Industrial Properties Inc
VCP NW 1016

4636 E. Marginal Way S.
Suite 215
Seattle, WA 98134
206.763.7364
Fax 206.763.4189

Clayton GROUP SERVICES

March 16, 2004

Ms. Sunny Becker
Voluntary Cleanup Program
DEPARTMENT OF ECOLOGY
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Clayton Project No. 75-03092.01

Subject: Sampling and Analysis Plan for the Removal of Two Underground Storage Tanks– Industrial Properties, Inc., 2450 Sixth Avenue South, Seattle, Washington (TCP ID# NW1016)

Ms. Becker:

Please find enclosed one copy of the proposed Sampling and Analysis Plan (SAP) for the removal of two underground storage tanks (USTs) at Industrial Properties, Inc., located at 2450 Sixth Avenue South, Seattle, Washington.

If you have any questions or comments regarding the project, please contact Shawn Wolfe or me at (206) 763-7364.

Sincerely,

Mitchell Williams, RG
Licensed Geologist
Real Estate Environmental Solutions
Seattle Regional Office

Cc: Mr. Ben Ives – Industrial Properties, Inc.
Mr. John Houlihan – Short Cressman & Burgess PLLC

Enclosure

RECEIVED
MAR 17 2004
DEPT OF ECOLOGY

4636 E. Marginal Way S.
Suite 215
Seattle, WA 98134
206.763.7364
Fax 206.763.4189

Clayton GROUP SERVICES

March 16, 2004

Mr. Ben Ives
Industrial Transfer and Storage Company
P.O Box 546
Black Eagle, MT 59414

Clayton Project No. 75-03092.01

Subject: Sampling and Analysis Plan for the Removal of Two Underground Storage Tanks – Industrial Properties, Inc., 2450 Sixth Avenue South, Seattle, Washington (TCP ID# NW1016) UST1 and UST2

Dear Mr. Ives:

Clayton Group Services, Inc. (Clayton) is pleased to submit this Sampling and Analysis Plan (SAP) for the removal of two underground storage tanks (USTs) at the Industrial Properties, Inc. facility (from hereon known as the Site) located at 2450 Sixth Avenue South, Seattle, Washington (Figure 1).

This SAP was prepared in response to the discovery of petroleum contaminated soil (PCS) and groundwater at Site in November of 2002 and January of 2003. The contamination was discovered in conjunction with in-place closure of three USTs (i.e., USTs 1, 2 and 3) at the Site. A recovery well was installed just north of UST-1 in February of 2003. Between March 2003 and November 2003 a total of 300 gallons of free product were removed from the recovery well. During February, 2004, UST 3 was removed from the Site.

SCOPE OF WORK

Task 1. Mobilization and Pre-Excavation

As part of the mobilization, Environmental Tank Service (ETS) will saw-cut the concrete floor above the USTs 1 and 2. Using a Bobcat 33, ETS will remove concrete from the Site and disposed of it at Renton Concrete Recyclers in Renton, Washington. A plastic barrier will be placed on walls to prevent migration of dust and odor to occupied areas of the building. ETS will install a high capacity ventilation fan to impart the negative air pressure to the work area further ensuring air quality for the remainder of the building. In

addition ETS, will be selectively demolish a limited portion of a non-bearing stud-wall as it lies directly over UST 1. This wall must be removed to in order to remove the UST.

Task 2. UST Removal

ETS will use a Bobcat 331 trackhoe to excavate soil from above and from around USTs 1 and 2 (Figure 2). The USTs will be cut up in-place into manageable pieces using sawzalls and transported to a metal recycler in Seattle, WA. The excavated soil will be placed on conveyors and placed in waiting dump trucks. Groundwater, when encountered, will be pumped by a 1,400-gallon vacuum pump truck and transported to Emerald Petroleum, Inc. in Seattle, Washington for treatment and disposal. The soil from around the USTs and fill from within the USTs will be transported to Waste Management, Inc.'s transfer station located at 3rd Avenue South and South Lander Street in Seattle, Washington.

Once the USTs have been removed and sufficient PCS excavated to warrant sampling, or limits of structural integrity of the Site warehouse have been reached, Clayton will collect 5 soil samples from each UST excavation. Samples will be collected from sidewalls and bottom of the excavation. Clayton's sampling methodology will be in accordance with Washington State Department of Ecology guidelines presented in *Guidance for Site Checks and Site Assessment for Underground Storage Tanks, February 1991, revised October 1992.*

Clayton will field screen potential soil-sampling locations for total volatile organics (TVOs) using a portable gas analyzer equipped with photoionization detector (PID). To accomplish this task, Clayton will place an aliquot of soil in a zip lock bag. The bag will be sealed. After approximately 5 minutes the headspace above the soil will be screened for TVOs by placing the probe of the gas analyzer into the headspace. Based PID measurements and visual observations Clayton will excavate additional PCS and/or select the soil samples for laboratory analysis (see Task 4). If TVOs are not detected, soil-sampling locations will be selected based on professional judgment.

If necessary, petroleum contaminated groundwater will be pumped from the excavation and stored on-Site in a Baker tank. At the client's request, Clayton will make recommendations regarding the disposal of petroleum-contaminated groundwater.

After the USTs have been removed and PCS excavated, ETS will backfill the excavation with control density fill (CDF), pour a concrete slab, and remove related debris from the Site.

Soil -Decontamination Procedures

Sampling equipment will be decontaminated between samples according to the following procedures:

- Scrub equipment thoroughly with phosphate-free detergent and potable water using a brush to remove any particulate matter or surface film;
- Rinse with clean potable water;
- Triple rinse with clean deionized carbon-free water;
- Air dry on plastic sheeting; and
- Wrap or package equipment in aluminum foil, plastic bags, or other appropriate containers to prevent recontamination.

Soil - Sample Management

Soil samples will be stored in an iced chest while at the Site and during transportation to the laboratory. Samples will be stored in the dark at 4° C. A chain of custody (COC) form will accompany each chest containing laboratory samples. Field personnel will retain a copy of the COC; the original will be sent with the samples to the laboratory.

Task 3. Site Restoration

Once sufficient petroleum contaminated soil is removed from the UST excavations, the excavations will be backfill with pea gravel to approximately 1-foot above the observed groundwater elevation. The pea gravel will serve as a solid structural base within the saturated zone as well as permitting ready transmissivity of soil gas and water. A layer of permeable geotextile fabric will be placed on top of the pea gravel followed by 1-foot lifts of Type 17 Engineered Pit Run. Each lift of Type 17 will be compacted to a 95% Modified Proctor. A concrete slab will be poured to match the surrounding grade.

Task 4. Chemical Analyses

ESN Northwest will analyze 10 soil samples for gasoline and diesel/lub oil range total petroleum hydrocarbons (TPHs) using Washington State Test Methods NW-TPH-Gx and NW-TPH-Dx. In addition soil samples will be analyzed for benzene, toluene, ethyl benzene, and xylenes (BTEX) using EPA Test Methods 8021. The soil sample collected from each UST excavation with highest concentration of diesel/lube oil range TPHs will be analyzed for and poly-aromatic hydrocarbons using EPA Test Methods 8270.

Mr. Ben Ives
Industrial Transfer & Storage
March 16, 2004

Task 5. Reporting and Consultation with Ecology

Four weeks after receiving analytical results from the laboratory, the Clayton will complete a letter report discussing our findings. The report will include a the following elements:

- A discussion of field activities and deviations from the SAP, if any.
- A discussion of soil and groundwater quality at the subject property relative to the applicable Washington State Department of Ecology Model Toxics Control Act cleanup levels.
- A discussion of groundwater elevations, groundwater flow direction, and hydraulic gradient.
- A discussion of our conclusions and recommendations regarding the necessity for additional investigation or remediation of contaminated soil and groundwater at the Site.

After discussing our findings with the client, Clayton will request a meeting with Ecology to discuss or findings.

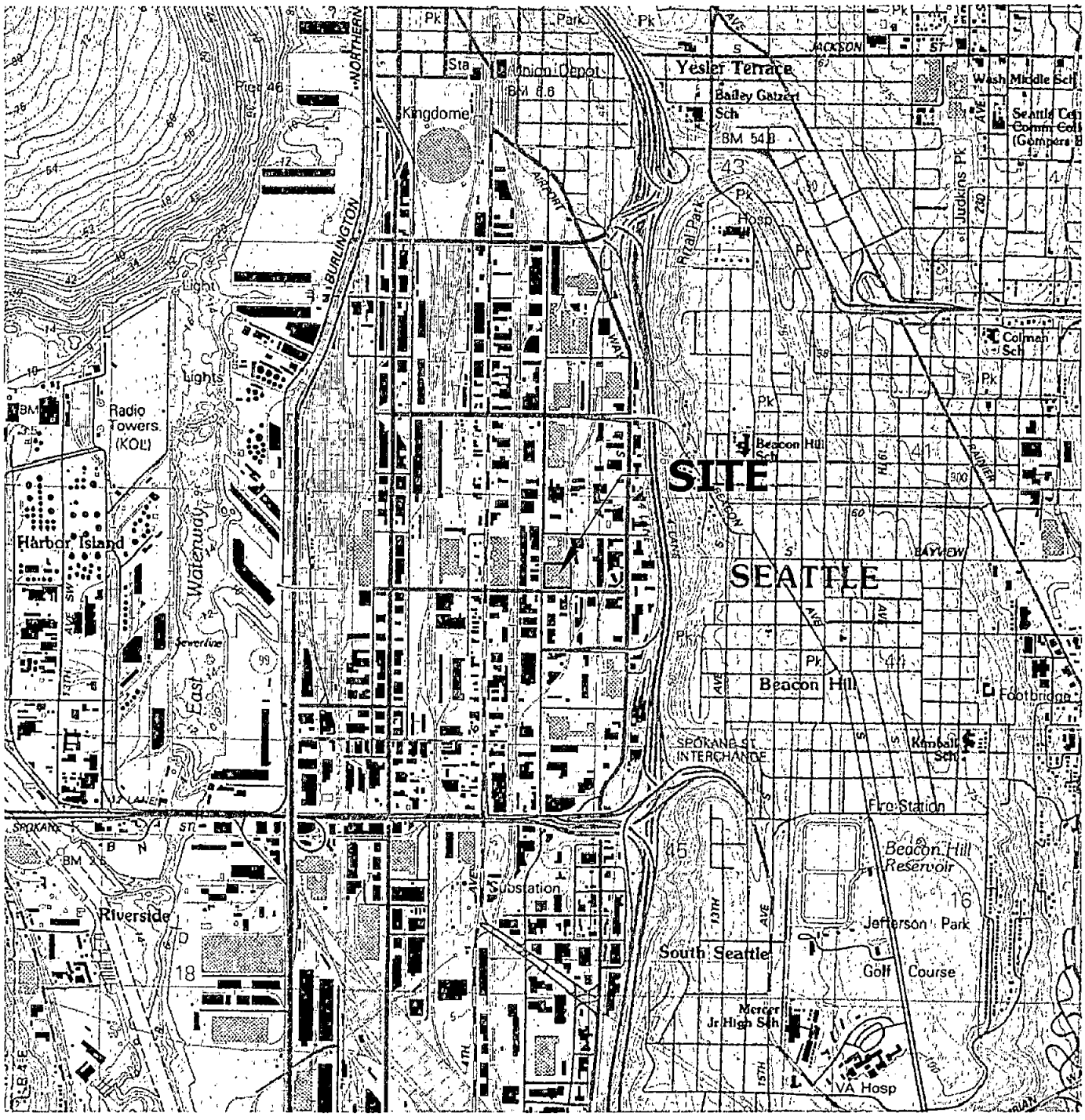
If we may provide any additional information or clarification of the SAP, please call Thomas Cammarata at 206.633.3783.

Sincerely,

Thomas Cammarata
Project Manager
Real Estate Environmental Solutions
Seattle Regional Office

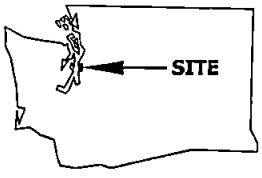
Attachments: A – Figures 1 and 2

ATTACHMENT A
FIGURES



Portion of 7.5–minute Series
Topographic Map
United States Department of the Interior
Geological Survey

Seattle South, Washington Quadrangle
1983
Scale 1:25,000



QUADRANGLE LOCATION

Figure 1 Site Location	Clayton GROUP SERVICES	Industrial Properties 2450 Sixth Avenue South Seattle, Washington 98134	
		Clayton Project 75–03092.00	Industrial Properties

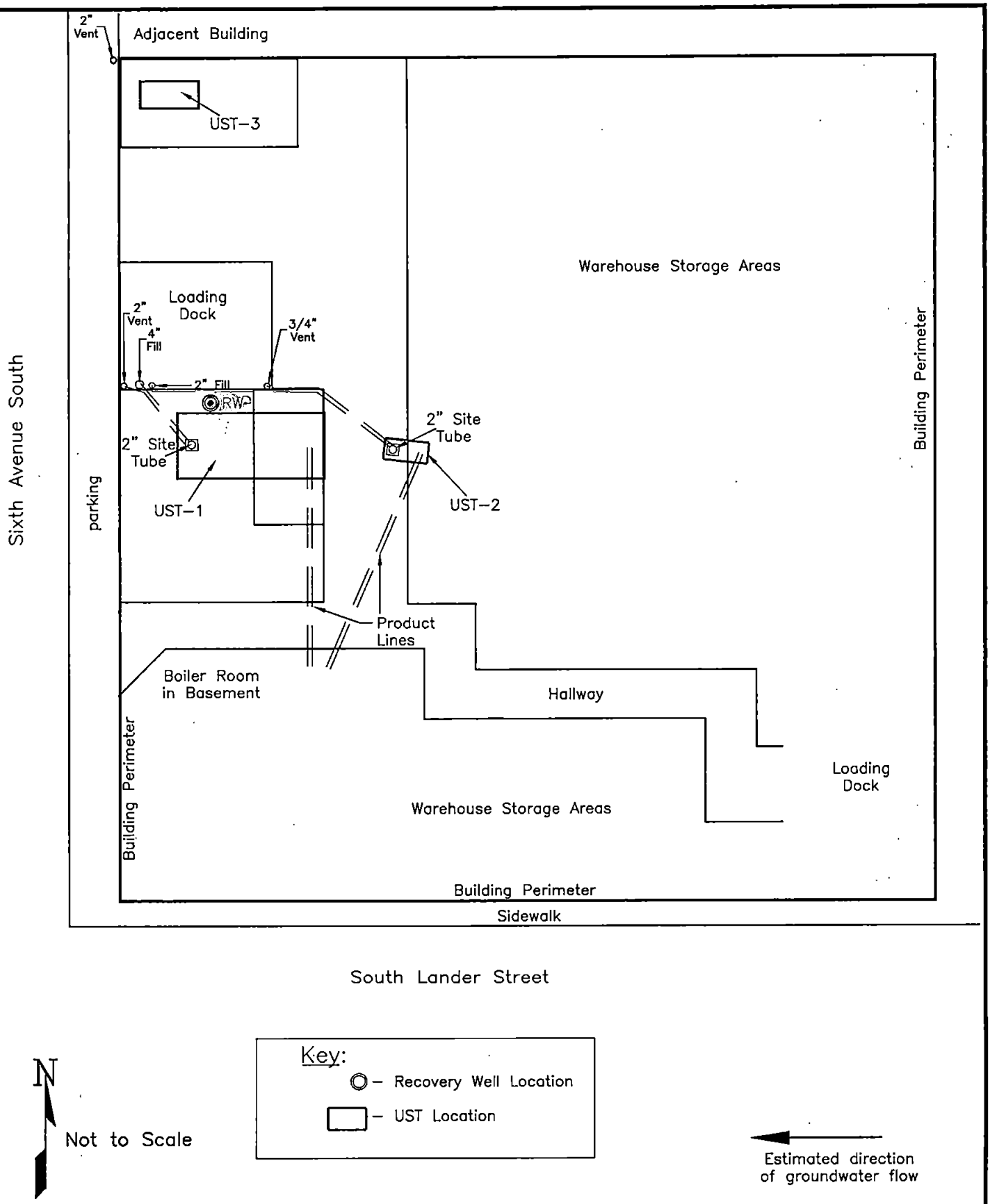


Figure 2

Building Layout & UST Location Map

Clayton GROUP SERVICES

Industrial Properties
2450 Sixth Avenue South
Seattle, Washington

Clayton Project No. 75-03092.00 | Industrial Properties

4636 E. Marginal Way S.
Suite 215
Seattle, WA 98134
206.763.7364
Fax 206.763.4189

Clayton GROUP SERVICES

December 17, 2003

Ms. Sunny Becker
Voluntary Cleanup Program
DEPARTMENT OF ECOLOGY
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Clayton Project No. 75-03092.01

Subject: Sampling and Analysis Plan for the Removal of One Underground Storage Tank and the Characterization of Groundwater Quality – Industrial Properties, Inc., 2450 Sixth Avenue South, Seattle, Washington (TCP ID# NW1016)

Ms. Becker:

Please find enclosed one copy of the proposed Sampling and Analysis Plan (SAP) for the removal of one underground storage tank (UST) and the characterization of groundwater quality at Industrial Properties, Inc., located at 2450 Sixth Avenue South, Seattle, Washington.

If you have any questions or comments regarding the project, please contact Shawn Wolfe or me at (206) 763-7364.

Sincerely,

Mitchell Williams, RG
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Cc: Mr. Ben Ives – Industrial Properties, Inc.
Mr. John Houlihan – Short Cressman & Burgess PLLC

Enclosure

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Clayton GROUP SERVICES

December 9, 2003

Mr. Ben Ives
Industrial Transfer and Storage Company
P.O Box 546
Black Eagle, MT 59414

Clayton Project No. 75-03092.01

Subject: Sampling and Analysis Plan for the Removal of One Underground Storage Tank and the Characterization of Groundwater Quality – Industrial Properties, Inc., 2450 Sixth Avenue South, Seattle, Washington

Dear Mr. Ives:

Clayton Group Services, Inc. (Clayton) is pleased to submit this Sampling and Analysis Plan (SAP) for the removal of one underground storage tank (UST) and the characterization of groundwater quality at the Industrial Properties, Inc. (from hereon known as the Site) located at 2450 Sixth Avenue South, Seattle, Washington (Figure 1).

This SAP was prepared in response to the discovery of petroleum contaminated soil (PCS) and groundwater at Site in November of 2002 and January of 2003. The contamination was discovered in conjunction with in-place closure of three USTs (i.e., USTs 1, 2 and 3) at the Site. A recovery well was installed just north of UST-1 in February of 2003. Between March 2003 and November 2003 a total of 300 gallons of free product were removed from the recovery well.

SCOPE OF WORK

Task 1. Underground Utility Check

Prior to conducting a subsurface investigation, Clayton will direct Underground Detection Service, Inc. to locate underground utilities at the Site. Clayton will also contact a public utility locate service. The purpose of this action is to locate, identify, and mark the locations of the underground utilities in order to avoid striking the utilities during the removal of the UST and drilling.

Task 2. UST Removal

UST-3 was previously closed in-place (Figure 2). ETS will remove the UST and excavate PCS as necessary. Once the UST has been removed and sufficient PCS excavated to warrant sampling, or limits of structural integrity of the Site warehouse have been reached, Clayton will collect 5 soil samples from the UST excavation. Samples will be collected from sidewalls and bottom of the excavation. Clayton's sampling methodology will be in accordance with Washington State Department of Ecology guidelines presented in *Guidance for Site Checks and Site Assessment for Underground Storage Tanks, February 1991, revised October 1992.*

Clayton will field screen potential soil-sampling locations for total volatile organics (TVOs) using a portable gas analyzer equipped with photoionization detector (PID). To accomplish this task, Clayton will place an aliquot of soil in a zip lock bag. The bag will be sealed. After approximately 5 minutes the headspace above the soil will be screened for TVOs by placing the probe of the gas analyzer into the headspace. Based PID measurements and visual observations Clayton will excavate additional PCS and/or select the soil samples for laboratory analysis (see Task 4). If TVOs are not detected, soil-sampling locations will be selected based on professional judgment.

If necessary, petroleum contaminated groundwater will be pumped from the excavation and stored on-Site in a Baker tank. At the client's request, Clayton will make recommendations regarding the disposal of petroleum-contaminated groundwater.

After UST-3 has been removed and PCS excavated, ETS will backfill the excavation with control density fill (CDF), pour a concrete slab, and remove related debris from the Site.

Task 2. Soil Boring

Soil Borings

Six soil borings will be drilled at the Site and converted to groundwater monitoring wells. (i.e., CMW-1 to CMW-6). Three of the soil borings/monitoring wells will be drilled on the west side of the Site either in the sidewalk/parking area or within 6th Avenue South. Three soil borings will be drilled in the interior of the Site warehouse. Prior to drilling, the concrete floor in the interior of the building will be cored or cut to allow access to subsurface soil and groundwater. The exact locations of soil boring/monitoring wells are yet to be determined. Cascade Drilling of Woodinville, Washington will drill the soil borings/monitoring wells using a hollow stem auger drill rig.

Clayton will collect soil samples from each soil boring on 2.5-foot sampling depth intervals using a split spoon sampler. Based on previous work at the Site, Clayton

anticipates that borings will be drilled to depths of approximately 15 to 20 feet bgs. Soil samples will be placed in preconditioned sterilized jars provided by the laboratory.

Clayton will screen soil samples in field for TVOs using a portable gas analyzer equipped with PID. To accomplish this task, Clayton will place an aliquot of soil in a zip bag. The bag will be sealed. After approximately 5 minutes the headspace above the soil will be screened for TVOs by placing the probe of the gas analyzer into the headspace. Clayton will select the two soil samples from each boring with the highest PID measurements for laboratory analysis (see Task 4). If TVOs are not detected in a soil boring, the soil sample collected nearest the soil/groundwater interface and a second soil sample, selected based on professional judgment, will be sent to the laboratory for analysis.

All soil boring cuttings will be placed in 55-gallon drums and stored at the Site. Clayton will advise the client regarding disposal of the soil cuttings upon request.

Soil -Decontamination Procedures

Sampling equipment will be decontaminated between samples according to the following procedures:

- Scrub equipment thoroughly with phosphate-free detergent and potable water using a brush to remove any particulate matter or surface film;
- Rinse with clean potable water;
- Triple rinse with clean deionized carbon-free water;
- Air dry on plastic sheeting; and
- Wrap or package equipment in aluminum foil, plastic bags, or other appropriate containers to prevent recontamination.

Soil - Sample Management

Soil samples will be stored in an iced chest while at the Site and during transportation to the laboratory. Samples will be stored in the dark at 4° C. A chain of custody (COC) form will accompany each chest containing laboratory samples. Field personnel will retain a copy of the COC; the original will be sent with the samples to the laboratory.

Task 3. Groundwater Quality Investigation

Groundwater Monitoring Well Installation and Sampling

Soil borings will be converted into 2-inch diameter groundwater-monitoring wells constructed of schedule 40 PVC, with 10-foot well screens (10 or 20 slot). A 2/12 or 10/20 silica sand will be used as filter pack around each well screen. Above the filter

pack, the annular space will be filled with hydrated bentonite chips. From one to two feet bgs to surface, the annular space will be filled with cement and a flush well monument will be installed. The wells will be installed following guidelines presented in Washington State Minimum Standards for Construction and Maintenance of Wells (WAC 173-160).

After well installation, Clayton will survey the locations of wells and wellhead elevations. All elevations will be measured from the top of the well casing. Elevations will be measured within an accuracy of 0.01 feet.

Monitoring Well Development

After installation of the groundwater monitoring wells, field personnel will develop the wells in order to remove accumulated fine grain material resulting from monitoring well installation procedures and to provide hydraulic conductivity with the aquifer. Clayton will use a down-hole pump and/or hand bailers to purge water and fines from the wells. A well will be considered developed after purging a maximum of ten casing volumes or when the well water becomes visually clear, which ever comes first. If the well purges dry. Clayton will allow the water in the well to recover to 90 percent of pre-purge water level. If the well pumps dry a second time, Clayton will consider the well developed.

All purge water generated during development will be stored at the Site in 55-gallon drums. At the request of the client, Clayton will advise the client regarding disposal of purge water.

Pre-sampling Well Purging

Field personnel will purge each monitoring wells prior to sampling. Prior to purging field personnel will measure the static water level in each well using a down-hole electric well sounder. Water level will be measured with an accuracy of 0.01 feet.

A down-hole low flow pump with polyethylene tubing will be used for both purging and sampling. The pump intake will be placed at approximately the center of the screen. Clayton will purged water form the well using a flow rate of not more than 1.0 liter per minute. Prior to measuring field parameters, field personnel will take care to purge stagnant water volume from the pump and tubing if replacement tubing is not used.

Field parameters (i.e., Eh, pH, dissolved oxygen, conductivity, and temperature) will be collected using external handheld metering system). Purging will continue until field parameters stabilize or until three casing volume of water has been removed from the well. Field parameter stabilization criteria are as follows:

FIELD PARAMETER	STABILIZATION CRITERIA
pH	+/- 0.2
Conductivity	+/- 10.0 µS/cm
Eh	+/- 10%
Dissolved Oxygen	+/- 10%
Temperature	+/- 1.0°C

Field parameters will be considered stable when three consecutive readings are within the stabilization criteria.

Groundwater Sampling

Field personnel will collect samples from the wells immediately after purging using the down-hole low-flow pump fitted with disposal tubing. The pump intake will be placed at approximately at the center of the screen. Samples will be collected at a flow rate of not more than 1.0 liter per minute. Samples will be placed in preconditioned sterilized bottles provided by the laboratory.

Groundwater -Decontamination Procedures

The down-hole sampling pumps will be decontaminated as follows:

- Place the pump in a container with phosphate-free detergent and scrub with a brush;
- Place the pump in a container with potable water and scrub with a brush;
- Rinse the pump with deionized carbon-free water

All purge water and decontamination water will be stored at the Site in 55-gallon drums. At the request of the client, Clayton will advise the client regarding disposal of water.

Groundwater - Sample Management

Groundwater samples will be stored in an iced chest while at the Site and during transportation to the laboratory. Samples will be stored in the dark at 4° C.A chain of custody (COC) form will accompany each chest containing laboratory samples. Field personnel will retain a copy of the COC; the original will be sent with the samples to the laboratory.

Task 4. Chemical Analyses

ESN Northwest will analyze 17 soil samples (two from each soil boring and five from UST excavation) and six groundwater samples for gasoline and diesel/lub oil range total petroleum hydrocarbons (TPHs) using Washington State Test Methods NW-TPH-Gx and NW-TPH-Dx. In addition soil and groundwater samples will be analyzed for benzene, toluene, ethyl benzene, and xylenes (BTEX) using EPA Test Methods 8021. The soil sample collected from the UST excavation with highest concentration of diesel/lube oil range TPHs will be analyzed for and poly-aromatic hydrocarbons using EPA Test Methods 8270. Soil samples not analyzed for TPHs will be archived at the laboratory in the dark at 4° C. If Clayton determines that additional soil samples should be analyzed for TPHs, Clayton will consult with the client before taking any action.

Task 5. Reporting and Consultation with Ecology

Four weeks after receiving analytical results from the laboratory, the Clayton will complete a letter report discussing our findings. The report will include a the following elements:

- A discussion of field activities and deviations from the SAP, if any.
- A discussion of soil and groundwater quality at the subject property relative to the applicable Washington State Department of Ecology Model Toxics Control Act cleanup levels.
- A discussion of groundwater elevations, groundwater flow direction, and hydraulic gradient.
- A discussion of our conclusions and recommendations regarding the necessity for additional investigation or remediation of contaminated soil and groundwater at the Site.

After discussing our findings with the client, Clayton will request a meeting with Ecology to discuss or findings.

Mr. Ben Ives
Industrial Transfer & Storage
December 9, 2003

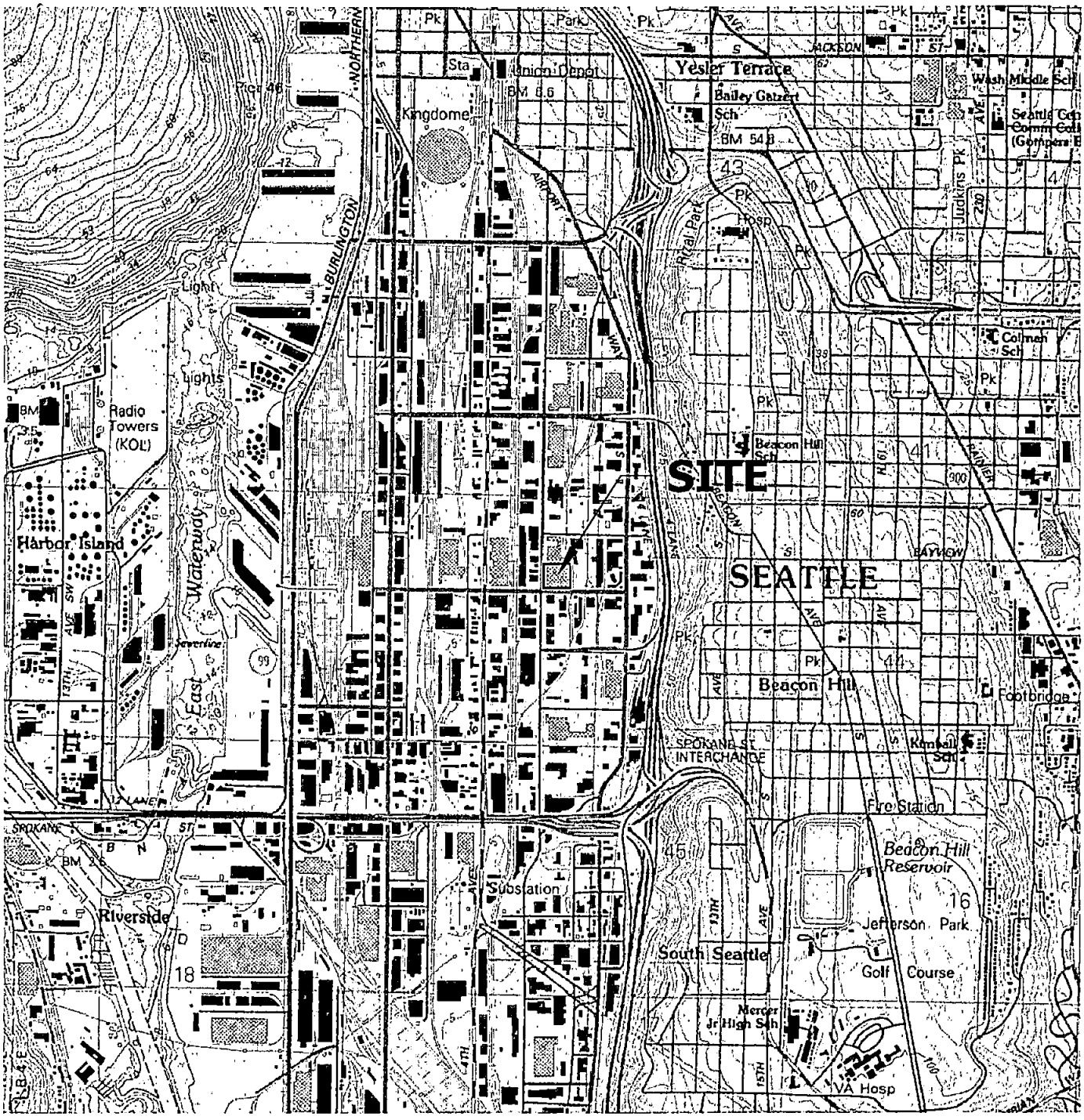
If we may provide any additional information or clarification of this proposal, please call Thomas Cammarata at 206.633.3783.

Sincerely,

Thomas Cammarata
Project Manager
Real Estate Environmental Solutions
Seattle Regional Office

Attachments: A – Figures 1 and 2

ATTACHMENT A
FIGURES



Portion of 7.5–minute Series
Topographic Map
United States Department of the Interior
Geological Survey

Seattle South, Washington Quadrangle
1983
Scale 1:25,000

Figure 1 Site Location	Clayton GROUP SERVICES	Industrial Properties 2450 Sixth Avenue South Seattle, Washington 98134	
		Clayton Project 75–03092.00	Industrial Properties

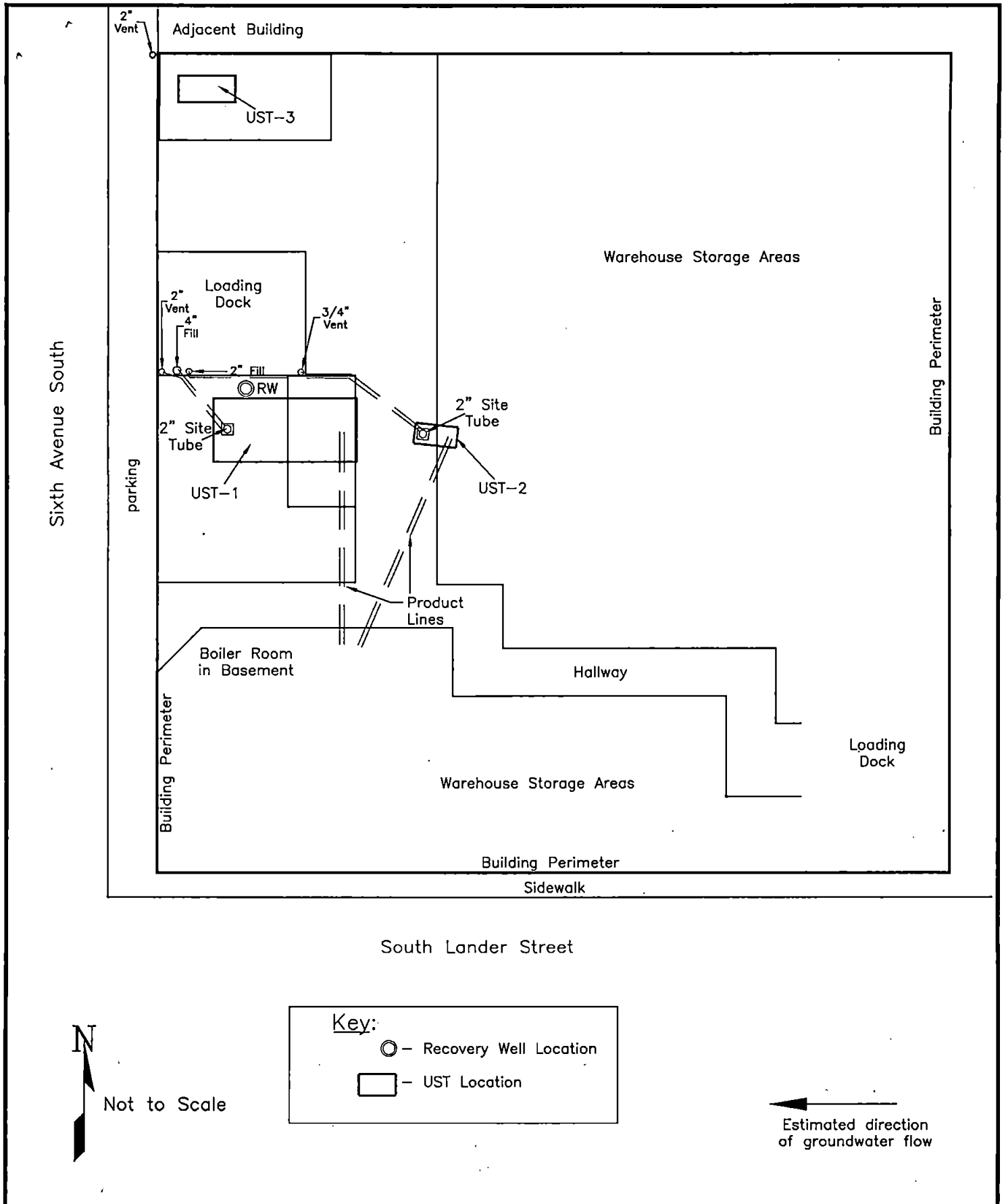


Figure 2

Building Layout & UST Location Map

Clayton GROUP SERVICES

Industrial Properties
2450 Sixth Avenue South
Seattle, Washington

Clayton Project No. 75-03092.00 | Industrial Properties

4636 E. Marginal Way S.
Suite 215
Seattle, WA 98134
206.763.7364
Fax 206.763.4189

Clayton GROUP SERVICES

December 15, 2003

Ms. Theresa Fisher
Voluntary Cleanup Program Administrator
Department of Ecology
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Clayton Project No. 75-03092.01

Subject: Sampling and Analysis Plan for the Removal of One Underground Storage Tank and the Characterization of Groundwater Quality – Industrial Properties, Inc., 2450 Sixth Avenue South, Seattle, Washington

Ms. Fisher:

Please find enclosed one copy of the proposed Sampling and Analysis Plan (SAP) for the removal of one underground storage tank (UST) and the characterization of groundwater quality at Industrial Properties, Inc., located at 2450 Sixth Avenue South, Seattle, Washington.

If you have any questions or comments regarding the project, please contact Shawn Wolfe or me at (206) 763-7364.

Sincerely,

Mitchell Williams, RG
Licensed Geologist
Real Estate Environmental Solutions
Seattle Regional Office

Cc: Mr. Ben Ives – Industrial Properties, Inc.
Mr. John Houlihan – Short Cressman & Burgess PLLC

Enclosure

4636 E. Marginal Way S.
Suite 215
Seattle, WA 98134
206.763.7364
Fax 206.763.4189

Clayton GROUP SERVICES

December 9, 2003

Mr. Ben Ives
Industrial Transfer and Storage Company
P.O Box 546
Black Eagle, MT 59414

Clayton Project No. 75-03092.01

Subject: Sampling and Analysis Plan for the Removal of One Underground Storage Tank and the Characterization of Groundwater Quality – Industrial Properties, Inc., 2450 Sixth Avenue South, Seattle, Washington

Dear Mr. Ives:

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SCOPE OF WORK

Task 1. Underground Utility Check

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If necessary, petroleum contaminated groundwater will be pumped from the excavation and stored on-Site in a Baker tank. At the client's request, Clayton will make recommendations regarding the disposal of petroleum-contaminated groundwater.

After UST-3 has been removed and PCS excavated, ETS will backfill the excavation with control density fill (CDF), pour a concrete slab, and remove related debris from the Site.

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Soil Borings

Six soil borings will be drilled at the Site and converted to groundwater monitoring wells. (i.e., CMW-1 to CMW-6). Three of the soil borings/monitoring wells will be drilled on the west side of the Site either in the sidewalk/parking area or within 6th Avenue South. Three soil borings will be drilled in the interior of the Site warehouse. Prior to drilling, the concrete floor in the interior of the building will be cored or cut to allow access to subsurface soil and groundwater. The exact locations of soil boring/monitoring wells are yet to be determined. Cascade Drilling of Woodinville, Washington will drill the soil borings/monitoring wells using a hollow stem auger drill rig.

Clayton will collect soil samples from each soil boring on 2.5-foot sampling depth intervals using a split spoon sampler. Based on previous work at the Site, Clayton

anticipates that borings will be drilled to depths of approximately 15 to 20 feet bgs. Soil samples will be placed in preconditioned sterilized jars provided by the laboratory.

Clayton will screen soil samples in field for TVOs using a portable gas analyzer equipped with PID. To accomplish this task, Clayton will place an aliquot of soil in a zip bag. The bag will be sealed. After approximately 5 minutes the headspace above the soil will be screened for TVOs by placing the probe of the gas analyzer into the headspace. Clayton will select the two soil samples from each boring with the highest PID measurements for laboratory analysis (see Task 4). If TVOs are not detected in a soil boring, the soil sample collected nearest the soil/groundwater interface and a second soil sample, selected based on professional judgment, will be sent to the laboratory for analysis.

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Soil -Decontamination Procedures

Sampling equipment will be decontaminated between samples according to the following procedures:

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- Rinse with clean potable water;
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- Air dry on plastic sheeting; and
- Wrap or package equipment in aluminum foil, plastic bags, or other appropriate containers to prevent recontamination.

Soil - Sample Management

Soil samples will be stored in an iced chest while at the Site and during transportation to the laboratory. Samples will be stored in the dark at 4° C. A chain of custody (COC) form will accompany each chest containing laboratory samples. Field personnel will retain a copy of the COC; the original will be sent with the samples to the laboratory.

Task 3. Groundwater Quality Investigation

Groundwater Monitoring Well Installation and Sampling

Soil borings will be converted into 2-inch diameter groundwater-monitoring wells constructed of schedule 40 PVC, with 10-foot well screens (10 or 20 slot). A 2/12 or 10/20 silica sand will be used as filter pack around each well screen. Above the filter

pack, the annular space will be filled with hydrated bentonite chips. From one to two feet bgs to surface, the annular space will be filled with cement and a flush well monument will be installed. The wells will be installed following guidelines presented in Washington State Minimum Standards for Construction and Maintenance of Wells (WAC 173-160).

After well installation, Clayton will survey the locations of wells and wellhead elevations. All elevations will be measured from the top of the well casing. Elevations will be measured within an accuracy of 0.01 feet.

Monitoring Well Development

After installation of the groundwater monitoring wells, field personnel will develop the wells in order to remove accumulated fine grain material resulting from monitoring well installation procedures and to provide hydraulic conductivity with the aquifer. Clayton will use a down-hole pump and/or hand bailers to purge water and fines from the wells. A well will be considered developed after purging a maximum of ten casing volumes or when the well water becomes visually clear, which ever comes first. If the well purges dry. Clayton will allow the water in the well to recover to 90 percent of pre-purge water level. If the well pumps dry a second time, Clayton will consider the well developed.

All purge water generated during development will be stored at the Site in 55-gallon drums. At the request of the client, Clayton will advise the client regarding disposal of purge water.

Pre-sampling Well Purging

Field personnel will purge each monitoring wells prior to sampling. Prior to purging field personnel will measure the static water level in each well using a down-hole electric well sounder. Water level will be measured with an accuracy of 0.01 feet.

A down-hole low flow pump with polyethylene tubing will be used for both purging and sampling. The pump intake will be placed at approximately the center of the screen. Clayton will purged water form the well using a flow rate of not more than 1.0 liter per minute. Prior to measuring field parameters, field personnel will take care to purge stagnant water volume from the pump and tubing if replacement tubing is not used.

Field parameters (i.e., Eh, pH, dissolved oxygen, conductivity, and temperature) will be collected using external handheld metering system). Purging will continue until field parameters stabilize or until three casing volume of water has been removed from the well. Field parameter stabilization criteria are as follows:

FIELD PARAMETER	STABILIZATION CRITERIA
pH	+/- 0.2
Conductivity	+/- 10.0 µS/cm
Eh	+/- 10%
Dissolved Oxygen	+/- 10%
Temperature	+/- 1.0° C

Field parameters will be considered stable when three consecutive readings are within the stabilization criteria.

Groundwater Sampling

Field personnel will collect samples from the wells immediately after purging using the down-hole low-flow pump fitted with disposal tubing. The pump intake will be placed at approximately at the center of the screen. Samples will be collected at a flow rate of not more than 1.0 liter per minute. Samples will be placed in preconditioned sterilized bottles provided by the laboratory.

Groundwater -Decontamination Procedures

The down-hole sampling pumps will be decontaminated as follows:

- Place the pump in a container with phosphate-free detergent and scrub with a brush;
- Place the pump in a container with potable water and scrub with a brush;
- Rinse the pump with deionized carbon-free water

All purge water and decontamination water will be stored at the Site in 55-gallon drums. At the request of the client, Clayton will advise the client regarding disposal of water.

Groundwater - Sample Management

Groundwater samples will be stored in an iced chest while at the Site and during transportation to the laboratory. Samples will be stored in the dark at 4° C.A chain of custody (COC) form will accompany each chest containing laboratory samples. Field personnel will retain a copy of the COC; the original will be sent with the samples to the laboratory.

Task 4. Chemical Analyses

ESN Northwest will analyze 17 soil samples (two from each soil boring and five from UST excavation) and six groundwater samples for gasoline and diesel/lub oil range total petroleum hydrocarbons (TPHs) using Washington State Test Methods NW-TPH-Gx and NW-TPH-Dx. In addition soil and groundwater samples will be analyzed for benzene, toluene, ethyl benzene, and xylenes (BTEX) using EPA Test Methods 8021. The soil sample collected from the UST excavation with highest concentration of diesel/lube oil range TPHs will be analyzed for and poly-aromatic hydrocarbons using EPA Test Methods 8270. Soil samples not analyzed for TPHs will be archived at the laboratory in the dark at 4° C. If Clayton determines that additional soil samples should be analyzed for TPHs, Clayton will consult with the client before taking any action.

Task 5. Reporting and Consultation with Ecology

Four weeks after receiving analytical results from the laboratory, the Clayton will complete a letter report discussing our findings. The report will include a the following elements:

- A discussion of field activities and deviations from the SAP, if any.
- A discussion of soil and groundwater quality at the subject property relative to the applicable Washington State Department of Ecology Model Toxics Control Act cleanup levels.
- A discussion of groundwater elevations, groundwater flow direction, and hydraulic gradient.
- A discussion of our conclusions and recommendations regarding the necessity for additional investigation or remediation of contaminated soil and groundwater at the Site.

After discussing our findings with the client, Clayton will request a meeting with Ecology to discuss or findings.

Mr. Ben Ives
Industrial Transfer & Storage
December 9, 2003

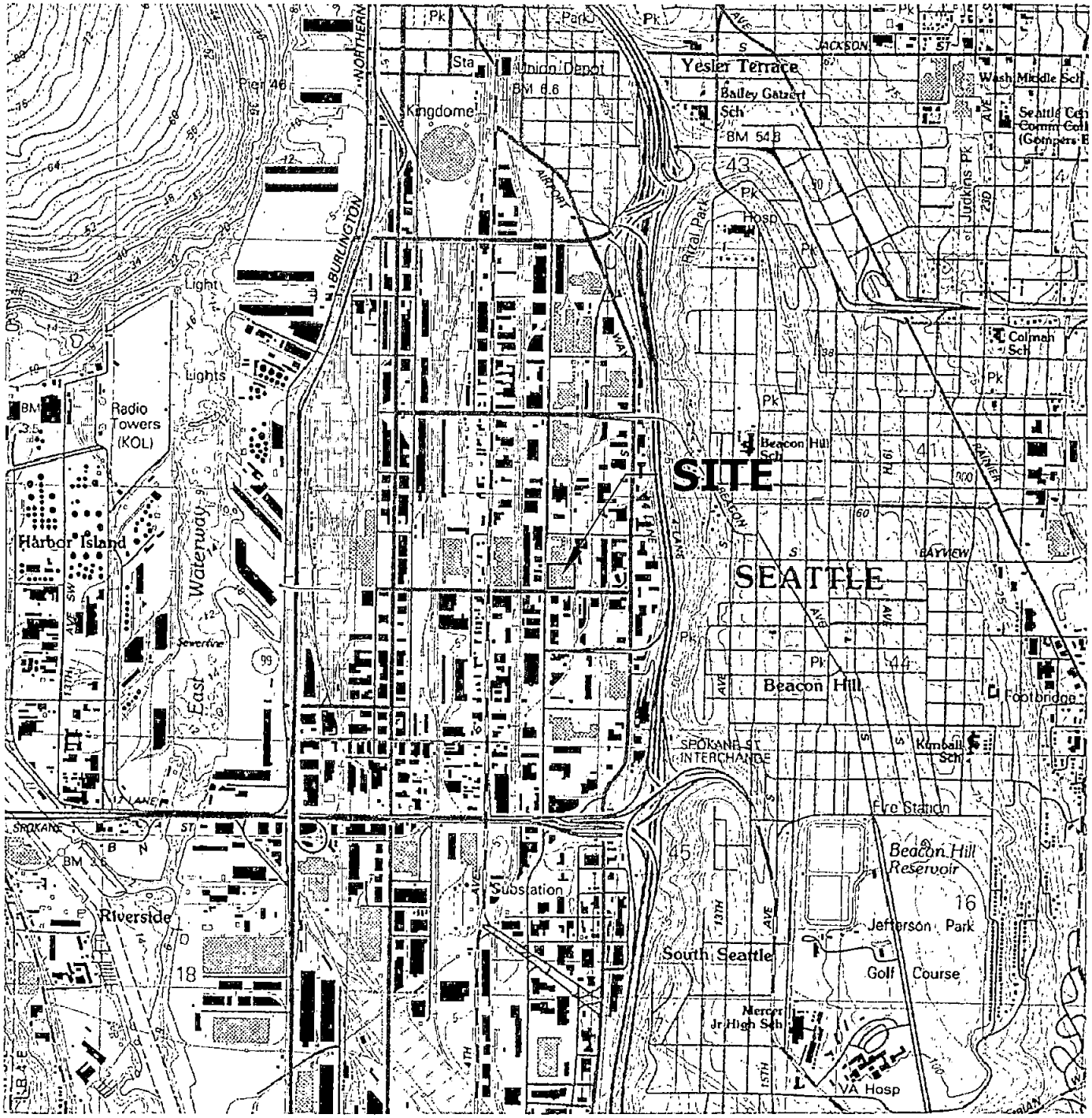
If we may provide any additional information or clarification of this proposal, please call Thomas Cammarata at 206.633.3783.

Sincerely,

Thomas Cammarata
Project Manager
Real Estate Environmental Solutions
Seattle Regional Office

Attachments: A – Figures 1 and 2

ATTACHMENT A
FIGURES



Portion of 7.5–minute Series
Topographic Map
United States Department of the Interior
Geological Survey

Seattle South, Washington Quadrangle
1983
Scale 1:25,000

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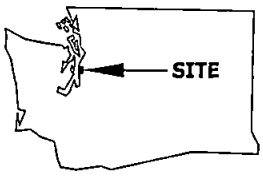

QUADRANGLE LOCATION

Figure 1 Site Location	Clayton GROUP SERVICES	Industrial Properties 2450 Sixth Avenue South Seattle, Washington 98134	
		Clayton Project 75–03092.00	Industrial Properties

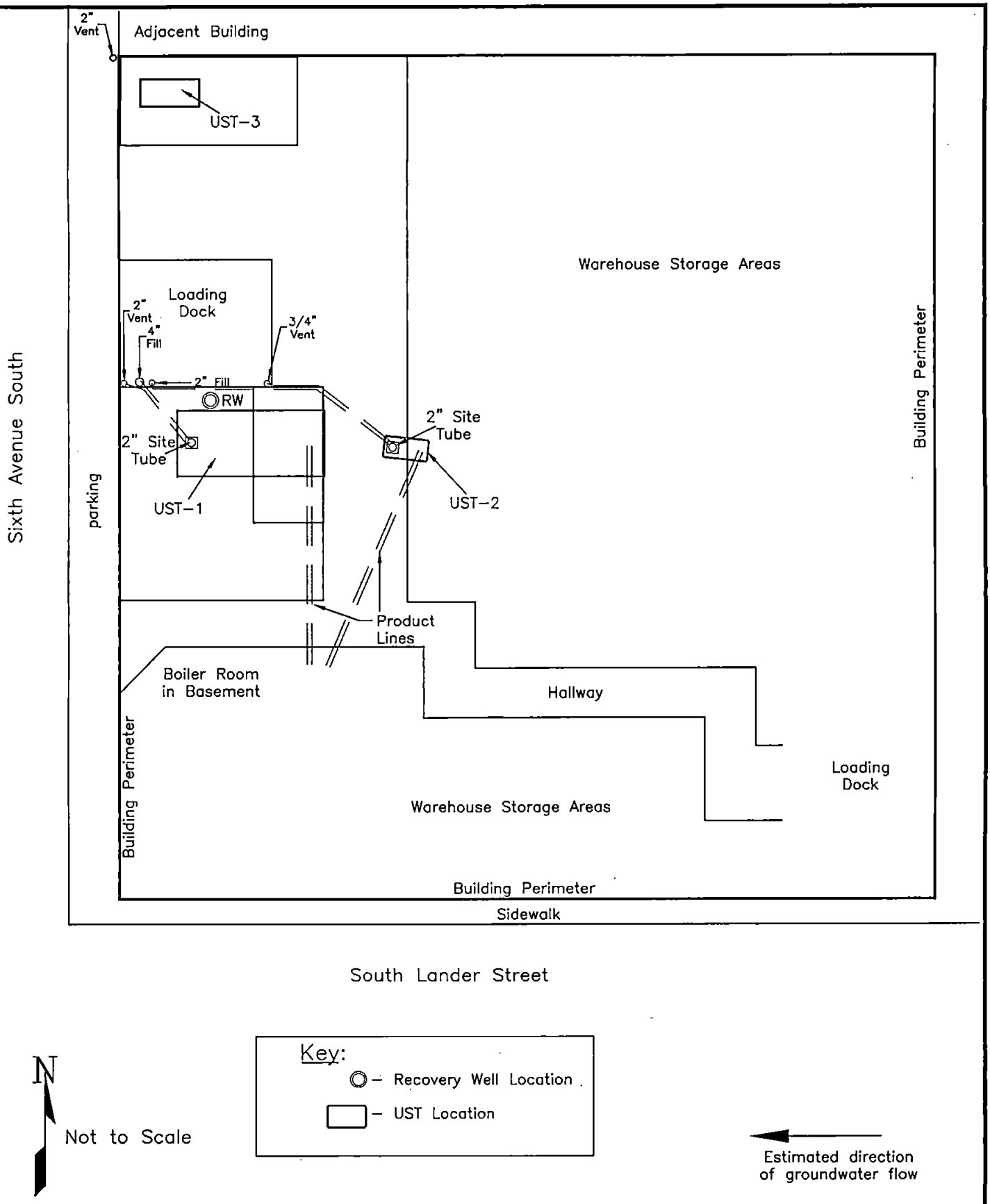

Figure 2

Building Layout & UST Location Map

Clayton GROUP SERVICES

Industrial Properties
2450 Sixth Avenue South
Seattle, Washington

Clayton Project No. 75-03092.00 | Industrial Properties