Method A cleanup level in a soil sample collected at a depth of 2.5 to 3.5 feet bgs in soil boring FL207-B22, located on the southeastern portion of the Muscatel Property, approximately 25 feet north of the shared property boundary (Figure 1). Although GeoEngineers' 2018 Phase II Environmental Site Assessment Report and Farallon's 2021 Summary Report both conclude that there is not an obvious source for the low concentrations of benzene detected in soil boring FL207-B22 and that this soil boring is not in close enough proximity to the documented Southgate Oil Property impacts to have migrated to this location on the Muscatel Property, Ecology's 2021 opinion letter attributes the contaminated soil removed to a depth of 4 feet bgs from this portion of the Muscatel Property to a release from the Southgate Oil Property. However, this is an incorrect assertion based on multiple lines of evidence, including the fact that benzene has not been detected above laboratory reporting limits in any of the analyzed soil samples collected on the Southgate Oil Property. Additionally, as documented in ECI's 2019 Supplemental Focused Subsurface Investigation Report, two test pit excavations were conducted in the vicinity of soil boring FL207-B22. The analytical results of samples collected from the two excavations confirmed that benzene and GRPH concentrations were below laboratory reporting limits on the bottom and sidewalls of each of the test pits following the removal of the identified contaminated soil and that the impacts did not extend up to or beyond the southern boundary of the Muscatel Property. Based on the results of ECI's test pit investigation, the soil impacts in this location were limited to the vicinity of soil boring FL207-B22 and were attributed by ECI to migration from an unknown source. Benzene has not been detected in any analyzed soil samples from the Southgate Oil Property; therefore, it is not possible for the unknown source to be the Southgate Oil Property.

SUMMARY

Based on the information provided in this Technical Memorandum, it is apparent that the assertions made by Farallon and others that petroleum hydrocarbon contamination has migrated from the Southgate Oil Property onto the Muscatel Property are materially false or misleading. The available data from previous subsurface investigations and remedial actions conducted at the Southgate Oil and Muscatel Properties demonstrate that the Southgate Oil Property is not the source of the contamination in any of the impacted portions of the Muscatel Property, and that the impacts on the Muscatel Property are the result of releases that occurred on the Muscatel Property itself. Therefore, on behalf of our client, SoundEarth

requests that Ecology reconsider its opinion regarding the source of the petroleum hydrocarbon contamination on the Muscatel Property and the inclusion of the Southgate Oil Property in the Muscatel Midway site.

SoundEarth appreciates the opportunity to provide a response to Ecology's 2021 opinion letter. Please let us know if we can provide any additional information.

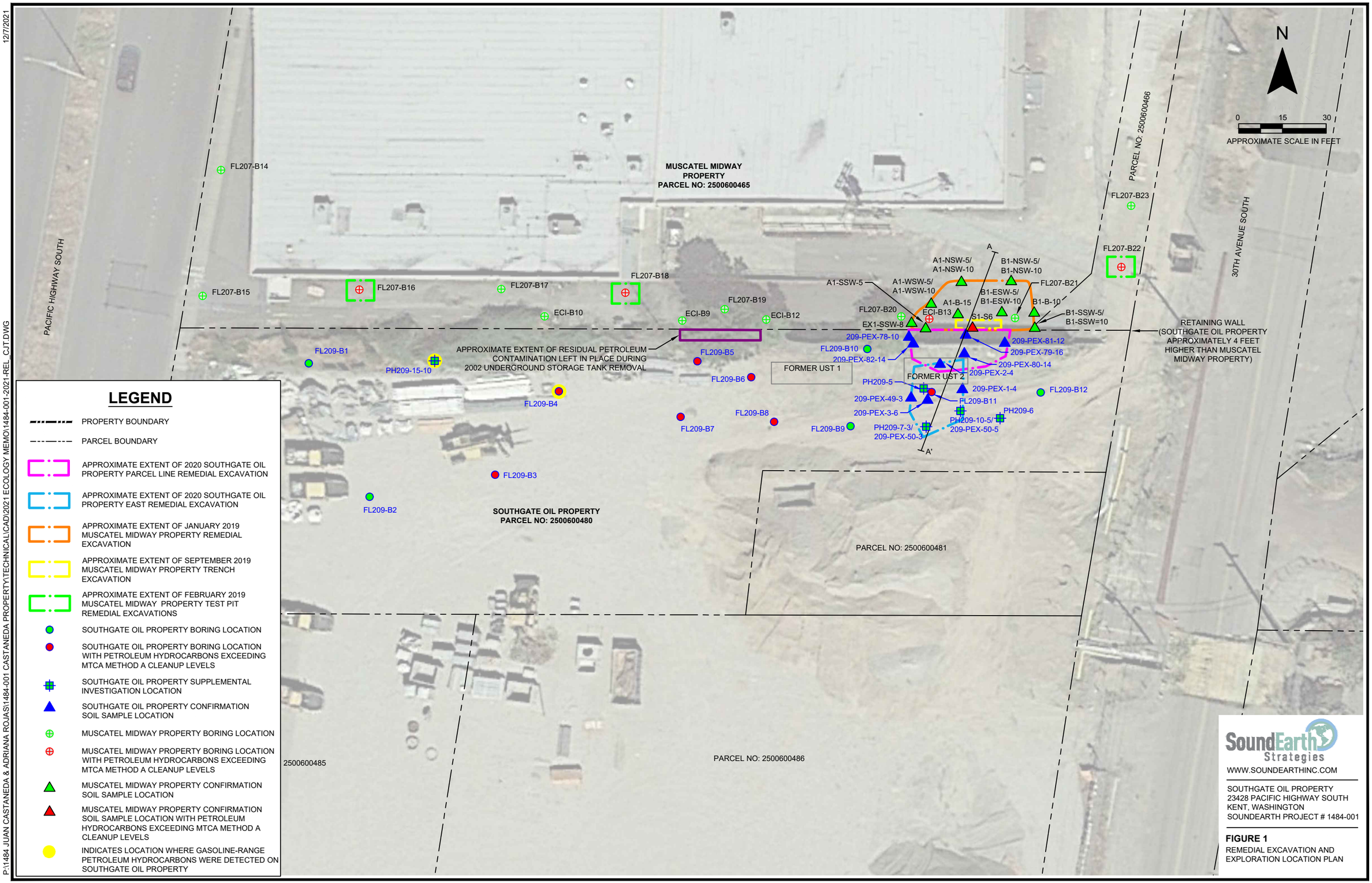
Attachments: Figure 1, Remedial Excavation and Exploration Location Plan
Figure 2, Cross Section A-A'
A, ECI Field Documentation dated January 21, 2019

CJT/RKB:kar

FIGURES

12/7/2021

P:\1484 JUAN CASTANEDA & ADRIANA ROJAS\1484-001 CASTANEDA PROPERTY\TECHNICAL\CAD\2021 ECOLOGY MEMO\1484-001-2021-REL_CJT.DWG



LEGEND

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- APPROXIMATE EXTENT OF 2020 SOUTHGATE OIL PROPERTY PARCEL LINE REMEDIAL EXCAVATION
- APPROXIMATE EXTENT OF 2020 SOUTHGATE OIL PROPERTY EAST REMEDIAL EXCAVATION
- APPROXIMATE EXTENT OF JANUARY 2019 MUSCATEL MIDWAY PROPERTY REMEDIAL EXCAVATION
- APPROXIMATE EXTENT OF SEPTEMBER 2019 MUSCATEL MIDWAY PROPERTY TRENCH EXCAVATION
- APPROXIMATE EXTENT OF FEBRUARY 2019 MUSCATEL MIDWAY PROPERTY TEST PIT REMEDIAL EXCAVATIONS
- SOUTHGATE OIL PROPERTY BORING LOCATION
- SOUTHGATE OIL PROPERTY BORING LOCATION WITH PETROLEUM HYDROCARBONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
- SOUTHGATE OIL PROPERTY SUPPLEMENTAL INVESTIGATION LOCATION
- SOUTHGATE OIL PROPERTY CONFIRMATION SOIL SAMPLE LOCATION
- MUSCATEL MIDWAY PROPERTY BORING LOCATION
- MUSCATEL MIDWAY PROPERTY BORING LOCATION WITH PETROLEUM HYDROCARBONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
- MUSCATEL MIDWAY PROPERTY CONFIRMATION SOIL SAMPLE LOCATION
- MUSCATEL MIDWAY PROPERTY CONFIRMATION SOIL SAMPLE LOCATION WITH PETROLEUM HYDROCARBONS EXCEEDING MTCA METHOD A CLEANUP LEVELS
- INDICATES LOCATION WHERE GASOLINE-RANGE PETROLEUM HYDROCARBONS WERE DETECTED ON SOUTHGATE OIL PROPERTY

SoundEarth Strategies

WWW.SOUNDEARTHINC.COM

SOUTHGATE OIL PROPERTY
23428 PACIFIC HIGHWAY SOUTH
KENT, WASHINGTON
SOUNDEARTH PROJECT # 1484-001

FIGURE 1

REMEDIAL EXCAVATION AND EXPLORATION LOCATION PLAN

12/7/2021

P:\1484 JUAN CASTANEDA & ADRIANA ROJAS\1484-001 CASTANEDA PROPERTY\TECHNICAL\CAD\2021 ECOLOGY MEMO\1484-001-2021-XSEC.DWG

MUSCATEL MIDWAY PROPERTY

SOUTHGATE OIL PROPERTY

RETAINING WALL

PROPERTY BOUNDARY

A NORTH

A' SOUTH

FEET BELOW GROUND SURFACE (bgs)

0' 5' 10' 15' 20' 25' 30'

PETROLEUM HYDROCARBON IMPACTS OBSERVED AT A DEPTH OF 1 TO 1.5 FEET BGS DURING JANUARY 2019 REMEDIAL EXCAVATION (EXACT EXTENT UNKNOWN)

FOOTING

EC1-B13

FL209-B11

B1-NSW-5 -- <50

A1-NSW-5 -- <50

B1-ESW-5 -- 56

A1-WSW-5 -- <50

A1-SSW-5 -- 540

B1-SSW-5 -- <50

S4-3.5 <5 <50

209-PEX-78-10 <4.74 <20.9

EX1-SSW-8 -- <50

S6-6.5 620 4,060

S5-6.5 <5 <50

S2-8 360 2,300

170^X 8,800

B1-NSW-10 -- <50

B1-B-10 -- <50

A1-WSW-10 -- 120

209-PEX-81-12 <5.78 <21.0

209-PEX-82-14 <5.11 <19.0

209-PEX-80-14 <5.44 <18.8

S1-10 85 500

21 1,100

A1-NSW-10 -- 430

B1-ESW-10 -- <50

S3-11 320 730

B1-SSW-10 -- <50

209-PEX-79-16 <5.62 1,510

A1-B-15 -- <50

209-PEX-2-4 -- <21.2

209-PEX-1-4 -- 82.0

PH209-5-3 -- <19.2

<12 550

<13 8,400

PH209-10-5 -- 364

<28 <56

209-PEX-49-3 -- <21.5

209-PEX-3-6 -- <19.9

PH209-7-3 -- <22.0

LEGEND

- SOIL BORING
- SOIL BORING SAMPLE
- MUSCATEL PROPERTY CONFIRMATION SOIL SAMPLE (ECOCON, INC. 2019)
- SOUTHGATE OIL PROPERTY CONFIRMATION SOIL SAMPLE (SOUND TRANSIT 2020)
- SUPPLEMENTAL INVESTIGATION SOIL SAMPLE
- RED — DENOTES CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL
- APPROXIMATE EXTENT OF 2020 SOUTHGATE OIL PROPERTY PARCEL LINE REMEDIAL EXCAVATION
- APPROXIMATE EXTENT OF 2020 SOUTHGATE OIL PROPERTY EAST REMEDIAL EXCAVATION
- APPROXIMATE EXTENT OF JANUARY 2019 MUSCATEL MIDWAY PROPERTY REMEDIAL EXCAVATION
- APPROXIMATE EXTENT OF SEPTEMBER 2019 MUSCATEL MIDWAY PROPERTY TRENCH EXCAVATION

RESULTS IN MILLIGRAMS/KILOGRAM (mg/kg):

<5	**GRPH:** GASOLINE-RANGE PETROLEUM HYDROCARBONS
<50	**DRPH:** DIESEL-RANGE PETROLEUM HYDROCARBONS
X	THE SAMPLE CHROMATOGRAPHIC PATTERN DOES NOT RESEMBLE THE FUEL STANDARD USED FOR QUANTITATION
--	NOT ANALYZED
BGS	BELOW GROUND SURFACE

5 2.5 0

0 2.5 5

APPROXIMATE SCALE IN FEET

SoundEarth Strategies

WWW.SOUNDEARTHINC.COM

SOUTHGATE OIL PROPERTY
23428 PACIFIC HIGHWAY SOUTH
KENT, WASHINGTON
SOUNDEARTH PROJECT # 1484-001

FIGURE 2
CROSS SECTION A-A'

ATTACHMENT A

ECI FIELD DOCUMENTATION DATED JANUARY 21, 2019

[redacted]

[redacted]

---------- Forwarded message ---------
From: **Stephen Spencer** <sspencer@ecocon.us>
Date: Mon, Jan 21, 2019 at 7:57 PM
Subject: Field Report-23418 Pacific Hwy S.-012119
To: Laurie Goldman <muskygold@gmail.com>
Cc: John Muscatel <jmmuscatel@gmail.com>, Mark Marcell <markm@cgius.net>, Dru Hoskins <druh@cgius.net>, John A. Coe <jcoe@coelaw.com>

FIELD ACTIVITIES REPORT

January 21, 2019

On January 21th, 2019, ECI mobilized to 23418 Pacific Highway South in Kent, Washington. The scope of work was to delineate the extent of contamination that had previously migrated from a neighboring property onto the Subject Property, and then to have that contamination removed. Brad Reilly and Stephanie Holt supervised the excavation activities.

One test pit (TP1) was excavated to approximately 11 feet, where no apparent signs of contamination were present. A sample was collected from the sidewall of this test pit at 8 feet bgs. A second test pit was started, and contamination was discovered in two discreet depth ranges: one plume at depths between 1 ft and 1.5' bgs, and a second plume beginning at approximately 6 feet bgs. The downward extent of the second plume is still under investigation. Full delineation of this plume is planned for tomorrow, 1/22/19. Excavation had to stop for the day due to concerns for the stability of a wall that runs along the southern property line. Excavation will continue tomorrow once the clean dirt from TP1 is backfilled.

There were four dump truck loads hauled from the site over the course of today's activities.

These included three loads of asphalt and one load of contaminated dirt. We were informed by the dump truck driver when she returned for the fourth load of the day that the landfill had requested we not send any more dirt today. We will continue sending contaminated dirt off site starting tomorrow, 1/22/19. The dump truck arrived on site at 7:55 this morning and hauled away the last load at 13:00.

One soil sample was collected from TP1 at a depth of 8 ft bgs. Groundwater was not encountered on the Property at the depth explored.

Laboratory supplied analyte specific containers were used to collect soil samples, and transferred under industry standard chain-of-custody protocols to Friedman & Bruya of Seattle, WA. The results of the analysis are expected to be returned to within two weeks from the date the laboratory receives the samples.

Prepared by:

Stephanie Holt

Staff Geologist


DEERE
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225D


DEERE


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LC