REPORT OF
VOLUNTARY REMEDIAL ACTION
NORTH STAR LODGE
808 North 39th Avenue
Yakima, Washington

Project Number 98921.1

March 25, 2002

Prepared for: Yakima Valley Memorial Hospital
Attn: John Vornbrock
2811 Tieton Drive
Yakima, Washington 98902

Prepared by: Travis Trent, RPG
Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, Washington 98901

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

Historically the North Star Lodge site was a portion of a larger orchard that operated for approximately 40 years. The North Star Lodge portion of the orchard was not the location of agricultural related buildings, materials storage areas, equipment washout areas, or any known historic agricultural chemical spills. Historic orchard sites often contain residual quantities of agricultural chemicals that result from prescribed application. Application of agricultural chemicals for intended purposes and according to label instructions are not considered a release under Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) regulations and therefore resulting residual soil concentrations, if any, would be exempt from reporting. However, given the potential health hazards associated with residual agricultural chemicals, the Owner pursued voluntary remedial action to control potential impact to human health and the environment.

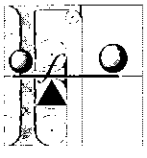
Residual concentrations of agricultural chemicals were assumed present on the North Star Lodge site. On-site management of impacted soils was selected at the most appropriate remedial action. A Remedial Plan was voluntarily drafted and implemented by the Owner that incorporated site investigation and remediation elements with North Star Lodge construction activities.

The site Health and Safety Plan required construction workers that may impact native site soils to attend a Site Safety Meeting as part of Hazard Communication requirements. The Health and Safety Plan also required site workers to conduct site activities using prescribed work practices and engineering controls.

During the course of construction activities, visual observation, on-site monitoring, and laboratory analysis documented that work practices and engineering controls were sufficient to prevent employee exposure above the applicable personal exposure limit. Visible emissions of site soils in excess of defined parameters were not observed and quantifiable off-site migration of site soils did not occur. During construction, it was determined that approximately 1,800 cubic yards of site soils would need to be relocated off-site to accommodate final site grading. These materials were relocated directly across 39th Avenue to a property that is under the same ownership as the North Star Lodge and was also part of the same historic orchard property. The North Star Lodge relocated soil was graded and stabilized with grass. North Star Lodge owners will maintain soil and vegetative cover until the site is developed.

Initial soil investigations conducted concurrent with construction activities identified lead, arsenic, and DDT present above selected remedial threshold values to an average depth of 2 feet below ground surface and were not encountered at depths below 6 feet. Following soil relocation and importation of structural fill, building foundations, sidewalks, paving and other impermeable surfaces were installed.

Following impermeable surface installation, remaining landscape areas were capped with clean topsoil. Post remediation samples documented two localized areas with lead and arsenic concentrations to be above the remedial threshold. Two of the samples above the applicable cleanup levels were collected from the landscape area on the south property boundary, which is



shared with the adjacent property. Due levels above the remedial threshold, remedial action was taken. Soil in these areas was removed was transported to property located immediately across 39th Avenue. This property is under the same ownership as the North Star Lodge and was also part of the same historic orchard. The existing cap was replaced with clean topsoil. Acceptable cleanup levels were achieved with the September 8, 2000 additional post remediation sampling.

Residual concentrations of historically applied agricultural chemicals present on-site have been contained beneath protective barriers sufficient to prevent human and ecological exposure to residual concentrations of agricultural chemicals. A restrictive deed covenant has been filed to notify future site owners of material presence. A site specific Soil Operations and Maintenance Plan is in place that outlines requirements to maintain protective barriers and summarizes measures necessary in the event that barriers are breached. On behalf of the Owner, Fulcrum requests a "No Further Action" determination from the Department of Ecology.

1.0 INTRODUCTION

This Report of Voluntary Remedial Action describes activities conducted at North Star Lodge located at 808 North 34th Avenue in Yakima, Washington. The purpose of remedial activity was to facilitate new construction on Lots 1 – 3 of the Village View Business Park. Remediation and construction activities were conducted concurrently. Documentation contained within this report is sufficient to demonstrate protection for human health and the environment and obtain a "No Further Action" (NFA) determination by the Washington State Department of Ecology (Ecology).

Information contained within this report provides site background information, pre-construction site conditions, remedial design, engineering and administrative controls implemented during remediation/ construction, soil sampling activities, air monitoring results, post-construction site conditions, and institutional controls.

2.0 PROJECT BACKGROUND/SITE DESCRIPTION

2.1 Project Background

In December of 1998, Yakima Valley Memorial Hospital (Memorial Hospital), retained Fulcrum Environmental Consulting, Inc. (Fulcrum) to conduct a Phase I Environmental Site Assessment (ESA) of real property at North 39th and Castlevale Avenues, in Yakima, Washington (see Appendix A for ESA report). Historical research indicated that the site had been operated as an orchard for approximately 40 years. The ESA research indicated that orchard trees were present on the site. However, research did not indicate that the site was the location of agricultural related buildings or material storage areas. Conclusion of the Phase I ESA was that potential exists for site soil to contain residual lead, arsenic and organic pesticide concentrations associated with historic orchard use. Memorial Hospital Purchased Lots 1, 2 and 3 for the purposes of planning and constructing a cancer facility called the North Star Lodge. For report purposes, the collective site will be referred to as the North Star Lodge site.

2.2 Site Description

The North Star Lodge site consists of approximately 3.48 acres located at 808 North 39th Avenue in Yakima, Washington. The subject site is legally described as:

> **Parcels 42406, 42407, and 42408**: Lots 1, 2, and 3, of Village View Business Park, according to the official plat thereof, recorded November 20, 1997, under Auditor's File No. 7035057, records of Yakima County, Washington.

See Figure 1 in Appendix B for a General Site Map.

North Star Lodge Facility Information	**Memorial Hospital Business Information**
808 North 39th Avenue	2811 Tieton Drive
Yakima, Washington, 98902	Yakima, Washington, 98902
(509) 574-3400	(509) 575-8007

The North Star Lodge site ranges from approximately 1,190 to 1,200 feet above sea level and prior to construction sloped gradually to the northeast. The subject site is bounded by Castlevale Avenue to the north, North 40th Avenue on the west, and North 39th Avenue on the east. To the south, between the subject site and Kern Road, is a Pizza Hut restaurant. Utilities are located along North 39th Avenue and near the northeast property boundary. See Figure 2 in Appendix B for a Subject Site Map.

3.0 PRE-CONSTRUCTION SITE CONDITIONS

Prior to remediation/construction activities described in this report, there were no onsite structures. The North Star Lodge site was historically part of a much larger orchard from sometime before 1939 to sometime after 1977. Orchard trees had been removed from the site and the site was overgrown with grasses, weeds, and small shrubs native to the area prior to remediation/construction activities.

3.1 Geology, Topography, and Hydrogeology

3.1.1 Regionally

Regionally the subject site is located within the Yakima Folds Geomorphic Province on the western margin of the Columbia River Plateau. The Columbia River Basalt Group is the dominant bedrock feature throughout the Columbia River Plateau. Quaternary alluvial sediments and colluvial deposits overlie Columbia River Basalt at the site and valleys near the site. Anticlinal hills and synclinal valleys of the Yakima Fold Belt dominate topography near the site. Geomorphology is characterized by channel scabland structures of the Spokane Floods overlain by present-day fluvial systems.

Two regional aquifers are known to be present in the Yakima Area (Biggane, 1982). The two regional aquifers are loosely characterized as the sedimentary aquifer and the basalt aquifer. Both regional aquifers consist of a large number of water bearing subunits and are hydraulically interconnected. When present, the sedimentary aquifer overlies the basalt aquifer, and is usually comprised of the Upper Ellensburg formation and other un-named Quaternary aged sediments.

3.1.2 Locally

Locally the subject site is located on a gentle northeast facing slope (5%-8%) grading toward the Naches River flood plain. The 1979 Soil Conservation Service Soil Survey of Yakima County characterizes the subject site and much of the surrounding area as silt loam soil formed in loess sediments. Silt loam soils of the area are typically well drained with moderate permeability.

The Naches River, approximately one mile north of the North Star Lodge site, is approximately 1,120 feet above sea level. The North Star Lodge site lies between north and east portions of the Naches and Cowiche ditch and south and west portions of the Congdon canal. The Naches and Cowiche ditch is approximately 1,140 feet above sea level and is located approximately one half of a mile northeast of the North Star Lodge Site. The Congdon canal is approximately 1,260 feet above sea level and is located less than a quarter mile southwest of the North Star Lodge site. Both the Naches and Cowiche ditch and the Congdon canal are concrete lined in the vicinity of the North Star Lodge site. Figure 1 General Site Map located in Appendix B shows the location of the river, ditch, and canal relative to the North Star Lodge site.

Site soils consist of silt and fine sand extending to more than 9 feet below ground surface (bgs). Permeability of the surface stratum is known to be moderate. Basalt bedrock was not encountered during this project. As part of remediation and site development, soil was excavated to a depth of approximately 12 below original grade. Free groundwater was not encountered at facility excavation extent. No evidence of seasonal, perched, unconfined, or confined groundwater was identified during site excavation.

3.1.3 Soil Lithology and Well Log Data

Well logs for the surrounding area were reviewed to determine average depth to groundwater, subsurface lithology, and proximity of the nearest downgradient well. Washington Department of Ecology (Ecology) well log reports are filed by Section, Township and Range. The North Star Lodge site is located along the central portion of Township 13 N., Range 18 EWM, Section 15. Therefore, Ecology well logs reports for Township 13 N., Range 18 EWM, Section 15 were reviewed. Appendix C contains pertinent well logs.

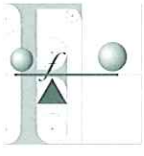
The only two reports in Ecology's file for Section 15 were for monitoring wells at 3701 River Road that had been abandoned in August of 1998. The River Road well site is located approximately 100 feet topographically lower in elevation 3/4 of a mile north of the North Star Lodge site. Soil lithology was reported as well graded silty-sandy-gravel, sandy-gravel or gravely-sand, all of which contained abundant cobbles. Monitoring wells were installed to an approximate depth of 28 feet below ground surface (bgs). Saturated material was identified between approximately 20 and 25 feet bgs. During a phone interview with Dave Enos, the River Road Project Manager, he indicated that 7 monitoring wells had originally been installed in February 1994. Mr. Enos indicated that data collected demonstrates groundwater flow direction is generally southeast, though easterly flow trends are evident during the irrigation season. Mr. Enos said that preliminary project data suggests that depth to groundwater at the River Road site strongly reflects the irrigation season ranging from approximately 12 to 22 feet bgs, depending upon the time of year measured.

Exact groundwater depth can not be conclusively determined without drilling and measuring. However, based upon reviewed well logs, local geology, and local topography, depth to groundwater at the subject site is likely to average between 40 to 60 feet bgs, depending upon season and local irrigation practices. However, seasonal fluctuations in groundwater resulting from local irrigation practices is lessened since nearby irrigation canals are concrete lined. The separation between agricultural chemical concentrations above remedial thresholds (estimated at 6 feet bgs) and inferred groundwater is estimated to be approximately 34 to 54 feet.

Given inferred depth to groundwater, and arid conditions (< 10 inches of rainfall/year), it is unlikely that groundwater has been impacted by residual agricultural chemicals present on the North Star Lodge site. Furthermore, since the nearest downgradient well is more than 1/2 mile from the site, the probability that utilized groundwater has been impacted is negligible.

4.0 REMEDIAL DESIGN

North Star Lodge remedial design was developed in conjunction with KDF Architecture and Memorial Hospital based in part on Department of Ecology (Ecology) approved activities conducted at two nearby sites (portions of the same historic orchard). Both sites received a "no further action" (NFA) determination from Ecology following project completion.



4.1 Release Information

There is no evidence of historical spills or leaks of agricultural chemical on the North Star Lodge site. Residual concentrations of agricultural chemicals are likely the result of application in accordance with labeling and standard agricultural practice. As such, residual concentrations to do not constitute a Model Toxic Control Act (MTCA) defined release. However, given the potential health hazards associated with the residual pesticide concentrations, the owner has chosen to pursue independent remedial action to control potential impact to human health and the environment during and after construction.

4.2 Identification of Agricultural Chemicals of Concern

Historical orchard property often contains residual quantities of agricultural chemicals that result from prescribed application of pesticides, herbicides, fungicides, etc. Ecology's MTCA regulations govern cleanup levels for released toxic chemicals. Application of pesticides and fertilizers for intended purposes and according to label instructions are not considered a release and are exempt from reporting under MTCA. Cleanup levels defined under MTCA are based upon concentrations that pose a detriment to human health or the environment. Included are typical agricultural chemicals such as lead, arsenic, and dichlorodiphenyltrichloroethane (DDT), among others that have historically been used for agricultural purposes. Although the North Star Lodge site is exempt from the reporting requirements of MTCA, use of MTCA clean-up levels is appropriate, as a guideline (threshold) for determining remedial action and institutional controls.

Soil sampling conducted on a nearby property (Landmark Care Center site) that was historically part of the same orchard had been completed prior to remediation activities at the North Star Lodge site. The sampled property is located to the immediate north of the North Star Lodge site. Refer to Figure 2 for a map showing North Star Lodge site location relative to the Landmark Care Center site. Review of the Landmark Care Center report of Voluntary Remedial Action that had been submitted to Ecology found sixty grid locations were identified for soil sampling. All samples were analyzed for arsenic. Approximately 10 percent of samples collected were analyzed for lead, and DDT. These three compounds are commonly associated with historic orchard land-use. Analytical results from the Landmark Care Center site suggested that use of arsenic, as an indicator chemical, was appropriate. The range of analytical results for each sampling depth is summarized in Table 4.2.

Table 4.2 Analytical Results

Chemical Sampled	Sample Depth				
	Surface	2 feet bgs	4 feet bgs	6 feet bgs[1]	8 feet bgs[1]
Lead	180 – 1040 ppm	3.6 – 37.6 ppm	5.5 – 7 ppm	Not Applicable	Not Applicable
Arsenic	11.1 – 109 ppm	4 – 103 ppm	2.9 – 45.3 ppm	3.9 – 9.6 ppm	3.0 – 5.5 ppm
DDT[2]	.97 – 3.68 ppm	<0.05 - 0.06 ppm	<0.05 ppm	Not Applicable	Not Applicable

1 Soil samples, collected in four areas at 6 and 8 foot depths, were only analyzed for arsenic.
2 0.05 ppm is the sampling method limit of detection for DDT.

Conclusion of site investigations for the Landmark Care Center was that arsenic, lead, and DDT concentration decrease with increasing depth bgs. Concentrations above threshold values are present throughout the site to an average depth of 1 to 4 feet bgs, with a maximum depth of 6 feet bgs.

Grid sampling of the North Star Lodge was expected to result in concentrations and distribution of agricultural chemicals similar to that at the Landmark Care Center. The North Star Lodge Sampling and Analysis Plan was designed to focus on specific areas of design concern, such as planned stormwater infiltration areas. While anticipated sampling results were evaluated and incorporated into pre-construction design, the actual site sampling was designed to be conducted as part of site construction. Refer to Appendix D for details on planned site sampling.

4.3 Evaluation of Remedial Threshold Values

Because the site is exempt from MTCA reporting requirements, applicability of Ecology regulations to the North Star Lodge site is not definitive. However, MTCA regulations provide a basis for remediation and are indicative of industry standards. MTCA regulations define cleanup levels for released chemicals known to be detrimental to human health and the environment. The U.S. Department of Housing and Urban Development (HUD) published the Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (Guidelines) under Title X. The HUD Guidelines govern certain types of residential property and provide a industry standard basis for lead concentrations in soil. Table 4.3 shows the comparison between clean up levels of different types of property using different health based assumptions.

Table 4.3

Chemical	MTCA Method A Unrestricted Use	MTCA Method A Industrial	HUD Guidelines
Lead	250 ppm	1,000 ppm	400 ppm Bare Soil 2,000 ppm Perimeter/Yard 5,000 ppm Abatement
Arsenic	20 ppm	200 ppm	Not Applicable
DDT	1 ppm	5 ppm	Not Applicable

4.4 Remedial Threshold Value Selected

MTCA Method A unrestricted use levels are conservative and appropriate for land use at this site. For the North Star Lodge site the MTCA Method A levels will be used as a threshold value to determine remedial action and institutional control need.

Chemicals of concern at the site are arsenic, lead, and DDT. Threatened groundwater was not suspected. See Section 3.1.3 for discussion of groundwater occurrence at or near the North Star Lodge site.

4.5 Remedial Action Selected

For this site Fulcrum determined that management of impacted media onsite would be the most appropriate remedial action. This remedial option was preferred over other options because impacted media was pervasive across the site and excavation and disposal would have subjected the Owner to costs disproportionate to the net environmental benefit.

The remedial action selected called for limiting potential exposure through onsite management of soils impacted with residual agricultural chemicals. Generally, residual agricultural chemical concentrations attenuate rapidly with increasing depth. Primary routes of human exposure are through inhalation and ingestion. Primary route of environmental migration is through wind and water. Onsite management includes site control and worker protection during construction activities, and installation of a protective barrier such as asphalt pavement, concrete building slab, concrete sidewalk, or a soil/vegetative cover. To ensure that the barrier is maintained and the investment protected an operation and maintenance plan would be prepared that specifies how to maintain the barrier and measures to be taken should the barrier be breached (see Section 9.0 Institutional Controls). To alert future owners of impacted soil, a notice would be filed with the deed identifying the agricultural chemicals onsite and informing interested parties of the operation and maintenance plan.

All media suspected of having residual concentrations of agricultural chemicals could be effectively used onsite for fill material. Preliminary investigations by Design Team members indicated that site soil should be suitable for compaction. Considering duration of likely application of chemicals at this site (~1930 - 1970), documented depth of maximum downward migration of residual chemicals is consistent with low measured and predicted leachability of metals in soil. Given the low mobility of chemicals and the distance to groundwater at this site it is likely that managing soils on site will effectively prevent groundwater impact.

At completion of gross grading the site would be capped with clean topsoil and vegetation/landscaping. Confirmation of remediation would be verified by sampling of surface capping material.

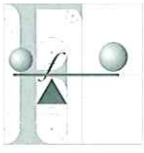
With adequate engineering and institutional controls it is reasonable and appropriate to manage these materials on site without jeopardizing either human health or the environment.

4.6 Points of Compliance

During remediation, points of compliance were the ground surface within the boundary of the North Star Lodge Site parcel. Residual agricultural chemical concentrations in site soils are a pervasive problem in the Yakima area. Urban sprawl has resulted in many historic orchard properties being subdivided for residential and commercial development. The North Star Lodge site is one portion of what was historically a much larger orchard parcel. Residual concentrations of agricultural chemicals shown to be present on the North Star Lodge site are likely present in neighboring parcels. Remediation of the original orchard's full extent is neither within the project scope nor within the North Star Lodge Owner's control. The boundaries of the North Star Lodge parcel were therefore determined to be the points of compliance.

4.7 Other Applicable or Relevant and Appropriate Requirements (ARAR)

Cleanup standards developed under MTCA must also meet the statutory requirement to be at least as stringent as other applicable federal and laws. This section lists the other potentially applicable laws.



Washington State Dangerous Waste Regulations (WAC 173-303) applicable to remedial waste generated during implementation of the remedial plan. An objective of the remedial plan was to prevent generation of waste soil. Onsite soil was determined to be suitable for compaction. Therefore, near surface soils containing residual pesticide concentrations had a beneficial onsite end use as fill material in the site grading process.

The National Emission Standard for Hazardous Air Pollutants (NESHAPS) regulations apply to ambient dust generated during construction projects, including dust containing toxic constituents. In Yakima County the NESHAPs regulation is administered by the Yakima Regional Clean Air Authority (YRCAA).

Occupational Safety and Health Act (OSHA) and Washington Industrial Safety and Health Act (WISHA) regulations apply to site workers during remedial activity. Worker exposure regulations (OSHA/WISHA) identify the permitted levels of employee chemical exposure. These regulations are applicable whenever there is potential for worker exposure to hazardous chemicals. Appendix E contains the site specific Health and Safety Plan (HSP). For this site, engineering controls such as dust suppression and personal protective equipment (such as respirators and coveralls) were used to reduce potential exposure. Air monitoring was used to verify regulatory compliance. Following is a summary of pertinent personnel exposure limits for the agricultural chemicals of concern identified onsite.

Table 4.7 Pertinent Worker Exposure Levels

Exposure Hazard	Action Limit	Personal Exposure Limit	Worker Exposure Regulation
Lead	0.03 mg/m^3	0.05 mg/m^3	WAC 296-155-17605
Arsenic[1]	0.005 mg/m^3	0.2 mg/m^3	WAC 296-62-67347
DDT[1]	0.25 mg/m^3	1.0 mg/m^3	WAC 296-62-07515
Particulate[1]	10 mg/m^3 Total 5 mg/m^3 Respirable	5 mg/m^3 Total 2.5 mg/m^3 Respirable	WAC 296-62-07510 WAC 296-62-07515

1 WISHA Construction Standard WAC 296-155-160 refers to air concentrations located in the WISHA General Industry (WAC 296-62) regulation.

The Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) applies to surface water and groundwater used for consumption. Other than stormwater generating events, impact to surface water is not anticipated at the North Star Lodge site. To assess the potential impact of onsite management of site soils containing residual concentrations of agricultural chemicals a search of nearby groundwater wells was conducted. There were no drinking water well identified within 1/2 mile of the North Star Lodge site. Refer to Section 3.1.3 Soil Lithology and Well Log Data for a discussion of water well log review. Appendix C contains pertinent well logs.

The Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) applies to the use, application, and disposal of pesticides. Previous historic investigations found no indication that use, or application of agricultural chemicals was inconsistent with FIFRA regulation or industry practice. Historic investigation indicated that pesticides were not disposed on the North Star Lodge site. This included disposal through unintentional spill or equipment washout.

In June of 1995, the U.S. Department of Housing and Urban Development (HUD) published the Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (HUD Guidelines) under Title X. The HUD guidelines govern certain types of residential property and provide a basis for the industry standard. The HUD guidelines specifically recommend either interim control or abatement for various soil lead concentrations.

No other applicable and relevant regulations have been identified for the site.

5.0 REMEDIATION/CONSTRUCTION

Construction was initiated on March 22, 1999 and completed on June 5, 2000. KDF Architects produced the construction specification. Fulcrum provided assistance with design criteria relative to residual agricultural concentrations. V.K. Powell of Yakima, Washington was the General Contractor for the Site. Leland Hyatt Construction (Hyatt) of Zillah, Washington was the primary excavation contractor, with Temple and Sons doing some of the trenching for footings, utilities, and stormwater infiltration systems. Other subcontractors, such as plumbing, electrical, and landscaping, had relatively minor contact with site soils. Fulcrum provided limited hazard communication, environmental documentation, limited health and safety monitoring, and oversight of remedial activities. Appendix F contains project field observations reports and Appendix G contains project photographic documentation.

A site Health and Safety meeting was held on the morning of March 22, 1999. Meeting attendees included representatives from Fulcrum, V.K. Powell, and Hyatt. The meeting topics included a review of the agricultural chemicals identified and associated health hazards, engineering controls instituted, personnel protective equipment utilized, and personal exposure monitoring (Appendix E contains the site specific Health and Safety Plan).

After the meeting, Hyatt began applying water to the site with a water truck equipped with a spreader bar located at the rear of the truck. As portions of the site became wet enough to suppress dust generation, site grading was initiated.

On March 22, 1999, a vehicle wash area was constructed onsite near the eastern property boundary. Wash area construction consisted of a coarse gravel area approximately 20 feet by 40 feet. Equipment would be temporarily staged on the wash area, cleaned of any clinging site soils, and then visually inspected. The wash area purpose was to reduce the potential for mechanical migration of agricultural chemical impacted soil offsite.

Hyatt initiated site grading on March 22, 1999 and completed grading activities on May 21, 1999. Onsite equipment utilized for site grading included a grader, bulldozer, excavator, dump truck, roller/compactor, and water truck. Water was applied throughout all earth moving activities (sparingly to prevent runoff offsite) sufficient to wet soils and prevent visible dust generation. Site grading activity was discontinued during periods of increased wind velocity.

The site grading plan called for significant (2 to 4 feet) cutting in selected portions of the parcel. Total volume of cut soil exceeded volume of soil that could be relocated during on-site grading activities by 3,000 cubic yards (yds^3). Initially approximately 1,200 $yrds^3$ was staged on-site for use as fill during the construction process. The remaining 1,800 $yrds^3$ was transported to property located immediately across 39th Avenue. This property is under the same ownership as the North

Star Lodge and was also part of the same historic orchard property. The relocated North Star Lodge soil was graded and stabilized with grass. The North Star Lodge owners will maintain soil and vegetative cover until the site is developed.

Visual monitoring of the work area documented that site soils remained onsite during grading activity and that dust control measures were adequate to prevent visual dust generation beyond parameters previously defined. Personal monitoring conducted during grading activities indicated that engineering controls were sufficient to prevent employee exposure to onsite concentrations of residual agricultural chemicals. Appendix H contains employee exposure monitoring results.

Hyatt began excavating footings for the basement of the building on May 18, 1999. Footing excavation predominantly occurred below the level of significant agricultural chemical impact. No visible emissions of dust were observed during fill compacting or subsequent footing excavation.

Temple & Sons (Temple) intermittently trenched, installed, and backfilled areas for the footings, utilities, and stormwater infiltration system from September 7 to September 14, 1999. Soils in the excavation/backfill areas were kept moist during impacting activities. No visible emissions were observed during excavation, installation, or subsequent backfilling. Fulcrum collected soil samples from excavation areas to determine the residual agricultural chemical concentrations in areas associated with future water conveying devices. See Section 6.5.2 for a discussion of analytical results.

6.0 SOIL SAMPLING AND ANALYSIS

Fulcrum drafted a Sampling and Analysis Plan (SAP) in January of 1999 for the North Star Lodge site. Appendix D contains a copy of the Plan. The SAP presented site background, objectives, sample location and frequency, analytical parameters, collection and handling methodology, decontamination procedures, quality assurance and control, detection limits, and labeling and chain of custody procedures. Following is a summary of some of the SAP elements, onsite sampling activities, and analytical results.

6.1 Soil Sampling Rationale

Historic orchard practice spaced trees approximately 30 to 40 feet apart. Early agricultural chemical application method predominately used hand spraying of individual trees. Later methods included means of more uniform application throughout the orchard. To account for potential variation in tree placement and variability of application method, site characterization sampling was performed using a systematic sampling grid. Selected grid spacing was different for each axis to increase the likelihood that samples collected were representative of the various site conditions (ie between tree rows as well as under tree drip lines) and would take into account the overall property dimensions. See Figure 3 Appendix B, Grid Location Map.

The selected site grid was then laid over site development plans. Grid nodes that were shown on site development plans to overlay building footprint, paving, or other relatively non-permeable surfaces were not sampled. Based upon planned site development, grid nodes that overlay permeable surfaces (like grass), and areas of enhanced concern (like the stormwater system) were selected for sampling. Areas of enhanced concern were defined as areas that have a greater potential to contribute to agricultural chemical migration then surrounding areas.

Prior investigations suggested that arsenic was a valid indicator chemical for screening purposes. Sampling and analysis demonstrated that if arsenic was above the remedial value then either lead or DDT was also typically present above corresponding levels in the same sample. However, if arsenic was below the remedial value, then both lead and DDT were likely below their corresponding level in the same sample. Based upon this hypothesis, all samples submitted for analysis from the North Star Lodge site were selected for arsenic analysis. Of the samples submitted, 10% were randomly selected for additional lead analysis and 5% were randomly selected for DDT analysis.

6.1.1 Initial Soil Sampling

Initial soil sampling was conducted at all selected grid nodes concurrent with initial site grading. All collected samples would be analyzed for arsenic. Ten percent of the samples collected were randomly selected for lead analysis. Five percent of the samples collected were randomly selected for DDT analysis. Representative depth sampling would be conducted in five select locations to confirm consistency of horizontal distribution with results of other nearby developed sites (portions of same historic orchard).

6.1.2 Soil Sampling During Construction of Specific Elements

During remediation a focused sampling approach would be used to collect samples from areas of specific concern. All samples collected would be submitted for arsenic analysis, 40% for lead analysis and 5% of samples collected would be randomly selected for DDT analysis.

6.1.3 Sampling Prior to Soil Importation

Remedial plans anticipated importing clean topsoil for use as capping material over permeable areas at the North Star Lodge Site. Clean topsoil means soil that is both suitable for planting vegetation and not already impacted by historic agricultural chemical application. Most sources in the Yakima area suitable for topsoil are associated with historical orchard property. As a screening measure and to reduce the potential of importing capping materials with residual agricultural chemicals soil samples would be collected from proposed topsoil sources prior to importation.

Soil samples would be collected on a random basis from proposed topsoil sources. All samples collected would be submitted for arsenic and lead analysis. Five percent of samples collected would be randomly selected for DDT analysis.

6.1.4 Post Remediation Soil Sampling

Soil samples would be collected from the North Star Lodge Site after completion of site capping with imported soil and prior to final landscaping and sod installation. Soil samples would be collected from the near surface at grid nodes identified for initial sampling to demonstrate surface soil agricultural chemical concentrations below the remedial threshold selected. All samples collected would be analyzed for arsenic. Ten percent of the samples collected would be randomly submitted for lead analysis. Five percent of the samples collected would be randomly submitted for DDT analysis.

6.2 Field Screening Techniques Used to Determine Sampling Locations

Historically, excessive residue, application, or spillage of lead/arsenic-based pesticides was identified by a characteristic white color. Should any near surface or subsurface layer of an unknown whitish colored material be identified, soil samples would be collected from that area in addition to sample locations identified above.

However, typically the potential presence of residual agricultural chemicals applied consistent with labeling do not have reliable field indicators, such as color, odor, or sheen. Field instrument analysis, such as photoionization detector (PID) or X-ray flouresence (XRF), conducted on other similar sites has not been shown to be consistent with laboratory analysis. Therefore field screen techniques were not used to determine soil samples locations. Refer to section 6.1 for a rationale of sample location selection.

6.3 Sampling Procedures

Soil samples were obtained by direct collection or by grab sampling from a backhoe bucket of soil collected at the desired location. Direct collection samples were collected by hand using a new latex or vinyl gloves and disposable plastic spoon from the desired location. Grab samples were obtained from the relatively undisturbed soil at the middle of the backhoe bucket near the teeth. Samples for laboratory analysis were deposited into labeled borosilicate glass sample containers, packaged on ice, and delivered under chain-of-custody to the analytical laboratory (SVL Analytical in Kellogg, Idaho). Refer to Appendix D for the Sampling and Analysis Plan.

Groundwater was not anticipated to be encountered during site sampling. A groundwater investigation was not conducted as part of this remediation project. Therefore, water sampling protocol was not summarized in the Sampling and Analysis Plan or in this report.

6.4 Analytical Methods Selected

The agricultural chemicals of concern identified for the North Star Lodge site are lead, arsenic, and DDT. Environmental Protection Agency (EPA) method 6010 (Inductive Couple Plasma - ICP) was selected for lead and arsenic analysis of the initial soil testing. EPA method 7421-lead/7060-arsenic (Graphite Furnace Atomic Absorption - GFAA) was selected for lead and arsenic analysis of the post remediation soil testing. EPA method 8081 was selected for DDT analysis.

EPA analytical method 6010 results in conservative arsenic analysis and is less costly when multiple metals are analyzed. Although EPA method 6010 has a higher detection limit (4 parts per million – ppm) than method 7060 (0.1 ppm detection limit) for arsenic, the method 6010 detection limit is sufficiently low enough to reliably identify agricultural chemicals below the remedial threshold value selected.

Analysis by method 6010 generally results in a conservative measurement of arsenic concentration. Data presented in the Washington State Department of Ecology's "Natural Background Soil Metals Concentrations in Washington State" states that at lower arsenic concentrations (less than 50 mg/kg), arsenic values produced by 6000 series analysis were significantly higher than those produced by 7000 series analysis. The skewing of analytical results is caused by iron interference and method

detection limits. According to Ecology's report, where arsenic is present at concentrations of 50 ppm or less, analysis of soil samples by method 7060 resulted in significantly lower arsenic concentration than corresponding 6010 analyses.

6.5 Summary of Soil Sampling Events

As a result of prior investigation of an adjacent site, the North Star Lodge site was assumed to be impacted with similar concentrations of agricultural chemicals. By design, site sampling was conducted in conjunction with the various site construction activities. Collecting samples in this manner reduced the cost of investigation, and facilitated sample collection in areas of greatest concern.

Soils sampling occurred during initial site excavation activity, during construction of specific elements, prior to soil being imported, and after capping materials were laid. Following is a summary of soil sampling activities.

6.5.1 Initial Site Investigation

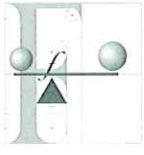
Fulcrum arrived onsite the morning of January 22, 1999 and February 4, 1999, and collected near surface (0 to 6 inches bgs) soil samples at the grid nodes identified in the SAP in conjunction with pre-construction surface vegetation removal. During the site grading process Hyatt, under Fulcrum's direction, excavated test pits to an approximate depth of 6 feet below original ground surface at three of the eastern property boundary grid nodes. Test pit location was consistent with locations identified in the North Star Lodge SAP. Fulcrum collected test pit soil samples at approximate 2 foot intervals for laboratory analysis. Appendix I contains analytical results in table format. Appendix J contains the corresponding analytical data and chain of custody records. The range of analytical results for each sampling depth is summarized in Table 6.5.1.1.

Table 6.5.1.1 Analytical Results

Chemical Sampled	Sample Depth		
	Surface	2 feet bgs	4 feet bgs
Lead	37.2 – 844 ppm	<4 ppm	Not Applicable
Arsenic	<4 – 124 ppm	<4 – 39.2 ppm	<4 – 12.1 ppm
DDT	.0351 – 1.960 ppm	Not Applicable	Not Applicable

In general, near surface site soils were compact poorly graded medium brown silty-clay. Soil type in test pit locations was consistent with that identified during near surface sampling.

Sample data was recorded on the chain of custody form. The chain of custody form accompanied samples from collection through analytical reporting. Samples were collected with a spade, disposable plastic spoon, or by hand enclosed in a new latex glove. Soil samples were placed in borosilicate sample jars, labeled and then placed immediately on ice pending shipment to the analytical laboratory. See Section 6.3 for a summary of sampling procedures and Appendix D for a copy of the SAP.



Results of systematic sampling indicated that horizontal extent of near-surface agricultural chemical concentrations was pervasive across the North Star Lodge site. The average near surface concentration was 403.41 milligrams per kilogram (mg/kg) for lead, 48.71 mg/kg for arsenic and .998 mg/kg for DDT. Refer to Table 6.5.1.1 in Appendix I for analytical summary table, and Figure 3 in Appendix B for the Grid Location Map.

Sample results were compared to remedial threshold values (see Section 4.4 for applicable values). Sample results indicated that concentrations greater than the remedial threshold values extended to an average depth of 2 ft and were not encountered at depths below 6 ft.

6.5.2 Construction of Specific Elements

From September 14, 1999, Fulcrum collected soil samples from the infiltration trenches that will be used for the main water line and the stormwater system. See Appendix I for analytical results in table format and Appendix J for Laboratory reports. Purpose of soil sampling was to determine if future leaks from these sources could contribute to residual agricultural chemical migration at this site.

Five samples were collected from the infiltration trenches (NS0914-01, NS0914-02, NS0914-03, NS0914-04, NS0914-05). All samples collected were analyzed for arsenic. Two samples were analyzed for lead (NS0914-03 and NS0914-05). One sample was analyzed for DDT (NS0914-05). Analytical results were below acceptable remedial threshold levels. See Table 6.5.2.1 in Appendix I for analytical results.

6.5.3 Sampling Prior to Soil Importation

On June 2, 1999, soil samples of proposed topsoil from the Canton Landfill on Naches-Wenas Road near Naches, Washington were evaluated for suitability as capping material for the North Star Lodge Site. Analytical results are summarized in Table 6.5.3.1in Appendix I. Appendix J contains Laboratory reports.

A second source of proposed topsoil, located at Washington and 48th Avenue in Yakima was sampled on March 3, 2000. The material from this source was characterized as a medium brown, poorly graded silt and clay soil. Analysis documented arsenic, lead, and DDT concentrations below the selected remedial threshold level. Analytical results are summarized in Table 6.5.3.2 in Appendix I. Appendix J contains Laboratory reports.

6.5.4 Post Remediation Sampling

June

After the clean topsoil was spread to grade, Fulcrum collected near surface (0 to 4 inches) soil samples in the same approximate grid locations as initial site sampling. Samples were collected on May 5, 2000. Purpose of sampling was to verify topsoil used for site capping remains below the remedial threshold after application. Analytical results are summarized in Table 6.5.4.1 in Appendix I. Analytical laboratory results are presented in Appendix J.

Analytical results documented two localized areas with lead and arsenic concentrations to be above the remedial threshold. On August 18, 2000 samples of the areas above the applicable cleanup levels were collected from the landscape area on the south property boundary, which is shared with the adjacent property. Due levels above the remedial threshold, remedial action was taken. Soil in these areas was removed was transported to property located immediately across 39th Avenue. This property is under the same ownership as the North Star Lodge and was also part of the same historic orchard. The existing cap was replaced with clean topsoil. Acceptable cleanup levels were achieved with the September 8, 2000 additional post remediation sampling. Analytical results are summarized in Table 6.5.4.2 in Appendix I. Analytical laboratory results are presented in Appendix J.

6.5.5 Adjacent Site Sampling

On September 8 and 10, 1999 Fulcrum collected near surface samples of soil that had been moved to an adjacent property from the North Star Lodge Site. The soil had been spread on the site, graded, and hydroseeded, prior to sampling.

Analytical results documented that two samples contained arsenic concentrations above the remedial threshold. Although number of samples is insufficient to perform statistical analysis using Ecology's approved formula, extrapolation of existing results suggests that such statistical analysis would not result in the site being considered below cleanup levels. Analytical results are summarized in Table 6.5.5.1 in Appendix I. Analytical laboratory results are presented in Appendix J.

7.0 AIR MONITORING DURING SITE ACTIVITY

Engineering controls were designed to prevent dust from drifting beyond property boundaries and to prevent site worker exposure in excess of the PEL (See Section 4.7 for specific PELs). Fulcrum monitored dust generation in the field using visual indicators and through collection of air samples for subsequent laboratory analysis.

The effectiveness of dust control was periodically assessed using visual indicators. Control measures were considered sufficient when equipment-generated dust did not extend beyond the impacting equipment by more than the length of the equipment and did not drift beyond property boundaries. Field observations confirmed that dust control measures instituted were adequate to suppress dust generation and that dust did not migrate beyond property boundaries. Hyatt and Temple diligently applied water to the site surface and soil piles staged on-site pending relocation. Equipment used by Hyatt and Temple was operated at reduced speed to augment engineering controls for dust suppression.

To assess compliance with the WISHA personal exposure limit (PEL), initial and periodic air samples were collected by means of a personal sampling pump and filter cassette. Analytical results of personal exposure monitoring documented employee exposure to be significantly below the PEL for lead, arsenic and total nuisance dust. Appendix H contains Personnel Exposure Monitoring report and corresponding laboratory analysis.

8.0 POST-CONSTRUCTION SITE CONDITIONS

8.1 Residual Agricultural Chemical Concentrations

By remedial design, approximately 1,200 yds^3 of soil with residual agricultural chemical concentrations above the selected remedial threshold has been left on-site. Due to site grading requirements, much of the material above remedial threshold levels has been relocated to the southern portion of the property. Native soil containing residual agricultural chemicals above the remedial threshold has been covered with impermeable parking, sidewalk, or building footprint areas; or has been capped with 6'' of topsoil and an additional 2 to 3" of landscaping material (sod, bark, etc.). Site capping prevents inadvertent surface contact, and windborne or mechanical (physical relocation) migration.

8.2 Sensitive Species or Environments

The North Star Lodge site is in a suburban development area. No sensitive species or environments have been identified at the site. All media at this site containing agricultural chemicals above remedial threshold levels has been covered with impermeable surfaces or capped with clean materials. These protective barriers are being managed through institutional controls. Therefore, no future sensitive species or environments are likely to be threatened by the residual concentrations.

8.3 Known Potential Threats to Public Health

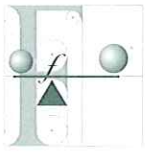
Since all media with concentrations above remedial threshold levels have managed to prevent site contact or off-site migrations, there is no known or potential threat to public health.

9.0 INSTITUTIONAL CONTROLS

Institutional controls in the form of a restrictive deed covenant and Operations and Maintenance Plan (O&M Plan) have been instituted. Appendix K contains a copy of the restrictive deed covenant. Appendix L contains the Operations and Maintenance plan for the North Star Lodge Site.

The purpose of the restrictive deed covenant is twofold. 1) The covenant will notify future owners of the presence of soils containing residual concentrations of agricultural chemicals above selected remedial thresholds. 2) The covenant will notify future owners of the existence of an Operations and Maintenance Plan for the North Star Lodge site soils.

The purpose of the O&M Plan is to institute long term onsite management of materials above remedial threshold values. The O&M Plan describes the procedure for notifying building tenants, maintenance workers, and repair contractors of the residual agricultural chemical presence. In addition, the O&M Plan outlines what controls are in place to prevent exposure or off site migration, how site workers can protect themselves from exposure, and what to do in the event that soils need to be excavated or protective barriers are breached. A copy of the O&M Plan will be maintained on-site along with other site maintenance manuals.



10.0 CONCLUSION

Residual concentrations of agricultural chemicals were assumed to be present on the North Star Lodge site prior to construction. Initial soil sampling investigations conducted concurrent with initial construction activities identified lead, arsenic, and DDT present in site soils above selected remedial threshold values to an approximate depth of 4 feet bgs. During construction approximately 1,800 yds^3 was transported to property located immediately across 39^{th} Avenue, which is under the same ownership as the North Star Lodge site. Removal from site was necessary to achieve final site grading requirements. Sampling identified select areas of relocated soils of near surface agricultural chemical concentrations in excess of identified remedial threshold levels. The soil on the adjacent site was kept wet and subsequently graded and hyrdoseeded to create a temporary site cap. Soil cap will be maintained until this site is developed.

Following construction of the North Star Lodge buildings and associated paved areas, the remaining landscape areas were capped with clean fill. Statistical analysis of site capping material sampling confirmed that the near surface agricultural chemical concentrations were below the selected remedial threshold. As a further barrier, soil-capping materials were overlayed with sod and other landscaping materials. Residual concentrations of agricultural chemical historically present onsite have been contained beneath protective barriers rendering future ecological and agricultural exposure to residual agricultural chemicals unlikely. A restrictive deed covenant has been filed to notify future site owners of material presence. An O&M Plan is in place that outlines measures necessary to maintain protective barriers and summarizes measures necessary in the event that barriers are breached. On behalf of Memorial Hospital, Fulcrum seeks a "No Further Action" (NFA) determination from Ecology for the North Star Lodge Site.

APPENDIX A

PHASE I ENVIRONMENTAL SITE ASSESSMENT (ESA)

PHASE I
ENVIRONMENTAL SITE ASSESSMENT
Memorial Cancer Project
N. 39th Avenue and Kern Road
Yakima, Washington

Project Number 98921

January 11, 1999

Prepared For: Valley Memorial Hospital Association
Attn: John Vornbrock
2811 Tieton Drive
Yakima, WA 98902

Prepared By: Fulcrum Environmental Consulting, Inc.
105 South Third Street
Yakima, WA 98901

Authored By: Chris Hansen **Date:** 01/13/99

Chris Hansen
Fulcrum Environmental Consulting, Inc.

Reviewed By: _____ **Date:** 1-11-99

Donald J. Hurst, RPG
President, Fulcrum Environmental Consulting, Inc.

TABLE OF CONTENTS

Phase I
Environmental Site Assessment Investigation
Executive Summary

Fulcrum Environmental Consulting, Inc., (Fulcrum) was retained by Valley Memorial Hospital to conduct a Phase I Environmental Site Assessment (ESA) of real property located at N. 39th Avenue and Kern Road, in Yakima, Washington. Fulcrum has performed this Phase I ESA in substantial conformance with the scope and limitations of ASTM Practice E 1527-97.

By design, scope of work for Phase I investigations is not sufficient to determine conclusively or quantitatively whether environmental degradation exists. Rather, it is designed to recognized and report significant and potentially significant environmental conditions.

This Phase I ESA notes one potentially significant environmental condition on-site:

1. Potential for on-site residual lead, arsenic, and DDT concentrations from historic pesticide application.

For most of this century, subject site land use has been as a fruit orchard. Residual concentrations of historically applied arsenic, lead, and organic-based pesticides are common on Yakima Valley orchard property. State regulations make a distinction between land residually contaminated with pesticides applied consistent with manufacturers' directions and land contaminated by pesticide spills, mixing or storage practices.

Pesticide contamination at the subject site, if present, appears to be the result of application consistent with manufacturers' directions. As such, reporting of a release is not required by regulation. However, there are regulatory obligations to mitigate the adverse impact of residual pesticide contamination to human health and the environment.

As a risk management issue we recommend either, 1) assume lead, arsenic, and organic pesticides are present in the soils at the subject site, or, 2) analyze soil samples to challenge the historical indication of residual pesticide contamination. If contamination is found or assumed, the Washington State Department of Ecology has accepted a variety of alternatives to soil removal as a remedial method. The primary criteria for Ecology acceptance of management techniques is to restrict the migration of lead, arsenic, and organic pesticides through air, soil, and groundwater.

No other sources of significant or potentially significant environmental conditions were identified during the course of this ESA. Fulcrum recommends Phase II investigation to conclusively determine residual pesticide concentration at the subject site.

1.0 INTRODUCTION

Fulcrum Environmental Consulting, Inc. (Fulcrum) was retained by Valley Memorial Hospital to conduct a Phase I Environmental Site Assessment (ESA) of real property located on the northeast corner of North 39th Avenue and Kern Road, in Yakima, Washington. See Figure 1, General Site Map for site location. Fulcrum has performed this Phase I ESA in substantial conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E 1527-97. Work described herein is intended for the exclusive use of the client. Third party reliance may not be appropriate and shall occur at the client's sole risk.

The purpose of an ESA is to assess existing and potential environmental concerns related to past and present activities, and current conditions of the property. By recognizing environmental conditions, relevant concerns are raised to mark significant or potentially significant environmental conditions. Methods used to assess the site include interviews with persons knowledgeable of the site; review of historical records and aerial photographs; a detailed site survey; and review of local, state, and federal regulatory lists.

2.0 SITE LOCATION AND DESCRIPTION

The subject site is comprised of three adjacent parcels of land. Currently, the subject site is vacant. Total subject site area is approximately 151,542 square feet. See Figure 2 for Subject Site Map. The subject site is legally described as:

Parcels 42406, 42407, and 42408: Lots 1, 2, and 3, of Village View Business Park, according to the official plat thereof, recorded November 20, 1997, under Auditor's File No. 7035057, records of Yakima County, Washington.

The subject site is bounded by Castlevale Avenue to the north, N. 40th Avenue on the west, and N. 39th Avenue on the east. To the south, between the subject site and Kern Road, are adjacent properties currently under development. Development to the west is comprised of residential homes. Residential houses occupy the lot to the north of the subject site. Lots east, across from N. 39th Avenue, and directly south of the subject site are currently under development of commercial and medical-affiliated business complexes.

3.0 ENVIRONMENTAL SETTING

3.1 Regional Setting

The Yakima Region is located within the Yakima Folds Geomorphic Province on the western margin of the Columbia River Plateau. The Columbia River Basalt Group is comprised of a number of geologic formations with three of the youngest formations being present in the Yakima Region. These basalt formations are interbedded with sedimentary layers. The basalt formations and corresponding interbeds along with overlying sedimentary lithologies of the Ellensburg Formation comprise the near surface stratigraphy of the Yakima Region. Anticlinal ridge and synclinal valley structures of the Yakima Fold Belt dominate topography.

According to Biggane, 1982, two major regional aquifers are present in the Yakima region. These are loosely characterized as the sedimentary aquifer and the basalt aquifer. In most areas, the sedimentary aquifer overlies the basalt aquifer, and in some areas, both aquifers are hydraulically connected. Recharge to the aquifers occurs through infiltration from precipitation and irrigation, and from influent portions of irrigation canals, local streams and rivers. Discharge of the aquifers occurs through effluent reaches of local streams and rivers as well as pumping for irrigation and drinking water.

3.2 Local Setting

The subject site is located on the gentle northeast facing slope (5%-8%) grading toward the Naches River flood plain. The 1979 Soil Conservation Service Soil Survey of Yakima County characterizes the subject site and much of the surrounding area as silt loam soil formed in loess sediments. Silt loam soils of the area are typically well drained with moderate permeability. Substratum may extend to a depth of 60 inches or more, though in some regions basalt, a hardpan, or old alluvium occurs at depths of 40 inches or greater. Elevation of the subject site is approximately 1,190 to 1,202 feet above sea level with minimal (less than 5 ft) topographic relief across the site.

Groundwater flow direction is a function of localized variations in geology and topography but will generally be east to northeast toward the Naches-Cowiche Canal. Significant variation in flow direction and depth to groundwater related to seasonal irrigation demands is common in the Yakima Valley. Depth to groundwater is estimated at approximately 12 to 22 feet below ground surface.

4.0 HISTORICAL REVIEW OF SITE AND VICINITY

4.1 Subject Site

From the 1900s until approximately five years ago, land use of the subject site was predominately apple orchard except for occasional peach trees. In 1995, the subject site was cleared of orchard trees and has since been vacant land. Information gained by review of aerial photographs, Yakima County Polk Directories, Sanborn Fire Insurance Maps, interviews, and title search are consistent with land use history of the subject site as orchard land.

Aerial photographs dated 1949, 1959, 1969, and 1977 show the subject site as orchard land. No structures were visible at the subject site. An increasing proportion of adjacent land is developed as residential and commercial property from 1939 to 1977. No development of the site is visible.

Yakima County Polk Directories (Polk directories) were reviewed for the subject site. Polk directories did not list the subject site with a corresponding address. There was no listing for the subject site owners until 1958. From 1958 to 1969, V.F. Compton, subject site owner during this time, was listed with a rural route address other than the subject site address. From 1970 until 1995, the Pearsons, site owners during this period, were listed with an address other than the subject site. From 1996 to present day, there is no listing for the subject site owners.

Sanborn Fire Insurance Maps were reviewed for the subject site site. No coverage exists for the subject site.

Personal interviews were conducted with Delmar Pearson and Ellen Pearson, previous site owners Mr. Pearson indicated that his father entered the orchard business as a partner with Mr. Compton, and they had owned the subject site since the early 1900s. Mr. Pearson indicated that the subject site was a small portion of a larger orchard. According to Mr. Pearson, Mr. Compton sold his partnership to the Pearsons during the Depression years. According to the Pearsons, the family residence and equipment storage/maintenance were located on orchard land west of the subject site location. Mr. Pearson indicated that operations such as mixing and storing pesticides and fertilizers took place on orchard property other than that currently defined by subject site.

4.2 Adjacent Area

Since the early 1900s the Yakima Valley has been dominated by agricultural and residential use. Aerial photographs of the region surrounding Yakima City show large areas of orchard trees in uniform rows interspersed with residences and product handling facilities.

North 40th Avenue bounds the subject site to the west. North 40th Avenue, a major thoroughfare for Yakima City, connects with Highway 82 and Highway 12. North 40th Avenue did not extend past the subject site until approximately 20 years ago. Aerial photographs dated 1949, 1959, and 1969 indicate that N. 40th Avenue did not extend past the subject site. The 1977 aerial photograph shows N. 40th Avenue extending past the subject site.

The subject site is situated southwest of the Naches-Cowiche Canal. Ken Watson, long time employee with the Naches-Cowiche Canal Company, indicated that the canal was installed in 1885. All aerial photographs reviewed confirm the presence of the canal.

4.3 Title Summary

A historical title review was conducted for the subject site based upon records at Yakima County Courthouse. The purpose of the title review was not to establish a legal chain of ownership, rather to provide an independent source of information related to historical land use patterns. Because of this, title information may not be continuous. No title records were located for the subject site prior to 1997. The only title record available shows D.E.P. Properties, Inc. (affiliated with the Pearson family) sold the property to Valley Memorial Hospital Association in 1997. In 1997, the subject site was segregated into three parcels and sold to Valley Memorial Hospital Association. Due to the segregation, there were no previous title records available. Prior to 1997, the Pearson family owned the subject site. In general, ownership and property transfer records are consistent with land-use data collected from other sources as summarized in Section 4.1.

5.0 REGULATORY AGENCY REVIEW FILE SEARCH

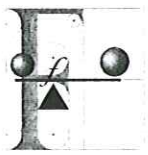
As part of this Phase I ESA, a search was done of available federal and state environmental record sources. Environmental Data Resources, Inc. (EDR) supplemented Fulcrum's records search, in accordance with ASTM E 1527-97 standard practice for ESAs. Appendix A contains description of the database abbreviations. Appendix B contains the EDR report. See Overview Map – 325486.1s and Detail Map – 325486.1s for site locations. The following regulatory agency resource files on the subject site and surrounding areas were evaluated:

Table 1: Regulatory Agency Resource Files

DATABASE[1]	SEARCH DISTANCE (MILES)	SUBJECT SITE LISTED	SURROUNDING AREAS LISTED	SITES REQUIRING ADDITIONAL RESEARCH*
NPL	1.00	None	None	None
Delisted NPL	Subject Property	None	Not Applicable	Not Applicable
RCRIS-TSD	0.50	None	None	None
SHWS	1.00	None	None	None
CERCLIS	0.50	None	None	None
CSCSL	1.00	None	None	None
CERC-NFRAP	Subject Property	None	Not Applicable	Not Applicable
CORRACTS	1.00	None	1	None
State Landfill	0.50	None	None	None
LUST	0.50	None	1	None
UST	0.25	None	None	None
RAATS	Subject Property	None	Not Applicable	Not Applicable
RCRIS-SQG	0.25	None	1	1
RCRIS-LQG	0.25	None	None	None
HMIRS	Subject Property	None	Not Applicable	Not Applicable
PADS	Subject Property	None	Not Applicable	Not Applicable
ERNS	Subject Property	None	Not Applicable	Not Applicable
FINDS	Subject Property	None	None	None
TRIS	Subject Property	None	Not Applicable	Not Applicable
NPL Liens	Subject Property	None	Not Applicable	Not Applicable
TSCA	Subject Property	None	Not Applicable	Not Applicable
MLTS	Subject Property	None	Not Applicable	Not Applicable
ROD	1.00	None	None	None
CONSENT	1.00	None	None	None
WA EMI	Subject Property	None	Not Applicable	Not Applicable
WA ICR	0.50	None	1	None
Coal/Gas	1.00	None	None	None
Orphan Sites	Undetermined	None	13	13

[1]See Appendix A for description of the database abbreviations.
*Sites may be listed in more than one database.

Neither the subject site's name nor address appeared on any of the lists. However, a RCRA generator site is present within a quarter mile radius of the subject site. The RCRA generator site is Washington State Department of Agriculture (WSDA) Yakima 1A, 4108 Kern Way, which is situated west of the subject site approximately 3 blocks. Department of Ecology does not have records for this site, therefore environmental significance of the WSDA site to the subject site cannot be conclusively determined. Field verification indicates that the property is a residential dwelling with an adjoining orchard. Based upon volume of waste generated by small quantity generators (less than 220 pounds per month), and no reported violations or releases, it is unlikely that the presence of waste at the WSDA site would impact the subject site.



Based upon readily available information and further address investigation, the remaining surrounding sites identified during the regulatory review did not require additional research. The sites were located in at a distance from the subject site that rendered their probable significance minimal.

Thirteen sites were listed on the orphan summary for the same zip code area as the subject site. The orphan summary is a list of sites whose map location was ambiguous due to inadequate site address or poor site location on file. After further address investigation, it appeared that due to either listing purpose or location and assumed groundwater flow, none of the orphan sites have a significantly elevated probability of an adverse impact on the subject site.

6.0 SITE SURVEY

Chris Hansen of Fulcrum conducted the site survey on January 7, 1999. During the site survey, existing environmental conditions and the potential for contamination from hazardous materials were evaluated. All accessible areas of concern were inspected including the potential for the presence of fuel storage tanks; on-site drainage; hazardous chemicals used, stored, or disposed of on-site; asbestos containing material (ACM); lead-based paint (LBP); and the presence of polychlorinated biphenyls (PCB).

6.1 Fuel Storage Tanks

No evidence was discovered to indicate that an underground storage tank (UST) is or ever has been present on the subject site. The site survey revealed no indication of past or present excavation associated with installation or removal of USTs. No evidence of USTs such as fill or vent pipes or soil staining was observed. The subject site is currently a vacant parcel covered with dryland weeds and a few bushes.

6.2 On-Site Drainage

The subject site gently slopes towards the east to northeast. Surface runoff discharges onto city streets and drains into the city sewer system. There was no evidence of pooling or staining on the subject site.

6.3 Asbestos Containing Materials

There are no structures or debris piles on the subject site, therefore suspect ACMs are not present on the subject site.

6.4 Hazardous Materials Used, Stored, Disposed On-Site

During the subject site survey, no visual evidence was noted suggesting hazardous materials have been spilled or misused on this piece of property. No evidence of soil staining or distressed vegetation resulting from chemical exposure was noted during the site survey. Historical research documents subject site land use as an orchard for approximately 90 years beginning in early 1900s. Mr. Pearson, previous site owner, indicated that the mixing and storage of agricultural chemicals did not take place on the subject site. Mr. Pearson indicated that over the years, chemicals applied on

the orchard (including the subject site) were typical of what was recommended for that period. Furthermore, according to Mr. Pearson, all chemicals were applied to the orchard according to the manufacturer's labeling.

6.5 Lead-based Paint

There are no existing structures or debris piles on the subject site, therefore, no suspect LBP is present on the subject site.

6.6 Polychlorinated Biphenyls

Electrical transformers have utilized mineral oil mixed with varying quantities of polychlorinated biphenyls (PCBs) as dielectric fluid since the early 1950's. Electrical transformers may contain polychlorinated biphenyls (PCBs). Three grounded transformers are located on site. The transformers are set on concrete slabs. A representative from PacifiCorp, the transformer owner, indicated that there are no records available for the three transformers documenting PCB concentration. Therefore, the transformers must be assumed to contain PCBs. PacifiCorp indicates that since they own the transformers, they are potentially liable for any spill or release that may occur. A copy of PacificCorp's spill cleanup policy can be obtained by calling Tom Hosler, Environmental Coordinator for PacifiCorp, at (503) 813-6639.

7.0 CONCLUSIONS

The scope of work for this Phase I investigation was not designed to conclusively determine whether conditions exist for environmental degradation. Rather this investigation was designed to identify significant and potentially significant environmental conditions.

For most of this century, subject site land use has been as a fruit orchard. Residual concentrations of historically applied arsenic, lead, and organic-based pesticides are common on Yakima Valley orchard property. State regulations make a distinction between land residually contaminated with pesticides applied consistent with manufacturers' directions and land contaminated by pesticide spills, mixing or storage practices.

Pesticide contamination at the subject site, if present, appears to be the result of application consistent with manufacturers' directions. As such, reporting of a release is not required by regulation. However, there are regulatory obligations to mitigate the adverse impact of residual pesticide contamination to human health and the environment.

As a risk management issue we recommend either, 1) assume lead, arsenic, and organic pesticides are present in the soils at the subject site, or, 2) analyze soil samples to challenge the historical indication of residual pesticide contamination. If contamination is found or assumed, the Washington State Department of Ecology has accepted a variety of alternatives to soil removal as a remedial method. The primary criteria for Ecology acceptance of management techniques is to restrict the migration of lead, arsenic, and organic pesticides through air, soil, and groundwater.

No other sources of significant or potentially significant environmental conditions were identified during the course of this ESA. Fulcrum recommends Phase II investigation to conclusively determine residual pesticide concentration at the subject site.

REFERENCES

Biggane, J., 1982, The Low Temperature Geothermal Resource and Stratigraphy of Portions of Yakima County, Washington, 126 pp.

City of Yakima Building Department, Yakima, Washington.

City of Yakima Public Works Department, Yakima, Washington.

Environmental Data Resources, Inc., Southport, Connecticut.

Hosler, Tom, Environmental Coordinator for PacifiCorp. Personal interview 01/08/99.

Pacific Power and Light, 500 North Keys Road, Yakima, Washington.

Pearson, Delmar and Ellen, previous owners. Personal interview 01/04/99 and 01/05/99.

U.S. West Dex for the Yakima Valley.

United States Department of Agriculture Natural Resource Conservation Service, 1606 Perry, Suite F, Yakima, Washington, 98902.

United States Department of Agriculture Soil Conservation Service, 1606 Perry, Suite A, Yakima, Washington, 98902.

Washington State Department of Ecology, 15 West Yakima Avenue, Suite 200, Yakima, Washington, 98902.

Watson, Ken, employed at Naches-Cowiche Canal Company. Personal interview 01/08/99.

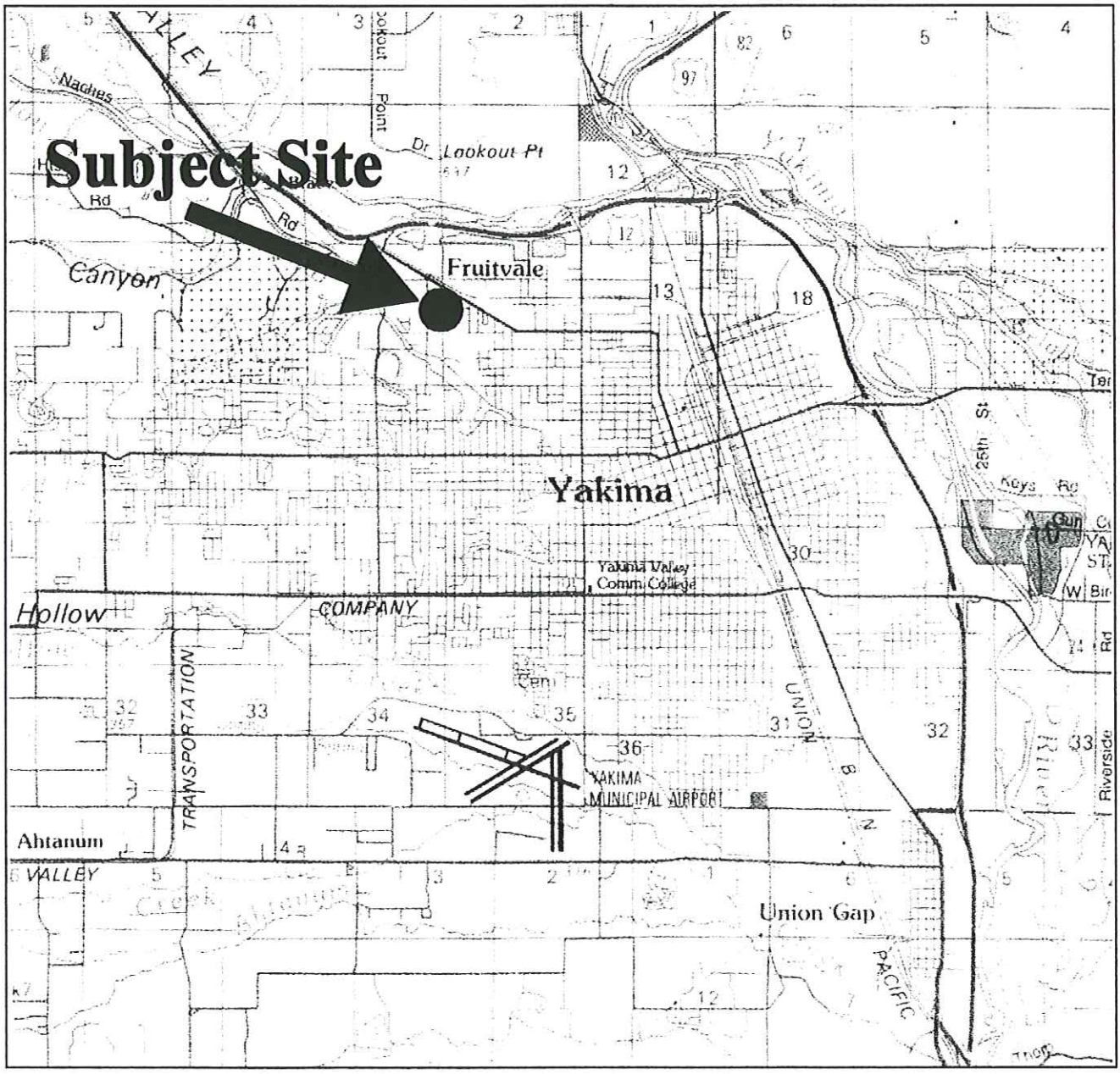
Yakima County Assessor's Office, Yakima County Courthouse, Yakima, Washington, 98901.

Yakima County Auditor's Office, Yakima County Courthouse, Yakima, Washington, 98901.

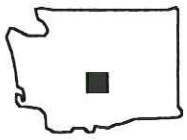
Yakima County Building Department, Yakima County Courthouse, Yakima, Washington, 98901.

Yakima Valley Museum and Historical Association, 2105 Tieton Drive, Yakima, Washington 98902.

Yakima Valley Regional Library, 102 North 3rd Street, Yakima, Washington, 98901.



LEGEND



Subject Site: ●

Scale: 1 mile

Contour Interval: 20 and 50 meters

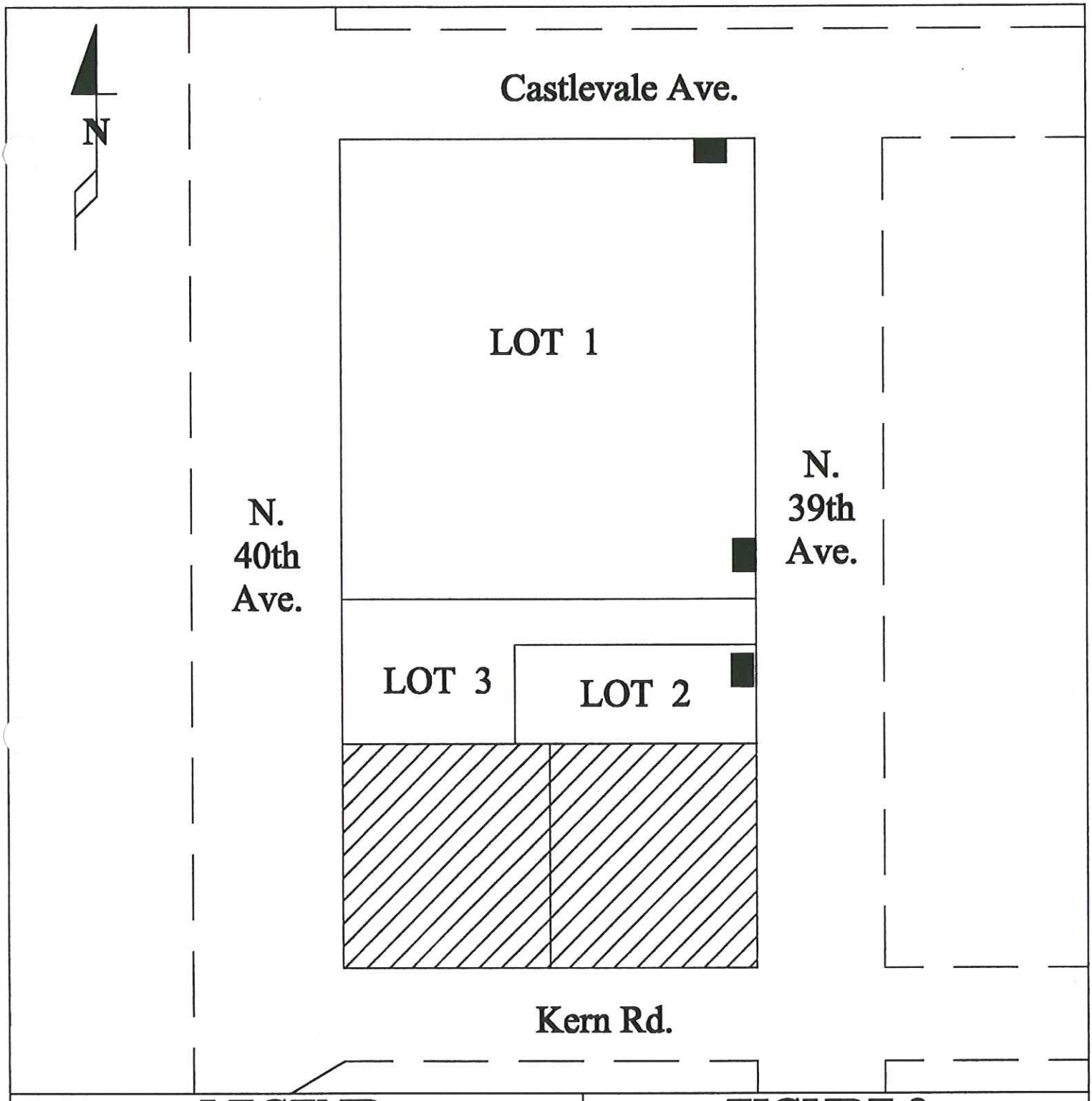
Source: WA Dept. of Natural Resouces 1:100,000 Planimetric Map

FIGURE 1

General Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/07/99	FILE NAME: Memorial Cancer Project



LEGEND

Adjacent lots (not part of subject site):

Street boundary: ------

Transformers:

Scale: NTS

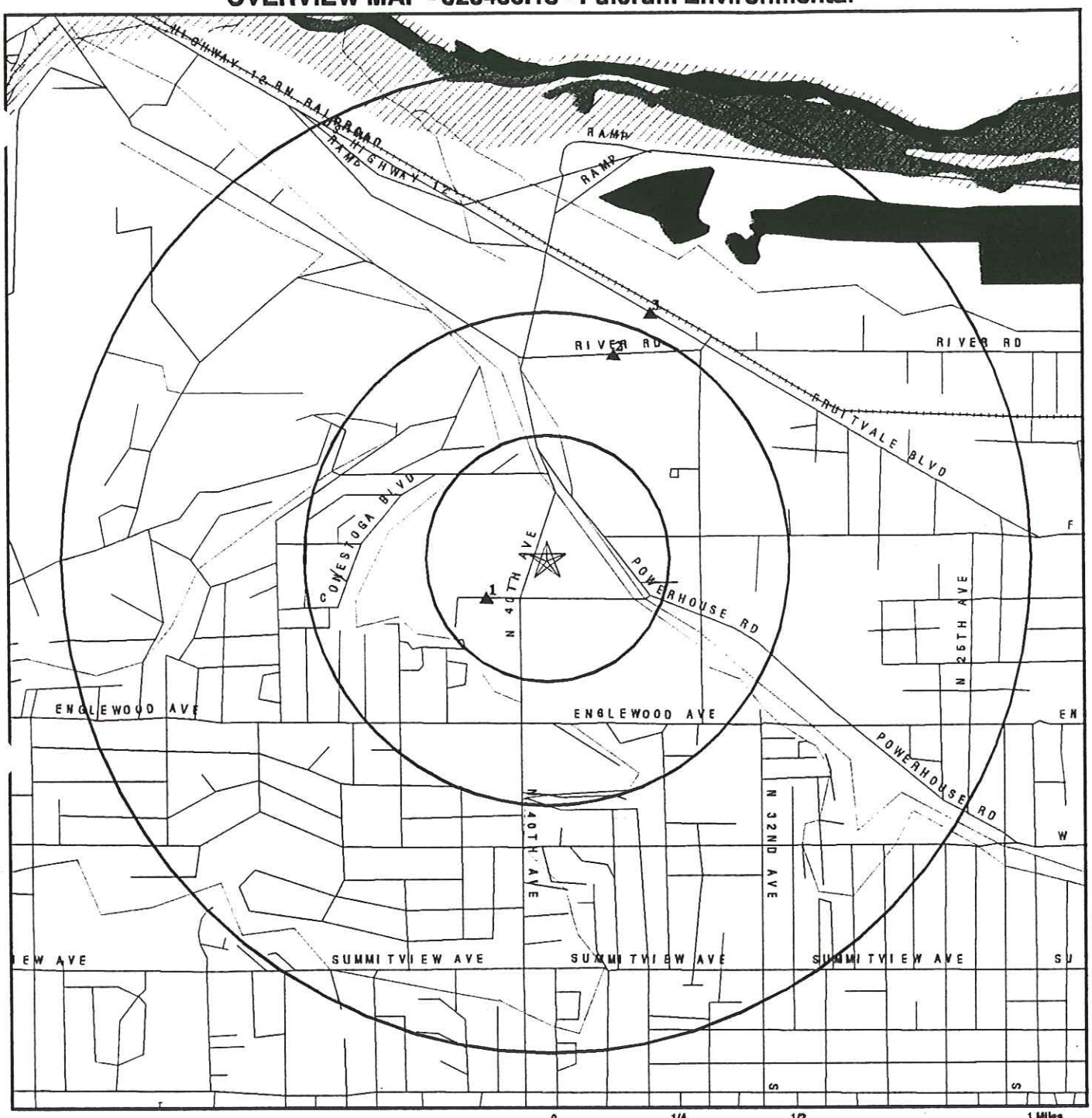
FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

OVERVIEW MAP - 325486.1s - Fulcrum Environmental



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

♟ Coal Gasification Sites (if requested)

National Priority List Sites

Landfill Sites

Power transmission lines

Oil & Gas pipelines

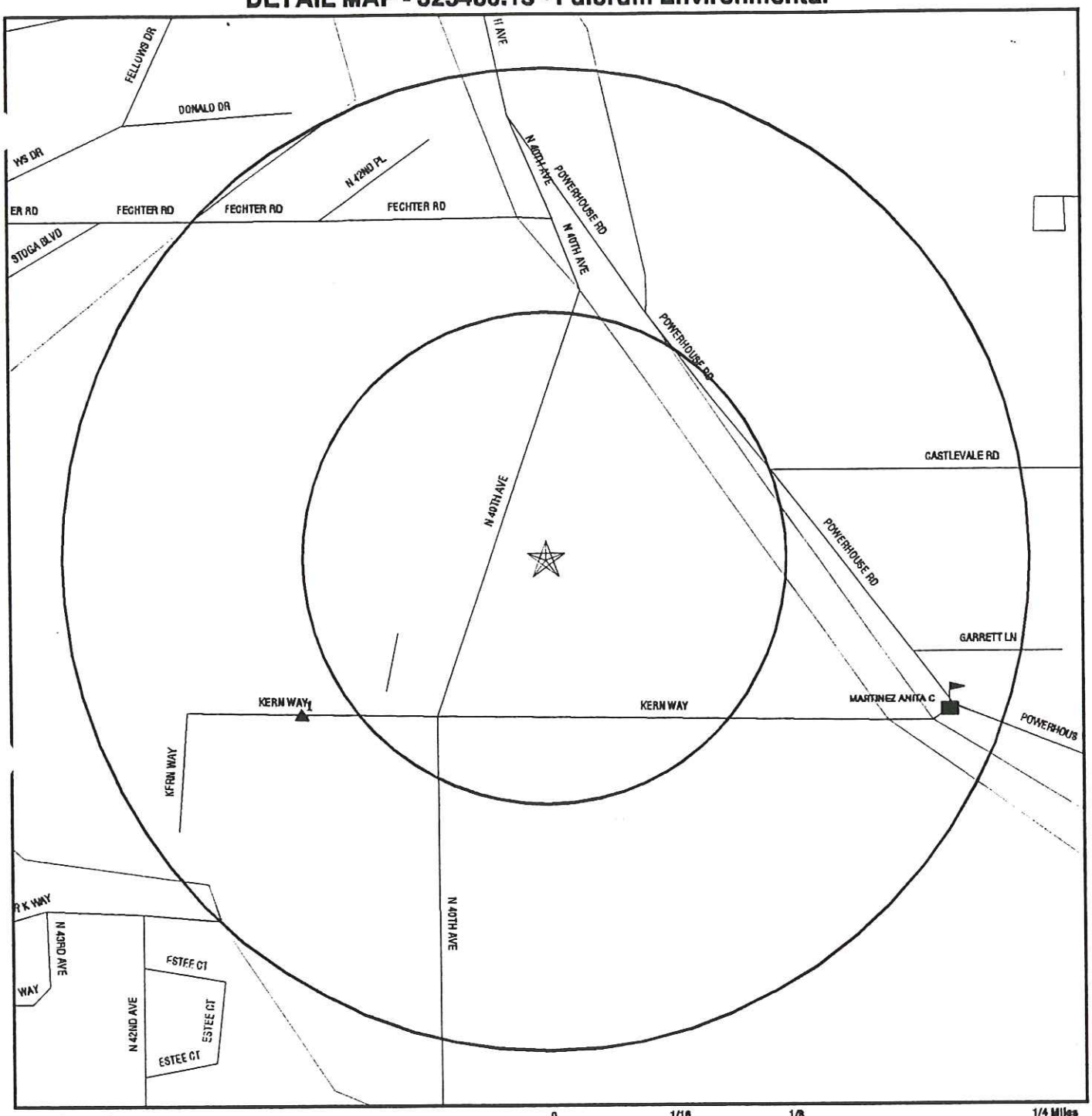
100-year flood zone

500-year flood zone

Wetlands per National Wetlands Inventory (1994)

TARGET PROPERTY:	Memorial Cancer Project	CUSTOMER:	Fulcrum Environmental
ADDRESS:	N 40th Ave at Kern Way	CONTACT:	Chris Hansen
CITY/STATE/ZIP:	Yakima WA 98902	INQUIRY #:	325486.1s
LAT/LONG:	46.6121 / 120.5596	DATE:	January 05, 1999 6:18 pm

DETAIL MAP - 325486.1s - Fulcrum Environmental



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

Coal Gasification Sites (if requested)

Sensitive Receptors

National Priority List Sites

Landfill Sites

Power transmission lines

Oil & Gas pipelines

100-year flood zone

500-year flood zone

TARGET PROPERTY:	Memorial Cancer Project	CUSTOMER:	Fulcrum Environmental
ADDRESS:	N 40th Ave at Kern Way	CONTACT:	Chris Hansen
CITY/STATE/ZIP:	Yakima WA 98902	INQUIRY #:	325486.1s
LAT/LONG:	46.6121 / 120.5596	DATE:	January 05, 1999 6:19 pm

APPENDIX A

Description of Database Abbreviations

CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CSCSL	State Hazardous Waste Sites (states equivalent to CERCLIS)
CONSENT	Superfund (CERCLA) Consent Decrees
CORRACTS	Corrective Action Report
Delisted NPL	NPL Deletions
ERNS	Emergency Response Notification System
FINDS	Facility Index System
HMIRS	Hazardous Materials Information Reporting System
LUST	Leaking Underground Storage Tank
MLTS	Material Licensing Tracking System
NPL Liens	NPL Liens
NPL	National Priority List
PADS	Polychlorinated Biphenyl Activity Database System
RAATS	RCRA Administrative Action Tracking System
RCRIS-LQG	RCRIS Large Quantity Generator
RCRIS-SQG	RCRIS Small Quantity Generator
RCRIS-TSD	Resource Conservation and Recovery System Treatment, Storage or Disposal Facility
ROD	
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
UST	Underground Storage Tank
WA EMI	Washington State Air Emissions
WA ICR	Washington State Independent Clean Up Reports

APPENDIX B

EDR Radius Map Report

The EDR-Radius Map
with GeoCheck®

Memorial Cancer Project
N 40th Ave at Kern Way
Yakima, WA 98902

Inquiry Number: 325486.1s

January 05, 1999

Environmental Data Resources, Inc.
an edr company

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-97. Search distances are per ASTM standard or custom distances requested by the user.

The address of the subject property for which the search was intended is:

N 40TH AVE AT KERN WAY
YAKIMA, WA 98902

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the subject property or within the ASTM E 1527-97 search radius around the subject property for the following Databases:

NPL:	National Priority List
Delisted NPL:	NPL Deletions
RCRIS-TSD:	Resource Conservation and Recovery Information System
CSCSL:	CSCSL
CERCLIS:	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP:	Comprehensive Environmental Response, Compensation, and Liability Information System
SWF/LF:	Solid Waste Facility Database
UST:	Underground Storage Tank Database
RAATS:	RCRA Administrative Action Tracking System
RCRIS-LQG:	Resource Conservation and Recovery Information System
HMIRS:	Hazardous Materials Information Reporting System
PADS:	PCB Activity Database System
ERNS:	Emergency Response Notification System
FINDS:	Facility Index System
TRIS:	Toxic Chemical Release Inventory System
NPL Lien:	NPL Liens
TSCA:	Toxic Substances Control Act
MLTS:	Material Licensing Tracking System
ROD:	ROD
CONSENT:	Superfund (CERCLA) Consent Decrees
Air Emissions:	Wa Air Emissions (EMI)
Coal Gas:	Former Manufactured gas (Coal Gas) Sites.

Unmapped (orphan) sites are not considered in the foregoing analysis.

Search Results:

Search results for the subject property and the search radius, are listed below:

Subject Property:

The subject property was not listed in any of the databases searched by EDR.

EXECUTIVE SUMMARY

Surrounding Properties:

Elevations have been determined from the USGS 1 degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the subject property includes a tolerance of -10 feet. Sites with an elevation equal to or higher than the subject property have been differentiated below from sites with an elevation lower than the subject property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 06/30/1998 has revealed that there is 1 CORRACTS site within approximately 1 mile of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
MANHASSET SPECIALITY CO	*3505 FRUITVALE BLVD*	*1/2 - 1 NNE*	*3*	*10*

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Ecology's Leaking Underground Storage Tanks Site List.

A review of the LUST list, as provided by EDR, and dated 07/15/1998 has revealed that there is 1 LUST site within approximately 0.5 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SIMCOE EQUIPMENT CO INC	*3701 RIVER RD*	*1/4 - 1/2NNE*	*2*	*9*

RCRIS: The Resource Conservation and Recovery Act database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The source of this database is the U.S. EPA.

A review of the RCRIS-SQG list, as provided by EDR, and dated 07/01/1998 has revealed that there is 1 RCRIS-SQG site within approximately 0.25 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
WSDA YAKIMA 1A	*4108 KERN WAY*	*1/8 - 1/4 WSW*	*1*	*9*

ICR: These are remedial action reports Ecology has received from either the owner or operator of the site. These actions have been conducted without department oversight or approval and are not under an order or decree.

A review of the WA ICR list, as provided by EDR, has revealed that there is 1 WA ICR site within approximately 0.5 miles of the subject property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SIMCOE EQUIPMENT CO INC	*3701 RIVER RD*	*1/4 - 1/2NNE*	*2*	*9*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
OLD SELAH DUMP	CSCSL
SPEYERS ROAD DUMP	CSCSL
MCILVANIE MACHINE WORKS INC	FINDS,CERC-NFRAP,CSCSL
VANTAGE/DUPES 012549	UST
HOP EXTRACT CORPORATION	WA ICR
CLASEN FRUIT	WA ICR
HAMMERSTROM SITE	WA ICR
YAKIMA TRANSIT	WA ICR
YAKIMA TRANSIT	WA ICR
YAKIMA TRANSIT	WA ICR
YAKIMA TRANSIT	WA ICR
MAID O'CLOVER	WA ICR
UNITED PARCEL SERVICE	WA ICR

TOPOGRAPHIC MAP - 325486.1s - Fulcrum Environmental

0 1/2 1 2 Miles

- Major Roads
- Contour Lines
- Waterways
- Earthquake epicenter, Richter 5 or greater
- (F) Closest Federal Well in quadrant
- [S] Closest State Well in quadrant
- (P) Closest Public Water Supply Well
- (HD) Closest Hydrogeological Data

TARGET PROPERTY:	Memorial Cancer Project	CUSTOMER:	Fulcrum Environmental
ADDRESS:	N 40th Ave at Kern Way	CONTACT:	Chris Hansen
CITY/STATE/ZIP:	Yakima WA 98902	INQUIRY #:	325486.1s
LAT/LONG:	46.6121 / 120.5596	DATE:	January 05, 1999 6:19 pm

GEOCHECK VERSION 2.1
SUMMARY

TARGET PROPERTY COORDINATES

Latitude (North):	46.612099 - 46° 36' 43.6"
Longitude (West):	120.559601 - 120° 33' 34.6"
Universal Transverse Mercator:	Zone 10
UTM X (Meters):	-4113522.5
UTM Y (Meters):	15720246.0

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property:	2446120-E5 YAKIMA WEST, WA

GEOLOGIC AGE IDENTIFICATION†

Geologic Code:	Q
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary

ROCK STRATIGRAPHIC UNIT†

Category:	Stratifed Sequence

GROUNDWATER FLOW INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, including well data collected on nearby properties, regional groundwater flow information (from deep aquifers), or surface topography.‡

AQUIFLOW™** Search Radius: 2.000 Miles

MAP ID	DISTANCE FROM TP	DIRECTION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported			

General Topographic Gradient at Target Property: General East
General Hydrogeologic Gradient at Target Property: No hydrogeologic data available.
Site-Specific Hydrogeological Data*:

Search Radius:	2.0 miles
Status:	Not found

FEDERAL DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP	LITHOLOGY	DEPTH TO WATER TABLE
Eastern	>2 Miles	Sedimentary (undifferentiated)	15 ft.

STATE DATABASE WELL INFORMATION

WELL QUADRANT	DISTANCE FROM TP

NO WELLS FOUND

† Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).
‡ U.S. EPA Ground Water Handbook, Vol I: Ground Water and Contamination, Office of Research and development EPA/625/6-90/016a,Chapter 4, page 78, September 1990.
** EDR AQUIFLOW™ Information System of hydrogeologically determined groundwater flow directions at specific locations. See the data pages at the end of this report for a complete description.

GEOCHECK VERSION 2.1
SUMMARY

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.
NOTE: PWS System location is not always the same as well location.

PWS Name: TERRACE PARK WATER CO
YAKIMA, WA 98901
Location Relative to TP: >2 Miles East
PWS currently has or has had major violation(s): Yes

AREA RADON INFORMATION

EPA Radon Zone for YAKIMA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Zip Code: 98902

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.859 pCi/L	94%	6%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.583 pCi/L	94%	6%	0%

OVERVIEW MAP - 325486.1s - Fulcrum Environmental

★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

Coal Gasification Sites (if requested)

National Priority List Sites

Landfill Sites

Power transmission lines

Oil & Gas pipelines

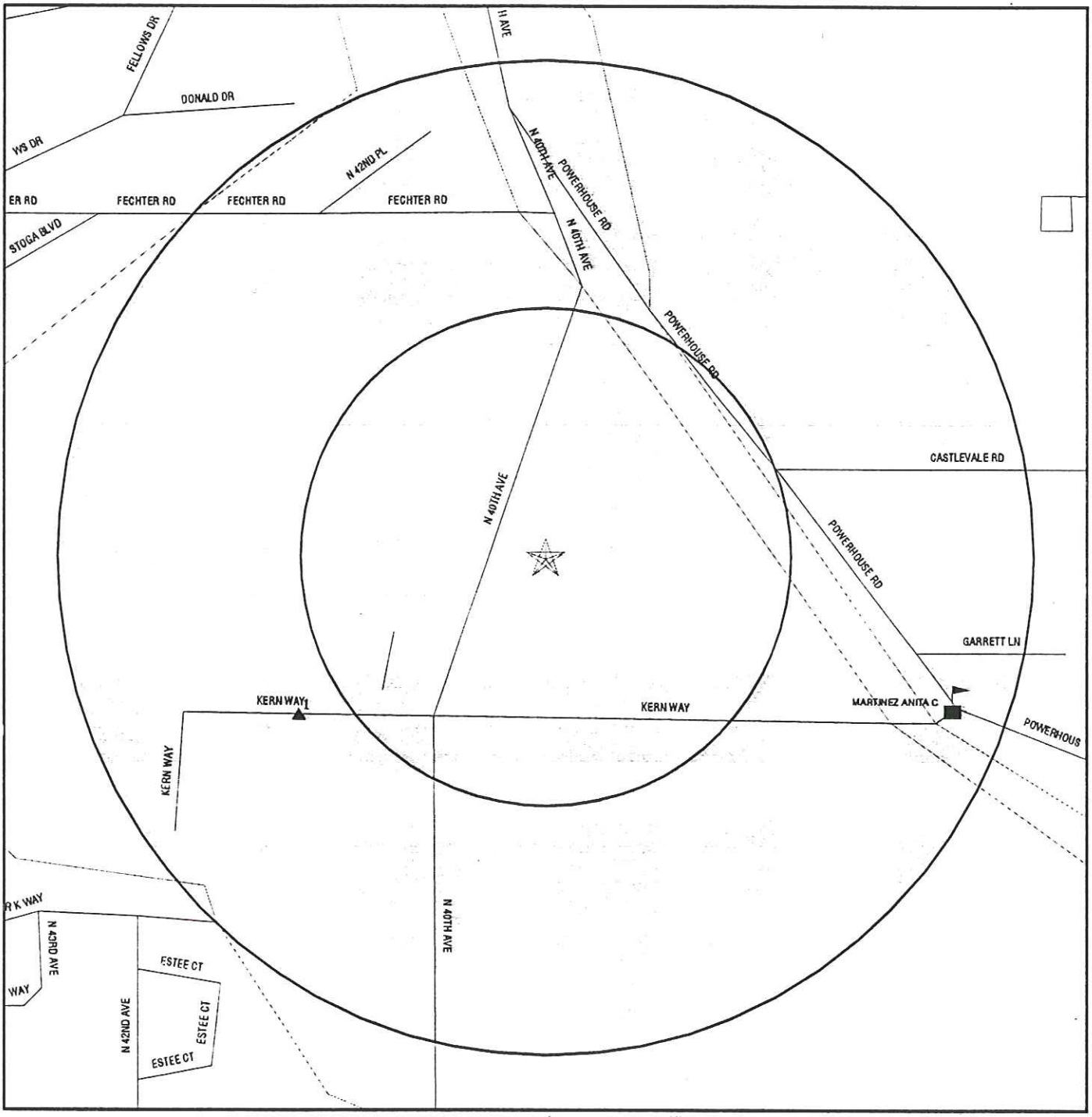
100-year flood zone

500-year flood zone

Wetlands per National Wetlands Inventory (1994)

TARGET PROPERTY:	Memorial Cancer Project	CUSTOMER:	Fulcrum Environmental
ADDRESS:	N 40th Ave at Kern Way	CONTACT:	Chris Hansen
CITY/STATE/ZIP:	Yakima WA 98902	INQUIRY #:	325486.1s
LAT/LONG:	46.6121 / 120.5596	DATE:	January 05, 1999 6:18 pm

DETAIL MAP - 325486.1s - Fulcrum Environmental



0 1/16 1/8 1/4 Miles

- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Coal Gasification Sites (if requested)
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites

- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone

TARGET PROPERTY:	Memorial Cancer Project	CUSTOMER:	Fulcrum Environmental
ADDRESS:	N 40th Ave at Kern Way	CONTACT:	Chris Hansen
CITY/STATE/ZIP:	Yakima WA 98902	INQUIRY #:	325486.1s
LAT/LONG:	46.6121 / 120.5596	DATE:	January 05, 1999 6:19 pm

MAP FINDINGS SUMMARY SHOWING ALL SITES

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	0	NR	0
Delisted NPL		TP	NR	NR	NR	NR	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
CSCSL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	1	NR	1
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	1	NR	NR	1
UST		0.250	0	0	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	1	NR	NR	NR	1
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
ROD		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
Wa Air Emissions (EMI)		TP	NR	NR	NR	NR	NR	0
WA ICR		0.500	0	0	1	NR	NR	1
Coal Gas		1.000	0	0	0	0	NR	0

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

MAP FINDINGS SUMMARY SHOWING ONLY SITES HIGHER THAN OR THE SAME ELEVATION AS TP

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1.000	0	0	0	0	NR	0
Delisted NPL		TP	NR	NR	NR	NR	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
CSCSL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		TP	NR	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	1	NR	1
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	1	NR	NR	1
UST		0.250	0	0	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	1	NR	NR	NR	1
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
ROD		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
Wa Air Emissions (EMI)		TP	NR	NR	NR	NR	NR	0
WA ICR		0.500	0	0	1	NR	NR	1
Coal Gas		1.000	0	0	0	0	NR	0

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

1
WSW
1/8-1/4
785
Higher

WSDA YAKIMA 1A
4108 KERN WAY
YAKIMA, WA 98908

RCRIS-SQG **1000658998**
FINDS **WAD988486593**

RCRIS:
Contact: LEE FAULCONER
(206) 753-5064
Record Date: 05/08/1991
Classification: Not reported
Used Oil Recyc: No
Violation Status: No violations found

2
NNE
1/4-1/2
2306
Higher

SIMCOE EQUIPMENT CO INC
3701 RIVER RD
YAKIMA, WA 98902

UST **U001125767**
WA ICR **N/A**
LUST

LUST:

Facility ID:	9098	Ecology Region:	Central
Release ID:	4733	Release Date:	6/11/92
Release Status:	CLEANUP STARTED	Status Date:	7/30/96
Alternate Name:	Not reported		
Affected Media:	Not reported		

WA ICR:

Date Ecology Received Report:	11/13/1992
Contaminants Found at Site:	Petroleum products
Media Contaminated:	Groundwater, Soil
Cause of Contamination:	Improper Handling, Land application
Region:	Central
Type of Report Ecology Received:	Interim cleanup report
Site Register Issue:	92-40
County Code:	39.00000

UST:

Facility ID:	9098
Install Date:	12/31/64
Capacity:	Not reported
Status:	Exempt
Tank Name:	2
Tank Material:	Steel-Unprotected
Substance:	Not reported
Compartment #:	1
Ecology Region:	Central

SIMCOE EQUIPMENT CO INC (Continued) **U001125767**

Facility ID: 9098
Install Date: 12/31/64
Capacity: Not reported
Status: Removed
Tank Name: 3
Tank Material: Steel-Unprotected
Substance: USED OIL/WASTE OIL
Compartment #: 1
Ecology Region: Central

Facility ID: 9098
Install Date: 12/31/64
Capacity: Not reported
Status: CLOSURE IN PROCESS
Tank Name: 1
Tank Material: Steel-Unprotected
Substance: LEADED GASOLINE
Compartment #: 1
Ecology Region: Central

3
NNE
1/2-1
2864
Higher

MANHASSET SPECIALITY CO
3505 FRUITVALE BLVD
YAKIMA, WA 98902

RCRIS-SQG **1000885196**
FINDS **WAD009250424**
RCRIS-TSD
CORRACTS

CORRACTS Data:
Prioritization: Low
Status: RCRA Facility Assessment Completed

RCRIS:
Contact: JAMES MILLER
(509) 248-3810

Record Date: 12/31/1996

Classification: Small Quantity Generator, TSDF

Used Oil Recyc: No

TSDF Activities: Not reported

Violation Status: Violations exist

MANHASSET SPECIALITY CO (Continued) **1000885196**

There are 24 violation record(s) reported at this site:

Evaluation	Area of Violation	Date of Compliance
Compliance Evaluation Inspection (CEI)	TSD-Groundwater Monitoring Requirements	09/01/1990
Compliance Evaluation Inspection (CEI)	TSD-Groundwater Monitoring Requirements	09/01/1990
Compliance Groundwater Monitoring Evaluation (CME)	TSD-Groundwater Monitoring Requirements	09/01/1990
Compliance Evaluation Inspection (CEI)	TSD-Groundwater Monitoring Requirements	10/10/1987
Compliance Evaluation Inspection (CEI)	TSD-Financial Responsibility Requirements	10/10/1987
	TSD-Other Requirements	10/10/1987
	TSD-Other Requirements	09/01/1990
Compliance Evaluation Inspection (CEI)	TSD-Other Requirements	07/04/1994
Compliance Evaluation Inspection (CEI)	TSD-Financial Responsibility Requirements	10/10/1987
	TSD-Other Requirements	10/10/1987
	TSD-Other Requirements	09/01/1990
Non-Financial Record Review	TSD-Closure/Post Closure Requirements	11/14/1985
Compliance Evaluation Inspection (CEI)	TSD-Other Requirements	07/04/1994
Compliance Evaluation Inspection (CEI)	TSD-Groundwater Monitoring Requirements	10/10/1987
	TSD-Closure/Post Closure Requirements	10/10/1987
	TSD-Financial Responsibility Requirements	10/10/1987
	TSD-Other Requirements	10/10/1987
	TSD-Other Requirements	10/10/1987
Non-Financial Record Review	TSD-Other Requirements	09/01/1990
Non-Financial Record Review	TSD-Closure/Post Closure Requirements	07/04/1994
Compliance Evaluation Inspection (CEI)	TSD-Closure/Post Closure Requirements	07/04/1994
	TSD-Financial Responsibility Requirements	07/04/1994
Compliance Evaluation Inspection (CEI)	TSD-Groundwater Monitoring Requirements	10/10/1987
	TSD-Closure/Post Closure Requirements	10/10/1987
	TSD-Financial Responsibility Requirements	10/10/1987

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
SELAH	S101703393	OLD SELAH DUMP	SPEYERS RD	98942	CSCSL	497
SELAH	S103084206	SPEYERS ROAD DUMP	SPEYERS ROAD	98942	CSCSL	95815182
VANTAGE	U000712731	VANTAGE/DUPES 012549	VANTAGE HWY 12 W. OF VANTAGE	98902	UST	101355
YAKIMA	S103124387	HOP EXTRACT CORPORATION	N. 2ND AVE. AND W. LINCOLN AVE.	98902	WA ICR	
YAKIMA	S103123564	CLASEN FRUIT	8603 ANTAHUM ROAD	98908	WA ICR	
YAKIMA	1000293134	MCILVANIE MACHINE WORKS INC	125 6TH AVENUE	98902	FINDS, CERC-NFRAP, CSCSL	
YAKIMA	S103124341	HAMMERSTROM SITE	471 BLINE RD	98908	WA ICR	
YAKIMA	S103127768	YAKIMA TRANSIT	SE CORNER OF 4TH ST.		WA ICR	
YAKIMA	S103127769	YAKIMA TRANSIT	SE CORNER OF 4TH ST.		WA ICR	
YAKIMA	S103127770	YAKIMA TRANSIT	SE CORNER OF 4TH ST.		WA ICR	
YAKIMA	S103127771	YAKIMA TRANSIT	SE CORNER OF 4TH ST.		WA ICR	
YAKIMA	S103121651	MAID O'CLOVER	10 / FRUITVALE	98902	WA ICR	
YAKIMA	S103126583	UNITED PARCEL SERVICE	W. YAKIMA VALLEY BLVD.	98902	WA ICR	

GEOCHECK VERSION 2.1 ADDENDUM
FEDERAL DATABASE WELL INFORMATION

Well Closest to Target Property (Eastern Quadrant)

BASIC WELL DATA

Site ID:	463613120301302	Distance from TP:	>2 Miles
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1982	County:	Not Reported
Altitude:	1060.00 ft.	State:	Not Reported
Well Depth:	818.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	15.00 ft.	Prim. Use of Site:	Not Reported
Date Measured:	10221982	Prim. Use of Water:	Not Reported

LITHOLOGIC DATA

Geologic Age ID (Era/System/Series):	Cenozoic-Quaternary-Pleistocene
Principal Lithology of Unit:	Sedimentary (undifferentiated)
Further Description:	Not Reported

WATER LEVEL VARIABILITY

Not Reported

GEOCHECK VERSION 2.1
PUBLIC WATER SUPPLY SYSTEM INFORMATION

Searched by Nearest PWS.

PWS SUMMARY:

PWS ID:	WA5387600	PWS Status:	Active	Distance from TP:	>2 Miles
Date Initiated:	Not Reported	Date Deactivated:	Not Reported	Dir relative to TP:	East
PWS Name:	TERRACE PARK WATER CO YAKIMA, WA 98901				
Addressee / Facility:	Not Reported				
Facility Latitude:	46 36 07		Facility Longitude:	120 30 16	
City Served:	Not Reported				
Treatment Class:	Treated		Population Served:	Under 101 Persons	

PWS currently has or has had major violation(s): Yes

Violations information not reported.

ENFORCEMENT INFORMATION:

Violation Type:	Monitoring, Repeat Major (TCR)		
Compliance Period:	07/01/95 - 07/31/95		
Contaminant:	COLIFORM (TCR)		
Enforcement Date:	Not Reported	Enf. Action:	Not Reported

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM RECORDS:

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 08/27/98
Date Made Active at EDR: 10/06/98
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 09/03/98
Elapsed ASTM days: 33
Date of Last EDR Contact: 12/02/98

ERNS: Emergency Response Notification System
Source: EPA/NTIS
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/30/98
Date Made Active at EDR: 07/20/98
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 07/14/98
Elapsed ASTM days: 6
Date of Last EDR Contact: 10/26/98

NPL: National Priority List
Source: EPA
Telephone: 703-603-8852
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC).

Date of Government Version: 03/06/98
Date Made Active at EDR: 07/09/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 06/09/98
Elapsed ASTM days: 30
Date of Last EDR Contact: 09/21/98

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NTIS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 07/01/98
Date Made Active at EDR: 10/06/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 08/27/98
Elapsed ASTM days: 40
Date of Last EDR Contact: 12/02/98

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/30/98
Date Made Active at EDR: 12/24/98
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 10/05/98
Elapsed ASTM days: 80
Date of Last EDR Contact: 12/18/98

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDERAL NON-ASTM RECORDS:

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/95
Database Release Frequency: Biennially
Date of Last EDR Contact: 12/21/98
Date of Next Scheduled EDR Contact: 03/22/99

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: Varies
Database Release Frequency: Varies
Date of Last EDR Contact: Varies
Date of Next Scheduled EDR Contact: N/A

FINDS: Facility Index System
Source: EPA/NTIS
Telephone: 703-908-2493
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 09/30/97
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/23/98
Date of Next Scheduled EDR Contact: 12/21/98

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4526
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/97
Database Release Frequency: Annually
Date of Last EDR Contact: 10/26/98
Date of Next Scheduled EDR Contact: 01/25/99

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/28/98
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/13/98
Date of Next Scheduled EDR Contact: 01/11/99

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 205-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 11/23/98
Date of Next Scheduled EDR Contact: 02/22/99

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-260-3936
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/22/97
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/03/98
Date of Next Scheduled EDR Contact: 02/15/99

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/15/98
Date of Next Scheduled EDR Contact: 03/15/99

ROD: Records Of Decision
Source: NTIS
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 03/31/95
Database Release Frequency: Annually

Date of Last EDR Contact: 10/09/98
Date of Next Scheduled EDR Contact: 01/18/99

TRIS: Toxic Chemical Release Inventory System
Source: EPA/NTIS
Telephone: 202-260-1531
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/95
Database Release Frequency: Annually

Date of Last EDR Contact: 09/28/98
Date of Next Scheduled EDR Contact: 12/28/98

TSCA: Toxic Substances Control Act
Source: EPA/NTIS
Telephone: 202-260-1444
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site. USEPA has no current plan to update and/or re-issue this database.

Date of Government Version: 12/31/94
Database Release Frequency: Annually

Date of Last EDR Contact: 10/26/98
Date of Next Scheduled EDR Contact: 01/25/99

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF WASHINGTON ASTM RECORDS:

HSL: Hazardous Sites List
Source: Department of Ecology
Telephone: 360-407-7200
The Hazardous Sites List is a subset of the CSCSL Report. It includes sites which have been assessed and ranked using the Washington Ranking Method (WARM).

Date of Government Version: 08/18/98
Date Made Active at EDR: 11/19/98
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 08/21/98
Elapsed ASTM days: 90
Date of Last EDR Contact: 12/15/98

LUST: Leaking Underground Storage Tanks Site List
Source: Department of Ecology
Telephone: 360-407-7200
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 07/15/98
Date Made Active at EDR: 10/15/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 08/07/98
Elapsed ASTM days: 69
Date of Last EDR Contact: 11/02/98

CSCSL: Confirmed & Suspected Contaminated Sites List
Source: Department of Ecology
Telephone: 360-407-7200
State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 05/20/98
Date Made Active at EDR: 08/04/98
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 07/09/98
Elapsed ASTM days: 26
Date of Last EDR Contact: 11/19/98

LF: Solid Waste Facility Database
Source: Department of Ecology
Telephone: 360-407-6132
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 07/01/98
Date Made Active at EDR: 12/31/98
Database Release Frequency: Annually

Date of Data Arrival at EDR: 10/14/98
Elapsed ASTM days: 78
Date of Last EDR Contact: 10/14/98

UST: Underground Storage Tank Database
Source: Department of Ecology
Telephone: 360-407-7170
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 07/15/98
Date Made Active at EDR: 11/16/98
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/09/98
Elapsed ASTM days: 68
Date of Last EDR Contact: 11/02/98

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF WASHINGTON NON-ASTM RECORDS:

AIR EMISSIONS: Washington Emissions Data System
Source: Department of Ecology
Telephone: 360-407-6040

Date of Government Version: 12/31/95
Database Release Frequency: Annually

Date of Last EDR Contact: 10/27/98
Date of Next Scheduled EDR Contact: 01/25/99

ICR: Independent Cleanup Reports
Source: Department of Ecology
Telephone: 360-407-7200
These are remedial action reports Ecology has received from either the owner or operator of the sites. These actions have been conducted without department oversight or approval and are not under an order or decree.

Date of Government Version: 06/01/98
Database Release Frequency: Quarterly

Date of Last EDR Contact: 09/08/98
Date of Next Scheduled EDR Contact: 01/25/99

WASHINGTON COUNTY RECORDS

SEATTLE/KING COUNTY:

Seattle - King County Abandoned Landfill Toxicity / Hazard Assessment Project
Source: Department of Public Health
Telephone: 206-296-4785
This report presents the Seattle-King County Health Department's follow-up investigation of two city owned and four county owned abandoned landfills which was conducted from February to December 1986.

Date of Government Version: 12/31/86
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 08/14/95
Date of Next Scheduled EDR Contact: N/A

KING COUNTY:

Abandoned Landfill Study in King County
Source: Seattle-King County Department of Public Health
Telephone: 206-296-4785
The King County Abandoned Landfill Survey was conducted from October through December 1984 by the Health Department's Environmental Health Division at the request of the King County Council. The primary objective of the survey was to determine if any public health problems existed at the predetermined 24 sites.

Date of Government Version: 04/30/85
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 10/21/94
Date of Next Scheduled EDR Contact: N/A

SEATTLE COUNTY:

Abandoned Landfill Study in the City of Seattle
Source: Seattle - King County Department of Public Health
Telephone: 206-296-4785
The Seattle Abandoned Landfill Survey was conducted in June and July of 1984 by the Health Department's Environmental Health Division at the request of the Mayor's Office. The primary objective of the survey was to determine if any public health problems existed at the predetermined 12 sites.

Date of Government Version: 07/30/84
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 10/21/94
Date of Next Scheduled EDR Contact: N/A

SNOHOMISH COUNTY:

Solid Waste Sites of Record at Snohomish Health District
Source: Snohomish Health District
Telephone: 206-339-5250

Date of Government Version: 06/19/96
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 10/26/98
Date of Next Scheduled EDR Contact: 01/25/99

TACOMA/PIERCE COUNTY:

Closed Landfill Survey
Source: Tacoma-Pierce County Health Department
Telephone: 206-591-6500
Following numerous requests for information about closed dumpsites and landfills in Pierce County, the Tacoma-Pierce County Health Department decided to conduct a study on the matter. The aim of the study was to evaluate public health risks associated with the closed dumpsites and landfills, and to determine the need, if any, for further investigations of a more detailed nature. The sites represent all of the known dumpsites and landfills closed after 1950.

Date of Government Version: 04/15/93
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 01/11/95
Date of Next Scheduled EDR Contact: N/A

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones: Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1996 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in March 1997 from the U.S. Fish and Wildlife Service.

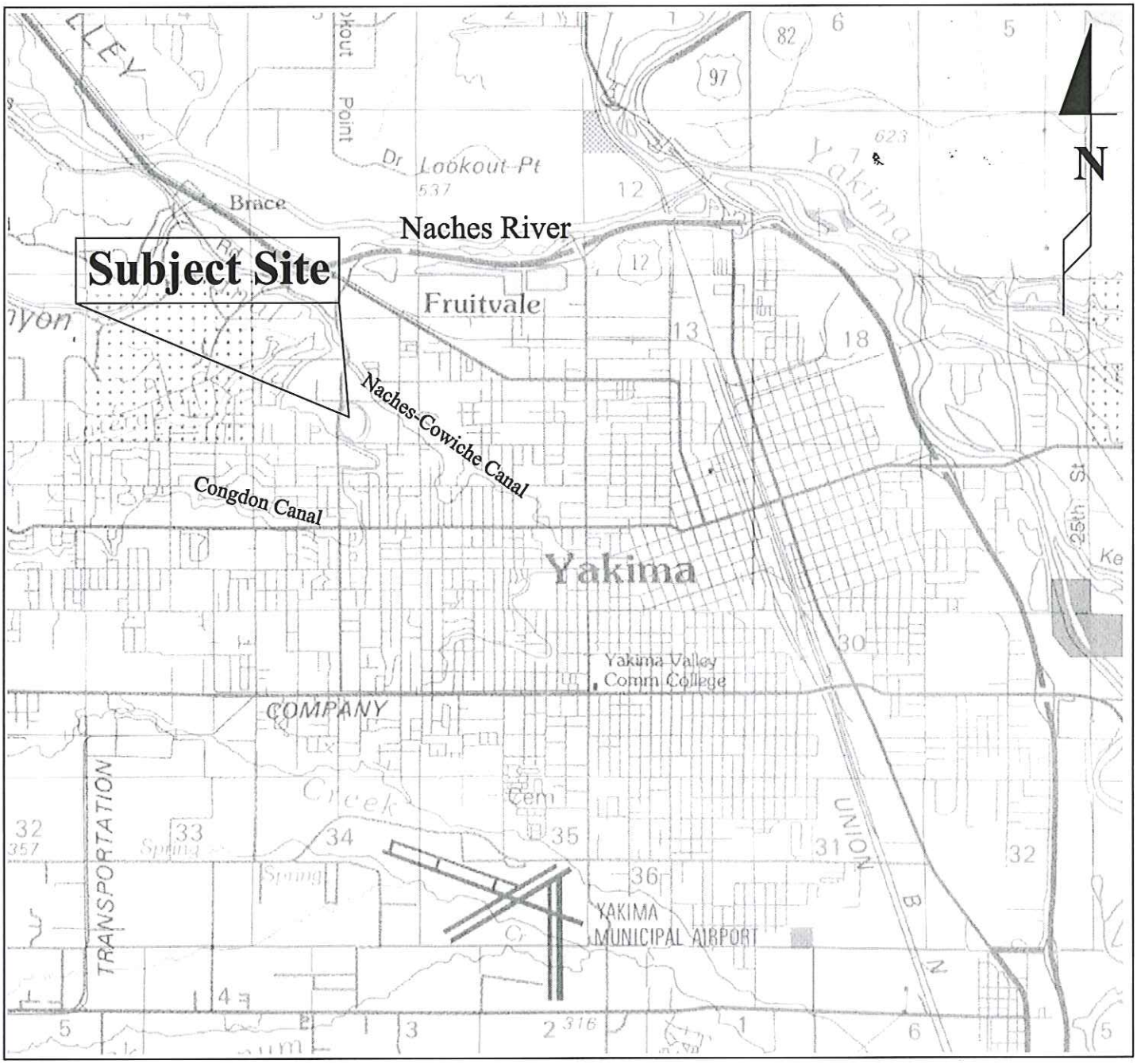
Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Water Dams: National Inventory of Dams
Source: Federal Emergency Management Agency
Telephone: 202-646-2801
National computer database of more than 74,000 dams maintained by the Federal Emergency Management Agency.

Kitsap County Water Wells in Washington
Source: Public Utility District No. 1 of Kitsap County
Telephone: 206-779-7656

APPENDIX B

FIGURES



LEGEND

Scale: 1 mile (2,590 meters)

Contour Interval: 20 and 50 meters

Source: WA Dept. of Natural Resources
1:100,000 Planimetric Map

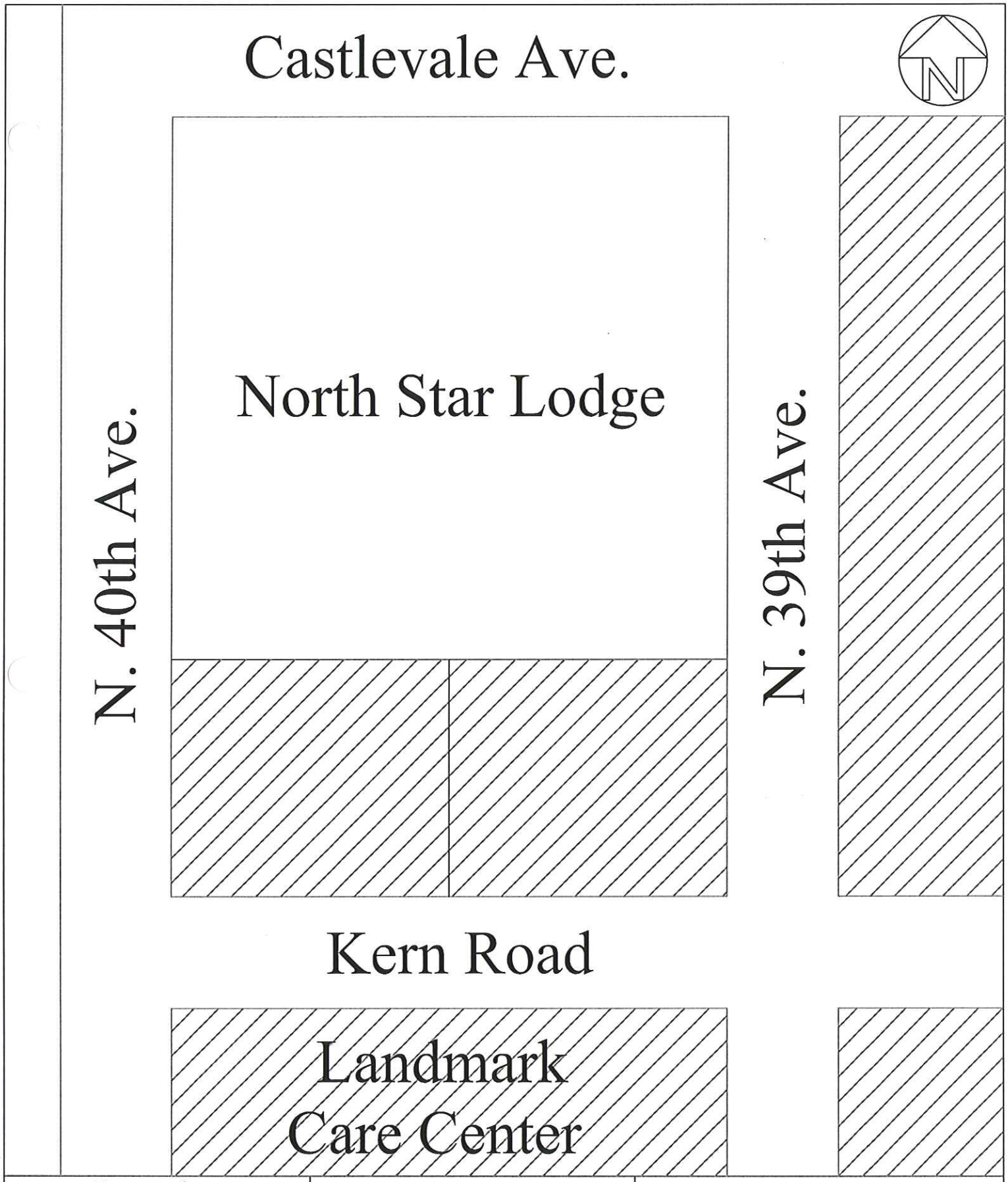
FIGURE 1

General Site Map

North Star Lodge
808 N. 39th Ave.
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921.1
DATE: 06/14/00	FILE NAME: North Star Lodge



Legend

Adjacent Lots:

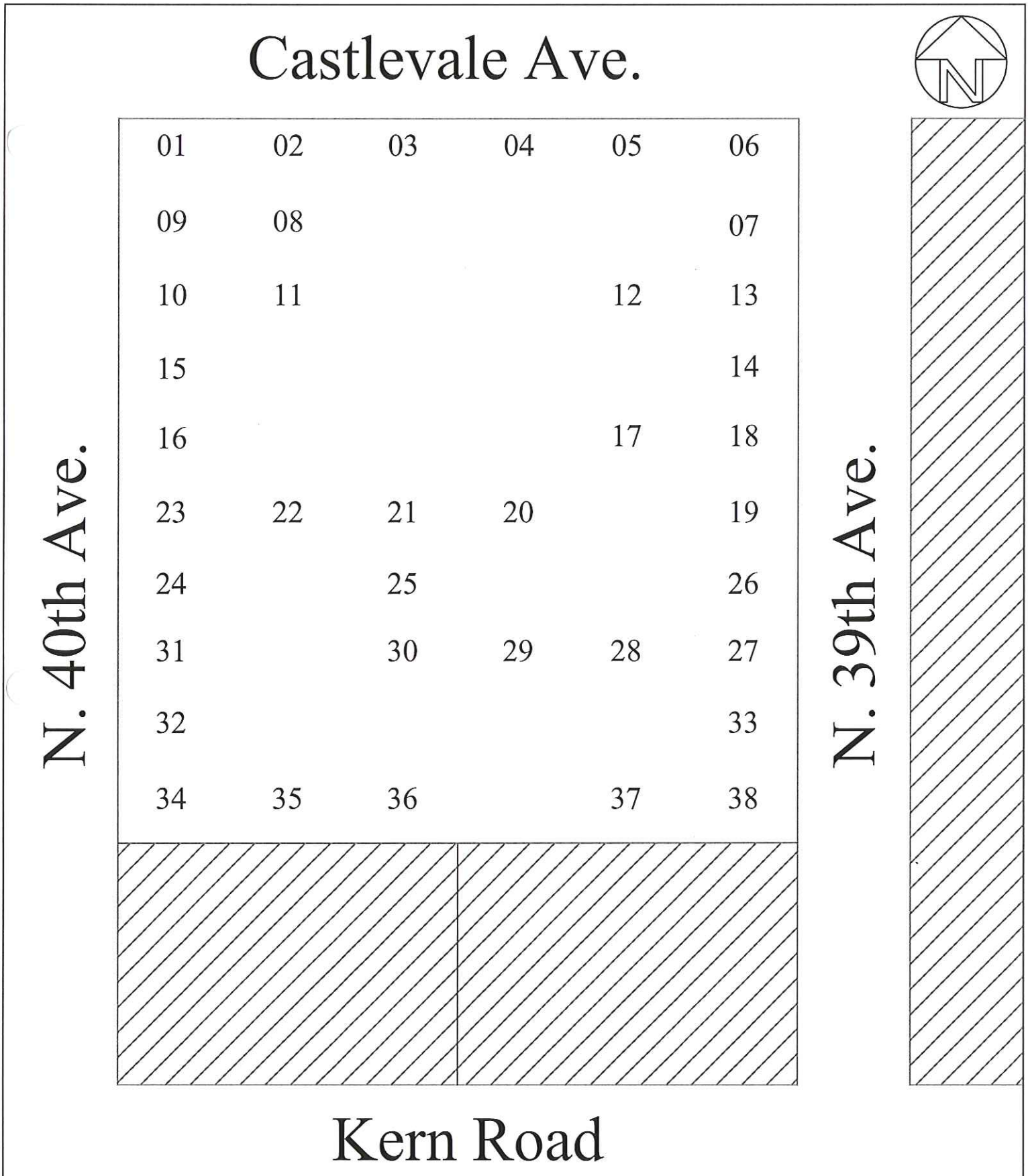
Scale: NTS

Figure 2
Subject Site Map

North Star Lodge
808 North 39th Avenue
Yakima, Washington

Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, Washington 98901
Phone (509) 574-0839 Fax (509) 575-8453

Drawn by: AMP	Project Number: 98921.1
Date: 09/17/2001	File Name: North Star Lodge



Legend

Sample Locations: CC122-##

Adjacent Lots:

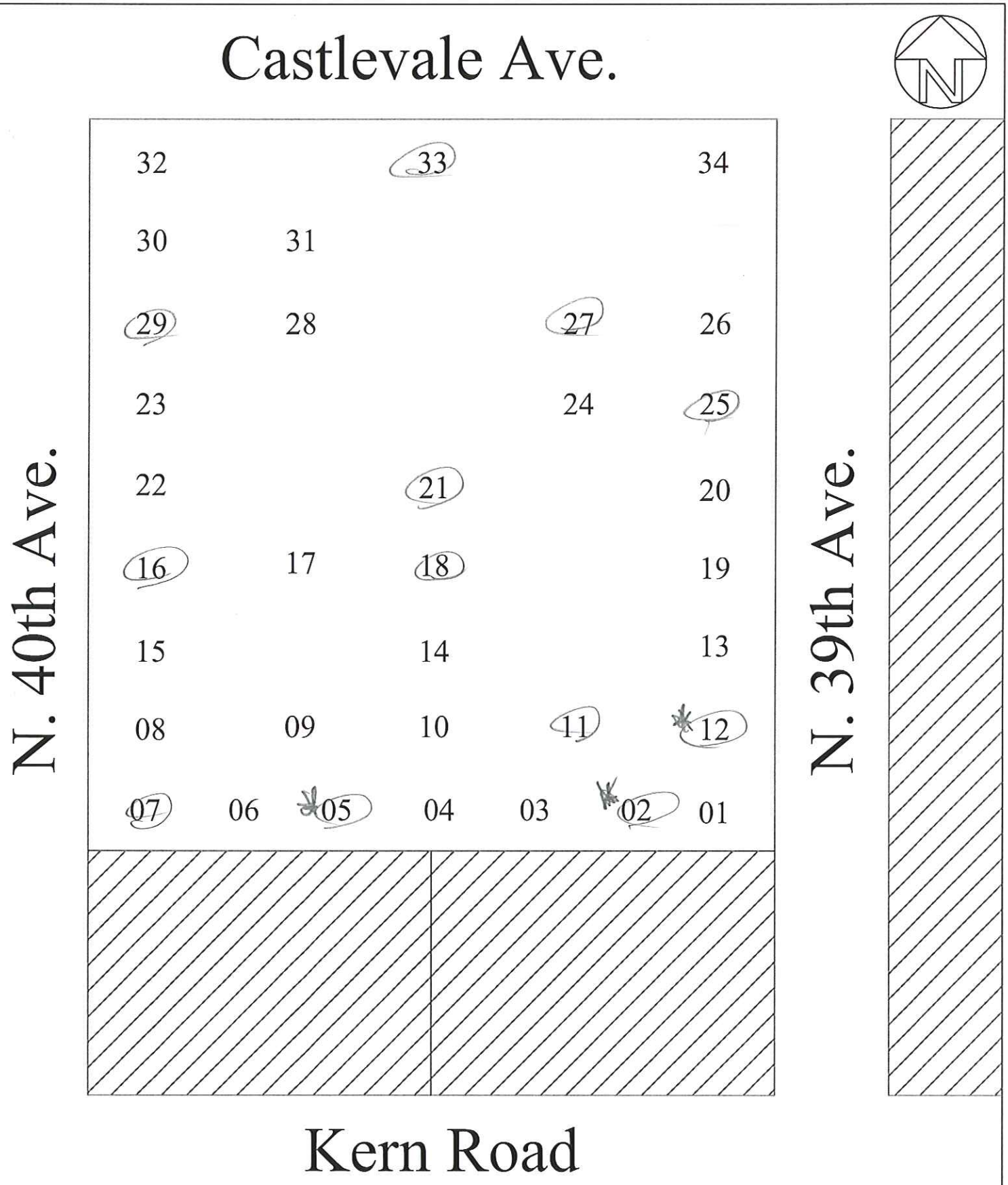
Scale: NTS

Figure 3
Initial Sampling Location Map

North Star Lodge
808 North 39th Avenue
Yakima, Washington

Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, Washington 98901
Phone (509) 574-0839 Fax (509) 575-8453

Drawn by: AMP	Project Number: 98921.1
Date: 09/17/2001	File Name: North Star Lodge

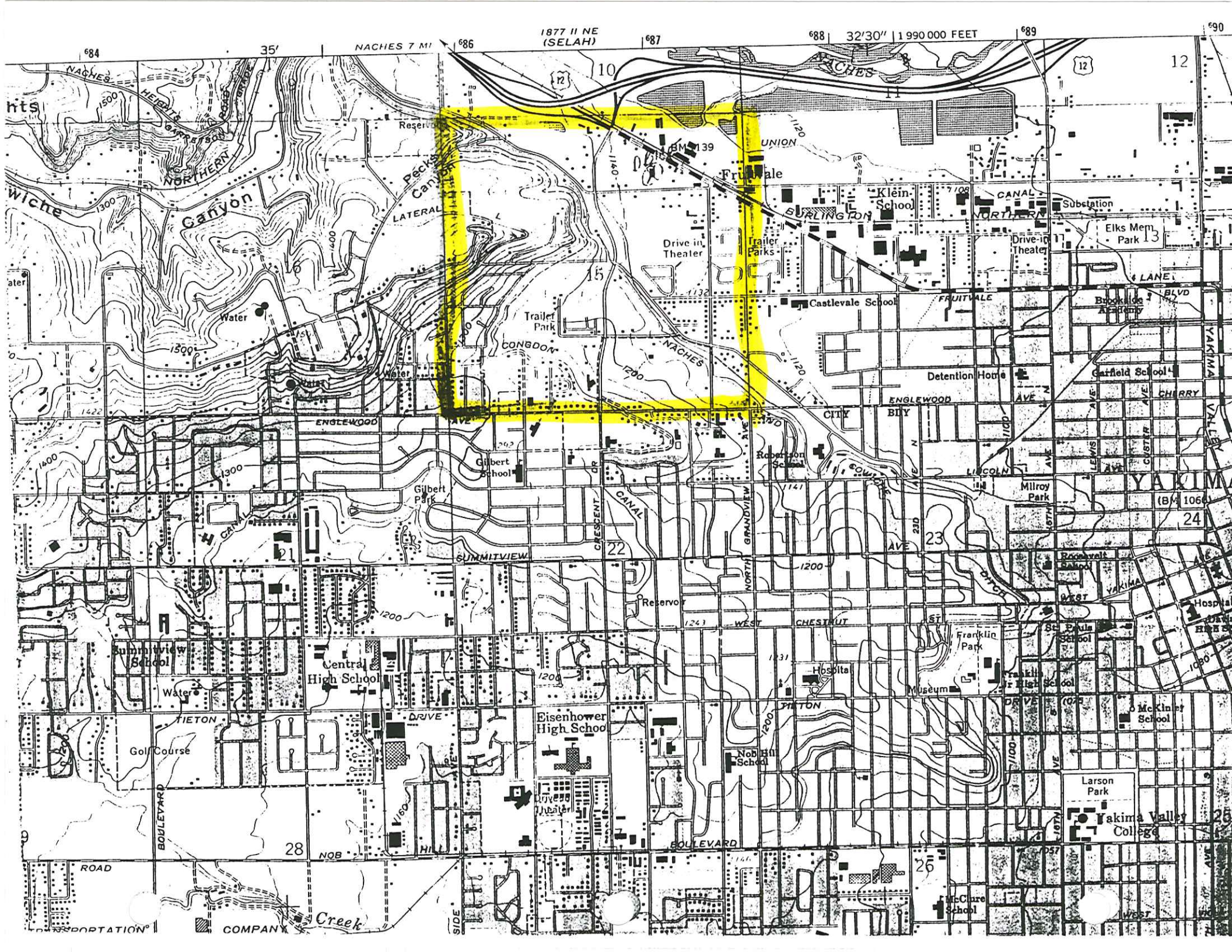


Legend	Figure 4 Post Remediation Sampling Location Map	Fulcrum Environmental Consulting, Inc. 122 South Third Street Yakima, Washington 98901 Phone (509) 574-0839 Fax (509) 575-8453	
Sample Locations: MC605-## Adjacent Lots: Scale: NTS	North Star Lodge 808 North 39th Avenue Yakima, Washington	Drawn by: AMP	Project Number: 98921.1
		Date: 09/17/2001	File Name: North Star Lodge

APPENDIX C

PERTINENT WELL LOGS

The outlined map is included to show the location of the section, township and range that correspond with the pertinent well logs, which follow the maps.


1877 II NE
(SELAH)
32'30"
1 990 000 FEET
NACHES 7 MI
NACHES
UNION
BURLINGTON
NORTHERN
CANAL
LATERAL
Pecks Canyon
Canyon
Fruitvale
Klein School
Substation
Elks Mem Park
Drive-in Theater
Trailer Parks
Castlevale School
Brookside Academy
Water
Trailer Park
CONDON
Detention Home
Garfield School
ENGLEWOOD
CITY
BLVD
Gilbert School
Gilbert Park
Robertson School
Milroy Park
YAKIMA
(BM 1066)
CRESCENT
GRANDVIEW
SUMMITVIEW
Reservoir
WEST
CHESTNUT
Franklin Park
Hospital
Roosevelt School
Summitview School
Central High School
Eisenhower High School
Museum
McKinley School
TIETON
DRIVE
Golf Course
Nob Hill School
Larson Park
Yakima Valley College
BOULEVARD
NOB
HILL
ROAD
McClure School
Creek
COMPANY
SIDE
21
22
23
24
25
26
28
10
11
12
13
15

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 29322

UNIQUE WELL I.D. # _____

Water Right Permit No. _____

OWNER: Name SIMCO Equipment Address 3701 River Rd. Yakima WA

(2) LOCATION OF WELL: County Yakima NW 1/4 NE 1/4 Sec 15 T. 13 N., R. 18 E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 3701 River Rd Yakima WA B

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☑ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) MW-1

Abandoned ☑ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 2" inches. Drilled _____ feet. Depth of completed well 27 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: _____" Diam. from _____ ft. to _____ ft.
Welded ☐ _____" Diam. from _____ ft. to _____ ft.
Liner Installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☐
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☐
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☐ No ☐ To what depth? _____ ft.
Material used in seal _____
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level _____ ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Bentonite Grout to 3' of Surface		
Concrete Plug from 3' to 1'		

AUG 18 1998

Work Started 8/13 19 Completed 8/13 19 98

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Environmental West Exp. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O. Box 11095 Spokane Wa 99211

(Signed) _____ (WELL DRILLER) License No. 2271

Contractor's Registration No. ENVIRWE101PP Date 14 August 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 29322

UNIQUE WELL I.D. # _____

Water Right Permit No. _____

OWNER: Name Simco Equipment Address 3701 River Rd. Yakima WA

(2) LOCATION OF WELL: County Yakima NW 1/4 NE 1/4 Sec. 15 T. 13N N., R. 18E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 3701 River Rd. Yakima WA B

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☑ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) MW-3

Abandoned ☑ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 2 inches. Drilled _____ feet. Depth of completed well 27 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: _____" Diam. from _____ ft. to _____ ft.
Welded ☐ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☐
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☐
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☐ No ☐ To what depth? _____ ft.
Material used in seal _____
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level _____ ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Bentonite Grout to 3' of surface		
Concrete Plug from 3' to 1'		

AUG 1 0

Work Started 8/13 19. Completed 8/13 19 98

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Environmental West Exp (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O. Box 11095 Spokane Wa 99211

(Signed) _____ (WELL DRILLER) License No. 2271

Contractor's Registration No. ENVIRWE101PP Date 14 August 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

QA/QC Borelogs

BISON ENVIRONMENTAL RESOURCES, INC WELL NO. MW-1

DATES DRILLED	FEB 24, 1994	CONTRACT NO.	94262	PROJECT	SIMCOE EQUIP
METHOD	HOLLOW-STEM AUGER	LOCATION	WEST	GEOLOGIST	D.ENOS
DRILLING CONTRACTOR	HOLT DRILLING	GROUND ELEV.	NA	TOTAL DEPTH	28 FT
		WELL HEAD ELEV.	NA	PAGE #	1 OF 1
		BOREHOLE DIA.	8 IN.		

DEPTH (FT)	BLOWS/6"	RECOVERY %	SAMPLE NO.	LITHOLOGY	LITHOLOGY DESCRIPTION
0					TOP SOIL: Silty sandy gravel, abundant cobbles.
	50/5	3"			SANDY GRAVEL: (GW) Well graded, loose dry, olive brown, no evidence of contamination. Abundant cobbles.
-5					
	23	3"			As above
	50/4				
-10					
	50/3	3"	MW-1/13		As above.
-15					
	50/5	4"	MW-1/18		As above, becoming yellowish brown.
-20					Saturated at 21.5 Ft
	50/4	5"			GRAVELLY SAND: (SW) Well graded, fine to coarse sand, fine to coarse gravel, minor silt, loose, saturated, greyish brown.
-25					
	50/5	8"			As above BOTTOM OF BOREHOLE 28 FT
-30					

WELL AS-BUILT

FLUSH MOUNT WELLHEAD

CONCRETE

BENTONITE CHIPS

10-20 COLORADO SILICA SAND

2-INCH SCHEDULE 40 PVC CASING

.020 SLOT PVC MILL-SLOT SCREEN

BISON ENVIRONMENTAL RESOURCES, INC WELL NO. MW-2

DATES DRILLED: FEB 24, 1994
METHOD: HOLLOW-STEM AUGER
DRILLING CONTRACTOR: HOLT DRILLING

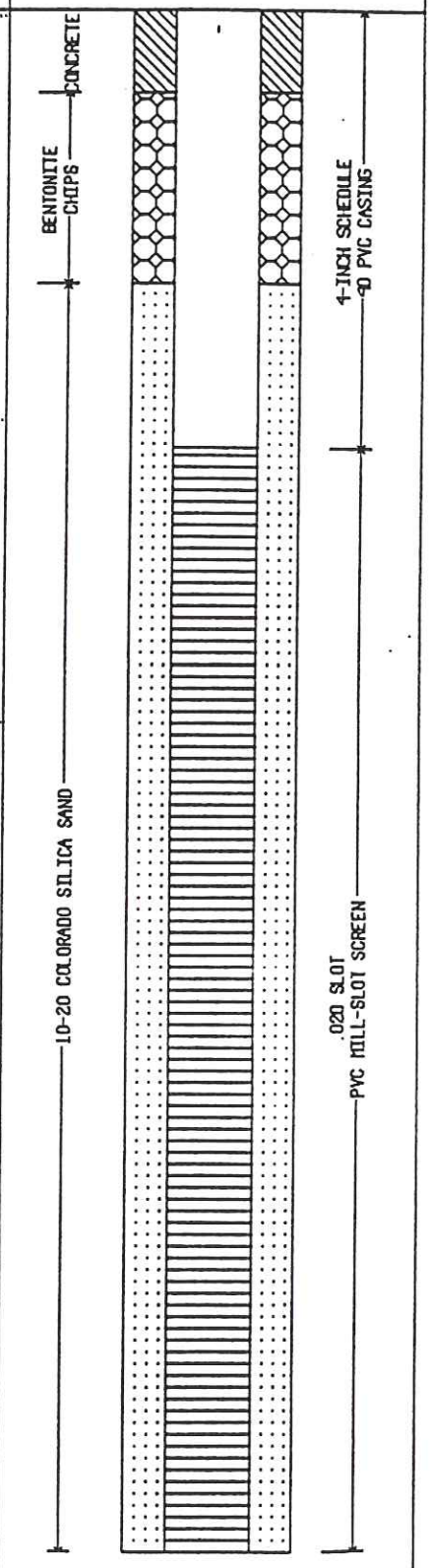
CONTRACT NO.: 94262
LOCATION: NEAR NW BLDG CRNR
GROUND ELEV.: NA
WELL HEAD ELEV.: NA
BOREHOLE DIA.: 10 IN.

PROJECT: SIMCOE EQUIP.
GEOLOGIST: D.ENOS
TOTAL DEPTH: 28 FT
PAGE #: 1 OF 1

DEPTH (FT)	BLOWS/6"	RECOVERY %	SAMPLE NO.	LITHOLOGY	LITHOLOGY DESCRIPTION
0					TOP SOIL: Silty sandy gravel, abundant cobbles.
-5	8 20 50/5	75			SILTY SANDY GRAVEL: (GM/GW) well graded, 60% gravel, 20 % sand, 20% fines, loose, dry, light brown, no evidence of contamination. Abundant cobbles.
-10	14 50/5	75	MW-2/12.5		SANDY GRAVEL: (GW) well graded medium to coarse gravel, 20% fine to medium sand, loose, dry, light brown, possible sheen, PID 10-20 ppm, evidence of contamination
-15	15 15 16	75	MW-2/17.5		As above.
-20	NR	75	MW-2/22.5		As above, increasing sand, diesel odor, dry. Saturated at about 23.5 ft Not clear on original
-25	NR	100			As above, no odor. BOTTOM OF BOREHOLE 28 FT
-30					

WELL AS-BUILT

FLUSH MOUNT WELLHEAD



BISON ENVIRONMENTAL RESOURCES, INC WELL NO. MW-3

DATES DRILLED FEB 25, 1994
METHOD HOLLOW-STEM AUGER
DRILLING CONTRACTOR HOLT DRILLING

CONTRACT NO. 94262
LOCATION NORTH
GROUND ELEV. NA
WELL HEAD ELEV. NA
BOREHOLE DIA. 8 IN.

PROJECT SIMCOE EQUIP
GEOLOGIST D. ENOS
TOTAL DEPTH 28 FT
PAGE # 1 OF 1

DEPTH (FT)	BLOWS/6"	RECOVERY %	SAMPLE NO.	LITHOLOGY	LITHOLOGY DESCRIPTION
0					TOP SOIL: Silty sandy gravel, abundant cobbles.
-5					
-10	50/3	0			
-15	27 50/5	50	MW-3/13		SANDY GRAVEL: (GW) well graded, fine to coarse gravel, 10% fines, loose, dry, light brown, no evidence of contamination. Abundant cobbles.
-20	18 24 50/5	75	MW-3/18		As above, dry. Saturated at 21.5 feet
-25	26 46 50/5	75			As above, approx. 40% sand, reddish brown, saturated. SAND: (SW) moderate to well graded, very fine to coarse sand, some gravel, <10 fines, compact, dark brown, saturated.
-30	50/4	25			BOTTOM OF BOREHOLE 28 FT

WELL AS-BUILT

FLUSH MOUNT WELLHEAD

CONCRETE
BENTONITE CHIPS
10-20 COLORADO SILICA SAND
2-INCH SCHEDULE 40 PVC CASING
.020 SLOT PVC MILL-SLOT SCREEN

BISON ENVIRONMENTAL RESOURCES, INC WELL NO. MW-4

DATES DRILLED: FEB 26, 1994
METHOD: HOLLOW-STEM AUGER
DRILLING CONTRACTOR: HOLT DRILLING

CONTRACT NO.: 94262
LOCATION: NORTHEAST
GROUND ELEV.: NA
WELL HEAD ELEV.: NA
BOREHOLE DIA.: 8 IN.

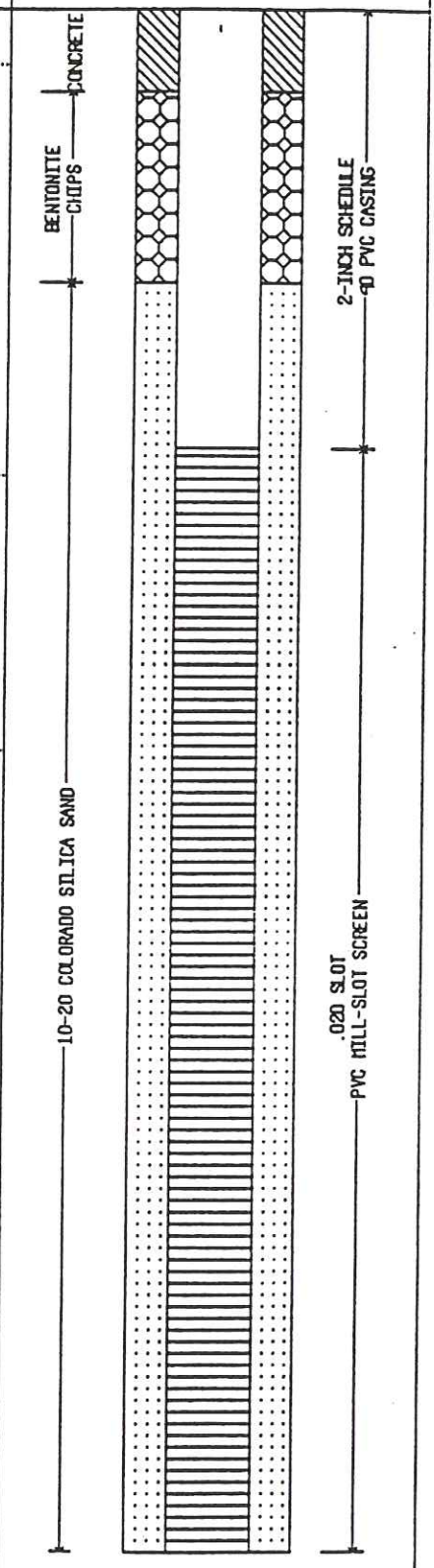
PROJECT: SIMCOE EQUIP
GEOLOGIST: D ENOS
TOTAL DEPTH: 28 FT
PAGE #: 1 OF 1

DEPTH (F	BLOWS/6"	RECOVERY %	SAMPLE NO.	LITHOLOGY	LITHOLOGY DESCRIPTION
0					TOP SOIL: Silty sandy gravel, abundant cobbles.
-5	13 17 10	33			SANDY GRAVEL: (GW) well graded, fine to coarse gravel, 10% fines, loose, dry, olive brown, no evidence of contamination. Abundant cobbles.
-10	13 9 8	50	MW-4/13		SILTY SANDY GRAVEL: (GM) as above, with approx. 15% fines, loose, dry to slightly damp, reddish brown, possibly fill.
-15	27 25 50	50	MW-4/18		As above, increasing fines, yellow, red, and grey colored matrix, possibly due to weathering fill.
-20	50/4	0			Cobble in drive shoe, no recovery, saturated.
-25	40 50/5	75			As described at 13 feet, greenish brown, minor clay BOTTOM OF BOREHOLE 28 FT
-30					

clear where water table begins

WELL AS-BUILT

FLUSH MOUNT WELLHEAD



BISON ENVIRONMENTAL RESOURCES, INC WELL NO. MW-5

DATES DRILLED: APRIL 11, 1991
METHOD: HOLLOW-STEM AUGER
DRILLING CONTRACTOR: HOLT DRILLING

CONTRACT NO.: 91252
LOCATION: SOUTH
GROUND ELEV.: NA
WELL HEAD ELEV.: NA
BOREHOLE DIA.: 8 IN.

PROJECT: SIMCOE EQUIP
GEOLOGIST: D. ENOS
TOTAL DEPTH: 28 FT
PAGE #: 1 OF 1

DEPTH (FT)	BLOWS/6"	RECOVERY %	SAMPLE NO.	LITHOLOGY	LITHOLOGY DESCRIPTION
0					TOP SOIL: Silty sandy gravel, abundant cobbles.
	33	100			SILTY SANDY GRAVEL: (GM) well graded, fine to coarse gravel, 15% fines, 30% medium to fine sand, loose, dry, dark brown, no evidence of contamination. Abundant cobbles.
	34				
-5	35				
-10	31	100	MW-5/13		As above, increasing gravel.
	39				
	30				
-15	28	50	MW-5/18		As above, damp, minor fines, no evidence of contamination.
	50/4				
-20					
	50/5	30			As above, saturated, becoming dark grey, no evidence of contamination.
-25					
	36	40			As above, increasing sand to 40%, no evidence of contamination.
	50/4				BOTTOM OF BOREHOLE 28 FT
-30					

Saturated / unclear where water begins

WELL AS-BUILT

FLUSH MOUNT WELLHEAD

CONCRETE
BENTONITE CHIPS
10-20 COLORADO SILICA SAND
2-INCH SCHEDULE 40 PVC CASING
.020 SLOT PVC MILL-SLOT SCREEN

BISON ENVIRONMENTAL RESOURCES, INC WELL NO. MW-6

DATES DRILLED: APRIL 11, 1994
METHOD: HOLLOW-STEM AUGER
DRILLING CONTRACTOR: HOLT DRILLING

CONTRACT NO.: 94262
LOCATION: EAST
GROUND ELEV.: NA
WELL HEAD ELEV.: NA
BOREHOLE DIA.: 8 IN.

PROJECT: SIMCOE EQUIP
GEOLOGIST: D.ENOS
TOTAL DEPTH: 28 FT
PAGE #: 1 OF 1

DEPTH (FT)	BLOWS/6"	RECOVERY %	SAMPLE NO.	LITHOLOGY	LITHOLOGY DESCRIPTION
0					TOP SOIL: Silty sandy gravel, abundant cobbles.
-5	50/6	0			No recovery
-10	40	75	MW-6/18		SILTY SANDY GRAVEL: (GM) well graded, fine to coarse gravel, 15% fines, 30% medium to fine sand, loose, dry, dark grey, no evidence of contamination. Abundant cobbles.
-15	40/4	35	MW-6/23		As above, becoming less well graded, slightly damp, fine to medium gravel, no evidence of contamination.
-20	20	30			As above, saturated, becoming greenish dark grey, diesel odor.
-25	19	50			As above, less evidence of contamination.
-30	40/4				BOTTOM OF BOREHOLE 28 FT

WELL AS-BUILT

FLUSH MOUNT WELLHEAD

CONCRETE
BENTONITE CHIPS
10-20 COLORADO SILICA SAND
2-INCH SCHEDULE 40 PVC CASING
.020 SLOT PVC MILL-SLOT SCREEN

BISON ENVIRONMENTAL RESOURCES, INC WELL NO. MW-7

DATES DRILLED: APRIL 12, 1994
METHOD: HOLLOW-STEM AUGER
DRILLING CONTRACTOR: HOLT DRILLING

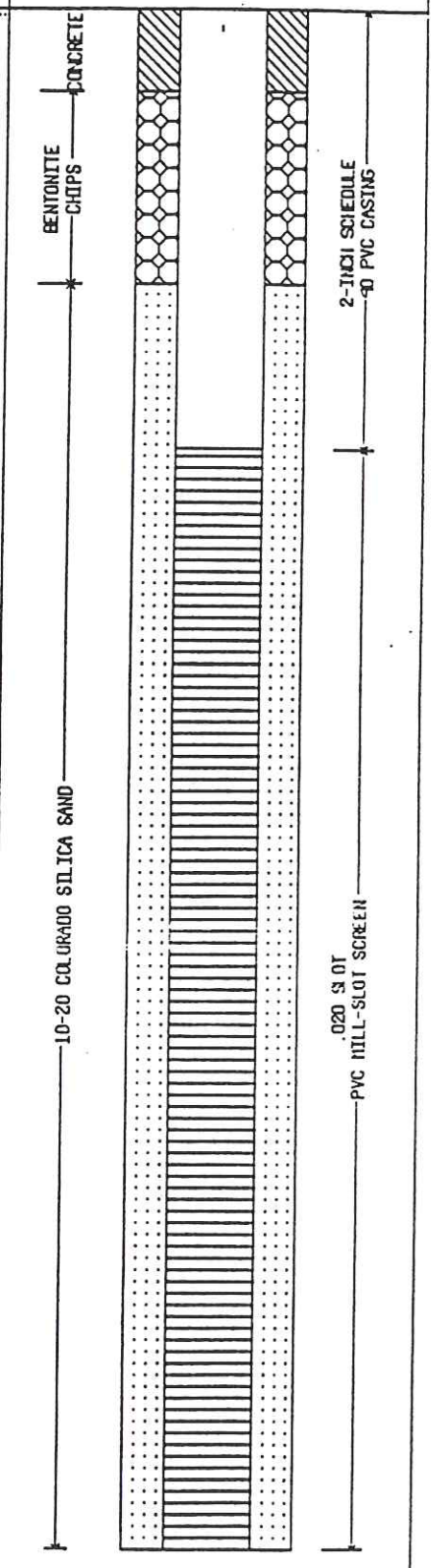
CONTRACT NO.: 94262
LOCATION: SOUTHEAST
GROUND ELEV.: NA
WELL HEAD ELEV.: NA
BOREHOLE DIA.: 8 IN.

PROJECT: SIMCOE EQUIP
GEOLOGIST: D ENOS
TOTAL DEPTH: 28 FT
PAGE #: 1 OF 1

DEPTH (FT)	BLOWS/6"	RECOVERY %	SAMPLE NO.	LITHOLOGY	LITHOLOGY DESCRIPTION
0					TOP SOIL: Silty sandy gravel, abundant cobbles.
-5					
-10					
		0			No recovery
-15					
	50/5	30	MW-7/18		SILTY SANDY GRAVEL: (GM) well graded, fine to coarse gravel, 20-30% fines, 30% medium to fine sand, compact, damp/moist, brownish grey, no evidence of contamination. Abundant cobbles.
-20					
	40 50/5	50			As above, saturated, no evidence of contamintion.
-25					
	NR	NR			As above, no evidence of contamination.
-30					BOTTOM OF BOREHOLE 28 FT

WELL AS-BUILT

FLUSH MOUNT WELLHEAD



APPENDIX D

SAMPLING AND ANALYSIS PLAN

SAMPLING AND ANALYSIS PLAN
NORTH STAR LODGE
Yakima, Washington

Project Number 98921.1

February 10, 1999

Prepared for: Yakima Valley Memorial Hospital
Attn: John Vornbrock
2811 Tieton Drive
Yakima, Washington 98902

Prepared by: Travis Trent, GIT
Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, Washington 98901

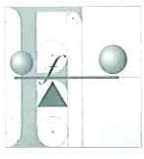


TABLE OF CONTENTS

LIST OF FIGURES

1.0 Introduction

Purpose of this sampling and analysis plan is to set forth sampling objectives and procedures necessary to document remediation status of North Star Lodge at North 39th Avenue and Castlevale Avenue in Yakima, Washington. See Figure 1 for location of North Star Lodge and Figure 2 for grid location of soil samples. Also included within this document is a summary of site history.

1.1 Site History

North Star Lodge is one lot in a development area. It is nearly rectangular in shape with prevailing winds and drainage running to the southeast corner of the site. Analytical results from adjacent parcels indicated agricultural chemical concentrations of arsenic, lead, and dichlorodiphenyltrichlo-roethane (DDT), due to former land use for agricultural crops. Historical aerial photographs dated 1939, 1949, 1969, and 1977 show the site being used as orchard land. No structures were visible at the site in the reviewed aerial photographs. An increasing proportion of adjacent land is developed as residential and commercial property from 1939 to 1977. A 1990 aerial photograph reveals the site had been cleared of orchard trees.

2.0 Environmental Setting

The sampling objective on this site is to determine residual agricultural chemical extent and confirm new fill is free of similar products. In addition, the site soils will be characterized through sampling to reduce exposure scenarios during pending construction.

2.1 Applicable State and Federal Regulations

Site cleanup criteria and associated cleanup actions were established consistent with WAC 173-340-745 and WAC 173-340-360.

3.0 Organization and Responsibilities for the Sampling and Analysis Activities

Fulcrum Environmental Consulting, Inc. (Fulcrum) personnel will perform all field sampling activities following review of sampling and analysis plan by North Star Lodge representatives. Samples will be delivered under chain-of-custody to SVL Analytical in Kellogg, Idaho, by Fulcrum using a common carrier.

Fulcrum will review laboratory results and laboratory quality assurance/quality control (QA/QC) documentation. Fulcrum will incorporate all laboratory data generated under this SAP into a Report of Volunteer Remedial Action, consistent with content described in Washington State Department of Ecology's (Ecology) 1994 guidance on preparing voluntary remedial reports under the Model Toxics Control Act (MTCA).

4.0 Results and Conclusions

4.1 Phase 1 Sampling (Total Site – Pre-Grading)

Fulcrum will sample the whole site with the exception of paved and building areas which will cover the soil. The sampling locations will be in a focused grid. All samples will be collected from surface soils at a depth not to exceed 6 inches. Refer to Figure 2 Grid Location Map for selected sample locations.

4.2 Phase 2 Sampling (Vertical Extent)

Sampling along the east side of the site, which is the lowest area of the site, will be sampled at three locations. This is the direction of topographic flow and prevailing winds that blow soil particles. The samples at those three locations will be collected at two feet intervals down to six feet. Sampling at similar sites has demonstrated that the greatest vertical extent of agricultural chemicals is generally located in areas of lowest topographic relief.

4.3 Phase 3 Sampling (Under Drainage)

Sampling under stormwater systems and waste main line will determine the likelihood of agricultural chemical concentrations being carried into lower soil layers should a water release from these sources occur.

4.4 Phase 3 Sampling (Clean Topsoil)

Clean topsoil will be randomly sampled prior to the material being brought onto the site and spread. Clean topsoil will be analyzed for same agricultural chemicals as pre-grading samples.

5.0 Analytical Parameters

All samples collected will be placed on ice until analyzed by the lab. Samples will be shipped overnight to the laboratory with corresponding chain-of-custody forms. Samples will be analyzed using normal turnaround times.

5.1 Phase 1 Sampling (Total Site – Pre-Grading)

All soil samples will be analyzed for arsenic, 10% of the samples will be analyzed for lead, and 5% of the samples will be analyzed for DDT. Samples will be randomly selected for lead and DDT using a random number generator.

5.2 Phase 2 Sampling (Vertical Extent)

Samples will be analyzed for arsenic and lead to the first sample below selected remedial threshold. The selected remedial threshold for arsenic is 20 parts per million (ppm) and for lead the selected remedial threshold is 250 ppm.

5.3 Phase 3 Sampling (Under Drainage)

Samples will be analyzed the same as Phase I.

5.4 Phase 4 Sampling (Clean Topsoil)

Random sample locations will be selected from the material identified for transport to the North Star Lodge site. Collected samples may be composited to represent overage concentrations that may result from natural mixing that occurs during loading and spreading.

All samples will be analyzed for arsenic, 10% of the samples analyzed for lead, and 5% of the samples for DDT to confirm the topsoil is clean before applying to the site.

6.0 Sample Collection ad Handling Methodology

Remedial confirmatory samples will be obtained by either direct collection at the desired location or by backhoe bucket for samples near unstable excavation sidewalls or at depths greater than four feet. For samples collected directly from the excavation, a plastic disposable spoon will be used to obtain samples from undisturbed soil three to six inches into the soil from the bottom or sidewall of the remedial excavation. When appropriate, samples may be collected by hand using new latex or vinyl gloves.

The following method will be used to collect samples using a backhoe bucket: First, the equipment operator will place the backhoe bucket at the desired sample location. Next, the bucket will be carefully brought into the soil to obtain a representative sample without disturbing overburden material, and the sample will be quickly brought to the surface. A new plastic spoon or gloved hand will be used to obtain soil samples that have not been near the teeth of the bucket. Care will be taken to obtain samples that have not been exposed to the atmosphere or been in contact with the backhoe bucket. The sample will be transferred by spoon or glove hand to the sample container.

Samples for laboratory analysis will be deposited into labeled borosilicate glass sample containers, packed on ice, and delivered to SVL Analytical in Kellogg, Idaho, using a common carrier. Any samples requiring compositing will be composited by the lab.

7.0 Sampling Decontamination Procedures

Decontamination of non-disposable equipment will be performed if more than insignificant amounts of residual soil are observed on shovel prior to sampling. Dry decontamination techniques, such as brushing or scraping off residual soil/waste, will be preferable over water washing to minimize waste generation.

8.0 Quality Assurance and Quality Control

Quality Assurance (QA) is a system of activities that assures the user of analytical data at a stated level of confidence. Quality Control (QC) is an overall system of activities that control the quality of a product or service so that the needs of the user are met. The ultimate goal is to control analytical measurement errors at a level acceptable to the user. To facilitate this goal, the following objectives are often identified: comparability, representativeness, accuracy, and precision.

If any of the above four factors cannot be controlled, the following qualifiers will be attached to the concentration values obtained from laboratory analysis to indicate an uncertainty in the concentration value:

B – Indicates that a result is less than the reporting limit but greater than the instrument detection limit.

U – Indicates that the analyte was analyzed for, but found to be at a level below the instrument detection limit.

E – Indicates that the reported result is estimated because of the presence of an interference.

N – Indicates that the spike recovery was not within control limits.

* – Indicates that the duplicate analysis was not within control limits.

J – Indicates that the associated value is an estimated quantity.

R – Indicates that the data is unusable (Note: the analyte may or may not be present).

Each of the indicated analytical methods mandate specific laboratory QA/QC requirements including duplicates, matrix spikes, and various blanks. In addition, one duplicate sample and one field blank samples for every 20 compliance samples will be analyzed by all indicated methods as part of the QA/QC plan.

9.0 Detection and Quantification Limits

Detection and quantification limits for analyses scheduled under this sampling and analysis plan will be included with analytical reports. Prior to performing additional analyses that may be required based upon field findings, laboratory detection, and quantification limits will be reviewed to ensure that limits are below site action levels.

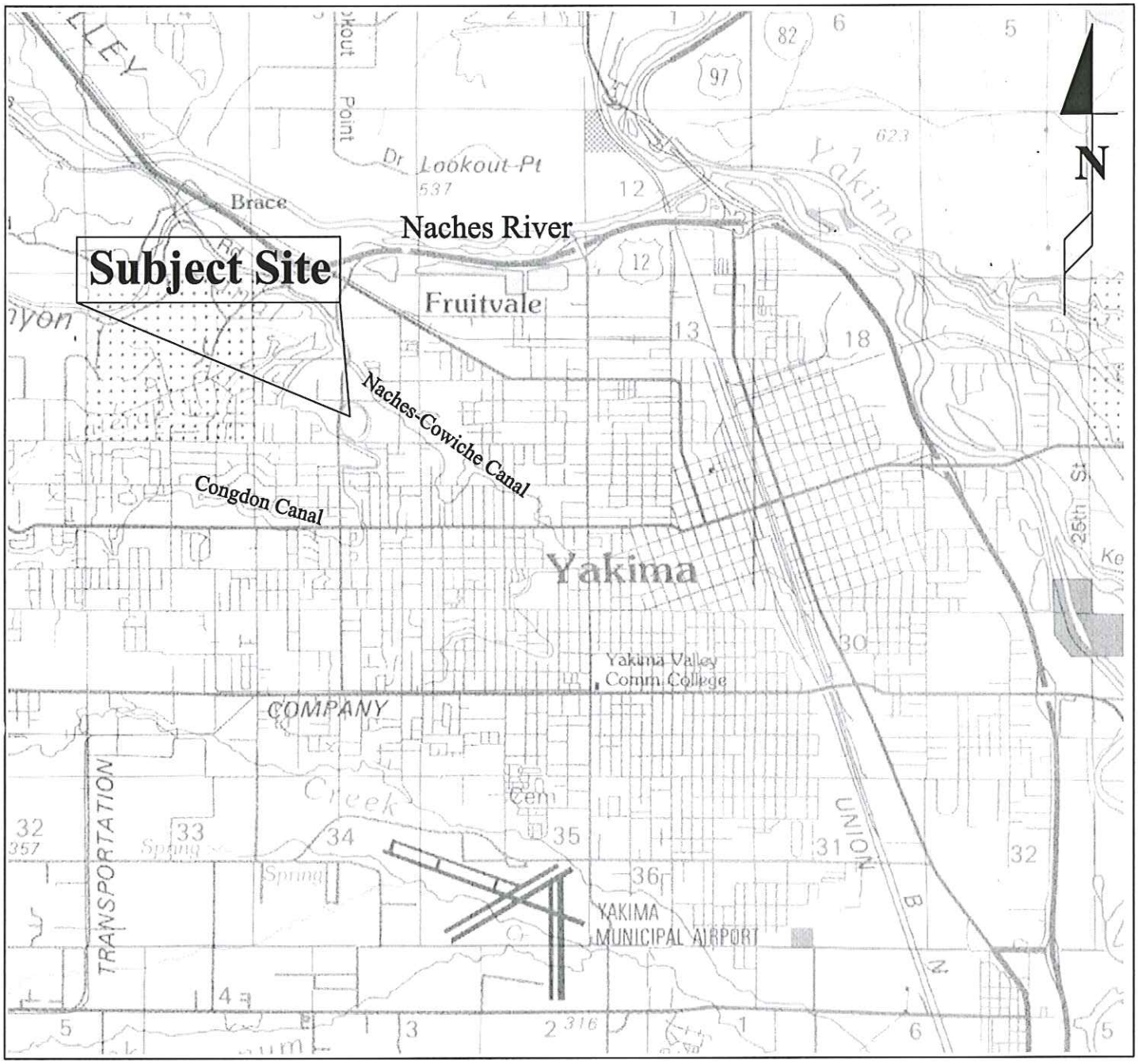
10.0 Sample Labeling and Chain of Custody

Each sample will be given a unique sample identification number. The following procedures will be used to label samples at the site:

Sample numbers will be designated by the site name, date collected and sequential numbers. For example, North Star Lodge soil samples (NS) collected on March 1st (0301) as the third sample in the project would be designated as NS0301-03.

Immediately following sampling, each sample will be logged onto a chain-of-custody and in a field report with exact sample location (i.e. map location and depth), analysis, laboratory, and sampler's name.

Following sampling and labeling of containers, each container will be placed into sealable quart-sized plastic bags. Samples will then be placed into an ice chest containing ice to preserve soil samples by refrigeration. At the end of each day of sampling activity, the ice chests will be shipped to the laboratory by common carrier for next day delivery.



LEGEND

Scale: 1 mile (2,590 meters)

Contour Interval: 20 and 50 meters

Source: WA Dept. of Natural Resources
1:100,000 Planimetric Map

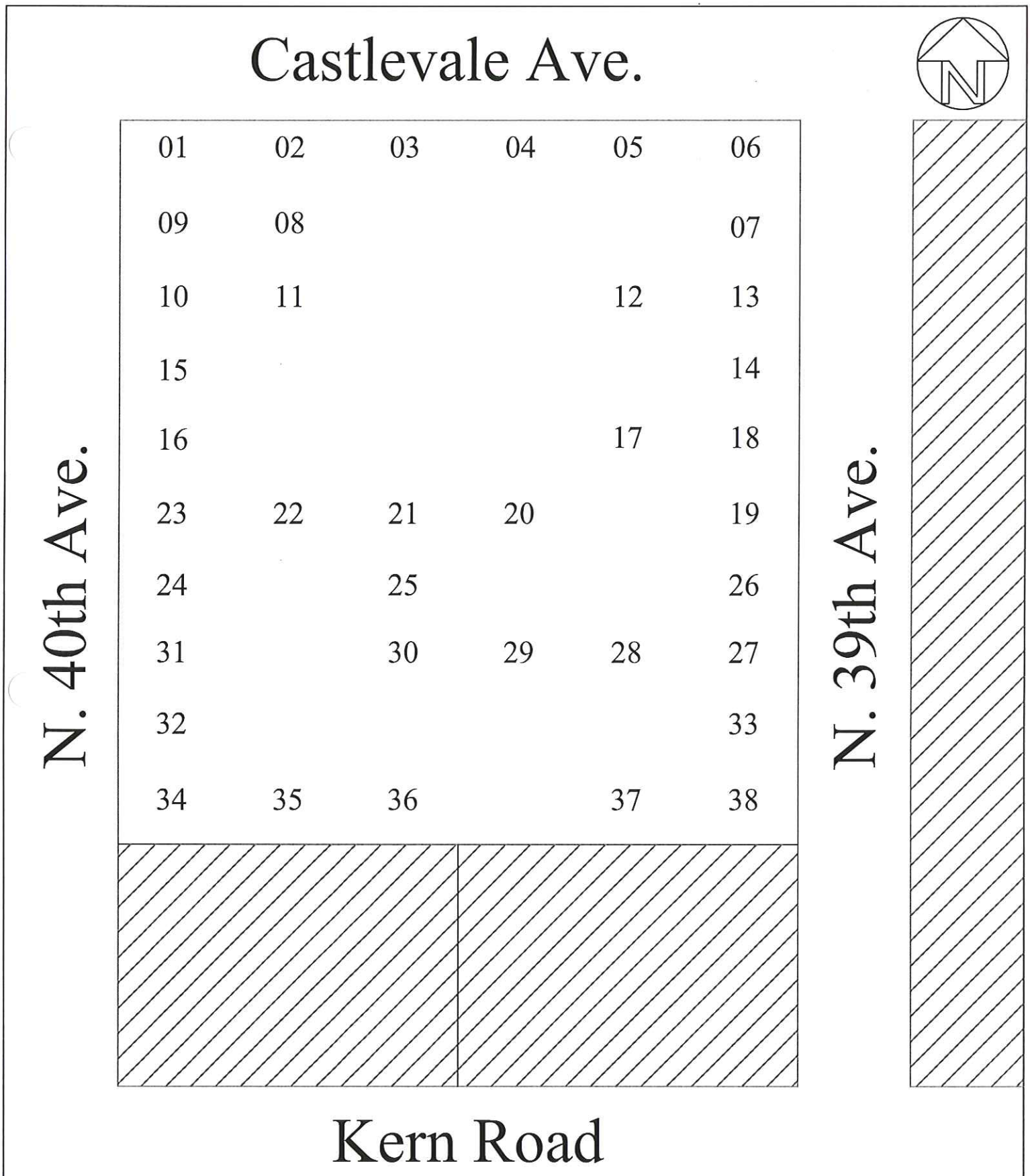
FIGURE 1

General Site Map

North Star Lodge
808 N. 39th Ave.
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921.1
DATE: 06/14/00	FILE NAME: North Star Lodge



Legend	Figure 2 Initial Sampling Location Map	Fulcrum Environmental Consulting, Inc. 122 South Third Street Yakima, Washington 98901 Phone (509) 574-0839 Fax (509) 575-8453	
Sample Locations: CC122-## Adjacent Lots: Scale: NTS	North Star Lodge 808 North 39th Avenue Yakima, Washington	Drawn by: AMP	Project Number: 98921.1
		Date: 09/17/2001	File Name: North Star Lodge

APPENDIX E

HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN
FOR MEMORIAL HOSPITAL'S
CANCER PROJECT
YAKIMA, WASHINGTON

Prepared by: Fulcrum Environmental Consulting Inc.
122 South Third Street
Yakima, Washington 98901-2827

March 19, 1999

Plan Prepared By: Chris Hansen

1.0 GENERAL PROJECT INFORMATION AND DESCRIPTION OF ACTIVITIES

1.1 DESCRIPTION OF ACTIVITIES

Approximately 151,542 square feet of soil contaminated with lead, arsenic, and DDT will be impacted as part of the Valley Memorial Cancer Project. Activities will include excavation, backfilling, and grading. Engineering controls will be implemented to control health risks to workers and supervisors. Scope of work for Fulcrum Environmental Consulting, Inc. (Fulcrum) will be to act as the owner's representative in monitoring airborne lead, arsenic, and total particulate levels at the start of each new operational phase that will impact native site soils. Additional monitoring will be conducted periodically during subsequent days of work. Fulcrum will also assist the contractor monitor the dust suppression program to ensure that the PEL for dust ($10mg/m^3$) is not being exceeded and that excess dust is not leaving the site. Dust suppression will be performed with spray trucks using water to moisten the soil.

1.2 SITE LOCATION AND DESCRIPTION:

The Valley Memorial Cancer Project, also referred to as Memorial Cancer Project, is located on the northeast corner of North 39th Avenue and Kern Road in Yakima Washington. Site is an undeveloped lot sloping gently from south to north.

1.3 CONTACT LIST:

Fulcrum Project Manager:	**Peggy Williamson, Senior Environmental Scientist**
Fulcrum Site Health and Safety Officer	**Travis Trent, Environmental Geologist**
Fulcrum Field Services Person:	**Travis Trent, Environmental Geologist**
	Chris Hansen, Environmental Technician
Client Contact:	**John Vornbrock, Memorial Hospital**
Other Project Personnel:	**Bill Frymier, VK Powell Co., Inc.**
	Rick Giberson, KDF Architecture

1.4 PROPOSED START DATE: **March 22, 1999**

1.5 OVERALL HAZARD RANKING: **Low**

2.0 GENERAL SITE SAFETY

All work shall be performed in compliance with Title 29 of the Code of Federal Regulations, Part 1910 (General Industry Standards), 29 CFR 1926 (Construction Industry Standards), Washington Administrative Code (WAC) 296-62, (General Industry Standards), WAC 296-155 (Construction Industry Standards) and other applicable federal, state, and local Health and Safety Laws. In addition, personnel will not jeopardize the health and safety of themselves or others, or any property, during the course of this excavation project.

3.0 SITE INFORMATION

3.1 SITE HISTORY

Fulcrum Environmental Consulting performed subsurface investigation of subject site in February of 1999. The investigation concluded that site soils were impacted by lead, arsenic, and DDT as a result of historical pesticide application consistent with labeling and associated with on-site agricultural practices.

3.2 PLANNED DURATION OF ACTIVITIES

It is anticipated that operational phases impacting native site soils will last approximately 3-5 weeks.

3.3 SITE TOPOGRAPHY AND ACCESSIBILITY

Site topography is gently sloping from south to north. The site is accessed from 39th Avenue and Kern Road.

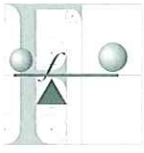
4.0 SITE SPECIFIC SAFETY AND HEALTH HAZARDS

4.1 PHYSICAL HAZARDS

Physical hazards are those associated with heavy machinery, open manholes, traffic hazards, and climate. Heavy equipment hazards include the possibility of encountering utilities such as pressurized natural gas lines, electrical power lines and water or sewer lines. Workers need to be aware of the limits of the machinery, the location of other workers, and areas of limited access (steep terrain, soft ground, near surface water, etc.). Hard hats, steel toed boots, and safety goggles must be worn by all personnel when in proximity of such equipment.

Personnel working near open trenches and manholes need to be aware of the possibility of excavation collapse along the trench sidewalls. Under no circumstance shall personnel enter a trench or excavation deeper than four feet deep without first shoring the trench with acceptable shoring equipment. No person shall enter a seepage catch basin or a dry well unless trained and certified for confined space entry. Shored trenches, seepage catch basins, and dry wells must be monitored for air quality prior to entry, since the possibility exists for the collection of explosive or toxic gasses in the confined space. Traffic hazards exist at any site that has vehicular access. Often the operator of a motor vehicle will be too busy watching the heavy equipment to notice personnel on site. In areas of high traffic, personnel will wear red reflective vests to increase personal visibility and one person will be designated as a "flagger" to direct traffic near the working area.

Machinery and heavy equipment can emit high decibel sound, capable of creating permanent hearing damage to those in close proximity. Personnel must wear hearing protection, such as earplugs or earmuffs while near operating machinery and heavy equipment.



Workers engaged in strenuous activities are prone to illness due to heat exposure, especially during the summer months. The possibility of heat related illnesses are increased when protective clothing are donned. Site personnel are encouraged to drink at least 16 ounces of water before work and at least 8 ounces of water/hour throughout the day. This should be increased to every 30 minutes if temperatures are above 82 degrees F, and to every 15 minutes for temperatures above 90 degrees. Also, personnel should rest in a cool area after drinking water to allow body temperature to cool down. All personnel on-site should be aware of the various symptoms and treatments of heat exposure.

Conversely, during periods of cold weather personnel should take measures to prevent hypothermia and frostbite. Layering clothing enables personnel to adjust to changing temperatures. Furthermore, wet clothing increases heat loss. Remove any wet layers as soon as possible. In addition, personnel should drink plenty of fluids and eat high-energy meals. As with heat exposure, all personnel on-site should be aware of the various symptoms and treatments of hypothermia.

4.2 CHEMICAL HAZARDS

The hazardous chemicals of concern under this Health and Safety Plan are lead, arsenic, and Dichloro-Diphenyl-Trichloroethane (DDT) pesticide residues.

5.0 ENVIRONMENTAL AND PERSONNEL PROTECTION

5.1 PERSONNEL AND ENVIRONMENTAL MONITORING

For this project, monitoring equipment will include personal air pumps to collect air samples in the work area and a MiniRam Real-Time dust monitor to determine the total airborne particulate levels. Action levels and response actions are listed in Section 5.2, Table 1.

Monitoring equipment must be:

1) capable of detecting contaminate concentration at a level 1/2 of the PEL for that contaminate;
2) selected so that all harmful chemicals suspected at the site can be detected, and
3) selected so that all conditions immediately dangerous to human health can be detected.

5.2 PERSONAL PROTECTION

All activities, regardless of personal and environmental monitoring results, are to be conducted in Level D personnel protective equipment (PPE). Level D PPE is defined as hard-hats, safety glasses, gloves, steel toed boots, and coveralls or work clothes. Additional PPE, consisting of a personal respirator, may be required if air monitoring results exceed the action level as shown in Table 1.

Action levels are defined as the concentration of a particular chemical or the level of a dangerous condition that mandates a change in personnel safety practices on-site. Action levels and response actions for the site are listed below:

TABLE 1: ACTION LEVELS AND RESPONSE ACTIONS

Hazard	PEL	Action Level	Response Action
Lead	0.05 mg/m^3	0.025 mg/m^3	Engineering Controls and Personal Respirator
Arsenic	0.01 mg/m^3	0.005 mg/m^3	Engineering Controls and Personal Respirator
DDT	0.5 mg/m^3	0.25 mg/m^3	Engineering Controls and Personal Respirator
Dust	10.0 mg/m^3	5.0 mg/m^3	Engineering Controls and Personal Respirator

5.3 ENVIRONMENTAL DELINEATION

A regulated work area shall be established when worker exposure to lead, arsenic, or DDT exceeds the action level listed above. The regulated work area shall be demarcated and segregated from the rest of the workplace in a manner that minimizes the number of persons who will be exposed. Access to the regulated work area shall be limited to authorized persons as determined by the Owner or Owner's Representative in compliance with all pertinent regulations. Any person entering the regulated work area shall be supplied with a respirator in compliance with WAC 296-62-07347 (8) and shall refrain from consumption of food or beverage; use of smoking products or chewing tobacco; and application of cosmetics.

Should contaminant(s) other than those identified in this health and safety plan be discovered, work shall be stopped immediately and the Owner's Representative shall be contacted. The Owner's Representative shall assess the type and severity of the discovered substance(s). After the assessment has been conducted and the substance(s) has been identified, an amended health and safety plan shall be implemented, and if necessary, additional engineering controls shall be executed. Work shall resume after implementation of the amended health and safety plan.

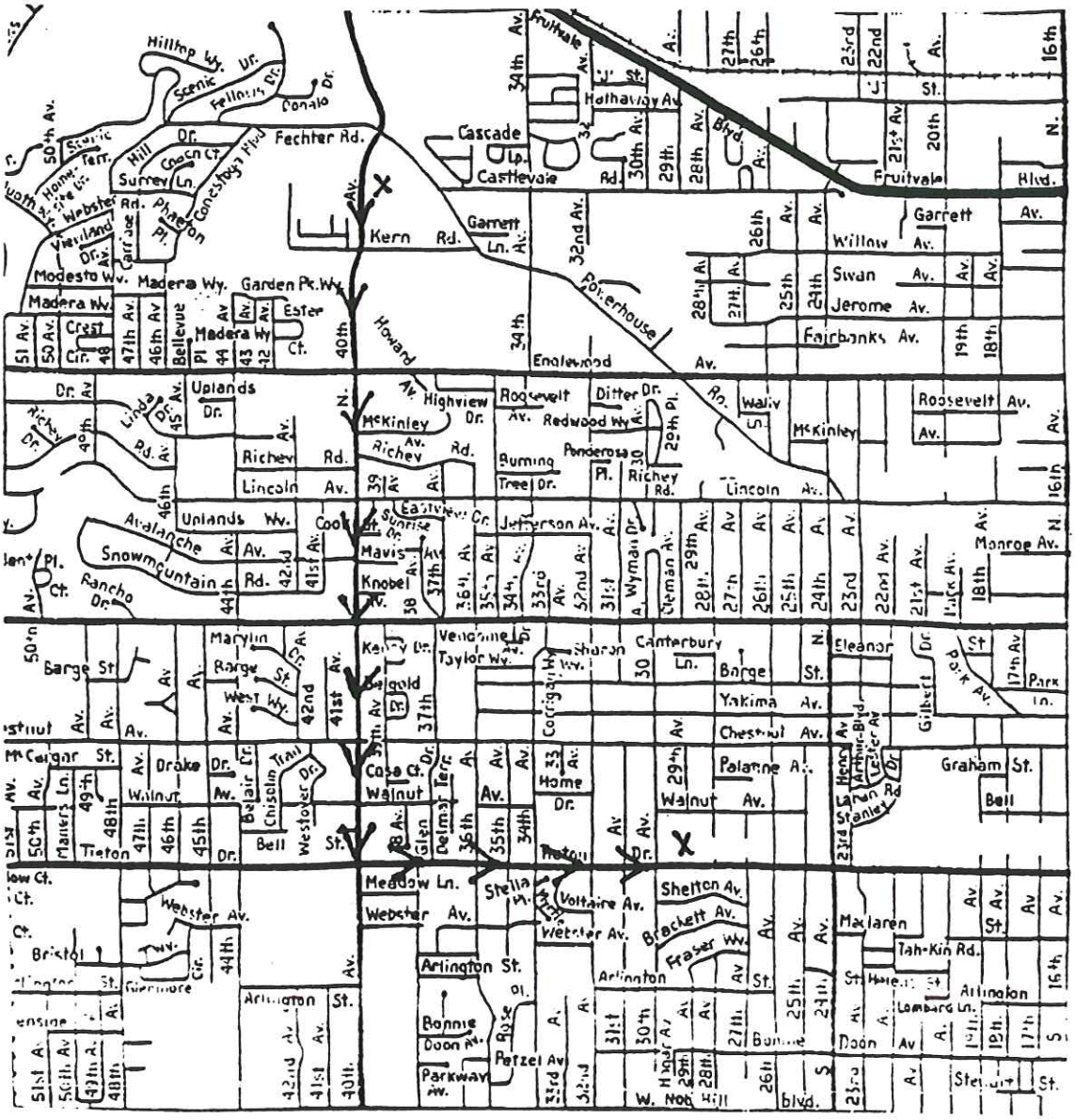
6.0 EMERGENCY RESPONSE

FIRE: 911
POLICE: 911
HOSPITAL: Yakima Valley Memorial Hospital
2811 Tieton Drive, Yakima, WA 98902
Emergency: 575-8100 24hr Operator: 575-8000

POISON CONTROL CENTER: 1-800-572-5842

EXPLOSIVE UNIT: 911

DIRECTIONS TO HOSPITAL: From site, go right (west) on Kern Road. Turn left (south) on 40th. Avenue and proceed to Tieton Drive. Turn left (east) on Tieton Drive. Proceed east to 28th, hospital is on the left (north), follow signs to the entrance. SEE ATTACHED MAPS.



Street Route from Memorial Cancer Project to Yakima Valley Memorial Hospital

Route to Nearest Hospital Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921.1
DATE: 03/22/99	FILE NAME: Memorial Cancer Project

APPENDIX F

FIELD OBSERVATION REPORTS

Project No. 98921-1 Project Name: Northstar Date: 9/30/99

Technician: Travis Trent Address: _____ Weather: Clear, Warm

Work Activities Performed, Engineering Controls Used, Visual Observations:

9:00 - Temple & Sons on-site placing manhole covers. No significant earth moving activities scheduled this week. Site soils are moist. Adjacent site is moist with grass beginning to emerge.

- Contacted Mike (V.K Powell) and Rick Giberson (KDF) regarding adjacent site analytical results. Rick will talk to Mr. Vornbrock and contact me regarding a meeting time to discuss course of action.

Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

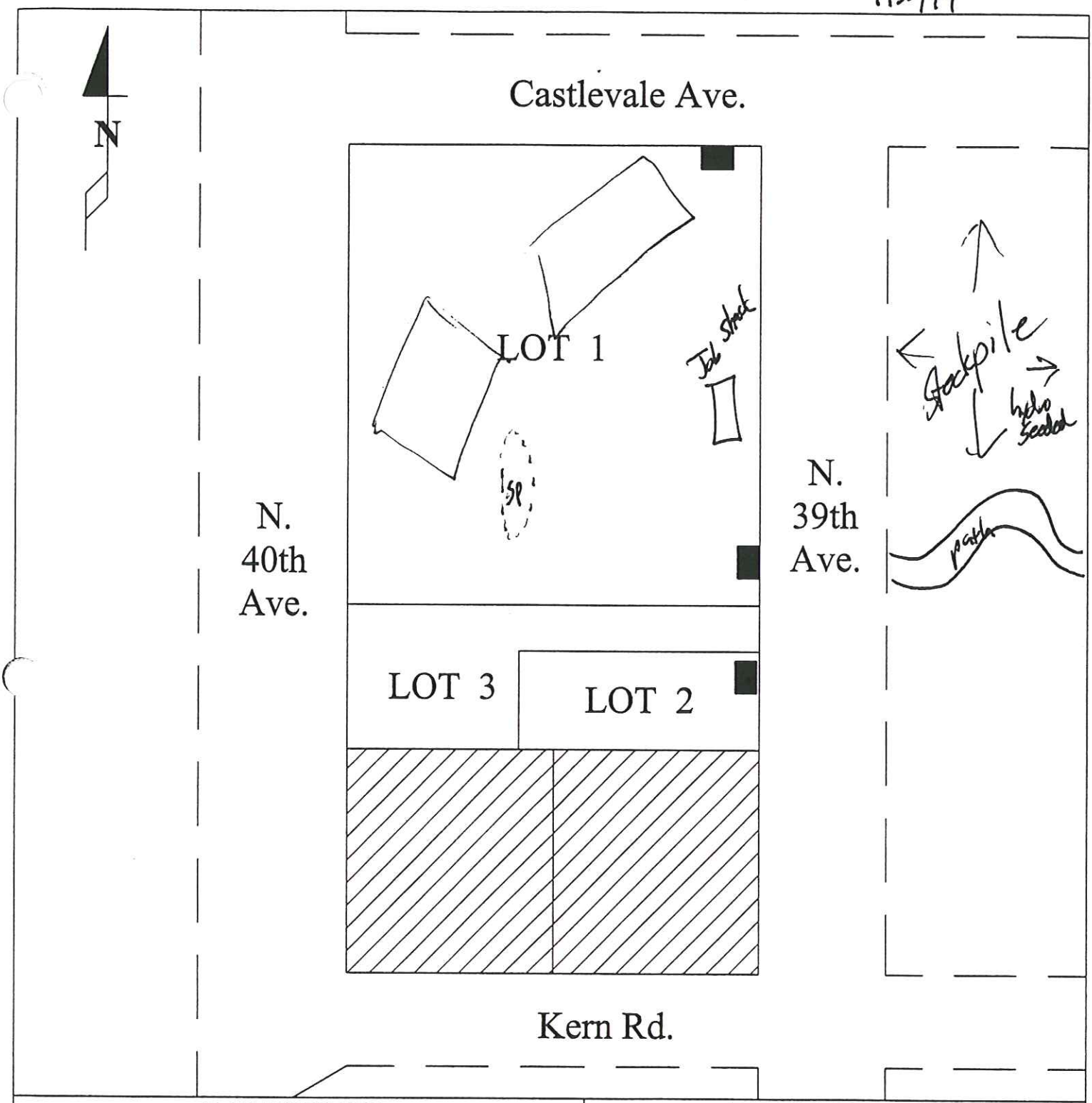
Contractor Documentation Reviewed:

Comments:

Problems, Delays, or Follow-up:

Signature: [signature] Date: 9/30/99

9/30/99



LEGEND

Adjacent lots (not part of subject site):

reet boundary: - - - - - -

Transformers:

Scale: NTS

FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

Project No. 98921-1 Project Name: Northstar Date: 9/22/99

Technician: Travis Trent Address: _____ Weather: clear warm

Work Activities Performed, Engineering Controls Used, Visual Observations:

- A couple of soil stockpiles are present. Appear to be remnants from infiltration trench installation. No earth moving equipment noted onsite. Soil is moderately moist.

Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

Contractor Documentation Reviewed: _____

Comments: _____

Problems, Delays, or Follow-up: _____

Signature: _____ Date: 9/22/99

Project No. 9892/-1 Project Name: Northstar Lodge Date: 9/14/99

Technician: T. Trent Address: _____ Weather: clear/warm little or no wind

Work Activities Performed, Engineering Controls Used, Visual Observations:

7:30am - Temple & Sons spent yesterday + today completing final two excavation trenches. Collected sample from south trench this morning. East trench has been backfilled with gravel. Water truck is on-site, firehose attached & being used to keep the excavation area wet. No visible emissions observed.

9:30am - Collected two soil samples from the NE trench. No visible emissions observed

Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

Contractor Documentation Reviewed:

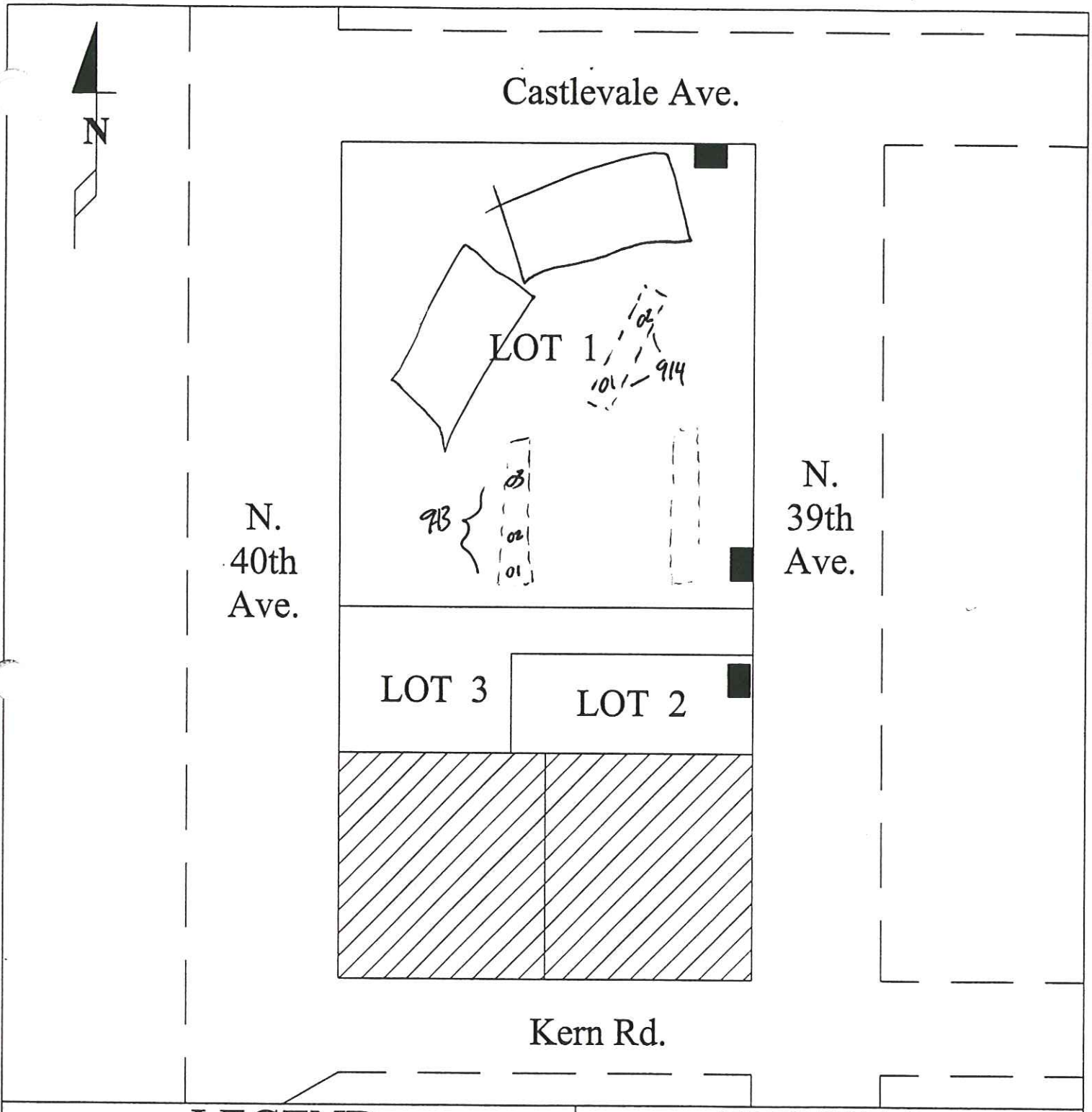
Comments:

Temple & Sons anticipates completing excavation activities for this project today.

Problems, Delays, or Follow-up:

Signature: [signature] Date: 9/14/99

9/14/99



LEGEND

Adjacent lots (not part of subject site):

reet boundary: - - - - - -

Transformers:

Scale: NTS

FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

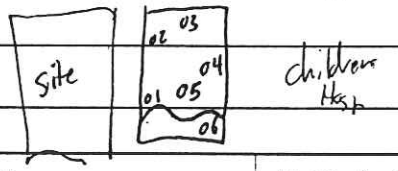
Project No. 97921-1 Project Name: Northstar Lodge Date: 9/10/99

Technician: T. Trent Address: _____ Weather: clear, warm

Work Activities Performed, Engineering Controls Used, Visual Observations:

- Temple & Sons stopped excavation of infiltration trenches today due to flaw in manhole design. Will re-commence excavation on Monday.

- Collected six soil samples 0-3" from adjacent site



Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

Contractor Documentation Reviewed: _____

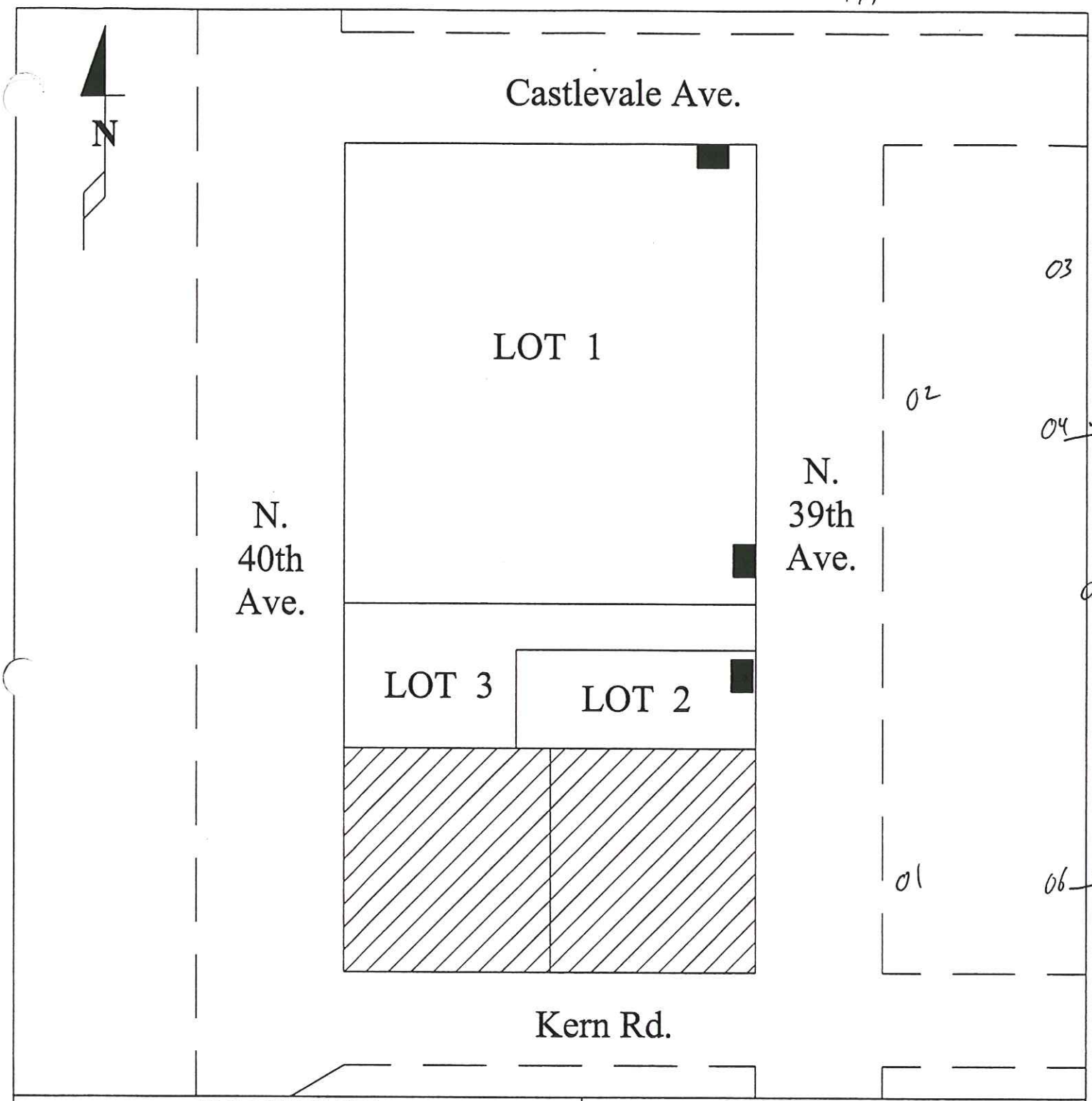
Comments:

- Dropped off copy of Site Health + Safety Plan for General Contractor.

Problems, Delays, or Follow-up: _____

Signature: Tami Trent Date: 9/10/99

9/10/99



LEGEND

Adjacent lots (not part of subject site):

Street boundary: - - - - - -

Transformers:

Scale: NTS

FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

Project No. 98921-1 Project Name: Northstar Lodge Date: 9/9/99

Technician: T. Trent Address: _____ Weather: clear/warm

Work Activities Performed, Engineering Controls Used, Visual Observations:

7am – Will complete installation of east infiltration trench this morning. 10' wide 10' deep trench w geo fabric lining gravel pack and 3' diameter perforated pipe, dry wells at each end. Will start excavation of next infiltration trench this afternoon. Water truck on-site, using hose to keep excavation area wet.

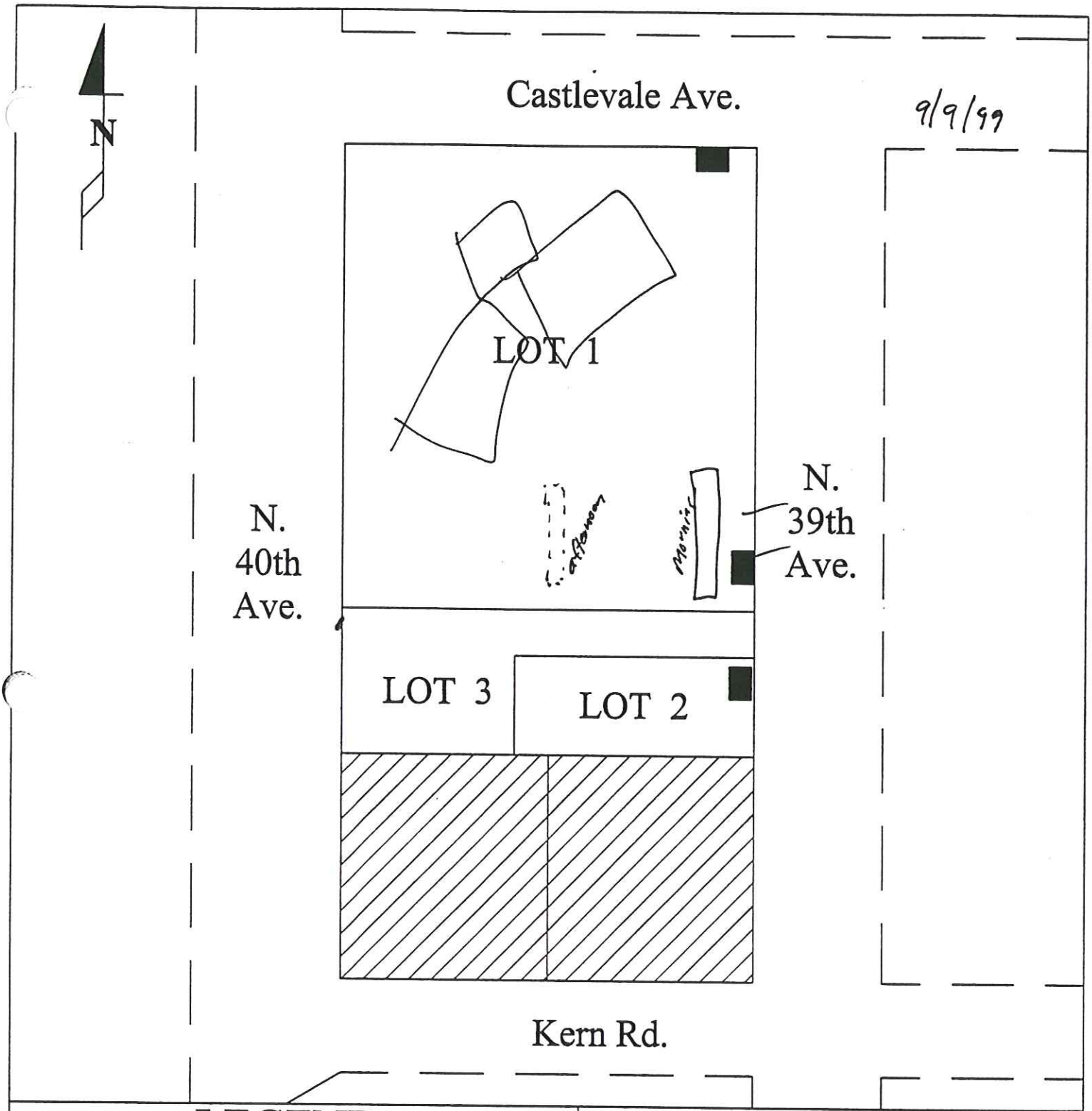
Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:
Vern Forenpahar	running excavator + east	lead, As, nuisance dust
Brad Wilke	Ground Crew	
Joe Pence	running truck	

Contractor Documentation Reviewed:

Comments:

Problems, Delays, or Follow-up:

Signature: _____ Date: 9/14/99



LEGEND

Adjacent lots (not part of subject site):

Street boundary: - - - - - -

Transformers:

Scale: NTS

FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

[redacted] Field Observation Report

Project: Northstar	Project #:	Date: 7/8/99
Contractor	Technician: T. Trent	Report #:

Contractor Employees and Equipment

Supervisor: Vern Forenpaher	Barriers:
Workers: Joe Peace	Manometer:
Brad Willie	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

7am - Excavating infiltration trenches today. (Temple & Sons)
Electric Contractor is excavating electric conduit trench. (Trench electric)

1:00pm - Collected 3 soil samples from the infiltration trenches
N0909-01, 02, 03

3:30pm - Collected air sample, trenching work continues tomorrow

Problems/Delays:

Comments:

- Site soils are moist, water truck is on-site

Brad Willey 544-92-3953 sample 7:45am
Dozer / Laborer

Schedule:

- 1st trench 1:00 pm
- 1 work days left

- final site grading by Leland Hyatt

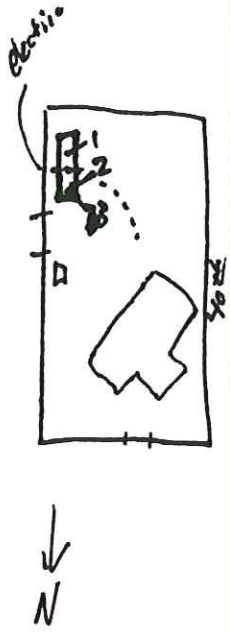
Clearance:

Visual:

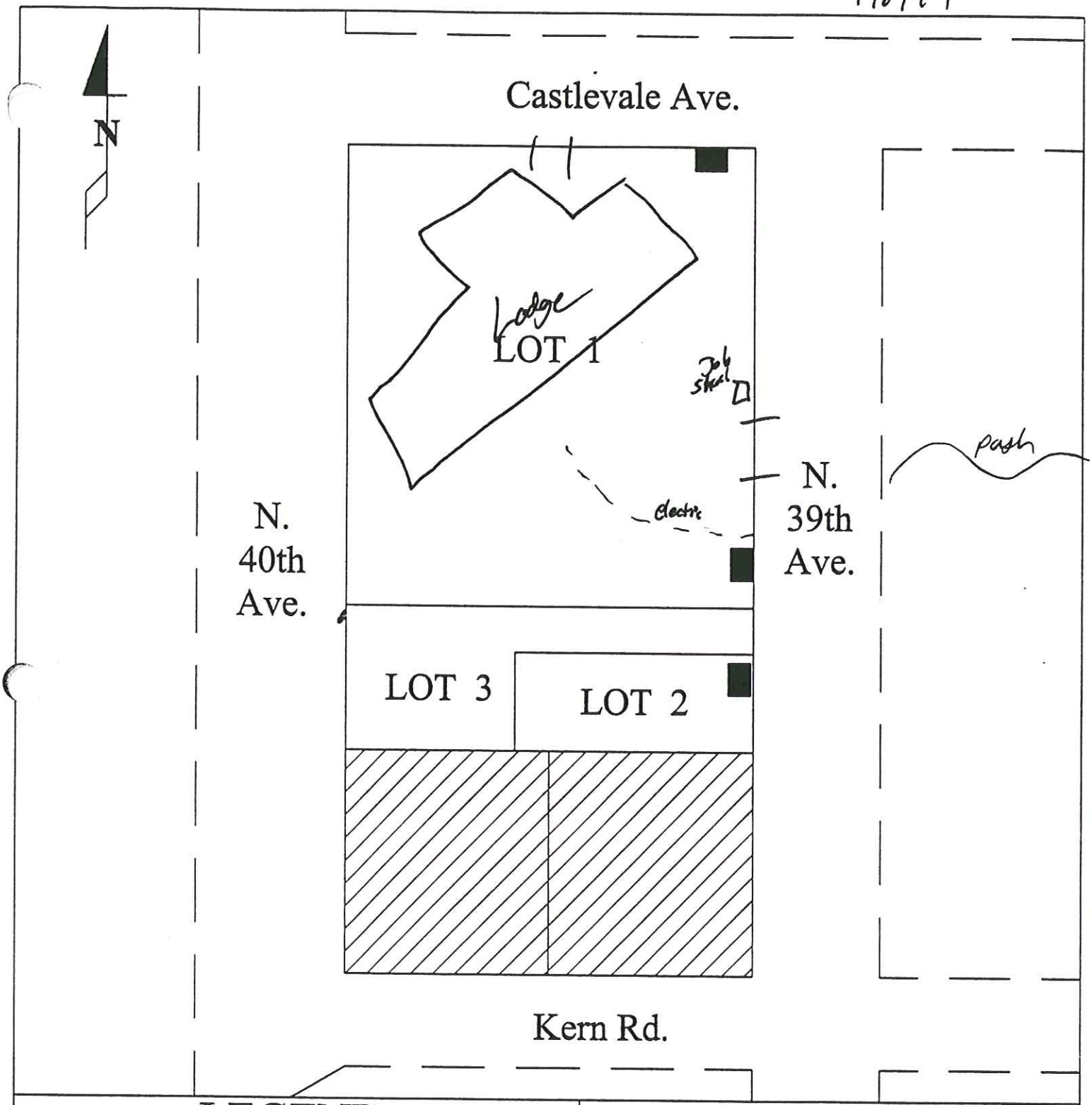
PCM:

TEM:

Signature: [signature] Date: 7/8/99



9/8/99



LEGEND

Adjacent lots (not part of subject site):

reet boundary: - - - - - -

Transformers:

Scale: NTS

FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

Project No. 9821-1 Project Name: Northstar Lodge Date: 9/7/99

Technician: T. Trent Address: _____ Weather: clear, warm

Work Activities Performed, Engineering Controls Used, Visual Observations:

- Knobel electric is excavation a trench for electric lines ≥ 4' deep
- Electric line excavation a landscape grading is occurring across street.

- Temple & Sons have completed installation of 4 drywells and will be working on more tomorrow. V.k. Powell contacted Fulcrum regarding drywells on friday and indicated they would be available for inspection and sampling on 9/7/99?

Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

Contractor Documentation Reviewed:

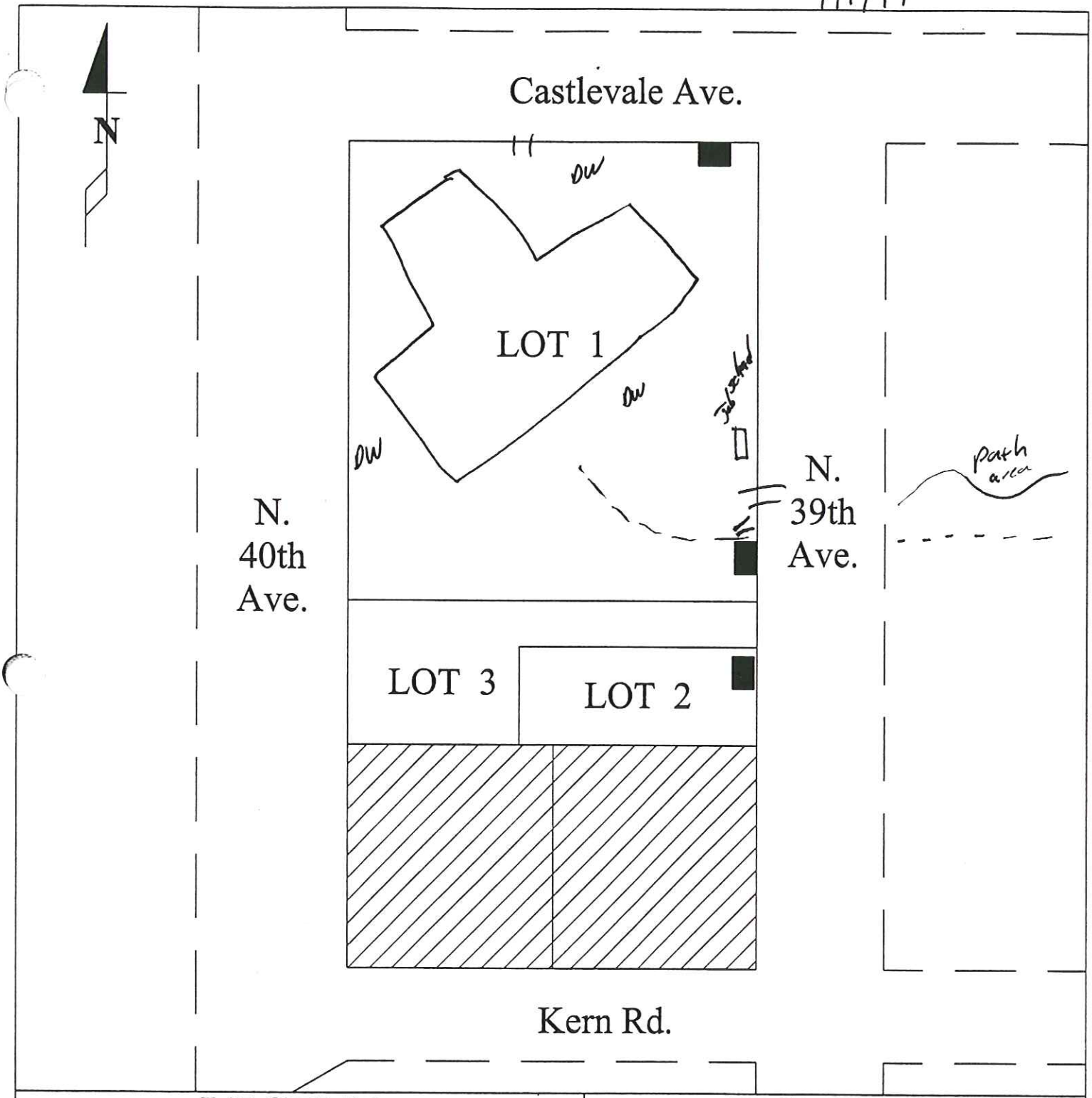
Comments:

- V.k. Powell does not have a copy of the site health + safety plan onsite. Fulcrum will provide a copy.

Problems, Delays, or Follow-up:

Signature: Traci Trent Date: 9/7/99

9/7/99



LEGEND

Adjacent lots (not part of subject site):

Street boundary: - - - - - -

Transformers:

Scale: NTS

FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

[redacted]nt Field Observation Report

Project: Northstar	Project #:	Date: 9/2/99
Contractor W.K. Powell	Technician: Travis Trout	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- Site access street has been graded to replace small rolling hills? Still being kept wet, a utilities trench is being cut through a portion of the site.

- Building demolition is continuing on main site. A 3 deep utilities trench has been excavated extending south from the New corner. A utilities vault trench is open next to the east entry gate. Site soils including stockpiled oil is being kept wet.

Problems/Delays:

Comments:

Schednle:

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 9/2/99

Asbestos Abatement Field Observation Report

Project: Northstar Lodge	Project #:	Date: 8/25/99
Contractor V.K. Powell	Technician: Travis Trout	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- No earth moving activities observed. Bldg construction is on-going. Site soils appear moderately moist. Vehical Wash Station (track pad) is still in-place, minimal dirt appears to be getting tracked onto the street. No dust was observed.

Problems/Delays:

Comments:

Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 8/25/99

Project No. Northstar Lodge	Project Name:	Date: 7/21/99
Technician: T. Trent	Address:	Weather: clear Warm no wind.

Work Activities Performed, Engineering Controls Used, Visual Observations:

12:30pm - Truck wash pad present, wet, water truck on-site. No dust being generated. Contractor working on bldg walls. No earth work. Soil across street is being wetted w/ sprinklers.

Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

Contractor Documentation Reviewed:

Comments:

Problems, Delays, or Follow-up:

Project No. 98921-1 Project Name: Northstar lodge Date: 6/30/99

Technician: Travis Trant Address: Weather: Clear/warm

Work Activities Performed, Engineering Controls Used, Visual Observations:

- Exposed site soils are wet. Lapland Hyatt is using soil stockpiled on site (southern pile) as backfill material for foundation walls. No earth moving activities occuring at time of site inspection. Vehical Wash station in place at site exit.

Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

Contractor Documentation Reviewed:

Comments:

Problems, Delays, or Follow-up:

~~Asbestos Abatement~~ Telephone Inquiry Report

Project: Wolfstar Lodge	Project #: 98921.1	Date: 6/23/99
Contractor: U.K. Powell	Technician: Travis Tran	Report #:
Time: 10:00	Contact: office	Work Area:

Summary:

U.K. Powell office: Tim out until Friday

Time: 10:15 Contact: Mike Orr Work Area:

Summary:

- Footings were installed yesterday. Will be moving a portion of the on-site stockpile for use as footing backfill next week. Will call. Still working on final drainage plans, will let us know when it is complete.

Time: Contact: Work Area:

Summary:

Time: Contact: Work Area:

Summary:

Time: Contact: Work Area:

Summary:

Signature: Travis Tran Date: 6/23/99

Project No. 98921.1 Project Name: Northstar Date: 6/17/99

Technician: T.T Address: Weather:

Work Activities Performed, Engineering Controls Used, Visual Observations:

- No earth moving activities observed. The contractor is working on the foundation. Exposed site soils are being kept moist and have been covered with gravel in high traffic areas. Soil moved across the street is being kept wet via an aboveground sprinkler system.

Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

Contractor Documentation Reviewed:

Comments:

Problems, Delays, or Follow-up:

Project No. 96038	Project Name: 9812.1	Date: 06/17/99
Technician: Chris Hansen	Address: N 39th & Castlevale	Weather: Sunny, Clear, upper 80's Slight breeze W→E

Work Activities Performed, Engineering Controls Used, Visual Observations:

General construction activities. Workers in proper PPE: hard hat, work clothes & BOOTS. water truck observed in use on-site. Vehicle EQA wash (gravel) observed on-site. No observable emissions from on-site equipment.

Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:

Contractor Documentation Reviewed:

Comments:

Problems, Delays, or Follow-up:

Signature: C Hansen Date: 06/17/99

~~Asbestos Abatement~~ Field Observation Report

Project: Northstar Lodge	Project #: 9892.1	Date: 8/18/99
Contractor V.K. Powell	Technician: TRAVIS TRUE	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- no earthmoving activities, soil in driving areas has been graveled to minimize dust generation. Remaining site soils are being kept wet (water truck on site).

Problems/Delays:

Comments:

Schedule:

- footings in a couple of weeks

Clearance:

Visual:

PCM:

TEM:

Signature: Travis True Date:

[redacted]t Field Observation Report

Project: Northstar lodge	Project #:	Date: 6/7/97
Contractor V.k. Powell	Technician: Travis Trent	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- Clean air has stopped by twice. Water truck on-site. using a bobcat for mine filling. No other earth moving
- road cleaning tonight.
- light wind, minimal dust being generated. No dust observed leaving the property

Problems/Delays:

- Need to get a copy of the drainage plan

Comments:

Schedule:

- excavator on-site in two weeks. to work on bldg footings

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 6/7/97

[redacted] Field Observation Report

Project: Northstar Lodge	Project #: 97821.1	Date: 6/2/97
Contractor: U.K. Powell	Technician: Travis Tarrant	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- No earth moving activities observed. Concrete being poured in basement footing trenches. Exposed dirty is generally moist. Water truck on site. No dust observed.

Problems/Delays:

Comments:

Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: [redacted] **Date:** 6/2/97

[redacted]ent Field Observation Report

Project: Northstar Lodge	Project #:	Date: 5/21/99
Contractor Leland Hyatt	Technician: Travis Trent	Report #:

Contractor Employees and Equipment

Supervisor: Steve Hyatt	Barriers:
Workers: Tom	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report — light Breeze

Work Performed:

6:45am - Footing in the basement. will be using an excavator, dump trucks + man in trench. Road looks clean.

Problems/Delays:

- light breeze clear. soil needs a little more water.

Comments:

± 14 yds³ per pile. across street. ~~2 piles~~ ± 60 piles ± 800-900 yds³

- soil cut at surface assumed contaminated. Any additional soil dug for footings in basement will be stockpiled in seperate area on-site.

Schedule:

7:15am Collected 5 samples from stockpiled soil across street from site. All samples were med brown slightly moist clayey silt.

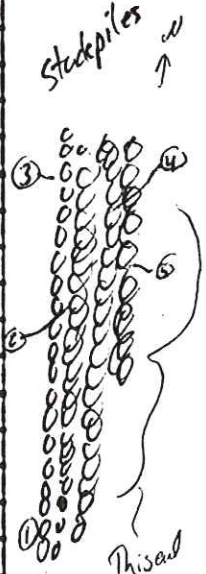
Clearance:

Visual:

PCM:

TEM:

Signature: [redacted] **Date:** 5/21/99



Asbestos Abatement Field Observation Report

Project: Northlake Lodge	Project #:	Date: 5/9/07
Contractor: Lehrer Hyatt	Technician: Trent Trent	Report #:

Contractor Employees and Equipment

Supervisor: Steve Hyatt - direct	Barriers:
Workers: Tim Adams - excavat	Manometer:
Butch McMillin - dump truck	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- soil going across the road to be stock-piled. Waste truck on-site. Soil is being kept wet. truck tires being cleaned on wash pad prior to leaving site. will use geo-textile if it gets too muddy.

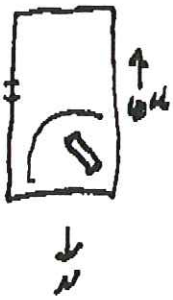
- excavating footings in basement area

Problems/Delays:

- light breeze today. Sunny

Comments:

- Air samples on Steve + Tim



Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: Trent Trent Date: 5/9/07

Asbestos Abatement Telephone Inquiry Report

Project: Northstar Lodge	Project #:	Date: 5/18/99
Contractor: U.S. Powell	Technician: Travis Trent/Williams	Report #:
Time: 9:15 am	Contact: Bob	Work Area: General
Summary:		
- ~~Hyatt~~ Leland Hyatt is starting excavation of footings. Excavation is in area graded for the basement. Soil should be below cleanup levels in this area. Contractor will stockpile soil if sufficient quantity is generated for use as cap material. If soil is stockpiled Fulcrum will sample to characterize. Fulcrum will collect air samples 5/19/99 during footing excavation.		
Time: 11:00	Contact: Bob	Work Area: 40th sites
Summary: I would like Fulcrum to collect soil samples from proposed topsoil source to confirm acceptable use as cap soil.		
Time:	Contact:	Work Area:
Summary:		
Time:	Contact:	Work Area:
Summary:		
Time:	Contact:	Work Area:
Summary:		
Signature:		Date: 5/18/99

~~Asbestos Abatement~~ Field Observation Report

Project: Memorial Cancer Ctr	Project #: 9842.1	Date: 4/27/99
Contractor V.K. Powell	Technician: Travis Trent	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- No on-site activities today. Site is fenced, no dust observed ~~from~~ on-site from exposed earth.

Problems/Delays:

Comments:

- attended General Construction mtg. Discussed hazardous material status and associated project design requirements.

- Will send scope of work/proposal to Memorial Hospital.

Schedule:

permits 5/18/99
footing to follow within 1 week

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 4/27/99

~~Asbestos Abatement~~ Field Observation Report

Project: Cancer Ctr	Project #:	Date: 4/1/99
Contractor	Technician: Travis Trent	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

8:00 am - Drive by - no activities, Grader + Cat parked on-site. Both sides of street have exposed soil. Soil is moist. Lots of dirt on road from site activities on an adjacent site.

Problems/Delays:

Comments:

Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 4/1/99

Asbestos Abatement Field Observation Report

Project: Cancer Ctr	Project #:	Date: 3/31/99
Contractor V.K. Powell / Leland Hall	Technician: Trent	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

8:00am - Water truck + grader on-site. No soil moving activities observed. Soil hauling on site across street is resulting in visible emmisions of dust that are blowing onto site (fairly minor amount)

Problems/Delays:

Comments:

Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: Trent Trent Date: 3/31/99

Asbestos Abatement Field Observation Report

Project: Memorial Cancer Ctr	Project #:	Date: 3/29/99
Contractor U.K. Powell/Leland Hyatt	Technician: Travis Tillman	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

Pillman - Excavate cutting soil banks from sidewalk. Cat + roller in use. Grade/cutter + water truck on-site. Soil moist from overnight rain, light breeze. No visible emmisions beyond 1 vehical length of active equip. Excavated soil is being stockpiled on south end of site.

Problems/Delays:

Comments:

Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: Travis Tillman Date: 3/29/99

~~Asbestos Abatement~~ Field Observation Report

Project: Memorial Cancer Project	Project #:	Date: 3/26/99
Contractor	Technician:	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

2:30 pm - Excavator being used to cut edges back from sidewalk, Grader, Cat, roller + water truck also in-use. Soils are moist, no visible emmisions beyond immediate soil impact area (less than one vehical length)

Problems/Delays:

Comments:

Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 3/26/99

~~Asbestos Abatement~~ Field Observation Report

Project: Memorial Cancer Project	Project #:	Date: 3/25/99
Contractor U.S. Powell Mechanical Contr.	Technician: Travis Trent	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

10:00 am - Grader/Cutter moving soil from north end of site to stockpile on south end. Water truck on site, soil is moist, minimal visible emmissions immediately adjacent to machinery (no trail of dust). Cat + roller also on-site. Street is clean.

Problems/Delays:

Comments:

Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: Travis Trent Date: 3/25/99

~~Asbestos Abatement~~ Field Observation Report

Project: Memorial Cancer Ctr	Project #:	Date: 3/24/99
Contractor V.K. Powell / Leland Hyatt	Technician: Trent	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- Grader / Cutter removing soil from North End of site and transporting to south end of site. Soil is being stockpiled on-site and will be used as fill material against foundation walls during the construction Phase. Site soils were moist, no visible emmissions were observed. A water truck was on-site, a roller was on-site, and a grader / cutter + CAT were on-site and in-use.

Problems/Delays:

Comments:

Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 3/24/99

~~Asbestos Abatement~~ Field Observation Report

Project: Memorial Cancer Ctr	Project #:	Date: 3/23/99
Contractor V.K. Powell/Leland Hyatt	Technician: Travis Trent	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

7:30 am - 2nd day of earth moving activities. Using a Cat to cut soil back from property boundaries. Using a grader/cutter to removes soil. Soil is being transported across street to adjacent property to be used as fill. Road between is covered by geo textile fabric, gravel wash station has been constructed at exit point from site for cleaning vehical tires. A water truck is on-site. Site soils are wet. No visible emmissions from Cat operation. Grader/cutter generates a

~~Problems/Delays~~: small cloud (less than 1/3 vehical length) w/ soil is dropped into bin. A roller is also on-site.

~~Comments~~: Civil Engineering firm on-site taking elevation measurments.

~~Schedule~~: Running personal samples on Dozer + cutter operators.

Clearance:

Visual:

PCM:

TEM:

Signature: Travis Trent Date: 3/23/99

~~Asbestos Abatement~~ Field Observation Report

Project: Memorial Cancer Ctr	Project #:	Date: 3/22/99
Contractor V.K. Powell + Leland Hyatt	Technician: Trent / Hansen	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- 1st day of earth moving. Fulcrum conducted a brief Haz Com. Bill Frymier + Steve Orr w V.K. Powell. 3 Leland Hyatt people in attendance. Discussed engineering controls. Leland Hyatt will keep site soils moist during site grading activities. A gravel tire cleaning area will be constructed at site exit, a geo textile fabric will be placed on road ~~where~~ near soil is being transported across the street to fill. Street will be cleaned of fabric + any residual soil at end of work shift. The site will be fenced. Workers will clean personal equip before leaving site, wash before eating etc.

~~Problems/Delays~~:

Comments:

- approx 3,000 ~~yds~~ yds^3 to be removed. Up to 4 ft in some areas. 1,900 yd^3 across street, balance to stay on site.

- Mark Peterschmidt approved site soil use as fill material across street. Fill material must be handled (capped) to achieve net positive environmental gain before a NFA will be considered.

Schedule:

4:30 - Site check, no activities, soil moist, street clean of fabric + soil.

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 3/22/99

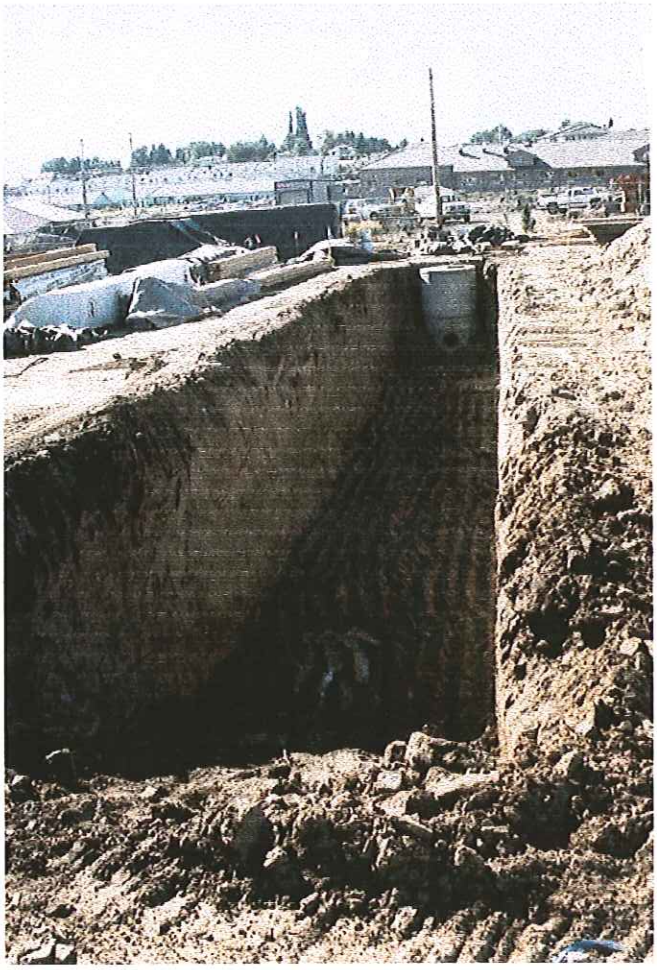
APPENDIX G

PROJECT PICTURES

Picture 1: View from west looking east. Completion of vegetation removal.

Picture 2: View from the east looking west. Dust suppression activities.

Pictures 3&4: View from the west looking east. Water main installation.



Picture 5: View to the south. Trench for water main installation.

Picture 6: View to the southeast. Trench closure over water main installation.

Picture 7: View from the east looking northwest. North Star Lodging nearing the end of the construction phase.

Picture 8: View from the northeast looking southwest. North Star Lodging nearing the end of the construction phase.

Picture 9: View from the south looking north. Initial site landscaping.

Picture 10: View from the west looking east. Initial site landscaping.

APPENDIX H

EMPLOYEE EXPOSURE MONITORING RESULTS

EXPOSURE ASSESSMENT
NORTH STAR LODGE
Yakima, Washington

Project Number 98921.1

March 25, 2002

Prepared for: Yakima Valley Memorial Hospital
Attn: John Vornbrock
2811 Tieton Drive
Yakima, Washington 98902

Prepared by: Travis Trent, RPG
Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, Washington 98901

Exposure Assessment
Executive Summary

On March 23 through September 8, 1999, Travis Trent and Chris Hansen of Fulcrum Environmental Consulting, Inc. (Fulcrum) performed exposure assessments for earth moving activities that impacted native soils containing arsenic, lead, and dichlorodiphenyltrichloroethane (DDT). Earth moving activities were conducted by Leland Hyatt Construction (Hyatt) and Temple & Sons at the North Star Lodge located near Castlevale Avenue and North 39th Avenue in Yakima, Washington. Activities included excavation, backfilling, grading and trenching of native soils. In accordance with WAC 296-155-17609, the exposure assessments consisted of air monitoring and observations of work practices and engineering controls used during earth moving activities.

The following table is a summary of concentrations of arsenic, lead, and DDT identified in varying soil depths at this site.

Contaminant Sampled	Sample Depth		
	Surface	2 feet bgs[1]	4 feet bgs
Lead	<4.0[2] – 844 ppm[3]	<4.0 ppm	NA
Arsenic	<4.0 – 113 ppm	<4.0 – 39.2 ppm	<4.0 – 12.1 ppm
DDT	.999 – 1.960 ppm	.0351 ppm	NA

NA = Not Analyzed
1 bgs = below ground surface
2 4.0 ppm is the sampling method limit of detection for Lead and Arsenic.
3 ppm = parts per million

Airborne soil containing residual concentrations of agricultural chemicals was identified as a potential employee exposure pathway. Visual and instrument assessments of total airborne soil particulates would be used as a conservative basis for evaluating potential employee exposure. Agricultural chemicals contained within the soil being a fraction of total particulate. Analytical results will be compared against the personal exposure level (PEL) for total particulate of 10.0 mg/m^3; the PEL for arsenic of 0.01 mg/m^3; the PEL for lead of 0.05 mg/m^3.

Of the agricultural chemicals identified at North Star Lodge, arsenic and lead was more pervasive and at greater depths in the soil than DDT. Adjacent site sampling indicated that if arsenic was present, one or more other agricultural chemicals would also be present. Furthermore, if arsenic concentrations were low, it was unlikely that lead or DDT would have concentrations above remedial thresholds. Therefore, in addition to particulate monitoring, baseline air sampling for arsenic was conducted. Baseline lead sampling was also conducted as a secondary check for employee exposure. If air monitoring of particulates, arsenic, or lead resulted in concentrations near the action level, as defined in the Health & Safety Plan, the samples would be reanalyzed for DDT.

Onsite engineering controls and personal protective equipment was observed in use. Engineering controls included use of a water truck for dust suppression, and a gravel run out with vehicle wash used to prevent off site migrating of soils. Personal protective equipment consisted of hard-hats, safety glasses, gloves, steel-toed boots, coveralls and other work clothes (Level D).

Personal time weighted average (TWA) samples were collected and analyzed for arsenic, lead, and total particulate. Personal pumps with 37 mm, pre-weighted filter cartridges were placed on representative workers (bulldozer operator, cutter operator, excavator operator, and manual laborers). Air samples were sent to SVL Analytical, Inc., located in Kellogg, Idaho, for analysis. The filters were analyzed using EPA 600 methods 206.2 for arsenic and 239.2 for lead. Total particulate was analyzed using methodology as prescribed in 40 CFR. Analytical results were compared against the PEL for arsenic of 0.01 mg/m^3; the PEL for lead of 0.05 mg/m^3; and the PEL for total particulate of 10.0 mg/m^3.

Samples indicated that arsenic, lead, and dust particulate exposure was significantly below the associated PEL. Exposures were also consistently below the action level (AL) as defined within the site-specific Health and Safety Plan. Analysis of personal samples demonstrated that arsenic, lead, and dust particulates were not released above levels of regulatory significance.

The attached table details the analytical results of the personal samples. The sample description column indicates the type of equipment operated, and the operator's name and social security number. The arsenic, lead, and dust results are recorded in milligrams per cubic meter, as are the respective PEL and AL for each agricultural chemical of concern.

Analytical results can be considered representative of anticipated exposure associated with earth moving activities of similar soil conditions using similar engineering controls (wetting soils) and work practices (bulldozers, cutters, excavators, and graders). Activities impacting substantially different soils, agricultural chemicals of concern, or agricultural chemical concentrations; or using substantially different engineering controls or work methods, will require additional air monitoring and worker protection until such time as a positive or negative exposure assessment can be made.

Appendix A contains air monitoring analytical laboratory reports for monitoring of arsenic, lead, and particulate during general earth moving activities at North Star Lodge. Additional visual observations are recorded on daily work logs in Appendix B.

Sample #	Date	Sample Description	Lead mg/m^3	PEL[1] AL[2] (mg/m^3)	Arsenic mg/m^3	PEL[1] AL[2] (mg/m^3)	Dust mg/m^3	PEL[1] AL[2] (mg/m^3)
MC323-01	03/23/99	Personal Sample on Bulldozer Operator	0.000156	0.05 0.025	0.000052	0.01 0.005	0.2	10.0 5.0
MC323-02	03/23/99	Personal Sample on Cutter Operator	0.000147	0.05 0.025	0.000083	0.01 0.005	0.2	10.0 5.0
NS0519-01	05/19/99	Personal Sample on Trench Digger	0.000097	0.05 0.025	0.000055	0.01 0.005	Void[3]	10.0 5.0
NS0519-02	05/19/99	Personal Sample on Excavator Operator	0.000097	0.05 0.025	<0.000050	0.01 0.005	Void[3]	10.0 5.0
N0908-01	09/08/99	Personal Sample on Bulldozer Operator	0.00132	0.05 0.025	0.00017	0.01 0.005	8.0	10.0 5.0
N0909-01	09/09/99	Personal Sample on Excavator Operator	0.00154	0.05 0.025	0.00019	0.01 0.005	4.5	10.0 5.0

See enclosed analytical laboratory reports for further information.

1 PEL means "permissible exposure limit"

2 AL means "action level

3 Laboratory results indicate that sample cassettes were invalid due to a missing matched weight filter in factory filter cassette.

APPENDIX A

Analytical Laboratory Reports

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 92334
SVL SAMPLE No.: 215459

CLIENT SAMPLE ID: N0908-01
Sample Collected: 9/08/99
Sample Receipt : 9/15/99
Date of Report : 9/27/99
Matrix: CASSET

Determination	Result	Units	Dilution	Method	Test Date	Reference
Tot. Sus. Part.	8.0	mg	1	40CFR	9/20/99	5
Arsenic	0.00017	mg/m3	1	206.2	9/27/99	1
Lead	0.00132	mg/m3	3	239.2	9/27/99	1

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 9/27/99
9/27/99 9:49

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL

SVL JOB No. : 92334
SVL SAMPLE No.: 215460

CLIENT SAMPLE ID: N0909-01
Sample Collected: 9/09/99
Sample Receipt : 9/15/99
Date of Report : 9/27/99

Matrix: CASSET

Determination	Result	Units	Dilution	Method	Test Date	Reference
Tot. Sus. Part.	4.5	mg	1	40CFR	9/20/99	5
Arsenic	0.00019	mg/m3	1	206.2	9/27/99	1
Lead	0.00154	mg/m3	3	239.2	9/27/99	1

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 9/27/99
9/27/99 9:49

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-2839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: North Star Ridge

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, (7) = Other (Specify) air

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 92334

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead	Analyses Required: Arsenic	Analyses Required: Total Particulate	Comments
1. N0908-01	9/8/99	7:45-8:30	TT	7	1	Y							✓	✓	✓	1441.5 liters
2. N0909-01	9/9/99	7:35-8:15	TT	7	1	Y							✓	✓	✓	1426 liters
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Lynn M. Palmer	9/14/99	12:45pm	Gordon Chitty	09/15/99	1015
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return [ ] Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

ASBESTOS AIR SAMPLING DATA FORM

Project Name: Northstar Lodge Project Number: _____

Contractor: Temple + Sons Technician: Travis Trent

Sample No.	Sample Code	Pump No.	Location	Time On	Time Off	Total Minutes	Flow Pre	Flow Post	Total Liters	Fibers	Fields	Concentration Fibers/cc
N0908-01			Brad Wilkey	7:45am	3:30pm	465	3.1	3.1	1441.5			
		SSN# =	544-92-3983									
		operating excel shovel										

Sample Code	Sample Type	Sample Code	Sample Type
PS	Personal Sample	HEPA	HEPA Fan Exhaust
PP	Personal Peak	WLO	Waste Load Out Area
IWA	Inside Work Area	PRA	Pre-Abatement
OWA	Outside Work Area	POAIA	Post Abatement Inside Area
DECON	Decontamination Area		

PROJECT MONITOR

I certify that the above samples were collected in strict compliance with applicable standards, regulations, and project specifications.

Date _____ Signature _____

Firm Name and Address _____

LABORATORY TECHNICIAN

I certify that fiber counts of the above samples were performed in strict compliance with applicable standards, regulations, and project specifications. Fiber counts were obtained following the NIOSH Method 7400. All results have been reported to the appropriate individuals.

Date _____ Signature _____

Firm Name and Address _____

ASBESTOS AIR SAMPLING DATA FORM

Project Name Northstar lodge Project Number 9892L-1

Contractor Temple + Sons Technician T. Trent 9/9/99

Sample No.	Sample Code	Pump No.	Location	Time On	Time Off	Total Minutes	Flow Pre	Flow Post	Total Liters	Fibers	Fields	Concentration Fibers/cc
NS0909-01			vern excavator cab	7:35	3:15	460	3.1	3.1	1426			
		SSN										

Sample Code	Sample Type	Sample Code	Sample Type
PS	Personal Sample	HEPA	HEPA Fan Exhaust
PP	Personal Peak	WLO	Waste Load Out Area
IWA	Inside Work Area	PRA	Pre-Abatement
OWA	Outside Work Area	POAIA	Post Abatement Inside Area
DECON	Decontamination Area		

PROJECT MONITOR

I certify that the above samples were collected in strict compliance with applicable standards, regulations, and project specifications.

Date 9/9/99 Signature Trent

Firm Name and Address

LABORATORY TECHNICIAN

I certify that fiber counts of the above samples were performed in strict compliance with applicable standards, regulations, and project specifications. Fiber counts were obtained following the NIOSH Method 7400. All results have been reported to the appropriate individuals.

Date Signature

Firm Name and Address

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-089

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 91296
SVL SAMPLE No.: 205454

CLIENT SAMPLE ID: NS0519-02
Sample Collected: 5/19/99
Sample Receipt : 5/27/99
Date of Report : 6/11/99
Matrix: CASSET

Determination	Result	Units	Dilution	Method	Test Date	Reference
Tot. Sus. Part.	54.9	mg	1	40CFR	6/11/99	5
Arsenic	<0.000050	mg/m3	1	206.2	6/10/99	1
Lead	0.000097	mg/m3	1	239.2	6/10/99	1

*TSP (NOT A MATCHED WEIGHT SET--NO TARE AVAILABLE)

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 6/11/99
6/11/99 12:48

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-089

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 91296
SVL SAMPLE No.: 205453

CLIENT SAMPLE ID: NS0519-01
Sample Collected: 5/19/99
Sample Receipt : 5/27/99
Date of Report : 6/11/99
Matrix: CASSET

Determination	Result	Units	Dilution	Method	Test Date	Reference
Tot. Sus. Part.	56.1*	mg	1	40CFR	6/11/99	5
Arsenic	0.000055	mg/m3	1	206.2	6/10/99	1
Lead	0.000097	mg/m3	1	239.2	6/10/99	1

*TSP (NOT A MATCHED WEIGHT SET--NO TARE AVAILABLE)

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blaine Johnson Date 6/11/99
6/11/99 12:48

CHAIN OF CUSTODY RECORD

Page ____ of ____

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 127 S 3rd Street
Yakima WA 98901
Phone Number: 509-574-0839
FAX Number: 509-575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

PO#: 94971.1
Project Name: Northstar Lodge

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, (7) = Other (Specify) air

Samplers Signature: C Hansen

FOR SVL USE ONLY
SVL JOB # 91296

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection		Miscellaneous				Preservative(s)						Analyses Required									Comments
	Date	Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	lead	arsenic	total particulate							
1. NS0519-01	05/19/99	7:20-3:40	CH	7	1	Y							✓	✓	✓							1000 liters
2. NS0519-02	05/19/99	7:20-3:40	CH	7	1	Y							✓	✓	✓							1000 liters
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

Relinquished by: Chris Hansen	Date: 5/19/99	Time: 12:00pm	Received by: Gordon Birks	Date: 5/27/99	Time: 0930
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 90850
SVL SAMPLE No.: 201320

CLIENT SAMPLE ID: MC323-01
Sample Collected: 3/23/99
Sample Receipt : 4/08/99
Date of Report : 4/19/99
Matrix: CASSET

Determination	Result	Units	Dilution	Method	Test Date	Reference
Tot. Sus. Part.	0.2	mg	1	40CFR	4/13/99	5
Arsenic	0.000052	mg/m3	1	206.2	4/16/99	1
Lead	0.000156	mg/m3	1	239.2	4/16/99	1

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 4/19/99
4/19/99 16:46

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 90850
SVL SAMPLE No.: 201321

CLIENT SAMPLE ID: MC323-02
Sample Collected: 3/23/99
Sample Receipt : 4/08/99
Date of Report : 4/19/99
Matrix: CASSET

Determination	Result	Units	Dilution	Method	Test Date	Reference
Tot. Sus. Part.	0.2	mg	1	40CFR	4/13/99	5
Arsenic	0.000083	mg/m3	1	206.2	4/16/99	1
Lead	0.000147	mg/m3	1	239.2	4/16/99	1

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 4/19/99
4/19/99 16:46

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

PO#: 98921.1
Project Name: Memorial Soil

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, (7) = Other (Specify) Air

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 90850

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead	Analyses Required: Arsenic	Analyses Required: TD Total Particulate	Comments
1. MC32301	3/23/99	7:35-4:35	TT	7	1	N							✓	✓	✓	960 liters
2. MC323-02	3/23/99	7:45-4:37	TT	7	1	N							✓	✓	✓	964 liters
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

Relinqeished by:	Date: 4/7/99	Time: 12:20	Received by:	Date: 04/08/99	Time: 1115
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

APPENDIX B

Daily Work Logs

Project No. 98921-1 Project Name: Northstar Lodge Date: 9/9/99

Technician: T. Trent Address: _____ Weather: clear/warm

Work Activities Performed, Engineering Controls Used, Visual Observations:

7am – Will complete installation of east infiltration trench this morning. 10' wide 10' deep trench w geo fabric lining gravel pack and 3' diameter perforated pipe, dry wells at each end. Will start excavation of next infiltration trench this afternoon. Water truck on-site, using hose to keep excavation area wet.

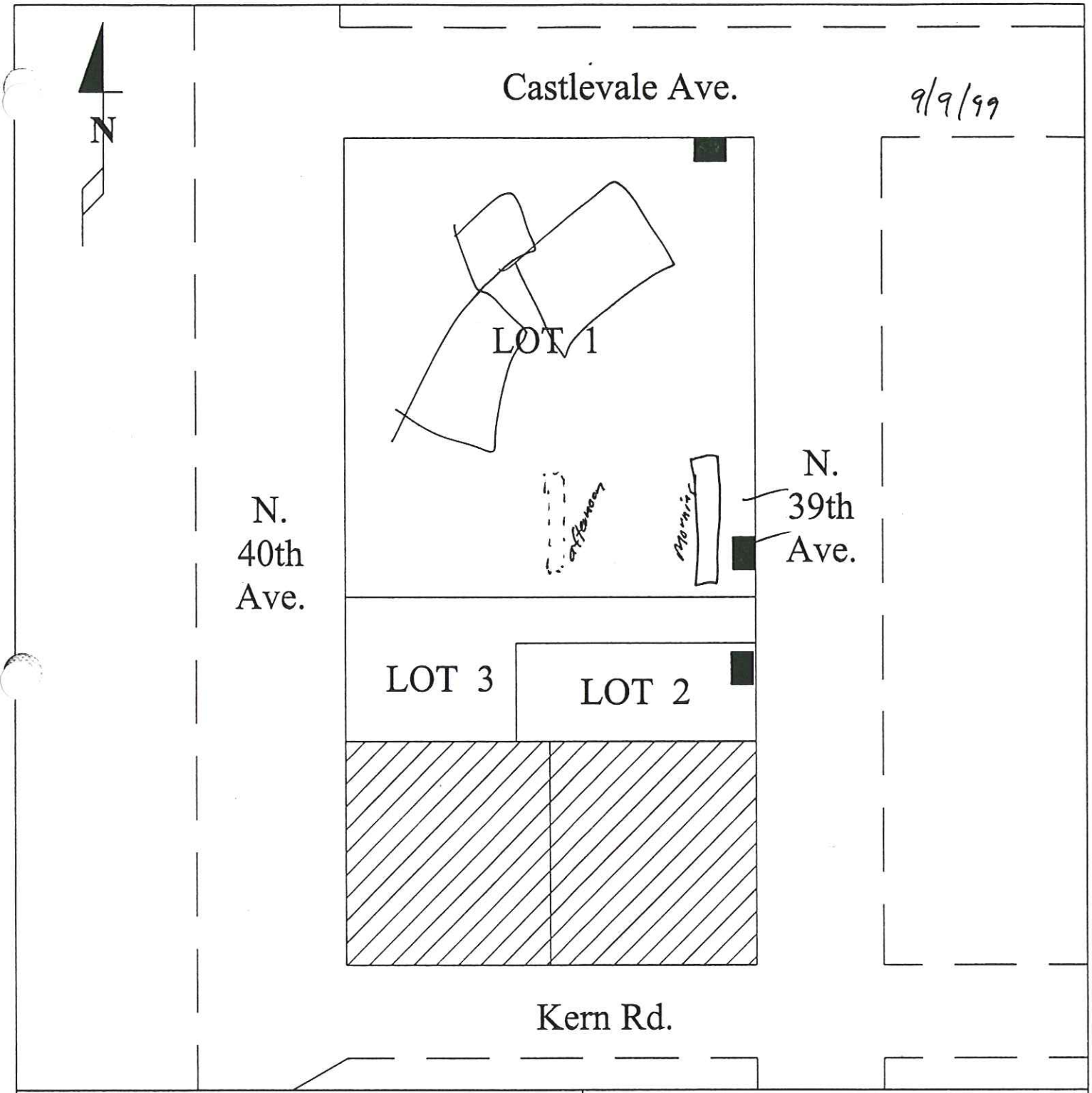
Worker Name & SSN:	Activity Performed:	Air Monitoring Performed:
Vern Forenpaher	running excavator + cat	lead, As, nuisance dust
Brad Wilke	Ground Crew	
Joe Pence	running truck	

Contractor Documentation Reviewed:

Comments:

Problems, Delays, or Follow-up:

Signature: _____ Date: 9/14/99



LEGEND

Adjacent lots (not part of subject site):

Street boundary: - - - - - -

Transformers:

Scale: NTS

FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

[redacted] Field Observation Report

Project: Northstar	Project #:	Date: 9/8/99
Contractor	Technician: T. Trent	Report #:

Contractor Employees and Equipment

Supervisor: Vern Forenpaher	Barriers:
Workers: Joe Peace	Manometer:
Brad Willse	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

7am - Excavating infiltration trenches today. (Temple & Sons)
Electric Contractor is excavating electric conduit trench (knobel electric)

1:00pm - Collected 3 soil samples from the infiltration trenches
N0909-01, 02, 03

3:30pm - Collected air Sample, trenching work continues tomorrow

Problems/Delays:

Comments:

- Site soils are moist, water truck is on-site

Brad Willcey 544-92-3953 sample 7:45am
Dozer / laborer

Schedule:

- 1st trench 1:00 pm
- 1 work days left

- final site grading by Leland Hyatt

Clearance:

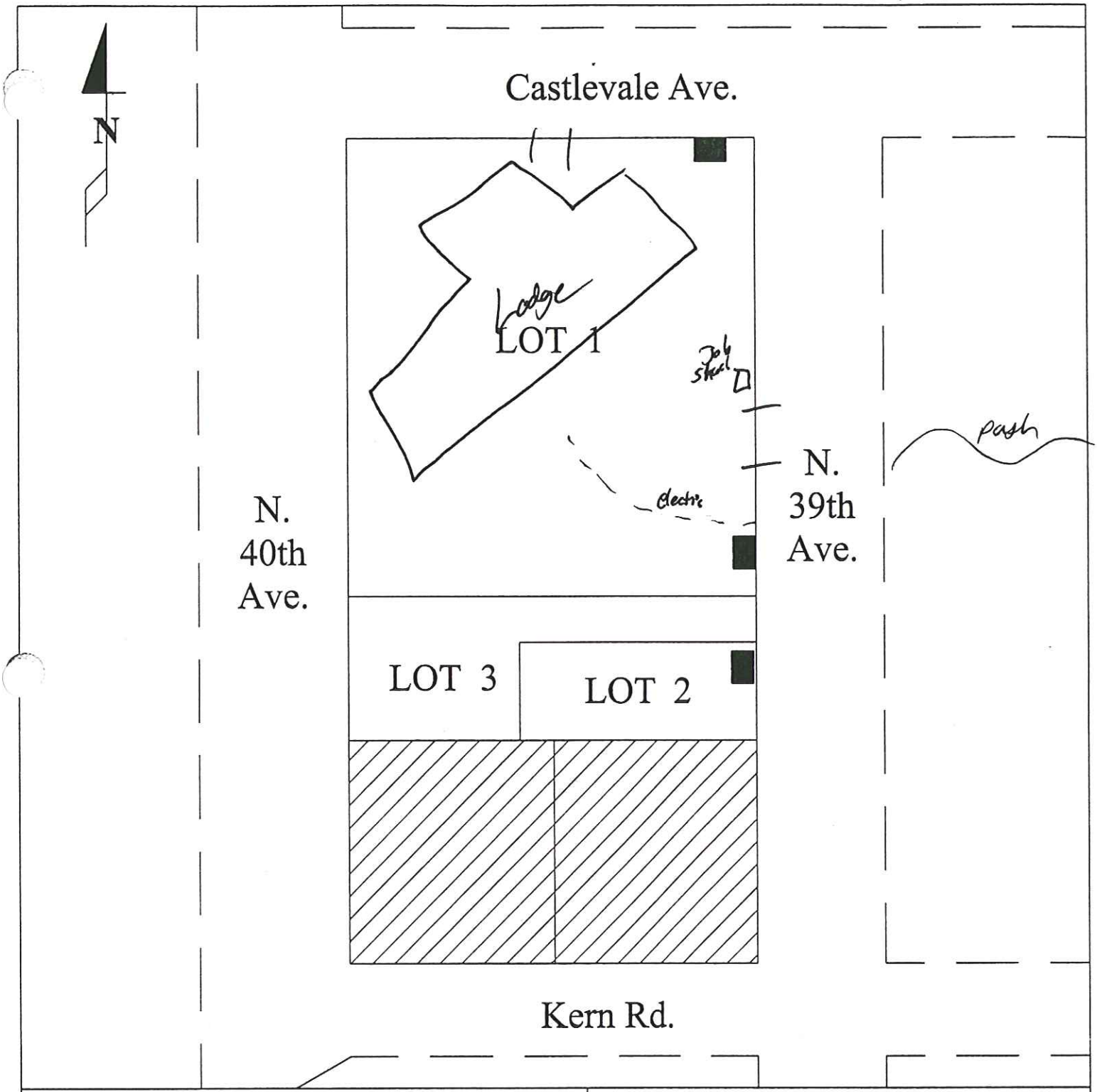
Visual:

PCM:

TEM:

Signature: [redacted] Date: 9/8/99

9/8/99



LEGEND

Adjacent lots (not part of subject site):

Street boundary: - - - - - -

Transformers:

Scale: NTS

FIGURE 2

Subject Site Map
N. 39th Avenue and Kern Road
Yakima, Washington

FULCRUM ENVIRONMENTAL CONSULTING, INC.
105 SOUTH 3RD STREET
YAKIMA, WASHINGTON 98901
(509) 574-0839

DRAWN BY: CRH	PROJECT NUMBER: 98921
DATE: 01/08/99	FILE NAME: Memorial Cancer Project

Asbestos Abatement Field Observation Report

Project: Northstar Lodge	Project #:	Date: 5/19/99
Contractor Leland Hyatt	Technician: Travis Trent	Report #:

Contractor Employees and Equipment

Supervisor: Steve Hyatt - ditch	Barriers:
Workers: Tim Peterson - excavator	Manometer:
Butch McMillin - dump truck	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

- Soil going across the road to be stockpiled. Water truck on-site. Soil is being kept wet. Truck tires being cleaned on wash pad prior to leaving site. Will use geo-textile if it gets to muddy.

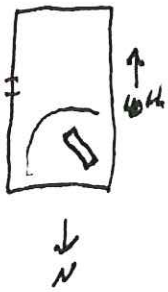
- Excavating footings in Basement area

Problems/Delays:

- light breeze today. Sunny

Comments:

- Air samples on Steve + Tim



Schedule:

Clearance:

Visual:

PCM:

TEM:

Signature: Date:

~~Asbestos Abatement~~ Field Observation Report

Project: Memorial Cancer Ctr	Project #:	Date: 3/23/99
Contractor V.K. Powell/Leland Hyatt	Technician: Travis Trent	Report #:

Contractor Employees and Equipment

Supervisor:	Barriers:
Workers:	Manometer:
	Neg Air:
	Smoke:
	Surfactant:
	Work Area:

Daily Written Report

Work Performed:

7:30 am - 2nd day of earth moving activities. Using a Cat to cut soil back from property boundaries. Using a grader/cutter to removes soil. Soil is being transported across street to adjacent property to be used as fill. Road between is covered by geo textile fabric, gravel wash station has been constructed at exit point from site for cleaning vehical tires. A water truck is on-site. Site soils are wet. No visible emmissions from Cat operation. Grader/cutter generates a

~~Problems/Delays~~: small cloud (less than 1/3 vehical length) where soil is dropped into bin. A roller is also on-site.

~~Comments~~: Civil Engineering firm on-site taking elevation measurments.

~~Schedule~~: Running personal samples on Dozer + cutter operators.

Clearance:

Visual:

PCM:

TEM:

Signature: [signature] Date: 3/23/99

APPENDIX I

ANALYTICAL SUMMARY TABLES

Initial Samples

Table 6.5.1.1 Initial Site Investigation

Sample Date	Sample Number/ Grid Location	Arsenic mg/kg EPA 6010A Sample Depth				Lead mg/kg EPA 6010A Sample Depth			DDT mg/kg EPA 8081 Sample Depth
		4" - 6"	2'	4'	6'	4" - 6"	2'	4'	4" - 6"
1/22/99	CC122-01A	62.5							
1/22/99	CC122-01B		<4.0				<4.0		
1/22/99	CC122-02A	81.3							
1/22/99	CC122-02B		32.7						
1/22/99	CC122-02C			<4.0					
1/22/99	CC122-03A	77.3				188.0			
1/22/99	CC122-03B		39.2						
1/22/99	CC122-03C			<4.0					
1/22/99	CC122-04A	<4.0							
1/22/99	CC122-04B		<4.0						0.0351
1/22/99	CC122-05A	40.6							
1/22/99	CC122-05B		24.7				<4.0		
1/22/99	CC122-05C			12.1					
2/4/99	CC0204-01	13.5							
2/4/99	CC0204-02	58.6							
2/4/99	CC0204-03	36.1							
2/4/99	CC0204-04	49.4							
2/4/99	CC0204-05	63.6				270.0			
2/4/99	CC0204-06	31.1							
2/4/99	CC0204-07	64.2				674.0			
2/4/99	CC0204-08	9.5							
2/4/99	CC0204-09	15.1							
2/4/99	CC0204-10	8.5							
2/4/99	CC0204-11	<4.0							1.960
2/4/99	CC0204-12	36.1							
2/4/99	CC0204-13	76.7							
2/4/99	CC0204-14	64.0				610.0			
2/4/99	CC0204-15	<4.0							
2/4/99	CC0204-16	11.2				50.3			
2/4/99	CC0204-17	44.3							
2/4/99	CC0204-18	17.4							
2/4/99	CC0204-19	19.6				37.2			
2/4/99	CC0204-20	44.7							
2/4/99	CC0204-21	70.7							
2/4/99	CC0204-22	63.8				706.0			
2/4/99	CC0204-23	42.7							
2/4/99	CC0204-24	54.0							
2/4/99	CC0204-25	68.6							
2/4/99	CC0204-26	20.7				180.0			
2/4/99	CC0204-27	38.5							
2/4/99	CC0204-28	74.1							

Table 6.5.1.1 Initial Site Investigation

Sample Date	Sample Number/ Grid Location	Arsenic mg/kg EPA 6010A Sample Depth				Lead mg/kg EPA 6010A Sample Depth			DDT mg/kg EPA 8081 Sample Depth
		4" - 6"	2'	4'	6'	4" - 6"	2'	4'	4" - 6"
2/4/99	CC0204-29	113.0							
2/4/99	CC0204-30	88.7				844.0			
2/4/99	CC0204-31	20.7							
2/4/99	CC0204-32	69.2							
2/4/99	CC0204-33	124.0							
2/4/99	CC0204-34	60.6				674.0			
2/4/99	CC0204-35	84.1							
2/4/99	CC0204-36	96.6							
2/4/99	CC0204-37	17.8							0.999
2/4/99	CC0204-38	49.4				204.0			

Infiltration Trench Samples

Table 6.5.2.1 Infiltration Trenches

Sample Date	Sample Number	Arsenic mg/kg EPA 6020	Lead mg/kg EPA 6020	DDT mg/kg EPA 8081
9/14/99	NS0914-01	19.1		
9/14/99	NS0914-02	4.9		
9/14/99	NS0914-03	5.3	5.1	
9/14/99	NS0914-04	5.0		
9/14/99	NS0914-05	12.0	4.4	<0.00285

Adjacent Site Samples

Table 6.5.5.1 Adjacent Site Sampling

Sample Date	Sample Number	Arsenic mg/kg EPA 6020	Lead mg/kg EPA 6020
9/8/99	N0908-01	4.8	
9/8/99	N0908-02	7.3	11.6
9/8/99	N0908-03	7.3	
9/10/99	N0910-01	38.8	
9/10/99	N0910-02	10.1	
9/10/99	N0910-03	7.1	
9/10/99	N0910-04	23.2	194.0
9/10/99	N0910-05	13.6	
9/10/99	N0910-06	17.6	

Topsoil Suitability Samples

Table 6.5.3.1 Topsoil Suitability

Sample Date	Sample Number	Arsenic mg/kg EPA 6020	Lead mg/kg EPA 6020	DDT mg/kg EPA 8081
6/2/99	C0602-01	2.2	5.6	
6/2/99	C0602-02	3.0	6.5	<0.0274
6/2/99	C0602-03	2.5	6.6	
6/2/99	C0602-04	2.6	6.9	
6/2/99	C0602-05	2.4	6.4	<0.0279
6/2/99	C0602-06	1.8	6.5	

Additional Topsoil Suitability Samples

Table 6.5.3.2 Topsoil Suitability

Sample Date	Sample Number	Arsenic mg/kg EPA 6020	Lead mg/kg EPA 6020	DDT mg/kg EPA 8081
3/3/00	NS0303-01	<4.0	<4.0	
3/3/00	NS0303-02	4.4		
3/3/00	NS0303-03	<4.0		
3/3/00	NS0303-04	<4.0		
3/3/00	NS0303-05	5.9		
3/3/00	NS0303-06	7.0	<4.0	
3/3/00	NS0303-07	<4.0		<0.00352

Post Remedial Samples

Table 6.5.4.1 Post Remediation Sampling

Sample Date	Sample Number	Arsenic mg/kg EPA 7060	Lead mg/kg EPA 7421	DDT mg/kg EPA 8081
6/5/00	MC605-02	62.5		
6/5/00	MC605-05	70.5	338.0	
6/5/00	MC605-07	6.9		
6/5/00	MC605-11	9.9		
6/5/00	MC605-12	29.0		
6/5/00	MC605-16	8.8		
6/5/00	MC605-18	13.8		
6/5/00	MC605-21	13.9		0.107
6/5/00	MC605-25	12.6		
6/5/00	MC605-27	13.8	39.7	
6/5/00	MC605-29	12.8		
6/5/00	MC605-33	11.8		

Additional Post Remedial Samples

Table 6.5.4.2 Additional Post Remediation Sampling

Sample Date	Sample Number	Arsenic mg/kg EPA 7060	Lead mg/kg EPA 7421
8/10/00	NS0810-01	58.8	
8/10/00	NS0810-02	2.2	
8/10/00	NS0810-03	36.2	120
8/10/00	NS0810-04	20.7	
9/8/00	0908-01	3.0	
9/8/00	0908-02	2.6	5.4
9/8/00	0908-03	2.5	
9/8/00	0908-04	3.7	

APPENDIX J

ANALYTICAL LABORATORY REPORTS AND
CHAIN OF CUSTODY RECORDS

Initial Samples

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 2/01/99

SVL JOB No. : 90243
Date of Report : 2/12/99

SVL ID	CLIENT SAMPLE ID	Test Method	As 6010A	Pb 6010A	% Sol. 999
S196335	CC122-01A	1/22/99	62.5mg/kg	***	78.6%
S196336	CC122-01B	1/22/99	<4.0mg/kg	<4.0mg/kg	93.4%
S196337	CC122-01C	1/22/99	***	***	***
S196338	CC122-01D	1/22/99	***	***	***
S196339	CC122-02A	1/22/99	81.3mg/kg	***	84.0%
S196340	CC122-02B	1/22/99	32.7mg/kg	***	94.9%
S196341	CC122-02C	1/22/99	***	***	***
S196342	CC122-02D	1/22/99	***	***	***
S196343	CC122-03A	1/22/99	77.3mg/kg	188mg/kg	91.1%
S196344	CC122-03B	1/22/99	39.2mg/kg	***	93.9%
S196345	CC122-03C	1/22/99	***	***	***
S196346	CC122-03D	1/22/99	***	***	***
S196347	CC122-04A	1/22/99	<4.0mg/kg	***	90.4%
S196348	CC122-04B	1/22/99	<4.0mg/kg	***	93.0%
S196349	CC122-04C	1/22/99	***	***	***
S196350	CC122-04D	1/22/99	***	***	***
S196351	CC122-05A	1/22/99	40.6mg/kg	***	89.7%
S196352	CC122-05B	1/22/99	24.7mg/kg	<4.0mg/kg	94.8%
S196353	CC122-05C	1/22/99	***	***	***
S196354	CC122-05D	1/22/99	***	***	***

***: Not Requested Soil Samples: As Received Basis

Reviewed By: Blake Johnson Date: 2/12/99

SVL ANALYTICAL, INC. Quality Control Report

Part I Prep Blank and Laboratory Control Sample

lient :FULCRUM ENVIRONMENTAL SVL JOB No. :90243

Analyte	Method	Matrix	Units	Prep Blank	True——LCS——Found		LCS %R	Analysis Date
Arsenic	6010A	SOIL	mg/kg	<4.0	163	182	111.7	2/10/99
Lead	6010A	SOIL	mg/kg	<4.0	66.0	67.9	102.9	2/10/99

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC. Quality Control Report

Part II Duplicate and Spike Analysis

ient :FULCRUM ENVIRONMENTAL SVL JOB No :90243

Test	Method	Matrix	QC SAMPLE ID Units	QC SAMPLE ID Result	Duplicate Result	Duplicate RPD%	Matrix Spike Result	Matrix Spike SPK ADD	Matrix Spike %R	Test Date
As	6010A	SOIL	1 mg/kg	<4.0	<4.0	UDL	112	100	112.0	2/10/99
Pb	6010A	SOIL	1 mg/kg	<4.0	<4.0	UDL	101	100	101.0	2/10/99
% Sol.	999	SOIL	1 %	93.4	93.5	0.1	N/A	N/A	N/A	2/09/99

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) Duplicate may be MSD for organics. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 196336 Client Sample ID: CC122-01B

SVL ANALYTICAL

February 11,1999

Travis Trent
Fulcrum Environmental
122 S. 3rd St.
Yakima, WA 98901

Dear Mr. Trent;
Enclosed are the results of the DDT (8081) analyses for the 1 soil sample submitted 2/1/99.

PO #: 98921.1

Please call if you have any questions and refer to SVL Job # 90243.

Sincerely yours,

Faye Smythe
Chemist, Organics Dept.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081)

Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	92.4%
Final Extraction Volume (mls):	10.0
Dilution Factor:	1.0

Client Sample ID:	CC122-04B
SVL Job #:	90243
SVL Sample ID:	S196348
Sample Matrix:	Soil
Date Sampled:	01/22/99
Date Extracted:	02/01/99
Date Analyzed:	02/06/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	2.89	35.1

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	46%	60-150
Decachlorobiphenyl	58%	60-150

COMMENTS:

Reviewed by: Judy Magin Date: 02/10/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081)
Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	100%
Final Extraction Volume (mls):	10.0
Dilution Factor:	1.0

Client Sample ID:	**PREP BLANK**
SVL Job #:	90243
SVL Sample ID:	S196333P
Sample Matrix:	Soil
Date Sampled:	NA
Date Extracted:	02/01/99
Date Analyzed:	02/06/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	2.67	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	52%	60-150
Decachlorobiphenyl	57%	60-150

COMMENTS:

Reviewed by: Judy Magin Date: 02/10/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : LCS / LCSD *

Client Sample ID: **Lab Control Samples**

Method:
Chlorinated Pesticides / PCB (8081)
Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	100%
Final Ext. Vol. (mls):	10.0
Dilution Factor:	1.0

SVL Job #:	90243
SVL Sample ID:	S196334C/D
Sample Matrix:	NA
Date Sampled:	NA
Date Extracted:	02/01/99
Date Analyzed:	02/06/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

#	COMPOUND NAME	SPIKE CONC.	AMPLE CONC.	LCS CONC.	LCSD CONC.	**LCS % REC.**	**LCSD % REC.**	RPD **
3	4'4-DDT	33.3	ND	34.4	33.3	**103%**	**100%**	2%

QC LIMITS	
RPD	REC.
20	70 - 120

SURROGATE RECOVERIES

COMPOUND NAME	LCS % REC.	LCSD % REC.	QC LIMITS
Tetrachloro-m-xylene	55%	55%	60 - 150
Decachlorobiphenyl	62%	60%	60 - 150

COMMENTS: None

ND = Not detected
* LCS / LCSD = Laboratory Control Sample / Laboratory Control Sample Duplicate
** RPD = Relative Percent Difference

Reviewed by: Judy Magin Date: 02/10/99

CHAIN OF CUSTODY RECORD

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: Memorial Soil

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 90243

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead (Total)	Analyses Required: Arsenic (Total)	Analyses Required: TCLP	Comments
1 CC122-01A	1/22/99	12:15	TT	3	1	N								X		
2 CC122-01B	"	12:17	TT	3	1	N							X	X		
3 CC122-01C	"	12:18	TT	3	1	N										Hold for further test
4 CC122-01D	"	12:20	TT	3	1	N										"
5 CC122-02A	"	12:25	TT	3	1	N								X		
6 CC122-02B	"	12:26	TT	3	1	N								X		
7 CC122-02C	"	12:28	TT	3	1	N										Hold for further testing
8 CC122-02D	"	12:29	TT	3	1	N										"
9 CC122-03A	"	12:35	TT	3	1	N							X	X		
10 CC122-03B	"	12:37	TT	3	1	N								X		

TEMP 1 Reading 1.7
SAMPLE I.D. ON ALL SAMPLES DO NOT MATCH C.o.c
Ja 02/01/99

Relinquished by:	Date:	Time:	Received by: London Autry	Date: 02/01/99	Time: 0930
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

CHAIN OF CUSTODY RECORD

Page 2 of 2

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 94921.1
Project Name: Memorial Soil

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 90243

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead (Total)	Analyses Required: Arsenic (Total)	Analyses Required: TPH	Comments
1. CC122-03C	1/22/99	12:38	TT	3	1	N										Hold for further testing
2. CC122-03D	"	12:40	TT	3	1	N										"
3. CC122-04A	"	12:42	TT	3	1	N								X		
4. CC122-04B	"	12:43	TT	3	1	N								X	X	
5. CC122-04C	"	12:45	TT	3	1	N										Hold for further testing
6. CC122-04D	"	12:46	TT	3	1	N										"
7. CC122-05A	"	1:50	TT	3	1	N								X		
8. CC122-05B	"	1:51	TT	3	1	N							X	X		
9. CC122-05C	"	1:52	TT	3	1	N										
10. CC122-05D	"	1:55	TT	3	1	N										Hold for further testing

SAMPLE I.D. ON ALL SAMPLES DO NOT MATCH C.C.C. for 02/01/99

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			Gordon Smith	2/01/99	0930
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 3/18/99

SVL JOB No. : 90649
Date of Report : 3/25/99

SVL ID	CLIENT SAMPLE ID	Test Method	As 6010A	% Sol. 999
S199611	CC122-02C	1/22/99	<4.0mg/kg	95.4%
S199612	CC122-03C	1/22/99	<4.0mg/kg	95.5%
S199613	CC122-05C	1/22/99	12.1mg/kg	95.5%

Soil Samples: As Received Basis

Reviewed By: Blake Johnson Date: 3/25/99

SVL ANALYTICAL, INC. Quality Control Report

Part I Prep Blank and Laboratory Control Sample

Client :FULCRUM ENVIRONMENTAL SVL JOB No. :90649

Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found		LCS %R	Analysis Date
Arsenic	6010A	SOIL	mg/kg	<4.0	163	174	106.7	3/23/99

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC. Quality Control Report

Part II Duplicate and Spike Analysis

Client :FULCRUM ENVIRONMENTAL SVL JOB No :90649

Test	Method	Matrix	QC SAMPLE ID Units	QC SAMPLE ID Result	Duplicate Result	Duplicate RPD%	Matrix Spike Result	Matrix Spike SPK ADD	Matrix Spike %R	Test Date
As	6010A	SOIL	1 mg/kg	<4.0	<4.0	UDL	111	100	111.0	3/23/99
% Sol.	999	SOIL	1 %	95.4	95.4	0.0	N/A	N/A	N/A	3/22/99

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) Duplicate may be MSD for organics. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 199611 Client Sample ID: CC122-02C

SVL ANALYTICAL

CHAIN OF CUSTODY RECORD

Page

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: Memorial Soil

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 90243

Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead (Total)	Analyses Required: Arsenic (Total)	Analyses Required: TCLP	Comments
1. CC122-03C	1/22/99	12:38	TT	3	1	N										Hold for further testing
2. CC122-03D	"	12:40	TT	3	1	N										"
3. CC122-04A	"	12:42	TT	3	1	N								X		
CC122-04B	"	12:43	TT	3	1	N								X	X	
5. CC122-04C	"	12:45	TT	3	1	N										Hold for further testing
6. CC122-04D	"	12:46	TT	3	1	N										"
7. CC122-05A	"	1:50	TT	3	1	N								X		
8. CC122-05B	"	1:51	TT	3	1	N							X	X		
9. CC122-05C	"	1:52	TT	3	1	N										Hold for further testing
10. CC122-05D	"	1:55	TT	3	1	N										"

SAMPLE I.D. ON ALL SAMPLES DO NOT MATCH C.O.C. 1/01/99

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
			Gordon Austin	1/01/99	0930
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

CHAIN OF CUSTODY RECORD

Page

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St. Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

PO#: 98921.1
Project Name: Memorial Soil

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB #
90243

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

	Collection		Miscellaneous				Preservative(s)						Analyses Required												
Sample ID	Date	Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Lead (Total)	Arsenic (Total)	TCLP										
1. CC122-01A	1/22/99	12:15	TT	3	1	N							X	X											
2. CC122-01B	"	12:17	TT	3	1	N								X											
3. CC122-01C	"	12:18	TT	3	1	N																			
4. CC122-01D	"	12:20	TT	3	1	N								X											
5. CC122-02A	"	12:25	TT	3	1	N								X											
6. CC122-02B	"	12:26	TT	3	1	N																			
7. CC122-02C	"	12:28	TT	3	1	N																			
8. CC122-02D	"	12:29	TT	3	1	N							X	X											
9. CC122-03A	"	12:35	TT	3	1	N								X											
10. CC122-03B	"	12:37	TT	3	1	N																			

TEMP 1°C on ICE 1/99
SAMPLE I.D. on ALL SAMPLES DO NOT MATCH C.o.c. Jan 02/01/99

Comments

Hold for further testing
"
Hold for further testing
"

Relinquished by:	Date:	Time:	Received by: Gordon Finley
Relinquished by:	Date:	Time:	Received by:

Date: 02/01/99 Time: 0930
Date: Time:

* Sam... Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

FROM SVL ANALYTICAL

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 2/09/99

SVL JOB No. : 90311
Date of Report : 2/17/99

SVL ID	CLIENT SAMPLE ID	Test Method	As 6010A	Pb 6010A	% Sol. 999
S196900	CC0204-01	2/04/99	13.5mg/kg	***	86.2%
S196901	CC0204-02	2/04/99	58.6mg/kg	***	83.3%
S196902	CC0204-03	2/04/99	36.1mg/kg	***	87.0%
S196903	CC0204-04	2/04/99	49.4mg/kg	***	85.8%
S196904	CC0204-05	2/04/99	63.6mg/kg	270mg/kg	87.0%
S196905	CC0204-06	2/04/99	31.1mg/kg	***	86.8%
S196906	CC0204-07	2/04/99	64.2mg/kg	674mg/kg	86.7%
S196907	CC0204-08	2/04/99	9.5mg/kg	***	82.2%
S196908	CC0204-09	2/04/99	15.1mg/kg	***	84.9%
S196909	CC0204-10	2/04/99	8.5mg/kg	***	84.5%
S196910	CC0204-21	2/04/99	70.7mg/kg	***	79.6%
S196911	CC0204-22	2/04/99	63.8mg/kg	706mg/kg	82.8%
S196912	CC0204-23	2/04/99	42.7mg/kg	***	87.1%
S196913	CC0204-24	2/04/99	54.0mg/kg	***	83.2%
S196914	CC0204-25	2/04/99	68.6mg/kg	***	81.4%
S196915	CC0204-26	2/04/99	20.7mg/kg	180mg/kg	85.5%
S196916	CC0204-27	2/04/99	38.5mg/kg	***	85.9%
S196917	CC0204-28	2/04/99	74.1mg/kg	***	85.8%
S196918	CC0204-29	2/04/99	113mg/kg	***	83.7%
S196919	CC0204-30	2/04/99	88.7mg/kg	844mg/kg	84.8%

***: Not Requested Soil Samples: As Received Basis

Reviewed By: Blake Johnson Date: 2/17/99

SVL ANALYTICAL, INC. Quality Control Report

Part I Prep Blank and Laboratory Control Sample

Client :FULCRUM ENVIRONMENTAL SVL JOB No. :90311

Analyte	Method	Matrix	Units	Prep Blank	True	LCS	Found	LCS %R	Analysis Date
Arsenic	6010A	SOIL	mg/kg	<4.0	163		181	111.0	2/16/99
Lead	6010A	SOIL	mg/kg	<4.0	66.0		72.9	110.5	2/16/99
% Solids	999	SOIL	%		N/A			N/A	2/20/99

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC. Quality Control Report

Part II Duplicate and Spike Analysis

ient :FULCRUM ENVIRONMENTAL SVL JOB No :90311

Test	Method	Matrix	QC SAMPLE ID Units	QC SAMPLE ID Result	Duplicate Result	Duplicate RPD%	Matrix Spike Result	Matrix Spike SPK ADD		Matrix Spike %R	Test Date
As	6010A	SOIL	1 mg/kg	63.6	57.6	9.9	149	100		85.4	2/16/99
Pb	6010A	SOIL	1 mg/kg	270	200	29.8	365	100	A	95.0	2/16/99
% Sol.	999	SOIL	1 %	87.0	86.8	0.2	N/A	N/A		N/A	2/12/99

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) Duplicate may be MSD for organics. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 196904 Client Sample ID: CC0204-05

CHAIN OF CUSTODY RECORD

Page 1 of 4

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

PO#: Cancer Center Soil
Project Name: 98921.1

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 90311

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

TEMP 3°C Jm 02/09/99

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead (Total)	Analyses Required: Arsenic (Total)	Analyses Required: DDT	Comments
1. CC0204-01	02/04/99	2:30	TT	3	1	N	X							X		
2. " -02	"	2:32	TT	3	1	N	X							X		
3. " -03	"	2:33	TT	3	1	N	X							X		
4. " -04	"	2:33	TT	3	1	N	X							X		
5. " -05	"	2:34	TT	3	1	N	X						X	X		
6. " -06	"	2:35	TT	3	1	N	X							X		
7. " -07	"	2:36	TT	3	1	N	X						X	X		
8. " -08	"	2:37	TT	3	1	N	X							X		
9. " -09	"	2:40	TT	3	1	N	X							X		
10. " -10	"	2:41	TT	3	1	N	X							X		

Relinquished by: [signature]	Date: 2/8/99	Time: 4:00	Received by: Gordon Arthur	Date: 02/03/99	Time: 0950
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

CHAIN OF CUSTODY RECORD

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 1225 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

PO#: 98921.1
Project Name: Cerro Center Soil

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB #
90311

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead (total)	Analyses Required: Arsenic (total)	Analyses Required: TCLP	Comments
1. CC0204 - 21	02/04/99	3:08	TT	3	1	N	X							X		
2. " - 22	"	3:09	TT	3	1	N	X						X	X		
3. " - 23	"	3:10	TT	3	1	N	X							X		
4. " - 24	"	3:13	TT	3	1	N	X							X		
5. " - 25	"	3:12	CH	3	1	N	X							X		
6. " - 26	"	3:16	CH	3	1	N	X						X	X		
7. " - 27	"	3:03	CH	3	1	N	X							X		
8. " - 28	"	3:02	CH	3	1	N	X							X		
9. " - 29	"	2:58	CH	3	1	N	X							X		
10. " - 30	"	2:56	CH	3	1	N	X						X	X		

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	2/8/99	4:00	Gordon Ritter	02/03/99	0950
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 2/09/99

SVL JOB No. : 90313
Date of Report : 2/23/99

SVL ID	CLIENT SAMPLE ID	Test Method	As 6010A	Pb 6010A	% Sol. 999
S196925	CC0204-11	2/04/99	<4.0mg/kg	***	80.3%
S196926	CC0204-12	2/04/99	36.1mg/kg	***	80.4%
S196927	CC0204-13	2/04/99	76.7mg/kg	***	87.5%
S196928	CC0204-14	2/04/99	64.0mg/kg	610mg/kg	88.2%
S196929	CC0204-15	2/04/99	<4.0mg/kg	***	87.4%
S196930	CC0204-16	2/04/99	11.2mg/kg	50.3mg/kg	83.6%
S196931	CC0204-17	2/04/99	44.3mg/kg	***	84.3%
S196932	CC0204-18	2/04/99	17.4mg/kg	***	85.6%
S196933	CC0204-19	2/04/99	19.6mg/kg	37.2mg/kg	86.0%
S196934	CC0204-20	2/04/99	44.7mg/kg	***	82.8%
S196935	CC0204-31	2/04/99	20.7mg/kg	***	88.0%
S196936	CC0204-32	2/04/99	69.2mg/kg	***	80.5%
S196937	CC0204-33	2/04/99	124mg/kg	***	85.7%
S196938	CC0204-34	2/04/99	60.6mg/kg	674mg/kg	87.0%
S196939	CC0204-35	2/04/99	84.1mg/kg	***	82.7%
S196940	CC0204-36	2/04/99	96.6mg/kg	***	87.0%
S196941	CC0204-37	2/04/99	17.8mg/kg	***	89.6%
S196942	CC0204-38	2/04/99	49.4mg/kg	204mg/kg	85.4%

***: Not Requested Soil Samples: As Received Basis

Reviewed By: Blake Johnson Date: 2/23/99

Part I Prep Blank and Laboratory Control Sample

Client :FULCRUM ENVIRONMENTAL SVL JOB No. :90313

Analyte	Method	Matrix	Units	Prep Blank	True	LCS	Found	LCS %R	Analysis Date
Arsenic	6010A	SOIL	mg/kg	<4.0	163		165	101.2	2/16/99
Lead	6010A	SOIL	mg/kg	<4.0	66.0		64.4	97.6	2/16/99
% Solids	999	SOIL	%		N/A			N/A	2/20/99

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC. Quality Control Report

Part II Duplicate and Spike Analysis

ient :FULCRUM ENVIRONMENTAL SVL JOB No :90313

Test	Method	Matrix	QC SAMPLE ID Units	Result	Duplicate Result	RPD%	Matrix Spike Result	SPK ADD	%R	Test Date
As	6010A	SOIL	1 mg/kg	64.0	51.8	21.1	149	100	85.0	2/16/99
Pb	6010A	SOIL	1 mg/kg	610	395	42.8	436	100	R >4S	2/16/99
% Sol.	999	SOIL	1 %	88.2	88.7	0.6	N/A	N/A	N/A	2/16/99

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) Duplicate may be MSD for organics. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 196928 Client Sample ID: CC0204-14

February 23,1999

Travis Trent
Fulcrum Environmental
122 S. 3rd St.
Yakima, WA 98901

Dear Mr. Trent;
Enclosed are the results of the DDT (8081) analyses for the 2 soil samples submitted 2/9/99.

PO #: 98921.1

Please call if you have any questions and refer to SVL Job # 90313.

Sincerely yours,

Faye Smythe
Chemist, Organics Dept.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081)
Client:
Fulcrum Environmental

Client Sample ID:	**CC0204-11**		
SVL Job #:	90313		
SVL Sample ID:	S196925		
Sample Matrix:	Soil		
Date Sampled:	02/04/99		
Date Extracted:	02/10/99		
Sample Weight (gr):	30.0	Date Analyzed:	02/19/99
% Dry Solids:	80.2%	GPC Clean-up ?:	NO
Final Extraction Volume (mls):	10.0	Analyst:	FS
Dilution Factor:	100	Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	333	1960

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	**	60-150
Decachlorobiphenyl	**	60-150

COMMENTS: surrogates not available due to dilution factor

Reviewed by: Wendy Ozminkowski Date: 2/23/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081)
Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	90.3%
Final Extraction Volume (mls):	10.0
Dilution Factor:	100

Client Sample ID:	**CC0204-37**
SVL Job #:	90313
SVL Sample ID:	S196941
Sample Matrix:	Soil
Date Sampled:	02/04/99
Date Extracted:	02/10/99
Date Analyzed:	02/19/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	295	999

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	**	60-150
Decachlorobiphenyl	**	60-150

COMMENTS: surrogates not available due to dilution factor

Reviewed by: Wendy Ozminkowski Date: 2/23/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081)
Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	100%
Final Extraction Volume (mls):	10.0
Dilution Factor:	1.0

Client Sample ID:	**PREP BLANK**
SVL Job #:	90313
SVL Sample ID:	S196923P
Sample Matrix:	Soil
Date Sampled:	NA
Date Extracted:	02/10/99
Date Analyzed:	02/19/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	2.67	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	49%	60-150
Decachlorobiphenyl	63%	60-150

COMMENTS:

Reviewed by: Wendy Ozminkowski Date: 2/23/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : LCS / LCSD *

Client Sample ID: **Lab Control Samples**

Method:
Chlorinated Pesticides (8081)
Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	100%
Final Ext. Vol. (mls):	10.0
Dilution Factor:	1.0

SVL Job #:	90313
SVL Sample ID:	S196924C/D
Sample Matrix:	NA
Date Sampled:	NA
Date Extracted:	02/10/99
Date Analyzed:	02/19/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

#	COMPOUND NAME	SPIKE CONC.	AMPLE CONC.	LCS CONC.	LCSD CONC.	**LCS % REC.**	**LCSD % REC.**	RPD **
3	4'4-DDT	33.3	ND	39.6	36.1	**119%**	**108%**	6%

QC LIMITS	
RPD	REC.
20	70 - 120

SURROGATE RECOVERIES

COMPOUND NAME	LCS % REC.	LCSD % REC.
Tetrachloro-m-xylene	56%	49%
Decachlorobiphenyl	68%	63%

QC LIMITS
60 - 150
60 - 150

COMMENTS: None

ND = Not detected
* LCS / LCSD = Laboratory Control Sample / Laboratory Control Sample Duplicate
** RPD = Relative Percent Difference

Reviewed by: Wendy Ozminkowski Date: 2/23/99

CHAIN OF CUSTODY RECORD

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

PO#: 98921.1
Project Name: Cashmere Center Soil

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
(3) = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 90313

Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

TEMP 3°C 02/04/99

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead (Total)	Analyses Required: Arsenic (Total)	Analyses Required: TCLP	Comments
1. CC0204 - 11	02/04/99	2:43	TT	3	1	N	X							X	X	
2. 11 - 12	11	2:45	TT	3	1	N	X							X		
3. 11 - 13	11	2:48	TT	3	1	N	X							X		
4. 11 - 14	11	2:50	TT	3	1	N	X						X	X		
5. 11 - 15	11	2:52	TT	3	1	N	X							X		
6. 11 - 16	11	2:53	TT	3	1	N	X						X	X		
7. 11 - 17	11	2:55	TT	3	1	N	X							X		
8. 11 - 18	11	2:57	TT	3	1	N	X							X		
9. 11 - 19	11	2:59	TT	3	1	N	X						X	X		
10. 11 - 20	11	3:07	TT	3	1	N	X							X		

Relinquished by:	Date: 2/8/99	Time: 4:00	Received by: Gordon Cantu	Date: 02/09/99	Time: 0950
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

CHAIN OF CUSTODY RECORD

Page 4 of 4

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 1225 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: Cancun Center Soil

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 90313

Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Lead (Total)	Analyses Required: Cadmium (Total)	Analyses Required: TCLP	Comments
1. CC0204-31	02/04/99	3:52	CH	3	1	N	X							X		
2. " -32		2:48	CH	3	1	N	X							X		
3. " -33		2:46	CH	3	1	N	X							X		
4. " -34		2:43	CH	3	1	N	X						X	X		
5. " -35		2:40	CH	3	1	N	X							X		
6. " -36		2:37	CH	3	1	N	X							X		
7. " -37		2:34	CH	3	1	N	X							X	X	
8. CC0204-38		2:30	CH	3	1	N	X						X	X		
9.																
10.																

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Jack Green	2/8/99	4:00	Gordon Arthur	02/09/99	0950
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Rejects: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

Infiltration Trench Samples

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 92333
SVL SAMPLE No.: 215452

CLIENT SAMPLE ID: NS0914-01
Sample Collected: 9/14/99
Sample Receipt : 9/15/99
Date of Report : 9/29/99
% Solids: 90.4%
Matrix: SOIL
As Received Basis

Determination	Result	Units	Dilution	Method	Test Date	Reference
Arsenic	19.1	mg/kg	10	7060	9/28/99	2

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blaine Johnson Date 9/29/99
9/29/99 11:06

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 92333
SVL SAMPLE No.: 215453

CLIENT SAMPLE ID: NS0914-02
Sample Collected: 9/14/99
Sample Receipt : 9/15/99
Date of Report : 9/29/99
% Solids: 93.6%
Matrix: SOIL
As Received Basis

Determination	Result	Units	Dilution	Method	Test Date	Reference
Arsenic	4.9	mg/kg	3	7060	9/28/99	2

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 9/29/99
9/29/99 11:06

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 92333
SVL SAMPLE No.: 215454

CLIENT SAMPLE ID: NS0914-03
Sample Collected: 9/14/99
Sample Receipt : 9/15/99
Date of Report : 9/29/99
% Solids: 93.1%
Matrix: SOIL
As Received Basis

Determination	Result	Units	Dilution	Method	Test Date	Reference
Arsenic	5.3	mg/kg	3	7060	9/28/99	2
Lead	5.1	mg/kg	2	7421	9/28/99	2

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 9/29/99
9/29/99 11:06

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 92333
SVL SAMPLE No.: 215455

CLIENT SAMPLE ID: NS0914-04
Sample Collected: 9/14/99
Sample Receipt : 9/15/99
Date of Report : 9/29/99
% Solids: 92.4%
Matrix: SOIL
As Received Basis

Determination	Result	Units	Dilution	Method	Test Date	Reference
Arsenic	5.0	mg/kg	2	7060	9/28/99	2

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Beahe Johnson Date 9/29/99
9/29/99 11:06

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83837-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT : FULCRUM ENVIRONMENTAL
SVL JOB No. : 92333
SVL SAMPLE No.: 215456

CLIENT SAMPLE ID: NS0914-05
Sample Collected: 9/14/99
Sample Receipt : 9/15/99
Date of Report : 9/29/99
% Solids: 93.0%
Matrix: SOIL
As Received Basis

Determination	Result	Units	Dilution	Method	Test Date	Reference
Arsenic	12.0	mg/kg	5	7060	9/28/99	2
Lead	4.4	mg/kg	2	7421	9/28/99	2

REFERENCES: 1) "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-20; 2) "Test Methods for Evaluating Solid Wastes, 3rd Edition", SW 846, 1994; 3) "Standard Methods for the Examination of Water and Wastewater", 18th ED. 1992; 4) ASTM Method; 5) 40 CFR, Part 261

Reviewed By: Blake Johnson Date 9/29/99
9/29/99 11:06

SVL ANALYTICAL, INC.

Quality Control Report

Part I Prep Blank and Laboratory Control Sample

Client :FULCRUM ENVIRONMENTAL

SVL JOB No. :92333

Analyte	Method	Matrix	Units	Prep Blank	True	LCS	Found	LCS %R	Analysis Date
Arsenic	7060	SOIL	mg/kg	<0.1	90.8		82.7	91.1	9/28/99
Lead	7421	SOIL	mg/kg	<0.1	122		121	99.2	9/28/99
% Solids	999	SOIL	%		N/A			N/A	9/25/99
PCBs	8081	SOIL	ppb		N/A			N/A	9/20/99

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC.

Quality Control Report

Part II Duplicate and Spike Analysis

Client :FULCRUM ENVIRONMENTAL

SVL JOB No :92333

Test	Method	Matrix	QC SAMPLE ID	Units	Result	Duplicate Result	Duplicate RPD%	Matrix Spike Result	Matrix Spike SPK ADD	Matrix Spike %R	Test Date
As	7060	SOIL	1	mg/kg	12.0	12.1	0.8	16.8	5.00	96.0	9/28/99
Pb	7421	SOIL	1	mg/kg	4.4	4.7	6.6	9.4	5.00	100.0	9/28/99
% Sol.	999	SOIL	1	%	93.0	93.1	0.1	N/A	N/A	N/A	9/24/99

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) Duplicate may be MSD for organics. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 215456 Client Sample ID: NS0914-05

SVL ANALYTICAL

September 21, 1999

Travis Trent
Fulcrum Environmental
122 S. 3rd St.
Yakima, WA 98901

Dear Mr. Trent;
Enclosed are the results of the DDT (8081A) analysis for the 1 soil sample submitted 9/15/99.

PO #: 98921.1
Project Name: North Star Lodge

Please call if you have any questions and refer to SVL Job # 92333.

Sincerely yours,

Kristine Haakenson
Chemist, Organics Dept.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081A)

Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	93.7%
Final Extraction Volume (mls):	10.0
Dilution Factor:	1.0

Client Sample ID:	**NS0914-05**
SVL Job #:	92333
SVL Sample ID:	S215456
Sample Matrix:	Soil
Date Sampled:	09/14/99
Date Extracted:	09/16/99
Date Analyzed:	09/17/99
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	2.85	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	80%	60-150
Decachlorobiphenyl	88%	60-150

COMMENTS: None

Reviewed by: WOz Date: 9/21/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081A)

Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	100.0%
Final Extraction Volume (mls):	10.0
Dilution Factor:	1.0

Client Sample ID:	**PREP BLANK**
SVL Job #:	92333
SVL Sample ID:	S215450P
Sample Matrix:	Soil
Date Sampled:	NA
Date Extracted:	09/16/99
Date Analyzed:	09/17/99
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	2.67	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	80%	60-150
Decachlorobiphenyl	86%	60-150

COMMENTS: None

Reviewed by: _____ Date: 9/21/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : LCS / LCSD *

Client Sample ID: **Lab Control Samples**

Method: **Chlorinated Pesticides (8081A)**

Client: **Fulcrum Environmental**

Sample Weight (gr):	30.0
% Dry Solids:	100%
Final Ext. Vol. (mls):	10.0
Dilution Factor:	1.0

SVL Job #:	92333
SVL Sample ID:	S215451C/D
Sample Matrix:	Soil
Date Sampled:	NA
Date Extracted:	09/16/99
Date Analyzed:	09/17/99
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	SPIKE CONC.	AMPLE CONC.	LCS CONC.	LCSD CONC.	**LCS % REC.**	**LCSD % REC.**	RPD **
3	4'4-DDT	33.3	ND	36.1	39.9	**108%**	**120%**	10%

QC LIMITS	
RPD	REC.
20	70 - 120

SURROGATE RECOVERIES

COMPOUND NAME	LCS % REC.	LCSD % REC.	QC LIMITS
Tetrachloro-m-xylene	93%	87%	60 - 150
Decachlorobiphenyl	94%	93%	60 - 150

COMMENTS: None

ND = Not detected

* LCS / LCSD = Laboratory Control Sample / Laboratory Control Sample Duplicate

** RPD = Relative Percent Difference

Reviewed by: _____ Date: 9/21/99

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : MS / MSD *

Client Sample ID: **NS0914-05MS/MSD**

Method: **Chlorinated Pesticides (8081A)**

Client: **Fulcrum Environmental**

SVL Job #:	92333
SVL Sample ID:	S215456MS/MSD
Sample Matrix:	Soil
Date Sampled:	09/14/99
Date Extracted:	09/16/99
Date Analyzed:	09/17/99
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

Sample Weight (gr):	30.0
% Dry Solids:	93.7%
Final Ext. Vol. (mls):	10.0
Dilution Factor:	1.0

#	COMPOUND NAME	SPIKE CONC.	SAMPLE CONC.	MS CONC.	MSD CONC.	**MS % REC.**	**MSD % REC.**	RPD **
1	4'4-DDT	35.6	ND	43.9	39.9	**123%**	**112%**	9%

QC LIMITS	
RPD	REC.
20	70 - 120

SURROGATE RECOVERIES

COMPOUND NAME	MS % REC.	MSD % REC.
Tetrachloro-m-xylene	83%	77%
Decachlorobiphenyl	90%	83%

QC LIMITS
60 - 150
60 - 150

COMMENTS: None

ND = Not detected

* MS / MSD = Matrix Spike / Matrix Spike Duplicate

** RPD = Relative Percent Difference

Reviewed by: _____ Date: 9/21/99

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

POH: 94921.1
Project Name: North Star Lodge
Samplers Signature:

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR SVL USE ONLY
SVL JOB # 92333

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

TEMP 18 Rec'd 9/15, 14

Sample ID	Collection: Date	Collection: Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: Total Lead - Method 7000	Total Arsenic - Method 7060	TCLP - Method 8081	Comments
1. NS0914-01	9/14/99		TT	3	1	N	X							X		Standard TAT
2. NS0914-02	"		"	3	1	N	X							X		
3. NS0914-03	"		"	3	1	N	X						X	X		
4. NS0914-04	"		"	3	1	N	X							X		
5. NS0914-05	↓		↓	3	1	N	X						X	X	X	
6.																
7.																
8.																
9.																
10.																

Relinquished by:	Date:	Time:	Received By:	Date:	Time:
Ann M. Palmer	9/14/99	12:30 pm	[signature]	9/15/99	1015
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return [| Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

Adjacent Site Samples

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 9/14/99

SVL JOB No. : 92322
Date of Report : 9/28/99

SVL ID	CLIENT SAMPLE ID	Test Method	As 7060	Pb 7421	% Sol. 999
S215354	N0908-01	9/08/99	4.8mg/kg	***	92.3%
S215355	N0908-02	9/08/99	7.3mg/kg	11.6mg/kg	88.9%
S215356	N0908-03	9/08/99	7.3mg/kg	***	84.8%
S215357	N0910-01	9/10/99	38.8mg/kg	***	97.3%
S215358	N0910-02	9/10/99	10.1mg/kg	***	86.4%
S215359	N0910-03	9/10/99	7.1mg/kg	***	87.1%
S215360	N0910-04	9/10/99	23.2mg/kg	194mg/kg	85.7%
S215361	N0910-05	9/10/99	13.6mg/kg	***	86.1%
S215362	N0910-06	9/10/99	17.6mg/kg	***	94.9%

***: Not Requested Soil Samples: As Received Basis

Reviewed By: Blake Johnson Date: 9/28/99

SVL ANALYTICAL, INC. Quality Control Report

Part I Prep Blank and Laboratory Control Sample

ient :FULCRUM ENVIRONMENTAL SVL JOB No. :92322

Analyte	Method	Matrix	Units	Prep Blank	True	LCS	Found	LCS %R	Analysis Date
Arsenic	7060	SOIL	mg/kg	<0.1	93.9		104	110.8	9/27/99
Lead	7421	SOIL	mg/kg	<0.1	135		141	104.4	9/27/99
% Solids	999	SOIL	%		N/A			N/A	9/19/99

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC.

Quality Control Report

Part II Duplicate and Spike Analysis

Client :FULCRUM ENVIRONMENTAL — SVL JOB No :92322

Test	Method	Matrix	QC SAMPLE ID / Units	Result	Duplicate Result	Duplicate RPD%	Matrix Spike Result	Matrix Spike SPK ADD	Matrix Spike %R	Test Date
As	7060	SOIL	1 mg/kg	7.3	15.4	71.4	12.6	5.00	106.0	9/27/99
Pb	7421	SOIL	1 mg/kg	11.6	14.0	18.8	18.0	5.00	128.0	9/27/99
% Sol.	999	SOIL	1 %	88.9	89.2	0.3	N/A	N/A	N/A	9/19/99

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) Duplicate may be MSD for organics. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 215355 Client Sample ID: N0908-02

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 1225. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8953

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: North Star Lodge
Samplers Signature:

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR SVL USE ONLY
SVL JOB # 92322

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Total Lead Method 7000	Analyses Required: Total Arsenic - Method 7060	Comments
1. N0908-01	9/8/99		TT	3	1	N	X							X	Standard TAT
2. N0908-02	↓		↓	3	1	N	X						X	X	
3. N0908-03	↓		↓	3	1	N	X							X	
4. N0910-01	9/10/99		↓	3	1	N	X							X	
5. N0910-02	↓		↓	3	1	N	X							X	
6. N0910-03	↓		↓	3	1	N	X							X	
7. N0910-04	↓		↓	3	1	N	X						X	X	
8. N0910-05	↓		↓	3	1	N	X							X	
9. N0910-06	↓		↓	3	1	N	X							X	
10.															

Relinquished by: Alan M. Palmer	Date: 9/13/99	Time: 3:00 pm	Received by: Sandra Cortez	Date: 09/14/99	Time: 0945
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return [X] Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

Topsoil Suitability Samples

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 6/04/99

SVL JOB No. : 91367
Date of Report : 6/18/99

SVL ID	CLIENT SAMPLE ID	Test Method	As 7060	Pb 7421	% Sol. 999
S206154	C0602-01	6/02/99	2.2mg/kg	5.6mg/kg	89.7%
S206155	C0602-02	6/02/99	3.0mg/kg	6.5mg/kg	97.4%
S206156	C0602-03	6/02/99	2.5mg/kg	6.6mg/kg	97.1%
S206157	C0602-04	6/02/99	2.6mg/kg	6.9mg/kg	95.8%
S206158	C0602-05	6/02/99	2.4mg/kg	6.4mg/kg	95.9%
S206159	C0602-06	6/02/99	1.8mg/kg	6.5mg/kg	97.4%
S206160	CH0602-02	6/02/99	3.3mg/kg	9.9mg/kg	85.7%
S206161	CH0602-03	6/02/99	3.3mg/kg	13.7mg/kg	75.1%

Soil Samples: As Received Basis

Reviewed By: Blaine Johnson Date: 6/18/99

SVL ANALYTICAL, INC.

Quality Control Report

Part I Prep Blank and Laboratory Control Sample

Client :FULCRUM ENVIRONMENTAL

SVL JOB No. :91367

Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found		LCS %R	Analysis Date
Arsenic	7060	SOIL	mg/kg	<0.1	36.5	38.8	106.3	6/15/99
Lead	7421	SOIL	mg/kg	0.1	50.2	50.4	100.4	6/15/99
% Solids	999	SOIL	%		N/A		N/A	6/09/99
ORG12B	8081	SOIL	ppb		N/A		N/A	6/09/99

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC.

Quality Control Report

Part II Duplicate and Spike Analysis

Client :FULCRUM ENVIRONMENTAL

SVL JOB No :91367

Test	Method	Matrix	QC SAMPLE ID / Units	Result	Duplicate Result	RPD%	Matrix Spike Result	SPK ADD	%R	Test Date
As	7060	SOIL	1 mg/kg	3.0	2.8	6.9	14.3	10.0	113.0	6/15/99
Pb	7421	SOIL	1 mg/kg	6.5	6.5	0.0	16.7	10.0	102.0	6/15/99
% Sol.	999	SOIL	1 %	97.4	97.3	0.1	N/A	N/A	N/A	6/09/99

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) Duplicate may be MSD for organics. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 206155 Client Sample ID: C0602-02

SVL ANALYTICAL

June 16,1999

Travis Trent
Fulcrum Environmental
122 S. 3rd St.
Yakima, WA 98901

Dear Mr. Trent;
Enclosed are the results of the DDT (8081) analyses for the 2 soil samples submitted 6/4/99.

PO #: 98921.1

Please call if you have any questions and refer to SVL Job # 91367.

Sincerely yours,

Faye Smythe
Chemist, Organics Dept.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method: Chlorinated Pesticides (8081)

Client: Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	97.2%
Final Extraction Volume (mls):	10.0
Dilution Factor:	10.0

Client Sample ID:	CO602-02
SVL Job #:	91367
SVL Sample ID:	S206155
Sample Matrix:	Soil
Date Sampled:	06/02/99
Date Extracted:	06/08/99
Date Analyzed:	06/10/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	27.4	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	82%	60-150
Decachlorobiphenyl	85%	60-150

COMMENTS:

Reviewed by: Wendy Dyminkowski Date: 6/16/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081)
Client:
Fulcrum Environmental

Sample Weight (gr):	30.0	Client Sample ID:	CO602-05
% Dry Solids:	95.7%	SVL Job #:	91367
Final Extraction Volume (mls):	10.0	SVL Sample ID:	S206158
Dilution Factor:	10.0	Sample Matrix:	Soil
		Date Sampled:	06/02/99
		Date Extracted:	06/08/99
		Date Analyzed:	06/10/99
		GPC Clean-up ?:	NO
		Analyst:	FS
		Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	27.9	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	82%	60-150
Decachlorobiphenyl	86%	60-150

COMMENTS:

Reviewed by: Wendy Ogrinkowski Date: 6/16/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method: Chlorinated Pesticides (8081)

Client: Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	100.0%
Final Extraction Volume (mls):	10.0
Dilution Factor:	10.0

Client Sample ID:	PREP BLANK
SVL Job #:	91367
SVL Sample ID:	S206152P
Sample Matrix:	Soil
Date Sampled:	NA
Date Extracted:	06/08/99
Date Analyzed:	06/10/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDT	50-29-3	26.7	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	64%	60-150
Decachlorobiphenyl	80%	60-150

COMMENTS:

Reviewed by: Wendy Ogminkowski Date: 6/16/99

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : LCS / LCSD *

Client Sample ID: **Lab Control Samples**

Method: Chlorinated Pesticides / PCB (8081)

Client: Fulcrum Environmental

SVL Job #:	91367
SVL Sample ID:	S206153C/D
Sample Matrix:	NA
Date Sampled:	NA
Date Extracted:	06/08/99
Date Analyzed:	06/10/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

Sample Weight (gr):	30.0
% Dry Solids:	100%
Final Ext. Vol. (mls):	10.0
Dilution Factor:	1.0

#	COMPOUND NAME	SPIKE CONC.	AMPLE CONC.	LCS CONC.	LCSD CONC.	LCS % REC.	LCSD % REC.	RPD **
3	4'4-DDT	33.3	ND	32.6	36.1	**98%**	**108%**	7%

QC LIMITS	
RPD	REC.
20	70 - 120

SURROGATE RECOVERIES

COMPOUND NAME	LCS % REC.	LCSD % REC.	QC LIMITS
Tetrachloro-m-xylene	74%	88%	60 - 150
Decachlorobiphenyl	86%	87%	60 - 150

COMMENTS: None

ND = Not detected

* LCS / LCSD = Laboratory Control Sample / Laboratory Control Sample Duplicate

** RPD = Relative Percent Difference

Reviewed by: Wendy Ozmunkowski Date: 6/16/99

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : MS / MSD *

Client Sample ID: **CO602-02 MS/MSD**

Method: Chlorinated Pesticides (8081)

Client: Fulcrum Environmental

SVL Job #:	91367
SVL Sample ID:	S206155 MS/MSD
Sample Matrix:	Soil
Date Sampled:	06/02/99
Date Extracted:	06/08/99
Date Analyzed:	06/10/99
GPC Clean-up ?:	NO
Analyst:	FS
Units:	ug/kg (ppb)

Sample Weight (gr):	30.0
% Dry Solids:	97.2%
Final Ext. Vol. (mls):	10.0
Dilution Factor:	1.0

#	COMPOUND NAME	SPIKE CONC.	AMPLE CONC.	MS CONC.	MSD CONC.	MS % REC.	MSD % REC.	RPD **
1	4'4-DDT	34.3	ND	39.4	42.9	115%	125%	6%

QC LIMITS	
RPD	REC.
20	70 - 120

SURROGATE RECOVERIES

COMPOUND NAME	MS % REC.	MSD % REC.
Tetrachloro-m-xylene	85%	83%
Decachlorobiphenyl	83%	88%

QC LIMITS
60 - 150
60 - 150

COMMENTS: None

ND = Not detected

* MS / MSD = Matrix Spike / Matrix Spike Duplicate

** RPD = Relative Percent Difference

Reviewed by: Wendy Ozminkowski Date: 6/16/99

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: Northstar Lodge

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 91367

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Total Lead - Method 7000	Analyses Required: Total Arsenic - GFAA-7060 Method	Analyses Required: DDT - Method 8081	Comments
1. CD602-01	6/2/99		TT	3		N	X						X	X		
2. CD602-02	6/2/99		TT	3		N	X						X	X	X	
3. CD602-03	6/2/99		TT	3		N	X						X	X		
4. CD602-04	"		TT	3		N	X						X	X		
5. CD602-05	"		TT	3		N	X						X	X	X	
6. CD602-06	"		TT	3		N	X						X	X		
7.																
8.																
9.																
10.																

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Ann M. Palmer	6/3/99	2:30	Gordon Smith	6/04/99	10 00
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

Additional Topsoil Suitability Samples

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 3/06/00

SVL JOB No. : 93798
Date of Report : 3/10/00

SVL ID	CLIENT SAMPLE ID	Test Method	As 6010B	Pb 6010B	% Sol. 999
S228245	NS0303-01	3/03/00	<4.0mg/kg	<4.0mg/kg	77.4%
S228246	NS0303-02	3/03/00	4.4mg/kg	***	77.2%
S228247	NS0303-03	3/03/00	<4.0mg/kg	***	76.7%
S228248	NS0303-04	3/03/00	<4.0mg/kg	***	78.2%
S228249	NS0303-05	3/03/00	5.9mg/kg	***	76.5%
S228250	NS0303-06	3/03/00	7.0mg/kg	<4.0mg/kg	76.5%
S228251	NS0303-07	3/03/00	<4.0mg/kg	***	76.0%

***: Not Requested Soil Samples: As Received Basis

Reviewed By: Blaine Johnson Date: 3/10/00

SVL ANALYTICAL, INC.

Quality Control Report

Part I Prep Blank and Laboratory Control Sample

Client :FULCRUM ENVIRONMENTAL

SVL JOB No. :93798

Analyte	Method	Matrix	Units	Prep Blank	True	LCS	Found	LCS %R	Analysis Date
Arsenic	6010B	SOIL	mg/kg	<4.0	75.2		79.9	106.3	3/09/00
Lead	6010B	SOIL	mg/kg	<4.0	56.8		52.8	93.0	3/09/00

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC.

Quality Control Report

Part II Duplicate and Spike Analysis

Client :FULCRUM ENVIRONMENTAL

SVL JOB No :93798

Test	Method	Matrix	QC SAMPLE ID Units	Result	Duplicate Result	RPD%	Matrix Spike Result	SPK ADD	%R	Test Date
As	6010B	SOIL	1 mg/kg	<4.0	<4.0	UDL	82.3	100	82.3	3/09/00
Pb	6010B	SOIL	1 mg/kg	<4.0	<4.0	UDL	77.1	100	77.1	3/09/00
% Sol.	999	SOIL	1 %	77.4	77.8	0.5	N/A	N/A	N/A	3/09/00

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) M in Duplicate indicates MSD. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 228245 Client Sample ID: NS0303-01

March 10, 2000

Peggy Williamson
Fulcrum Environmental
122 S. 3rd St.
Yakima, WA 98901

Dear Ms. Williamson,

RE: Organic Analysis Results

Enclosed are the results of the DDT (8081A) analyses for the 1 soil samples submitted 3/6/00. Also enclosed are the results for DDE and DDD (8081A). These are significant breakdown products of DDT.

PO #: 98921.1
Project Name: Northstar Lodge

Please call if you have any questions and refer to SVL Job # 93798.

Sincerely yours,

Kristine Haakenson
Chemist, Organics Dept.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081A)
Client:
Fulcrum Environmental

Sample Weight (g):	30.0
% Dry Solids:	75.8%
Final Extraction Volume (mL):	10.0
Dilution Factor:	1.0

Client Sample ID:	**NS0303-07**
SVL Job #:	93798
SVL Sample ID:	S228251
Sample Matrix:	SOIL
Date Sampled:	03/03/00
Date Extracted:	03/06/00
Date Analyzed:	03/09/00
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDE	72-55-9	3.52	ND
2	4,4'-DDD	72-54-8	3.52	ND
3	4,4'-DDT	50-29-3	3.52	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	74%	70-119
Decachlorobiphenyl	97%	70-130

COMMENTS:

Reviewed by: _____ Date: 3/10/00

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081A)
Client:
Fulcrum Environmental

Client Sample ID:	**PREP BLANK**
SVL Job #:	93798
SVL Sample ID:	S228243P
Sample Matrix:	NA
Date Sampled:	NA
Date Extracted:	03/06/00
Date Analyzed:	03/09/00
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)
Sample Weight (g):	30.0
% Dry Solids:	100%
Final Extraction Volume (mL):	10.0
Dilution Factor:	1.0

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDE	72-55-9	2.67	ND
2	4,4'-DDD	72-54-8	2.67	ND
3	4,4'-DDT	50-29-3	2.67	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	80%	70-119
Decachlorobiphenyl	95%	70-130

COMMENTS:

Reviewed by: _____ Date: 3/10/00

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : LCS / LCSD *

Client Sample ID: **Lab Control Samples**

Method:
Chlorinated Pesticides (608/8081A/8082)
Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	100%
Final Ext. Vol. (mls):	10.0
Dilution Factor:	1.0

SVL Job #:	93798
SVL Sample ID:	S228244C/D
Sample Matrix:	NA
Date Sampled:	NA
Date Extracted:	03/03/00
Date Analyzed:	03/09/00
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	SPIKE CONC.	AMPLE CONC.	LCS CONC.	LCSD CONC.	LCS % REC.	LCSD % REC.	RPD **	QC LIMITS RPD	QC LIMITS REC.
1	g-BHC (Lindane)	16.7	ND	17.0	17.8	**102%**	**107%**	5%	20	70 - 130
2	Dieldrin	33.3	ND	35.3	37.5	**106%**	**112%**	6%	20	78 - 130
3	4'4-DDT	33.3	ND	42.5	45.4	**128%**	**136%**	7%	20	72 - 130
4	Heptachlor	16.7	ND	21.7	22.8	**130%**	**137%**	5%	20	72 - 129
5	Endrin	33.3	ND	42.8	45.5	**128%**	**137%**	6%	20	77 - 130
6	Aldrin	16.7	ND	17.0	17.8	**102%**	**107%**	5%	20	70 - 130

SURROGATE RECOVERIES

COMPOUND NAME	LCS % REC.	LCSD % REC.	QC LIMITS
Tetrachloro-m-xylene	83%	88%	70-119
Decachlorobiphenyl	97%	103%	70-130

COMMENTS: None

ND = Not detected
* LCS / LCSD = Laboratory Control Sample / Laboratory Control Sample Duplicate
** RPD = Relative Percent Difference

Reviewed by: _____ Date: 3/10/00

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : MS / MSD *

Client Sample ID: **NS0303-07 MS/MSD**

Method:
Chlorinated Pesticides (8081A)
Client:
Fulcrum Environmental

Sample Weight (gr):	30.0
% Dry Solids:	75.8%
Final Ext. Vol. (mls):	10.0
Dilution Factor:	1.0

SVL Job #:	93798
SVL Sample ID:	S228251 MS/MSD
Sample Matrix:	SOIL
Date Sampled:	03/03/00
Date Extracted:	03/06/00
Date Analyzed:	03/09/00
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	SPIKE CONC.	SAMPLE CONC.	MS CONC.	MSD CONC.	**MS % REC.**	**MSD % REC.**	RPD **
1	g-BHC (Lindane)	22.0	ND	19.1	20.8	**87%**	**95%**	8%
2	Dieldrin	44.0	ND	40.7	43.9	**92%**	**100%**	8%
3	4'4-DDT	44.0	ND	52.0	55.1	**118%**	**125%**	6%
4	Heptachlor	22.0	ND	24.4	27.0	**111%**	**123%**	10%
5	Endrin	44.0	ND	51.0	54.7	**116%**	**124%**	7%
6	Aldrin	22.0	ND	19.0	20.7	**86%**	**94%**	9%

QC LIMITS	
RPD	REC.
20	70 - 130
20	78 - 130
20	72 - 130
20	72 - 129
20	77 - 130
20	70 - 130

SURROGATE RECOVERIES

COMPOUND NAME	MS % REC.	MSD % REC.
Tetrachloro-m-xylene	68%	76%
Decachlorobiphenyl	88%	94%

QC LIMITS
70-119
70-130

COMMENTS: None

ND = Not detected
* MS / MSD = Matrix Spike Sample / Matrix Spike Sample Duplicate
** RPD = Relative Percent Difference

Reviewed by: _____ Date: 3/10/00

Per Anne Palmer. Data needed on 3/13/00! gc 3/06/00

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Fukuum Environmental
Contact: Peggy Williamson
Address: 1222 3rd St.
Yakima WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

POH: 9892.1
Project Name: Northstar Lodge

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
(3) = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR SVL USE ONLY
SVL JOB # 23798

Samplers Signature:

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): ~~HNO3~~ Arsenic ICP	Preservative(s): ~~HCl~~ Lead	Preservative(s): ~~H2SO4~~ BOT (30817)	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required	Comments
1. NS0303-01	3/3/00	11:10	PW	3	1	N	X	X	X					
2. NS0303-02		11:13	PW	3	1	N	X	X						
3. NS0303-03		11:15	PW	3	1	N	X	X						
4. NS0303-04		11:20	PW	3	1	N	X	X						
5. NS0303-05		11:38	PW	3	1	N	X	X						
6. NS0303-06		11:40	PW	3	1	N	X	X	X					
7. NS0303-07	↓	11:45	PW	3	1	N	X	X		X				
8.														
9.														
10.														

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Peggy Williamson	3/3/00				
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
				3/4/00	10:10

* Sample Re[illegible]: [ ] Return [ ] Dispose [ ] Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-CC 2/95

Post Remedial Samples

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 6/16/00

SVL JOB No. : 94671
Date of Report : 6/29/00

SVL ID	CLIENT SAMPLE ID	Test Method	As 7060	Pb 7421	% Sol. 999
S235404	MC605-02	6/15/00	62.5mg/kg	***	72.5%
S235405	MC605-05	6/15/00	70.5mg/kg	338mg/kg	78.9%
S235406	MC605-07	6/15/00	6.9mg/kg	***	81.7%
S235407	MC605-11	6/15/00	9.9mg/kg	***	83.7%
S235408	MC605-12	6/15/00	29.0mg/kg	***	86.2%
S235409	MC605-16	6/15/00	8.8mg/kg	***	85.6%
S235410	MC605-18	6/15/00	13.8mg/kg	***	85.7%
S235411	MC605-21	6/15/00	13.9mg/kg	***	88.0%
S235412	MC605-25	6/15/00	12.6mg/kg	***	82.6%
S235413	MC605-27	6/15/00	13.8mg/kg	39.7mg/kg	84.3%
S235414	MC605-29	6/15/00	12.8mg/kg	***	86.2%
S235415	MC605-33	6/15/00	11.8mg/kg	***	86.0%

***: Not Requested Soil Samples: As Received Basis

Reviewed By: Blake Johnson Date: 6/29/00

SVL ANALYTICAL, INC.

Quality Control Report

Part I Prep Blank and Laboratory Control Sample

ient :FULCRUM ENVIRONMENTAL

SVL JOB No. :94671

Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found		LCS %R	Analysis Date
Arsenic	7060	SOIL	mg/kg	<0.1	136	147	108.1	6/28/00
Lead	7421	SOIL	mg/kg	<0.1	144	164	113.9	6/29/00

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC.

Quality Control Report

Part II Duplicate and Spike Analysis

Client :FULCRUM ENVIRONMENTAL

SVL JOB No :94671

Test	Method	Matrix	QC SAMPLE ID Units	Result	Duplicate Result	RPD%	Matrix Spike Result	SPK ADD	%R	Test Date
As	7060	SOIL	1 mg/kg	70.5	72.0	2.1	74.5	5.00	80.0	6/28/00
Pb	7421	SOIL	1 mg/kg	338	478	34.3	438	5.00	R >4S	6/29/00
% Sol.	999	SOIL	1 %	78.9	71.5	9.8	N/A	N/A	N/A	6/26/00

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) M in Duplicate indicates MSD. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 235405 Client Sample ID: MC605-05

SVL ANALYTICAL, INC.
One Government Gulch * P.O. I 029 * Kellogg, Idaho 83837 * Phone: (20 84-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Method:
Chlorinated Pesticides (8081A)

Client:
Fulcrum Environmental

Sample Weight (g):	30.0
% Dry Solids:	87.3%
Final Extraction Volume (mL):	10.0
Dilution Factor:	10.0

Client Sample ID:	**MC605-21**
SVL Job #:	94671
SVL Sample ID:	S235411
Sample Matrix:	SOIL
Date Sampled:	06/15/00
Date Extracted:	06/20/00
Date Analyzed:	6/22-6/23/00
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDE	72-55-9	30.5	321
2	4,4'-DDD	72-54-8	30.5	ND
3	4,4'-DDT	50-29-3	30.5	107

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	76%	9 - 119
Decachlorobiphenyl	129%	0 - 148

COMMENTS:

Reviewed by: _____ Date: 6/27/2000

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. I)29 * Kellogg, Idaho 83837 * Phone: (20 84-1258 * Fax: (208) 783-0891

REPORT OF ANALYTICAL RESULTS

Client Sample ID: **PREP BLANK**

Method:
Chlorinated Pesticides (8081A)

Client:
Fulcrum Environmental

SVL Job #:	94671
SVL Sample ID:	S235402P
Sample Matrix:	NA
Date Sampled:	NA
Date Extracted:	06/20/00
Date Analyzed:	06/22/00
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)
Sample Weight (g):	30.0
% Dry Solids:	100%
Final Extraction Volume (mL):	10.0
Dilution Factor:	1.0

#	COMPOUND NAME	CAS Number	REPORTING LIMIT *	SAMPLE CONCENTRATION *
1	4,4'-DDE	72-55-9	2.67	ND
2	4,4'-DDD	72-54-8	2.67	ND
3	4,4'-DDT	50-29-3	2.67	ND

SURROGATE RECOVERIES

COMPOUND NAME	% RECOVERY	QC LIMITS
Tetrachloro-m-xylene	86%	9 - 119%
Decachlorobiphenyl	123%	0 - 148%

COMMENTS:

Reviewed by: _____ Date: 6/22/2000

ND = Not detected at stated reporting limit.
* Concentrations calculated on a dry weight basis.

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : LCS / LCSD *

Client Sample ID: **Lab Control Samples**

Method:
Chlorinated Pesticides (8081A)
Client:
Fulcrum Environmental

Sample Weight (g):	30.0
% Dry Solids:	100%
Final Ext. Vol. (mL):	10.0
Dilution Factor:	1.0

SVL Job #:	94671
SVL Sample ID:	S235403C/D
Sample Matrix:	NA
Date Sampled:	NA
Date Extracted:	06/20/00
Date Analyzed:	06/22/00
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	SPIKE CONC.	SAMPLE CONC.	LCS CONC.	LCSD CONC.	**LCS % REC.**	**LCSD % REC.**	RPD **
1	g-BHC (Lindane)	16.7	ND	17.4	16.6	**104%**	**99%**	5%
2	Dieldrin	33.3	ND	38.9	39.1	**117%**	**117%**	1%
3	4'4-DDT	33.3	ND	36.1	38.7	**108%**	**116%**	7%
4	Heptachlor	16.7	ND	18.2	17.3	**109%**	**104%**	5%
5	Endrin	33.3	ND	46.4	46.5	**139%**	**139%**	0%
6	Aldrin	16.7	ND	17.2	15.9	**103%**	**95%**	8%

QC LIMITS	
RPD	REC.
20	63 - 139%
20	78 - 155%
20	87 - 140%
20	72 - 129%
20	77 - 204%
20	56 - 143%

SURROGATE RECOVERIES

COMPOUND NAME	LCS % REC.	LCSD % REC.
Tetrachloro-m-xylene	102%	93%
Decachlorobiphenyl	131%	132%

QC LIMITS
9 - 119%
0 - 148%

COMMENTS: None

ND = Not detected

* LCS / LCSD = Laboratory Control Sample / Laboratory Control Sample Duplicate

** RPD = Relative Percent Difference

Reviewed by: _____ Date: 6/29/2000

SVL ANALYTICAL, INC.
One Government Gulch * P.O. Box 929 * Kellogg, Idaho 83837 * Phone: (208) 784-1258 * Fax: (208) 783-0891

QUALITY CONTROL REPORT : MS / MSD *

Client Sample ID: **MC605-21 MS/MSD**

Method:
Chlorinated Pesticides (8081A)
Client:
Fulcrum Environmental

Sample Weight (g):	30.0
% Dry Solids:	87.3%
Final Ext. Vol. (mL):	10.0
Dilution Factor:	1.0

SVL Job #:	94671
SVL Sample ID:	S235411MS/MSD
Sample Matrix:	SOIL
Date Sampled:	06/15/00
Date Extracted:	06/20/00
Date Analyzed:	06/22/00
GPC Clean-up ?:	NO
Analyst:	KBH
Units:	ug/kg (ppb)

#	COMPOUND NAME	SPIKE CONC.	SAMPLE CONC.	LCS CONC.	LCSD CONC.	**LCS % REC.**	**LCSD % REC.**	RPD **
1	g-BHC (Lindane)	19.1	ND	17.7	18.1	**93%**	**95%**	2%
2	Dieldrin	38.2	ND	45.5	47.6	**119%**	**125%**	5%
3	4'4-DDT	38.2	155	185	223	**79%**	**178%**	19%
4	Heptachlor	19.1	ND	21.8	22.5	**114%**	**118%**	3%
5	Endrin	38.2	ND	46.9	49.4	**123%**	**129%**	5%
6	Aldrin	19.1	ND	18.3	19.1	**96%**	**100%**	4%

QC LIMITS	
RPD	REC.
20	63 - 139%
20	78 - 155%
20	87 - 140%
20	72 - 129%
20	77 - 204%
20	56 - 143%

SURROGATE RECOVERIES

COMPOUND NAME	LCS % REC.	LCSD % REC.
Tetrachloro-m-xylene	84%	87%
Decachlorobiphenyl	125%	129%

QC LIMITS
9 - 119%
0 - 148%

COMMENTS: None

ND = Not detected
* MS / MSD = Matrix Spike Sample / Matrix Spike Sample Duplicate
** RPD = Relative Percent Difference

Reviewed by: _____ Date: 6/29/2000

CHAIN OF CUSTODY RECORD

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima WA 98901
Phone Number: (509) 574-0834
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: North Star Lodge
Samplers Signature:

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
(3) = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR SVL USE ONLY
SVL JOB # 94671

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Total Arsenic – Method 7060	Analyses Required: Total Lead – Method 7000	Analyses Required: DDT – Method 8081	Comments
1. MC605-01	6/15/00		TT	3	1	N	X									Hold
2. MC605-02													X			
3. MC605-03																Hold
4. MC605-04																
5. MC605-05													X	X		
6. MC605-06																Hold
7. MC605-07													X			
8. MC605-08																
9. MC605-09																Hold
10. MC605-10			↓	↓	↓	↓	↓									

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Travis Trent	6/15/00	3:45			
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
				6/16/00	10:05

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY

SVL-COC 12/95

CHAIN OF CUSTODY RECORD

Page 2 of 4

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

PO#: 9892L.1
Project Name: North Star Lodge

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB #

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Total Arsenic – Method 7060	Analyses Required: Total Lead – Method 7000	Analyses Required: DDT – Method 8081	Comments
1. MC605-11	6/15/00		TT	3	1	N	X						X			
2. MC605-12													X			
3. MC605-13																Hold
4. MC605-14																
5. MC605-15																
6. MC605-16													X			
7. MC605-17																Hold
8. MC605-18													X			
9. MC605-A																Hold
10. MC605-2D																

Relinquished by: [signature] Date: 6/15/00 Time: 3:45 Received by: [signature]
Relinquished by: Date: Time: Received by: Date: 6/16/00 Time: 10:05

* Sample Reject: | | Return [| Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

CHAIN OF CUSTODY RECORD

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima WA 98901
Phone Number: (509) 574-0834
FAX Number: (509) 575-8453

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

* 3) Designate Sample Reject Disposition

PO#: 98921.1

Project Name: North Star Lodge

Samplers Signature:

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
(3) = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR SVL USE ONLY
SVL JOB #

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Total Arsenic Method 7060	Analyses Required: Total Lead – Method 7000	Analyses Required: DDT – Method 8081	Comments
1. MC605-21	6/15/00		TT	3	1	N	X						X		X	
2. MC605-22																Hold
3. MC605-23																
4. MC605-24																
5. MC605-25													X			
6. MC605-26																Hold
7. MC605-27													X	X		
8. MC605-28																Hold
9. MC605-29													X			
10. MC605-30																Hold

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	6/15/00	3:45	[signature]	6/16/00	10:05
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY

CHAIN OF CUSTODY RECORD

Client: Fulcrum Environmental
Contact: Trevis Trent
Address: 125 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition

PO#: 98921.1
Project Name: North Star Lodge
Samplers Signature:

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
(3) = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR SVL USE ONLY
SVL JOB #

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Total Arsenic-Method 7060	Analyses Required: Total Lead-Method 7421	Analyses Required: EDB-Method 8011	Comments
1. MC605-31	6/15/00		TT	3	1	N	X									Hold
2. MC605-32	↓		↓	↓	↓	↓	↓									
3. MC605-33													X			
4. MC605-34	↓		↓	↓	↓	↓	↓									Hold
5.																
6.																
7.																
8.																
9.																
10.																

Relinquished by:	Date:	Time:	Received By:	Date:	Time:
[signature]	6/15/00	3:45	[signature]	6/16/00	10:05
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY

Additional Post Remedial Samples

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 8/11/00

SVL JOB No. : 95204
Date of Report : 8/25/00

SVL ID	CLIENT SAMPLE ID	Test Method	As 7060	Pb 7421	% Sol. 999
S240532	NS0818-01	8/10/00	58.8mg/kg	***	83.9%
S240533	NS0810-02	8/10/00	2.2mg/kg	***	48.0%
S240534	NS0810-03	8/10/00	36.2mg/kg	120mg/kg	81.4%
S240535	NS0810-04	8/10/00	20.7mg/kg	***	83.7%

***: Not Requested Soil Samples: As Received Basis

Reviewed By: Blake Johnson Date: 8/25/00

SVL ANALYTICAL, INC.

Quality Control Report

Part I Prep Blank and Laboratory Control Sample

ient :FULCRUM ENVIRONMENTAL

SVL JOB No. :95204

Analyte	Method	Matrix	Units	Prep Blank	True—LCS—Found		LCS %R	Analysis Date
Arsenic	7060	SOIL	mg/kg	<0.1	75.2	75.9	100.9	8/25/00
Lead	7421	SOIL	mg/kg	<0.1	56.8	63.0	110.9	8/25/00
% Solids	999	SOIL	%		N/A		N/A	8/25/00

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC.

Quality Control Report

Part II Duplicate and Spike Analysis

Client :FULCRUM ENVIRONMENTAL

SVL JOB No :95204

Test	Method	Matrix	QC SAMPLE ID Units	Result	Duplicate Result	RPD%	Matrix Spike Result	SPK ADD	%R	Test Date
As	7060	SOIL	1 mg/kg	36.2	38.2	5.4	40.2	5.00	80.0	8/25/00
Pb	7421	SOIL	1 mg/kg	120	120	0.0	126	5.00	120.0	8/25/00
% Sol.	999	SOIL	1 %	81.4	81.6	0.2	N/A	N/A	N/A	8/25/00

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100) M in Duplicate indicates MSD. UDL = Both SAM & DUP not detected.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 240534 Client Sample ID: NS0810-03

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: Northstar Lodge

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
(3) = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature: [signature]

FOR SVL USE ONLY
SVL JOB # 9504

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Total Arsenic - Method 7060	Analyses Required: Total Lead - Method 7010	Comments
1. N50810-01	8/10/00		CH	3	1	N	X						X		
2. N50810-02	"		CH	3	1	N	X						X		
3. N50810-03	"		CH	3	1	N	X						X	X	
4. N50810-04	"		CH	3	1	N	X						X		
5.															
6.															
7.															
8.															
9.															
10.															

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Ann M. Palmer	8/10/00	3:45 pm	[signature]	8/11/00	10:15
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

SVL ANALYTICAL, INC.
One Government Gulch ■ P.O. Box 929 ■ Kellogg, Idaho 83827-0929 ■ Phone: (208)784-1258 ■ Fax: (208)783-0891

REPORT OF ANALYTICAL RESULTS

CLIENT :FULCRUM ENVIRONMENTAL
Sample Receipt : 9/12/00

SVL JOB No. : 95520
Date of Report : 9/26/00

SVL ID	CLIENT SAMPLE ID	Test Method	As 7060	Pb 7421	% Sol. 999
S243551	0908-01	9/08/00	3.0mg/kg	***	69.5%
S243552	0908-02	9/08/00	2.6mg/kg	5.4mg/kg	73.6%
S243553	0908-03	9/08/00	2.5mg/kg	***	76.7%
S243554	0908-04	9/08/00	3.7mg/kg	***	82.0%

***: Not Requested Soil Samples: As Received Basis

Reviewed By: Blake Johnson Date: 9/26/00

98921.1

SVL ANALYTICAL, INC.

Quality Control Report

Part I Prep Blank and Laboratory Control Sample

Client :FULCRUM ENVIRONMENTAL

SVL JOB No. :95520

Analyte	Method	Matrix	Units	Prep Blank	True	LCS	Found	LCS %R	Analysis Date
Arsenic	7060	SOIL	mg/kg	<0.1	100		83.0	83.0	9/26/00
Lead	7421	SOIL	mg/kg	<0.1	60.1		55.6	92.5	9/26/00
% Solids	999	SOIL	%		N/A			N/A	9/22/00

LEGEND:

LCS = Laboratory Control Sample LCS %R = LCS Percent Recovery N/A = Not Applicable

SVL ANALYTICAL, INC.

Quality Control Report

Part II Duplicate and Spike Analysis

Client :FULCRUM ENVIRONMENTAL

SVL JOB No :95520

t	Method	Matrix	QC SAMPLE ID Units	Result	Duplicate or MSD Found	RPD%	Matrix Spike Result	SPK ADD	%R	Test Date
As	7060	SOIL	1 mg/kg	2.6	1.9	31.1	8.0	5.00	108.0	9/26/00
Pb	7421	SOIL	1 mg/kg	5.4	5.8	7.1	11.8	5.00	128.0	9/26/00
% Sol.	999	SOIL	1 %	73.6	71.4	3.0	N/A	N/A	N/A	9/22/00

LEGEND:

RPD% = (|SAM - DUP|/((SAM + DUP)/2) * 100)

UDL = Both SAM & DUP not detected.

RPD% = (|SPK - MSD|/((SPK + MSD)/2) * 100)

M in Duplicate/MSD column indicates MSD.

SPIKE ADD column, A = Post Digest Spike; %R = Percent Recovery N/A = Not Analyzed; R > 4S = Result more than 4X the Spike Added

QC Sample 1: SVL SAM No.: 243552 Client Sample ID: 0908-02

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Fulcrum Environmental
Contact: Travis Trent
Address: 122 S. 3rd St.
Yakima, WA 98901
Phone Number: (509) 574-0839
FAX Number: (509) 575-8453

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
* 3) Designate Sample Reject Disposition
PO#: 98921.1
Project Name: Northstar Lodge

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

Samplers Signature:

FOR SVL USE ONLY
SVL JOB # 9520

Lab Name: SVL Analytical, Inc. (208) 784-1258 FAX (208) 783-0891
Address: One Government Gulch, Kellogg, ID 83837-0929

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: Total Arsenic - Method 7060	Analyses Required: Total Lead - Method 7420	Comments
1. 0908-01	9/8/00	4:30	TT	3	1	N	✓						X		
2. 0908-02	↓	↓	↓	3	1	N	✓						X	X	
3. 0908-03				3	1	N	✓						X		
4. 0908-04	↓	↓	↓	3	1	N	✓						X		
5.															
6.															
7.															
8.															
9.															
10.															

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	9/14/00	8:45am	[signature]	9/12/00	12:02
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: | | Return | | Dispose | | Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 12/95

APPENDIX K

DEED COVENANT

RESTRICTIVE COVENANT

NORTH STAR LODGE

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030 (1) (f) and (g) and WAC 173-340-440 by Yakima Valley Memorial Hospital (hereafter "Memorial Hospital"), its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following document: Report of Voluntary Remedial Action prepared by Travis Trent of Fulcrum Environmental Consulting, Inc. This document is on file at Ecology's Central Regional Office.

This Restrictive Covenant is required by WAC 173-340-440 because the Remedial Action resulted in residual concentrations of Arsenic, Lead, and Dichlorodiphenyltrichloroethane (DDT) which exceed the Model Toxics Control Act Method A unrestricted use levels for soil established under WAC 173-340-740. Accordingly, certain engineering controls have been put in place on the Property to deal with such soil.

The undersigned, Memorial Hospital, is the fee owner of real property (hereafter "Property") in the County of Yakima, State of Washington, which is subject to this Restrictive Covenant. The Property is legally described as follows:

> **Parcels 42406, 42407, and 42408**: Lots 1, 2, and 3, of Village View Business Park, according to the official plat thereof, recorded November 20, 1997, under Auditor's File No. 7035057, records of Yakima County, Washington.

Memorial Hospital makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

1. The Property contains Arsenic, Lead, and DDT concentrations in soil located under impermeable surfaces such as the building and associated asphalt areas; or under sod and 6" of clean topsoil in permeable surface areas such as landscaped areas. The Owner shall not alter, modify, or remove the existing structure or clean top soil/sod barrier in any manner that may result in the release or exposure to the environment of soil containing Arsenic, Lead, DDT, or create a new exposure pathway without prior written approval from Ecology.

   Any activity on the Property that may result in the release or exposure to the environment of the soil containing Arsenic, Lead, DDT, that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited on this site include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface greater than 6" with a rod, spike, or similar item, bulldozing or earthwork.

2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

4. The Owner of the property must give thirty (30) days advance written notice to Ecology of the Owner's intent to convey any interest in the Property. The Owner shall consummate no conveyance of title, easement, lease, or other interest in the Property without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.

5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property. This provision shall not require notification of residents of individual beds or suites within the Property while being used essentially in its present fashion.

6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.

8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, finds it appropriate to do so.

Executed this _____ day of _____, 2000.

MEMORIAL HOSPITAL

By: _____

John Vornbrock
Vice President

APPENDIX L

OPERATIONS AND MAINTENANCE PLAN

AGRICULTURAL CHEMICAL SOIL OPERATIONS AND MAINTENANCE PLAN NORTH STAR LODGE
Yakima, Washington

Project Number 98921.1

August 31, 2000

Prepared for: Yakima Valley Memorial Hospital
Attn: John Vornbrock
2811 Tieton Drive
Yakima, Washington 98902

Prepared by: Travis Trent, RPG
Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, WA 98901

TABLE OF CONTENTS

1.0 INTRODUCTION

The purpose of this Agricultural Chemical Impacted Soil (impacted soil) Operations and Maintenance Plan (O&M Plan) is to institute long term onsite management of protective barriers overlaying impacted soils in excess of selected remedial threshold concentrations (threshold concentrations). The agricultural chemicals identified at the North Star Lodge site are lead, arsenic, and dichlorodiphenyltrichloroethane (DDT). The threshold concentrations selected for these agricultural chemicals are 250 parts per million (ppm), 20 ppm, and 1 ppm, respectively. Site soils containing these agricultural chemicals in excess of threshold concentrations have been placed under protective barriers which include impermeable surfaces, such as the building footprint and parking areas, or permeable surfaces, such as under 6 inches of clean topsoil and sod or other landscaping materials.

A. Policy Statement

It is the policy of Yakima Valley Memorial Hospital (Memorial Hospital), to provide a safe and healthful work environment for all employees, tenants, and site contractors. A portion of the Safety and Health Program for the North Star Lodge site includes the safe management of impacted soil located beneath protective barriers. Additionally, it is Memorial Hospital's intent to comply with all federal, state, and local regulations pertaining to occupational safety and health, and environmental protection.

B. Objective

The objective of this O&M Plan is to reduce the risk of exposure to onsite workers and migration beyond property boundaries of impacted soil. This O&M Plan describes the procedure for notifying tenants, maintenance workers, and repair contractors of residual agricultural chemical presence. In addition, the O&M Plan outlines what controls are in place to prevent exposure or off site migration, how site workers can protect themselves from exposure, and what to do in the event that soils need to be excavated or protective barriers breached.

2.0 NOTIFICATION PROCEDURES

Notifying personnel who may potentially disturb site soils is the best prevention of inadvertent worker exposure, offsite migration of impacted soils, or destruction of protective barriers.

A. Tenants

A notification of agricultural chemical impacted soil will be included as part of building lease terms. The notification will identify the agricultural chemicals, the location of impacted soil in excess of threshold concentrations, and require that tenant's Hazard Communication Program include notification of regular site maintenance workers and occasional site workers. Also included in the tenant notification will be a requirement that protective barriers are maintained in place.

B. Maintenance and Landscape Workers

It is unlikely that during routine maintenance and landscape tasks that workers will encounter impacted site soils in excess of threshold concentrations. However, during non-routine tasks, such as replacement of large shrubs/trees or sprinkler line repair, maintenance and landscape workers may encounter agricultural chemical impacted soils.

As part of Hazard Communication, site tenants will notify their employees who may be expected to encounter impacted soils of the presence, location, and expected concentrations of agricultural chemicals. Employees will also be notified of how to protect themselves should they encounter impacted soils in excess of threshold concentrations and how to replace materials so that the integrity of the site barriers remains sound.

C. Occasional Site Workers/Contractors

Occasional site workers/contractors are those individuals or companies under contract, who are brought onsite to complete a specific task. Many tasks, such as painting or mowing, will not require that impacted soil be contacted. However some tasks, such as main water line replacement, will require careful excavation and replacement of materials so that agricultural chemical impacted soils do not end up near the surface or become washed or transported off-site.

As part of Hazard Communication, site tenants will notify occasional site workers/contractors who may be expected to encounter impacted soils of the presence, location, and expected concentrations of residual agricultural chemicals. Occasional site workers/contractors will also be notified of how their employees should protect themselves when they come in contact with impacted soils in excess of threshold concentrations and how to replace materials so that the integrity of the site barriers remains sound.

D. Washington State Department of Ecology

Prior written approval from the Washington State Department of Ecology (Ecology) is required before commencement of any activity that will alter, modify, or remove existing structures; or will result in the release or exposure to the environment of soil containing agricultural chemicals that was contained as part of the Remedial Action; or will create a new exposure pathway. Following is some examples of activities that may require written approval from Ecology: drilling, excavation, bulldozing, building demolition, retaining wall replacement or repair, waterline replacement.

Memorial Hospital will also notify Ecology of proposed property use changes to the extent that the protective barriers will no longer be maintained. Ecology may approve inconsistent use after public notice and comment is received.

E. Property Transfer

A written notice stating Memorial Hospital's intent to convey interest in the North Star Lodge property will be submitted to Ecology a minimum of 30 days in advance of the event. Interest in the North Star Lodge property (title, easement, lease, etc) will include provisions for continued operations and maintenance of the Remedial Action.

3.0 SITE CONTROLS

As part of construction design, the North Star Lodge site has incorporated specific elements to control impacted soils in excess of threshold concentrations. Following is a summary of the specific elements incorporated into the North Star Lodge design.

A. Impermeable Surfaces

The impermeable surfaces at the North Star Lodge site consist of a patient care building, paved parking and drive areas, sidewalks, and retaining wall systems. These impermeable materials cover approximately 80 percent of the total site surface.

These impermeable materials are to be maintained in good condition for the life of the buildings. Should replacement of any of these materials or structures be required, contact an environmental and health professional to assess and develop the appropriate procedures to be followed.

B. Permeable Surfaces

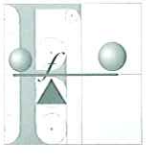
The permeable surfaces at the North Star Lodge site consist of small areas of landscaping. Impacted soils in excess of threshold concentrations in these areas have been overlain with 6 inches of clean topsoil and approximately 2 to 3 inches of sod or other landscaping materials. Whenever feasible, low water and fertilizing requiring plants were selected for site plantings. Irrigation in these areas was designed for the least water penetration necessary to sustain landscaping plants.

Near surface (less than 6 inches deep) plantings can be replaced as desired. Plantings at depths greater than 6 inches should be maintained as originally planted. Should replacement of deeper plantings be required, the work procedures outlined in Section 4.0 should be followed. If required, landscape areas should be hand cultivated. Rototilling or other soil relocation activities that disturb materials at depths greater than 6 inches are prohibited.

C. Installation of Water Conveying Systems

Water conveying systems at the North Star Lodge site include the stormwater system and the main water line. The stormwater system was installed at an elevation below impacted soils. Water collected in the stormwater system will not percolate through impacted soil in excess of threshold concentrations. The stormwater system should be maintained as installed. Minor repair or cleanout of the system can be accomplished by following the procedures outlined in Section 4.0. An environmental and health consultant should be contacted to assess and develop a work plan for major repairs or replacement of the stormwater system.

Whenever feasible, the main water line was installed at elevations below impacted soils. However, connections with existing systems required that portions of the main water line be installed within elevations containing impacted soils in excess of threshold concentrations. Minor repairs to the main water line can be accomplished by following the procedures outlined in Section 4.0. An environmental and health consultant should be contacted to assess and develop a work plan for major repairs or replacement of the main water line.



4.0 WORKER PROTECTION

Several controls and work practices, used either singly or in combination, can be employed to reduce potential exposure to impacted soils. Following is a summary of control measures and work practices.

A. Dust Suppression

By keeping impacted soils moist during a work activity, dust is less likely to become suspended in the air causing worker exposures or offsite migration. Whenever feasible, the work area should be pre-moistened prior to soil impacting activities. Periodically during soil impacting activities, the stockpiled soil and the excavation area should be rewetted to enhance dust suppression. A surfactant (liquid soap-like substance) can be added to dust suppression water to increase the water's effectiveness.

Other factors that will aid suppression of dust are weather conditions and work practices. Impacting materials on low wind days (generally less than 10 miles per hour) will decrease the likelihood of site soils becoming airborne and migrating offsite or resulting in employee exposure. In addition to adequate wetting of site soils (discussed above), work area containment and decontamination (discussed below) are additional work practices that will aid dust suppression.

B. Work Area Containment

The goal of work practice implementation is to keep all impacted soils in excess of threshold concentrations within their containment area. Most maintenance and landscaping activities will not impact the in-place protective barriers. However, if maintenance or landscaping activities require excavation greater than 6 inches deep but less than 100 square feet in surface area, the following work practices should be implemented:

1. Lay plastic sheeting on all sides of the proposed excavation ground surface. Sheeting should extend approximately 4 to 10 feet from edge of proposed excavation, depending on estimated amount of material removed. Lap plastic sheeting seams so that dust and soil cannot become lodged or migrate underneath the plastic.
2. Place traffic barriers or other identification around the perimeter of the work area to prevent inadvertent access to the area during excavation.
3. Place the sod and the top approximate 6 inches of soil on one side of the excavation. This is the clean capping material.
4. Place the remaining subgrade soil excavated to facilitate the maintenance or landscaping activity on the side of the excavation opposite of the sod. This is the soil potentially impacted with agricultural chemicals.
5. Conduct the maintenance or landscaping activity.
6. Replace soil potentially impacted with agricultural chemicals in the excavation.
7. Offsite disposal of excavated material is prohibited. Contact an environmental and health profession to determine disposal requirements if excess excavated materials requires transportation offsite.
8. Clean tools, equipment, and protective clothing of remaining soils by dry brushing damp soil followed by wet cleaning. Place the accumulated soil in the excavation.
9. Replace the clean capping soil, compacting as necessary.

10. If the distance from the replaced soil surface to the ground surface exceeds the thickness of the sod then place additional clean soil imported from offsite sources into the excavation until the depth discrepancy matches the sod thickness.
11. Replace the sod.
12. Remove the plastic sheeting.
13. Thoroughly wash hands and face to remove any remaining soil.

C. Decontamination

Wet cleaning of tools, equipment, and workers will also reduce potential exposure and offsite migration. After completing the work task and replacing the impacted soil (soil excavated below 6 inches), clean tools and equipment used during the project. Moist soil can be dry brushed from tools, equipment, personnel clothing and from the plastic sheeting where the impacted soil was staged. Following dry brushing, complete the cleaning process by wet wiping or washing these items.

After replacement of the clean topsoil and sod, site workers should proceed to a wash station/facility and thoroughly wash their hands and face to remove any potentially remaining particles of impacted soil in excess of threshold concentrations.

5.0 PROCEDURES FOR BREACHING PROTECTIVE BARRIERS

Planned and unplanned protective barrier breaches may occur at the North Star Lodge site as part of operations consistent with developed site use. A planned protective barrier breach is the result of a scheduled maintenance or construction activity. For example, installation of a new retaining wall is a planned event that may breach the protective barrier. An unplanned protective barrier breach is the result of an accident or emergency repair activity. For example, the rapid repair of a broken main water line is an unplanned event that could result in a protective barrier breach. Following is a procedure summary for each type of protective barrier breach:

A. Planned Protective Barrier Breach

During the planning phase, evaluate the potential for the additional site development or maintenance activity to impact the protective barrier. For small projects (less than 100 square feet of protective barrier) where in-house employees will conduct the work preformed, evaluate the feasibility of implementing the procedures outlined in section 4.0. If the procedures outlined in Section 4.0 can be feasibly implemented, then work can proceed as planned. If Section 4.0 work procedures cannot be feasibly implemented, than work should be put on hold until an environmental and health professional can assess the planned work and recommend alternative work procedures.

For large projects (greater than 100 square feet of protective barrier) an environmental and health professional should assess and develop work procedures during the project-planning phase. Large projects may also require Ecology notification as summarized in Section 2.0.

B. Unplanned Protective Barrier Breach

The first step when an unplanned protective barrier breach occurs is to control the event that caused the breach, then contain any offsite soil migration. Once the site is temporarily stabilized, notify Ecology of the unplanned protective barrier breach and contact an environmental and health professional to assess the extent of protective barrier impact and develop a work plan for repairing or replacing the protective barrier.

6.0 CONCLUSION

Initial soil sampling investigations conducted concurrent with construction, identified lead, arsenic, and DDT present in site soils above threshold concentrations to an approximate depth of 4 feet below ground surface across the site. During construction, site soils were relocated from the higher elevation western portion of the site to the lower elevation eastern portion of the site. Following construction of the North Star Lodge buildings and associated paved areas, the remaining landscape areas were capped with clean topsoil. Statistical analysis of site samples of capping material confirmed near surface agricultural chemical concentrations were below the selected remedial threshold. As a further barrier, soil capping materials were overlayed with sod and other landscaping materials. Residual concentrations of agricultural chemical historically present onsite have been contained beneath protective barriers rendering future ecological and agricultural exposure to residual chemicals unlikely.

A restrictive deed covenant has been filed to notify future site owners of material presence. A O&M Plan is in place that outlines measures necessary to maintain protective barriers and summarizes measures necessary in the event that barriers are breached. Following is a summary of additional information sources regarding the North Star Lodge Voluntary Remedial Action:

Yakima Valley Memorial Hospital
2811 Tieton Drive
Yakima, Washington 98902
(509) 575-8007

Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, Washington 98901
(509) 574-0839

Washington State Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, Washington 98902
(509) 575-2490

APPENDIX M

OPERATIONS AND MAINTENANCE PLAN
ADJACENT SITE

AGRICULTURAL CHEMICAL SOIL OPERATIONS AND MAINTENANCE PLAN NORTH STAR LODGE ADJACENT SITE Yakima, Washington

Project Number 98921.1

August 31, 2000

Prepared for: Yakima Valley Memorial Hospital
Attn: John Vornbrock
2811 Tieton Drive
Yakima, Washington 98902

Prepared by: Travis Trent, RPG
Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, WA 98901

TABLE OF CONTENTS

1.0 INTRODUCTION

The purpose of this Agricultural Chemical Impacted Soil (impacted soil) Operations and Maintenance Plan (O&M Plan) is to institute long-term on-site management of soils in excess of selected remedial threshold concentrations (threshold concentrations). The property is located across 39th Avenue from the North Star Lodge site. Existent site soils are assumed impacted with agricultural chemicals resulting from historic land-use. Approximately 1,800 cubic yards of known agricultural chemical impacted soil has been moved onto the site during the development of the North Star Lodge facility located across the street at 808 North 39th Avenue. Identified residual agricultural chemicals include lead, arsenic, and dichlorodiphenyl-trichloroethane (DDT). The threshold concentrations selected for these agricultural chemicals are 250 parts per million (ppm), 20 ppm, and 1 ppm, respectively.

Following movement of adjacent site soils on to the 39th Avenue site, the property was graded and hydroseeded to establish vegetative cover as quickly as possible. Site vegetative cover will be maintained until site development plans are finalized. On-site activities will be managed to minimize or eliminate potential exposure to impacted soils. Final disposition of agricultural chemical impacted soils will be addressed during future site development.

A. Policy Statement

It is the policy of Yakima Valley Memorial Hospital (Memorial Hospital), to provide a safe and healthful work environment for all employees, tenants, and site contractors. A portion of the Safety and Health Program for the adjacent North Star Lodge site includes the safe management of impacted soil located beneath vegetative cover. Additionally, it is Memorial Hospital's intent to comply with all federal, state, and local regulations pertaining to occupational safety and health, and environmental protection.

B. Objective

The objective of this O&M Plan is to reduce the risk of exposure to on-site workers and migration beyond property boundaries of impacted soil. This O&M Plan describes the procedure for notifying tenants, maintenance workers, and repair contractors of residual agricultural chemical presence. In addition, the O&M Plan outlines what controls are in place to prevent exposure or off site migration, how site workers can protect themselves from exposure, and what to do in the event that soils need to be excavated or protective barriers breached.

2.0 NOTIFICATION PROCEDURES

Notifying personnel who may potentially disturb site soils is the best prevention of inadvertent worker exposure, off-site migration of impacted soils, or destruction of protective barriers.

A. Maintenance and Landscape Workers

It is unlikely that during routine maintenance and landscape tasks that workers will encounter impacted site soils in excess of threshold concentrations. However, during non-routine tasks, such as replacement of large shrubs/trees or sprinkler line repair, maintenance and landscape workers may encounter agricultural chemical impacted soils.

As part of Hazard Communication, site tenants will notify their employees who may be expected to encounter impacted soils of the presence, location, and expected concentrations of agricultural chemicals. Employees will also be notified of how to protect themselves should they encounter impacted soils in excess of threshold concentrations and how to replace materials so that the integrity of the site barriers remains sound.

B. Occasional Site Workers/Contractors

Occasional site workers/contractors are those individuals or companies under contract, who are brought on-site to complete a specific task. Many tasks, such as painting or mowing, will not require that impacted soil be contacted. However some tasks, such as main water line replacement, will require careful excavation and replacement of materials so that agricultural chemical impacted soils do not end up near the surface or become washed or transported off-site.

As part of Hazard Communication, site tenants will notify occasional site workers/contractors who may be expected to encounter impacted soils of the presence, location, and expected concentrations of residual agricultural chemicals. Occasional site workers/contractors will also be notified of how their employees should protect themselves when they come in contact with impacted soils in excess of threshold concentrations and how to replace materials so that the integrity of the site barriers remains sound.

C. Washington State Department of Ecology

Prior written approval from the Washington State Department of Ecology (Ecology) is required before commencement of any activity that will alter, modify, or remove existing structures; or will result in the release or exposure to the environment of soil containing agricultural chemicals that was contained as part of the Remedial Action; or will create a new exposure pathway. Following is some examples of activities that may require written approval from Ecology: drilling, grading, excavation, or bulldozing. Memorial Hospital will also notify Ecology of proposed property use changes to the extent that the protective barriers will no longer be maintained. Ecology may approve inconsistent use after public notice and comment is received.

D. Property Transfer

A written notice stating Memorial Hospital's intent to convey interest in the 39th Avenue property will be submitted to Ecology a minimum of 30 days in advance of the event. Interest in the 39th Avenue property (title, easement, lease, etc) will include provisions for continued operations and maintenance of the Remedial Action.

3.0 SITE CONTROLS

Impacted soils in excess of threshold concentrations have been overlain with vegetative cover or other landscaping materials. Whenever feasible, low water and fertilizing requiring plants were selected for site plantings. Irrigation should be maintained with the least water penetration necessary to sustain landscaping plants.

Plantings should be maintained as originally planted. Should replacement of plantings be required, the work procedures outlined in Section 4.0 should be followed. If required, landscape areas should be hand cultivated. Rototilling or other soil relocation activities that disturb soil and depths greater than 6 inches are prohibited.

4.0 WORKER PROTECTION

Several controls and work practices, used either singly or in combination, can be employed to reduce potential exposure to impacted soils. Following is a summary of control measures and work practices.

A. Dust Suppression

By keeping impacted soils moist during a work activity, dust is less likely to become suspended in the air causing worker exposures or offsite migration. Whenever feasible, the work area should be pre-moistened prior to soil impacting activities. Periodically during soil impacting activities, the stockpiled soil and the excavation area should be rewetted to enhance dust suppression. A surfactant (liquid soap-like substance) can be added to dust suppression water to increase the water's effectiveness.

Other factors that will aid suppression of dust are weather conditions and work practices. Impacting materials on low wind days (generally less than 10 miles per hour) will decrease the likelihood of site soils becoming airborne and migrating offsite or resulting in employee exposure. In addition to adequate wetting of site soils (discussed above), work area containment and decontamination (discussed below) are additional work practices that will aid dust suppression.

B. Work Area Containment

The goal of work practice implementation is to keep all impacted soils in excess of threshold concentrations within their containment area. Most maintenance and landscaping activities will not impact the in-place protective barriers. However, if maintenance or landscaping activities require excavation greater than 6 inches deep but less than 100 square feet in surface area, the following work practices should be implemented:

1. Lay plastic sheeting on all sides of the proposed excavation ground surface. Sheeting should extend approximately 4 to 10 feet from edge of proposed excavation, depending on estimated amount of material removed. Lap plastic sheeting seams so that dust and soil cannot become lodged or migrate underneath the plastic.
2. Place traffic barriers or other identification around the perimeter of the work area to prevent inadvertent access to the area during excavation.
3. Place the sod and the top approximate 6 inches of soil on one side of the excavation. This is the clean capping material.
4. Place the remaining subgrade soil excavated to facilitate the maintenance or landscaping activity on the side of the excavation opposite of the sod. This is the soil potentially impacted with agricultural chemicals.
5. Conduct the maintenance or landscaping activity.
6. Replace soil potentially impacted with agricultural chemicals in the excavation.

7. Offsite disposal of excavated material is prohibited. Contact an environmental and health profession to determine disposal requirements if excess excavated materials requires transportation offsite.
8. Clean tools, equipment, and protective clothing of remaining soils by dry brushing damp soil followed by wet cleaning. Place the accumulated soil in the excavation.
9. Replace the clean capping soil, compacting as necessary.
10. If the distance from the replaced soil surface to the ground surface exceeds the thickness of the sod then place additional clean soil imported from offsite sources into the excavation until the depth discrepancy matches the sod thickness.
11. Replace the sod.
12. Remove the plastic sheeting.
13. Thoroughly wash hands and face to remove any remaining soil.

C. Decontamination

Wet cleaning of tools, equipment, and workers will also reduce potential exposure and offsite migration. After completing the work task and replacing the impacted soil (soil excavated below 6 inches), clean tools and equipment used during the project. Moist soil can be dry brushed from tools, equipment, personnel clothing and from the plastic sheeting where the impacted soil was staged. Following dry brushing, complete the cleaning process by wet wiping or washing these items.

After replacement of the clean topsoil and sod, site workers should proceed to a wash station/facility and thoroughly wash their hands and face to remove any potentially remaining particles of impacted soil in excess of threshold concentrations.

5.0 PROCEDURES FOR BREACHING PROTECTIVE BARRIERS

Planned and unplanned protective barrier breaches may occur at the North Star Lodge site as part of operations consistent with developed site use. A planned protective barrier breach is the result of a scheduled maintenance or construction activity. For example, installation of a new retaining wall is a planned event that may breach the protective barrier. An unplanned protective barrier breach is the result of an accident or emergency repair activity. For example, the rapid repair of a broken main water line is an unplanned event that could result in a protective barrier breach. Following is a procedure summary for each type of protective barrier breach:

A. Planned Protective Barrier Breach

During the planning phase, evaluate the potential for the additional site development or maintenance activity to impact the protective barrier. For small projects (less than 100 square feet of protective barrier) where in-house employees will conduct the work preformed, evaluate the feasibility of implementing the procedures outlined in section 4.0. If the procedures outlined in Section 4.0 can be feasibly implemented, then work can proceed as planned. If Section 4.0 work procedures cannot be feasibly implemented, than work should be put on hold until an environmental and health professional can assess the planned work and recommend alternative work procedures.

For large projects (greater than 100 square feet of protective barrier) an environmental and health professional should assess and develop work procedures during the project-planning phase. Large projects may also require Ecology notification as summarized in Section 2.0.

B. Unplanned Protective Barrier Breach

The first step when an unplanned protective barrier breach occurs is to control the event that caused the breach, then contain any offsite soil migration. Once the site is temporarily stabilized, notify Ecology of the unplanned protective barrier breach and contact an environmental and health professional to assess the extent of protective barrier impact and develop a work plan for repairing or replacing the protective barrier.

6.0 CONCLUSION

Soil sampling investigations conducted on adjacent properties identified lead, arsenic, and DDT above threshold concentrations to an approximate depth of 4 feet below ground surface. During construction, of the North Star Lodge, approximately 1,800 cubic yards of impacted soil were relocated across the street to the 39th Avenue site. Soils were graded and hydroseeded to establish vegetative cover as quickly as possible.

Residual concentrations of agricultural chemical historically present on-site have been contained beneath protective barriers rendering future ecological and agricultural exposure to residual chemicals unlikely.

A restrictive deed covenant should be filed to notify future site owners of material presence. An O&M Plan is in place that outlines measures necessary to maintain protective barriers and summarizes measures necessary in the event that barriers are breached. Following is a summary of additional information sources regarding the North Star Lodge Voluntary Remedial Action:

Yakima Valley Memorial Hospital
2811 Tieton Drive
Yakima, Washington 98902
(509) 575-8007

Fulcrum Environmental Consulting, Inc.
122 South Third Street
Yakima, Washington 98901
(509) 574-0839

Washington State Department of Ecology
Central Regional Office
15 West Yakima Avenue, Suite 200
Yakima, Washington 98902
(509) 575-2490