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

CLEANUP ACTION REPORT

Property:
Smokey Point Retail Center
2707 171st Place Northeast
Marysville, Washington

Prepared for:
Madison Development Group LLC
10510 Northeast Northup Way, Suite 120
Kirkland, Washington

Report Date:
June 12, 2015

Cleanup Action Report

Prepared for:

Madison Development Group LLC
10510 Northeast Northup Way, Suite 120
Kirkland, Washington 98033

Smokey Point Retail Center
2707 171st Place Northeast
Marysville, Washington 98271

Project No.: 0918-001

Prepared by:

Rob Roberts
Senior Scientist

Reviewed by:

John R. Funderburk, MSPH
Principal Scientist

June 12, 2015

SoundEarth Strategies

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ACRONYMS AND ABBREVIATIONS

AEG	Associated Environmental Group, LLC
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
Ecology	Washington State Department of Ecology
GSM	GeoScience Management, Inc.
GRPH	gasoline-range petroleum hydrocarbons
MTCA	Washington State Model Toxics Control Act
PCS	petroleum-contaminated soil
PVC	polyvinyl chloride
Report	Cleanup Action Report
SPRC Property	Smokey Point Retail Center, 2707 171st Place Northeast, Marysville, Washington
the Site	soil and/or groundwater contaminated with gasoline-range petroleum hydrocarbons, benzene, toluene, ethylbenzene, and total xylenes beneath the Source Property (Smokey Point Chevron property) and the SPRC Property
Source Property	Smokey Point Chevron property, 2804 172nd Avenue Northeast, Marysville, Washington
SoundEarth	SoundEarth Strategies, Inc.
UST	underground storage tank
VCP	Voluntary Cleanup Program
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

SoundEarth Strategies, Inc. has prepared this Cleanup Action Report for the Smokey Point Retail Center property located at 2707 171st Place Northeast in Marysville, Washington (the SPRC Property) on behalf of Madison Development Group LLC. The SPRC Property was enrolled in the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP #NW2833, Facility Site #5591) in 2014. This cleanup action was conducted to meet the requirements of the Washington State Model Toxics Control Act (MTCA) cleanup regulation in Chapter 340 of Title 173 of the Washington Administrative Code (WAC).

The SPRC Property consists of a single tax parcel that covers approximately 1.36 acres of land (Snohomish County parcel number 0697200000700) and was purchased as undeveloped vacant land in 2008. The Smokey Point Retail Center was constructed in 2009 and features two 1-story retail buildings varying in size from 5,940 square feet (Building 1) to 8,460 square feet (Building 2).

Releases of gasoline at the adjacent Smokey Point Chevron property (Source Property) have impacted groundwater conditions at the SPRC Property. The Source Property is listed with Ecology as a leaking underground storage tank (UST) site and was enrolled in the VCP in 2009 (VCP #NW2174). A partial cleanup of accessible petroleum-contaminated soil was conducted by the owner of the Source Property in 2009. However, petroleum-contaminated soil remains beneath the Source Property building and in saturated soil at the former UST and pump island area of that property. Groundwater flow from the Source Property is consistently measured as flowing to the south, directly toward and beneath the SPRC Property.

Several interim cleanup actions have been completed to address residual contamination in groundwater. These actions included the following:

- The UST and source soil removal at the Source Property in 2009, as mentioned above.
- Installation of a polyvinyl chloride (PVC) infiltration system for oxidizer injection in the UST source area.
- Installation of a PVC infiltration system on the boundary line between the Source Property and the SPRC Property for oxidizer injection to treat migrating groundwater.
- An injection event in 2014 to infiltrate oxidizer into groundwater at three select locations on the SPRC Property.

The Site includes areas of soil and shallow groundwater contaminated with gasoline-range petroleum hydrocarbons, benzene, toluene, ethylbenzene, and total xylenes. Soil and groundwater sampling indicates that vadose zone soil is not impacted on or beneath the SPRC Property, with groundwater seasonally impacted by gasoline and benzene on the north and central portions of the SPCR Property.

SoundEarth conducted a feasibility review and a disproportionate cost analysis for three cleanup alternatives to accomplish an MTCA-compliant cleanup at the SPRC Property. The results of the feasibility review and disproportionate cost analysis were presented to Ecology in the SoundEarth report dated April 27, 2015. The selected remedy was implementation and maintenance of Institutional Engineering Controls with an Environmental Covenant. The remedy incorporated the existing vapor barrier beneath the buildings to mitigate vapor intrusion, and an existing asphalt cap to limit direct

contact to soil and groundwater. The remedy includes inspection and maintenance of these engineering controls on an annual basis, as well as annual groundwater monitoring of approximately six compliance wells across the SPRC Property. The groundwater monitoring will be conducted to demonstrate that the groundwater contamination beneath the SPRC Property is stable and not expanding, and that the plume is not adversely affected by operations and activities on the SPRC Property. An environmental covenant will be filed for the SPRC Property to ensure that the engineering controls are maintained and that there is no potential exposure to the groundwater contamination.

This executive summary is presented solely for introductory purposes, and the information contained in this section should be used only in conjunction with the full text of this report. A complete description of the project, the Source Property and SPRC Property conditions, investigative methods, and investigation results is contained within this report.

1.0 INTRODUCTION

SoundEarth Strategies, Inc. (SoundEarth) has prepared this Cleanup Action Report (Report) for the Smokey Point Retail Center Property located at 2707 171st Place Northeast in Marysville, Washington (the SPRC Property) on behalf of Madison Development Group LLC. The location of the Property and adjoining properties are shown on Figures 1 and 2. This Report was prepared to meet the general requirements of the Washington State Model Toxics Control Act (MTCA) Cleanup Regulation in Sections 430 and 440 of Chapter 340 of Title 173 of the Washington Administrative Code (WAC 173-340-430 and 440).

The Site is defined by the full lateral and vertical extent of contamination that has resulted from the former operation of a retail gasoline station on the adjoining property to the north at 2804 172nd Avenue Northeast, which is known as Smokey Point Chevron, Facility Site #28658971 (Source Property). Based on the information gathered to date, soil and groundwater at the Site are contaminated with gasoline-range petroleum hydrocarbons (GRPH) and benzene, toluene, ethylbenzene, and total xylenes (BTEX). However, for the SPRC Property, only groundwater is impacted by GRPH and benzene at levels above the MTCA Method A cleanup levels.

1.1 PURPOSE

The purpose of this Report is to demonstrate compliance with MTCA and to obtain a Property-Specific No Further Action determination from the Washington State Department of Ecology (Ecology) for the SPRC Property only. The Report documents field activities that were conducted as part of the cleanup action and describes the future monitoring and maintenance of the existing engineering controls.

1.2 REPORT ORGANIZATION

This Report is organized into the following sections:

- **Section 2.0, Background.** This section discusses the Site location and description, the land use history of the Site and surrounding parcels, and the previous investigations conducted at the Site.
- **Section 3.0, Selected Cleanup Action.** This section provides a summary of the selected cleanup action alternative.
- **Section 4.0, Cleanup Action.** This section describes the components of the cleanup action, including monitoring well installation and installation of the vapor barrier and asphalt cap.
- **Section 5.0, Compliance Monitoring.** This section describes the protection, performance, and confirmational monitoring that is being conducted as part of the cleanup action.
- **Section 6.0, Environmental Covenant.** This section summarizes the proposed land use restriction and maintenance requirements for an environmental covenant.
- **Section 7.0, Conclusions.** This section presents the conclusions based on the results of the interim cleanup action.
- **Section 8.0, Limitations.** This section discusses document limitations.
- **Section 9.0, References.** This section lists references cited in this document.

2.0 BACKGROUND

This section provides a description of the Site's features and location; a summary the land use history of the Source Property and SPRC Property parcels; and a summary of previous investigations conducted at The Source Property and the SPRC Property. Additional background information is provided in the following reports:

- Phase I Environmental Site Assessment, Proposed Retail Development (Riley 2006)
- Report of Underground Storage Tank Decommissioning and Contaminated Soil Removal Former Smokey Point Chevron Site (GeoScience Management, Inc. [GSM] 2010)
- Groundwater Monitoring Event, Former Smokey Point Chevron Site (GSM 2011)
- Smokey Point Chevron Building Subsurface Soil Investigation (SoundEarth 2013)
- Second Quarter 2015 Groundwater Monitoring, Smokey Point Retail Center (SoundEarth 2015c)

2.1 LOCATION AND DESCRIPTION

The Site includes the Source Property (Snohomish County parcel #00697200000400) and the SPRC Property (Snohomish County parcel #00697200000700). These adjoining parcels are located in the Smokey Point commercial area of Marysville, Washington (Figure 1). The Site is defined by the lateral and vertical extent of contamination that has resulted from the former operation of a retail gasoline station on the Source Property. A portion of an adjoining property (John L. Scott, parcel #00697200000600) may be impacted by a cross-gradient fringe of the plume originating from the Source Property.

2.2 GEOLOGY/HYDROGEOLOGY

Soil borings advanced at the Source Property by GSM in 2006 indicated the site was underlain by gravelly silty sand to the maximum depth of boring (15.5 feet). The *Geologic Map of Washington—Northwest Quadrant* shows the vicinity of the SPRC Property as underlain by recessional outwash sand deposits (Dragovich et al. 2002). Groundwater was present in the GSM monitoring wells at depths ranging from 4 to 7 feet.

Groundwater monitoring conducted by SoundEarth on the SPRC Property has indicated that the groundwater flow direction is consistently to the south, and that groundwater levels fluctuate seasonally from 4 to 7 feet below ground surface (bgs).

The background for the adjoining Source Property and the downgradient SPRC Property is described in Sections 2.2 through 2.3 below.

2.3 SITE HISTORY

The following information summarizes the relevant site history for the Source Property and the SPRC Property.

2.3.1 Source Property

Smokey Point Chevron was built on the adjoining property to the north in 1978 and was operated by Denis and Mary Rogers until it was leased by Robert Ford from 1988 to 1992 and by

Wayne Hoskins from 1992 to 2008. The station included three 12,000-gallon gasoline underground storage tanks (USTs). The USTs were relined and upgraded with overfill and cathodic protection systems in 1988. Fuel dispensers were upgraded in the mid-1990s. Smokey Point Chevron operated until mid-2008. In 2009, a source removal cleanup was implemented to remove the USTs and assessable petroleum-contaminated soil (PCS). The three USTs and 1,767 tons of PCS were removed in the area shown on Figure 2. The Source Property has remained vacant since 2008.

2.3.2 Smokey Point Retail Center Property

The SPRC Property remained undeveloped until the Smokey Point Retail Center was constructed in 2008. Approximately 5 feet of native soil was removed and backfilled with material more amenable to surface water infiltration, as required by local building codes. Backfill included compacted site soil, imported pit run, and quarry spalls.

During construction, the general contractor (Pennon Construction) installed a polyvinyl chloride (PVC) pipe infiltration gallery for injecting oxidizer into groundwater along the common boundary between the SPRC Property and the Source Property (Figure 2). Installation consisted of excavating a trench approximately 4 feet deep, placing a layer of pea gravel in the trench bottom, and then laying the piping on the pea gravel, approximately 3 feet below grade. The piping consisted of schedule 40 PVC blank, attached to 20-foot-long sections of 20-slot PVC screen. The piping was then covered with approximately 1 foot of additional pea gravel. A geotextile fabric was placed on top of the pea gravel, and the trench was then backfilled with the trench spoils. No groundwater, stained soil, or odors were encountered in the trench. Each set of infiltration piping was stubbed up against the fence along the common property line and capped. These pipe stubs were used to introduce solutions to enhance biological degradation of hydrocarbon compounds in groundwater. However, due to the depth of groundwater, typically ranging from 4 to 6 feet below grade, the shallower infiltration gallery has not been routinely used.

To mitigate the potential for soil vapor concerns in the SPRC retail buildings, a Stego Wrap vapor barrier was also installed beneath both SPRC buildings prior to construction. This remedial measure is further described in the Cleanup Action Section 4.0 below.

Past and present tenants of the SPRC Property buildings have included Five Guys Burgers and Fries, AT&T, and Savvy Mattress Outlet.

2.4 PREVIOUS INVESTIGATIONS AND REMEDIAL MEASURES

The following summarizes previous environmental assessments and cleanup actions for the Source Property and the downgradient SPRC Property. Remedial areas and well points are shown on Figure 2.

2.4.1 Source Property

In 2003, Associated Environmental Group, LLC (AEG) installed three monitoring wells on the north, south, and east sides of the three Smokey Point Chevron USTs. Groundwater collected from all three AEG wells contained concentrations of GRPH and BTEX above MTCA Method A cleanup levels (GSM 2010).

In September 2006, GSM conducted a subsurface investigation that included installation of 11 monitoring wells at the Source Property and 9 push-probe borings at the SPRC Property. PCS was not identified in any of the push-probe borings advanced on the SPRC Property. However,

groundwater collected from all 9 of the push-probe borings contained concentrations of GRPH and/or benzene exceeding the MTCA Method A cleanup levels.

The three USTs and associated PCS were removed in 2009 (Figure 2). PCS was excavated to a depth of approximately 7 feet below grade. During excavation, groundwater infiltrated into the remedial excavation at a depth of 5.5 feet. Brown frothy material and sheens were observed on the surface of the excavation water and removed by skimmers, absorbents, and a vacuum truck. A total of 1,767 tons of PCS and 4,900 gallons of excavation water were removed during remediation. Soil samples collected from the south side of the excavation at a depth of 5 feet exceeded MTCA cleanup levels. More expansive excavation was not conducted due to the presence of the convenience store building. Therefore, PCS was left beneath the Smokey Point Chevron building. In addition, some PCS may have been left in-place at the base of the excavation (the cleanup report does not indicate any samples were collected deeper than 6 feet, and very few verification samples were collected from the bottom-center of the excavation). A PVC-pipe infiltration gallery was installed in the excavation prior to backfilling. However, no additional remediation has been conducted at the Smokey Point Chevron site since 2009.

In August 2013, SoundEarth conducted a subsurface assessment for the Smokey Point Chevron building on the Source Property. ESN Northwest, under the direction of SoundEarth, advanced eight push-probe borings (P01 through P08) inside the Building at the locations shown on Figure 2. Borings P01 through P05 were advanced to a depth of 16 feet. Borings P06 through P08 were advanced to depths of 4 to 8 feet to evaluate the extent of near-surface impacts near the northeast corner of the Smokey Point Chevron building. Gasoline odors were noted in all deep borings from approximately 6 to 12 feet. Gasoline odors were also noted in boring P02 from the surface to 16 feet depth, and in boring P03 from 7 to 16 feet depth. Concentrations of GRPH exceeding the MTCA Method A cleanup level were detected in one or more samples collected from all 8 borings. Concentrations of benzene exceeding the MTCA Method A cleanup level of 0.03 milligrams per kilogram were detected in samples collected from borings P03, P04, P05, and P07.

Based on SoundEarth field observations, photoionization detector readings, and laboratory analysis, soil and groundwater beneath most of the Source Property Building is impacted by GRPH at a depth of approximately 6 feet to 12 feet bgs. Groundwater is present at approximately 6 feet. The upper depth of contamination appeared to be consistent with the water table. The lower depth of contamination was not well defined, but appeared to attenuate at approximately 12 feet bgs.

2.4.2 Smokey Point Retail Center Property

In November 2008, GSM installed seven monitoring wells on the SPRC Property (MW-112 through MW-118). Approximately 5 to 6 feet of fill soil was encountered in the borings (imported prior to construction as described above) overlying 4 to 5 feet of gravelly sand and silty sand, underlain by coarse-grained sand and gravel to 15.5 feet (GSM 2009). Saturated soil was encountered at approximately 4.5 to 5.5 feet. Based on previous testing and recent site backfilling demonstrating no vadose zone contamination, no soil samples were submitted for analysis. Concentrations of benzene exceeding MTCA levels were detected in all of the wells. GRPH was detected in 6 of the 7 wells, but only exceeded MTCA levels in one well (MW-118).

Groundwater quality at the SPRC Property has been monitored by SoundEarth and others from 2008 to 2015. The most recent groundwater sampling and monitoring events at the SPRC

Property in May 2015, show that concentrations of GRPH and/or benzene in groundwater samples collected from monitoring wells MW-112, MW-113, and MW-114 exceed applicable MTCA Method A cleanup levels. Concentrations of GRPH and BTEX in the remaining monitoring wells within the monitoring well network were not reported above laboratory reporting limits and/or applicable MTCA Method A cleanup levels (Table 1; SoundEarth 2015c).

To further define the southern extent of the plume originating from the Source Property, SoundEarth installed well MW-119 near the southwestern corner of the SPRC Property, downgradient from well MW-114. The well was installed on May 18, 2015, and screened 4 to 14 feet bgs (similar to all of the SPRC wells). Following development and purging, MW-119 was sampled during the May 20, 2015, monitoring event (SoundEarth 2015c). The analytical results for MW-119 included no detectable concentrations of GRPH, benzene, ethylbenzene, or total xylenes. Toluene was detected at a concentration of 1.1 micrograms per liter. The SPRC Property monitoring event will be summarized in a groundwater monitoring report to be submitted to Ecology in June 2015.

In May 2014, SoundEarth conducted an injection of sodium persulfate into temporary probe wells located near monitoring wells MW-112, MW-113, and MW-115 (two probe locations adjacent to each well (Figure 2). Approximately 150 gallons of peroxide-activated oxidizer was injected into each of the six injection wells (IP-01 through IP-06) at depths of 4 to 9 feet (depth to groundwater was approximately 4 feet below grade in the SPRC Property wells).

In February 2015, to assess the potential for vapor intrusion at the SPRC buildings, SoundEarth collected one indoor ambient air sample from the northwest corner of Building 1 (located directly downgradient from the Smokey Point Chevron building) and an outdoor ambient air sample near the Building 1 roof air intake (to represent local ambient air loads for volatile organics). The concentrations of the gasoline-related volatile constituents (BTEX) in the indoor air in Building 1 were less than applicable MTCA Method B indoor air cleanup levels when corrected for background outdoor ambient air concentrations, as mandated by established protocol under the 2009 Ecology Vapor Intrusion Guidance (Ecology 2009, SoundEarth 2015a).

2.5 SUMMARY OF ENVIRONMENTAL CONDITIONS

Based on the environmental sampling conducted at the Source Property and the SPRC Property, the following conclusions are presented.

2.5.1 Groundwater

Groundwater on the SPRC Property is being impacted by residual GRPH and BTEX contamination present in soil on the Source Property. Concentrations of GRPH and benzene often exceed MTCA Method A cleanup limits in wells MW112, MW113, and MW114, more often during periods of higher groundwater levels, indicating that residual GRPH is mobilized by rising water levels. Depth to groundwater typically ranges from 3 to 6 feet, and flows consistently to the south. Groundwater does not appear to be impacted by GRPH or benzene in areas downgradient from the SPRC Property, as indicated by non-detect results in wells MW117, MW116, and MW119.

2.5.2 Soil

Soil on the Source Property is impacted beneath the Smokey Point Chevron building, and possibly at depths exceeding the 7-foot-deep 2009 remedial excavation. Soil samples collected

in the SPRC Property by GSM in 2006 indicated that vadose zone soil at the SPRC was not impacted.

2.5.3 Indoor Air at Smokey Point Retail Center

The concentrations of the gasoline-related volatile constituents (BTEX) in the indoor air in Building 1 on the SPRC Property were less than applicable MTCA Method B indoor air cleanup levels when corrected for background outdoor ambient air concentrations.

3.0 SELECTED CLEANUP ACTION

Based on the interim remedial measures and the results of the soil, groundwater, and indoor air testing described above, SoundEarth conducted a disproportionate cost analysis of three remedial alternatives for the SPRC Property (SoundEarth 2015b). The selected remedial alternative (Alternative 3) was Institutional Engineering Controls with an Environmental Covenant. Encapsulating residual contamination beneath existing engineering controls on the SPRC Property does not pose an unacceptable threat to human health or the environment given the current land use of the SPRC Property. This cleanup action was recommended because it is protective of human health and the environment on the SPRC Property through the use of institutional and engineering controls (SoundEarth 2015b).

In addition, since the owner of the Source Property does not have the financial resources required for a source cleanup, alternatives to clean up residual contamination at the Source Property (Alternatives 1 and 2) are not implementable at this time, or in the foreseeable future.

4.0 CLEANUP ACTION

This section provides a description of the components of the selected remedial alternative completed as part of the ongoing cleanup action. The cleanup action elements are shown on Figure 3.

4.1 VAPOR BARRIER

To mitigate the potential for soil vapor concerns, a Stego Wrap vapor barrier was installed beneath both buildings on the SPRC Property prior to building floor slab construction in 2009 (photographs of the installation and material specifications are included in Appendix A). The polyolefin-based vapor barrier was 15 mils thick and met the requirements of American Society for Testing and Materials specification E1745 Class A vapor barrier. The Stego vapor barrier is designed to control radon, methane, and petroleum byproduct gases. Photographs taken during installation show that the vapor barrier was installed beneath the perimeter footings and under utility vaults prior to pouring the slab and that pipe penetrations and seams in the slab were taped with Stego tape. In addition, a layer of 10-mil plastic sheeting was installed over the vapor barrier. The vapor barriers beneath Buildings 1 and 2 prevent the potential intrusion of impacted subsurface vapors into interior spaces. Photographs of the installation, and product specifications were included in the SoundEarth report Vapor Intrusion Study (2015a). The vapor barriers have not been altered since installation.

4.2 ASPHALT CAP

The SPRC Property was developed in 2009 with a 4-inch-thick asphalt parking lot cap. Other areas of the SPRC Property are covered with concrete building slabs and sidewalks. Small strips of landscaping exist

at the south end of the SPRC Property (a non-impacted area). The asphalt cap serves as a barrier to the direct contact pathway. The asphalt cap is in nearly new condition and is maintained and repaired as needed to provide environmental protection and for required property management purposes.

5.0 COMPLIANCE MONITORING

There are three types of compliance monitoring identified for remedial actions performed under MTCA (WAC 173-340-410): protection, performance, and confirmational monitoring. A paraphrased definition for each is presented below (WAC 173-340-410[1]).

- **Protection Monitoring**. To evaluate whether human health and the environment are adequately protected during the operation and maintenance period of a cleanup action.
- **Performance Monitoring**. To document that the cleanup action has attained cleanup standards.
- **Confirmational Monitoring**. To evaluate the long-term effectiveness of the interim action or cleanup action once cleanup standards or other performance standards have been attained.

5.1 PROTECTION MONITORING

Indoor air monitoring for gasoline-related BTEX compounds was conducted by SoundEarth in Building 1 in February 2015. For a nine-hour commercial exposure period, the results were below the MTCA Method B indoor air cleanup levels adjusted for background. Additional monitoring of indoor air will be conducted in the event that groundwater concentrations significantly exceed previously detected levels in SPRC Property monitoring wells. Any future maintenance work involving building slab cutting or removal will require an inspection of the affected vapor barrier, with repairs inspected by a Stego-certified worker or a licensed professional engineer.

Condition of the asphalt cap and concrete slabs and foundations will be monitored annually and repaired as needed. Records of maintenance and inspection will be maintained by the property manager.

5.2 PERFORMANCE MONITORING

To monitor the effectiveness of the soil removal conducted at the Source Property and subsequent natural attenuation, groundwater samples will be collected on an annual basis from four existing monitoring wells located in the SPRC plume area (MW-112, MW-113, MW-114) and near the downgradient SPRC Property line (MW-119). Samples will be collected in spring during the annual period of highest groundwater. The groundwater monitoring will be conducted using low-flow purging and sampling methods. Samples will be analyzed for GRPH by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx, and BTEX by U.S. Environmental Protection Agency Method 8021B. Groundwater reports will be submitted annually to Ecology.

Annual inspections of the vapor barrier and asphalt cap will be conducted at the time of annual groundwater monitoring, using a final Ecology-approved version of the inspection form template that is included as Appendix B.

6.0 ENVIRONMENTAL COVENANT

Since residual contamination remains in groundwater beneath the SPRC Property, the cleanup action includes an environmental covenant. The covenant will restrict certain activities and uses of the SPRC Property in order to prevent potential exposure to groundwater contamination or vapor-phase contamination, and thereby enhance protection of human health and the environment. The restrictions include continued use of the SPRC Property for commercial purposes, limitations on use of groundwater, and annual maintenance and inspection of the vapor barriers and asphalt cap. A draft of the restrictive covenant is presented in Appendix C.

7.0 CONCLUSIONS

The remedy selected for the SPRC Property incorporated the existing controls including the vapor barrier beneath the buildings and the asphalt cap as a barrier to direct contact, along with implementation of an environmental covenant. The cleanup action is protective of human health and the environment. The integrity of remedial measures on the Source Property and SPRC Property, as well as natural attenuation, will be evaluated by annual groundwater monitoring. The environmental covenant will prevent any potential exposure to residual groundwater contamination beneath the SPRC Property.

8.0 LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

9.0 REFERENCES

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FIGURES

SoundEarth Strategies
WWW.SOUNDEARTHINC.COM

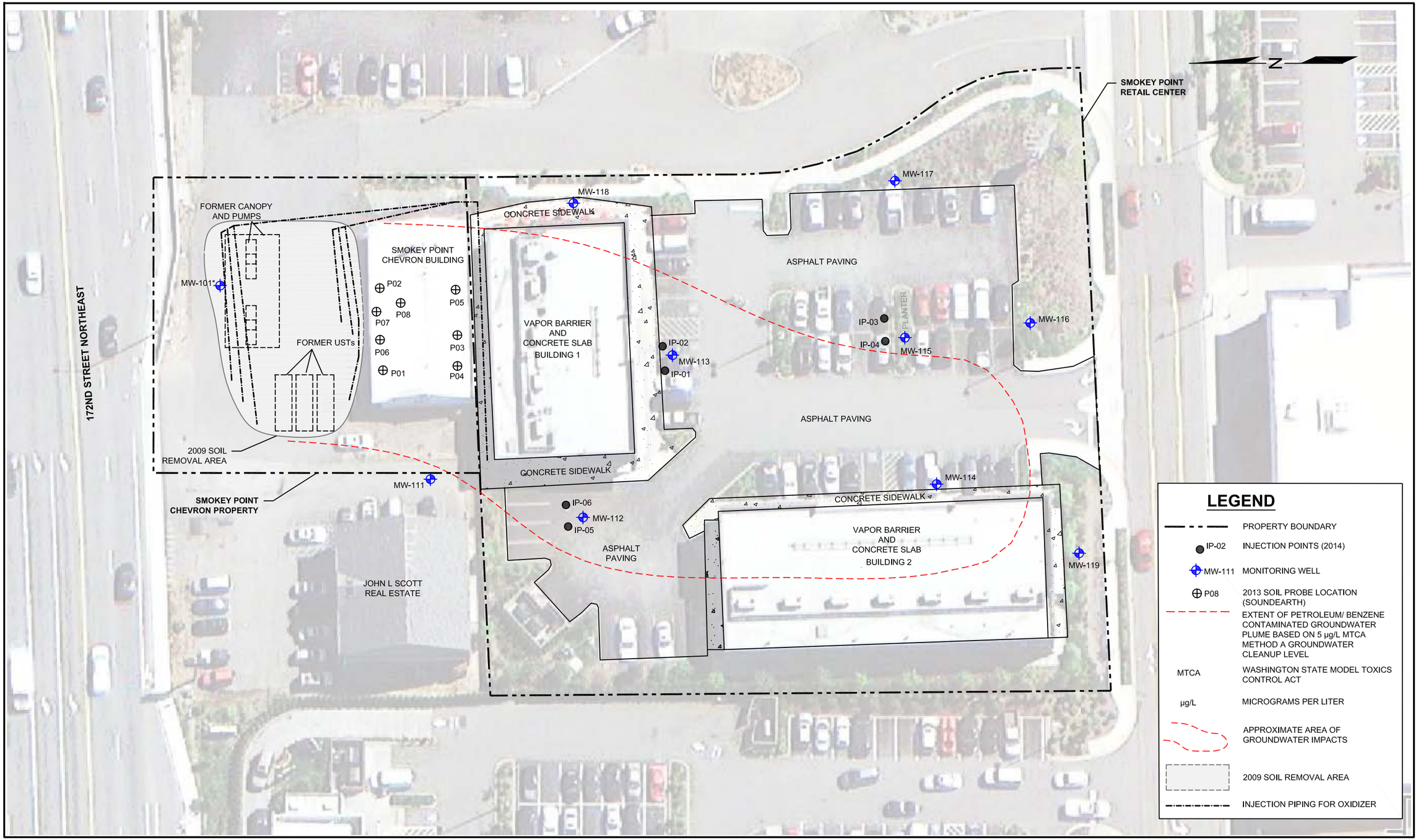
DATE:	06/10/15
DRAWN BY:	JQC
CHECKED BY:	CER
CAD FILE:	0918-001_FIG1

PROJECT NAME:	SMOKEY POINT RETAIL CENTER
PROJECT NUMBER:	0918-001
STREET ADDRESS:	171ST PLACE NORTHEAST
CITY, STATE:	MARYSVILLE, WASHINGTON

FIGURE 1
PROPERTY AND VICINITY MAP

6/10/2015
P:\0918 MADISON DEVELOPMENT\0918-001 SMOKEY POINT\TECHNICAL\CAD\2015\2015 CAR\0918-001 FIG1.DWG
SOUNDEARTHINC.COM

6/11/2015



LEGEND

	PROPERTY BOUNDARY
IP-02	INJECTION POINTS (2014)
MW-111	MONITORING WELL
P08	2013 SOIL PROBE LOCATION (SOUNDEARTH)
	EXTENT OF PETROLEUM/ BENZENE CONTAMINATED GROUNDWATER PLUME BASED ON 5 µg/L MTCA METHOD A GROUNDWATER CLEANUP LEVEL
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
µg/L	MICROGRAMS PER LITER
	APPROXIMATE AREA OF GROUNDWATER IMPACTS
	2009 SOIL REMOVAL AREA
	INJECTION PIPING FOR OXIDIZER

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DATE: 06/05/15
DRAWN BY: JQC/NAC
CHECKED BY: CER
CAD FILE: 0918-001_FIG2

PROJECT NAME: SMOKEY POINT RETAIL CENTER
PROJECT NUMBER: 0918-001
STREET ADDRESS: 171ST PLACE NORTHEAST
CITY, STATE: MARYSVILLE, WASHINGTON

REGION:

0 20 40 80
APPROXIMATE SCALE IN FEET

FIGURE 2
REMEDIAL MEASURES FOR SPRC PROPERTY AND SMOKEY POINT CHEVRON PROPERTY

P:\0918 MADISON DEVELOPMENT\0918-001 SMOKEY POINT\TECHNICAL\CAD\2015\2015 CAR\0918-001_FIG2.DWG

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6/10/2015

P:\0918 MADISON DEVELOPMENT\0918-001 SMOKEY POINT\TECHNICAL\CAD\20150615 CAR\0918-001_FIG3.DWG

N

SMOKEY POINT RETAIL CENTER

172ND STREET NORTHEAST

FORMER CANOPY AND PUMPS

MW-101

FORMER USTs

SMOKEY POINT CHEVRON BUILDING

MW-118

CONCRETE SIDEWALK

VAPOR BARRIER AND CONCRETE SLAB BUILDING 1

MW-117

ASPHALT PAVING

PLANTER

MW-116

MW-115

MW-113

ASPHALT PAVING

MW-114

CONCRETE SIDEWALK

VAPOR BARRIER AND CONCRETE SLAB BUILDING 2

MW-119

MW-111

SMOKEY POINT CHEVRON PROPERTY

MW-112

ASPHALT PAVING

JOHN L SCOTT REAL ESTATE

LEGEND

- PROPERTY BOUNDARY
- MW-111 MONITORING WELL
- EXTENT OF PETROLEUM/ BENZENE CONTAMINATED GROUNDWATER PLUME BASED ON 5 µg/L MTCA METHOD A GROUNDWATER CLEANUP LEVEL
- MTCA WASHINGTON STATE MODEL TOXICS CONTROL ACT
- µg/L MICROGRAMS PER LITER
- APPROXIMATE AREA OF GROUNDWATER IMPACTS
- VAPOR BARRIER
- GROUNDWATER FLOW DIRECTION (AUGUST 7, 2014)

SoundEarth Strategies
WWW.SOUNDEARTHINC.COM

DATE: 06/05/15
DRAWN BY: JQC/NAC
CHECKED BY: CER
CAD FILE: 0918-001_FIG3

PROJECT NAME: SMOKEY POINT RETAIL CENTER
PROJECT NUMBER: 0918-001
STREET ADDRESS: 171ST PLACE NORTHEAST
CITY, STATE: MARYSVILLE, WASHINGTON

REGION:

0 20 40 80
APPROXIMATE SCALE IN FEET

FIGURE 3
INSTITUTIONAL CONTROLS FOR SPRC PROPERTY AND SMOKEY POINT CHEVRON PROPERTY

TABLE

SoundEarth Strategies

Table 1
Groundwater Data Summary
Smokey Point Retail Center
2707 171st Place Northeast
Marysville, Washington

Well ID	Sample ID	Sampled By	Sample Date	TOC Elevation (ft)	Depth to Water[1] (ft)	Groundwater Elevation[2] (ft)	Analytical Results (µg/L)				
							GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]
MW101	--	SoundEarth	05/20/15	--	5.20	--	--	--	--	--	--
MW111	MW-111	GeoScience	09/27/06	100.78	7.69	93.09	<100	<1	<1	<1	<3
	MW-111	GeoScience	12/06/08		5.46	95.32	<100	<1	<1	<1	<3
	MW-111	GeoScience	09/27/09		7.29	93.49	<100	1.0	1.3	<1	<3
	MW-111	GeoScience	04/11/11		3.50	97.28	**4,500**	**6.9**	45	220	130
	MW111-20120914	SoundEarth	09/14/12		4.83	95.95	<100	<1	<1	<1	<3
	MW111-20130405	SoundEarth	04/05/13		5.15	95.63	<50	<1	<1	<1	<2
	--	SoundEarth	01/16/14		4.19	96.59	--	--	--	--	--
	--	SoundEarth	05/20/15		6.05	94.73	--	--	--	--	--
MW112	MW-112	GeoScience	12/06/08	99.50	4.21	95.29	<100	1.5	1.2	<1	<3
	MW-112	GeoScience	09/27/09		6.11	93.39	<100	<1	<1	<1	<3
	MW-112	GeoScience	04/11/11		2.51	96.99	700	**140**	54	35	67
	MW112-20120913	SoundEarth	09/13/12		5.39	94.11	180	**21**	1.6	3.4	5.6
	MW112-20130405	SoundEarth	04/05/13		4.02	95.48	63.2	**25.6**	<1	<1	2.64
	MW112-20140116	SoundEarth	01/16/14		3	96.50	<100	<1	<1	<1	<3
	MW112-20140530	SoundEarth	05/30/14		4.04	95.46	**4,100**	**570**	280	270	260
	MW112-20140711	SoundEarth	07/01/14		5	94.50	**1,300**	**56**	22	30	120
	MW112-20140807	SoundEarth	08/07/14		5.30	94.20	**5,800**	**140**	97	190	1,000
	MW112-20150520	SoundEarth	05/20/15		4.86	94.64	**990**	**24**	10	92	110
MW113	MW-113	GeoScience	12/06/08	100.03	4.86	95.17	250	**50**	1.8	6.9	<3
	MW-113	GeoScience	09/27/09		6.73	93.30	130	**29**	4.7	5.6	7.2
	MW-113	GeoScience	04/11/11		3.18	96.85	**4,000**	**70**	110	110	260
	MW113-20120913	SoundEarth	09/13/12		5.99	94.04	180	**17**	20	3.7	17
	MW113-20130405	SoundEarth	04/05/13		4.71	95.32	**4,510**	**118**	209	147	792
	MW113-20140116	SoundEarth	01/16/14		3.58	96.45	140	1.9	2.3	4.8	14
	MW113-20140530	SoundEarth	05/30/14		4.59	95.44	<100	1.8	6.5	2.2	5.1
	MW113-20140807	SoundEarth	08/07/14		5.97	94.06	380	**16**	13	18	48
	MW113-20150520	SoundEarth	05/20/15		5.46	94.57	210	**11**	16	7.0	32
MTCA Method A Cleanup Level for Groundwater[5]							**1,000/800[6]**	**5**	**1,000**	**700**	**1,000**

SoundEarth Strategies

Table 1
Groundwater Data Summary
Smokey Point Retail Center
2707 171st Place Northeast
Marysville, Washington

Well ID	Sample ID	Sampled By	Sample Date	TOC Elevation (ft)	Depth to Water[1] (ft)	Groundwater Elevation[2] (ft)	Analytical Results (µg/L)				
							GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]
MW114	MW-114	GeoScience	12/06/08	99.62	4.71	94.91	250	28	<1	<1	<3
	MW-114	GeoScience	09/27/09		6.55	93.07	160	15	1.9	1.3	<3
	MW-114	GeoScience	04/11/11		3.07	96.55	<100	9.2	<1	4.5	8.3
	MW114-20120913	SoundEarth	09/13/12		5.92	93.70	120	21	1.1	4.1	<3
	MW114-20130405	SoundEarth	04/05/13		4.65	94.97	288	59	<1	13.0	2.50
	MW114-20140116	SoundEarth	01/16/14		3.49	96.13	100	1.8	2.4	6.6	6.90
	MW114-20140530	SoundEarth	05/30/14		4.47	95.15	190	25	2.2	7.0	<3
	MW114-20140807	SoundEarth	08/07/14		5.83	93.79	300	43	2.6	23	<3
	MW114-20150520	SoundEarth	05/20/15		5.33	94.29	<100	5.4	2.0	<1	<3
MW115	MW-115	GeoScience	12/06/08	99.90	4.93	94.97	540	120	1.1	14	<3
	MW-115	GeoScience	09/27/09		6.49	93.41	<100	180	<1	10	<3
	MW-115	GeoScience	04/11/11		3.15	96.75	<100	<1	<1	<1	<3
	MW115-20120914	SoundEarth	09/14/12		6.08	93.82	<100	5.2	1.3	<1	<3
	MW115-20130405	SoundEarth	04/05/13		4.85	95.05	<50	5.75	<1	5.34	<2
	MW115-20140116	SoundEarth	01/16/14		3.67	96.23	390	18	5.6	10	16
	MW115-20140530	SoundEarth	05/30/14		4.65	95.25	<100	<1	<1	<1	<3
	MW115-20140807	SoundEarth	08/07/14		6.03	93.87	<100	1.8	<1	<1	<3
	MW115-20150520	SoundEarth	05/20/15		5.52	94.38	<100	1.3	<1	<1	<3
MW116	MW-116	GeoScience	12/06/08	100.17	5.30	94.87	380	49	<1	<1	<3
	MW-116	GeoScience	09/27/09		7.17	93.00	<100	32	<1	1.2	<3
	MW-116	GeoScience	04/11/11		3.75	96.42	<100	<1	<1	<1	<3
	MW116-20120914	SoundEarth	09/14/12		6.53	93.64	<100	1.1	<1	<1	<3
	MW116-20130405	SoundEarth	04/05/13		5.28	94.89	<50	<1	<1	<1	<2
	MW116-20140116	SoundEarth	01/16/14		4.06	96.11	<100	<1	<1	<1	<3
	MW116-20140530	SoundEarth	05/30/14		5.02	95.15	<100	<1	<1	<1	<3
	MW116-20140807	SoundEarth	08/07/14		6.42	93.75	<100	<1	<1	<1	<3
	MW116-20150520	SoundEarth	05/20/15		5.90	94.27	<100	<1	<1	<1	<3
MTCA Method A Cleanup Level for Groundwater[5]							**1,000/800[6]**	**5**	**1,000**	**700**	**1,000**

SoundEarth Strategies

Table 1
Groundwater Data Summary
Smokey Point Retail Center
2707 171st Place Northeast
Marysville, Washington

Well ID	Sample ID	Sampled By	Sample Date	TOC Elevation (ft)	Depth to Water[1] (ft)	Groundwater Elevation[2] (ft)	Analytical Results (µg/L)				
							GRPH[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]
MW117	MW-117	GeoScience	12/06/08	100.65	5.59	95.06	100	**12**	1.6	<1	<3
	MW-117	GeoScience	09/27/09		7.45	93.20	<100	1.4	1.0	<1	<3
	MW-117	GeoScience	04/11/11		3.78	96.87	<100	<1	<1	<1	<3
	MW117-20120913	SoundEarth	09/13/12		6.78	93.87	<100	<1	<1	<1	<3
	MW117-20130405	SoundEarth	04/05/13		5.5	95.15	<50	<1	<1	<1	<2
	--	SoundEarth	01/16/14		4.30	96.35	--	--	--	--	--
	--	SoundEarth	05/30/14		5.27	95.38	--	--	--	--	--
	MW117-20140807	SoundEarth	08/07/14		6.69	93.96	<100	<1	<1	<1	<3
	--	SoundEarth	05/20/15		6.16	94.49	--	--	--	--	--
MW118	MW-118	GeoScience	12/06/08	100.20	4.91	95.29	**2,400**	**290**	3.0	20	5.1
	MW-118	GeoScience	09/27/09		6.78	93.42	<100	4.1	21.0	2	14.0
	MW-118	GeoScience	04/11/11		3.19	97.01	<100	1.1	3.1	1.9	5.8
	MW118-20120914	SoundEarth	09/14/12		6.00	94.20	<100	<1	<1	<1	<3
	MW118-20130405	SoundEarth	04/05/13		4.74	95.46	<50	<1	<1	<1	<2
	--	SoundEarth	01/16/14		3.61	96.59	--	--	--	--	--
	MW118-20140530	SoundEarth	05/30/14		4.62	95.58	<100	<1	<1	<1	<3
	--	SoundEarth	08/07/14		6.00	94.20	--	--	--	--	--
	--	SoundEarth	05/20/15		5.50	94.70	--	--	--	--	--
MW119	MW119-20150520	SoundEarth	05/20/15	98.76	4.67	94.09	<100	<1	1.1	<1	<3
	--	--	--		--	--	--	--	--	--	--
MTCA Method A Cleanup Level for Groundwater[5]							**1,000/800[6]**	**5**	**1,000**	**700**	**1,000**

NOTES:

Samples collected by SoundEarth were analyzed by Friedman & Bruya, Inc., and/or Fremont Analytical, Inc., of Seattle, Washington.

Red denotes concentrations exceeding MTCA Method A cleanup levels for groundwater.

[1]Measured in feet below north side of the top of monitoring well casing.

[2]Based on May 2011 Geoscience Management, Inc. report.

[3]Analyzed by Northwest Total Petroleum Hydrocarbon Method NWTPH-Gx.

[4]Analyzed by U.S. Environmental Protection Agency Method 8260B, 8260C, or 8021B.

[5]MTCA Method A Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, revised November 2007.

[6]1,000 µg/L when benzene was present and 800 µg/L when benzene was not present.

-- = not sampled, measured, or analyzed

< = not detected at concentration exceeding the laboratory's lower reporting limit

µg/L = micrograms per liter

ft = feet

GeoScience = GeoScience Management, Inc.

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

SoundEarth = SoundEarth Strategies, Inc.

TOC = top of casing elevation

APPENDIX A

VAPOR BARRIER INSTALLATION PHOTOGRAPHS AND SPECIFICATIONS

Photo 1. Stego barrier extending under perimeter footing.

Photo 2. Stego vapor barrier installed under utility vault south of northern building.

Photo 3. Stego vapor barrier extending beneath perimeter concrete footing of northern building.

Photo 4. Seams taped.

Photo 5. Seams taped

Photo 6. Pipe penetrations taped.

GeoScience Management, Inc.
Environmental Consulting Services
809 156th Street NE
Arlington, WA 98223

PHOTO PLATE 1.
Installation of Stego Vapor Barrier
Madison Development Group, LLC Property
Smokey Point, WA

Photo 7. Pipe penetration taped.

Photo 8. Overlapping seams taped.

Photo 9. Placing layer of 10-mil visqueen over stego vapor barrier.

GeoScience Management, Inc.
Environmental Consulting Services
809 156th Street NE
Arlington, WA 98223

PHOTO PLATE 2.
Installation of Stego Vapor Barrier
Madison Development Group, LLC Property
Smokey Point, WA

Stego® Wrap Vapor Barrier

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Wrap Vapor Barrier

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Wrap Vapor Barrier is used as a below-slab vapor barrier.
COMPOSITION: Stego Wrap Vapor Barrier is a multi-layer plastic extrusion manufactured with only high grade prime, virgin, polyolefin resins.
ENVIRONMENTAL FACTORS:
Stego Wrap Vapor Barrier can be used in systems for the control of soil gases (radon, methane), soil poisons (oil by-products) and sulfates.

5. Installation
UNDER SLAB: Unroll Stego Wrap Vapor Barrier over an aggregate, sand or tamped earth base. Overlap all seams a minimum of six inches and tape using Stego Tape or Crete Claw® Tape. All penetrations must be sealed using a combination of Stego Wrap and Stego accessories.

For additional information, please refer to Stego's complete installation instructions.

6. Availability & Cost
Stego Wrap Vapor Barrier is available nationally via building supply distributors. For current cost information, contact your local Stego Wrap distributor or Stego Industries' sales department.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
None required.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or via the website.

10. Filing Systems
- Stego Industries' website
- Buildsite
- 4Specs

4. Technical Data

TABLE 1: PHYSICAL PROPERTIES OF STEGO WRAP VAPOR BARRIER

PROPERTY	TEST	RESULTS
Under Slab Vapor Retarders	ASTM E 1745 Class A, B & C – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs	Exceeds Class A, B & C
Water Vapor Permeance	ASTM F 1249 – Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor	0.0086 perms *0.0036 WVTR
Puncture Resistance	ASTM D 1709 – Test Methods for Impact Resistance of Plastic Film by Free-Falling Dart Method	2266 grams
Tensile Strength	ASTM D 882 – Test Method for Tensile Properties of Thin Plastic Sheeting	70.6 lbf/in.
Permeance After Conditioning (ASTM E 1745 Sections 7.1.2 - 7.1.5)	ASTM E 154 Section 8, F 1249 – Permeance after wetting, drying, and soaking ASTM E 154 Section 11, F 1249 – Permeance after heat conditioning ASTM E 154 Section 12, F 1249 – Permeance after low temperature conditioning ASTM E 154 Section 13, F 1249 – Permeance after soil organism exposure	0.0098 perms 0.0091 perms 0.0097 perms 0.0095 perms
Methane Transmission Rate	ASTM D 1434 – Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting	**192.8 GTR mL(STP)/m²*day
Radon Diffusion Coefficient		5.5 x 10^{-14} m²/second
Thickness	ACI 302.1R-04 – Minimum Thickness (10 mils)	15 mils
Roll Dimensions		14 ft. wide x 140 ft. long or 1,960 ft²
Roll Weight		140 lbs.

Note: perm unit = grains/(ft² *hr* in.Hg) * WVTR = Water Vapor Transmission Rate ** GTR = Gas Transmission Rate

Note: Test results above are for Stego Wrap products made as of March 15, 2013. If you have product made prior to March 15, 2013 please refer to Stego literature dated 10/12 for representative test results or call your local Stego Representative with questions.

Stego® Mastic

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Mastic

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Mastic is designed to be used as a waterproofing and vapor retardant membrane for use in conjunction with Stego Wrap 10-mil and 15-mil Vapor Retarder/Barrier. Stego Mastic can be used as an alternate to boots for pipe penetrations in Stego Wrap Vapor Barrier.
COMPOSITION: Stego Mastic is a medium-viscosity, water-based, polymer-modified anionic bitumin-ous/ asphalt emulsion, which exhibits bonding, elongation and water-proofing characteristics.
SIZE: Stego Mastic comes in five-gallon buckets.

4. Technical Data
APPLICABLE STANDARDS:
American Society for Testing and Materials (ASTM)

- ASTM D 412 Standard Test Method for Vulcanized Rubber and Therm-oplastic Elastomers - Tension
- ASTM E 154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth under Concrete Slabs, on Walls, or as Ground Cover
- ASTM G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials (Withdrawn 2000)
- ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials
- ASTM D 751 Standard Test Methods for Coated Fabrics
- ASTM D 1434 Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting
- ASTM C 836 Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Water-proofing Membrane for Use with Separate Wearing Course.
- ASTM E 1643 Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.

5. Installation
PREPARATION:

- A test application simulating the project environment should always be done prior to final usage of Stego Mastic.
- All Surfaces should be dry and free of loose materials, oils and other contaminants. The surfaces should be cleaned in the same fashion as the test surface in order to ensure proper results.
- Store above 40°F

PENETRATIONS:
For small pipe and rebar penetrations in Stego Wrap Vapor Barrier cut Stego Wrap just big enough for the pene-tration. Liberally apply Stego Mastic around the penetration to keep the integrity of the membrane intact. Stego Mastic can be applied by brush, roller, or sprayer.
NOTES: 1) For larger penetrations or wide cut-outs of Stego Wrap, use Stego Wrap and Stego Tape to repair and seal. 2) Solvent-based products should not be applied over this product. 3)Clean all tools with kerosene and/or oil-based cleaners.
For additional information, please refer to Stego's complete installation instructions.

6. Availability & Cost
Stego Mastic is available nationally via building supply distributors. For current cost information, contact your local Stego distributor or Stego Industries' sales department.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchan-tability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
None required.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or by visiting the website.

10. Filing Systems
- Stego Industries' website
- Buildsite

TABLE 1: PHYSICAL PROPERTIES OF STEGO MASTIC

Property and Test	Stego Mastic
Tensile/Elongation, ASTM D 412	32 psi / 3860%
Resistance to Decay, ASTM E 154	9% perm loss
Accelerated Aging, ASTM G 23	No Effect
Permeance, ASTM E 96	0.17 Perms
Hydrostatic Water Pressure, ASTM D 751	28 psi
Methane Transmission Rate, ASTM D 1434	0
Adhesion to Concrete & Masonry, ASTM C 836	7 lbf./in.
Hardness, ASTM C 836	85
Crack Bridging, ASTM C 836	No Cracking
Low Temp Flexibility, ASTM C 836	No Cracking at -20°C
Resistance to Acids:	
Acetic	30%
Sulfuric and Hydrochloric	15%
Temperature Effect:	
Stable	248°F
Flexible	13°F

Note: perm unit = grains/(ft² *hr* in.Hg)

Stego® Tape

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Tape

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Tape is a low permeance tape designed for protective sealing, hanging, seaming, splicing, and patching applications where a highly conformable material is required. It has been engineered to bond specifically to Stego Wrap, making it ideal for sealing Stego Wrap seams and penetrations.

COMPOSITION: Stego Tape is composed of polyethylene film and an acrylic, pressure-sensitive adhesive.

SIZE: Stego Tape is 3.75" wide and 180' long. Stego Tape ships 12 rolls in a case.

4. Technical Data
APPLICABLE STANDARDS:

Pressure Sensitive Tape Council (PSTC)

- PSTC 101 – International Standard for Peel Adhesion of Pressure Sensitive Tape

American Society for Testing & Materials (ASTM)

- ASTM E 1643 - Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs

5. Installation
SEAMS:

Overlap Stego Wrap six inches and seal with Stego Tape. Make sure the area of adhesion is free from dust, dirt, moisture and frost to allow maximum adhesion of the pressure sensitive tape.

PIPE PENETRATION SEALING

1) Install Stego Wrap around pipe by slitting/cutting material
2) If void space around pipe is minimal, seal around base of pipe with Stego Tape (Stego Mastic can be used for additional coverage)

DETAIL PATCH FOR PIPE PENETRATION SEALING

1) Cut a piece of Stego Wrap that creates a six inch overlap around all edges of the void space
2) Cut an "X" in the center of the detail patch
3) Slide detail patch over pipe, secure tightly
4) Tape down all sides of detail patch with Stego Tape
5) Seal around base of pipe with Stego Tape (Stego Mastic can be used for additional coverage)

Stego Tape should be installed above 40°F. In temperatures below 40°F, take extra care to remove moisture or frost from the area of adhesion.

For additional information, please refer to Stego's complete installation instructions.

6. Availability & Cost
Stego Tape is available nationally via building supply distributors. For current cost information, contact your local Stego distributor or Stego Industries' sales department.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given, as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
None required.

9. Technical Services
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10. Filing Systems
- Stego Industries' website
- Buildsite

TABLE 1: PHYSICAL PROPERTIES OF STEGO TAPE

PROPERTY	RESULTS
Total Thickness	6 mils
Permeance	0.03 perms
Tensile Strength	17 lbs./in. width
Elongation (at break) MD	1060%
Adhesion (20 min dwell ss, PSTC 101)	95-oz./in. width
Ultraviolet Resistance	Excellent

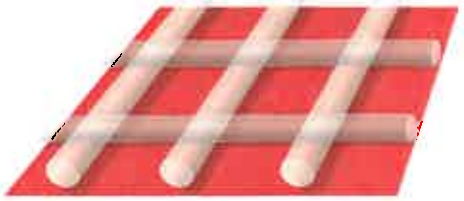
STEGO CRETE CLAW® TAPE

Stego Crete Claw® Tape provides an innovative and economical way to secure plastic film to concrete while the concrete is still wet.

Crete Claw is a multi-layered tape/detail strip that will mechanically lock Stego Wrap Vapor Barrier to concrete. The patent-pending design allows wet concrete to cast into the textured surface of Crete Claw. Just stick Crete Claw to Stego Wrap prior to concrete placement, then place the concrete directly over the system.

Stego Crete Claw can be used in place of Stego Tape to seal joints in Stego Wrap Vapor Barrier providing a dual purpose and helping to offset costs.

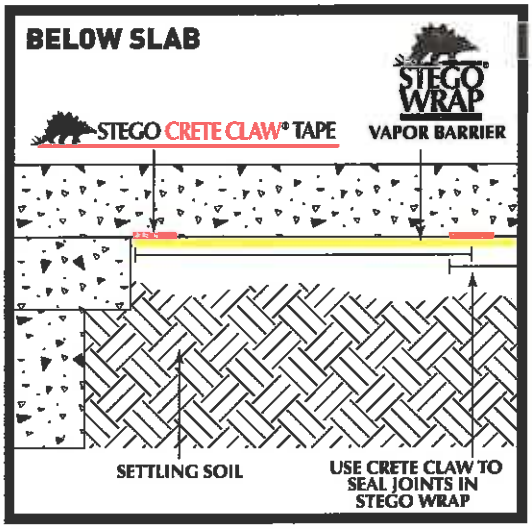
The patent-pending design allows wet concrete to cast into the textured surface of Crete Claw



ANGLED TOP VIEW

MOST COMMON APPLICATIONS FOR CRETE CLAW®		6" Wide	3" Wide
ASTM E 1643 - Forming seal to the slab at perimeter		✓	✓
Securing Stego Wrap to bottom of slab for expansive/settling soils and carton/void form applications	Perimeter	✓	
	Seams	✓	

- Quick and easy to install
- Saves time and money
- Innovative Solution to help meet ASTM E 1643



Other more expensive products rely on chemical reaction or geotextile to bond with concrete making it all but impossible to properly install the vapor barrier. Often in pursuit of the all-in-one product, the performance characteristics of the vapor barrier are compromised. Because Crete Claw Tape is applied as a separate accessory to the vapor barrier, it does not interfere with the ability to detail around penetrations or repair damaged areas.

TABLE 1: CRETE CLAW TAPE TEST RESULTS

PROPERTY	TEST	RESULTS
Total Thickness		26 mils
Permeance	ASTM F 1249	0.03 perms
180° Adhesion Peel Strength	ASTM D 903	17.6 lbf/in.
Sheer Adhesion Strength	1 in.² shear test using an Instron 3345 Machine	>49 lbf/in.²*
Roll Sizes		6" x 180' and 3" x 180' **

* Specimens failed by stretching vapor barrier to failure before pulling Crete Claw from concrete.
** 3" wide is for perimeter seal application only.

Contact us to learn more about this innovative product.

STEGO INDUSTRIES, LLC | San Clemente, CA | 949-257-4100 | Toll Free 877-464-7834 | Fax 949-257-4113 | www.stegoindustries.com

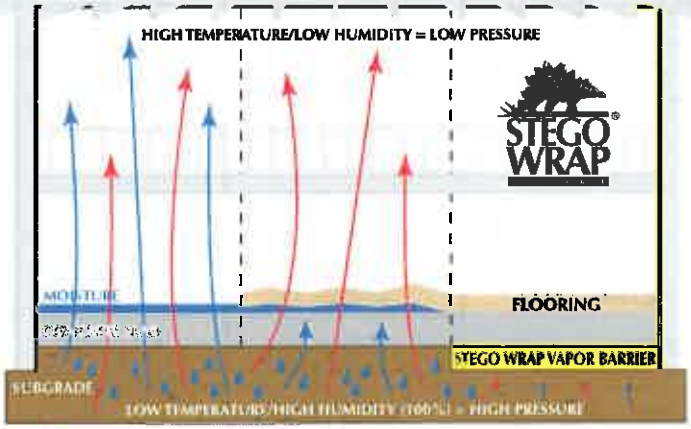
04/2013

STEGO® WRAP VAPOR BARRIER

ASTM E 1745 Class A-B-C Compliant

STEGO® WRAP VAPOR BARRIER

is made with our proven trade secret blend of prime virgin resins and additives. Stego Wrap Vapor Barrier is an ASTM E 1745 Class A Vapor Barrier (Below 0.01 perms). We focus on producing a product that will maintain its extremely low permeance for the life of a building. The protection of Stego Wrap Vapor Barrier provides the flexibility to change flooring types and overall building use without worrying about below-slab moisture vapor.



Regardless of the location of the water table, humidity below concrete slabs approximates 100%. Typical below slab vapor pressure is more than twice that of building interiors at room temperature, creating vapor drive from the substrate, up through the slab, and into the building.

FEATURES & BENEFITS

Unsurpassed Permeance Characteristics

Life of the Building Protection

Exceptional Tear and Puncture Resistance

Easy, Reliable Installation

Competitively Priced

Available Nationwide

Local Support

THE STEGO® ADVANTAGES

SUPERIOR DEFENSE Against Floor Failures:

Experts say "the need for a vapor barrier (as opposed to a vapor retarder) is becoming increasingly clear." Concrete Construction Magazine, August 2003, p.18.

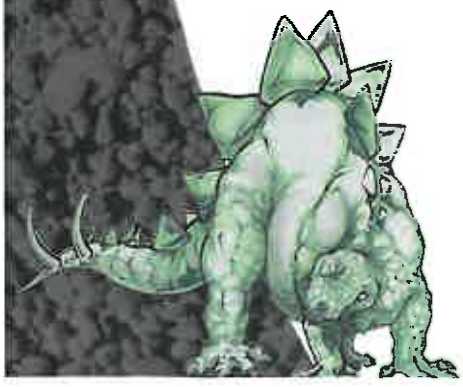
Infiltration of moisture through concrete slabs is a major building defect liability. Stego Wrap Vapor Barrier has an extremely low permeance preventing water vapor, soil gases (i.e. Radon), alkaline salts and soil sulfates from compromising the integrity of the building envelope and leading to serious problems with the concrete slab, floor coverings and indoor air quality. Stego Wrap Vapor Barrier is the best protection against these costly failures.

MOLD PREVENTION:

Mold needs three things to survive: moisture, sustained temperature (between 50° and 122° F), and a food source (dust, drywall, etc.). In any given building environment, contractors can only control one of these variables: moisture. Mold spores are present in 100% of building interiors. If moisture is allowed into your building environment, mold can and will grow. Toxic molds like Stachybotyrus can be fatal for nearly 5% of people (Institute of Medicine 1993), and cause a variety of serious health problems in others. Several recent well-publicized cases involving toxic mold have resulted in multimillion-dollar insurance settlements. Many of the nation's leading insurance companies have severely limited or removed coverage for mold claims fearing that these claims will bankrupt their companies. Now more than ever, it is critically important that extra attention be paid to preventing the intrusion of moisture vapor from your below-slab environment. Stego Wrap Vapor Barrier offers the level of protection that many architects are now seeking and is considered to be inexpensive insurance against these costly failures.

LONGEVITY AND STRENGTH:

Stego Wrap Vapor Barrier is NOT made with recycled materials and will not degrade. Prime, virgin resins are the key. Molecules within Stego Wrap "interlock" to provide strength, durability and unprecedented resistance to moisture vapor and radon gas. Stego Wrap's puncture resistance is excellent. Stego Wrap will not tear, crack, flake, snag or puncture, even when 18,000 lb. laser-screed machines are driving directly across the barrier (see the reverse side for Stego Wrap Vapor Barrier's specifications).



Stego Industries, LLC · San Clemente, CA
Tel: 949-257-4100 · Toll Free: 877-464-7834 · Fax: 949-257-4113
www.stegoindustries.com

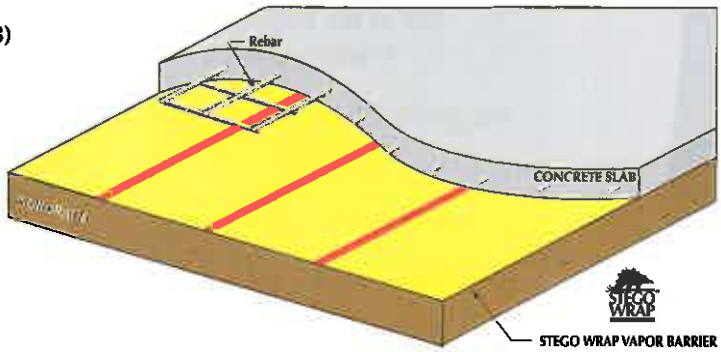
STEGO® WRAP VAPOR BARRIER SPECIFICATIONS

PROPERTIES	TEST METHOD	ASTM E 1745 Class A Requirements	TEST RESULT	EXPLANATION
Permeance	ASTM F 1249	0.1 perms	0.0086 perms * 0.0036 WVTR	Very impermeable to water vapor
Puncture Resistance	ASTM D 1709	2200 grams	Method B 2266 grams	Resistant to puncturing from construction abuse
Tensile Strength	ASTM D 882	45.0 lbf./in.	70.6 lbf./in.	Will not tear easily
Permeance After Conditioning (ASTM E 1745 Sections 7.1.2 - 7.1.5)	ASTM E 154 section 8	0.1 perms	0.0098 perms	Permeance after wetting, drying, and soaking
	ASTM E 154 section 11	0.1 perms	0.0091 perms	Permeance after heat conditioning
	ASTM E 154 section 12	0.1 perms	0.0097 perms	Permeance after low temperature conditioning
	ASTM E 154 section 13	0.1 perms	0.0095 perms	Permeance after soil organism exposure
Methane Transmission Rate	ASTM D 1434		**GTR = 192.8 mL(STP)/m^2*day	Greatly impedes the transmission of methane gas
Radon Diffusion Coefficient			5.5 x 10^{-14} m^2/second	Greatly impedes the transmission of radon gas
Thickness			15 mils	Stronger, tougher and less permeable than much thicker membranes
Roll Dimensions			14 ft. X 140 ft.	1,960 ft^2/roll - allows for a minimum of seams
Roll Weight			140 lbs.	Easy to unroll and install

Note: perm unit = grains/(ft^2 *hr* in.Hg) * WVTR = water vapor transmission rate **GTR = Gas Transmission Rate

INSTALLATION INSTRUCTIONS: (Based on ASTM E 1643)

Unroll Stego Wrap over the area where the slab is to be placed. Stego Wrap should completely cover the concrete placement area. Overlap seams 6 inches and tape using Stego Tape. All penetrations and blockouts should be sealed using a combination of Stego Wrap, Stego Tape and/or Stego Mastic. If the Stego Wrap is damaged, cut a piece from the Stego Wrap roll, place over the damaged area, and tape around all edges. Concrete may be placed directly on Stego Wrap. For additional information, please refer to Stego's complete installation instructions.



STEGO® TAPE:

STEGO WRAP RED POLYETHYLENE TAPE (3.75" x 180'/roll) is specially designed to seal seams and penetrations on Stego Wrap installations. The acrylic, pressure-sensitive adhesive provides permanent bonding and quick-stick properties. The area to be bonded should be free of dust, dirt and moisture.

WARRANTY:

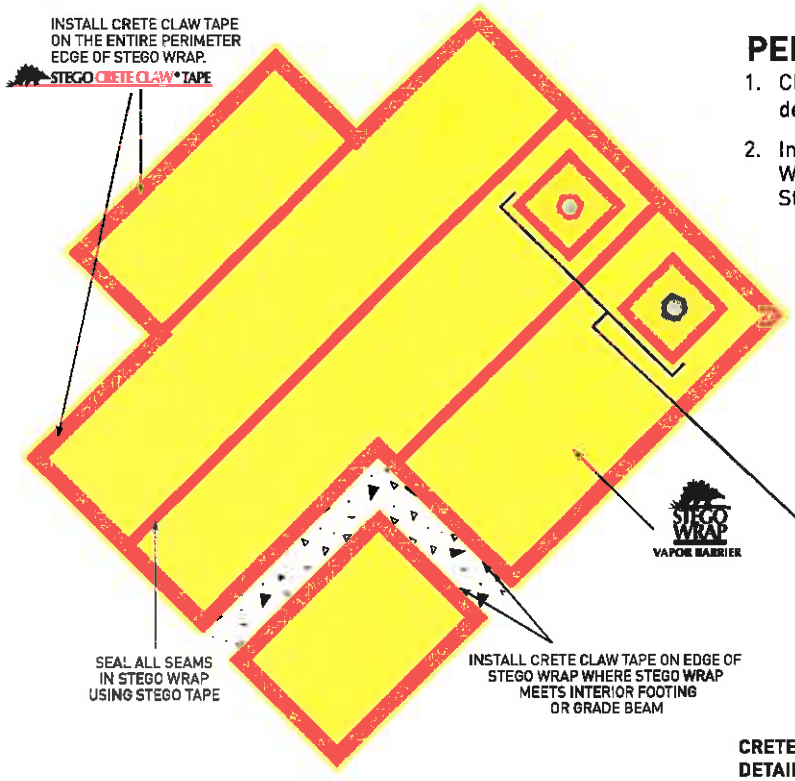
STEGO INDUSTRIES, LLC believes, to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions and installations are not within our control, STEGO INDUSTRIES, LLC does not guarantee results from use of the information provided and disclaims all liability from any loss or damage. NO WARRANTY EXPRESS OR IMPLIED IS GIVEN AS TO THE MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, OR OTHERWISE WITH RESPECT TO THE PRODUCTS REFERRED TO.

Note: Test results above are for Stego Wrap products made as of March 15, 2013. If you have product made prior to March 15, 2013, please refer to Stego literature dated 10/12 for representative test results or call your local Stego Representative with questions.

Stego Industries, LLC · San Clemente, CA
Tel: 949-257-4100 · Toll Free: 877-464-7834 · Fax: 949-257-4113 · www.stegoindustries.com

04/2013

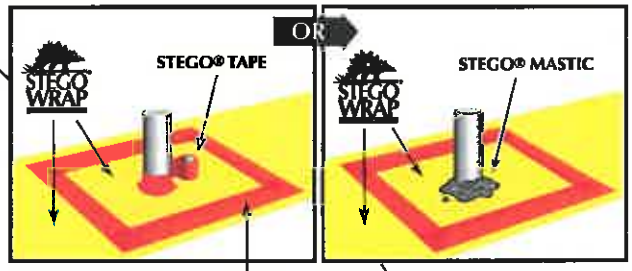
STEGO CRETE CLAW® TAPE
INSTALLATION INSTRUCTIONS
TOP-DOWN VIEWS OF A BUILDING FOOTPRINT



PERIMETER SEAL TO SLAB

1. Clean surface of Stego Wrap to ensure that it is free of moisture and debris prior to the installation of Crete Claw Tape.
2. Install 3" or 6" Crete Claw Tape on the entire perimeter of the Stego Wrap installation. Crete Claw Tape should be completely on Stego Wrap.

SEAL ALL PENETRATIONS WITH STEGO TAPE AND/OR STEGO MASTIC. CRETE CLAW TAPE IS NOT MEANT FOR REPAIRING PENETRATIONS.



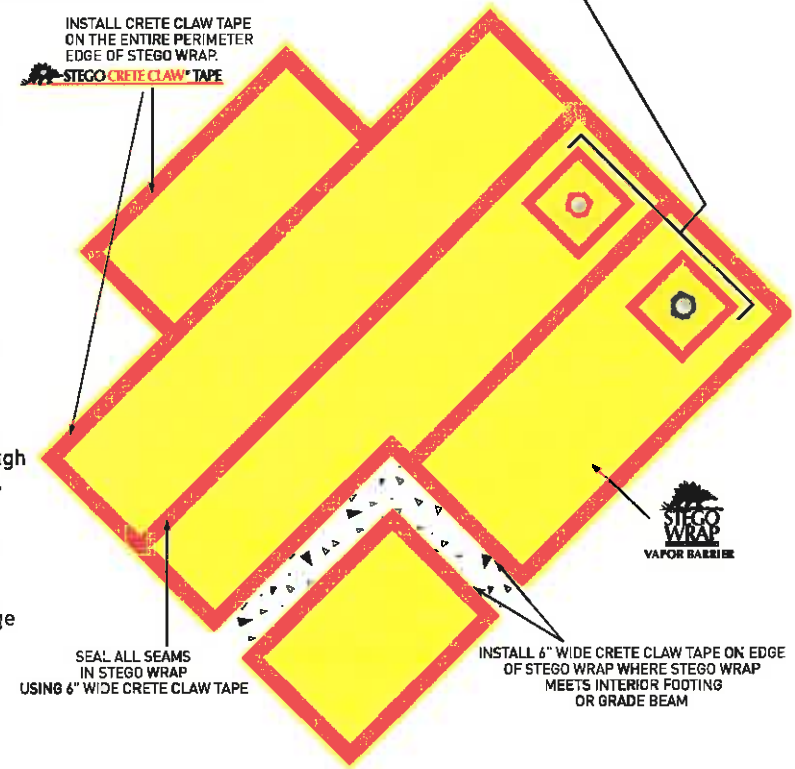
CRETE CLAW CAN BE USED TO SEAL SEAM AROUND DETAIL PATCH FOR ADDED PROTECTION.

SECURING STEGO WRAP TO THE BOTTOM OF THE SLAB

1. Clean surface of Stego Wrap to ensure that it is free of moisture and debris prior to the installation of 6" wide Crete Claw Tape.
2. Overlap seams a minimum of 6 inches. Seal all seams in Stego Wrap using Crete Claw Tape.
3. Install 6" wide Crete Claw Tape on the entire perimeter of the Stego Wrap installation. Crete Claw Tape should be completely on Stego Wrap.
4. Install additional Crete Claw Tape if required. Lab and simulated field tests have shown that if 6" wide Crete Claw is installed on all seams and around the perimeter, then it is more than strong enough to support Stego Wrap. If determined by the architect or engineer, additional Crete Claw may be specified.
5. Prior to the placement of concrete, ensure that Crete Claw is free of dirt or debris to ensure maximum bond to the concrete.

These are general instructions. Installation requirements may change on a project-by-project basis

IMPORTANT - For the application of securing Stego Wrap to the bottom of the slab, always use 6" wide Crete Claw Tape.



NOTE: Stego Industries, LLC's ("Stego") Installation Instructions are based on ASTM E 1643 - *Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.* These instructions are meant to be used as a guide, and do not take into account specific job site situations. Consult local building codes and regulations along with the building owner or owner's representative before proceeding. If you have any questions regarding the above mentioned installation instructions, Stego products, please call us at 877-464-7834 for technical assistance. While Stego employees and representatives may provide technical assistance regarding the utility of a specific installation practice or Stego product, they are not authorized to make final design decisions.

Stego® Crete Claw® Tape

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00

1. Product Name
Stego® Crete Claw® Tape

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Crete Claw Tape is a multi-layered tape that is used to seal Stego Wrap to concrete while the concrete is still wet. Crete Claw allows wet concrete to cast into the textured top surface to form a mechanical bond/seal.
COMPOSITION: Stego Crete Claw is composed of polyethylene film, aperture film, and an acrylic, pressure sensitive adhesive.
SIZE: Stego Crete Claw is 6" wide by 180' long. Stego Crete Claw ships 8 rolls in a case.

4. Technical Data

TABLE 1: PHYSICAL PROPERTIES OF STEGO CRETE CLAW

PROPERTY	RESULTS
Dimensions	6" x 180'
Total Thickness	26 mils
Permeance: ASTM F 1249	0.03 perms
180° Adhesion Peel Strength: ASTM D 903	17.6 lbf/in.
Sheer Adhesion Strength: 1 in^2 shear test using an Instron 3345 Machine	>49 lbf/in^2*

* Specimens failed by stretching vapor barrier to failure before pulling Crete Claw from concrete.

5. Installation
SECURING STEGO WRAP TO SLAB: Clean the surface of Stego Wrap to ensure that it is free of moisture, frost, dirt, and debris prior to the installation of Stego Crete Claw. When ready to apply Crete Claw, peel back the release liner and apply to Stego Wrap. Stego Crete Claw should be completely on Stego Wrap.

Install Crete Claw Tape on all seams and around the entire perimeter of the Stego Wrap installation.

To detail, cut Stego Crete Claw with a box knife or scissors. Crete Claw should be installed above 40°F for maximum adhesion. For additional information, please refer to Stego's complete installation instructions.

TIP: Wrap the release liner back over the entire roll while unrolling Crete Claw. This technique will allow the release liner to pull off easily and keep it out of the way.

6. Availability & Cost
Stego Crete Claw is available nationally through our network of building supply distributors. For current cost information, contact your local Stego Wrap distributor or Stego Industries' Sales Representative.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
Store Stego Crete Claw in a dry and temperate area.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical department or via our website.

10. Filing Systems
www.stegoindustries.com
Buildsite

Stego® Crete Claw® (3" Wide)

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00

1. Product Name
Stego® Crete Claw® (3" Wide)

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Crete Claw is a multi-layered tape that is used to seal Stego Wrap to the perimeter of the slab while the concrete is placed. Crete Claw allows wet concrete to cast into the textured top surface to form a mechanical bond/seal.
COMPOSITION: Stego Crete Claw is composed of polyethylene film, aperture film, and an acrylic, pressure sensitive adhesive.
SIZE: Stego Crete Claw (3" Wide) is 3" wide and 180' long. Stego Crete Claw (3" Wide) ships 16 rolls in a case.

4. Technical Data

TABLE 1: PHYSICAL PROPERTIES OF STEGO CRETE CLAW (3" Wide)

PROPERTY	RESULTS
Dimensions	3" x 180'
Total Thickness	26 mils
Permeance: ASTM F 1249	0.03 perms
180° Adhesion Peel Strength: ASTM D 903	17.6 lbf/in.
Sheer Adhesion Strength: 1 in^2 shear test using an Instron 3345 Machine	>49 lbf/in^2*

* Specimens failed by stretching vapor barrier to failure before pulling Crete Claw from concrete.

5. Installation
UNDER SLAB: Clean surface of Stego Wrap to ensure that it is free of moisture, frost, dirt, and debris prior to the installation of Stego Crete Claw. When ready to apply Crete Claw, peel back the release liner and apply to Stego Wrap. Stego Crete Claw should be completely on Stego Wrap.

To detail, cut Stego Crete Claw with a box knife or scissors. Crete Claw should be installed above 40°F for maximum adhesion. For additional information please refer to Stego's complete installation instructions.

TIP: Wrap the release liner back over the entire roll while unrolling Crete Claw. This technique will allow the release liner to pull off easily and keep it out of the way.

6. Availability & Cost
Stego Crete Claw (3" Wide) is available nationally through our network of building supply distributors. For current cost information, contact your local Stego Wrap distributor or Stego Industries' Sales Representative.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
Store Stego Crete Claw in a dry and temperate area.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical department or via our website.

10. Filing Systems
www.stegoindustries.com
Buildsite

StegoTack® Tape

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
StegoTack® Tape

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: StegoTack Tape is a double-sided adhesive strip used to bond and seal Stego Wrap to concrete, masonry, wood, metal, and other surfaces. StegoTack is a flexible and moldable material to allow for a variety of applications and installations.
COMPOSITION: StegoTack Tape is made from a blend of synthetic rubber and resins. SIZE: StegoTack Tape is 2 inches wide and 50 feet long. StegoTack Tape ships 12 rolls in a case.

5. Installation
TO WALLS: Make sure the area of adhesion is free of dust, dirt, debris, moisture, and frost to allow maximum adhesion. Remove release liner on one side and stick to desired surface. When ready to apply Stego Wrap, remove the exposed release liner and press Stego Wrap firmly against StegoTack Tape to secure.

TO FOOTINGS: Make sure the area of adhesion is free of dust, dirt, debris, moisture, and frost to allow maximum adhesion. Remove release liner on one side and stick to desired surface. When ready to apply Stego Wrap, remove the exposed release liner and press Stego Wrap firmly against StegoTack Tape to secure.

Cut StegoTack Tape using a utility knife or scissors. Cut StegoTack Tape before removing the release liner for easier cutting. Install StegoTack Tape between 40°F and 110°F. For additional information please refer to Stego's complete installation instructions.

6. Availability & Cost
StegoTack Tape is available nationally through our network of building supply distributors. For current cost information, contact your local Stego Wrap distributor or Stego Industries' Sales Representative.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
For longer adhesive life, store in dry, temperate area.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or via the website. **www.stegoindustries.com**

10. Filing Systems
www.stegoindustries.com
Buildsite

4. Technical Data

TABLE 1: PHYSICAL PROPERTIES OF STEGOTACK TAPE

PROPERTY	RESULTS
Dimensions	50 feet long, 2 inches wide
Total Thickness	30 Mils
Permeance	0.03 perms (30 mils)
Color	Grey
Material	Synthetic rubber blend
Adhesion to Steel	10.3 lbs./in. width ASTM C 1000
Installation Temperature	40°F/110°F (4°C/43°C)
In Service Temperature Range	-20°F/+140°F (-29°C/60°C)
VOC Content	No VOC's, 100% solids

Stego® Term Bar

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Term Bar

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Term Bar is a semi-flexible plastic termination bar used for mechanically securing Stego Wrap or other materials to concrete, masonry, or wood.
COMPOSITION: Stego Term Bar is made from post-industrial recycled PVC.

5. Installation
UNDER SLAB: Nail through Stego Term Bar and Stego Wrap to secure material as needed. If the beveled edge is facing the wall, a pocket/lip is created for mastic/sealant to be used if required. Pre-drilled nail holes are provided every 6 inches for ease of installation.

To cut Stego Term Bar, score with a utility knife or wire snips. Stego Term Bar can be bent back and forth and then broken at desired locations as well. Stego Term Bar is flexible enough to bend around corners and contours in the wall for easy installation.

For additional information, please refer to Stego's complete installation instructions.

6. Availability & Cost
Stego Term Bar is available nationally through our network of building supply distributors. For current cost information, contact your local Stego Wrap distributor or Stego Industries' Sales Representative.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
Store above 60°F. Term Bar will become less flexible at lower temperatures.

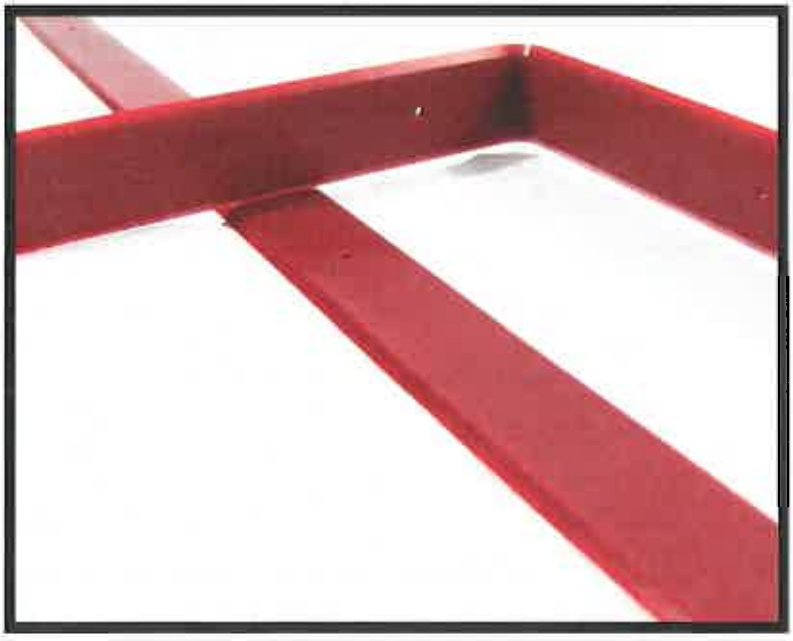
9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or via the website. **www.stegoindustries.com**

10. Filing Systems
www.stegoindustries.com

4. Technical Data

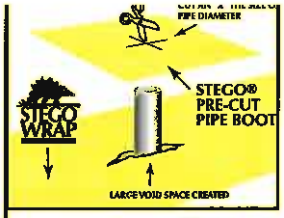
TABLE 1: PHYSICAL PROPERTIES OF STEGO TERM BAR

PROPERTY	RESULTS
Dimensions	4 feet long, 1 1/8 inches wide
Color	Red
Material	Recycled PVC
Weight	4.7 oz. (132 grams)



Stego® Pre-Cut Pipe Boots

STEGO INDUSTRIES, LLC



Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Pre-Cut Pipe Boots

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Pre-Cut Pipe Boots are used to seal around permanent penetrations in Stego Wrap.
COMPOSITION: Stego Pre-Cut Pipe Boots are made from Stego Wrap Vapor Barrier (15-mil), and therefore are manufactured from only high grade prime, virgin, polyolefin resins.
SIZE: Stego Pre-Cut Pipe Boots are 18" by 18" and 15 mils thick. Stego Pre-Cut Pipe Boots ship 10 packs of 25 in a case (250 boots per case).

5. Installation
UNDER SLAB: Cut an "X" the size of the pipe diameter in the center of the Pre-Cut Pipe Boot and slide tightly over pipe. Tape all sides of the pipe boot with Stego Tape. Seal around the base of the pipe using Stego tape and/or Stego Mastic.

For additional information, please refer to Stego's complete installation instructions.

6. Availability & Cost
Stego Pre-Cut Pipe Boots are available nationally through our network of building supply distributors. For current cost information, contact your local Stego Wrap distributor or Stego Industries' Sales Representative.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
None required.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or via the website. **www.stegoindustries.com**

4. Technical Data

TABLE 1: PHYSICAL PROPERTIES OF STEGO PRE-CUT PIPE BOOTS

PROPERTY	TEST	RESULTS
Under Slab Vapor Retarders	ASTM E 1745 Class A, B & C – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs	Exceeds Class A, B & C
Water Vapor Permeance	ASTM F 1249 – Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor	0.0086 perms *0.0036 WVTR
Puncture Resistance	ASTM D 1709 – Test Methods for Impact Resistance of Plastic Film by Free-Falling Dart Method	2266 grams
Tensile Strength	ASTM D 882 – Test Method for Tensile Properties of Thin Plastic Sheeting	70.60 lbf/in.
Permeance After Conditioning (ASTM E 1745 Sections 7.1.2 - 7.1.5)	ASTM E 154 Section 8, F 1249 – Permeance after wetting, drying, and soaking ASTM E 154 Section 11, F 1249 – Permeance after heat conditioning ASTM E 154 Section 12, F 1249 – Permeance after low temperature conditioning ASTM E 154 Section 13, F 1249 – Permeance after soil organism exposure	0.0098 perms 0.0091 perms 0.0097 perms 0.0095 perms
Thickness	ACI 302.1R-04 – Minimum Thickness (10 mils)	15 mils
Pipe Boot Dimensions		18" x 18"

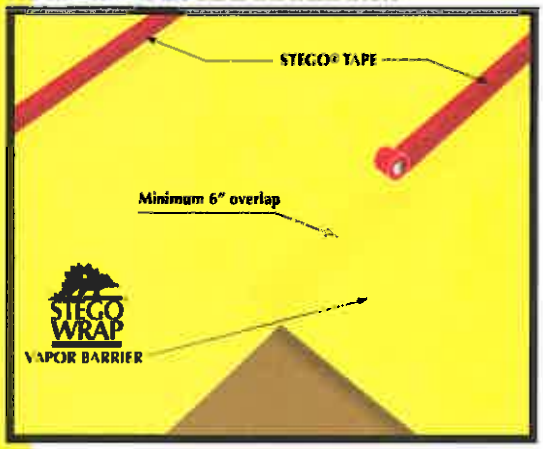
Note: perm unit = grains/(ft² *hr* in.Hg) * WVTR = Water Vapor Transmission Rate

PART 1

STEGO WRAP VAPOR BARRIER/RETARDER INSTALLATION INSTRUCTIONS

IMPORTANT: Please read these installation instructions completely, prior to beginning any Stego Wrap installation. The following installation instructions are based on ASTM E 1643 - Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs. If project specifications call for compliance with ASTM E 1643, then be sure to review the specific installation sections outlined in the standard along with the techniques referenced in these instructions.

FIGURE 1: UNDER-SLAB INSTALLATION



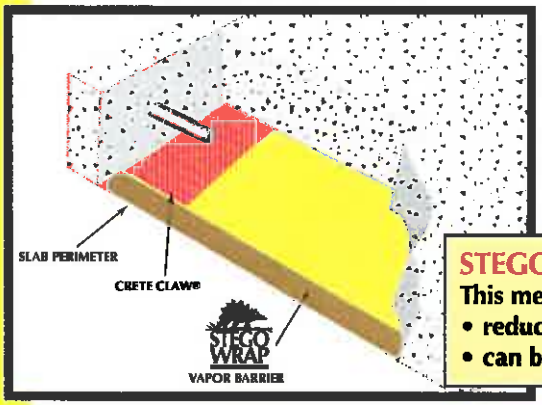
UNDER-SLAB INSTRUCTIONS:

1. Stego Wrap can be installed over an aggregate, sand, or tamped earth base. It is not necessary to have a cushion layer or sand base, as Stego Wrap is tough enough to withstand rugged construction environments.
2. Unroll Stego Wrap over the area where the slab is to be placed. Stego Wrap should completely cover the concrete placement area. All joints/seams both lateral and butt should be overlapped a minimum of six inches and taped using Stego Tape.

NOTE: The area of adhesion should be free from dust, dirt, moisture, and frost to allow maximum adhesion of the pressure-sensitive tape.

3. ASTM E 1643 requires sealing the perimeter of the slab. *Extend vapor retarder over footings and seal to foundation wall, grade beam, or slab at an elevation consistent with the top of the slab or terminate at impediments such as waterstops or dowels.* Consult the structural engineer of record before proceeding.

FIGURE 2a: SEAL TO SLAB AT PERIMETER



SEAL TO SLAB AT PERIMETER:*

NOTE: Clean the surface of Stego Wrap to ensure that the area of adhesion is free from dust, dirt, moisture, and frost to allow maximum adhesion of the pressure-sensitive adhesive.

a. Install Crete Claw® on the entire perimeter edge of Stego Wrap.

b. Prior to the placement of concrete, ensure that the top of Crete Claw is free of dirt, debris, or mud to maximize the bond to the concrete.

STEGO LABOR SAVER!
This method not only complies with ASTM E 1643, but it also:
- **reduces labor compared to other perimeter sealing techniques.**
- **can be used even without an existing wall or footing, unlike alternatives.**

FIGURE 2b: SEAL TO PERIMETER WALL

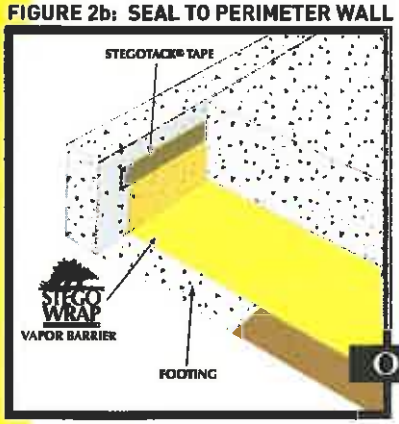
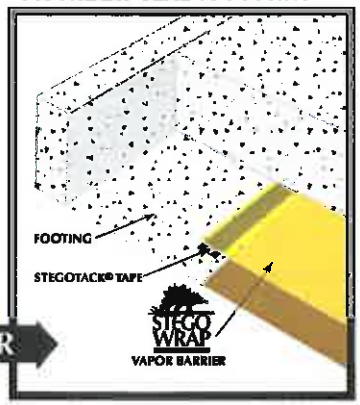


FIGURE 2c: SEAL TO FOOTING



OR

OR SEAL TO PERIMETER WALL OR FOOTING WITH STEGOTACK® TAPE:*

a. Make sure area of adhesion is free of dust, dirt, debris, moisture, and frost to allow maximum adhesion.

b. Remove release liner on one side and stick to desired surface.

c. When ready to apply Stego Wrap, remove the exposed release liner and press Stego Wrap firmly against StegoTack Tape to secure.

* If ASTM E 1643 is specified, consult with project architect and structural engineer to determine which perimeter seal technique should be employed for the project.

NOTE: Stego Industries, LLC's ("Stego") installation instructions are based on ASTM E 1643 - *Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.* These instructions are meant to be used as a guide, and do not take into account specific job site situations. Consult local building codes and regulations along with the building owner or owner's representative before proceeding. If you have any questions regarding the above mentioned installation instructions or Stego products, please call us at 877-464-7834 for technical assistance. While Stego employees and representatives may provide technical assistance regarding the utility of a specific installation practice or Stego product, they are not authorized to make final design decisions.

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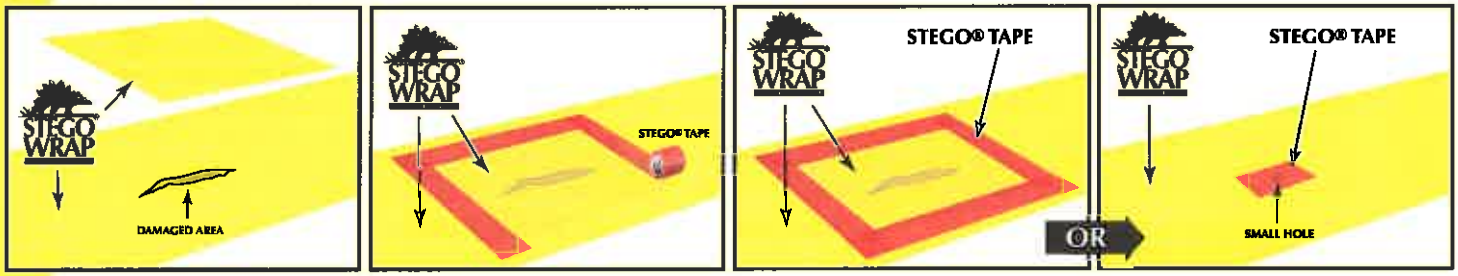
4. In the event that Stego Wrap is damaged during or after installation, repairs must be made. Stego Tape can be used to repair small holes in the material. For larger holes, cut a piece of Stego Wrap to a size and shape that covers any damage by a minimum overlap of six inches in all directions. Clean all adhesion areas of dust, dirt, moisture, and frost. Tape down all edges using Stego Tape (see figure 3, Sealing Damaged Areas).

FIGURE 3: SEALING DAMAGED AREAS



5. **IMPORTANT: ALL PENETRATIONS MUST BE SEALED.** All pipe, ducting, rebar, wire penetrations and block outs should be sealed using Stego Wrap, Stego Tape and/or Stego Mastic (see figure 4a, Pipe Penetration Sealing).

FIGURE 4a: PIPE PENETRATION SEALING

STEGO WRAP PIPE PENETRATION REPAIR DETAIL:

1: Install Stego Wrap around pipe penetrations by slitting/cutting material as needed. Try to minimize the void space created.

2: If Stego Wrap is close to pipe and void space is minimized then seal around pipe penetration with Stego Tape and/or Stego Mastic.

(See Figure 4a)

3: If detail patch is needed to minimize void space around penetration, then cut a detail patch to a size and shape that creates a six inch overlap on all edges around the void space at the base of the pipe. Stego Pre-Cut Pipe Boots are also available to speed up the installation.

4: Cut an "X" the size of the pipe diameter in the center of the pipe boot and slide tightly over pipe.

5: Tape down all sides of the pipe boot with Stego Tape.

6: Seal around the base of the pipe using Stego Tape and/or Stego Mastic.

(See Figure 4b)

FIGURE 4b: DETAIL PATCH FOR PIPE PENETRATION SEALING

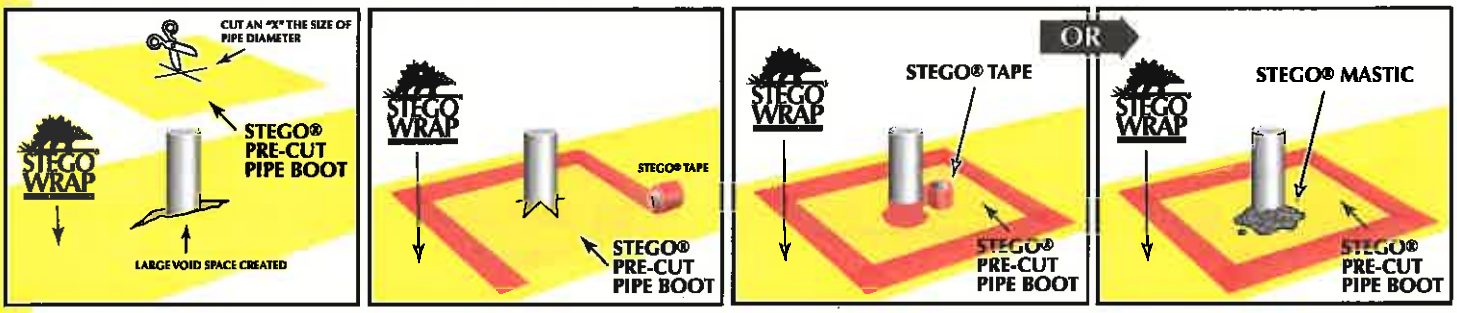
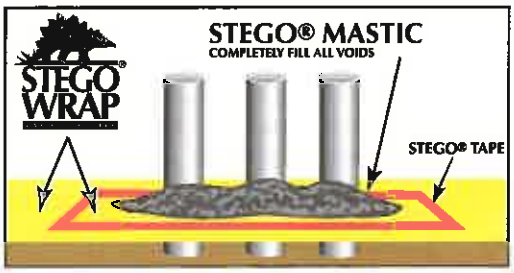


FIGURE 5: MULTIPLE PIPE PENETRATION SEALING



MULTIPLE PIPE PENETRATION SEALING:

Multiple pipe penetrations in close proximity and very small pipes may be sealed using Stego Wrap and Stego Mastic for ease of installation (see figure 5, Multiple Pipe Penetration Sealing).

NOTE: Stego Industries, LLC's ("Stego") installation instructions are based on ASTM E 1643 - *Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.* These instructions are meant to be used as a guide, and do not take into account specific job site situations. Consult local building codes and regulations along with the building owner or owner's representative before proceeding. If you have any questions regarding the above mentioned installation instructions or Stego products, please call us at 877-464-7834 for technical assistance. While Stego employees and representatives may provide technical assistance regarding the utility of a specific installation practice or Stego product, they are not authorized to make final design decisions.

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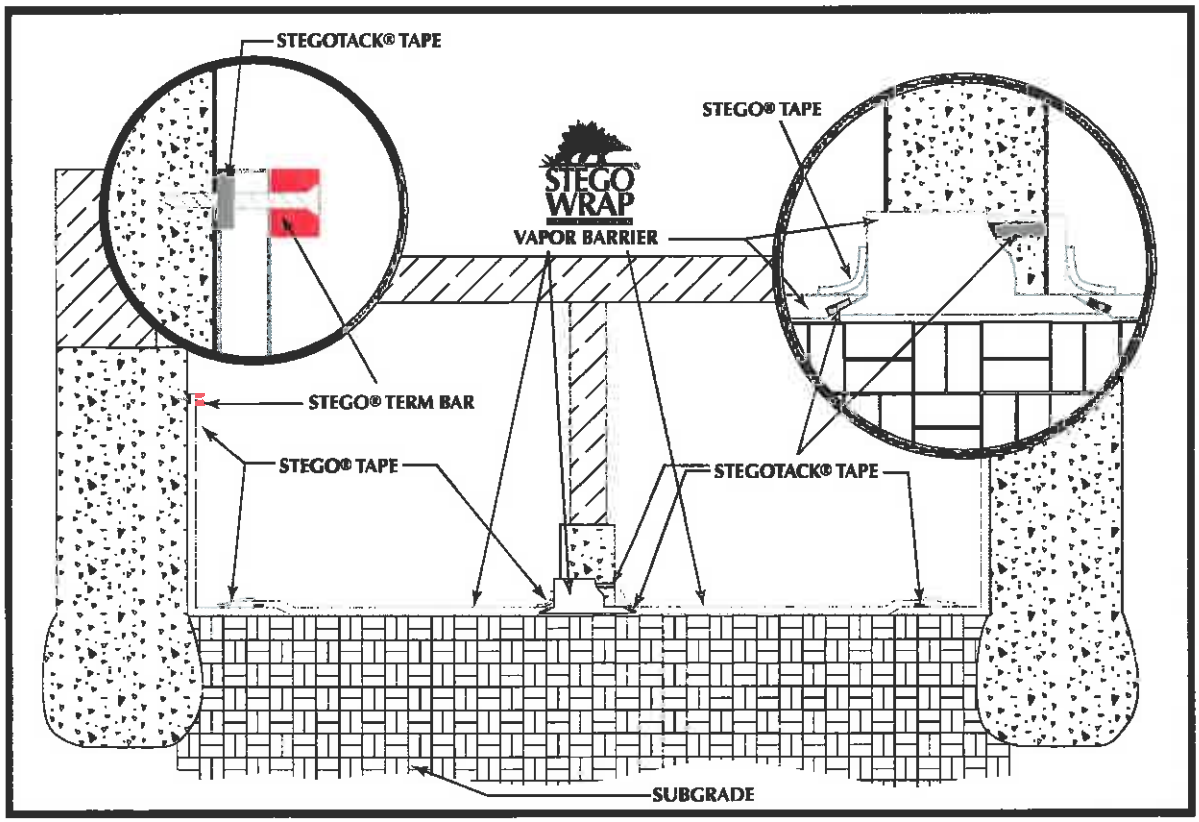
PART 2

STEGO WRAP VAPOR BARRIER/RETARDER INSTALLATION INSTRUCTIONS

CRAWL SPACE INSTALLATION INSTRUCTIONS:

1. Turn Stego Wrap up the foundation wall to a minimum height of six inches above the outside/exterior grade or in compliance with local building codes and terminate with Stego Term Bar. To form a complete seal, apply StegoTack Tape or a layer of Stego Mastic to the foundation wall prior to installing Stego Term Bar. Allow one hour for Stego Mastic to cure prior to installing Stego Term Bar.
2. Seal Stego Wrap around all penetrations and columns using Stego Tape, StegoTack Tape, and/or Stego Mastic.
3. Place Stego Wrap directly over the crawl space floor. If rigid insulation is to be used, install Stego Wrap prior to insulation (under insulation and between the foundation wall and insulation).
4. Overlap seams a minimum of six inches and seal with Stego Tape. Some codes require a minimum of a twelve inch overlap. Check appropriate codes prior to installation.

FIGURE 6: CRAWL SPACE INSTALLATION



NOTE: Stego Wrap Vapor Barrier and Stego Tape are both available in white (as shown in illustration above).

INSTALLATION TIP:

1. For a cleaner look and to prevent against tenting of Stego Wrap at the foundation wall/foundation floor intersection, consider mechanically fastening Stego Wrap to base of foundation wall in addition to the above mentioned wall termination.

NOTE: Stego Industries, LLC's ("Stego") installation instructions are based on ASTM E 1643 - *Standard Practice for Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.* These instructions are meant to be used as a guide, and do not take into account specific job site situations. Consult local building codes and regulations along with the building owner or owner's representative before proceeding. If you have any questions regarding the above mentioned installation instructions or Stego products, please call us at 877-464-7834 for technical assistance. While Stego employees and representatives may provide technical assistance regarding the utility of a specific installation practice or Stego product, they are not authorized to make final design decisions.

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APPENDIX B

VAPOR BARRIER AND ASPHALT CAP INSPECTION FORM

SoundEarth Strategies

Vapor Barrier Inspection Form

Client: _____ Date Form Completed: _____

Project No.: _____ Field Personnel: _____

Location: Smokey Point Retail Center

Inspection Element	Satisfactory	Maintenance Needed
Slab and Foundation Cracking		
	Comments:	
Settlement		
	Comments:	
Slab Damage and Wear		
	Comments:	
Slab Cutting, Coring, and Patching		
	Comments:	
Recent Utility Work affecting Slab		
	Comments:	
Other		
	Comments:	

The vapor barrier will be inspected by Madison Development or SoundEarth Strategies field personnel for cracking, erosion damage, animal burrows, sloughing, seepage, or any other damage to the cap.

Date: _____ Field Personnel: _____

Asphalt Cap Inspection Form

Client: _____ Date Form Completed: _____

Project No.: _____ Field Personnel: _____

Location: Smokey Point Retail Center

Inspection Element	Satisfactory	Maintenance Needed
Cracking		
	Comments:	
Erosion		
	Comments:	
Animal Burrows		
	Comments:	
Settlement		
	Comments:	
Ponded Water		
	Comments:	
Other		
	Comments:	

The asphalt cap will be inspected by Madison Development or SoundEarth Strategies field personnel for cracking, erosion damage, animal burrows, sloughing, seepage, or any other damage to the cap.

Date: _____ Field Personnel: _____

APPENDIX C
DRAFT ENVIRONMENTAL COVENANT

Environmental Covenant (DRAFT)

Grantor:	**Madison Marysville LLC**
Grantee:	**State of Washington, Department of Ecology**
Brief Legal Description:	**Smokey Pt. Service Center Block 000 Lot 7**
Tax Parcel Nos.:	**00697200000700**
Cross Reference:	**NW2833**

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part or all of a site commonly known as **Smokey Point Retail Center, Ecology Facility #5591, VCP #NW2833.** The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

c. The Property is the subject of remedial action under MTCA. This Covenant is required because residual contamination will remain on the Property after completion of remedial actions. Specifically, the following principle contaminants remain on the Property:

Medium	Principle Contaminants Present
Soil	None
Groundwater	Gasoline and benzene
Surface Water/Sediment	None

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through the Washington State Department of Ecology. **This includes the following document: *Cleanup Action Report, Smokey Point Retail Center, 2707 171ST Place Northeast, Marysville, Washington*, SoundEarth Strategies Inc., report dated June 12, 2015.**

e. This Covenant grants the Washington State Department of Ecology, as holder of this Covenant, certain rights specified in this Covenant. The right of the Washington State Department of Ecology as a holder is not an ownership interest under MTCA, Chapter 70.105D RCW or the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") 42 USC Chapter 103.

COVENANT

Madison Marysville LLC, as Grantor and owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assignees, (hereafter "Ecology") the following covenants. Furthermore, it is the intent of the Grantor that such

covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. Interference with Remedial Action. The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. Protection of Human Health and the Environment. The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. Continued Compliance Required. Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. Leases. Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. Amendment to the Covenant. Grantor must notify and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. Before approving any proposal, Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal. If Ecology approves the proposal, the Covenant will be amended to reflect the change.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. Land use. The remedial action for the Property is based on a cleanup designed for commercial property. As such, the Property shall be used in perpetuity only for commercial land uses as that term is defined in the rules promulgated under Chapter 70.105D RCW. Prohibited uses on the Property include but are not limited to residential uses, childcare facilities, K-12 public or private schools, parks, grazing of animals, and growing of food crops.

b. Vapor/gas controls. To mitigate the potential for soil vapor concerns, a Stego Wrap vapor barrier was installed beneath both buildings on the Property during construction in 2009. The polyolefin-based vapor barrier is 15 mils thick and meets the requirements of the American Society for Testing and Materials specification E1745 Class A vapor barrier. The vapor barrier was installed beneath the perimeter footings and under utility vaults prior to pouring the slab. Pipe penetrations and seams in the slab were taped with Stego tape. The vapor barriers beneath

the building prevents the potential intrusion of impacted subsurface vapors into interior spaces. The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the vapor barriers and report within thirty (30) days of the inspection the condition of the vapor barriers and any changes to the vapor barriers that would impair its performance.

c. Groundwater use. The groundwater beneath the Property remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation. Drilling of a well for any water supply purpose is strictly prohibited. Groundwater extracted from the Property for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

d. Monitoring. Groundwater samples will be collected on an annual basis from monitoring wells located within the Property. The Grantor shall maintain clear access to these wells and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring well. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

e. Containment of Soil/Waste Materials. The property was developed with a 4-inch-thick asphalt parking lot cap. Other areas of the property are covered with concrete building slabs and sidewalks. The asphalt cap and paved surfaces will be maintained as a barrier to the direct contact pathway. The Grantor covenants and agrees that it shall annually, or at another time as approved in writing by Ecology, inspect the cap and report within thirty (30) days of the inspection the condition of the cap and any changes to the cap that would impair its performance.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. Conveyance of Any Interest. The Grantor, when conveying any interest, including but not limited to title, easement, leases, and security or other interests, must:

i. Notify Ecology at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE SNOHOMISH COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. Reporting Violations. Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation to Ecology.

c. Emergencies. For any emergency or significant change in site conditions due to Acts of Nature (for example, flood, fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Any required written notice, approval, or communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant.

Tom Lee Madison Development Group LLC 10510 Northeast Northup Way, Suite 120 Kirkland, Washington 98033 425-889-9500	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000

As an alternative to providing written notice and change in contact information by mail, these documents may be provided electronically in an agreed upon format at the time of submittal.

Section 5. Modification or Termination.

a. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in Chapter 64.70 RCW and Chapter 70.105D RCW and any rules promulgated under these chapters.

b. By signing this agreement, per RCW 64.70.100, the original signatories to this agreement, other than Ecology, agree to waive all rights to sign amendments to and termination of this Covenant.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Grantor shall provide Ecology with an original signed Covenant and proof of recording within ten (10) days of execution of this Covenant.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including Chapter 70.105D RCW and Chapter 64.70 RCW. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of the Model Toxics Control Act, chapter 70.105D RCW and Uniform Environmental Covenants Act, chapter 64.70 RCW.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

The undersigned Grantor warrants he/she holds the title to the Property and has authority to execute this Covenant.

EXECUTED this _____ day of _____, 2015.

Madison Marysville LLC

_____
Tom Lee, Member

Dated: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

_____
[TITLE]

Dated: _____

Exhibit A

LEGAL DESCRIPTION

WHEN RECORDED RETURN TO
MADISON MARYSVILLE LLC
10510 NE NORTHUP WAY, SUITE 120
KIRKLAND, WA 98033

200802250318 4 PGS
02/25/2008 10:35am $45.00
SNOHOMISH COUNTY, WASHINGTON

2/25/2008 10:20 AM 28
No. 4361869
Thank you for your payment.
GERI

CHICAGO TITLE INSURANCE COMPANY 5302572

1190198

STATUTORY WARRANTY DEED

4 pgs.
45 =

THE GRANTOR(S)
CHUNG C. KIM AND YONG U. KIM, HUSBAND AND WIFE

for and in consideration of
TEN DOLLARS AND OTHER GOOD AND VALUABLE CONSIDERATION AND AS PART OF AN I.R.C. 1031 TAX DEFERRED EXCHANGE

in hand paid, conveys and warrants to
MADISON MARYSVILLE LLC, A WASHINGTON LIMITED LIABILITY COMPANY

the following described real estate situated in the County of SNOHOMISH State of Washington:

LOT 7, SMOKEY POINT SERVICE CENTER, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 41 OF PLATS, PAGES 29 THROUGH 32 INCLUSIVE, RECORDS OF SNOHOMISH COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF SNOHOMISH, STATE OF WASHINGTON.

SUBJECT TO MATTERS ON EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF BY THIS REFERENCE.

Tax Account Number(s): 006972-000-007-00

Dated: February 25, 2008

CHUNG C. KIM

YONG U. KIM

LPB10/KLC/052006

Exhibit B

PROPERTY MAP

SoundEarth Strategies
WWW.SOUNDEARTHINC.COM

DATE: 06/10/15
DRAWN BY: JQC
CHECKED BY: CER
CAD FILE: 0918-001_FIG1

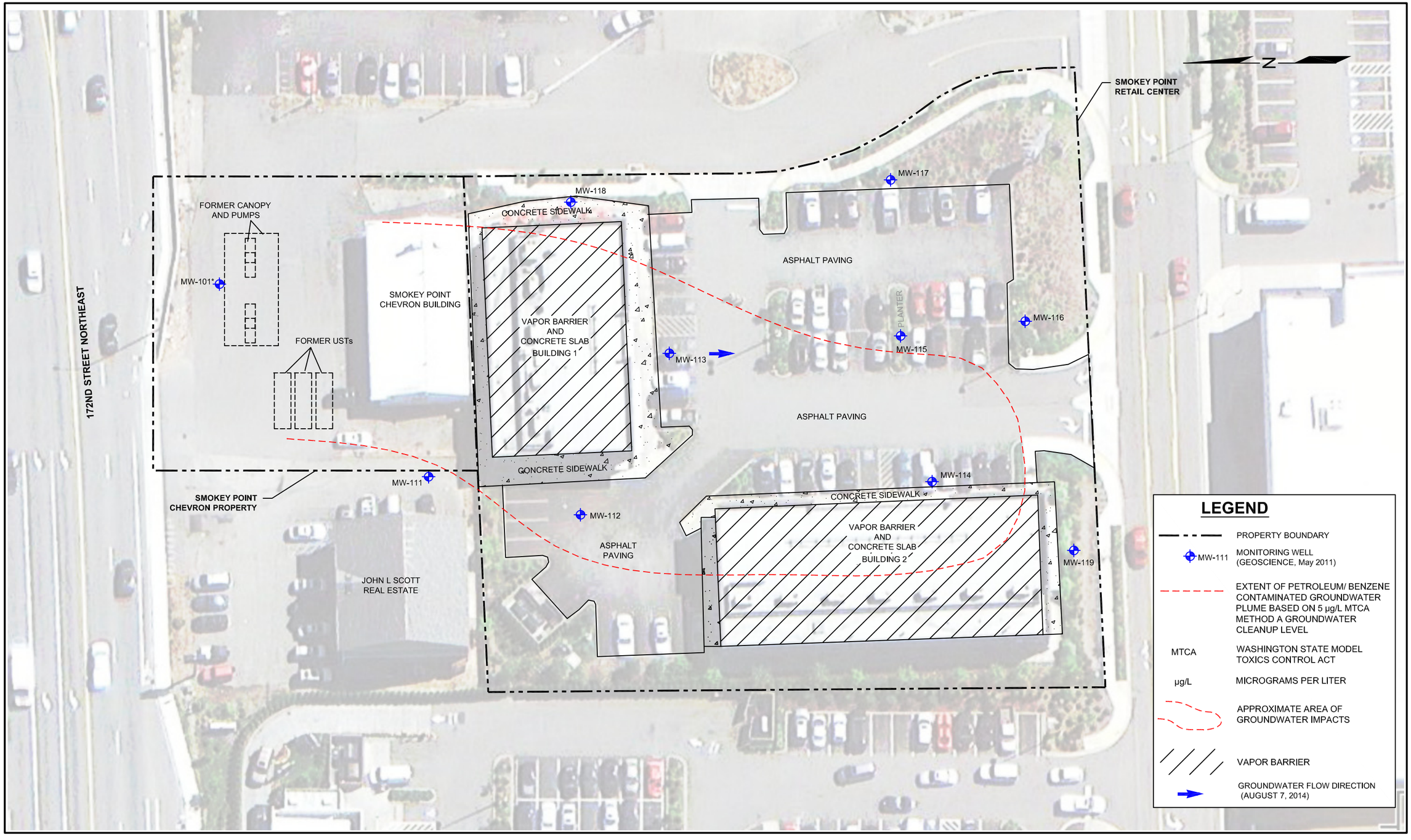
PROJECT NAME: SMOKEY POINT RETAIL CENTER
PROJECT NUMBER: 0918-001
STREET ADDRESS: 171ST PLACE NORTHEAST
CITY, STATE: MARYSVILLE, WASHINGTON

FIGURE 1
PROPERTY AND VICINITY MAP

6/10/2015
P:\0918 MADISON DEVELOPMENT\0918-001 SMOKEY POINT\TECHNICAL\CAD\2015\2015 CAR\0918-001_FIG1.DWG
SOUNDEARTHINC.COM

Exhibit C

MAP ILLUSTRATING LOCATION OF RESTRICTIONS



LEGEND

- PROPERTY BOUNDARY
- MW-111 — MONITORING WELL (GEOSCIENCE, May 2011)
- EXTENT OF PETROLEUM/ BENZENE CONTAMINATED GROUNDWATER PLUME BASED ON 5 µg/L MTCA METHOD A GROUNDWATER CLEANUP LEVEL
- MTCA — WASHINGTON STATE MODEL TOXICS CONTROL ACT
- µg/L — MICROGRAMS PER LITER
- APPROXIMATE AREA OF GROUNDWATER IMPACTS
- VAPOR BARRIER
- GROUNDWATER FLOW DIRECTION (AUGUST 7, 2014)

SoundEarth Strategies
WWW.SOUNDEARTHINC.COM

DATE: 06/05/15
DRAWN BY: JQC/NAC
CHECKED BY: CER
CAD FILE: 0918-001_FIG3

PROJECT NAME: SMOKEY POINT RETAIL CENTER
PROJECT NUMBER: 0918-001
STREET ADDRESS: 171ST PLACE NORTHEAST
CITY, STATE: MARYSVILLE, WASHINGTON

REGION:

0 20 40 80
APPROXIMATE SCALE IN FEET

FIGURE 3
INSTITUTIONAL CONTROLS FOR
SPRC PROPERTY AND
SMOKEY POINT CHEVRON PROPERTY

6/5/2015
P:\0918 MADISON DEVELOPMENT\0918-001 SMOKEY POINT\TECHNICAL\CAD\2015\2015 CAR\0918-001 FIG3.DWG
WWW.SOUNDEARTHINC.COM

Exhibit D

SUBORDINATION AGREEMENT

KNOW ALL PERSONS, That _____, the owner and holder of that certain _____ (Instrument) bearing the date the _____ day of _____, 20____, executed by _____, _____, and recorded in the office of the County Auditor of _____ County, State of Washington, on the _____, 20____, under Auditor's File Number _____, does hereby agree that said Instrument shall be subordinate to the interest of the State of Washington, Department of Ecology, under the environmental (restrictive) covenant dated _____, 20____, executed by _____, and recorded in _____ County, Washington under Auditor's File Number _____.

Dated _____, 20___.

NAME

_____

STATE OF _____
COUNTY OF _____

On this _____ day of _____, 20____, I certify that _____ _____ personally appeared before me, and acknowledged that **he/she** is the individual described herein and who executed the within and foregoing instrument and signed the same at **his/her** free and voluntary act and deed for the uses and purposes therein mentioned.

_____
Notary Public in and for the State of Washington, residing at _____.
My appointment expires_____.