Appendix A

Prospective Purchaser Consent Decree

STATE OF WASHINGTON

KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Plaintiff, v. TOUCHSTONE CORPORATION, Defendant.	NO. PROSPECTIVE PURCHASER CONSENT DECREE

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I. INTRODUCTION

A. The mutual objective of the State of Washington, Department of Ecology (Ecology) and Touchstone Corporation (Defendant) under this Decree is to (1) resolve the potential liability of Defendant for contamination at the Metro Lake Union Site (Site) and sediments in Lake Union arising from a release or threatened release of hazardous substances, in advance of Defendant purchasing an ownership interest in the Site, and (2) facilitate the cleanup of the Site for redevelopment or reuse. This Decree requires Defendant to excavate and dispose of soil contamination at a portion of the Site.

Ecology has determined that these actions are necessary to protect human health and the environment.

B. The Complaint in this action is being filed simultaneously with this Decree. An answer has not been filed, and there has not been a trial on any issue of fact or law in this case. However, the Parties wish to resolve the issues raised by Ecology's Complaint. In addition, the Parties agree that settlement of these matters without litigation is reasonable and in the public interest, and that entry of this Decree is the most appropriate means of resolving these matters.

C. By signing this Decree, the Parties agree to its entry and agree to be bound by its terms.

D. By entering into this Decree, the Parties do not intend to discharge non-settling parties from any liability they may have with respect to matters alleged in the Complaint. The Parties retain the right to seek reimbursement, in whole or in part, from any liable persons for sums expended under this Decree. This section does not modify the Contribution Protection provision in the existing Consent Decree between Ecology, King County, and Chevron, *Department of Ecology v. King County and Chevron Products Company*, King County Superior Court Cause No. 99-2-08651-1SEA (1999), Section XXIX.

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E. This Decree shall not be construed as proof of liability or responsibility for any releases of hazardous substances or cost for remedial action nor an admission of any facts; provided, however, that Defendant shall not challenge the jurisdiction of Ecology in any proceeding to enforce this Decree.

F. The Court is fully advised of the reasons for entry of this Decree, and good cause having been shown:

Now, therefore, it is HEREBY ORDERED, ADJUDGED, AND DECREED as follows:

II. JURISDICTION

A. This Court has jurisdiction over the subject matter and over the Parties pursuant to the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

B. Authority is conferred upon the Washington State Attorney General by RCW 70.105D.040(4)(a) to agree to a settlement with any potentially liable person (PLP) if, after public notice and any required hearing, Ecology finds the proposed settlement would lead to a more expeditious cleanup of hazardous substances. In addition, under RCW 70.105D.040(5), the Attorney General may agree to a settlement with a person not currently liable for remedial action at a facility who proposes to purchase, redevelop, or reuse the facility, provided: the settlement will yield substantial new resources to facilitate cleanup; the settlement will expedite remedial action consistent with the rules adopted under MTCA; and Ecology determines based upon available information that the redevelopment or reuse of the facility is not likely to contribute to the existing release or threatened release, interfere with remedial actions that may be needed at the Site, or increase health risks to persons at or in the vicinity of the Site. RCW 70.105D.040(4)(b) requires that such a settlement be entered as a consent decree issued by a court of competent jurisdiction.

C. Ecology has determined that a release or threatened release of hazardous substances has occurred at the Property that is the subject of this Decree, and that the remedial actions required by this Decree are necessary to protect human health and the environment

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based on the planned future use of the Property as contemplated by the Parties under this Decree.

D. Defendant has not been named a PLP for the Site, and Defendant has certified under Section IX (Certification of Defendant) that it is not currently liable for the Site under MTCA. However, Defendant has entered into a purchase agreement to acquire property located at 3301 Densmore Avenue North, Seattle, Washington, from King County, the current owner of the Property. The Property comprises a portion of the Site. Defendant will incur potential liability under RCW 70.105D.040(1)(a) at the time it acquires an interest in the Property for performing remedial actions or paying remedial costs incurred by Ecology or third parties resulting from past releases or threatened releases of hazardous substances at the Site. This Decree settles Defendant's liability as described herein for this Site and for contaminated sediments in Lake Union, upon its purchase of the Property.

E. Ecology finds that this Decree will yield substantial new resources to facilitate cleanup of the Property; will lead to a more expeditious cleanup of hazardous substances at the Site in compliance with the cleanup standards established under RCW 70.105D.030(2)(e) and Chapter 173-340 WAC; will promote the public interest by facilitating the redevelopment or reuse of the Property; and will not be likely to contribute to the existing release or threatened release at the Property, interfere with remedial actions that may be needed at the Site, or increase health risks to persons at or in the vicinity of the Site.

F. Defendant has agreed to undertake the actions specified in this Decree and consents to the entry of this Decree under MTCA.

G. This Decree has been subject to public notice and comment.

III. PARTIES BOUND

This Decree shall apply to and be binding upon the Parties to this Decree, their successors and assigns. The undersigned representative of each party hereby certifies that he or she is fully authorized to enter into this Decree and to execute and legally bind such party to

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comply with the Decree. Defendant agrees to undertake all actions required by the terms and conditions of this Decree. No change in ownership or corporate status shall alter Defendant's responsibility under this Decree. However, Touchstone Corporation may create a limited liability corporation (LLC) for the purpose of developing a building on the Property. If that occurs, the LLC will take title to the Property and be responsible for cleanup and redevelopment. Touchstone Corporation will assign all of its rights and obligations under this Consent Decree to the LLC and will have no further responsibility under this Decree. Defendant shall provide a copy of this Decree to all agents, contractors and subcontractors retained to perform work required by this Decree, and shall ensure that all work undertaken by such agents, contractors, and subcontractors complies with this Decree.

IV. DEFINITIONS

Unless otherwise specified herein, all definitions in RCW 70.105D.020 and WAC 173-340-200 shall control the meanings of the terms in this Decree.

A. Site: The Site is referred to as the Metro Lake Union Site and is generally located at 1602 N. Northlake Way, Seattle, Washington. The Site is more particularly described in the Site Diagram, attached as Exhibit A. The Site constitutes a Facility under RCW 70.105D.020(4).

B. Property: Refers to the property located at 3301 Densmore Avenue North, Seattle, Washington, that Defendant intends to purchase. The Property comprises a portion of the Site. A diagram of the Property is attached as Exhibit B. A legal description of the Property is attached as Exhibit C.

C. Parties: Refers to the State of Washington, Department of Ecology (Ecology) and Touchstone Corporation.

D. Defendant: Refers to Touchstone Corporation. Touchstone Corporation may create a LLC for the purpose of developing a building on the Property. If that occurs, the LLC will take title to the Property and be responsible for cleanup and redevelopment of the Property. Touchstone Corporation will assign all of its rights and obligations under this Consent Decree to the LLC, and the LLC will become the sole Defendant.

E. Consent Decree or Decree: Refers to this Prospective Purchaser Consent Decree and each of the exhibits to the Decree. All exhibits are integral and enforceable parts of this Prospective Purchaser Consent Decree. The terms "Consent Decree" or "Decree" shall include all exhibits to this Prospective Purchaser Consent Decree.

V. FINDINGS OF FACTS

Ecology makes the following findings of fact without any express or implied admissions of such facts by Defendant:

A. The Site is located along the north shore of Lake Union, approximately three miles north of downtown Seattle, Washington. The Site is approximately three acres, and consists of the North Yard and the South Yard, which are separated by public streets North Northlake Place and North Northlake Way. The North Yard is bounded by North 34th Street on the north, Woodlawn Avenue North on the west, North Northlake Place and North Northlake Way on the south, and Densmore Avenue North on the east. The South Yard is bounded by North Northlake Place on the northeast, the Seattle Harbor Patrol on the southeast, Northlake Ship Builders on the northwest, and Lake Union on the southwest. The Site includes rights of way. A diagram of the Site, depicting the North and South Yards, is attached as Exhibit A.

B. Between approximately 1925 and 1982, the Site was used by Chevron Products Company, a division of Chevron U.S.A. Inc., (Chevron) and its predecessor, Standard Oil of California, as a bulk fuel storage and distribution facility. In 1982, King County Metro Transit (King County) purchased the Site from Chevron. King County is the current owner and

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operator of the Site. The Site is currently used for office and shop space, storage, and parking. The North Yard is zoned industrial/commercial 45 (I/C 45). The South Yard is zoned I/C 45 with an urban maritime overlay.

C. Past operations at the Site resulted in the release of hazardous substances in soil and groundwater at the Site, including petroleum hydrocarbons and metals. The identified chemicals of concern that exceeded the cleanup levels established for the Site are more fully described and documented in prior environmental documents prepared for the Site, such as the Remedial Investigation/Feasibility Study prepared by Applied Geotechnology, Inc. in 1993, and the prior Cleanup Action Plan prepared by Foster Wheeler in 1998. These documents are on file with the Department of Ecology.

D. A number of remedial investigations have been conducted at the Site. In 1999, Ecology entered into a Consent Decree with King County and Chevron to conduct cleanup of soil and groundwater at the Site. *See Department of Ecology v. King County and Chevron Products Company*, King County Superior Court Cause No. 99-2-08651-1SEA (1999). The cleanup was divided into two phases. Phase I included removal of aboveground storage tanks and excavation and disposal of soil containing metals from sand blasting and painting activities. Confirmational sampling indicated that all soils with concentrations of metals were removed from the North Yard. The Phase II remediation included a variety of methods of bioremediation for petroleum hydrocarbons in soil and groundwater at the North and South Yards. Bioremediation methods including groundwater extraction, peroxide injection, and biosparging were conducted between 1999 and 2003, at which time they were discontinued. Bioremediation methods removed some but not all contaminants.

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E. Separate phase petroleum hydrocarbons, exceeding the cleanup levels previously established for the Site, continue to be observed in monitoring wells at the North and South Yards. Remediation of contaminated sediments will occur in Lake Union. Touchstone's remediation under this Decree would have a positive effect on managing a potential source of contamination to the sediments in Lake Union.

F. On July 19, 2006, Defendant entered into a purchase and sale agreement with King County to purchase a portion of the Site. Pursuant to the purchase and sale agreement, Defendant intends to purchase most of the North Yard (the Property). The purchase and sale agreement does not include the adjacent road rights of way. The legal description of the Property to be purchased by Defendant is attached as Exhibit C.

G. Defendant proposes to clean up the Property and construct a commercial office building on the Property, including a public viewing platform for the general public. The proposed commercial office building will be consistent with MTCA and its implementing regulations, Chapter 173-340 WAC.

H. As documented in the PPCD Cleanup Action Plan (CAP), attached as Exhibit D, the cleanup action to be implemented at the Property includes the excavation and disposal or thermal desorption of soils contaminated with petroleum hydrocarbons. Defendant has agreed to use Method A Unrestricted soil cleanup levels for the chemicals of concern on the Property. These are more stringent levels than the current Method C Industrial soil cleanup levels established for the Site. When the soil cleanup levels in the attached CAP have been met, the Restrictive Covenant previously placed on the Property by King County will be amended to eliminate restrictions on the Property that were based on use of industrial soil cleanup levels.

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VI. WORK TO BE PERFORMED

This Decree contains a program designed to protect human health and the environment from the known release, or threatened release, of hazardous substances or contaminants at, on, or from the Property.

A. Defendant will excavate Impacted Soil, as described in the attached CAP, within the boundaries of the Property. Defendant will dispose of or treat these soils. Defendant will conduct monitoring at the bottom of the excavation and internal sidewalls to confirm that soil cleanup standards have been met within the Property boundaries.

B. Any soil contamination outside the boundaries of the Property, and any groundwater contamination throughout the Site except for new releases as described in Section XIX, remains the responsibility of King County and Chevron, and Defendant is not responsible for remediating any such contamination.

C. Upon meeting the soil cleanup levels established in the attached CAP, or completion of other approved remedial action following a disproportionate cost analysis under section 4.4 of the CAP, Defendant may record an amended Restrictive Covenant as described in Section XXI.

D. Defendant agrees not to perform any remedial actions on the Property outside the scope of this Decree unless the Parties agree to modify the Scope of Work and Schedule in the CAP (Exhibit D) to cover these actions. All work conducted by Defendant under this Decree shall be done in accordance with Chapter 173-340 WAC unless otherwise provided herein.

VII. DESIGNATED PROJECT COORDINATORS

The project coordinator for Ecology is:

Maura S. O'Brien
PG/Hg #869, Professional Geologist/Hydrogeologist
3190 – 160th Avenue S.E.
Bellevue, WA 98008-5452
(425) 649-7249

The project coordinator for Defendant is:

Douglas Howe
President
Touchstone Corporation
2025 First Avenue, Suite 790
Seattle, WA 98121
(206) 727-2394

Each project coordinator shall be responsible for overseeing the implementation of this Decree. Ecology's project coordinator will be Ecology's designated representative for the Site. To the maximum extent possible, communications between Ecology and Defendant and all documents, including reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Decree shall be directed through the project coordinators. The project coordinators may designate, in writing, working level staff contacts for all or portions of the implementation of the work to be performed required by this Decree.

Any party may change its respective project coordinator. Written notification shall be given to the other party at least ten (10) calendar days prior to the change.

VIII. PERFORMANCE

All geologic and hydrogeologic work performed pursuant to this Decree shall be under the supervision and direction of a geologist licensed in the State of Washington or under the direct supervision of an engineer registered in the State of Washington, except as otherwise provided for by Chapters 18.220 and 18.43 RCW.

All engineering work performed pursuant to this Decree shall be under the direct supervision of a professional engineer registered in the State of Washington, except as otherwise provided for by RCW 18.43.130.

All construction work performed pursuant to this Decree shall be under the direct supervision of a professional engineer or a qualified technician under the direct supervision of a professional engineer. The professional engineer must be registered in the State of Washington, except as otherwise provided for by RCW 18.43.130.

Any documents submitted containing geologic, hydrologic or engineering work shall be under the seal of an appropriately licensed professional as required by Chapter 18.220 RCW or RCW 18.43.130.

Defendant shall notify Ecology in writing of the identity of any engineer(s) and geologist(s), contractor(s) and subcontractor(s), and others to be used in carrying out the terms of this Decree, in advance of their involvement at the Property.

IX. CERTIFICATION OF DEFENDANT

Defendant represents and certifies that, to the best of its knowledge and belief, it has fully and accurately disclosed to Ecology the information currently in its possession or control that relates to the environmental conditions at and in the vicinity of the Property, or to Defendant's right and title thereto.

Defendant represents and certifies that it did not cause or contribute to a release or threatened release of hazardous substances at the Site and is not otherwise currently potentially liable for the Site under RCW 70.105D.040(1).

X. ACCESS

Ecology or any Ecology authorized representative shall have full authority to enter and freely move about all property at the Site that Defendant either owns, controls, or has access rights to at all reasonable times for the purposes of, *inter alia*: inspecting records, operation logs, and contracts related to the work being performed pursuant to this Decree; reviewing Defendant's progress in carrying out the terms of this Decree; conducting such tests or collecting such samples as Ecology may deem necessary; using a camera, sound recording, or other documentary type equipment to record work done pursuant to this Decree; and verifying the data submitted to Ecology by Defendant. Ecology or any Ecology authorized representative shall give reasonable (at least 24 hours) notice before entering any portion of the Property owned or controlled by Defendant unless an emergency prevents such notice. All

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Parties who access the Property pursuant to this Section shall comply with any applicable Health and Safety Plan(s). Ecology employees and their representatives shall not be required to sign any liability release or waiver as a condition of Property access.

XI. SAMPLING, DATA SUBMITTAL, AND AVAILABILITY

With respect to the implementation of this Decree, Defendant shall make the results of all sampling, laboratory reports, and/or test results generated by it or on its behalf available to Ecology. Pursuant to WAC 173-340-840(5), all sampling data shall be submitted to Ecology in both printed and electronic formats in accordance with Section XII (Progress Reports), Ecology's Toxics Cleanup Program Policy 840 (Data Submittal Requirements), and/or any subsequent procedures specified by Ecology for data submittal.

If requested by Ecology, Defendant shall allow Ecology and/or its authorized representative to take split or duplicate samples of any samples collected by Defendant pursuant to the implementation of this Decree. Defendant shall notify Ecology seven (7) days in advance of any sample collection or work activity at the Property. Ecology shall, upon request, allow Defendant and/or its authorized representative to take split or duplicate samples of any samples collected by Ecology pursuant to the implementation of this Decree, provided that doing so does not interfere with Ecology's sampling. Without limitation on Ecology's rights under Section X (Access), Ecology shall notify Defendant prior to any sample collection activity unless an emergency prevents such notice.

In accordance with WAC 173-340-830(2)(a), all hazardous substance analyses shall be conducted by a laboratory accredited under Chapter 173-50 WAC for the specific analyses to be conducted, unless otherwise approved by Ecology.

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XII. PROGRESS REPORTS

Defendant shall submit to Ecology written monthly Progress Reports that describe the actions taken during the previous month to implement the requirements of this Decree. The Progress Reports shall include the following:

A. A list of on-Property activities that have taken place during the month;

B. Detailed description of any deviations from required tasks not otherwise documented in project plans or amendment requests;

C. Description of all deviations from the Scope of Work and Schedule in the Cleanup Action Plan (Exhibit D) during the current month and any planned deviations in the upcoming month;

D. For any deviations from the schedule, a plan for recovering lost time and maintaining compliance with the schedule;

E. All raw data (including laboratory analyses) received by Defendant during the past month and an identification of the source of the sample; and

F. A list of deliverables for the upcoming month if different from the schedule.

All Progress Reports shall be submitted by the tenth (10^{th}) day of the month in which they are due after the effective date of this Decree. Unless otherwise specified, Progress Reports and any other documents submitted pursuant to this Decree shall be sent by certified mail, return receipt requested, to Ecology's project coordinator.

XIII. RETENTION OF RECORDS

During the pendency of this Decree, and for ten (10) years from the date this Decree is no longer in effect as provided in Section XXX (Effective Date), Defendant shall preserve all records, reports, documents, and underlying data in its possession relevant to the implementation of this Decree and shall insert a similar record retention requirement into all

contracts with project contractors and subcontractors. Upon request of Ecology, Defendant shall make all records available to Ecology and allow access for review within a reasonable time.

XIV. TRANSFER OF INTEREST IN PROPERTY

Prior to Defendant's transfer of any interest in all or any portion of the Property, and during the effective period of this Decree, Defendant shall provide a copy of this Decree to any prospective purchaser, lessee, transferee, assignee, or other successor in said interest; and, at least thirty (30) days prior to any transfer, Defendant shall notify Ecology of said transfer. Upon transfer of any interest, Defendant shall restrict uses and activities to those consistent with this Consent Decree and notify all transferees of the restrictions on the use of the property.

XV. RESOLUTION OF DISPUTES

A. In the event a dispute arises as to an approval, disapproval, proposed change, or other decision or action by Ecology's project coordinator, or an itemized billing statement under Section XXV (Remedial Action Costs), the Parties shall utilize the dispute resolution procedure set forth below.

1. Upon receipt of Ecology's project coordinator's written decision, or the itemized billing statement, Defendant has fourteen (14) days within which to notify Ecology's project coordinator in writing of its objection to the decision or itemized statement.

2. The Parties' project coordinators shall then confer in an effort to resolve the dispute. If the project coordinators cannot resolve the dispute within fourteen (14) days, Ecology's project coordinator shall issue a written decision.

3. Defendant may then request regional management review of the decision. This request shall be submitted in writing to the Northwest Region Toxics Cleanup Program Section Manager within seven (7) days of receipt of Ecology's project coordinator's decision.

4. Ecology's Regional Section Manager shall conduct a review of the dispute and shall endeavor to issue a written decision regarding the dispute within thirty (30) days of Defendant's request for review.

5. If Defendant finds Ecology's Regional Section Manager's decision unacceptable, Defendant may then request final management review of the decision. This request shall be submitted in writing to the Toxics Cleanup Program Manager within seven (7) days of receipt of the Regional Section Manager's decision.

6. Ecology's Toxics Cleanup Program Manager shall conduct a review of the dispute and shall endeavor to issue a written decision regarding the dispute within thirty (30) days of Defendant's request for review of the Regional Section Manager's decision. The Toxics Cleanup Program Manager's decision shall be Ecology's final decision on the disputed matter.

B. If Ecology's final written decision is unacceptable to Defendant, Defendant has the right to submit the dispute to the Court for resolution. The Parties agree that one judge should retain jurisdiction over this case and shall, as necessary, resolve any dispute arising under this Decree. In the event Defendant presents an issue to the Court for review, the Court shall review the action or decision of Ecology on the basis of whether such action or decision was arbitrary and capricious and render a decision based on such standard of review.

C. The Parties agree to only utilize the dispute resolution process in good faith and agree to expedite, to the extent possible, the dispute resolution process whenever it is used. Where either party utilizes the dispute resolution process in bad faith or for purposes of delay, the other party may seek sanctions.

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D. Implementation of these dispute resolution procedures shall not provide a basis for delay of any activities required in this Decree, unless Ecology agrees in writing to a schedule extension or the Court so orders.

XVI. AMENDMENT OF DECREE

The project coordinators may agree to minor changes to the work to be performed without formally amending this Decree. Minor changes will be documented in writing by Ecology.

Substantial changes to the work to be performed shall require formal amendment of this Decree. This Decree may only be formally amended by a written stipulation among the Parties that is entered by the Court, or by order of the Court. Such amendment shall become effective upon entry by the Court. Agreement to amend the Decree shall not be unreasonably withheld by any party.

Defendant shall submit a written request for amendment to Ecology for approval. Ecology shall indicate its approval or disapproval in writing in a timely manner after the written request for amendment is received. If the amendment to the Decree is a substantial change, Ecology will provide public notice and opportunity for comment. Reasons for the disapproval of a proposed amendment to the Decree shall be stated in writing. If Ecology does not agree to a proposed amendment, the disagreement may be addressed through the dispute resolution procedures described in Section XV (Resolution of Disputes).

XVII. EXTENSION OF SCHEDULE

A. An extension of schedule shall be granted only when a request for an extension is submitted in a timely fashion, generally at least thirty (30) days prior to expiration of the deadline for which the extension is requested, and good cause exists for granting the extension. All extensions shall be requested in writing. The request shall specify:

1. The deadline that is sought to be extended;

2. The length of the extension sought;

3. The reason(s) for the extension; and

4. Any related deadline or schedule that would be affected if the extension were granted.

B. The burden shall be on Defendant to demonstrate to the satisfaction of Ecology that the request for such extension has been submitted in a timely fashion and that good cause exists for granting the extension. Good cause may include, but may not be limited to:

1. Circumstances beyond the reasonable control and despite the due diligence of Defendant including delays caused by unrelated third parties or Ecology, such as (but not limited to) delays by Ecology in reviewing, approving, or modifying documents submitted by Defendant; or

2. Acts of God, including fire, flood, blizzard, extreme temperatures, storm, or other unavoidable casualty; or

3. Endangerment as described in Section XVIII (Endangerment).

However, neither increased costs of performance of the terms of this Decree nor changed economic circumstances shall be considered circumstances beyond the reasonable control of Defendant.

C. Ecology shall act upon any written request for extension in a timely fashion. Ecology shall give Defendant written notification of any extensions granted pursuant to this Decree. A requested extension shall not be effective until approved by Ecology or, if required, by the Court. Unless the extension is a substantial change, it shall not be necessary to amend this Decree pursuant to Section XVI (Amendment of Decree) when a schedule extension is granted.

D. An extension shall only be granted for such period of time as Ecology determines is reasonable under the circumstances. Ecology may grant schedule extensions exceeding ninety (90) days only as a result of:

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1. Delays in the issuance of a necessary permit which was applied for in a timely manner;

2. Other circumstances deemed exceptional or extraordinary by Ecology; or

3. Endangerment as described in Section XVIII (Endangerment).

XVIII. ENDANGERMENT

In the event Ecology determines that any activity being performed at the Property is creating or has the potential to create a danger to human health or the environment, Ecology may direct Defendant to cease such activities for such period of time as it deems necessary to abate the danger. Defendant shall immediately comply with such direction.

In the event Defendant determines that any activity being performed at the Property is creating or has the potential to create a danger to human health or the environment, Defendant may cease such activities. Defendant shall notify Ecology's project coordinator as soon as possible, but no later than twenty-four (24) hours after making such determination or ceasing such activities. Upon Ecology's direction, Defendant shall provide Ecology with documentation of the basis for the determination or cessation of such activities. If Ecology disagrees with Defendant's cessation of activities, it may direct Defendant to resume such activities.

If Ecology concurs with or orders a work stoppage pursuant to this Section, Defendant's obligations with respect to the ceased activities shall be suspended until Ecology determines the danger is abated, and the time for performance of such activities, as well as the time for any other work dependent upon such activities, shall be extended, in accordance with Section XVII (Extension of Schedule), for such period of time as Ecology determines is reasonable under the circumstances.

Nothing in this Decree shall limit the authority of Ecology, its employees, agents, or contractors to take or require appropriate action in the event of an emergency.

XIX. COVENANT NOT TO SUE

A. Covenant Not to Sue: In consideration of Defendant's compliance with the terms and conditions of this Decree, Ecology covenants not to institute legal or administrative actions against Defendant regarding the Matters Addressed in this Decree.

The Matters Addressed in this Decree cover current, threatened, or future releases except as described in the following paragraph, of hazardous substances on or from the Site identified in the Site Diagram (Exhibit A), which includes any current, threatened, or future releases of hazardous substances from the Site to the water or sediments in Lake Union. The Matters Addressed in this Decree only include those hazardous substances that Ecology knows as of the date of entry of this Decree are or were located at the Site. This Decree does not cover any other hazardous substance or area. Ecology retains all of its authority relative to any substance or area not covered by the Matters Addressed in this Decree. In addition, this Decree does not settle any potential liability Defendant may incur for acquiring any further interest in the Site not addressed under this Decree.

"Future releases" under this Covenant Not to Sue does not include any new release of a hazardous substance into the soil or groundwater at the Property by Defendant after the date of entry of this Decree. A "new release" is a release by Defendant of a hazardous substance that is not already located in soil or groundwater (e.g. a new spill of petroleum from Defendant's equipment, or the puncture by Defendant of a tank or drum containing hazardous substances which causes a release). Migration or other movement in soil or groundwater of a hazardous substance that exists at the Site as of the entry of this Decree is not considered a new release and is a Matter Addressed by this Decree and within the scope of the Covenant Not to Sue.

This Covenant Not to Sue shall have no applicability whatsoever to:

1. Criminal liability;

2. Liability for damages to natural resources;

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3. Any Ecology action, including cost recovery, against PLPs not a party to this Decree.

If factors not known at the time of entry of this Decree are discovered and present a previously unknown threat to human health or the environment, the Court shall amend this covenant not to sue.

B. Reopeners: Ecology specifically reserves the right to institute legal or administrative action against Defendant to require it to perform additional remedial actions at the Site and to pursue appropriate cost recovery, pursuant to RCW 70.105D.050 under the following circumstances:

1. Upon Defendant's failure to meet the requirements of this Decree, including, but not limited to, failure of the remedial action to meet the cleanup standards identified in the Cleanup Action Plan (Exhibit D); or

2. Upon the availability of new information regarding factors previously unknown to Ecology that present a previously unknown threat to human health or the environment, and Ecology determines, in light of this information, that further remedial action is necessary at the Site to protect human health or the environment.

C. Except in the case of an emergency, prior to instituting legal or administrative action against Defendant pursuant to this Section, Ecology shall provide Defendant with thirty (30) calendar days notice of such action.

XX. CONTRIBUTION PROTECTION

With regard to claims for contribution against Defendant, the Parties agree that Defendant is entitled to protection against claims for contribution for Matters Addressed in this Decree as provided by RCW 70.105D.040(4)(d), and as described in Section XIX.A. Section I.D of the consent decree between Ecology, King County, and Chevron, *Department of Ecology v. King County and Chevron Products Company*, King County Superior Court Cause

No. 99-2-08651-1SEA (1999), does not modify the contribution protection provided in this Section.

XXI. LAND USE RESTRICTIONS

Upon meeting the soil cleanup levels established in the CAP, Defendant may record an amendment to the existing Restrictive Covenant substantially in the form of Exhibit E with the office of the King County Auditor. The amendment shall remove restrictions that were placed on the Property due to use of Method C Industrial soil cleanup levels under the existing Consent Decree with King County and Chevron. Defendant shall provide Ecology with a copy of the recorded amended Restrictive Covenant within thirty (30) days of the recording date. If Touchstone leaves contamination below the smear zone as part of its approved remedial action, using the process described in section 4.4 of the CAP, upon completion of the approved remedial action, Touchstone may record an amendment to the existing Restrictive Covenant that: (1) modifies restriction number 3 so that it limits future development of the Property to industrial uses, and to commercial uses that do not result in disturbance or exposure of Impacted Soil on the Property that is covered by Touchstone's development, without Ecology approval; and (2) modifies restriction number 4 so that it only restricts excavation that will disturb any Impacted Soil remaining on the Property without Ecology approval.

XXII. FINANCIAL ASSURANCES

At least thirty (30) days before removing the buildings, asphalt and concrete ("Existing Surface") that currently cover the Property, Defendant shall acquire and maintain a financial assurance mechanism in an amount adequate to cover costs associated with installing a temporary or 5-year cover if work is delayed or stopped after the Existing Surface or portion thereof is removed as described in the CAP, Exhibit D. The estimated amount of a temporary or a 5-year cover is described in the CAP. The financial assurance mechanisms that Touchstone may use are a security agreement and assignment of bank account (substantially in the form set forth in Exhibit F), a letter of credit, or a bond. Any funds set aside under a

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financial assurance mechanism pursuant to this Section shall be released by Ecology not later than when the slab on grade is constructed. Recourse by Ecology to any financial assurances provided under this Section shall not affect any remedies provided in this Decree or which are available to Ecology in law or equity.

In the event Defendant chooses to submit a letter of credit as financial assurance, the following terms shall apply.

A. The letter of credit shall be a clean, irrevocable and unconditional standby letter of credit in a form acceptable to Ecology in its sole discretion issued by a bank approved by Ecology in its sole judgment in favor of Ecology.

B. Ecology shall have the unconditional right to draw against the Letter of Credit in full or in part upon the occurrence of Defendant's failure to perform its obligation set forth above.

C. Ecology will hold the draw proceeds in its own name and for its own account, without liability for interest, as security for the performance of Defendant under this Decree.

XXIII. INDEMNIFICATION

Defendant agrees to indemnify and save and hold the State of Washington, its employees, and agents harmless from any and all claims or causes of action for death or injuries to persons or for loss or damage to property to the extent arising from or on account of acts or omissions of Defendant, its officers, employees, agents, or contractors in entering into and implementing this Decree. However, Defendant shall not indemnify the State of Washington nor save nor hold its employees and agents harmless from any claims or causes of action to the extent arising out of the negligent acts or omissions of the State of Washington, or the employees or agents of the State, in entering into or implementing this Decree.

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XXIV. COMPLIANCE WITH APPLICABLE LAWS

A. Pursuant to RCW 70.105D.090(1), Defendant is exempt from the procedural requirements of Chapters 70.94, 70.95, 70.105, 77.55, 90.48, and 90.58 RCW and of any laws requiring or authorizing local government permits or approvals. However, Defendant shall comply with the substantive requirements of such permits or approvals. The exempt permits or approvals and the applicable substantive requirements of those permits or approvals, as they are known at the time of entry of this Decree, have been identified in the CAP (Exhibit D).

B. Defendant has a continuing obligation to determine whether additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Decree. In the event either Defendant or Ecology determines that additional permits or approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under this Decree, it shall promptly notify the other party of this determination. Ecology shall determine whether Ecology or Defendant shall be responsible to contact the appropriate state and/or local agencies. If Ecology so requires, Defendant shall promptly consult with the appropriate state and/or local agencies and provide Ecology with written documentation from those agencies of the substantive requirements those agencies believe are applicable to the remedial action. Ecology shall make the final determination on the additional substantive requirements that must be met by Defendant and on how Defendant must meet those requirements. Ecology shall inform Defendant in writing of these requirements. Once established by Ecology, the additional requirements shall be enforceable requirements of this Decree. Defendant shall not begin or continue the remedial action potentially subject to the additional requirements until Ecology makes its final determination.

C. Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the exemption from complying with the procedural requirements of the laws referenced in RCW 70.105D.090(1) would result in the loss of approval from a federal agency that is necessary for the State to administer any federal law, the exemption shall not apply and Defendant shall

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comply with both the procedural and substantive requirements of the laws referenced in RCW 70.105D.090(1), including any requirements to obtain permits.

XXV. REMEDIAL ACTION COSTS

Defendant shall pay to Ecology costs incurred by Ecology for negotiating this Decree with Touchstone Corporation (but not costs of negotiating with King County or Chevron concerning their consent decree), reviewing plans and performing public participation from November 1, 2006 until the Consent Decree is entered, and such further costs incurred pursuant to this Decree and consistent with WAC 173-340-550(2). These costs shall include work performed by Ecology or its contractors for, or on, the Property under Chapter 70.105D RCW, including remedial actions and Decree preparation, negotiation, oversight and administration. These costs shall include work performed both prior to and subsequent to the entry of this Decree. Ecology's costs shall include costs of direct activities and support costs of direct activities as defined in WAC 173-340-550(2). Defendant shall pay the required amount within ninety (90) days of receiving from Ecology an itemized statement of costs that includes a summary of costs incurred, an identification of involved staff, and the amount of time spent by involved staff members on the project. A general statement of work performed will be provided upon request. Itemized statements shall be prepared quarterly. Pursuant to WAC 173-340-550(4), failure to pay Ecology's costs within ninety (90) days of receipt of the itemized statement of costs will result in interest charges at the rate of twelve percent (12%) per annum, compounded monthly.

Pursuant to RCW 70.105D.055, Ecology has authority to recover unreimbursed remedial action costs by filing a lien against real property subject to the remedial actions.

XXVI. IMPLEMENTATION OF REMEDIAL ACTION

If Ecology determines that Defendant has failed without good cause to implement the remedial action, in whole or in part, Ecology may, after notice to Defendant, perform any or all portions of the remedial action that remain incomplete. If Ecology performs all or portions of

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the remedial action because of Defendant's failure to comply with the obligations under this Decree, Defendant shall reimburse Ecology for the costs of doing such work in accordance with Section XXV (Remedial Action Costs), provided that Defendant is not obligated under this Section to reimburse Ecology for costs incurred for work inconsistent with or beyond the scope of this Decree.

Except where necessary to abate an emergency situation, Defendant shall not perform any remedial actions at the Property outside those remedial actions required by this Decree, unless Ecology concurs, in writing, with such additional remedial actions pursuant to Section XVI (Amendment of Decree).

XXVII. PUBLIC PARTICIPATION

Ecology shall maintain the responsibility for public participation at the Site. However, Defendant shall cooperate with Ecology, and shall:

A. If agreed to by Ecology, develop appropriate mailing list, prepare drafts of public notices and fact sheets at important stages of the remedial action, such as the submission of work plans, remedial investigation/feasibility study reports, cleanup action plans, and engineering design reports. As appropriate, Ecology will edit, finalize, and distribute such fact sheets and prepare and distribute public notices of Ecology's presentations and meetings.

B. Notify Ecology's project coordinator prior to the preparation of all press releases and fact sheets, and before major meetings with the interested public and local governments. Likewise, Ecology shall notify Defendant prior to the issuance of all press releases and fact sheets, and before major meetings with the interested public and local governments. For all press releases, fact sheets, meetings, and other outreach efforts by Defendant that do not receive prior Ecology approval, Defendant shall clearly indicate to its audience that the press release, fact sheet, meeting, or other outreach effort was not sponsored or endorsed by Ecology.

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C. When requested by Ecology, participate in public presentations on the progress of the remedial action at the Site. Participation may be through attendance at public meetings to assist in answering questions, or as a presenter.

D. When requested by Ecology, arrange and/or continue information repositories at the following locations:

1. Touchstone Corporation
2025 First Avenue, Suite 790
Seattle, Washington

2. Ecology's Northwest Regional Office
3190 – 160th Avenue SE
Bellevue, Washington

At a minimum, copies of all public notices, fact sheets, and press releases; all quality assured monitoring data; remedial actions plans and reports; supplemental remedial planning documents, and all other similar documents relating to performance of the remedial action required by this Decree shall be promptly placed in these repositories.

XXVIII. DURATION OF DECREE

The remedial program required pursuant to this Decree shall be maintained and continued until Defendant has received written notification from Ecology that the requirements of this Decree have been satisfactorily completed. This Decree shall remain in effect until dismissed by the Court. When dismissed, Section XIX (Covenant Not to Sue) and Section XX (Contribution Protection) shall survive.

XXIX. CLAIMS AGAINST THE STATE

Defendant hereby agrees that it will not seek to recover any costs accrued in implementing the remedial action required by this Decree from the State of Washington or any of its agencies; and further, that Defendant will make no claim against the State Toxics Control

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Account or any local Toxics Control Account for any costs incurred in implementing this Decree. Except as provided above, however, Defendant expressly reserves its right to seek to recover any costs incurred in implementing this Decree from any other PLP. This Section does not limit or address funding that may be provided under Chapter 173-322 WAC.

XXX. EFFECTIVE DATE

This Decree is effective only upon the date (Effective Date) that title to the Property vests in Defendant, following entry of this Decree by the Court. If Defendant does not purchase the Property this Decree shall be null and void, and Defendant will be under no obligation to perform the work required by this Decree. In such event, the Parties will jointly move the Court to dismiss the cause of action and to declare the Decree null and void.

XXXI. WITHDRAWAL OF CONSENT

If the Court withholds or withdraws its consent to this Decree, it shall be null and void at the option of any party and the accompanying Complaint shall be dismissed without costs and without prejudice. In such an event, no party shall be bound by the requirements of this Decree.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

JAMES J. PENDOWSKI
Program Manager
Toxics Cleanup Program
(360) 407-7177

Date:_____

ROB McKENNA
Attorney General

JAMES R. SCHWARTZ
Assistant Attorney General
(360) 586-4619

Date:_____

TOUCHSTONE CORPORATION

Douglas O. Howe
President
(206) 727-2393

Date: 1/19/07

ENTERED this _____ day of _____2007.

_____
JUDGE
King County Superior Court

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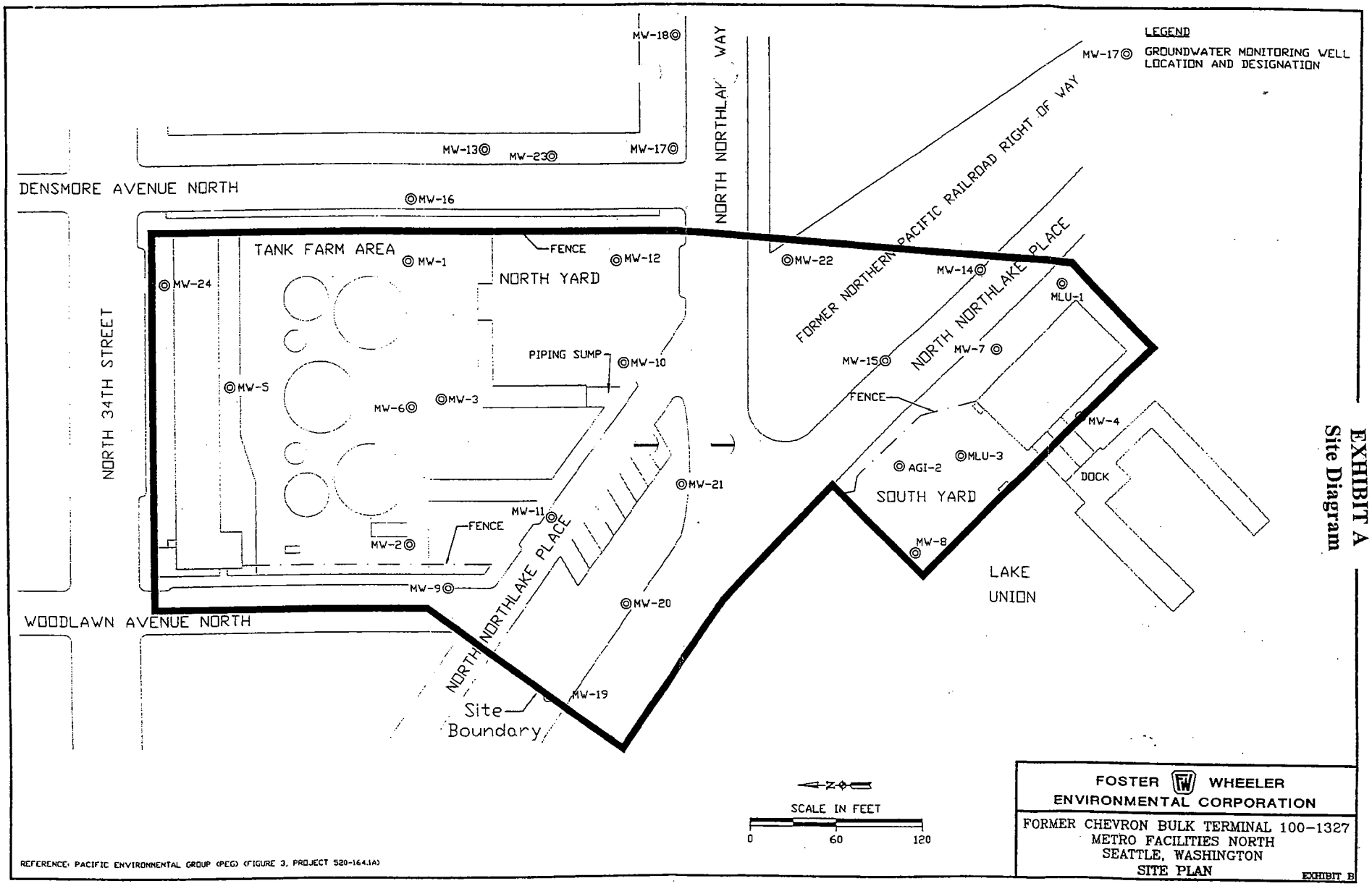
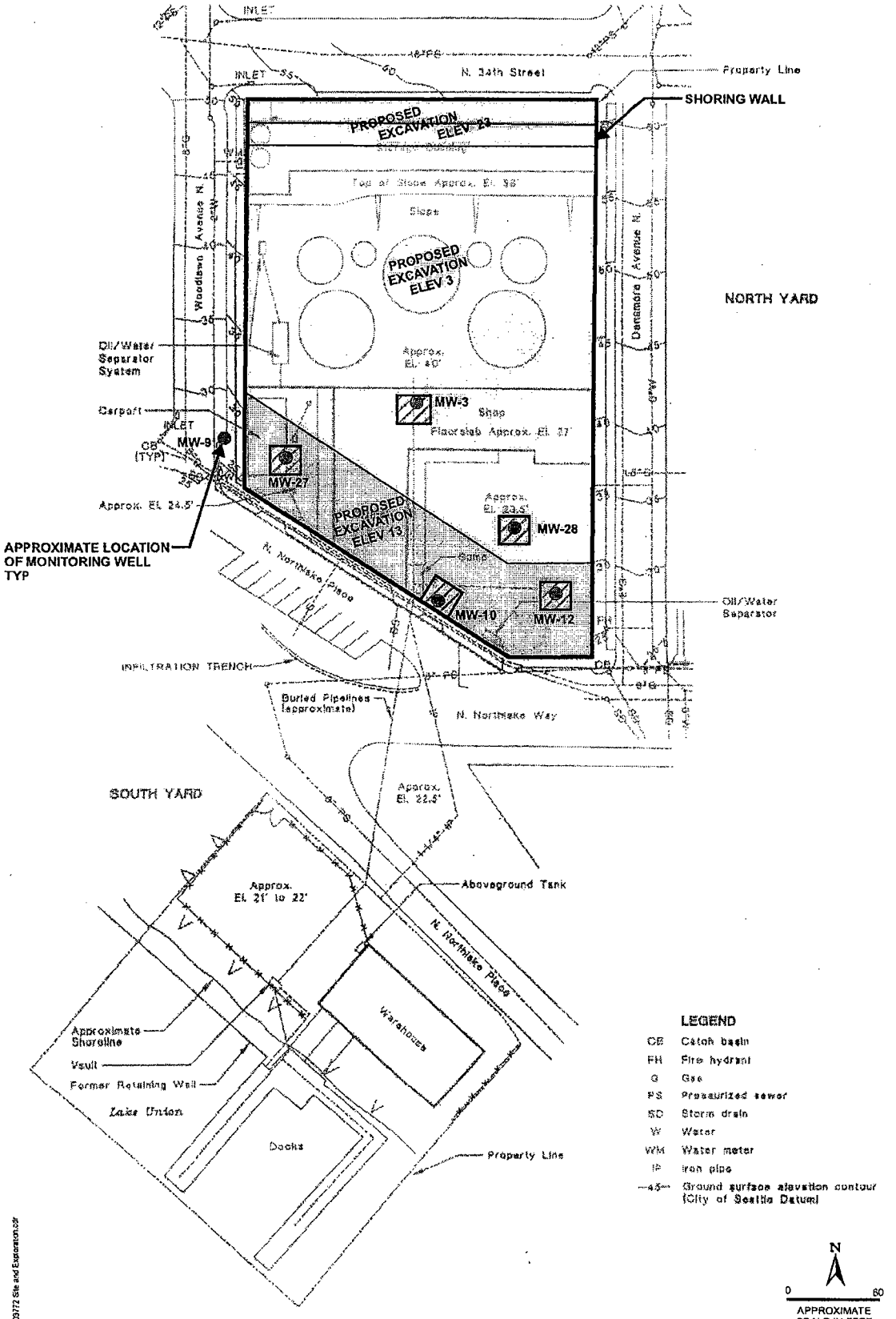


EXHIBIT A
Site Diagram

EXHIBIT B
Property Diagram



Reference: Metro Site Plan - Existing and New, drawing number G102, dated December 1991, Applied Geotechnology Inc.

03772 North Lake Union\ 03772 Site and Exploration.dgn

Associated Earth Sciences, Inc.

BUILDING EXCAVATION PLAN
NORTH LAKE UNION
SEATTLE, WASHINGTON

FIGURE 2
DATE 9/06
PROJ. NO. KE03772A

EXHIBIT C

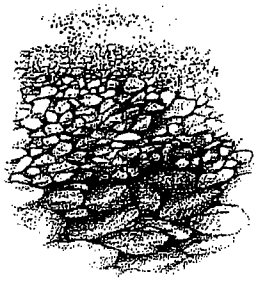
Department of Ecology v. Touchstone Corporation
Prospective Purchaser Consent Decree

Legal Description of Property

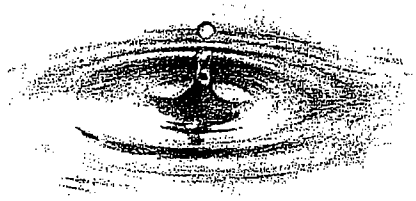
LOTS 1 THROUGH 12, INCLUSIVE, BLOCK 74, LAKE UNION ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 1 OF THE PLATS, PAGE 238, IN KING COUNTY, WASHINGTON

EXHIBIT D

Department of Ecology v. Touchstone Corporation
Cleanup Action Plan



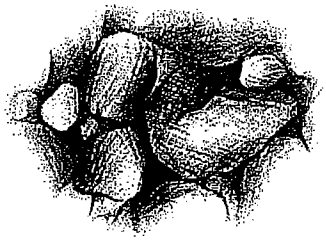
Geotechnical Engineering



Water Resources

Environmental Assessments and Remediation

Sustainable Development Services



Geologic Assessments

Associated Earth Sciences, Inc.

Celebrating 25 Years of Service

Cleanup Action Plan

METRO LAKE UNION NORTH YARD PROPERTY CLEANUP SITE

Seattle, Washington

Prepared for

Touchstone Corporation

Project No. KV03772A
January 18, 2007

CLEANUP ACTION PLAN

METRO LAKE UNION NORTH YARD PROPERTY CLEANUP SITE

Seattle, Washington

Prepared for:
Touchstone Corporation
2025 First Avenue, Suite 790
Seattle, Washington 98121

Prepared by:
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, Washington 98033
425-827-7701
Fax: 425-827-5424

January 18, 2007
Project No. KV03772A

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1.0 INTRODUCTION

1.1 Purpose and Scope

Touchstone Corporation (Touchstone) intends to purchase the portion of the Metro Lake Union Cleanup Site (hereafter "the Site") known as the North Yard except for the adjacent road rights of way (hereafter "the Property" or "the North Yard Property"). Touchstone intends to construct an office building at the Property. The Property is currently owned by King County/Municipality of Metropolitan Seattle (Metro). The Property will be covered with a building, which will include underground parking.

The entire Metro Lake Union Cleanup Site, including the North and South Yards, was subject to prior cleanup actions by King County and Chevron under a consent decree with the Washington State Department of Ecology (hereafter King County/Chevron Consent Decree). However, petroleum hydrocarbon concentrations in soils and groundwater on the North Yard Property still exceed the cleanup levels for the Site. Ultimately, Touchstone intends to remediate the soil contamination that remains on the Property under a Prospective Purchaser Consent Decree (PPCD) entered into with the Washington State Department of Ecology (Ecology) under the Model Toxics Control Act (MTCA), and receive from Ecology a written determination that Touchstone's cleanup obligations under the PPCD have been met and that no further action by Touchstone is necessary. This PPCD only requires Touchstone to remediate soil contamination within the boundaries of the Property it purchases, and does not address off-Property soil contamination, including road rights of way in the North Yard Property and all of the South Yard of the Site. Touchstone will conduct dewatering activities, including groundwater testing and disposal, during excavation if subsurface conditions require dewatering, as described in Section 4.3. Touchstone will not be responsible for monitoring or remediation of any off-Property soil contamination, nor be responsible for any groundwater contamination remaining after construction on or off the Property at the Site except as noted in the PPCD, which will remain the responsibility of Chevron and King County/Metro.

This Cleanup Action Plan (CAP) includes the following elements:

- A summary of the nature and extent of chemicals at the Property;
- A discussion of exposure pathways for chemicals of concern;
- The cleanup levels for the Property;
- A detailed description of the selected alternative;
- The compliance monitoring and reporting requirements;

- A schedule;

- An Environmental Contingency Plan (ECP) that is intended to provide guidance for construction contractors regarding practices and procedures to protect workers, the public, and the environment from chemical exposures during construction; and

- A Compliance Monitoring and Sampling and Analysis plan (SAP) that describes how samples will be collected and tested.

This plan does not address asbestos containing materials (ACMs) or lead-based paint (LBP), both of which are known to be present in buildings at the Property. These buildings are to be removed prior to construction. Hazards and appropriate mitigation guidelines associated with ACM and LBP are fairly standard and should be addressed by demolition contractors that specialize in ACM and LBP abatement.

1.2 Location and Setting

As shown on Figure 1, the Site is located in Seattle, Washington, with an address of 1602 North Northlake Place. As shown on Figure 2, the Property is located between North 34th Street (to the north) and North Northlake Place (to the south), and between Woodlawn Avenue North (to the west) and Densmore Avenue North (to the east). The address of the Property is 3301 Densmore Avenue North. The Property is approximately 300 feet long (north to south) and 220 feet wide (east to west). The Property slopes to the southwest with elevations between 25 feet above average mean sea level (amsl) and 60 feet amsl. The soils beneath the Property are primarily glacial till, recessional sand, and fill in places. Depth to groundwater has ranged from 6 to 16 feet below ground surface in recent years (Science Applications International Corporation [SAIC], 2006). Groundwater monitoring wells generally provide a short-term yield estimated at 2 gallons per minute (gpm) with a range of 0.5 to 3.0 gpm.

The Touchstone Property is most of the northern portion (referred to as the North Yard) of a larger property currently owned by King County/Metro. King County/Metro also owns property south of North Northlake Place referred to as the South Yard. This CAP only addresses the property to be purchased by Touchstone at the North Yard. Previously, the entire King County/Metro property was a bulk fuels terminal built by Standard Oil Company of California (Standard), a predecessor to Chevron, in 1925. Standard/Chevron used the facility for storage and distribution of bulk petroleum-based fuels and oils, and various containerized petroleum products until the property was sold to King County/Metro in 1982. The entire property currently owned by King County, both the North and South Yards, has been designated as a cleanup site, known as the Metro Lake Union Site.

1.3 Previous Environmental Assessments and Cleanup Actions

Several environmental assessments were conducted by several environmental consultants in the early 1990s to assess the extent of contamination at the Metro Lake Union Site. These reports and additional work performed by Applied Geotechnology, Inc. (AGI), were summarized in a Remedial Investigation/Feasibility Study (RI/FS) (AGI, 1993).

Additional work was conducted following the RI/FS, culminating in the Cleanup Action Plan completed in 1998 (Foster Wheeler, 1998). In 1999, King County and Chevron entered into a Consent Decree with Ecology to implement the Cleanup Action Plan and clean up the Metro Lake Union Site. Remediation of the site was divided into Phase I and Phase II. Phase I included removal of the aboveground storage tanks (ASTs) along with associated piping and structures, followed by excavation and off-site disposal of shallow soil containing metals from AST sand blasting and painting activities. Phase II included a variety of methods to increase bioremediation of soil and groundwater containing petroleum hydrocarbons. Phase II also included groundwater monitoring, institutional controls, and restrictive covenants.

AST removal and Phase I soil excavation and disposal was conducted in 1999. Confirmation sampling following soil excavation indicated that all soils with concentrations of metals in excess of cleanup levels were removed (AGI, 2000). The Phase II bioremediation system included groundwater extraction, peroxide injection, and biosparging that were conducted between 1999 and 2003. These methods were successful in removing some, but not all, of the contamination. Concentrations of petroleum hydrocarbons exceed the current Method C Industrial soil cleanup levels for the Site, as demonstrated by the presence of separate phase hydrocarbons (SPH) in the following monitoring wells located in the North Yard (SAIC, 2006):

MW-3
MW-9
MW-10
MW-11
MW-12
MW-27
MW-28

Cleanup levels were set for groundwater at the Site based on protection of surface water, as discussed in detail in the RI/FS (AGI 1993) and the previous CAP for the existing site (Foster Wheeler 1998). Although some reduction in groundwater concentrations have been accomplished over the years, separate phase hydrocarbons are still observed in some wells and groundwater concentrations still exceed cleanup levels for the Site. This Cleanup Action Plan for the North Yard Property does not address groundwater contamination at the Site. Except for "new releases" as described in the PPCD, Touchstone is not responsible for groundwater

monitoring and any necessary further remediation at the Site, which responsibility remains with King County/Metro and Chevron subject to their Consent Decree with Ecology. However, it is expected that Touchstone's remediation of petroleum contaminated soil to the bottom of the smear zone at its Property will remove potential source material and thereby improve the groundwater at the Site.

2.0 NATURE AND EXTENT OF CHEMICAL CONSTITUENTS OF CONCERN FOR SOIL

This section provides a summary of the nature and extent of remaining chemicals of concern (COCs) for soil at the North Yard Property.

Soil samples were collected at numerous locations and depths across the Property. Although metals and polycyclic aromatic hydrocarbons (PAHs) were detected in shallow soil near the former AST locations, this soil was removed as part of the Phase I cleanup. Soil cleanup levels for the Site were previously established in the King County/Chevron Consent Decree (Ecology, 1999) and are tabulated in the CAP for that Decree (Foster Wheeler, 1998) and listed in Table 1. The chemical constituents listed in Table 1 will be considered COCs on the North Yard Property:

Table 1
Maximum Concentrations of COC Detected in Soil and Cleanup Levels

Chemical	Maximum Detected Concentration (ppm)[1]	Site-Specific Cleanup Level[2] (ppm)	MTCA Cleanup Level[3] (ppm)
TPH[4]-Gasoline	6,700	4,520	30
TPH-Diesel	14,000	5,140	2,000
TPH-Oil	430	5,780	2,000
Benzene	9.9	4,530	0.03
Fluoranthene	ND	18	None
Naphthalene	0.24	18	5
Benzo(a)pyrene	ND	18	0.1
Chrysene	0.028	18	0.1
Dibenzo(a,h)anthracene	ND	18	0.1
Indeno(1,2,3-cd)pyrene	0.03	18	0.1
Benzo(k)fluoranthene	ND	18	0.1
Benzo(a)anthrance	ND	18	0.1
Benzo(b)fluoranthene	0.036	18	0.1

[1]ppm = parts per million.
[2]As determined in the King County/Metro and Chevron Consent Decree.
[3]MTCA = Model Toxics Control Act. Method A for unrestricted site use.
[4]TPH = Total Petroleum Hydrocarbons.

As indicated above, gasoline and diesel-range petroleum hydrocarbon concentrations are above both the site-specific cleanup levels previously established and the MTCA Method A unrestricted site use cleanup levels. Benzene concentrations are above the MTCA Method A unrestricted site use cleanup level.

3.0 DEVELOPMENT AND EVALUATION OF REMEDIATION ALTERNATIVES

3.1 Cleanup Levels for Chemicals of Concern

MTCA Method A cleanup levels for unrestricted site use will be applicable for COCs in the PPCD and are provided in Table 1. These cleanup levels are significantly lower than the cleanup levels specified in the 1999 Consent Decree. Soil with COCs above cleanup levels is referred to as "Impacted Soil" in the remainder of this report.

3.2 Screening of Alternatives

The bioremediation alternatives for soil contamination have partially reduced COC concentrations, but have not reduced COC concentrations below the site-specific MTCA cleanup levels previously established for the Site. Excavation and off-site disposal/treatment, or continued monitoring and natural attenuation are the two remaining viable alternatives for addressing soil contamination. Excavation and off-site disposal/treatment is the only alternative compatible with Touchstone's development plans for the Property, which includes excavation for an underground garage to a depth ranging from 10 to 55 feet below the existing ground surface.

As stated in WAC 173-340-350(8)(b), remedial alternatives may be eliminated from further consideration if they do not achieve the following criteria:

1. Protective of human health and the environment.
2. Compliance with cleanup levels.
3. Compliance with all applicable state and federal laws.
4. Provide for compliance monitoring.

The proposed remedial action (Soil Removal and Off-Site Disposal/Treatment) will achieve the screening criteria.

3.3 Evaluation of Alternatives

Table 2 provides a comparison of the proposed remedial action against the MTCA evaluation criteria. As shown in the table, the proposed remedial alternative performs satisfactorily with regards to all the criteria.

Table 2
Evaluation of Remediation Alternative

Criteria	Soil Removal and Off-Site Disposal/Treatment
Protectiveness	Achieves protectiveness since all Impacted Soil will be removed from the Property.
Compliance with Cleanup Levels	Will achieve all the cleanup levels for soils at the Property.
Permanence	Permanent solution to the maximum extent practicable since in situ treatment has not achieved MTCA cleanup levels. Some Impacted Soils that remain on the Property will be treated off-site.
Cost	$2.0M
Long-Term Effectiveness	Very good due to removal of all Impacted Soil from the Property.
Management of Short-Term Risks	Short-term risk of exposure to Impacted Soil during excavation considered acceptable.
Implementability	There are no impediments to effective implementation.
Consideration of Public Concerns	Public concerns have not been expressed.

3.4 Reasonable Restoration Timeframe

WAC 173-340-360(4) requires that a cleanup action provide for a reasonable restoration timeframe. The cleanup action that is the subject of this CAP is soil excavation and off-site disposal or treatment. Excavation and removal of the Impacted Soil is the quickest way to achieve cleanup levels at the Property. The selected remedy will achieve cleanup levels for soil at the Property within three to six months, which is generally considered an extremely short restoration time-frame.

3.5 Exposure Pathways Following Implementation of Remedial Action

Touchstone intends to remove all Impacted Soil from within its Property boundaries. Since the excavation extends below the groundwater table, impacted groundwater will also be removed from the North Yard Property. In addition, Touchstone will implement moisture and vapor barriers around the subsurface portion of the building to provide additional protective measures where necessary

Evaluation of individual exposure pathways following construction are provided below:

Soil → Office Worker via Ingestion/Direct Exposure: This pathway has been eliminated due to removal of Impacted Soil.

Soil → Groundwater → Office Worker via Ingestion/Direct Exposure: This pathway has been eliminated due to removal of Impacted Soil.

Soil → Vapor → Office Worker via Inhalation: Previous indoor air sampling and analysis indicated that the COCs for the Property were not detected inside the existing structures (Foster Wheeler, 1998). This pathway can be eliminated given these data and due to removal of Impacted Soil. In addition, waterproofing and a vapor barrier will be constructed around the subsurface portion of the building where necessary.

Groundwater → Office Worker via Ingestion/Direct Exposure: This pathway has been eliminated due to removal of impacted groundwater and an existing Restrictive Covenant recorded on the Property preventing use of groundwater. In addition, waterproofing and a vapor barrier will prevent migration of groundwater into the building.

Groundwater → Vapor → Office Worker via Inhalation: Previous indoor air sampling and analysis indicated that the COCs for the Property were not detected inside the existing structures (Foster Wheeler, 1998). This pathway can be eliminated given these data and due to removal of some impacted groundwater during dewatering of the excavation. In addition, waterproofing and a vapor barrier will prevent migration of vapors into the building.

4.0 REMEDIAL DESIGN OF THE PREFERRED ALTERNATIVE

The selected remediation alternative is soil removal with off-site disposal/treatment. Each element of the remedial action plan is discussed in the following sections. In addition, all remediation work will be conducted in accordance with the procedures and practices described in the ECP (see Appendix A).

4.1 "Hot Spot" Removal

The purpose of "hot spot" removal is to eliminate all the known pockets of high concentrations of petroleum hydrocarbons during installation of excavation shoring. The following well locations within the North Yard (including the street rights of way) have been identified as "hot spots" with either free product or high concentrations of petroleum hydrocarbons:

MW-3
MW-9
MW-10
MW-11
MW-12
MW-27
MW-28

Wells MW-3, MW-10, MW-12, MW-27, and MW-28 are located within the Touchstone North Yard Property and will be abandoned by removing the well and surrounding Impacted Soils that are within the Property boundaries. MW-9 and MW-11 are located off of the Touchstone Property and Touchstone will remediate any Impacted Soil surrounding MW-9 and MW-11 that is within the boundaries of Touchstone's Property. Hot spot excavations conducted by Touchstone will extend to the bottom of the soil "smear" zone where groundwater fluctuation has impacted soil. It is estimated that the soil "smear" zone extends no more than 5 feet below the groundwater table. In no event will Touchstone be responsible to remediate contaminated soil outside of the Property boundaries.

The "hot spots" within the boundaries of the Property will be excavated and backfilled with pea gravel or drain rock during installation of excavation shoring. Six to 12-inch-diameter, perforated pipe will be placed in the "hot spot" excavations before backfilling to create temporary sumps to facilitate removal of separate phase hydrocarbons. The "hot spot" sumps will be removed during excavation of the underground parking garage, as discussed in Section 4.4.

Assuming that each excavation will have an approximate depth of 15 feet and an approximate diameter of 15 feet, it is estimated that approximately 400 cubic yards of Impacted Soil will be generated by the "hot spot" removal. Impacted Soil will be hauled to an off-site facility licensed for the treatment and/or disposal of hydrocarbon-impacted soil. Testing, treatment, and disposal documentation will be submitted to Ecology in the Compliance Monitoring Report.

4.2 Contingency for Temporary and 5-Year Cover

Once Touchstone has removed the buildings and asphalt and concrete covering the North Yard Property, if remedial work is stopped or delayed for more than 14 days and less than 60 days, a temporary cover will be installed within 28 calendar days of stoppage. If work stoppage lasts more than 60 calendar days, then a 5-year cover will be installed within 90 calendar days from work stoppage. The cover over the Property will be constructed as follows:

1. **Temporary Cover:** Touchstone will install and maintain a temporary cover over the Property or a sufficient portion of the Property to ensure that any exposed soil on the Property will be protected from water, snow, or wind. The cover will include storm water controls. The temporary cover will be constructed using minimum 10 mil plastic geomembrane with taped seams. The estimated cost for the temporary cover is $21,000.

2. **5-Year Cover:** Touchstone will install and maintain a 5-year cover over the Property or a sufficient portion of the Property to ensure that that any exposed soil on the Property will be protected from water, snow, or wind. The cover will include

storm water controls. The 5-year cover will be constructed using a minimum 30 mil polyvinyl chloride (PVC) geomembrane with glued or welded seams. The estimated cost for the 5-year cover is $245,000.

The above cost estimates are based on 2006 dollars and would be revised to reflect current costs at the time the financial assurance is provided.

Both alternatives would include a stormwater collection system. Stormwater would be discharged to the storm sewer in accordance with City of Seattle permit, King County Metro discharge and Ecology MTCA requirements.

Financial assurance will be provided for both the temporary and permanent covers, in accordance with the requirements in the PPCD. Design of the contingency covers would be provided in the Engineering Design Report.

4.3 Dewatering

Following excavation of "hot spots", any groundwater and free product in the "hot spot" sumps will be removed using a vac truck upon accumulation of 0.1 inches of separate phase hydrocarbons or, at a minimum, at least once per week during the excavation period. The sumps will be inspected daily for the first week, then weekly during the pre-excavation period. Ground water extracted from "hot spots" will be transported to a licensed treatment facility for treatment and disposal. Any occurrence of separate phase hydrocarbons greater than 0.1 inches will be documented, removed off-site for treatment and/or disposal, and reported to Ecology in the Compliance Monitoring Report.

In advance of construction, perimeter dewatering wells may be constructed if they are necessary. These dewatering wells would be designed and constructed to lower the water table below the base of the excavation during construction of the underground parking garage. Dewatering (extracted) groundwater will either be transported off-site for treatment and/or disposal or discharged to the sanitary sewer under permit to King County Metro. If discharged to the sewer, the extracted groundwater will be sampled and analyzed in accordance with the King County/Metro sewer discharge permit. Dewatering activities will be documented and reported to Ecology in the Compliance Monitoring Report.

4.4 Parking Garage Excavation

Once the excavation is sufficiently dewatered, excavation for the parking garage will be conducted. It is expected that shoring will be installed before excavation begins or that soil nailing will be utilized as excavation progresses. The expected lateral extent of excavation is shown on Figure 2 and the estimated depth of excavation is shown on Figure 3. As shown on Figure 3, Touchstone estimates that the excavation for the parking garage will extend down to

the water table along the south side and approximately 40 feet below the water table on the north side. It is expected that impacted soil will be found to a depth of approximately 5 feet below the water table along the south side of the Property. Therefore, the excavation will be extended beyond the depth required by the parking garage to ensure that all Impacted Soil will be removed from within the Property boundaries. It is expected that the excavation will extend laterally to the Property boundary along the south side.

After excavation, performance soil sampling will be used to confirm that the Method A unrestricted cleanup levels have been achieved. If the cleanup levels have not been achieved, then Touchstone will excavate another 6-inch cut across the location where cleanup levels were not achieved and repeat performance soil sampling. If the cleanup levels still have not been achieved, then Touchstone will excavate another 6-inch cut across the location and repeat performance soil sampling. If the cleanup levels are not achieved, then Touchstone may choose at its option, to prepare a Disproportionate Cost Analysis following WAC 173-340-360(3)(e) or excavate another 6-inch cut across the location and repeat performance soil sampling.

Excavated soil will be tested to determine the concentrations of total petroleum hydrocarbons and BTEX. It is expected that excavated soil will be segregated into clean soil (no detectable levels of total petroleum hydrocarbons [TPH]) or benzene), nuisance soil (gasoline TPH between 0 and 100 ppm, diesel TPH between 0 and 200 ppm, or benzene between 0 and 0.5 ppm), and high TPH soil (gasoline TPH greater than 100 ppm, diesel TPH greater than 200 ppm, or benzene greater than 0.5 ppm). Clean soils will be laboratory tested to confirm that gas and diesel TPH and benzene concentrations are below method detection levels. Once it is documented that concentrations are below method detection levels clean soils may be exported to another site and used as clean fill material. Nuisance soil will be landfilled and high TPH soil will be thermally treated at a licensed facility. Removal of clean soil and removal and treatment of nuisance and high TPH soils will be documented, manifested, and reported to Ecology in the Compliance Monitoring Report.

Evaluation of petroleum hydrocarbon concentrations will be conducted in the field using screening methods and performance monitoring samples will be submitted to the laboratory for analysis, as described below and as discussed in the SAP (Appendix B):

- **Qualitative Field Screening**: Soils with detectable TPH concentrations can generally be identified in the field based on appearance, odor, and screening with an organic vapor analyzer (OVA).

- **Semi-Quantitative Field Screening Using the PetroFlag System**: The PetroFlag system is a turbidimetric screening method for assessing TPH in soil. The EPA methodology (Method 9074) is provided in Appendix C. Semi-quantitative field

screening will be conducted using this method to categorize soils as either: 1) clean, 2) nuisance, or 3) high TPH.

- **Laboratory Testing**: Soil samples will be collected and analyzed in a laboratory to verify the accuracy of the field screening methods and to demonstrate that all impacted soils have been removed from the Property (once excavation is complete). Initially, 10% of the PetroFlag samples will be tested in a laboratory to determine the accuracy of the field screening. If the laboratory samples indicate that the PetroFlag results are providing reliable results, this frequency may be decreased to 5% after 50 PetroFlag samples. The higher frequency will be utilized whenever there are significant changes in soil characteristics. Sampling and analysis procedures are provided in Appendix B.

Assuming the dimensions of Impacted Soil shown on Figures 2 and 3, it is estimated that approximately 15,000 to 25,000 cubic yards of Impacted Soils will be disposed/treated off-site. The remaining soil is expected to be clean.

If unexpected underground storage tanks and/or pipelines are encountered on the Property during demolition or excavation activities, they will be characterized and properly disposed of and/or remediated. These new discoveries will be reported to Ecology.

4.5 Applicable Relevant and Appropriate Requirements (ARARS)

Touchstone and its contractors shall comply with all applicable federal, state, and local regulations pertaining to work practices, hauling and disposal of Impacted Soil, and protection of workers, visitors to the Property, and persons occupying areas adjacent to the Property. A description of the federal, state, and local regulations potentially applicable to the cleanup is presented in the ECP (found in Appendix A).

It is anticipated that cleanup work at the Property will trigger the following permit requirements:

- Asbestos Removal Permit from the Puget Sound Clean Air Agency (Regulation 3, Article 4: Asbestos Control Standards)

- Shoring and excavation permit from the City of Seattle.

- A stormwater discharge permit from King County/Metro Industrial Waste Program for discharge of contaminated groundwater.

The specific conditions to be imposed by these permit laws is unknown at this time. Remediation at the Property is not expected to occur for several years. When Touchstone is prepared to begin remediation, it will contact the permitting agencies to determine the specific

substantive requirements of the permits. Those substantive requirements will be included in the draft Engineering Design Report submitted to Ecology.

4.6 Health and Safety

Touchstone or its contractor is responsible for developing their own health and safety plan and ensuring that the plan is correctly implemented. The plan shall, at a minimum, comply with the health and safety guidelines specified in the ECP.

4.7 Compliance Monitoring

4.7.1 Performance Monitoring and Confirmational Sampling

The point of compliance for soil is defined horizontally as the North Yard Property boundary and vertically as the base of the smear zone. Performance monitoring soil samples will be collected from the bottom of the excavation and from internal excavation sidewalls on the Property (not on sidewalls of the excavation around the perimeter of the Property) in areas where Impacted Soils have been removed. These samples will be used to confirm that COC concentrations meet cleanup levels in soil at the base of the excavation and interior sidewalls within the Property boundary.

Any discharge from footing drains and/or basement sumps will also be sampled following remediation to confirm that chemical concentrations are within discharge limits defined in the King County Metro sewer discharge permit.

Characterization soil samples will be collected from the Property perimeter sidewalls as the excavation shoring is installed. These samples will be analyzed for COCs to characterize soil concentrations at the Property boundary. This information will be used by Ecology, King County/Metro, and Chevron to make future decisions regarding contaminated soils that occur off the Property. However, this characterization sampling is not part of Touchstone's compliance monitoring. If perimeter sidewall samples exceed cleanup levels for the North Yard Property or for the Site, that information will not result in a determination by Ecology that Touchstone's cleanup has failed to meet cleanup levels for the North Yard Property or that Touchstone is obligated to clean up contaminated soil outside the Property boundaries.

Performance monitoring and characterization sampling will be conducted in accordance with the procedures specified in the Compliance Monitoring and Sampling and Analysis Plan (Appendix B). All sampling results will be documented and reported to Ecology in the Compliance Monitoring Report.

4.7.2 Groundwater Compliance Monitoring/Point of Compliance

The point of compliance for groundwater in the North Yard, including the North Yard Property, was established in the King County/Chevron Consent Decree as the southern property boundary, to be monitored using existing wells MW-19, MW-20, and MW-21. That point of compliance will remain unchanged.

Once performance monitoring soil sampling shows that COC concentrations in soils on the North Yard Property meet cleanup levels inside the point of compliance for soil, Touchstone's obligations to conduct remedial actions, including monitoring, will be complete.

King County/Metro and Chevron will continue to conduct any remaining required ground water monitoring at the North Yard and the remainder of the Metro Lake Union Site, pursuant to their Consent Decree with Ecology.

4.7.3 Monitoring of Basement Sump Discharge Post Construction

It is expected that basement sump seepage will be collected and discharged to the storm sewer under a permit from King County/Metro. This permit will specify sampling and analysis requirements and identify allowable petroleum hydrocarbon concentrations that will determine if treatment is necessary. If sump seepage is discharged under a King County/Metro Permit, Touchstone will comply with the discharge and monitoring requirements specified in the King County/Metro Permit. Results of sump seepage monitoring will be provided to Ecology in the Compliance Monitoring Report.

4.7.4 Compliance Monitoring Plan

The Compliance Monitoring Plan will be prepared during the Engineering Design phase following WAC 173-340-410. The draft Compliance Monitoring Plan will be consistent with the SAP and will address specific design details, such as excavation configuration, storm water permit requirements, and material staging.

4.8 Institutional Controls

The cleanup actions earlier conducted on the Site, including the North Yard, resulted in residual levels of petroleum hydrocarbons in the soil and shallow groundwater being left on the Site that exceeded unrestricted cleanup levels for soil and drinking water standards for groundwater. Therefore, King County recorded a restrictive covenant for the North Yard Property. That restrictive covenant will remain in place for the North Yard Property, but will be amended by Touchstone as described in the PPCD.

5.0 REPORTING AND NO FURTHER ACTION DETERMINATION

Touchstone will submit a draft Engineering Design Report (EDR) to Ecology. The EDR will include the engineering specifications, procedures, and substantive permit requirements to implement the excavation, testing, storage, transport, treatment by thermal desorption, and disposal of the Impacted Soils, and testing and documentation for clean soils. The EDR will also include the Draft Compliance Monitoring Plan (described above). Note, the Compliance Monitoring Plan is to address the soils within the Property and the dewatering activities during excavation and/or work stoppage once the existing cover is removed within the Property.

Once performance monitoring results indicate that all Impacted Soil exceeding cleanup levels has been removed from the Touchstone Property within the point of compliance, Touchstone will submit a Compliance Monitoring Report to Ecology that documents the performance monitoring results. Touchstone will also request a written determination from Ecology that Touchstone has met all of its obligations under the PPCD with Ecology and that no further action by Touchstone is necessary. All reports will be issued with three hard copies to Ecology and an electronic copy. Laboratory and analytical results will be submitted with hard copy and electronic copy in EIM (Environmental Information Management) format.

6.0 SCHEDULE

Construction of the new building at the North Yard Property will begin once a new King County facility is constructed (by Touchstone) on a different site. The new King County facility is not expected to be completed for several years. Therefore, construction of the new North Yard facility is not expected to start until the fourth quarter of 2008. Construction is expected to take approximately 18 to 24 months.

The remediation schedule is as follows:

1. When Touchstone is prepared to begin remediation of the North Yard Property, it will provide Ecology with a written notice of its intent to proceed. The date Touchstone sends Ecology the written notice will begin the time clock for this schedule.

2. Touchstone will submit a Draft Engineering Design Report (EDR) at 50 percent design within 30 days of sending the notice of intent to proceed. Ecology will review the draft report and provide Touchstone with comments within 30 days of receipt of the draft report. Touchstone will consult with state and local agencies to determine the substantive requirements of permits exempted under RCW 70.105D.090, and will include those substantive requirements in the draft EDR.

3. Touchstone will submit a Final Draft EDR at 100 percent design. Ecology will review the Final Draft EDR and provide Touchstone with comments within 30 days of receipt of the draft report.

4. Touchstone will submit a final EDR responding to Ecology's comments within 30 days of receipt of Ecology's comments. Ecology will review the final EDR and approve it or provide additional comments within 30 days of receipt of the final EDR.

5. Touchstone will begin remediation upon Ecology's approval of the final EDR.

6. Touchstone will submit a draft compliance monitoring report to Ecology within 60 days of receipt of performance monitoring sampling indicating COCs in soils at the Touchstone Property meet cleanup levels. Ecology will review the draft report and provide Touchstone with comments within 30 days of receipt.

7. Touchstone will submit a final compliance monitoring report responding to Ecology's comments within 30 days of receipt of Ecology's comments. Ecology will issue a determination that Touchstone has met its obligations under the PPCD and that no further action is necessary for the Property within 30 days of Ecology approval of the final compliance monitoring report. Ecology will review the final compliance monitoring report and approve it or provide additional comments within 30 days of receipt of the final report.

7.0 PUBLIC PARTICIPATION

The draft CAP, PPCD signed by Touchstone, State Environmental Policy Act checklist, threshold determination, and Public Participation Plan will be submitted for a 30-day public comment period. This provides the public an opportunity to formally comment on the proposed cleanup. Any public comments and concerns will be evaluated by Ecology and Touchstone in finalizing the PPCD and CAP. A responsiveness summary will be prepared by Ecology and may be included with the final CAP to respond to public comment.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
Kirkland, Washington

J. Scott Kindred, P.E.
Senior Engineer

Jon N. Sondergaard, P.G., P.E.G.
Principal Geologist

8.0 REFERENCES

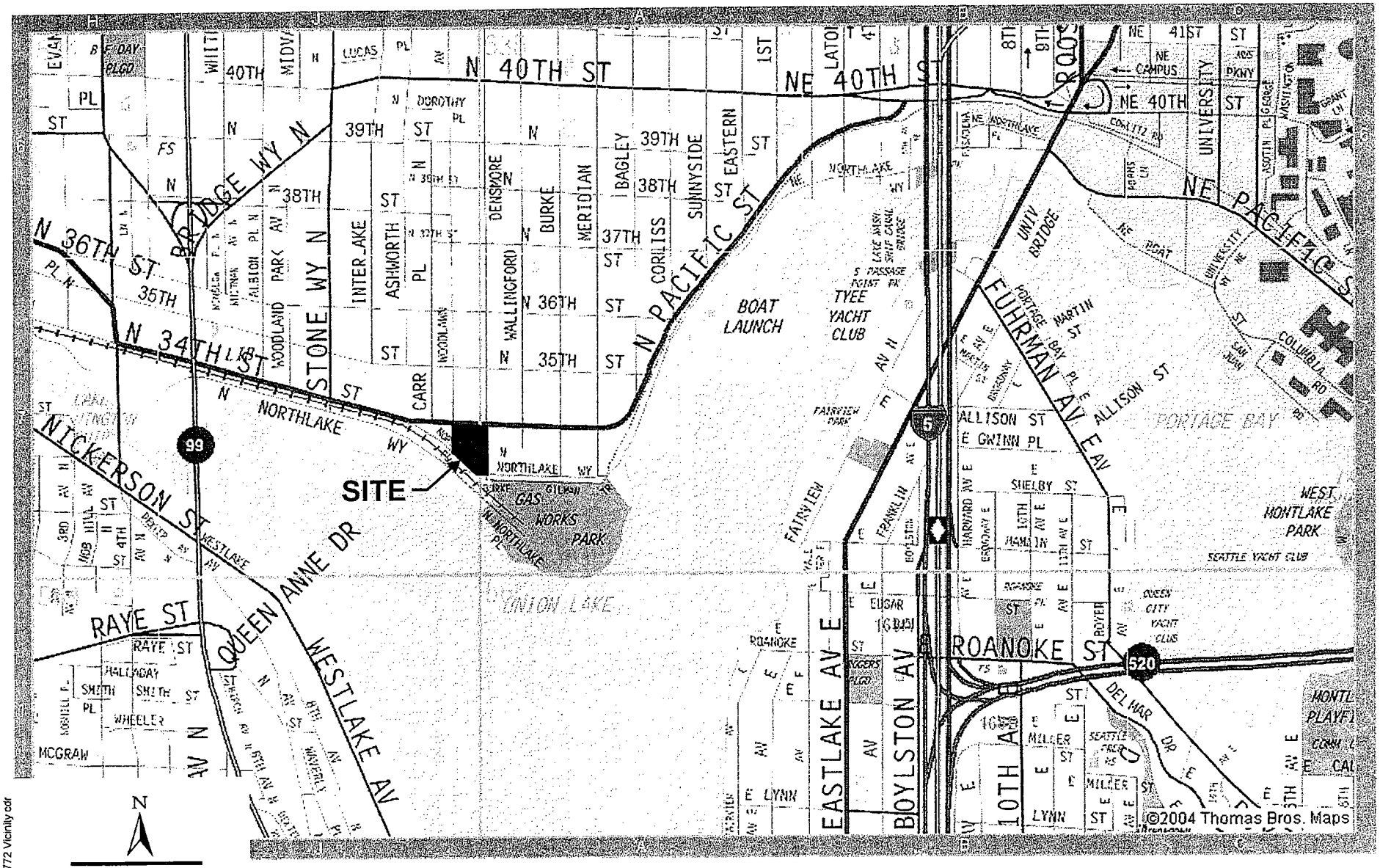
Applied Geotechnology, Inc. (AGI), 1993, Draft remedial investigation/feasibility study, Facilities North Site, Seattle, Washington; Bellevue, Washington, November 1993.

Applied Geotechnology, Inc. (AGI), 2000, Cleanup action report, Shallow Soil Remediation Facilities North, Seattle, Washington: Bellevue, Washington, January 19, 2000.

Foster Wheeler Environmental Corporation (Foster Wheeler), 1998, Draft cleanup action plan, Former Chevron Bulk Plant 100-1327 Facilities North/King County Metro Transit Lake Union Site: Seattle, Washington, November 24, 1998.

Science Applications International Corporation (SAIC), 2006, March 2006 annual groundwater monitoring report, Former Chevron Bulk Plant No. 100-1327, Facilities North/King County Metro Transit Lake Union Site, Seattle, Washington: April 20, 2006.

Washington State Department of Ecology (Ecology), 1998, Consent decree, Former Chevron Bulk Terminal #100-1327 Facilities North/King County Metro Transit Lake Union Site; Seattle Washington, November 24, 1998.



N

NO SCALE

Associated Earth Sciences, Inc.

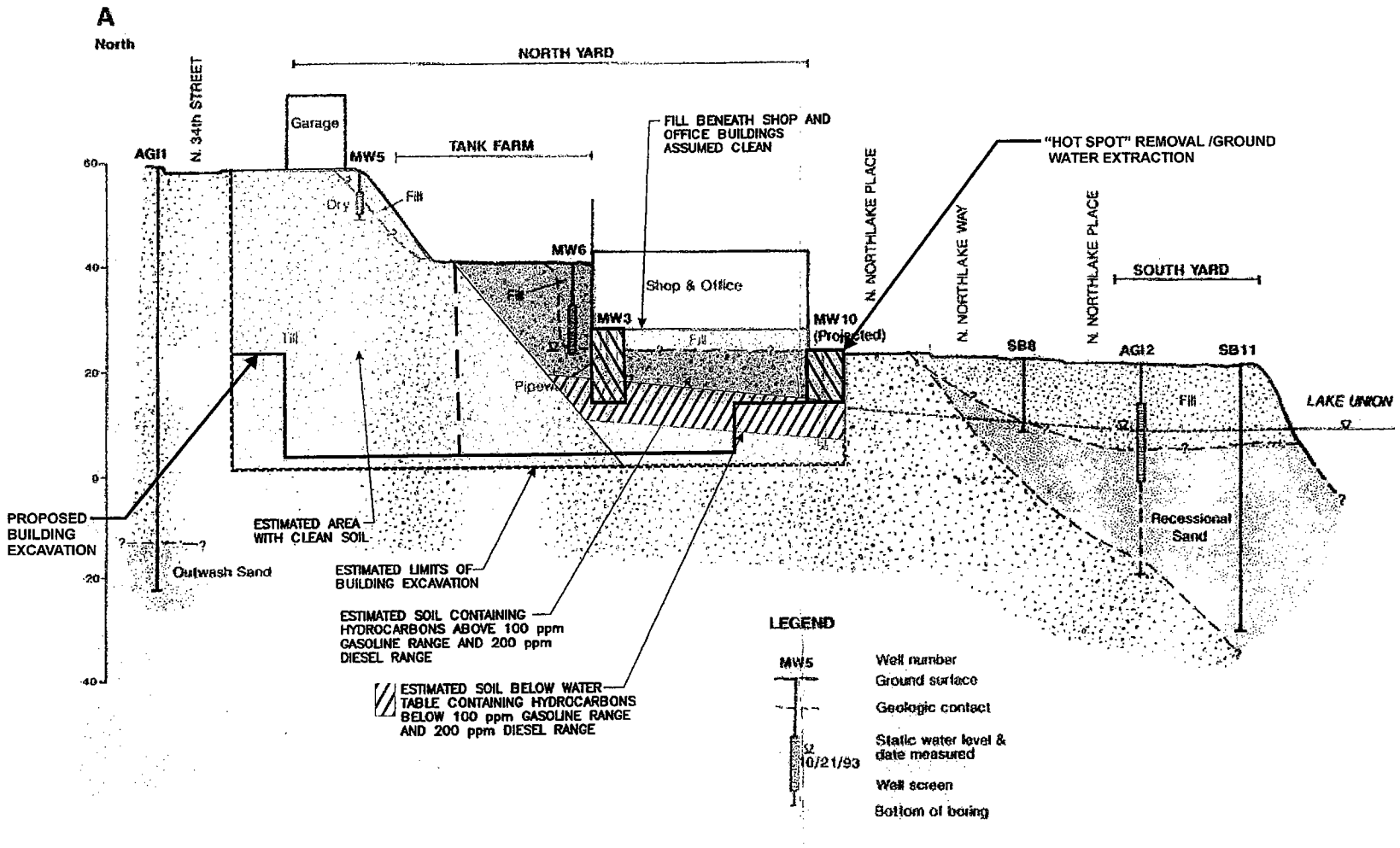
VICINITY MAP
NORTH LAKE UNION
SEATTLE, WASHINGTON

FIGURE 1

DATE 9/06

PROJ. NO. KV03772A

03772 North Lake Union \ 03772 Vicinity.cdr

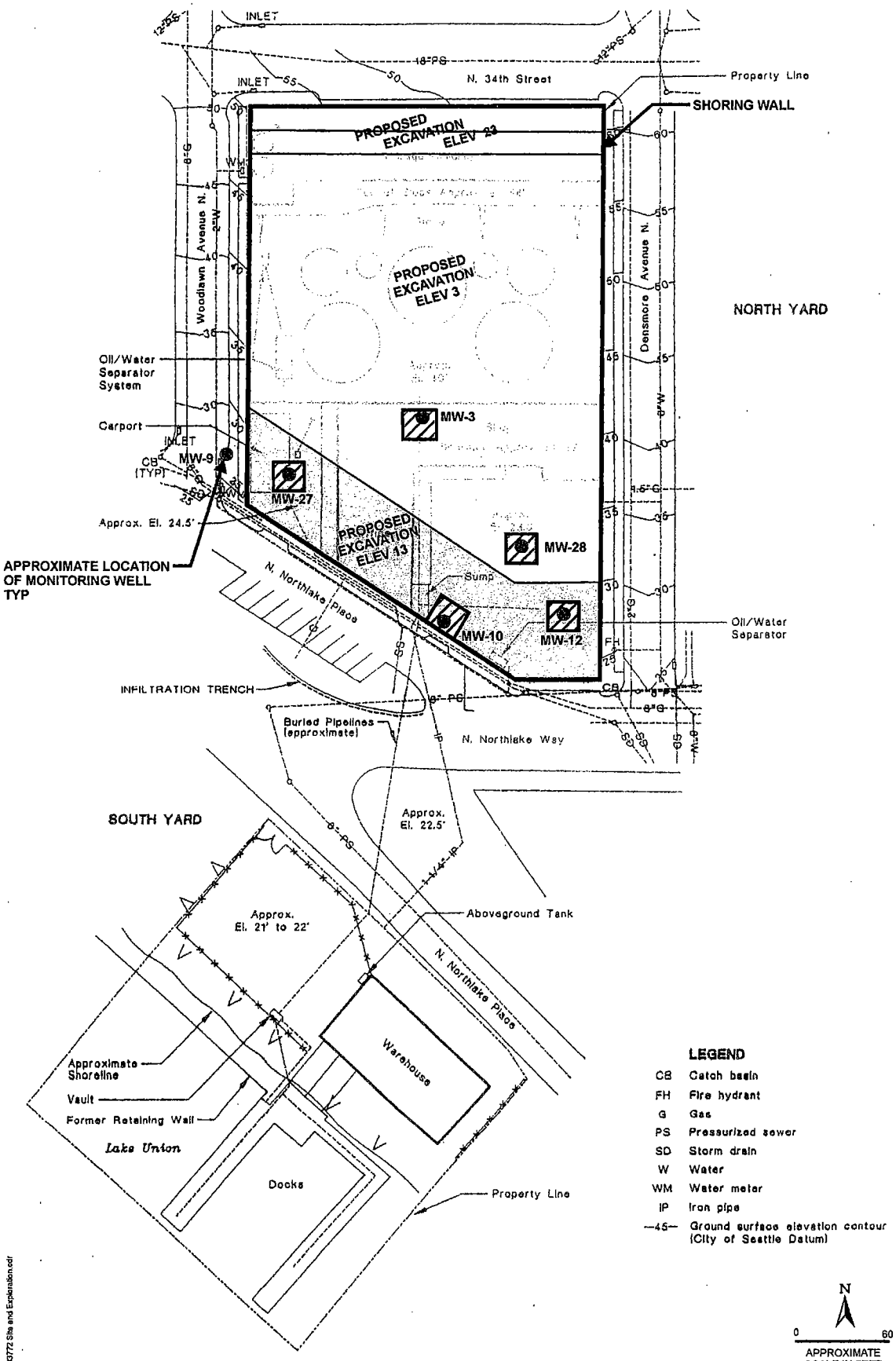


03772 North Lake Union\03772 Site Cross Section.cdr

Associated Earth Sciences, Inc.

CROSS SECTION
NORTH LAKE UNION
SEATTLE, WASHINGTON

FIGURE 3
DATE 9/06
PROJ. NO. KE03772A



Reference: Metro Site Plan - Existing and New, drawing number G102, dated December 1991, Applied Geotechnology Inc.

03772 North Lake Union \ 03772 Site and Exploration.cdr

Associated Earth Sciences, Inc.

BUILDING EXCAVATION PLAN
NORTH LAKE UNION
SEATTLE, WASHINGTON

FIGURE 2
DATE 9/06
PROJ. NO. KE03772A

APPENDIX A

Environmental Contingency Plan (ECP)

ENVIRONMENTAL CONTINGENCY PLAN

METRO LAKE UNION NORTH YARD PROPERTY CLEANUP SITE

Seattle, Washington

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Seattle, Washington 98121

Prepared by:
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Kirkland, Washington 98033
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January 18, 2007
Project No. KV03772A

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A.1 INTRODUCTION

A.1.1 Purpose and Scope

This Environmental Contingency Plan (ECP) provides a summary of the chemical hazards identified for the North Yard Property and guidelines for addressing the chemical hazards during construction at the Property. This ECP is intended to provide guidance for construction contractors regarding practices and procedures to protect workers, the public, and the environment from chemical exposures during and after construction.

Although this document references a number of regulations, it is not intended to be a complete list of applicable regulations. This plan does not address asbestos containing materials (ACM) or lead-based paint (LBP), both of which are known to be present in buildings at the Property. These buildings will be removed prior to excavation. Hazards and appropriate mitigation guidelines associated with ACM and LBP are fairly standard and should be addressed by demolition contractors that specialize in ACM and LBP abatement.

A.2 APPLICABLE CODES AND REGULATIONS

Except to the extent that more explicit or more stringent requirements are written directly in this ECP, all applicable federal, state, and local codes, regulations, and standards have the same force and effect (and are made a part of this ECP) as if copied directly into this document, or as if published copies are bound herewith. Where the federal and state regulations or this ECP differ, the more stringent shall be relevant to this project. A description of the primary federal, state, and local regulations applicable to this project are presented below.

Federal Regulations: Federal regulations that govern the handling, hauling, and/or disposal of petroleum hydrocarbon-impacted soil include, but are not limited to, the following:

OSHA: United States Department of Labor, Occupational Safety and Health Administration, including, but not limited to:

29 CFR 1910.134	Respiratory Protection
29 CFR 1910.1025	General Industry Standard
29 CFR 1910.1200	Hazard Communication
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts, and Mists
29 CFR 1926.57	Ventilation
29 CFR 1926.62	Construction Standard

EPA: United States Environmental Protection Agency, including, but not limited to:

40 CFR 261	Identification and Listing of Hazardous Wastes
40 CFR 266	Standards for the Management of Wastes
40 CFR 268	Land Disposal Restrictions
40 CFR 302	Reportable Quantities of Hazardous Substances
40 CFR 372	Toxic Chemical Release Reporting; Arsenic
40 CFR 745	Requirements for Construction Related Activities

HUD: Department of Housing and Urban Development, including, but not limited to:

Title X	Guidelines for the Evaluation and Control of Lead-Based Paint Hazards

DOT: United States Department of Transportation (DOT), including, but not limited to:

49 CFR 171 and 172	Hazardous Substances

State of Washington Regulations:

L&I: Washington State Department of Labor and Industries, including, but not limited to:

WAC: Washington Administrative Code	
WAC 296-62	General Occupational Health Standards
WAC 296-24	Safety Standards for Construction Work
WAC 173-303, 304	Dangerous Waste Regulations

Local Requirements: Abide by all local requirements which govern the handling, removal, hauling, and disposal of petroleum hydrocarbon-contaminated materials, including:

1. King County and City of Seattle Health Department.

2. Local solid waste municipal landfill or disposal site requirements.

3. City of Seattle Department of Planning and Development excavation and shoring requirements.

4. King County Metro Industrial Waste Program requirements for discharge of contaminated groundwater.

5. City of Seattle and King County testing, transport, dust abatement, tarping, and documentation requirements for the transport of petroleum contaminated soils, and if applicable, the transport of petroleum contaminated water from dewatering activities.

A.3 CHEMICAL HAZARD ASSESSMENT

This section provides a general assessment of the known chemical hazards at the Property. Physical hazards are not addressed as part of this assessment and should be addressed as part of an overall Health and Safety Plan for construction. Although ACM and LBP are known to be present at the Property, these hazards are also not addressed and should be addressed by a demolition contractor that specializes in ACM and LBP abatement.

In addition, there may be unknown chemical hazards at the Property that may be discovered during construction and may require further assessment.

A.3.1 Long-Term Soil Cleanup Levels

Potentially hazardous chemicals known to be present in soils at the Property are listed in Section 2 of the CAP. The only chemicals with concentrations above the MTCA Method A cleanup levels are petroleum hydrocarbons, including total petroleum hydrocarbons (TPH)-gasoline, TPH-diesel, TPH-oil, and benzene.

MTCA Method A cleanup levels are applicable for a long-term exposure scenario. Given the short duration of exposure during construction, the long-term cleanup levels are highly conservative for the construction worker exposure scenario.

A.3.2 Industrial Exposure Limits

OSHA is responsible for regulating industrial exposure to chemicals and has developed applicable exposure limits. Table A-1 provides industrial exposure limits for petroleum hydrocarbons and PAHs that have been detected in soils and groundwater at the Property.

Table A-1
Industrial Exposure Limits for Petroleum Hydrocarbons and PAHs Detected at the Property

Substance	OSHA PEL	OSHA STEL	NIOSH REL	NIOSH STEL	IDLH
TPH-Gasoline	none	none	none	none	Ca
TPH-Diesel	none	none	none	none	none
TPH-Oil	5 mg/m^3	none	5 mg/m^3	10 mg/m^3	2500 mg/m^3
Benzene	1 ppm	5 ppm	0.1 ppm	1 ppm	500 ppm
Ethylbenzene	100 ppm	none	100 ppm	125 ppm	800 ppm
Toluene	200 ppm	500 ppm	100 ppm	150 ppm	500 ppm
Carcinogenic PAH	1.0 mg/m^3	none	0.5 mg/m^3	none	500 mg/m^3

PEL = Permissible Exposure Level.
STEL = Short-Term Exposure Level.
REL = Recommended Exposure Limit.
IDLH = Immediately Dangerous to Life or Health.
TPH = Total Petroleum Hydrocarbons
Ca = Potential carcinogen.
mg/m^3 = Milligram/cubic meter.
ppm = parts per million.

Table A-2 provides potential chemical exposure routes for the chemicals listed above. Touchstone and its contractor are solely responsible for full compliance with all applicable regulatory and health and safety criteria.

Table A-2
Chemical Exposure Routes

Potential Chemical Exposure Routes at the Property:	Known	Possible	Unlikely
Inhalation	None	Without adequate respiratory protection.	With adequate respiratory protection.
Ingestion	None	Without adequate decon practices.	With adequate decon practices.
Skin Absorption	None	Without adequate protective clothing.	With adequate protective clothing.
Skin Contact	None	Without adequate protective clothing.	With adequate protective clothing.
Eye Contact	None	Without adequate eye protection.	With adequate eye protection.

A.4 CONSTRUCTION GUIDELINES

A.4.1 Permits, Licenses, and Notifications

Touchstone or its contractor shall secure all necessary permits, licenses, and notifications for handling, removing, testing, transporting, and treatment/disposal of impacted soil generated during site construction activities. Touchstone or its contractor shall post all notices required by applicable federal, state, and local regulations at the job site, where necessary.

A.4.2 Warning Signs

Contaminant warning signs should be used and printed as described in 29 CFR 1926.62, WAC 293-848, and any other applicable regulations. Warning signs shall be posted at all entrances to the Property and at other areas required by federal, state, and local regulations. The warning signs shall be posted at areas where they can be clearly visible from a minimum of 20 feet so that personnel may read the sign and take the necessary protective steps required before entering the area. Postings shall be in English and Spanish, and in any language used by any of the contractor's employees as the primary language of communication.

A.4.3 Establishing a Regulated Area

Access to the Property shall be limited by posting warning signs (see previous section) at all entrances. Chain-link fencing equipped with lockable gates shall also be erected around the perimeter of the Property in order to limit access to the work area by unauthorized personnel.

A.4.4 Hygiene Facilities

Adequate washbasins shall be erected immediately adjacent to the work area. Touchstone or its contractor shall ensure that all personnel exposed to impacted soils within the Property thoroughly wash their hands, face, and other exposed body parts prior to breaks and at the end of every work shift. Touchstone or its contractor to ensure that all workers within the Property adequately decontaminate themselves prior to leaving the Property.

A.4.5 Required Safety Equipment

Individuals who do not have, or do not properly wear, the necessary personal protective equipment as noted in Section A.6.2 of this ECP shall not be permitted within areas of the Property requiring such equipment.

A.4.6 Personnel Communications

Communications between workers and other personnel within the Property must be maintained at all times. Emergency communication signals shall be pre-arranged. Hand signals used to guide operating equipment or control traffic shall be standardized and pre-arranged.

A.4.7 Safety Labeling

Legible and understandable precautionary labels shall be prominently affixed to containers of hazardous raw materials, intermediates, products, by-products, mixtures, scrap, wastes, debris, and contaminated clothing. The waste containers must be appropriately labeled until analyses have been completed by the laboratory and specific contents have been determined. All labeling will be weatherproof.

A.4.8 Safe Work Procedures and Engineering Control Measures

Touchstone or its contractor shall use work procedures and equipment required to limit occupational and environmental exposure to petroleum hydrocarbon-impacted soil when grading, excavating, or other soil disturbance is being conducted within the Property. Touchstone or its contractors are responsible for ensuring that no contaminated surface water runoff from the Property enters the municipal storm water or sanitary sewer system unless it is a permitted discharge in compliance with all discharge requirements.

Dust control measures should be conducted to minimize dust generation during excavation activities. However, spraying of water to suppress dust should be minimized due to the potential of flushing petroleum hydrocarbons into groundwater. If spraying of water is necessary to suppress dust, the amount of water should be just enough to dampen the surface without causing significant infiltration.

A.4.9 Excavation of Contaminated Soil

It is expected that excavation of soil with COCs that exceed the cleanup level (Impacted Soil) will be conducted as part of the remedial action. Any excavation of Impacted Soil must be conducted in a manner that complies with the following objectives:

- Minimize worker exposure to Impacted Soil.
- Minimize wind and water transport of Impacted Soil.
- Ensure that Impacted Soil is segregated from non-Impacted Soil.

In order to comply with these objectives, excavation of Impacted Soil should be conducted in accordance with the following guidelines:

1. As soon as any Impacted Soil is excavated, it should be placed directly into a truck or other container. If this is not possible, the Impacted Soil should be segregated from clean soil.
2. Any Impacted Soil that is stockpiled should be covered to minimize wind and water transport.
3. Staging, loading, and transport of Impacted Soil will be planned and implemented to minimize dust, exposure, and spillage when equipment is moved from the Property onto public rights-of-way following City of Seattle and King County requirements.

A.4.10 Record Keeping, Submittals, and Notifications

Touchstone or its contractor (at a minimum) shall maintain the following records concerning the cleanup actions conducted by Touchstone:

1. Copies of air monitoring reports completed for the Property.
2. Copies of permits and notifications to regulatory agencies.
3. Employee Health and Safety Training Records (40-hour training and annual refresher training).
4. Accident/Incident Investigation Reports.

5. Copies of waste manifests for all soil testing, soil transport, and soil treatment and/or disposal to a permitted facility for treatment and/or disposal.

6. Site-Specific Health and Safety Plan.

A.5 WASTE CHARACTERIZATION AND DISPOSAL

A.5.1 Waste Soil Profile Analysis and Disposal

All Impacted Soil being transported off-site for treatment/disposal shall be tested, tarped, and transported to a state-certified petroleum hydrocarbon disposal/treatment facility in compliance with City of Seattle and King County requirements, including documentation.

Touchstone shall obtain written evidence of proper disposal of waste soil transported from the Property. Written evidence includes submitting copies of waste manifests signed by the waste transporter and the disposal/treatment facility.

A.5.2 Sampling Frequency and Analyses

Evaluation of petroleum hydrocarbon concentrations will be conducted using the following methods:

- **Qualitative Field Screening**: Soils with detectable TPH concentrations can generally be identified in the field based on appearance, odor, and screening with an organic vapor analyzer (OVA).

- **Semi-Quantitative Field Screening Using the PetroFlag System**: The PetroFlag system is a turbidimetric screening method for assessing TPH in soil. The EPA methodology (Method 9074) is provided in Appendix C of the CAP. Semi-quantitative field screening will be conducted using this method to categorize soils as either: 1) clean, 2) nuisance, or 3) high TPH.

- **Laboratory Testing**: Soil samples will be collected and analyzed in a state-certified laboratory to verify the accuracy of the field screening methods and to demonstrate that all impacted soils have been removed from the Property (once excavation is complete). Initially, 10% of the PetroFlag samples will be tested in a laboratory to determine the accuracy of the field screening. If the laboratory samples indicate that the PetroFlag results are providing reliable results, this frequency may be decreased to 5% after 50 PetroFlag samples. The higher frequency will be utilized whenever there are significant changes in soil characteristics. It is expected that laboratory soil samples will be tested for all chemicals of concern, including the following constituents: TPH-

Gasoline, TPH-Diesel, TPH-Oil, benzene, ethylbenzene, toluene, and xylenes (BTEX), and polycyclic aromatic hydrocarbons (PAHs).

Soil sampling and analysis will be conducted as part of the remediation effort and to characterize soil for disposal. Excavated soil will be evaluated to determine the concentrations of petroleum hydrocarbons. It is expected that excavated soil will be segregated into clean soil (no detectable levels of TPH), nuisance soil (gasoline TPH between 0 and 100 ppm, diesel TPH between 0 and 200 ppm, or benzene between 0 and 0.5 ppm), and high TPH soil (gasoline TPH greater than 100 ppm, diesel TPH greater than 200 ppm, or benzene greater than 0.5 ppm). Clean soils may be exported to another site and used as clean fill material. Nuisance soil will be landfilled and high TPH soil will be thermally treated at a licensed facility. Removal and testing for clean soils and removal, treatment and testing of nuisance and high TPH soils will be documented, manifested, and reported to Ecology in the Compliance Monitoring Report.

Once all Impacted Soil has been removed (based on field screening) performance monitoring soil sampling will be conducted to document that soil concentrations meet cleanup levels within the point of compliance. These samples will be sent to an analytical laboratory for testing. Results of the performance monitoring sampling will be provided to Ecology in the Compliance Monitoring Report.

Soil samples should be collected by qualified environmental professionals using standard sampling protocols and in accordance with the Sampling and Analysis Plan (SAP).

A.6 HEALTH AND SAFETY REQUIREMENTS

As discussed in the introduction, this plan is not intended to serve as a Health and Safety Plan for construction activities at the Property. Touchstone or its construction contractor is responsible for developing and implementing a Health and Safety Plan based on their own assessment of the risks associated with the Property and the planned construction activities.

A.6.1 Site-Specific Health and Safety Plan

The contractor shall develop and utilize an effective Site-Specific Health and Safety Plan that will be required when impacted soil is encountered during construction. The plan shall conform to the requirements established under 29 CFR 1910.120, including the use of appropriately trained workers, monitoring and identification of contaminated media, contractor's health and safety officer's authorities and responsibilities, and health and safety briefings for applicable site personnel. The Site-Specific Health and Safety Plan will require workers involved with handling or disturbing impacted soil at the Property to use a required level of personal protective equipment, as specified in Section A.6.2.

The contractor is responsible for the health and safety of their workers, subcontractors, and visitors to the Property. The contractor shall establish the minimum personal protective equipment requirements for this project and shall provide the necessary training and equipment needed to accomplish these requirements.

A.6.2 Required Personal Protective Equipment

At a minimum, all on-site workers will be required to wear hard hats, safety glasses, long-sleeved clothing, and appropriate footwear (hard toed boots) specified in federal, state, and local safety regulations. Hard hats and safety glasses are not required to be worn during breaks provided there are no potential hazards. Touchstone will ensure that the contractor provide their employees, subcontractors, and visitors who are assigned work within the Property with the following personal protective equipment.

A.6.2.1 Respiratory Protection

Respiratory protection may be necessary based on concentrations of petroleum hydrocarbons in the breathing space. Air monitoring will be conducted during excavation activities to verify that levels of petroleum hydrocarbons are below permissible limits and published exposure levels in the breathing zone.

If air monitoring results indicate that respiratory protection is warranted, the contractor shall provide the proper use and selection of respirators, perform required respiratory fit tests, and institute a respiratory program until or unless exposure monitoring results reveal airborne exposure levels are consistently below the regulatory Action Levels and Permissible Exposure Limits noted in Section A.3.2. If respiratory protection is necessary, evidence of a successful fit test within the last 12 months and medical screening must be provided for each contractor employee, subcontractor, and visitor in the work zone prior to using such equipment.

Respirators shall be used as specified in 29 CFR 1910.1025 and 29 CFR 1926.62. All respirators used shall be approved by the National Institute of Occupational Safety and Health (NIOSH) for protection against petroleum hydrocarbon fumes and mists.

If respiratory protection is necessary, initial selection of a respirator must follow federal, state, and local regulations regarding a negative exposure assessment (NEA) for work activities described in this ECP. The NEA must be established through air monitoring of workers within the project site during work activities or must be from prior NEA data obtained from workplace conditions that closely resemble the processes, type of contamination, control methods, work practices, and environmental conditions used by the contractor. The NEA must also show that under prevailing site conditions there is a high degree of certainty that worker exposures will not exceed the regulatory airborne Action Levels and Permissible Exposure Limits. The minimum level of respiratory protection for this project shall be a half-face

negative pressure respirator equipped with HEPA or P100 filters capable of effectively protecting the worker against airborne petroleum hydrocarbon fumes and mists.

A.6.2.2 Protective Clothing

If exposure monitoring results reveal airborne exposure levels are above the regulatory Action Levels and Permissible Exposure Limits noted in Section A.3.2, the contractor shall provide protective, whole body coveralls (e.g., Tyvek suits), gloves (including disposable polyethylene or rubber gloves to protect hands, when necessary), and foot coverings to all personnel engaging in soil disturbing work activities where petroleum hydrocarbon-impacted soil has been documented or suspected. Use of the protective clothing will assist in preventing airborne petroleum hydrocarbons from adhering to exposed skin areas and underlying street clothing.

A.6.3 Exposure Symptoms

Personnel must inform their immediate supervisor as soon as possible of any subjective symptoms of chemical exposure, such as headaches, dizziness, nausea, and irritation of the respiratory tract, eyes, or skin. The contractor's Site Safety Officer or the workers' immediate supervisor must arrange immediate first aid or medical attention, whichever is most appropriate. In addition, heat stress should be considered in the safety analysis.

A.6.4 Direct Contaminant Contact

Direct skin contact with contaminated or suspected contaminated media shall be avoided. Individuals whose skin comes into contact with contaminated or suspected contaminated media must immediately wash the skin with soap and water and, if necessary, seek medical attention.

A.6.5 Contaminant Ingestion

Eating, drinking, chewing gum or tobacco, smoking, or any practice that involves hand-to-mouth contact increases the probability of contaminant ingestion and is prohibited in any area where the possibility of soil contamination exists. The Property shall be clearly marked with signs, and violators of these rules shall be immediately removed from the Property and the project. All personnel shall thoroughly wash hands and face prior to eating, drinking, using tobacco products, or leaving the work area.

A.6.6 Medical Surveillance

If air monitoring results indicate that petroleum hydrocarbon exposures exceed the Action Levels or Permissible Exposure Limits identified in Section A.3.2, the contractor shall implement a medical surveillance program. This program will include a baseline record of petroleum hydrocarbon exposures to workers employed for this project, provide a continuing

surveillance of worker health, evaluate work restrictions, and satisfy regulatory requirements. The contractor shall retain one copy of the most recent physician's approval for each worker that is exposed to petroleum hydrocarbons at levels equal to or above the Action Levels or Permissible Exposure Limits. This physical exam certificate must also permit the employee to work using a respirator and must be dated within the last 12 months.

A.6.7 Health and Safety Training and Daily Safety Meetings

Workers entering the project site where grading, excavating, drilling, or other disturbance of impacted soil is occurring are required to be trained in accordance with 29 CFR 1910.120 (40-hour Hazardous Waste Operations and Emergency Response [HAZWOPER]). Workers must have current, 8-hour HAZWOPER refresher training. Documents verifying adequate training will be maintained at the Property.

Subcontractors working on-site will also be required to have current 40-hour HAZWOPER training or refresher training (29 CFR 1910.120) until such time that testing has shown that all impacted soil has been removed. Documents verifying adequate training will be maintained at the Property.

All on-site personnel will be briefed by the contractor, initially and in daily briefings, on the anticipated site hazards, air monitoring and sampling results, personal protective equipment requirements, safety practices, emergency procedures, upwind safe areas (in the event evacuation is necessary), and preferred methods of communication. Daily safety briefings will discuss relevant events and conditions from the previous day's operation and those anticipated for that day. Daily safety briefings will be documented. Copies of the air monitoring results will be available to workers upon request.

A.6.8 Exposure Minimization Practices

Standard hygiene measures should be implemented to minimize worker exposure to petroleum hydrocarbons. Appropriate hygiene measures include the following:

1. Workers should wear long sleeve shirts, long pants, gloves, and eye protection during excavation activities.

2. All clothing should be disposed of or washed at the end of each day.

3. No eating, drinking, or smoking should be allowed during excavation activities.

4. Workers should wash their hands at the end of the work day and before eating, drinking, or smoking on breaks.

If deemed necessary based on air monitoring results, respiratory protection should be utilized to minimize inhalation of petroleum hydrocarbons.

A.6.9 Air Monitoring

Proper hygiene should eliminate any risk of worker exposure to petroleum hydrocarbons at the Property; however, air monitoring will be conducted to ensure that exposures are below the Action Levels and Permissible Exposure Limits identified in Section A.3.2.

Air monitoring shall be conducted in accordance with established OSHA or NIOSH methods for petroleum hydrocarbons. Full shift air-monitoring with personal and area sampling shall be conducted during the first 3 days of excavation in areas with potentially elevated concentrations of petroleum hydrocarbons. This monitoring will include personal air sampling on at least two workers and at least one area sample along the downwind boundary of the Property. Assuming that non-detectable levels of petroleum hydrocarbons are measured during the first 3 days, air monitoring shall be conducted at a frequency of 1 day per week, and the first day when excavation at a new location of Impacted Soils occurs.

Because of the relative complexity of air sampling and the potential carcinogenicity of the contaminants, an environmental professional should be on-site to observe and document mitigation measures during excavation of soils with elevated concentrations of petroleum hydrocarbons.

A.7 REFERENCES

Applied Geotechnology, Inc. (AGI), 1993, Draft remedial investigation/feasibility study, Facilities North Site, Seattle, Washington: Bellevue, Washington, November 1993.

Applied Geotechnology, Inc. (AGI), 2000, Cleanup action report, Shallow Soil Remediation Facilities North, Seattle, Washington: Bellevue, Washington, January 19, 2000.

Foster Wheeler Environmental Corporation (Foster Wheeler), 1998, Draft cleanup action plan, Former Chevron Bulk Plant 100-1327 Facilities North/King County Metro Transit Lake Union Site: Seattle, Washington, November 24, 1998.

Science Applications International Corporation (SAIC), 2006, March 2006 annual groundwater monitoring report, Former Chevron Bulk Plant No. 100-1327, Facilities North/King County Metro Transit Lake Union Site, Seattle, Washington: April 20, 2006.

Washington State Department of Ecology (Ecology), 1998, Consent decree, Former Chevron Bulk Terminal #100-1327 Facilities North/King County Metro Transit Lake Union Site: Seattle Washington, November 24, 1998.

APPENDIX B

Compliance Monitoring and Sampling and Analysis Plan (SAP)

COMPLIANCE MONITORING AND SAMPLING AND ANALYSIS PLAN

METRO LAKE UNION NORTH YARD PROPERTY CLEANUP SITE

Seattle, Washington

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Prepared by:
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January 18, 2007
Project No. KV03772A

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B.1 INTRODUCTION

The Compliance Monitoring and Sampling Analysis Plan (SAP) provides the methods and rationale for sampling and analysis of soil and water at the North Yard Property. Organization and responsibilities are provided in Section B.2, sampling procedures are provided in Section B.3, sample analysis methods are provided in Section B.4, and reporting is provided in Section B.5. Quality assurance and quality control procedures are included within the appropriate sections.

B.2 ORGANIZATION AND RESPONSIBILITIES

The following organizations and personnel will be involved in sampling and analysis:

- Touchstone Corporation (Touchstone, Property owner)
  - Shawn Parry (owner's project manager)
  - Touchstone will authorize and oversee all work at the Property.

- Associated Earth Sciences, Inc. (AESI, environmental consultant)
  - Jon Sondergaard (environmental consultant's project manager)
  - AESI will plan sampling and analysis work, collect samples, and prepare relevant reports.

- Friedman & Bruya, Inc. (F&B, Analytical Laboratory)
  - Michael Erdahl (analytical laboratory project manager)
  - F&B will conduct all chemical analysis

B.3 SAMPLING PROCEDURES

B.3.1 Sampling Locations, Schedule, and Frequency

Sample locations and frequency are discussed below for each type of sampling:

Soil sampling during excavation: The primary objective of sampling during excavation is to characterize the soil for disposal. The PetroFlag field screening methodology provided in Appendix C will be used to characterize soils for disposal. It is anticipated that one PetroFlag test will be performed for every 200 cubic yards of excavated material. Initially, 10% of the PetroFlag samples will be tested in a laboratory to determine the accuracy of the field screening. If the laboratory samples indicate that the PetroFlag results are providing reliable results, this frequency may be decreased to 5% after 50 PetroFlag samples. The higher frequency will be utilized whenever there are significant changes in soil characteristics.

Ground water discharge sampling: Any dewatering discharge (either before or during construction) and stormwater discharge to the sewer will be sampled and tested in accordance with the King County/Metro discharge permit and Ecology MTCA requirements.

Performance monitoring soil sampling: Performance monitoring sampling of the excavation bottom and internal sidewalls (not include perimeter sidewalls) will be conducted to document that Impacted Soils meet cleanup levels within the point of compliance. Sampling will be conducted in a grid pattern with sample locations spaced no more than 60 ft apart in the horizontal directions and at least two samples in the vertical direction on internal sidewalks.

Characterization soil sampling: Characterization sampling of the excavation perimeter sidewalls will be conducted to document soil concentrations at the Property boundary. Samples will be collected every 60 feet from portions of the excavation where elevated concentrations of COCs are observed (primarily the southern boundary and southern portions of the east and west boundaries).

Basement sump discharge sampling: Sump discharge from the building basement drains will be sampled and tested in accordance with the King County/Metro discharge permit and Ecology MTCA requirements for the specific chemicals of concern listed in Table B-1.

All sampling results will be reported to Ecology in the Compliance Monitoring Report.

B.3.2 Installation of Sampling Devices

No sampling devices will be installed.

B.3.3 Sample Collection and Decontamination

Sample collection methods are provided below:

Soil sampling: Soil samples for metals, total petroleum hydrocarbons as diesel (TPH-Dx), and polycyclic aromatic hydrocarbons (PAHs) will be collected in 4 ounce (oz) glass jars. Two glass jars will be collected at each sample location. Soil samples for total petroleum hydrocarbons as gasoline (TPH-Gx) and benzene, toluene, ethylbenzene, xylenes (BTEX) will be collected in accordance with EPA Method 5035A (Closed System Analysis for VOCs). This sampling method utilizes a plastic syringe to collect 13-grams of soil per 40-ml glass vial. Four sample vials will be collected at each sample location. The vials and jars will be placed in separate polyethylene bags to minimize contact between sample containers. All soil samples will be placed in a cooler with frozen gel ice packs for transport to the laboratory.

Dewatering and ground water discharge sampling: Any dewatering and ground water discharge to the storm sewer will be sampled and analyzed in accordance with the King County/Metro discharge permit requirements and Ecology MTCA requirements for the specific chemicals of concern listed in Table B-1. Results will be reported to Ecology in the Compliance Monitoring Report.

Any metal spoons or other sampling equipment that comes into contact with soil or groundwater will be decontaminated between samples. Decontamination will consist of washing using an Alconox (or equivalent) detergent and a triple rinse using deionized water. The sampler shall use clean nitrile (or equivalent) gloves to collect each sample and the gloves will be discarded after the sample is collected.

B.3.4 Management of Waste Materials

Soil sampling of stockpiled soil and exposed excavation soils will not generate cuttings or other waste soil. Therefore, no special handling of waste soils is necessary. Groundwater sampling of dewatering discharge or sump discharge may result in generation of purge water that will be handled in the same manner as other sump or dewatering well discharge.

Soil and groundwater sampling will generate small amounts of garbage (gloves, bailers, etc.) that may be contaminated with petroleum hydrocarbons. This garbage may be disposed of as standard municipal waste.

B.3.5 Sample Labeling and Chain of Custody

All samples should be labeled with the following information:

- Job Name (North Lake Union Property)
- Date and time
- Analysis request
- Sampling company (AESI)
- Sample ID

The chain of custody should include the following information:

- Job Name (North Lake Union Property)
- AESI job number
- Name and signature of sampler
- Sample information (Sample ID, date, sample time, sample type, # of containers)
- Requested analyses and sample condition (filtered or unfiltered and any preservative)

Everyone who takes possession of the samples should sign and date the chain of custody.

B.3.6 Quality Assurance/Quality Control Samples

The following QA/QC samples will be collected as part of the soil sample collection procedure:

- One duplicate will be collected and submitted for every 10 soil samples. Duplicates consist of soil collected from the same area as the primary sample.
- One split sample will be collected for every 20 soil samples and sent to an alternate laboratory. Split samples consist of soil collected from the same area as the primary sample.
- Sample blacks for decontamination procedures, container QA/QC and trip blanks.

B.4 SAMPLE ANALYSIS

Analyses will be performed by Friedman & Bruya. Soil samples will be analyzed in accordance with the methods listed in Table B-1. Sample containers, preservative, and holding times are provided in Table B-2.

Table B-1
Soil Cleanup Levels, Detection Levels, and Analysis Methods

Chemical	Soil Cleanup Level[3] (ppm)[1]	Reporting Limit (ppm)	Analytical Method
TPH[2]-Gasoline	30	2	NWTPH-Gx
TPH-Diesel	2,000	50	NWTPH-Dx
TPH-Oil	2,000	250	NWTPH-Dx
Benzene	0.03	0.02	8021B
Ethylbenzene	6	0.02	8021B
Toluene	7	0.02	8021B
Benzo(a)pyrene	0.1	0.005	EPA 8270C
Chrysene	0.1	0.005	EPA 8270C
Dibenzo(a,h)anthracene	0.1	0.005	EPA 8270C
Indeno(1,2,3-cd)pyrene	0.1	0.005	EPA 8270C
Benzo(k)fluoranthene	0.1	0.005	EPA 8270C
Benzo(a)anthrance	0.1	0.005	EPA 8270C
Benzo(b)fluoranthene	0.1	0.005	EPA 8270C
Fluoranthene	None	0.005	EPA 8270C
Naphthalene	5	0.005	EPA 8270C

[1]ppm = parts per million.
[2]TPH = Total Petroleum Hydrocarbons.
[3]Cleanup level based on MTCA Method A for unrestricted sites.

Table B-2
Soil Sample Container, Preservative, and Holding Times

Matrix	Chemical Analysis	Sample Container	Preservative	Holding Time
	TPH-Gx, BTEX	4-40ml vials	Cool 4°C	14 days
	TPH-Dx	4 oz soil jar	Cool 4°C	14 days
	PAHs	4 oz soil jar	Cool 4°C	14 days

HDPE = High Density Polyethylene
PAHs = Polycyclic Aromatic Hydrocarbons
BTEX = Benzene, toluene, ethylbenzene, xylenes
TPH = Total petroleum hydrocarbons

B.4.2 Detection Limits

Friedman & Bruya typically provides reporting limits that are the same as the practical quantitation limit. The detection limits that they are generally able to achieve are identified in Table B-1.

B.4.3 Quality Assurance and Quality Control

Friedman & Bruya will utilize standard QA/QC measures in accordance with their routine internal procedures, and will include the following measures:

- Instrument calibration and standards as defined in the laboratory standard operating procedures,
- Laboratory blanks,
- Matrix spikes,
- Duplicates.

B.5 REPORTING

Friedman & Bruya will provides laboratory data sheets that report analytical results for submitted samples, QA/QC results, the Chain of Custody sheet, and any relevant information related to methodologies, deviations from standard operation procedures, and any potential problems with the results. All reports will be issued with three hard copies to Ecology and an electronic copy. Laboratory and analytical results will be submitted with hard copy and electronic copy in EIM (Environmental Information Management) format.

APPENDIX C

Turbidimetric Screening Method for Total Recoverable Petroleum Hydrocarbons in Soil

METHOD 9074

TURBIDIMETRIC SCREENING METHOD FOR TOTAL RECOVERABLE PETROLEUM HYDROCARBONS IN SOIL

1.0 SCOPE AND APPLICATION

1.1 This method may be used to screen soil samples to determine the total amount of recoverable petroleum hydrocarbon contamination in soil including a wide range of fuels, oils, and greases. The turbidimetric approach in this method is designed to quickly screen soil samples using a system calibrated with a blank and a single calibration standard.

1.2 The definition of total recoverable petroleum hydrocarbons for this method can be found in the section on definitions (Sec. 3.0).

1.3 This screening technique is specifically designed to be used in the field but may also have some screening applications in the laboratory. The system analysis range is 10-2000 ppm for most hydrocarbons.

1.4 This method is considered a screening technique because of the broad spectrum of hydrocarbons it detects. The method may be especially useful in quickly determining that a site does not contain hydrocarbon contamination. However, it cannot be used to determine specific hydrocarbon compounds or groups of compounds that may be part of a larger hydrocarbon mixture. As with other screening techniques, it is advisable to confirm a certain percentage of both positive and negative test results, especially when near or above a regulatory action limit or when the presence of background or interfering hydrocarbons is suspected. The limitations of this procedure are described in more detail in the section on interferences (Sec. 4.0).

1.5 This method does not address the evaporation of volatile petroleum hydrocarbon mixtures (i.e. gasoline) during sample collection, preparation, and analysis. Although the screening kit can be used to qualitatively detect volatile hydrocarbons, it is NOT recommended that the system be used to quantitatively determine volatile petroleum hydrocarbons unless evaporation during sample handling is addressed, appropriate response factor corrections are made, and method performance is demonstrated on real world samples.

1.6 This method is restricted to use by or under the supervision of trained analysts. Each analyst must demonstrate the ability to generate acceptable results with this method.

2.0 SUMMARY OF METHOD

2.1 A 10 ± 0.1 g sample of soil is extracted with a solvent mixture composed primarily of methanol. The resulting mixture is allowed to settle and the free liquid is decanted into the barrel of a filter-syringe assembly. The liquid is filtered through a 0.2-µm filter into a vial containing an aqueous emulsifier development solution. The filtered sample is allowed to develop for 10 minutes. During the development, any hydrocarbons present precipitate out and become suspended in solution.

2.2 The developed sample is placed in a turbidimeter that has been calibrated using a blank and a single calibration standard. A beam of yellow light at 585 nm is passed through the

sample and the scattering of light through the suspension at 90° is measured. The concentration of total recoverable petroleum hydrocarbons present is calculated relative to the standard curve.

3.0 DEFINITIONS

3.1 See Sec. 5.0 of Chapter 1 and the manufacturer's instructions for definitions associated with this analytical procedure.

3.2 For the purpose of this method, "total recoverable petroleum hydrocarbons" is defined as those hydrocarbons that are recovered using the solvent-specific extraction procedure provided with this kit. Since there is no cleanup step to separate any co-extracted naturally occurring hydrocarbons from the petroleum hydrocarbons, elevated turbidimetric readings are likely without performing background correction. See the interferences section (Sec. 4.0) for additional details.

4.0 INTERFERENCES

4.1 This method is considered a screening technique because of the broad spectrum of hydrocarbons it detects. It cannot distinguish between co-extracted naturally occurring hydrocarbons and petroleum hydrocarbons. Using background correction and/or a selected response factor discussed in the manufacturer's instructions, an analyst may be able to eliminate some of the interferences caused by co-extracted naturally occurring hydrocarbons. However, it is very difficult to find a truly clean, representative sample for use as a background.

4.2 This method has been shown to be susceptible to interference from vegetable oils (positive interference). It is anticipated that co-extracted naturally occurring oils from vegetative materials would be one of the most probable positive interferants found in the field. To demonstrate this interference, standard soil samples were spiked with corn oil at levels of 50 to 1000 ppm and tested with PetroFLAG™ system. Soil samples spiked with mineral oil were also analyzed for comparison. These data indicate that, over the range tested, the slope of the PetroFLAG™ vegetable oil response is approximately 18% of the response of the mineral oil standard. Supporting data are presented in Table 2.

4.3 This method has been shown to be susceptible to interference from water (negative interference). To demonstrate this interference, soils were spiked with diesel fuel at 100 ppm. The samples were then spiked with varying amounts of water, up to saturation. The samples were analyzed using the PetroFLAG™ system and the results were below that expected for the spike added. The low bias may be due to a decrease in extraction efficiency in samples containing large amounts of water, as a result of dilution of the extraction solvent. Supporting data are presented in Table 3.

4.4 This method has been shown to NOT be significantly affected by up to 5% sodium chloride contamination. Supporting data are presented in Table 6.

4.5 This method has been shown to NOT be significantly affected by up to 1000 ppm of common surfactants such as trisodium phosphate (TSP), soap, and sodium dodecyl sulfate (SDS). Supporting data are presented in Tables 7, 8, and 9.

4.6 Polycyclic aromatic hydrocarbons (PAHs) are a class of compounds present in many hydrocarbon mixtures that are detected by the PetroFLAG system. These compounds are often targeted because of their toxic characteristics and may be present individually as soil contaminants.

However, the response of the individual PAHs varies greatly from compound to compound. Therefore, use of the PetroFLAG system to quantitate individual PAHs is not recommended without good knowledge of the site and after adjusting the analytical approach. Quantitation of PAHs as part of a larger hydrocarbon fraction, such as diesel fuel, is recommended. Supporting data are presented in Table 12.

4.7 The PetroFLAG™ analyzer can be used at temperatures from 4°C to 45°C. The analyzer is equipped with an on-board temperature sensor to measure the ambient temperature at which measurements are being made. The software uses this temperature reading to correct the optical drift caused by temperature fluctuations.

4.8 Temperature at which the calibration is run should be recorded because of the effect temperature has on the suspension. This can be done by taking a reading without inserting a vial. If, during sample analysis, the temperature fluctuates more than ±10°C from the temperature at the calibration, the calibration should be rerun at the new temperature.

5.0 SAFETY

Safety practices appropriate for handling potentially contaminated hazardous or toxic samples and extraction solvents should be employed.

6.0 EQUIPMENT AND SUPPLIES

PetroFLAG™ Hydrocarbon Analysis System, (Dexsil Corporation, One Hamden Park Drive, Hamden, CT), or equivalent. Each commercially-available test kit will supply or specify the apparatus and materials necessary for successful completion of the test.

7.0 REAGENTS AND STANDARDS

Each commercially-available test kit will supply or specify the reagents necessary for successful completion of the test. Reagents should be labeled with appropriate expiration dates, and reagents should not be employed beyond such dates.

8.0 SAMPLE COLLECTION, PRESERVATION, AND STORAGE

8.1 See the introductory material to this chapter, Organic Analytes, Sec. 4.1.

8.2 Soil samples may be contaminated, and should therefore be considered hazardous and handled accordingly. All samples should be collected using a sampling plan that addresses the considerations discussed in Chapter Nine.

8.3 To achieve accurate analyses, soil samples should be well homogenized prior to testing. The hydrocarbons may not be evenly distributed in a soil sample and extensive mixing is necessary to assure homogeneity.

NOTE: It is strongly recommended that any free aqueous liquid be decanted from samples prior to analysis with the PetroFLAG system. Free aqueous liquid will dilute the extraction solvent and produce a negative interference.

NOTE: When users of the PetroFLAG system wish to report their results on a dry weight basis, additional representative samples should be collected for percent moisture determination. See the extraction Methods 3540 or 3550 for the procedure for determining percent moisture.

9.0 QUALITY CONTROL

9.1 Follow the manufacturer's instructions for quality control procedures specific to the test kit used. Additional guidance on quality control is provided in Chapter One.

9.2 Use of replicate analyses, particularly when results indicate concentrations near the action level, is recommended to refine information gathered with the kit.

9.3 Method 9074 is intended for use as a screening procedure in either the field or a fixed laboratory. Wherever it is employed, a quality assurance program appropriate for a screening procedure should be employed as a means of documenting the quality of the resulting data.

10.0 CALIBRATION AND STANDARDIZATION

See the PetroFLAG™ Hydrocarbon Analyzer User's Manual for instruction on generating an initial calibration curve using the PetroFLAG™ analyzer. Contact the manufacturer for specific details on the calibration calculations programmed into the PetroFLAG™ analyzer.

11.0 PROCEDURE

Follow the manufacturer's instructions in the PetroFLAG™ Hydrocarbon Analyzer User's Manual to extract, develop, and analyze soil samples. Those test kits used must meet or exceed the performance specifications indicated in Tables 1 through 3.

12.0 DATA ANALYSIS AND CALCULATIONS

Consult the PetroFLAG™ Hydrocarbon Analyzer User's Manual for the procedure used to generate concentration readings from samples using the PetroFLAG™ analyzer. Contact the manufacturer for specific details on the concentration calculations programmed into the PetroFLAG™ analyzer.

13.0 METHOD PERFORMANCE

13.1 Method Detection Limits were determined using a modification of the procedures in Chapter One and in 40 CFR, Part 136. The procedure was modified slightly because the instrument automatically subtracts an average blank value for each analysis (blank analysis is part of the calibration procedure of the PetroFLAG™ test system). Two sets of seven samples each were prepared, one set spiked with 30 ppm of diesel fuel, and one set spiked with 30 ppm of used motor oil. The standard deviation (SD) of the results for each oil type were calculated. The method detection limit (MDL) was determined by multiplying the SD by the Student's *t* value (3.143). These data are presented in Table 1. The MDL for diesel fuel was 13 ppm and for used motor oil was 18.6 ppm (Ref 1).

13.2 Samples of a standard soil were prepared by spiking with either diesel fuel or used motor oil at 100 ppm intervals from 100 ppm to 1000 ppm. Each sample was analyzed in duplicate by the PetroFLAG™ system and by Methods 3550 and 8015B. The results are shown in Table 4. These data were analyzed using regression analysis. The results of the regression analysis are also provided in Table 4. In addition, an analysis of variance (ANOVA) analysis was performed. The F-statistic from the ANOVA revealed a significant bias between the two methods, with the PetroFLAG™ providing consistently higher values for both types of contamination. The results confirm that the kit design is intentionally conservative, in that it favors a high bias in order to avoid reporting false negative results (Ref. 1).

13.3 Precision and bias were determined by analysis of variance (ANOVA) of the results obtained from spiked soil samples. Four sets of spiked samples were prepared, containing either diesel fuel or used motor oil at two different concentrations (200 and 1000 ppm). Each analyte at each concentration was analyzed in duplicate 10 times (e.g., 20 replicates of each). The results were transformed into recovery data. The ANOVA used these transformed data. The results are presented in Table 5. The F-statistic for the diesel fuel analysis indicate a slight day effect for these samples. The F-statistic seems to be driven more by the very low value of the mean square error within days rather than by any large value for the mean square error between days (Ref. 1).

13.4 The response of the PetroFLAG System to a soil spiked with 500 ppm of diesel fuel and 0 to 5% of dry sodium chloride is provided in Table 6 (Ref. 2).

13.5 The responses of the PetroFLAG System to a soil spiked with 500 ppm of diesel fuel and up to 1000 ppm of common surfactants such as trisodium phosphate (TSP), soap, and sodium dodecyl sulfate (SDS), are presented in Tables 7, 8, and 9 (Ref. 2).

13.6 Performance of the PetroFLAG™ system on anthracene from 100 to 2000 ppm and on creosote from 100 to 1000 ppm are presented in Tables 10 and 11, respectively. An explanation of the erratic performance of anthracene is provided in the Table 10 narrative (Ref. 2).

13.7 The performance of the PetroFLAG system for several PAHs relative to the mineral oil calibrator on soil is presented in Table 12 (Ref. 4).

13.8 Performance of the PetroFLAG™ system on Jet-A from 40 to 2808 ppm (Ref. 4) and on gasoline from 1000 to 4070 ppm (Ref. 2) are provided in Tables 13 and 14, respectively. An explanation of the performance of Jet-A and gasoline are provided in the narrative in Tables 13 and 14.

14.0 POLLUTION PREVENTION

This method does not use any halogenated solvents and may be used to help reduce the number of samples sent to the laboratory under certain project scenarios. Traditional laboratory extraction methods (i.e. Soxhlet or sonication) would generally require much larger volumes of solvent to extract the sample.

15.0 WASTE MANAGEMENT

Waste management procedures must be consistent with federal, state, and local regulations.

16.0 REFERENCES

1. Data Validation Package, *Testing for Petroleum Hydrocarbons in Soil by Turbimetric Analysis*, PetroFLAG™ Test System, DEXSIL Corp., Hamden, CT.

2. Supplementary Validation Data, *Additional Analyte and Contaminant Testing Data for the PetroFLAG Hydrocarbon Analysis System*, DEXSIL Corp., Hamden, CT, August 24, 1995.

3. PetroFLAG™ Hydrocarbon Analyzer User's Manual, DEXSIL Corp., Hamden, CT.

4. Supplementary Data Validation Package III, *Additional Analyte Testing Data for Petroleum Hydrocarbons in Soil by Turbimetric Analysis - PetroFLAG Test System*, DEXSIL Corp., Hamden, CT, June 20, 1997.

5. Supplementary Data Validation Package IV, *Polycyclic Aromatic Hydrocarbon Response data for Method 9074 Petroleum Hydrocarbons in Soil by Turbimetric Analysis - PetroFLAG Test System*, DEXSIL Corp., Hamden, CT, August 22, 1997.

17. TABLES, DIAGRAMS, FLOWCHARTS, AND VALIDATION DATA

The pages to follow contain Tables 1 through 14.

TABLE 1

METHOD DETECTION LIMIT FOR PetroFLAG TEST SYSTEM

Trial #	30 ppm diesel fuel	30 ppm motor oil
1	34	35
2	24	41
3	28	40
4	34	53
5	36	46
6	32	48
7	30	42
Average (ppm)	31.03	43.6
SD (ppm)	4.12	5.91
MDL (ppm)	13.0	18.6

Data from Reference 1.

TABLE 2

RELATIVE RESPONSE OF VEGETABLE OILS AS AN INTERFERANT

Analyte Spike Concentration (ppm)	Mineral Oil Response (ppm)	Vegetable Oil Response[a] (ppm)
50	55	30
100	100	45
200	189	94
500	504	111
1000	947	208

[a] The vegetable oil samples were analyzed using the PetroFLAG system set to response factor 10. The slope of the PetroFLAG vegetable oil response is approximately 18% of the response of the mineral oil standard. This means that a sample containing 5,560 ppm vegetable oil would provoke a response equivalent to that given by 1,000 ppm mineral oil.

Data from Reference 1.

TABLE 3

EFFECT OF WATER ON PetroFLAG RESULTS

% Water Saturation (% Water)	% Recovery of Mineral Oil[a]
0 (0)	100
5 (1)	94
25 (5)	98
50 (10)	95
100 (20)	85

[a] Soil sample spiked with 100 ppm of mineral oil. (Ref. 1)

TABLE 4

COMPARISON OF PetroFLAG AND GC TEST RESULTS

Spike Conc. (µg/g)	PetroFLAG (µg/g)		3550/8015B (µg/g)	
Diesel Fuel	Trial 1	Trial 2	Trial 1	Trial 2
100	112	116	73	82
200	230	248	158	156
300	312	370	242	218
400	420	455	299	275
500	538	564	342	344
600	626	654	460	439
700	774	790	509	494
800	910	900	612	607
900	1091	977	678	614
1000	1182	1062	646	649
Corr Coef	0.999		0.992	
Slope	1.126		0.679	
Intercept	-2.8		30.5	
Motor Oil	Trial 1	Trial 2	Trial 1	Trial 2
100	121	128	123	82
200	243	292	200	200
300	381	408	301	275
400	428	497	341	343
500	531	554	441	452
600	654	668	534	528
700	717	771	609	652
800	880	883	711	746
900	931	1052	835	881
1000	1014	1098	887	846
Corr Coef	0.998		0.997	
Slope	1.02		0.887	
Intercept	50.9		20.5	

Data from Reference 1.

TABLE 5

ANOVA RESULTS FOR SPIKED PETROLEUM HYDROCARBON SAMPLES

Analyte/Concentration	n	Mean ($\bar{x}$)	Variance (σ_{n-1}^2)	Standard Deviation (σ_{n-1})	Standard Error ($\sigma_{\bar{x}}$)
Diesel, 200 ppm	20	1.09	0.0059	0.0768	0.0172
Diesel, 1000 ppm	20	1.00	0.00430	0.0656	0.0147
Motor Oil, 200 ppm	20	1.12	0.00266	0.0515	0.0115
Motor Oil, 1000 ppm	20	0.937	0.000919	0.0303	0.00678

Data from Reference 1.

TABLE 6

RESPONSE OF PetroFLAG SYSTEM WITH VARIOUS LEVELS OF SODIUM CHLORIDE[a]

	% Sodium Chloride				
	0	0.5	1.0	2.0	5.0
PetroFLAG Response (ppm)	518	539	529	516	524

[a] A series of soil samples consisting of sand, clay, and topsoil was spiked with 500 ppm of diesel fuel and varying levels of dry sodium chloride (NaCl) from 0 to 5 percent. The samples were analyzed using the PetroFLAG system set to response factor 5 (Ref. 2).

TABLE 7

RESPONSE OF PetroFLAG SYSTEM WITH VARIOUS TSP CONCENTRATIONS[a]

	TSP Concentration (ppm)				
	0	100	200	500	1000
PetroFLAG Response (ppm)	522	511	512	500	492

[a] Response of the PetroFLAG system for soil containing 500 ppm of diesel fuel and various levels of trisodium phosphate(TSP), a common surfactant. The samples were analyzed using the PetroFLAG system set to response factor 5 (Ref. 2).

TABLE 8

RESPONSE OF PetroFLAG SYSTEM WITH VARIOUS SOAP CONCENTRATIONS[a]

	Soap Concentration (ppm)				
	0	100	200	500	1000
PetroFLAG Response (ppm)	500	494	488	502	528

[a] Response of the PetroFLAG system for soil containing 500 ppm of diesel fuel and various levels of soap (non-ionic and anionic surfactants). The samples were analyzed using the PetroFLAG system set to response factor 5 (Ref. 2).

TABLE 9

RESPONSE OF PetroFLAG SYSTEM WITH VARIOUS SDS CONCENTRATIONS[a]

	SDS Concentration (ppm)				
	0	100	200	500	1000
PetroFLAG Response (ppm)	472	474	488	486	496

[a] Response of the PetroFLAG system for soil containing 500 ppm of diesel fuel and various levels of sodium dodecyl sulfate, a surfactant. The samples were analyzed using the PetroFLAG system set to response factor 5 (Ref. 2).

TABLE 10

RESPONSE OF PetroFLAG SYSTEM WITH VARIOUS AMOUNTS OF ANTHRACENE[a]

	Anthracene Conc. (ppm)				
	100	200	500	1000	2000
PetroFLAG Response (ppm)	798	1376	1641	1380	1735

[a] Response of the PetroFLAG system for soil containing various levels of anthracene. The results show that the PetroFLAG system returns a strong response to anthracene. The response to anthracene is higher than response to the calibrator, therefore, the meter displays a reading over-estimating the concentration. For concentrations greater than 200 ppm, the turbidity developed exceeds the recommended level (i.e. a reading greater than 1000 on response factor 10). To obtain accurate results the user should rerun the sample using a smaller sample size. This will bring the results into linear range. The samples were analyzed using the PetroFLAG system set to response factor 10 (Ref. 2).

TABLE 11

RESPONSE OF PetroFLAG SYSTEM WITH VARIOUS AMOUNTS OF CREOSOTE[a]

	Creosote Conc. (ppm)			
	100	200	500	1000
PetroFLAG Response (ppm)	103	210	538	1043

[a] Response of the PetroFLAG system for soil containing various levels of creosote. The samples were analyzed using the PetroFLAG system set to response factor 8 (Ref. 2).

TABLE 12

RELATIVE RESPONSE OF PetroFLAG SYSTEM TO VARIOUS POLYCYCLIC AROMATIC HYDROCARBONS[a]

Compound	Spike Level in ppm (Matrix Used)	PetroFLAG Reading in ppm (Rf 10)	Response Relative to Mineral Oil Calibrator
Anthracene	100 (Soil)	798	8
Benzo[a]pyrene	50 (Soil)	180	3.6
Chrysene	16 (Solvent)	172	11
Fluoranthene	200 (Solvent)	101	0.5
Pyrene	200 (Solvent)	216	1.1

[a] The data for anthracene and benzo(a)pyrene were generated by spiking each compound onto a composite sandy clay loam soil and homogenizing the sample for later analysis. The soil sample size was 10 g. The soil spiking procedure used for anthracene and benzo(a)pyrene produced inconsistent results for the other PAH compounds. These compounds (chrysene, flouranthene, and pyrene), which are very soluble in the extraction solvent, were spiked directly into the extraction solvent and analyzed. All of the PAHs samples were analyzed on response factor 10 (the correct response factor for mineral oil). The data indicate that, for example, using a standard sample size analyzed on response factor 10 (the correct response factor for mineral oil), a 100 ppm anthracene sample read 798 ppm. The PetroFLAG response to the above analytes is equal to or greater than the calibrator in all cases except for fluoranthene which has a response equivalent to diesel fuel.

NOTE: When analyzing soils containing anthracene, benzo(a)pyrene, or chrysene the PetroFLAG meter will read over range for concentrations of 250, 550, and 180 ppm respectively. These soils can be analyzed using a 1 gram sample size to increase the maximum quantifiable concentration.

TABLE 13

RESPONSE OF PetroFLAG SYSTEM WITH VARIOUS AMOUNTS OF JET-A[a]

	Jet-A Conc. (ppm)							
	0	40	79	198	397	793	1586	2776
PetroFLAG Response (ppm)	54	110	162	208	368	700	1592	2808

[a] Response of the PetroFLAG system for soil containing various levels of Jet-A. The composite soils were prepared from two types of clay-loam soil and sand. The component soils were air dried and sieved to remove particles larger than 850 µm and then mixed in the ratio 2:1:1, followed by tumbling for one hour. The soil was weighed out into 10 g aliquots. Each of the soil aliquots was spiked by direct injection of Jet-A fuel onto the soil using a microliter syringe, mixed, and analyzed by the PetroFLAG system with the instrument set to response factor 4. The coefficient of determination (r^2) for the Jet-A data was 0.997, indicating that the PetroFLAG response was linear over the range 40 ppm to 2808 ppm (Ref. 4).

TABLE 14

RESPONSE OF PetroFLAG SYSTEM WITH VARIOUS AMOUNTS OF WEATHERED GASOLINE[a]

	Weathered Gasoline Conc. (ppm)			
	1000	2040	3050	4070
PetroFLAG Response (ppm)	285	1780	4335	6870

[a] Response of the PetroFLAG system for soil containing various levels of weathered gasoline (50% evaporated). The manufacturer recommends that PetroFLAG be used to qualitatively detect gasoline at these levels. It is not recommended that PetroFLAG be used quantitatively for gasoline unless significant response factor corrections are made and evaporation of the target hydrocarbons is addressed. The samples were analyzed using the PetroFLAG system set to response factor 2 (Ref. 2).

EXHIBIT E

Department of Ecology v. Touchstone Corporation
Prospective Purchaser Consent Decree

Amended Restrictive Covenant for Property

Recording Requested By And
When Recorded Mail To

Touchstone Corporation
2025 First Avenue, Suite 790
Seattle, WA 98121

DECLARATION OF RESTRICTIVE COVENANTS

Reference #s of Documents Released or Assigned	None
Grantor	Touchstone Corporation
Grantee	Washington State Department of Ecology
Legal Description (abbreviated)	Lots 1-12, Blk 74, Lake Union Addition to City of Seattle
Assessor's Tax Parcel ID#	

TOUCHSTONE CORPORATION hereby gives notice that the Property, which is legally described below, is the subject of the following restrictive covenants. This Declaration of Restrictive Covenants hereby supersedes the Declaration of Restrictive Covenants recorded by KING COUNTY on November 26, 2002, solely as to the Property described herein. The Property, which is the subject of the following restrictive covenants ("the Property"), is legally described as:

> Lots 1 through 12, inclusive, Block 74, Lake Union Addition to the City of Seattle, according to the plat recorded in volume 1 of plats, page 238, in King County, Washington.

The Property was the subject of remedial actions under Chapter 70.105D RCW and implementing regulations. The work performed in the remedial actions is described in a Consent Decree filed with and approved by the Superior Court of the State of Washington in and for King County, in King County Cause No. 99-2-08651-1SEA ("the Consent Decree"); and a Prospective Purchaser Consent Decree filed with and approved by the Superior Court of the State of Washington in and for King County, in King County Cause No. _____ ("the Prospective Purchaser Consent Decree").

These restrictive covenants are required by ECOLOGY under WAC 173-340-440(5) because the cleanup actions on the Property under the Consent Decree and the Prospective Purchaser Consent Decree

will achieve Method B surface water standards for groundwater but do not achieve drinking water standards, as established under WAC chapter 170-340.

Subject to exceptions and reservations of record, TOUCHSTONE CORPORATION is the owner of the Property. TOUCHSTONE CORPORATION makes the following declaration as to limitations, restrictions and uses to which the Property may be put. TOUCHSTONE CORPORATION specifies that such declarations and the obligations created by the declarations shall constitute covenants to burden and run with the land and such covenants shall be binding on all parties and all persons, including TOUCHSTONE CORPORATION, who have or acquire any portion of, or interest in, the Property. Such declarations shall inure to the benefit of and be enforceable by the Washington State Department of Ecology and its successors and assigns ("ECOLOGY").

Pursuant to the Prospective Purchaser Consent Decree, TOUCHSTONE CORPORATION subjects the Property to the following restrictive covenants. These restrictive covenants hereby supersede and replace the restrictive covenants recorded on the Property by KING COUNTY on November 26, 2002.

1. No activities that interfere with the remedial actions required by the Consent Decree or Prospective Purchaser Consent Decree shall be undertaken on the Property without ECOLOGY approval.

2. No wells for the extraction of water shall be installed in the Property without ECOLOGY approval.

3. No title, easement, lease or other interest in the Property shall be conveyed or entered into without adequate provision for the terms of this Declaration of Restrictive Covenants.

4. Authorized representatives of ECOLOGY shall have the right to enter the Property at reasonable times with reasonable notice for the purposes of evaluating compliance with the terms of this Declaration of Restrictive Covenants.

Except as limited by the express provisions of this Declaration of Restrictive Covenants, TOUCHSTONE CORPORATION and its successors and assigns expressly reserve all rights of ownership, use and enjoyment of the Property.

Executed this ___ day of _____, 2006.

TOUCHSTONE CORPORATION

By: _____

Its: _____

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the _____ of TOUCHSTONE CORPORATION to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATED: _____

_____

_____
Notary Public in and for the State of
Washington, residing at _____.
My Commission Expires: _____

EXHIBIT F

Department of Ecology v. Touchstone Corporation
Prospective Purchaser Consent Decree

IRREVOCABLE ASSIGNMENT

Pursuant to Section XXII of the Prospective Purchaser Consent Decree (PPCD) between the State of Washington, Department of Ecology ("Ecology") and Touchstone Corporation, King County Superior Court Cause No. _____ (_____, 2007), the undersigned depositor(s) ("Owner") hereby irrevocably assigns, transfers, and sets over to Ecology all rights, title and interest in and to $_____ ("Assigned Funds") on deposit in account number _____ ("Account") with the accepting deposit institution identified below ("Bank"). Ecology shall have full power and authority to demand, collect and receive the Assigned Funds for the uses and purposes prescribed in Section XXII of the PPCD. Owner hereby authorizes Bank, and Bank agrees to release to Ecology any or all of the Assigned Funds held in the Account upon 30 days notice of demand and with no other conditions of release. Bank agrees that it holds the Assigned Funds in its possession, and it agrees to hold the Assigned Funds until a release of this assignment is received from Ecology.

OWNER(s)

_____ _____
Dated: Dated:

ACCEPTANCE

The undersigned Bank accepts and agrees to be bound by the terms of this irrevocable assignment and to hold the Assigned Funds until Ecology authorizes the release thereof in writing.

BANK ATTEST

_____ _____
Title: Title:
Date: Date:

EXHIBIT G

Department of Ecology v. Touchstone Corporation
Prospective Purchaser Consent Decree

Estoppel Agreement

King County and Chevron have executed a consent decree in King County Superior Court under Cause No. 99-2-08651-1SEA (Lake Union Decree), with the Department of Ecology regarding a contaminated site, as the term Site is defined in the Lake Union Decree. The Site includes the Property to be acquired by Touchstone, which is the subject of this Prospective Purchaser Consent Decree (PPCD). The Lake Union Decree established the obligations of King County and Chevron as to contamination at the Site.

Under the PPCD with Touchstone, Touchstone proposes to remove soil from the Property as prescribed in the Touchstone cleanup action plan (Touchstone CAP). Ecology is providing Touchstone with a covenant not to sue and contribution protection in the PPCD, under which Touchstone will not be liable for groundwater contamination at the Site, except in those circumstances described in Section XIX.A of the PPCD concerning new releases. King County and Chevron shall remain responsible, under the terms of the Lake Union Decree, for groundwater contamination on the Site, including the Touchstone Property, except for new releases as described in Section XIX.A of the PPCD.

Chevron

_____

King County

_____