

SUPPLEMENTAL REMEDIAL INVESTIGATION WORK PLAN

PREPARED BY:

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PREPARED FOR:

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> RGI PROJECT NO. 2012-107L VCP PROJECT NO. NW2811

> > SUPPLEMENTAL REMEDIAL INVESTIGATION WORK PLAN MAIN STREET APARTMENTS DEVELOPMENT 10505 MAIN STREET BELLEVUE, WASHINGTON 98004

> > > AUGUST 11, 2016

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Figure 1 Property Representation Map With Proposed Cross Section B-B' Location Figure 2Garage Layout with Proposed Groundwater Monitoring Well Location

Attachment A..... Response to Ecology June 6, 2016 Opinion Letter



1 INTRODUCTION

The Riley Group, Inc. (RGI) is pleased to present this Work Plan based on Ecology's request for additional information for the Alamo Manhattan Main Street project located at 10505 Main Street in Bellevue, Washington (herein referred to as the Property). The layout of the Property is depicted on the attached Figure 1.

The Property is currently owned by Alamo Manhattan Bellevue, LLC and has been enrolled in the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) since December of 2013. The Property is identified by Ecology as the Alamo Manhattan Main Street project (VCP project number NW2811).

RGI has had frequent correspondence with Ecology over the past few years and most recently Ecology has requested that RGI prepare a Work Plan describing the methodologies for completing additional work requested by Ecology. The purpose of this document is to comply with that requirement.

Alamo Manhattan has retained RGI to complete this Work Plan and other environmental work requested by Ecology. The scope of work presented herein is intended to supplement the work documented in previous investigation and remedial action reports with the ultimate objective of obtaining a No Further Action (NFA) determination with a Restrictive Covenant from Ecology for the Property.

Additionally, RGI has prepared the Response to Ecology Comments, which provides RGI and Alamo Manhattan responses to comments presented in Ecology's Opinion Letter dated June 6, 2016. This standalone document is included for Ecology review as Attachment A. The Work Plan and Response to Ecology Comments were prepared based on information contained in the Ecology Opinion Letter and information obtained from Ecology during subsequent communications.

2 PROJECT BACKGROUND

Several previous investigations have been performed on the Property, including a completed Remedial Action. The following reports/correspondences pertain to environmental investigations previously conducted for the Property:

- Method B Groundwater Evaluation Technical Memorandum (July 2016 Memorandum) dated July 11, 2016 by RGI.
- Further Action at the following Site: Alamo Manhattan Main Street (June 2016 Opinion Letter) dated June 6, 2016 by Ecology.
- Groundwater Characterization Report, Alamo Manhattan Main Street (Groundwater Characterization Report) dated July 22, 2015 by RGI.
- Groundwater Characterization Work Plan, Alamo Manhattan Main Street (Groundwater Characterization Report) dated October 30, 2014 by RGI.
- Remedial Action Report, Main Street Apartments Development (RA report) dated June 13, 2014 by RGI.



- Excavation Work Plan, Main Street Development (Excavation Work Plan) dated July 17, 2013 by RGI.
- Phase I Environmental Site Assessment Update Report (Phase I ESA Update) Main Street Development dated June 26, 2013 by RGI.
- Additional Groundwater Monitoring Well Installation and Sampling Report (Well and Sampling Report) Proposed Main Street Development dated June 19, 2013 by RGI.
- Phase II Subsurface Investigation Report (Phase II); Proposed Main Street Development dated July 24, 2012 by RGI.
- Phase I Environmental Site Assessment Report (Phase I ESA); Aaron Bothers Retail Property dated March 21, 2012 by RGI.

The history of the Property and details pertaining to environmental investigations are described in these documents and the reader should refer to these documents in their entirety for details pertaining to these investigations. Additionally, all of the aforementioned reports have been submitted to Ecology for review.

3 SCOPE OF WORK

3.1 TASK 1.0 METHOD B GROUNDWATER EVALUATION (COMPLETED)

The Method B groundwater data evaluation discussed was performed prior to completion of this Work Plan due to the fact that the results of this evaluation impacted the overall scope of work for the Property moving forward. The results of that evaluation were documented in the July 2016 Memorandum, which was submitted to and reviewed by Ecology.

The results of the evaluation demonstrated that groundwater in wells RW1 and RW2 is in compliance with the MTCA regulation. RGI concluded that no further assessment of groundwater on the Property was necessary. However, as previously stated, Ecology has requested additional groundwater evaluation.

3.2 TASK **2.0** VAPOR INTRUSION EVALUATION

RGI performed a vapor intrusion evaluation in 2013, which was included in the 2013 RA Report and concluded that vapor intrusion was not a concern for the Property at that time. Since that time, there have been significant changes to the vapor intrusion regulations and the following documents pertaining to vapor intrusion have been released by Ecology and the EPA:

- Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion Implementation Memorandum No. 14 (2016 Ecology PVI Guidance Memorandum) dated March 31, 2016 by Ecology.
- OSWER Technical Guide For Assessing and Mitigating the Vapor Intrusion Pathway From Subsurface Vapor Sources to Indoor Air (2015 EPA VI Guidance) dated June 2015 by the U.S. Environmental Protection Agency (EPA).
- Technical Guide For Assessing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites (2015 EPA PVI Guidance) dated June 2015 by the EPA.



Updated Table B-1 Indoor Air Cleanup Levels, Groundwater Screening Levels, and Soil Gas Screening Levels revised April 6, 2015 by Ecology. Table B-1 was originally included in the Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action (2009 Ecology Draft VI Guidance) dated 2009 by Ecology.

Ecology indicated during the June 16, 2016 meeting that soil and groundwater on the Property should be evaluated in accordance with the above-referenced documents in order to determine if a vapor intrusion concern exists for the Property.

RGI will evaluate the risk associated with soil and groundwater concentrations of COPCs considered sufficiently toxic and volatile to cause a vapor intrusion concern. The vapor intrusion evaluation will be conducted in accordance with the guidelines set forth in the aforementioned documents and the MTCA regulation.

Based on RGI's experience working on similar projects, it is unlikely that an actual vapor intrusion concern exists for the Property due to the fact that subsurface vapors would have to migrate through four levels of the underground parking garage and five associated concrete slabs to reach the living or occupied space of the building. The presence of the slabs and high air change per hour (ACH) rate associated with the parking garage would significantly attenuate any COPC soil vapor concentrations down to negligible levels.

3.2.1 PROPOSED GROUNDWATER VAPOR INTRUSION EVALUATION

RGI will evaluate the potential for groundwater concentrations of COPCs to cause a potential vapor intrusion concern by comparing the highest detected concentrations of COPCs (including TPH fractions for diesel-range TPH) to the most recent Ecology groundwater screening levels considered protective of indoor air.

If groundwater concentrations of COPCs in groundwater are all below these screening levels, the groundwater portion of the vapor intrusion evaluation will be considered complete. If groundwater concentrations of COPCs exceed these screening levels, further risk assessment will be conducted using site-specific data in accordance with the most recent EPA and Ecology guidance's.

3.2.2 PROPOSED SOIL VAPOR INTRUSION EVALUATION

The scope of work presented below for assessing the potential for vapor intrusion to result from remaining soil contamination on the Property was discussed with Mr. Charles San Juan, Hydrogeologist, at Ecology and this methodology is considered acceptable by Ecology.

Soil containing concentrations of COPCs that are considered sufficiently volatile and toxic enough to cause a vapor intrusion concern remain in place in the following two locations on the Property:

- In Area 3 (located at the southwestern portion of the Property), diesel-range TPH remains in soil beginning at approximately elevation 74', which is approximately 4 feet below the garage floor slab (approximately elevation 78') and extends to approximately elevation 62'. Previous soil analytical data demonstrated that this contamination had not migrated to groundwater, which is present at approximately elevation 51'.
- In the former location of groundwater monitoring well MW-4, diesel-range TPH and PCE remain in place in a few foot thick zone of soil situated at approximately elevation 61', which is approximately 17 feet below the garage floor slab. Previous soil and groundwater



analytical data demonstrated that this contamination had not impacted groundwater on the Property.

WAC 173-340-740(3)(C)(III) stipulates that the soil to vapor pathway be evaluated for dieselrange organics whenever the total petroleum hydrocarbon (TPH) concentration is greater than 10,000 mg/kg. Since all soil containing diesel-range TPH remaining on the Property contains concentrations of diesel-range TPH less than 10,000 mg/kg, no further assessment of dieselrange TPH in soil pertaining to vapor intrusion is required.

The only area of soil contamination requiring further vapor intrusion evaluation under the MTCA regulation is the former location of well MW4, where PCE was present in a layer of soil a few feet thick at a concentration of 0.40 milligrams/kilogram (mg/kg) at approximately elevation 61'.

As discussed with Ecology, in order to evaluate whether or not this PCE-containing soil represents a vapor intrusion threat for the Property, RGI will utilize the MTCA equation 747-1 to predict a vapor phase concentration from the PCE soil concentration of 0.40 mg/kg. RGI will then use this estimated soil vapor concentration to assess the risk for vapor intrusion associated with soil vapors migrating from approximately 17 feet below the garage slab through four levels of underground parking. The evaluation will be conducted in accordance with the new EPA and Ecology vapor intrusion guidance's.

The results of the vapor intrusion evaluation will be documented in the Supplemental Remedial Investigation report discussed in Section 3.5.

3.3 TASK 3.0 PROPOSED ADDITIONAL GROUNDWATER MONITORING WELL INSTALLATION

Ecology has requested that a groundwater monitoring well be installed down-gradient of existing wells RW1 and RW2 and former wells B-1A and MW-4, where concentrations of benzene and diesel-range TPH were previously detected above MTCA Method A Cleanup Levels for Groundwater. The locations of the proposed well, existing wells, and former wells are depicted on Figures 1 and 2.

As discussed with Ecology, RGI assessed the underground parking garage for drilling access and determined two locations (represented by the highlighted boxes on Figure 2) where drilling is possible due to sufficient overhead clearance in these areas. Drilling outside of these locations is not possible due to limited overhead clearance. Therefore, Ecology and RGI agree that the most appropriate accessible location for MW6 is the location proposed on Figure 2. The scope of work required to install this well is discussed in this section.

The installation of well MW6 has tentatively been scheduled for August 24, 2016.

3.3.1 PUBLIC AND PRIVATE UTILITY LOCATE

Prior to drilling, efforts to locate publicly and privately owned underground utilities include the following:

- At least 72 hours prior to drilling, RGI will contact the One-Call public utility notification center to locate public underground utilities (for example, electric, natural gas, and telecommunications).
- RGI will also subcontract a private utility locating service to locate any potential underground utilities situated beneath the garage.



> Review any readily available sanitary sewer cards and utility maps for the property.

3.3.2 GROUNDWATER MONITORING WELL INSTALLATION AND CONSTRUCTION

Proposed groundwater monitoring well MW6 will be installed in the location depicted on Figures 1 and 2. This well be constructed and screened similar to the other wells associated with the Property.

Prior to drilling, RGI will retain the services of a concrete corer to core a 14-inch diameter hole in the garage floor slab in the location of MW6.

Boring MW6 will be advanced using standard hollow stem auger (HSA) drilling techniques. A limited access HSA rig will be used due to the fact that there is only approximately 14 feet of overhead clearance in the location of proposed well MW6.

The boring will initially be advanced directly to approximately elevation 60' at which point RGI will log soil conditions at approximate 2.5 to 5-foot intervals for the purpose of determining the depth of groundwater in that location. Beginning at approximately elevation 60', the HSA stem will be advanced to the top of the desired sample interval and the drill rod will be removed. A decontaminated 18-inch long, steel split spoon sampler will be inserted into the auger stem driven through an 18-inch interval. Blow counts will be obtained during soil sampling following ASTM D-1586-99 standards. Upon either driving the sampler a total of 18 inches or encountering refusal (i.e., >50 blows per 6-inch interval) the sampler will be retrieved and the samples removed from the split spoon sampler.

The soil conditions encountered during drilling will be described using the Unified Soil Classification System (USCS) visual-manual procedures (ASTM 2488-06) and will be presented on a borelog, which will be included in the report of findings once the investigation is complete.

The boring will be completed as groundwater monitoring well MW6 and will be drilled and installed using procedures sufficient to meet resource protection well construction standards found in Ecology Minimum Standards for Construction and Maintenance of Water Wells (Chapter 173-160 WAC).

The well will be constructed of 2-inch diameter, flush-threaded, Schedule 40 polyvinylchloride (PVC) well casing and screen. The well will be approximately 37 feet in total in length with approximately 15 feet of 0.01-inch slotted screen. The terminal depth of well will be at about 10 feet below the unsaturated/saturated interface at the time of drilling with a 15-foot screened interval (from approximately 5 feet above the groundwater table to 10 feet below. This will allow the water table to intersect the well screen throughout the normal annual fluctuations in water table elevation. Flush-threaded, Schedule 40 PVC blank well casing will extend from the top of the screened interval to approximately 6 inches below the grade of the garage floor. A 2-inch diameter, locking, watertight PVC well cap will be installed to secure the well casing.

A sand filter pack will be installed by pouring sand into the annulus between the well casing and auger as the auger is withdrawn. A weighted tape will be used to monitor filter pack placement and depth during installation. The sand filter pack will extend to approximately 2-feet above the top of the screened interval.

A minimum 2-foot-thick seal of hydrated bentonite chips will be installed in the annular space immediately above the sand filter pack and hydrated with potable water. The remainder of the



annular space will be sealed with bentonite grout or hydrated bentonite chips to within one foot of the ground surface.

The well will be secured with flush-completion steel protective monuments set in concrete. The monument will be set to match the existing grade of the garage floor.

After installation, the well will be developed using a combination of pumping and surging. Well development will be completed by continuous pumping at a steady rate using a submersible pump. Well development equipment used inside the well will be either new single-use equipment, new, dedicated equipment, or will be decontaminated to the satisfaction of the RGI field personnel. Well development will be terminated when the turbidity is reduced to a level considered sufficient by RGI personnel. No more than 10 wetted casing volumes will be removed during well development.

3.3.3 TOP OF CASING SURVEYING

The newly constructed well (MW-6) will be surveyed by a Washington-licensed surveyor to the North American Vertical Datum of 1988 (NAVD88). Surveying will include measurement of the top surface of the well monument and the top edge of the well casing on the north side. Horizontal locations shall be to an accuracy of ± 0.01 foot and vertical elevations shall be to an accuracy of ± 0.01 foot.

3.3.4 GROUNDWATER MONITORING WELL SAMPLING

At least 24 hours after installation and development, the new well (MW-6) will be sampled along with wells RW1, RW2, and MW5. RGI will obtain a Right of Way Use Street Use Permit from the City of Bellevue and signage and traffic control services necessary to close the northbound lane of 105th Avenue Southeast required for sampling of well MW5.

Prior to sampling, the water levels in wells MW5, MW6, RW1, and RW2 will be measured using an electronic water level meter. The depth of water will be measured relative to the northernmost point on the well casing. This measurement will be subtracted from the surveyed elevation to establish the groundwater elevation and generate groundwater elevation contours to determine flow direction.

After collection of water level data, MW6 will be purged of three wetted casing volumes. Purging will be performed using a QED air bladder or submersible pump and dedicated tubing. Measurements of pH, temperature, and conductivity will be recorded at each well volume and prior to sample collection.

During sample collection, the flow rate of the pump will be reduced to 100 milliliters/minute and samples will be pumped directly from the pump discharge tubing to laboratory-supplied containers deemed appropriate for the intended analysis.

Immediately after collection, samples will be labeled and placed in an iced cooler pending submittal to the analytical laboratory. Samples will be transported to the laboratory under standard Chain of Custody protocols.

3.3.5 Investigation Derived Waste

Investigation derived waste (IDW) will consist of soil cuttings and decontamination water generated during drilling and purge water generated during well development and groundwater sampling. IDW will be collected in DOT-approved 55-gallon drums and properly labeled.



An estimated 5 drums of IDW will need to be stored on-Property temporarily (approximately 2 weeks) until analytical data is obtained and appropriate disposal is arranged, or as agreed by the Client.

3.3.6 ANALYTICAL LABORATORY ANALYSIS

As discussed with Ecology, groundwater samples collected from the four wells during this project will be submitted to an Ecology-accredited third-party analytical laboratory for the following laboratory analyses.

- Benzene, toluene, ethylbenzene, xylenes, tetrachloroethene (PCE), trichloroethene (TCE), cis 1,2-dichloroethene (cis 1,2-DCE), trans 1,2-dichloroethene (trans 1,2-DCE) , 1,1-dichloroethene (1,1-DCE), and vinyl chloride using EPA Method 8260C.
- > Extractable petroleum hydrocarbons (EPH) using Method NWEPH.
- > Volatile petroleum hydrocarbons (VPH) using Method NWVPH.

Ecology has additionally requested the following analyses be performed only for the purpose of evaluating historical data:

- Sasoline-range total petroleum hydrocarbons (TPH) using Method NWTPH-Gx.
- > Diesel-range-TPH using Northwest Method NWTPH-Dx.

As discussed with Ecology, the Method B evaluation will be used for determining groundwater compliance with the MTCA regulation. The Method B evaluation results would supersede gasoline- or diesel-range TPH data.

3.3.7 DATA ANALYSIS AND REPORTING

Upon completion of field activities and acquisition of final laboratory reports, a summary of the groundwater characterization activities and findings will be prepared in the form of a Supplemental Remedial Investigation Report, which will be submitted to Ecology for review. Reporting is discussed below in Section 3.5.

The report will present detailed accounts of the findings of the investigation, tables and figures displaying locations of groundwater monitoring wells, groundwater elevation contours and flow direction, laboratory analytical results, and any other features pertinent to the investigation. The report will also include final analytical laboratory reports and a borelog providing details pertaining to the construction of groundwater monitoring well MW-6.

3.3.8 GROUNDWATER DATA EVALUATION

As discussed with Ecology, if concentrations of COPCs in all four wells are below applicable MTCA groundwater cleanup levels, RGI and Alamo Manhattan would request that the groundwater assessment of the Property be considered complete at that time due to the following:

- 1) Groundwater in all locations associated with the Property would be in compliance with the MTCA regulation.
- 2) The RA report demonstrated that soil cleanup was completed on the Property in accordance with the MTCA regulation and that, in the two areas where soil contamination remains, it has been demonstrated that contaminated soil is not impacting groundwater.



3) Alamo Manhattan has complied with all of Ecology's requests since enrolling the Property into the VCP in 2013. Any delays in the issuance of an Ecology opinion would have a negative impact on the Property.

If COPCs are detected in groundwater at concentrations exceeding applicable MTCA groundwater cleanup levels, RGI will prepare a scope of work for additional groundwater sampling, which will be presented to Ecology for review and approval.

3.4 TASK 4.0 CROSS SECTION B-B'

RGI will prepare an east-west cross section (B-B') across the entire Property in the location displayed on the attached Figure 1. Ecology has indicated that this is an acceptable location for the cross section, which will display the current building layout relative to former features on the Property. The cross section will also display locations where soil contamination remains in place on the Property with select analytical data and include groundwater elevation data as well.

As discussed with Ecology, the cross section will display pertinent current and historical features situated within 20 feet offset from the cross section.

3.5 TASK 5.0. SUPPLEMENTAL REMEDIAL INVESTIGATION REPORT PREPARATION

RGI will prepare an Supplemental Remedial Investigation Report (SRI Report) summarizing the findings and conclusions pertaining to Tasks 2, 3, and 4

This report will present tables and figures displaying locations of groundwater monitoring wells, groundwater elevation contours and flow direction, summarizing laboratory analytical results and will include a conceptual site mode, a cross section, and any other information considered pertinent to Tasks 2, 3, or 4. The report will also include final analytical laboratory reports and a borelog providing details pertaining to the construction of groundwater monitoring well MW-6.

As discussed with Ecology, this SRI Report will include a brief summary of, and reference, the RA and Groundwater Characterization reports. The SRI report will also include tables summarizing analytical data obtained during these investigations as Appendices to the report.

3.6 TASK 6.0 FOCUSED FEASIBILITY STUDY AND DISPROPORTIONATE COST ANALYSIS

As requested by Ecology, RGI will prepare a Focused Feasibility Study and Disproportionate Cost Analysis (FS/DCA) in order to evaluate cleanup action alternatives and associated costs pertaining to contamination that remains on Property. RGI will prepare the FS/DCA in general accordance with regulatory requirements of the Model Toxics Control Act (MTCA), specifically WAC 173-340-350 and 173-340-360. Since the cleanup action was completed in 2013, the RGI anticipates the evaluation will be limited to the two areas where contaminated soil remains in place on the Property. However, if additional investigation indicates that evaluation is necessary in other locations, this would be included in the FS/DCA. The FS/DCA will include the following:

- > Description of the cleanup action alternative goal.
- Selection of cleanup action alternatives suitable to address the two areas of remaining soil contamination on the Property by comparing them against the MTCA minimum threshold requirements (WAC 173-340-360(2)). A minimum of 3 cleanup action alternatives will be selected for further evaluation.



- Provide a description of the three cleanup action alternatives selected for further evaluation and estimated costs associated with each cleanup action alternative. Note that estimated costs will be based on RGI's project experience and industry standard rates. Actual cost estimates provided by subcontractors will not be included.
- Conduct a DCA in accordance with WAC 173-340-360(3)(e). The difference in cost between more permanent cleanup action alternatives and less permanent cleanup action alternatives will be compared in order to determine the difference in benefits between them and assess whether or not the cost for a more permanent alternative is disproportionate to the benefit provided. The DCA will be conducted using the seven evaluation criteria stipulated in the MTCA regulation.
- Select the appropriate cleanup action alternative for the Property.

The Focused FS/DCA will be presented in a report, which will be submitted to Ecology for review and comment.

4 SCHEDULE

The scope of work outlined above requires approximately 8-10 weeks to complete from receiving approval from Ecology to proceed with the scope of work outlined in this Work Plan.

Please let us know if Ecology considers the above scope of work adequate to qualify the Property for consideration of a No Further Action determination with a Restrictive Covenant. If you have any questions, or need additional information, please contact us at (425) 415-0551.

Sincerely,

THE RILEY GROUP, INC.

Jerry Sawetz Senior Environmental Scientist

Paul D. Riley, LG, LHG Principal









TECHNICAL MEMORANDUM

Date:	August 11, 2016	RGI Project Number:	2012-107L
Το:	Mr. Michael Warfel Washington Department of Ecology Northwest Regional Office 3190 160th Avenue Southeast Bellevue, Washington 98008		
CC:	Mr. Matt Segrest Alamo Manhattan Bellevue, LLC		
From:	Mr. Jerry Sawetz/ Mr. Paul Riley The Riley Group, Inc.		
Subject:	Response to Ecology June 6, 2016 O Alamo Manhattan Main Street 10505 Main Street Bellevue, Washington Ecology VCP No. NW2811	pinion Letter	
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The Riley Group (RGI) has been retained by Alamo Manhattan Bellevue, LLC (Alamo Manhattan) to manage environmental issues pertaining to the Alamo Manhattan Main Street project located 10505 Main Street in Bellevue, Washington (herein referred to as the Property).

The Property is currently enrolled in the Washington Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) and is identified as the Alamo Manhattan Main Street project assigned with VCP Project No. NW2811.

This Technical Memorandum was prepared in response to Ecology's *Further Action at the following Site: Alamo Manhattan Main Street Letter* (June 2016 Opinion Letter) dated June 6, 2016, which is included as Appendix A. This response also incorporates information and subsequent communications with Ecology. This document is only intended to address Ecology comments. The Property history and details pertaining to previous investigations have been described extensively in previous documents. For additional information the reader is directed to refer to the Work Plan and the documents referenced in the Work Plan.

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RESPONSE TO ECOLOGY COMMENTS

Alamo Manhattan and RGI responses to comments below pertain only to Ecology comments that require a response. Comments where RGI and Alamo Manhattan either concur with Ecology or do not think a response is warranted are not included. The purpose of this document is to ensure that Ecology, Alamo Manhattan, and RGI all have the same understanding of the work required to bring the Property to a No Further Action (NFA) determination with a Restrictive Covenant.

In order to address Ecology comments below, the following documents were referenced

- Additional Site Characterization Work Plan (Work Plan) dated August 11, 2016. Note that this document is being submitted as Attachment A of the Work Plan.
- Method B Groundwater Evaluation Technical Memorandum (July 2016 Memorandum) dated July 11, 2016 by RGI.
- Further Action at the following Site: Alamo Manhattan Main Street (June 2016 Opinion Letter) dated June 6, 2016 by Ecology (Appendix A)
- Remedial Action Report, Main Street Apartments Development (RA report) dated June 13, 2014 by RGI.
- 1) On Page 3, under Characterization of the Site, bullet 3, Ecology states the following:

The Extent of impacts from releases to ground water has not been established downgradient of the following locations of prior exceedance of MTCA groundwater cleanup levels on the western third of the Property:

- Existing monitoring wells RW1 and RW2.
- Decommissioned monitoring wells B-1A and MW-4.

RGI and Alamo Manhattan Response: This comment is addressed by the installation and sampling of groundwater monitoring well MW6, which will be situated downgradient of these locations. Ecology has indicated that the proposed location of MW6 is acceptable. Details pertaining to proposed installation of well MW6 are described in Section 3.3 of the Work Plan.

2) On Pages 3 and 4, under Characterization of the Site, bullets 4, 5, and 6, Ecology states the following:

Groundwater elevations, flow directions, gradients, and potential chemical impacts from previously documented areas of soil contamination have not been characterized on the eastern part of the Property (former Parcel 0005), where the following former contamination sources were located (see Enclosure A, Figures 2 and 3):



- Pump Islands and a 500-gallon UST associated with a former service station and auto repair facility.
- 500-gallon heating oil UST.
- 900- and 660-gallon USTs associated with a former fueling area.
- Oil/water separator.

The full range of chemicals of potential concern (COPCs) associated with the identified contamination sources was not included in all of the soil and ground water sample analyses completed to date, as summarized in Table 1 of Enclosure B to this letter. Use of the tested analytes in soil as indicator hazardous substances to guide the completed excavation and removal of soil from the Site was acceptable; however, all COPCs must also be analyzed in ground water.

Ecology recommends the following actions to address Site characterization data needs:

- Install ground water monitoring wells meeting resource protection well standards in the vicinity of the following locations:
 - Existing monitoring wells RW1 and RW2.
 - Former monitoring wells B-1A and MW-4.
 - Former contamination sources in the eastern part of the Site.

RGI and Alamo Manhattan Response: Additional soil and groundwater investigation on the eastern portion of the Property was discussed with Ecology in a meeting that took place on June 16, 2016. Additionally, RGI submitted the July 2016 Memorandum to Ecology subsequent to that meeting, which concluded that no additional soil or groundwater characterization was required for the eastern portion of the Property.

Ecology has further evaluated data obtained during previous investigations and remedial actions and determined that no additional soil or groundwater characterization is necessary for the eastern portion of the Property. Therefore, no further action is required regarding the eastern portion of the Property. A copy of the email from Ecology dated July 29, 2016 supporting this conclusion is included as Appendix B for reference.

Proposed groundwater monitoring well MW6 will be situated downgradient of existing wells RW1 and RW2 and former wells B-1A and MW4 and was previously discussed under Comment 1.

- 3) On Pages 4 and 5, under Characterization of the Site, bullet 6 (sub-bullets 3 and 5), Ecology states the following:
 - Collect four quarterly sets of samples from the four monitoring wells using low-flow purge and sampling techniques.



- Submit ground water samples for analysis by an Ecology certified laboratory for the following chemical parameters:
 - Western part of the Property, downgradient of RW1/RW2 and B1A/MW4: TPHg, TPHd, TPHo, BTEX volatile organic compounds (VOCs). Note that the comment regarding analysis recommended for the eastern portion of the Property is not addressed due to the fact that investigation on this portion of the Property is no longer required by Ecology (See Response to No. 1).

RGI and Alamo Manhattan Response: The July 2016 Memorandum demonstrates that petroleum hydrocarbon concentrations in groundwater obtained from wells RW1 and RW2 is currently in compliance with the MTCA regulation. Historical groundwater investigation data also indicates that diesel-range TPH and benzene were the only COPCs in groundwater that historically exceeded applicable MTCA groundwater cleanup levels.

As discussed with Ecology, groundwater samples collected from wells RW1, RW2, MW5 and MW6 will be submitted to the laboratory for the following analyses:

- Extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH) using Methods NWEPH and NWVPH, respectively. The purpose of these analyses is to evaluate petroleum hydrocarbon concentrations in groundwater using MTCA Method B.
- Select volatile organic compounds (VOCs) using EPA Method 8260. As discussed with Ecology, the selected VOCs are benzene, toluene, ethylbenzene, xylenes (BTEX) and tetrachloroethene (PCE) and associated breakdown compounds (trichloroethene [TCE], cis 1,2-dichloroethene [cis 1,2-DCE], trans 1,2dichloroethene [trans 1,2-DCE], 1,1 dichloroethene [1,1-DCE] and vinyl chloride).

It should be noted that when evaluating groundwater under Method B, it will be assumed that groundwater does not contain concentrations of carcinogenic polycyclic aromatic hydrocarbons (cPAHs) as cPAHs were previously analyzed for in groundwater and not detected in groundwater on the Property.

RGI will sample groundwater monitoring wells RW1, RW2, MW5, and MW6 in accordance with the methodology described in Section 3.3.4 of the Work Plan.

The Method B evaluation using EPH/VPH data will be used to determine if groundwater on the Property is in compliance with the MTCA regulation.

Ecology has requested that groundwater samples also be analyzed for gasoline- and diesel-range TPH using Northwest Methods NWTPH-Gx and NWTPH-Dx. Ecology has indicated that this data is only to be used for the purpose of evaluating historical data and not for the purpose of determining if groundwater is in compliance with the MTCA regulation.



If groundwater is determined to be in compliance with the MTCA regulation in all four well locations, RGI and Alamo Manhattan will respectfully request that the groundwater assessment of the Property be considered complete at that time. Groundwater data evaluation is discussed further in Section 3.3.8 of the Work Plan.

- 4) On Page 5, under Characterization of the Site, bullet 6 (sub-bullets 8 and 9), Ecology states the following:
 - Incorporate the updated characterization of ground water conditions into a conceptual Site Model that fully addresses contamination sources, migration, pathways, and potential receptors. Include a Terrestrial Ecological Evaluation per the requirements of WAC 173-340-7490 and associated Ecology guidance.

Present the updated Site characterization data in a Remedial Investigation (RI) report format that consolidates all pertinent Site historical information, collected soil and groundwater data, and completed soil cleanup data.

RGI and Alamo Manhattan Response: RGI submitted the Terrestrial Ecological Evaluation (TEE) to Ecology with the VCP Application in 2013. The results of the evaluation determined that the Property qualified for an exclusion as all remaining contaminated soil is situated at least 15 feet below the surface. A copy of the TEE form is included as Appendix C.

The RA Report includes a summary of all environmental investigations conducted prior to the performance of the Remedial Action. The RA Report also presents all soil and groundwater data associated with these investigations and the cleanup action.

As discussed with Ecology, RGI will prepare a SRI Report, which will include all of the data obtained during Tasks 2, 3, and 4 of the Work Plan. This report will also briefly summarize the RA and Groundwater Characterization reports and include data obtained during these investigations. SRI Report preparation is described in Section 3.5 of the Work Plan.

On Page 5, under Establishment of cleanup standards and selection of a cleanup action, Ecology states the following:

Ecology has determined that the cleanup standards and cleanup action you selected for the Site do not meet the substantive requirements of MTCA. The Site characterization is not complete; therefore, establishment of cleanup standards is not complete, and Ecology considers the cleanup actions conducted at the Site (soil removal and off-Site disposal) as an interim cleanup action. The completed Site characterization (RI) should be the basis for preparation of a Feasibility Study (FS) that meets the MTCA requirements for selection of a cleanup action.

RGI and Alamo Manhattan Response: As discussed with Ecology, the SRI Report will take into account all new and previous site characterization data pertaining to the Property



and will be the basis for preparation of a Focused Feasibility Study/Disproportionate Cost Analysis (FS/DCA). The Focused FS/DCA is described in Section 3.6 of the Work Plan.

Please let us know if Ecology considers the above scope of work adequate to address all of Ecology's concerns. If you have any questions, or need additional information, please contact us at (425) 415-0551.

Attachment A:	June 6, 2016 Opinion Letter
Attachment B:	Ecology email dated July 29, 2016
Attachment C:	Terrestrial Ecological Evaluation





STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office = 3190 160th Ave SE = Bellevue, WA 98008-5452 = 425-649-7000 711 for Washington Relay Service = Persons with a speech disability can call 877-833-6341

June 6, 2016

Mr. Matt Segrest Alamo Manhattan Bellevue LLC 2808 Fairmount Street Dallas, TX 75201

Re: Further Action at the following Site:

- Site Name: Alamo Manhattan Main Street
- Site Address: 10505 Main Street, Bellevue, WA 98004
- Cleanup Site ID: 12266
- Facility/Site No.: 5245
- VCP Project No.: NW2811

Dear Mr. Segrest:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Alamo Manhattan Main Street facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

YES. Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site as characterized to date is defined by the nature and extent of contamination associated with the following releases:



- Benzene, ethylbenzene, xylenes, total petroleum hydrocarbons (TPH) as gasoline (TPHg), TPH as diesel (TPHd), TPH as oil (TPHo), tetrachloroethene (PCE), and naphthalene releases in Soil.
- Benzene, TPHg, TPHd, TPHo, and PCE releases in Ground Water.

The Site is more particularly described in **Enclosure A** to this letter, which includes detailed Site diagrams. The description of the Site is based solely on the information contained in the documents listed below in this letter.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcels associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

- 1. The Riley Group, *Phase I Environmental Site Assessment Report, Aaron Brothers Retail Property, 10505, 10507, 10509, and 10525 Main Street, Bellevue, Washington,* March 21, 2012.
- 2. The Riley Group, *Phase II Subsurface Investigation Report, Proposed Main Street Development, 10505 to 10509 and 10515 to 10525 Main Street, Bellevue, Washington, July 24, 2012.*
- 3. The Riley Group, Additional Groundwater Monitoring Well Installation and Sampling Report, Proposed Main Street Development, 10505 to 10509 and 10515 to 10525 Main Street, Bellevue, Washington, June 19, 2013.
- 4. The Riley Group, *Phase I Environmental Site Assessment Update, Main Street Development Property, 10505 to 10525 Main Street, Bellevue, Washington, June 26, 2013.*
- 5. The Riley Group, *Excavation Work Plan, Main Street Development, 10505 to 10525 Main Street, Bellevue, Washington, July 17, 2013.*
- 6. The Riley Group, *Remedial Action Report*, June 13, 2014.
- 7. The Riley Group, Groundwater Characterization Work Plan, Main Street Apartments Development, 10505 Main Street, Bellevue, Washington, October 30, 2014.
- 8. The Riley Group, Groundwater Characterization Report, Alamo Manhattan Main Street, 10505 Main Street, Bellevue, Washington, July 22, 2015.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at 425-649-7235 or sending an email to nwro_public_request@ecy.wa.gov.

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of ground water at the Site is not sufficient to select a cleanup action, as documented by the following discussion and request for additional information:

- Ground water characterization and monitoring conducted prior to installation of monitoring well MW-5 in December 2014 assumed a ground water flow direction to the northwest. This assumption was based on data from former monitoring wells MW-3 and MW-4 (see Enclosure A, Figure 3). Subsequent ground water level measurements incorporating MW-5 indicate ground water flow directions ranging from north-northeast to east-northeast (see Enclosure A, Figure 4). Therefore, MW-5 is not downgradient of ground water contamination previously documented at the Site.
- The most recent ground water samples tested for TPHd from monitoring wells RW1 and RW2 (between December 2014 and May 2015) were subjected to a silica gel cleanup procedure prior to laboratory analysis, which can result in artificially lowered TPHd concentrations. Results of silica gel cleanup of ground water samples analyzed for TPH-Dx are not recognized as acceptable by Ecology.
- The extent of impacts from releases to ground water has not been established downgradient of the following locations of prior exceedance of MTCA ground water cleanup levels on the western third of the Property:
 - Existing monitoring wells RW1 and RW2.
 - Decommissioned monitoring wells B-1A and MW-4.
- Ground water elevations, flow directions, gradients, and potential chemical impacts from previously documented areas of soil contamination have not been characterized in the eastern part of the Property (former Parcel 0005), where the following former contamination sources were located (see Enclosure A, Figures 2 and 3):

- Pump islands and a 500-gallon UST associated with a former service station and auto repair facility.
- 500-gallon heating oil UST.
- o 900- and 660-gallon USTs associated with a former fueling area.
- Oil/water separator.
- The full range of chemicals of potential concern (COPCs) associated with the identified contamination sources was not included in all of the soil and ground water sample analyses completed to date, as summarized in **Table 1 of Enclosure B** to this letter. Use of the tested analytes in soil as indicator hazardous substances to guide the completed excavation and removal of soil from the Site was acceptable; however, all COPCs must also be analyzed in ground water.
- Ecology recommends the following actions to address Site characterization data needs:
 - Install ground water monitoring wells meeting resource protection well standards (WAC 173-160) in the vicinity of the following locations (see Enclosure A, Figure 4):
 - Existing monitoring wells RW1 and RW2.
 - Former monitoring wells B-1A and MW-4.
 - Former contamination sources in the eastern part of the Site.
 - These monitoring wells should be located in a downgradient ground water flow direction with respect to documented areas of historical soil and ground water contamination at the Site. The well screens should be positioned such that anticipated seasonal ground water levels are within the screened interval of each well (well screens must not be totally submerged).
 - Collect four quarterly sets of samples from the four monitoring wells using low-flow purge and sampling techniques.
 - Prepare ground water level elevation contour maps for each quarterly monitoring event, illustrating ground water flow directions and providing data to calculate ground water gradients.
 - Submit the ground water samples for analysis by an Ecology-certified laboratory for the following chemical parameters:

- Western part of Property, downgradient of RW1/RW2 and B-1A/MW-4: TPHg, TPHd, TPHo, BTEX, and volatile organic chemicals (VOCs).
- Eastern part of Property, downgradient of former contamination sources: TPHg, TPHd, TPHo, BTEX, VOCs, metals (lead, cadmium, chromium, nickel, and zinc), polychlorinated biphenyls (PCBs), carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and naphthalenes.
- If any ground water samples from the first and second quarterly sampling events show detectable PCBs, cPAHs, or metals other than lead at concentrations less than MTCA ground water cleanup levels, these analytes can be eliminated from the third and fourth quarterly ground water sampling events for those specific monitoring wells.
- Note that a silica gel cleanup procedure is not acceptable for ground water samples analyzed for TPH-Dx. Laboratory reporting limits that are below the respective MTCA ground water cleanup levels need to be specified.
- Incorporate the updated characterization of ground water conditions into a conceptual Site model that fully addresses contamination sources, migration pathways, and potential receptors (see Section 6.3, Use of a Conceptual Site Model, in *Guidance for Remediation of Petroleum Contaminated Sites, Toxics Cleanup Program Publication No. 10-09-057*, September 2011). Include a Terrestrial Ecological Evaluation per the requirements of WAC 173-340-7490 and associated Ecology guidance.
- Present the updated Site characterization data in a Remedial Investigation (RI) report format that consolidates all pertinent Site historical information, collected soil and ground water data, and completed soil cleanup data. See the following Ecology web page for RI report format and content requirements: <u>http://www.ecy.wa.gov/programs/tcp/policies/checklists</u>.

2. Establishment of cleanup standards and selection of a cleanup action.

Ecology has determined the cleanup standards and cleanup action you selected for the Site do not meet the substantive requirements of MTCA. The Site characterization is not complete; therefore, establishment of cleanup standards is not complete, and Ecology considers the cleanup actions conducted at the Site (soil removal and off-Site disposal) as an interim cleanup action. The completed Site characterization (RI) should be the basis for preparation of a Feasibility Study (FS) that meets the MTCA requirements for selection of a cleanup action. See the following Ecology web page for a preferred FS report format and content requirements: http://www.ecy.wa.gov/programs/tcp/policies/checklists .

3. Other Issues

- Electronic submittal of all sampling data into Ecology's electronic Environmental Information Management (EIM) database is a requirement in order to receive a final Ecology opinion for this Site. Jenna Durkee (email jedu461@ecy.wa.gov, or via telephone at 509-454-7865) is Ecology's contact and resource on entering data into EIM.
- Before further work is completed, Ecology encourages the development of a work plan to ensure that sufficient data for the soil and ground water is collected to avoid unnecessary expenditure of time and money.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After

you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: <u>www.</u> <u>ecy.wa.gov/programs/tcp/vcp/vcpmain.htm</u>. If you have any questions about this opinion, please contact me by phone at 425-649-7257 or e-mail at michael.warfel@ecy.wa.gov.

Sincerely,

Michel P.W.fo

Michael R. Warfel, Site Manager NWRO Toxics Cleanup Program

MW:MC

Enclosures (2): A – Description and Diagrams of the Site B – Table 1, Chemicals of Potential Concern at the Alamo Manhattan Main Street Site

cc: Jerry Sawetz, The Riley Group Sonia Fernandez, VCP Coordinator, Ecology

Enclosure A

Description and Diagrams of the Site

Site Description

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.

<u>Site</u>: The Site is defined by benzene, ethylbenzene, xylenes, total petroleum hydrocarbons (TPH) as gasoline (TPHg), TPH as diesel (TPHd), TPH as oil (TPHo), tetrachloroethene (PCE), and naphthalene releases in Soil; and benzene, TPHg, TPHd, TPHo, and PCE releases in ground water. The Site is located at 10505 Main Street in Bellevue, Washington (the Property) on King County tax parcel number 5223300005 which covers 1.45 acres. Two former parcels (0005 and 0015) were combined to form this current parcel (see **Figure 2**).

<u>Area and Property Description</u>: The Property is located in downtown Bellevue (see Figure 1). The Property is bounded by 105th Avenue SE on the west, Main Street on the north, 107th Avenue SE on the east, and a multi-unit residential building on the south. The Property is presently occupied by a six-story wood-frame apartment building with 260 units and two levels of underground parking that was constructed in 2014.

<u>Site History and Current Use</u>: Historical Property included the following businesses since the mid-1940s:

- Automobile sales and repair.
- Gasoline service stations.
- Oil fuel sales.
- Photo processing.
- Residential dry cleaning.
- Pet supply store.
- Restaurant.

Sources of Contamination: The following potential and documented sources of soil and ground water contamination were identified by due diligence assessments, subsurface investigations, and remedial excavations (see Figures 2, 3, 5, and 6):

- Former Parcel 0015, western 1/3 of Property:
 - Dry cleaning machine.
 - Floor drains and septic tank.

- 2,000-gallon fuel underground storage tank (UST), pump island dispenser, and associated piping.
- Former Parcel 0005, eastern 2/3 of Property:
 - Three 1,000-gallon fuel USTs, a 500-gallon UST, pump island dispensers, underground fuel piping, and two underground hydraulic hoists associated with a former service station and auto repair facility.
 - o 500-gallon heating oil UST.
 - \circ 900- and 660-gallon USTs associated with a former fueling area.
 - Oil/water separator.

Physiographic Setting: The Site is situated on the northern terminus of a ridge the trends northsouth parallel to Lake Washington to the west. Land surface at the Site slopes from south to the northwest, north, and northeast, between approximate elevations of 120 feet to 80 feet above mean sea level (msl).

<u>Surface/Storm Water System</u>: The nearest identified surface water body is Meydenbauer Bay (an inlet of Lake Washington) located approximately 2,000 feet west of the Site (see Figure 1). Storm water in the vicinity of the Site is collected in catch basins on City of Bellevue streets.

Ecological Setting: The Site is located in a developed area adjacent to the downtown core of Bellevue and is surrounded by commercial and residential land uses. The Property is primarily covered by impervious surfaces (apartment building roof and sidewalks), with bordering landscaped areas. The surrounding area is developed commercial and residential land uses.

Geology: Borings and monitoring wells drilled on the Site encountered 25 to 37 feet of dense to very dense silty fine sand, on top of a very dense silty sand to sandy silt that was observed to a depth of 60 feet below ground surface (bgs), the maximum depth explored.

Ground Water: Subsurface explorations drilled at the Site prior to construction of the present apartment building encountered ground water at depths of 45 to 50 feet bgs. Ground water data from two former monitoring wells drilled prior to December 2014 (MW-3 and MW-4; see **Figure 4**) indicated a likely ground water flow direction to the northwest. Subsequent ground water elevations incorporating existing monitoring wells RW1, RW2, and MW-5 show ground water flow directions ranging from north-northeast to east-northeast (see **Figure 4**). Monitoring wells RW1 and RW2 were installed below the lower level of the underground parking garage beneath the apartment building, which is at an elevation of approximately 79 feet msl.

<u>Release and Extent of Contamination</u>: In 2013?, soil with TPHd and PCE concentrations above MTCA Method A cleanup levels were detected at a depth of approximately 36 feet bgs in the MW-4 borehole. Ground water samples collected from MW-4 in May and June 2013

showed concentrations of benzene above Method A cleanup levels. Subsequent sampling conducted during subsurface investigations and remedial excavations completed at the Site confirmed the release of the other chemicals noted above in the Site definition.

Interim Cleanup Actions: Five USTs and a septic tank were encountered and decommissioned as part of remedial action work completed at the Site during August through October 2013. Soil was excavated at the Site to an elevation of approximately 74 feet msl prior to construction of the apartment building. Of this excavated soil, a total of 1,434 tons of contaminated soil were removed from the Site and transported for off-Site disposal at licensed facilities.

The following residual soil contamination remains at the Site (see Figure 6):

- Soil with TPHd concentrations above MTCA Method A cleanup levels, between 42 and 50 feet bgs in remedial excavation Area 3.
- Soil with TPHd and tetrachloroethene (PCE) concentrations above MTCA Method A cleanup levels, at a depth of approximately 36 feet bgs at the location of former monitoring well MW-4.

Site Diagrams



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Enclosure A, Figure 1



Enclosure A, Figure 2









Enclosure B

Table 1, Chemicals of Potential Concern, AlamoManhattan Main Street Site

	Chemicals of Potential Concern (Shaded); Tested: s						s =						
Contaminant Source and Associated Test Borings	TPHg	ТРНО	ТРНо	ВТЕХ	Pb	Cq	ъ	iZ	Zn	voc	PCB	СРАН	Naphthalenes
Former Parcel 0015 (west 1/3 of property)*													
Dry cleaners										s,g			
280-gallon heating oil UST		s,g	s,g										S,Ę
2,000-gallon fuel UST	s,g			s,g	S								
Septic tank	s,g	s,g	s,g	s,g	s	s,g				s,g			
Former Parcel 0005 (east 2/3 of property)*													
Fuel USTs/dispensers north of building	-s				S								
Service station (hoists, waste oil)	S	S	S		S						S	S	S
Fuel USTs/dispensers south of building	s				S								
Heating oil UST		S	s										
Oil/water separator	S	s	s	s						s			

Jerry Sawetz

From: Sent: To: Cc: Subject: Attachments: Warfel, Michael (ECY) <MWAR461@ECY.WA.GOV> Wednesday, July 27, 2016 10:16 AM Jerry Sawetz Matt Segrest; Bardy, Louise (ECY) Ecology VCP NW2811, Main Street Apartments Development Area 5 and 7 Excavation Profiles.pdf

Hi Jerry:

Thanks for your tech memo dated July 11, 2016 regarding the results of your Method B groundwater evaluation of data from monitoring wells RW-1 and RW-2. Here are my initial thoughts on the memo:

- Your Method B calculations, using the Ecology spreadsheet, are acceptable\] and confirm that the lab results from the most recent groundwater sampling event (June 2016) for RW-1 and RW-2 are below the calculated Method B groundwater cleanup level.
- Upon detailed evaluation of data from the eastern part of the property, I concur with your conclusion that
 additional soil or groundwater characterization is not necessary in this part of the Site. My evaluation of this
 issue was greatly facilitated when I created a schematic scaled cross section showing the locations and data for
 soil confirmation samples, the bottom of the building excavation, and the estimated range of groundwater
 elevations (based on monitoring wells from the western part of the Site). This cross section is attached for
 reference and illustrates the type of supplemental information that is very helpful to Ecology when evaluating
 a site of this nature.
- The conclusion that no additional groundwater assessment is necessary for the property is not consistent with the discussion at our meeting at Ecology on June 16, and does not address the following data gaps:
 - Assessment of groundwater quality downgradient of former monitoring wells MW B-1A and MW-4, where groundwater sample results showed benzene and diesel (without silica gel cleanup) at concentrations above Method A cleanup levels.
 - Collection of four consecutive sets of quarterly groundwater samples and water level data from RW-1, RW-2, MW-5, and any new monitoring wells installed downgradient of former wells B-1A and MW-4, to confirm groundwater flow directions and assess compliance with Method A or calculated Method B groundwater cleanup levels.

I look forward to receiving your submittal of a work plan describing the methodologies for future work on the Site, for formal Ecology review. Ecology appreciates your efforts in moving the Site forward through the VCP process.

Mike

Michael R. (Mike) Warfel, LG, LHG, RG Site Manager, Voluntary Cleanup Program State of Washington, Department of Ecology NW Regional Office/Toxics Cleanup Program 3190 160th Ave SE Bellevue WA 98008 Phone: 425-649-7257 Fax: 425-649-7098 michael.warfel@ecy.wa.gov



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

- 1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
- 2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
- 3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Main Street Apartments Development

Facility/Site Address: 10505 Main Street, Bellevue, Washington

Facility/Site No: N/A

VCP Project No .: N/A

Title: Senior Environmental

Scientist

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Jerry Sawetz

Organization: The Riley Group

Mailing address: 17522 Bothell Way Northeast

City: Bothell		State: Washington	Zip code: 98011	
Phone: 425-415-0551	Fax: 425-415-0311	E-mail: jsa	wetz@riley-group.com	

A.	Exclusion	from further evaluation.
1.	Does the S	Site qualify for an exclusion from further evaluation?
	X Y	es If you answered "YES," then answer Question 2.
	🔲 N Unkn	lo or If you answered "NO" or "UKNOWN," then skip to Step 3B of this form.
2.	What is th	e basis for the exclusion? Check all that apply. Then skip to Step 4 of this form.
	Point of Co	ompliance: WAC 173-340-7491(1)(a)
	\boxtimes	All soil contamination is, or will be,* at least 15 feet below the surface.
		All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.
	Barriers to	Exposure: WAC 173-340-7491(1)(b)
	\boxtimes	All contaminated soil, is or will be,* covered by physical barriers (such as buildings o paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.
	Undevelop	ed Land: WAC 173-340-7491(1)(c)
		There is less than 0.25 acres of contiguous [#] undeveloped [±] land on or within 500 fee of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
		For sites not containing any of the chemicals mentioned above, there is less than 1. acres of contiguous [#] undeveloped [±] land on or within 500 feet of any area of the Site
	Backgrou	nd Concentrations: WAC 173-340-7491(1)(d)
		Concentrations of hazardous substances in soil do not exceed natural background level as described in WAC 173-340-200 and 173-340-709.
* / acc	An exclusion ceptable to f	based on future land use must have a completion date for future development that is Ecology. d land" is land that is not covered by building, roads, paved areas, or other barriers that would
pre # "	event wildlife 'Contiguous' hways, exte	from feeding on plants, earthworms, insects, or other food in or on the soil. I undeveloped land is an area of undeveloped land that is not divided into smaller areas of ensive paving, or similar structures that are likely to reduce the potential use of the overall area

1. E	oes the Si	e qualify for a simplified evaluation?
		If you answered "VES " then answer Question 2 below.
		s in you answered 123 , then answer Question 2 seret.
		or If you answered "NO" or "UNKNOWN," then skip to Step 3C of this form.
2. E	Did you cor	duct a simplified evaluation?
	🗌 Ye	s If you answered "YES," then answer Question 3 below.
		If you answered "NO," then skip to Step 3C of this form.
3. \	Nas further	evaluation necessary?
	🗌 Ye	s If you answered "YES," then answer Question 4 below.
	🗌 No	If you answered "NO," then answer Question 5 below.
4. 1	If further ev	aluation was necessary, what did you do?
		Used the concentrations listed in Table 749-2 as cleanup levels. If so, then skip to Step 4 of this form.
		Conducted a site-specific evaluation. If so, then skip to Step 3C of this form.
5. 1 t	If no furthe to Step 4 of Exposure A	r evaluation was necessary, what was the reason? Check all that apply. Then skip this form. nalysis: WAC 173-340-7492(2)(a)
		Area of soil contamination at the Site is not more than 350 square feet.
		Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.
r	Ll Dathway Ar	alveis: WAC 173-340-7492(2)(b)
T		No potential exposure pathways from soil contamination to ecological receptors.
(L Contaminar	t Analysis: WAC 173-340-7492(2)(c)
		No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
		No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
		No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
		No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, ar institutional controls are used to manage remaining contamination.

 Yes If you answered "YES," then answer Question 2 below. If you answered "NO," then identify the reason here and then skip to Question below: No issues were identified during the problem formulation step. While issues were identified, those issues were addressed by the cleanup actions for protecting human health. 2. What did you do to resolve the problem? See WAC 173-340-7493(3). Used the concentrations listed in Table 749-3 as cleanup levels. If so, then skip to Question 5 below. Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. If so, then answer Questions 3 and 4 below. 3. If you conducted further site-specific evaluations, what methods did you use? Check all that apply. See WAC 173-340-7493(3). Literature surveys. Soil bioassays. Wildlife exposure model. Biomarkers. Site-specific field studies. Weight of evidence. Other methods approved by Ecology. If so, please specify: 4. What was the result of those evaluations? Confirmed there was no problem. Confirmed there was a problem and established site-specific cleanup levels. 5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps? Yes If so, please identify the Ecology staff who approved those steps: 	1. W	as there	a problem? See WAC 173-340-7493(2).
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			(on If so please identify the Ecology staff who approved those steps:

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.