INTERIM ACTION REPORT
TERRACE HEIGHTS ELEMENTARY SCHOOL
SOIL REMEDIATION PROJECT

FACILITY/SITE PROJECT NO. 11005.1

DECEMBER 17, 2014

LOOFBURROW WETCH ARCHITECTS

INTERIM ACTION REPORT
TERRACE HEIGHTS ELEMENTARY SCHOOL
YAKIMA, WASHINGTON

Facility/Site Project No. 11005.1

December 17, 2014

Prepared by
Loofburrow Wetch Architects
Gary A. Wetch (509) 457-5121
And
Meier Engineering
And
GN-Northern

TABLE OF CONTENTS

1 INTRODUCTION

1.1 PURPOSE OF THIS DOCUMENT

The purpose of this report is to document cleanup activities conducted at Terrace Heights Elementary School (Site) during the summer and fall of 2013.

1.2 AREA WIDE INTRODUCTION

Area-wide soil contamination is defined as contamination above state cleanup levels that is dispersed over a large geographic area. The soil contamination in this case is a result of central Washington's orchard industry. Much of the region consists of current or former orchard land, where long-term pesticide application has left persistent chemicals in the soil. Lead-arsenate, a pesticide commonly used between the years of 1905 and 1947 to control the codling moth, has been identified as the primary source of increased lead and arsenic concentrations.

Due to their chemical structure, lead and arsenic tend to bond with soil particles and often remain at or near ground surface level for decades, creating an exposure pathway through inhalation and/or ingestion.

Although lead and arsenic are naturally occurring elements, elevated concentrations have been proven to have a negative impact on human health. Young children are generally more susceptible than adults, which is why Ecology has focused remediation efforts on Elementary Schools with higher exposure to children.

Because of the unique nature of area-wide contamination, traditional methods of remediation are not feasible. Therefore, the Area-Wide Soil Contamination Task Force was established in 2002 to identify and pursue effective statewide strategies. Recommendations from the Task Force included soil testing, qualitative evaluations, and protective measures at child-use areas.

In the Central Washington region, Okanogan, Chelan, Douglas, and Yakima counties were targeted based on the large volume of apple and pear production during the first half of the 20th century. Ecology's Central Regional Office (CRO) began initial sampling and analysis during the spring of 2002 in the Wenatchee area. This area was chosen based on aerial photography from 1927 and 1947 that showed a high number of school properties located on former orchard land.

Results from the Wenatchee area showed several schools with soil contamination exceeding state cleanup standards. Based on these results, soil testing was implemented in the four priority counties. Over 100 public schools were tested for lead and arsenic during the summer of 2005. Of the schools sampled, Ecology's CRO identified 35 schools with soil contamination exceeding state cleanup standards.

The 35 schools were then prioritized for remedial activities. Remedial activities at Terrace Heights Elementary were initiated and completed during the summer and fall of 2013.

2 SITE DESCRIPTION

The Terrace Heights Elementary School (Site) is located in Yakima County in central Washington within the community of Terrace Heights. Based on soil sampling results by Ecology in 2005, the Site has residual lead/arsenic concentrations considered low/moderate and greater than Model Toxics Control Act cleanup levels. The school grounds are routinely used by the school and community for activities.

According to the Geotechnical Survey conducted by GN-Northern, Inc, soil at the site is predominantly classified as silty sand loam (SM) brown, fine to medium grained, dry to moist, medium dense with trace gravel, with moderate calcareous cementation (caliche) and cobbles up to 24 inches in diameter after 2.0 - 2.5 feet. The site is generally flat and slopes slightly to the south/southwest at an approximate slope of 2.5 to 3.0%. Mean annual precipitation is 9 to 12 inches, and the mean annual air temperature is 48 to 52 degrees F, with a frost-free period of 100 to 180 days. The silty sand loam (SM) brown, fine to medium grained, dry to moist, medium density with trace gravel, calcareous cementation (caliche) and cobbles up to 24 inches drain within soil infiltration rates but should be tested again at retention basins due to cemented soils (caliche) observed. The water table is noted between 160 inches and 40 inches below surface grades.

3 SITE HISTORY

This site was included in an area-wide lead and arsenic sampling program which involved collecting samples from schools suspected of having a history of past pesticide use. Prior to the mid-1940s, lead arsenate was the most widely used chemical used to control codling moths on fruit trees. Lead (Pb) and arsenic (As) are known to be very stable in soil and tend to stay near the surface. Because of this historical background, it was suspected that the soil in the school playground might be contaminated with lead and arsenic. The Washington Department of Ecology (Ecology) obtained permission from the East Valley School District to sample and test the soils from Terrace Heights Elementary for lead and arsenic.

The soils throughout the property were sampled by the Department of Ecology. Samples were taken at various depths from the surface using a core sampler. The samples were analyzed for lead and arsenic using X-Ray Fluorescence (XRF) Spectroscopy.

The analytic results of initial sampling at Terrace Heights Elementary indicated that contaminant levels in soil exceeded the Model Toxics Control Act Method A cleanup levels for lead (250 ppm) and/or arsenic (20 ppm) in preliminary samples.

Additional soil sampling was conducted by GN-Northern, Inc., in order to further delineate contamination in soil for remediation. The results of the 55 soil samples taken from the property at Terrace Heights Elementary School showed that the lead and arsenic contamination above Method A cleanup levels extends in the upper 12 to 18 inches of soil but was observed as deep as 24 inches below ground surface. The highest level of arsenic detected at the site was 94 ppm, compared to the state cleanup standard of 20 ppm for arsenic. For lead, the highest level detected was 3,190 ppm, compared to the state cleanup standard of 250 ppm.

To prevent exposure to contaminated soil a geotextile barrier and 8-inch cap of clean soil were installed over the existing play area. Turf replacement was accomplished with sod and/or hydroseed. Because contamination was not removed from the site, a restrictive covenant will be issued to discuss any future development or improvements on the site that could expose contaminated soil.

4 SITE CONTACT INFORMATION

Remedial activities were designed, and supervised by Loofburrow Wetch Architects and consultant Meier Engineering, with overview and partial funding by Ecology. Construction was performed by a licensed general contractor. Chervenell Construcion was the overall General Contractor responsible for the majority of the site with the remedial portion being conducted by Wyser Construction as a separate Bid. Ecology monitored construction activities at key points and milestones and maintained contact with East Valley School District, Architect and Contractor throughout the project.

The following table contains contact information for the primary individuals with whom Ecology interacted during the remediation process.

Table 1: Site Contacts

Name	Organization	Position	Phone Number
Gary Wetch	Loofburrow Wetch Architects	Principal-In-Charge	(509) 457-5121
John Schieche	East Valley School District	Superintendent	(509) 573-7300
John Hultman	Hill International	Owner's Construction Manager	(509) 747-8037
Kyle Clark	Chervenell Construction	General Contractor	(509) 735-3377
Dan Reynolds	Wyser Construction	Remediation Contractor	(206) 510-0672

5 REMEDIAL ACTIVITIES

5.1 RISK

The potential exposure pathways for lead and arsenic in soil are inhalation, ingestion, and dermal absorption. It is important to consider that ingestion is not considered as an exposure pathway in the site hazard assessment ranking method. For the purpose of this cleanup, ingestion was considered as a significant exposure pathway. Ingestion of contaminated soil is expected to be the primary route of exposure for metals, particularly with young children. Metals in dust or soil can be ingested accidentally by hand-to-mouth activity. Pica behavior in young children, that is, eating of non-food items, will increase this exposure. Ingestion or inhalation of wind-blown soil or dust are additional pathways of exposure to lead and arsenic. Children are considered a sensitive population because they tend to ingest more soil and dust than adults and because they tend to absorb more of the lead they ingest. Metals are not readily absorbed through the skin, so dermal absorption of metals is not a significant concern at the concentrations found at schools in the area-wide cleanup program.

Evidence of groundwater contamination or the threat of groundwater contamination has not been found relative to area-wide lead and arsenic contamination. Extensive soil profile sampling in Central Washington has demonstrated that lead and arsenic contamination does not extend below 30 inches below ground surface (bgs) in undisturbed situations. High levels of lead and arsenic contamination (above 50 ppm for arsenic and above 500 ppm for lead) were not found below 12 inches bgs. These results may vary in climates with more precipitation, but in this region the findings were very consistent. Due to the depth of groundwater found in the vicinity of the school, combined with the distribution of the contamination, the risk of lead and arsenic contamination in groundwater is minimal.

5.2 SAFETY AND HEALTH

The site was restricted from public access throughout the construction period with a combination of chain link fence, orange safety netting, and yellow caution tape. The contractor was required to provide, and did provide, a specific Safety & Health Plan for the site construction activities.

5.3 DUST CONTROL PLAN

The contactor was required to control dust and to prepare a dust control plan. Dust control measures included the use of area hydrants, water trucks, and the existing and new irrigation system as they came on line through sequencing.

5.4 REMEDIAL PROCESS

Capping of existing soil with clean soil was chosen as the most efficient remedial option for the site. The remedial process was carried out as follows: The existing grass turf was tilled to a depth of approximately six inches with a tractor-drawn rototiller. The tilled surface was flattened with a roller, and a permeable geotextile fabric was installed over the existing soil surface. The geotextile was rolled out and staked in place with 12 inches of overlap at the seams. At hardscape edges such as pavement and foundations, contaminated soil was excavated to allow the clean soil cap to meet existing grade. A minimum of eight inches of clean topsoil was placed on top of the geotextile and lightly compacted. The imported topsoil was tested for the presence of lead, arsenic, pesticides and petroleum products prior to import. No contaminants of concern were detected. Neither lead nor arsenic were detected above background concentrations. Following topsoil import and grading, sod was installed on the remediated area and hydrosseeding was used where growth had not established. Approximately 99.9% of the field area was treated with sod rather than hydro-seed , and fenced off to allow to germinate and establish.

5.5 SAMPLE RESULTS

Table 2: Pre-Remedial Sampling using XRF

Terrace Heights Elementary School

SAMPLE ID	As (mg/kg)	Pb (mg/kg)
B1	35	174
B2	136	170
B3	102	515
B4	61	625
B5	62	632
B6	65	364
B7	70	180
B8	98	517
B9	44	197
B10	39	125
B11	86	814
B12	12	21
B13	43	423
B14	43	48
B15	74	540
B16	43	197
B17	37	165
B18	77	675
B19	32	122
B20	48	148
B21	63	511
B22	125	598
B23	16	67
B24	99	270
B25	84	673
B26	29	18
B27	189	865
B28	14	23
B29	37	152
B30	15	77
B31	28	210
B32	23	97
B33	49	460
B34	23	90
B35	11	16
B36	13	104
B37	19	16
B38	ND	209
B39	46	354
B40	56	128
B41	15	21

B42	42	225
B43	ND	52
B44	ND	144
B45	71	319
B46	ND	204
B47	ND	ND
B48	ND	64
B49	ND	ND
B50	ND	321
B51	41	ND
B52	29	34
B53	40	118
B54	65	216
B55	50	73

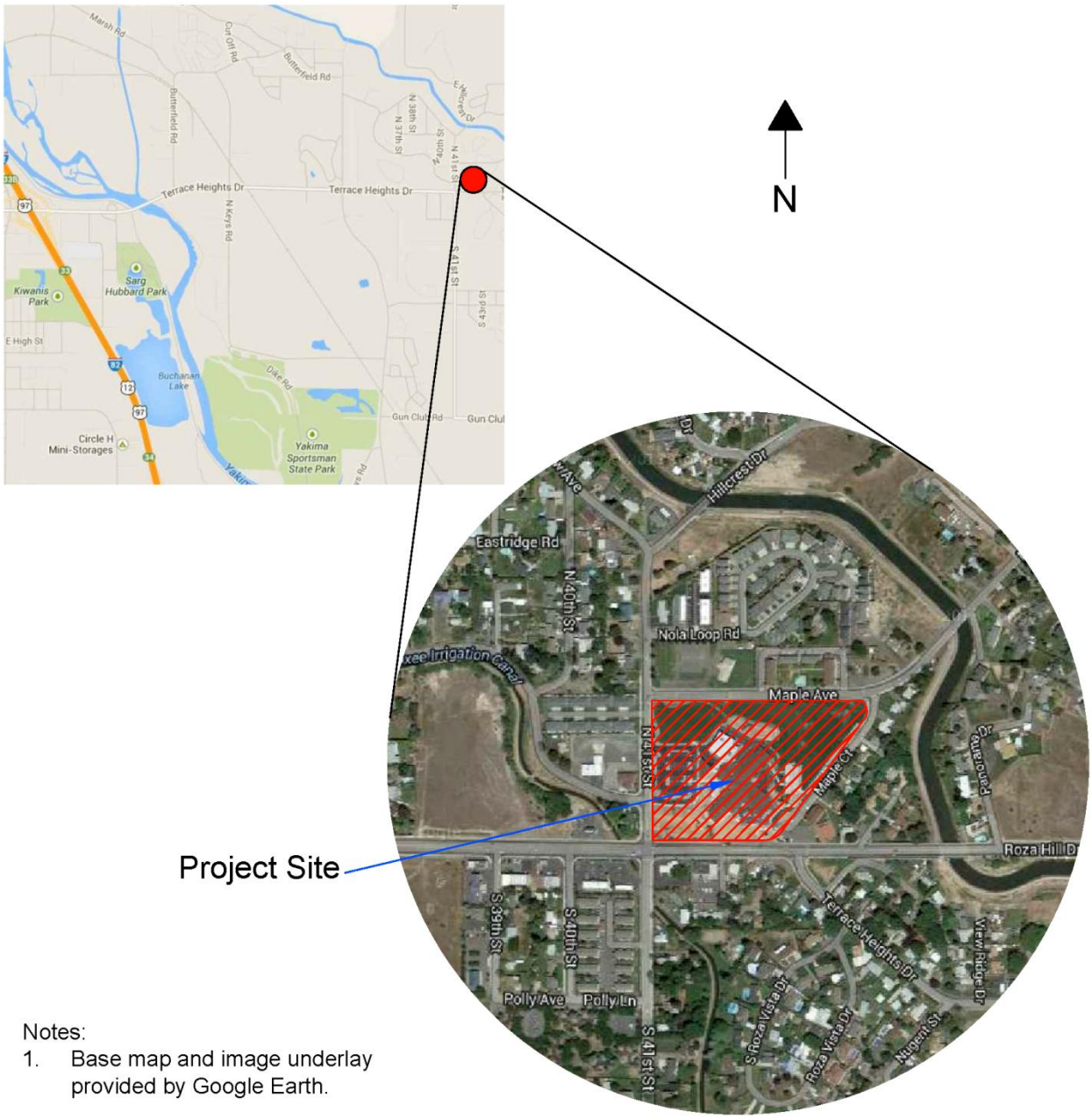
6 PROJECT SUMMARY

Soil samples collected at Terrace Heights Elementary indicated lead and arsenic contamination existed in surface soils at concentrations above MTCA cleanup levels. The course of action taken was to cap the field with clean soil. Soil was reconfigured where necessary to adjust for final grades and keep all soil on-site. A permeable geotextile fabric was placed on top of the contaminated soil. Clean topsoil was placed over the geotextile, and sod or hydroseed was applied to restore the site to the original condition. As a result of the Interim Action, lead and arsenic contaminated soil is contained within the site, and a restrictive covenant will be filed for any future improvements or redevelopment of the site.

7 APPENDICES

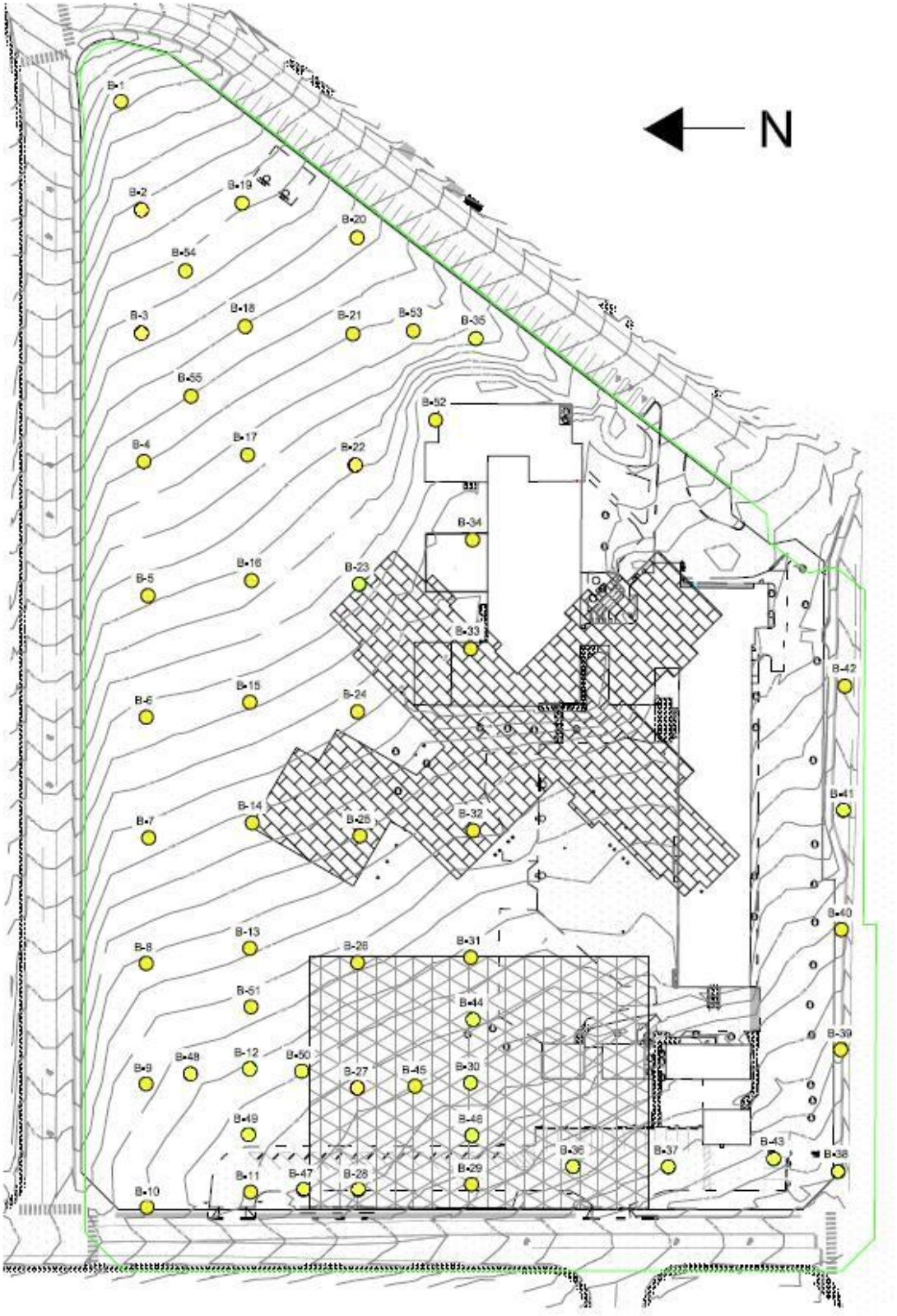
7.1 Appendix A: FIGURES

Figure A-1: Vicinity Map



Notes:
1. Base map and image underlay provided by Google Earth.

Figure A-2: Remediation Area Map



7.2 Appendix B: XRF USE

GN Northern performed Pre-Remedial soil sampling/on-site testing at the Terrace Heights Elementary School on March 1 and 2, 2012 as part of the remedial investigation activities to define and delineate contaminated portions of the property and to design and implement a clean-up plan. This property is known to be contaminated with lead and arsenic. The Department of Ecology completed a pilot sampling/testing at this site in 2005 and found elevated levels of lead and arsenic in the on-site soils.

A total of fifty-five (55) testing locations were placed at various locations around the site. Forty-two (42) auger test holes were conducted on, an approximate, ninety (90) foot grid spacing where buildings and paved areas were not present. Additionally, thirteen (13) more test holes were placed between previously tested areas where large spikes or drops in lead and arsenic levels were observed. On-site testing was done on all collected soil samples using a portable X-Ray Fluorescence Analyzer (XRF) by Innov-x Systems. Ten (10) of the samples collected were shipped to an independent lab to compare and verify the XRF field test results/readings. The samples sent out for independent testing were selected across a full range of contamination levels, as determined using the XRF testing.

Results, using the XRF, show lead levels ranging from non-detect (ND) to 865 mg/kg and arsenic levels from ND to 189 mg/kg. Additional verification through laboratory testing showed levels of lead from 33 mg/kg to 3190 mg/kg and arsenic levels from 16 mg/kg to 94 mg/kg. MTCA clean-up levels for lead and arsenic are 250 mg/kg and 20 mg/kg, respectively. It was found that the portable XRF had a correlation coefficient (R^2 value) between field and laboratory analyses of 0.8089 for Arsenic and 0.911 for Lead, as shown in figures B-1 and B-2 below:

Figure B-1: Arsenic Comparison

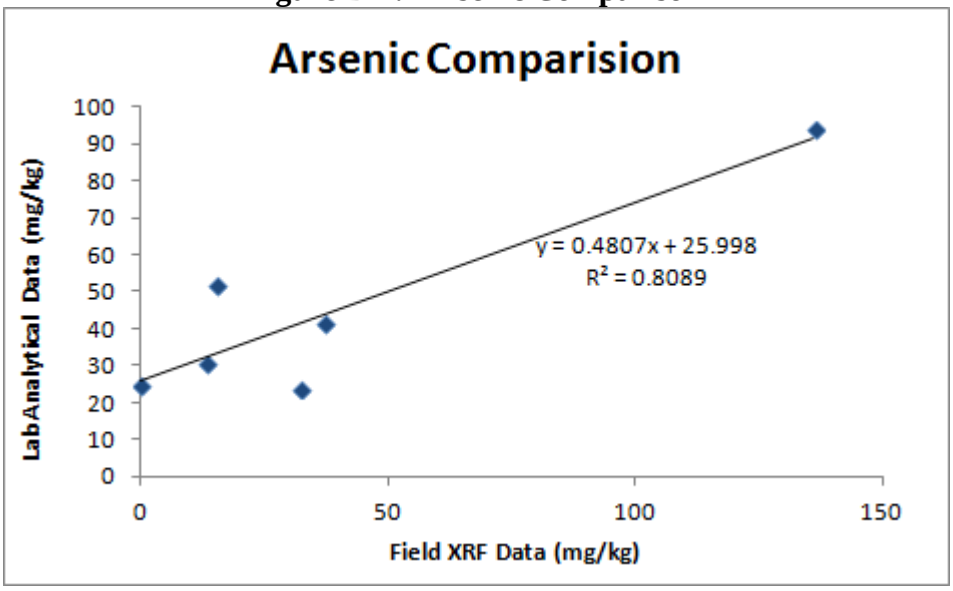
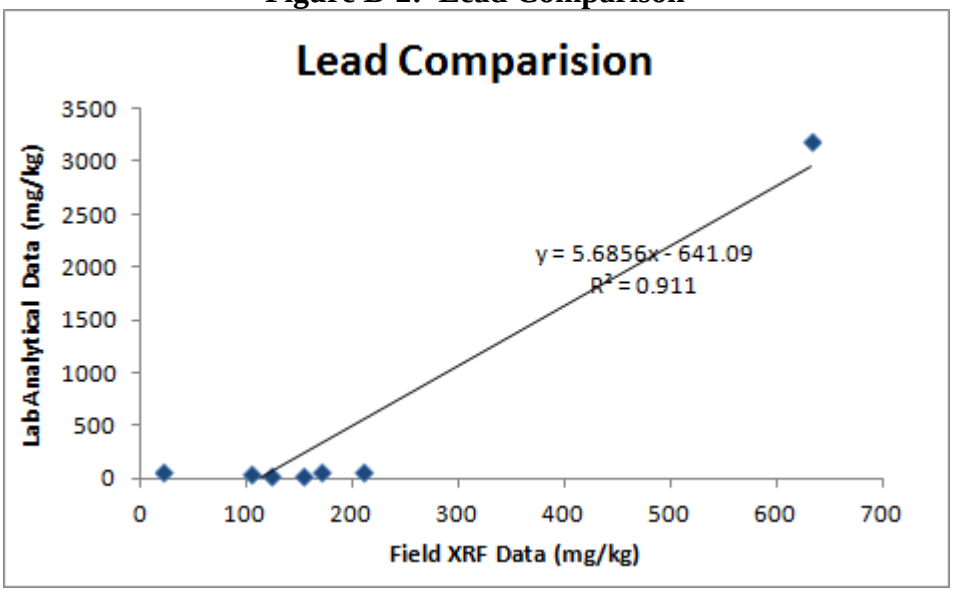


Figure B-2: Lead Comparison



7.3 Appendix C: COSTS

Table 3: Terrace Heights Elementary School Remediation Costs

TERRACE HEIGHTS ELEMENTARY SCHOOL

1.	Mobilization	$32,843.92
2.	Erosion	$3,500.00
3.	Dust Control	$4,500.00
4.	Excavation	$87,850.00
5.	Storm System	$11,950.00
6.	Play Chip Installation	$38,975.00
7.	Asphalt Pathway	$51,350.00
8.	Curbing	$3,500.00
9.	Liner Installation	$34,750.00
10.	Irrigation Install	$35,450.00
11.	Topsoil Installation	$79,850.00
12.	Plant Installation	$4,850.00
13.	Tree Installation	$2,850.00
14.	Sod Installation	$73,606.08
15.	Fertilizer/Mow Lawn	$8,950.00
16.	Stump Disposal	$2,500.00
17.	Bark Installation	$4,850.00
18.	Demobilize	$4,500.00
19.	Close-out Documents	$2,850.00
20.	Survey	$8,500.00
	Subtotal	**$497,975.00**
	Change Orders	$32,431.89
	Tax	$43,493.36
	TOTAL	**$573,900.25**

7.4 Appendix D: PHOTO LOG

Photo D-1: Terrace Heights Elementary School remediation starts

Photo D-2: Terrace Heights Elementary School new sod/hydroseed

Photo D-3: Terrace Heights Elementary School landscape ensuing

Photo D-4: Terrace Heights Elementary School complete

7.5 Appendix E: Bibliography

US EPA. Method 6200. "Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment". January 1998.

US EPA. "Innovative Technology Verification Report: XRF Technologies for Measuring Trace Elements in Soil and Sediment: Innov-X XT400 Series XRF Analyzer". EPA/540/R-06/002. February 2006.

Natural Resources Conservation Service Web Soil Survey; National Cooperative Soil Survey, "Soil Survey Area: Yakima County Area, Washington," Version 10 June 12, 2009.

7.6 Appendix F: Remedial Action Plan (see attached)

Attached for reference is the Remedial Action Plan specified from the Contract Documents for construction, Bid on December 6, 2012 at 6:00 PM as follows.

7.7 Appendix G: Import Soil Testing Results (see attached)

Attached for reference is the Contractors testing and inspection results, Submittal No. 7, indicating no contamination present in topsoil cap material.

7.8 Appendix H: As-built drawings for future planned improvements (see attached)

As-built drawings (1 to 2 pages) showing general outline of future improvements or locations of 2'-0" clean fill for future planting areas.

7.9 Appendix I: Environmental Covenant & O&M for ground maintenance (see attached)

Attached for reference is the Environmental Covenant and O&M maintenance provisions from the District.

Independent Remedial Action Plan

Terrace Height Elementary School, Yakima WA

Prepared by/for

East Valley School District

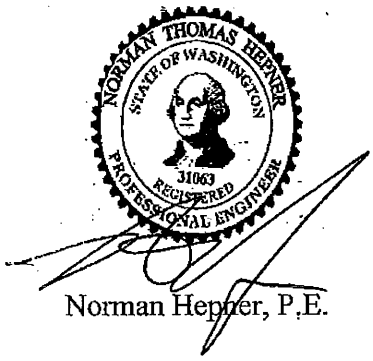
and

Loofburrow Wetch Architects

with

Environmental Engineering Support from

Washington State Department of Ecology



Norman Hepner, P.E.

October 25, 2012

Introduction

This Independent Remedial Action Plan is written for the Terrace Heights Elementary School in accordance with section 137-340-515 of the Washington Administrative Code (WAC). This independent remedial action plan meets the substantive requirements of Model Toxics Control Act (MTCA) as outlined below.

Background

In response to increasing public concerns on lead/arsenic contamination, the 2001 Washington State Legislature requested that Ecology prepare a statewide strategy to address lead and arsenic soil contamination. The project's main focus was on areas with low to moderate levels of lead and arsenic that have been developed into residential neighborhoods, schools, day cares and parks.

The Washington State Department of Ecology adopted a strategy based on the findings and recommendations of the Area-Wide Soil Contamination Task Force [Task Force], a 17-person panel chartered by the Washington State Departments of Agriculture, Ecology, Health, and Community, Trade and Economic Development (the Agencies). The statewide strategy to respond to low- to moderate-level arsenic and lead soil contamination in Washington State is a completed report, **Area-Wide Soil Contamination Task Force Report,** Ross & Associates Environmental Consulting, Ltd., Landau Associates, Inc., Hubbard Gray Consulting, Inc, June 3, 2003.

The Task Force deliberations focused on understanding the nature and extent of area-wide soil contamination, making recommendations about effective, practical, and affordable steps individuals and organizations can take to reduce their potential for exposure to area-wide soil contamination, and on creating an alternate, more streamlined approach under MTCA for properties affected by area-wide soil contamination.

Specifically, the Task Force recommendations and Ecology's strategy for schools affected by area-wide soil contamination include the following actions:

- that property owners implement individual protection measures
- maintain good soil cover in areas where children play
- conduct qualitative evaluations to increase their understanding of where exposure could occur
- test soils where qualitative evaluations indicate the potential for exposure to contaminated soil,
- implement additional protective measures such as installing a geotextile fabric barrier between contaminated soils and surfacing materials in play areas if contamination is found.

Site Description

The Terrace Heights Elementary School (Site) is located in Yakima County in central Washington within the community of Terrace Heights. Based on soil sampling results by Ecology in 2005, the Site has residual lead/arsenic concentrations considered low/moderate and greater than Model Toxics Control Act cleanup levels. The school grounds are routinely used by the school and community for activities.

Contaminants of Concern

The main contaminants of concern at this Site are the toxic metals, lead and arsenic. Long-term exposure to elevated levels of arsenic may cause cancer, whereas, long-term exposure to lead may affect and impair the human nervous system and proper brain function. More information on the short and long-term affects of lead and arsenic can be found online at www.doh.wa.gov/communityandenvironment/contaminants/arsenic.aspx. Ecology has accepted the placement of a geotextile fabric underneath the clean soil as an adequate barrier for the protection of terrestrial and ecological resources for areawide lead and arsenic soil contaminants.

Site Assessment

Site soil sampling completed in April 2012 by GN Northern confirmed Ecology's previous sampling and indicated low to moderate levels of lead/arsenic contamination are present throughout the school grounds. Based on historic aerial photography the Site was known to be an old orchard. Based on this information and subsequent sampling, the soil is contaminated to a minimum depth from approximately 24 to 36 inches.

Independent Remedial Action Plan (IRAP)

The East Valley School District has entered into an interagency agreement with the Department of Ecology to perform an independent remedial action during the construction of the new Terrace Heights Elementary School meeting the substantive requirements of an Ecology cleanup action at the Site. Ecology is providing substantial environmental engineering technical support to facilitate completion of the independent remedial action during the Site's construction.

During the development of the Independent Remedial Action, the following alternatives were considered:

- Institutional controls that warns students and the public not to dig in the area and to wash hands thoroughly.
- Covering contaminated soils with a clean cap and providing institutional controls to prevent unauthorized digging into contaminated soil.
- Removal of the contaminated soil.

Initially, removal of the contaminated soil was the preferred option; however, construction bids were significantly over-budget and several assumptions on the depth and type of soil were incorrect. This plan documents the activities to cover the contaminated soils onsite and limit future human exposure.

Design Elements: The Independent Remedial Action Plan will use the following design elements to ensure protection of public health:

1. An environmental covenant following completion of the independent remedial action requiring protective measures to occur if the cap is breached to perform maintenance activities. An operations and maintenance plan detailing the proper technique and precautions to take in breaching/restoring the barrier.

2. Balance all materials onsite to the extent practicable through balancing cut and fill to meet Site needs. All soils removed from the site shall be disposed at the Terrace Heights landfill.
3. Construction of a protective barrier layer consisting of a minimum 4 ounce geotextile fabric or geogrid, and 8" to 24" of a barrier layer consisting of either/and/or gravel, asphalt, engineering wood fiber, bark/mulch, concrete, soil, and grass turf (sod or hydroseed). See Figure 1.
4. Construction of an irrigation system to maintain the grass turf cover system. The irrigation system, including the irrigation mainline, shall be constructed in clean soil above the geotextile fabric.
5. All tree planting sites shall be a minimum 5' radius, 2' deep clean soil, and underlain with geogrid (Mirafi 8XT or approved equivalent)
6. All small planting/lawn areas shall be a minimum of 12" clean soil underlain with 4 ounce geotextile fabric to facilitate irrigation system placement in clean soil.
7. All large lawn areas shall be a minimum of 8" clean soil underlain with 4 ounce geotextile fabric. Where lateral irrigation lines are placed the clean soil shall be a minimum of 12" depth. The irrigation main line shall be placed at a minimum depth of 16" within a minimum 2' wide fabric-lined, clean soil trench.
8. The project shall be sequenced to minimize the impacted area requiring active dust control measures. The contractor shall submit a remediation plan and schedule that minimizes areas requiring active dust control measures by dividing the property into areas of work coinciding with the 'irrigation zones' and completing each area sequentially.

Permits: None required beyond what has already been completed for the construction of the new school. The SEPA adequately covered the independent remedial action.

Compliance Monitoring:
Compliance monitoring will generally consist of depth measurements of the clean barrier system layers during construction inspection. Laboratory sampling to verify the quality of the clean soil components shall occur prior to acceptance of the material onsite (see Sampling and Analysis). No additional verification is required. In the event that contaminated soils and clean soils are purposely or inadvertently mixed, all mixed soils shall be less than 7 mg/kg arsenic to be accepted based on 95% upper confidence levels of testing performed.

Sampling and Analysis
Prior to importing topsoil, the topsoil shall be sampled and analyzed prior to acceptance. Soil shall be from a native in-place soil source. A minimum of 10 samples from each native soil source will be taken and analyzed with an XRF by Ecology. Two of the 10 samples will be verified with laboratory analysis at contractor's expense. No laboratory sample is allowed to exceed 5 mg/kg Arsenic and 30 mg/kg Lead. In the event that sampling and analysis is required to be conducted because soils were purposely or inadvertently mixed, a portable XRF will be used to screen a homogenous mix of the soil to be tested with 10% of the highest samples sent to a laboratory for analysis at contractor's expense.

Safety and Health

The Safety and Health Plan for the Site shall comply with Washington State L&I requirements. A contractor following an accepted Health and Safety Plan may consider the site a 'controlled' hazardous waste site for purposes of complying with Washington State L&I requirements. Once the barrier fabric or confining layer is placed, all personnel working above the fabric or confining layer can perform their duties without special hazardous materials training beyond 'awareness level' training. Personnel provided 'awareness level' training shall immediately report any breach of the barrier fabric/confining layer to the supervisor and cease work activities until the breach is corrected. The contractor will be required to provide a specific Safety & Health Plan for the site.

CHERVENELL CONSTRUCTION CO.

GENERAL CONTRACTORS • COMMERCIAL • INDUSTRIAL

EST. 1975

John Hultman
818 W. Riverside, Ste 350
Spokane, WA 99201

June 19th 2013

Re: Disposal of Excess Material from Terrace Heights Elementary

Mr. Hultman,

Per the attached documentation, you will find photo's and receipts showing that Terrace Heights Elementary School had approximately 490 tons of contaminated material that needed to be disposed of at the Terrace Heights Land Fill.

Per contractor error, it was thought that the material was clean enough to be disposed of at Tri-Valley Construction's yard and used for fill. This was discussed with the D.O.E. and it was determined that all material leaving the jobsite needed to be disposed of at the landfill.

The photo's show the material hauled to Tri-Valley and the receipts prove the quantity disposed of at the landfill. If you need anything further, please don't hesitate to contact me.

Thanks,

Kyle Clark
Project Manager

P. O. Box 6935 Kennewick, WA 99336 Office: (509) 735-3377 Fax: (509) 735-8305

TRI-VALLEY

Construction, Inc.

Contractor's License #TRIVACI055KP

1008 N. 1st Street • Yakima, WA 98901 • (509) 452-4098 • Fax (509) 248-9800

June 19, 2013

Chervenell Construction Co.
P.O. Box 6935
Kennewick, WA. 99336

RE: T.H. Elementary Replacement
Soil Disposal
Attn: Kyle

There was approximately 390 ton of excess soil on site that we were told by Chervenell Construction employees was clean soil. We loaded soil and hauled offsite to our property for later use. We were then told that that soil, along with another 100 ton that was still on site, was above the acceptable levels for re-use and it would have to be reloaded and hauled and disposed of at the THLF along with the 100 tons still onsite.

If you have any questions regarding this matter, please call me.

Sincerely,

Greg Huylar
President

TH Elms
Cont Soil

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

491.87

RECEIPT

TICKET #: 1912024

	--IN---	---OUT--
DATE:	06/12/13	06/12/13
TIME:	11:58	12:18
ID:	CLR	LKB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI V TERR
GROSS: 70900 LBS TARE: 26860 LBS

MATERIAL:95 - Earth Cover
NET LBS: 44040 LBS TIP FEE: 209.19
NET TONS: 22.02 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $209.19

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1912052

	---IN---	---OUT--
DATE:	06/12/13	06/12/13
TIME:	12:43	12:55
ID:	CLR	LKB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:THS DIRT
GROSS: 65000 LBS TARE: 26800 LBS

MATERIAL:95 - Earth Cover
NET LBS: 38200 LBS TIP FEE: 181.45
NET TONS: 19.10 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $181.45

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1912093

	---IN---	---OUT--
DATE:	06/12/13	06/12/13
TIME:	13:17	13:31
ID:	CLR	CLR

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:THS DIRT
GROSS: 63740 LBS TARE: 26660 LBS

MATERIAL:90 - Yard Waste
NET LBS: 37080 LBS TIP FEE: 296.64
NET TONS: 18.54 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $296.64

S/B 1763

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1912126

	---IN---	---OUT--
DATE:	06/12/13	06/12/13
TIME:	13:51	14:03
ID:	LKB	CLR

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:016
GROSS: 59580 LBS TARE: 26560 LBS

MATERIAL:95 - Earth Cover
NET LBS: 33020 LBS TIP FEE: 156.85
NET TONS: 16.51 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $156.85

NOTE:
SPECIALS FEES QTY

X _____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1912168

	---IN---	---OUT--
DATE:	06/12/13	06/12/13
TIME:	14:32	14:45
ID:	LKB	CLR

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:016
GROSS: 68080 LBS TARE: 26540 LBS

MATERIAL:95 - Earth Cover
NET LBS: 41540 LBS TIP FEE: 197.32
NET TONS: 20.77 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $197.32

NOTE:
SPECIALS FEES QTY

X _____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1912561

	---IN---	---OUT--
DATE:	06/13/13	06/13/13
TIME:	13:40	13:55
ID:	CLR	EKS

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:THS
GROSS: 40820 LBS TARE: 26420 LBS

MATERIAL:95 - Earth Cover
NET LBS: 14400 LBS TIP FEE: 68.40
NET TONS: 7.20 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $68.40

NOTE:
SPECIALS FEES QTY

X _____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1912280

	---IN---	---OUT--
DATE:	06/13/13	06/13/13
TIME:	07:01	07:12
ID:	CLR	CLR

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:THS
GROSS: 66220 LBS TARE: 26440 LBS

MATERIAL:95 - Earth Cover
NET LBS: 39780 LBS TIP FEE: 188.96
NET TONS: 19.89 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $188.96

NOTE:
SPECIALS FEES QTY

X _____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1912298

	---IN---	---OUT--
DATE:	06/13/13	06/13/13
TIME:	07:46	07:58
ID:	CLR	CLR

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TV #16
GROSS: 68860 LBS TARE: 26380 LBS

MATERIAL:95 - Earth Cover
NET LBS: 42480 LBS TIP FEE: 201.78
NET TONS: 21.24 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $201.78

NOTE:
SPECIALS FEES QTY

X _____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914124

	---IN---	---OUT--
DATE:	06/17/13	06/17/13
TIME:	10:53	11:12
ID:	DLB	LKB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI 12
GROSS: 94960 LBS TARE: 34480 LBS

MATERIAL:95 - Earth Cover
NET LBS: 60320 LBS TIP FEE: 286.52
NET TONS: 30.16 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $286.52

NOTE:
SPECIALS FEES QTY

X _____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914040

	---IN---	---OUT--
DATE:	06/17/13	06/17/13
TIME:	08:59	09:23
ID:	DLB	LKB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI 12
GROSS:103480 LBS TARE: 34520 LBS

MATERIAL:95 - Earth Cover
NET LBS: 68960 LBS TIP FEE: 327.56
NET TONS: 34.48 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $327.56

NOTE:
SPECIALS FEES QTY

X _____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914084

	---IN---	---OUT--
DATE:	06/17/13	06/17/13
TIME:	09:59	10:18
ID:	DLB	LKB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI 12
GROSS: 93200 LBS TARE: 34480 LBS

MATERIAL:95 - Earth Cover
NET LBS: 58720 LBS TIP FEE: 278.92
NET TONS: 29.36 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $278.92

NOTE:
SPECIALS FEES QTY

X _____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914184

	---IN---	---OUT--
DATE:	06/17/13	06/17/13
TIME:	11:49	12:28
ID:	DLB	DLB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI 12
GROSS: 97280 LBS TARE: 34420 LBS

MATERIAL:95 - Earth Cover
NET LBS: 62860 LBS TIP FEE: 298.59
NET TONS: 31.43 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $298.59

NOTE:
SPECIALS FEES QTY

X _____

Nick
Contaminated Soils
Terrace Heights

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914297

	---IN---	---OUT--
DATE:	06/17/13	06/17/13
TIME:	14:36	14:54
ID:	LKB	DLB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:015
GROSS:101860 LBS TARE: 37700 LBS

MATERIAL:95 - Earth Cover
NET LBS: 64160 LBS
NET TONS: 32.08

TIP FEE:	304.76
SPEC FEE:	0.00
TAX FEE:	0.00
TOTAL FEE:	$304.76

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914251

	---IN---	---OUT--
DATE:	06/17/13	06/17/13
TIME:	13:38	13:59
ID:	LKB	DLB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:015
GROSS:101400 LBS TARE: 37720 LBS

MATERIAL:95 - Earth Cover
NET LBS: 63680 LBS
NET TONS: 31.84

TIP FEE:	302.48
SPEC FEE:	0.00
TAX FEE:	0.00
TOTAL FEE:	$302.48

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914202

	---IN---	---OUT--
DATE:	06/17/13	06/17/13
TIME:	12:36	12:57
ID:	DLB	DLB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1038 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI 15
GROSS:104760 LBS TARE: 37760 LBS

MATERIAL:95 - Earth Cover
NET LBS: 67000 LBS
NET TONS: 33.50

TIP FEE:	318.25
SPEC FEE:	0.00
TAX FEE:	0.00
TOTAL FEE:	$318.25

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914165

	---IN---	---OUT---
DATE:	06/17/13	06/17/13
TIME:	11:41	12:02
ID:	DLB	LKB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI 15
GROSS: 98300 LBS TARE: 37820 LBS

MATERIAL:95 - Earth Cover
NET LBS: 60480 LBS TIP FEE: 287.28
NET TONS: 30.24 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $287.28

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914120

	---IN---	---OUT---
DATE:	06/17/13	06/17/13
TIME:	10:50	11:09
ID:	DLB	LKB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI 15
GROSS:101760 LBS TARE: 37840 LBS

MATERIAL:95 - Earth Cover
NET LBS: 63920 LBS TIP FEE: 303.62
NET TONS: 31.96 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $303.62

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

RECEIPT

TICKET #: 1914083

	---IN---	---OUT---
DATE:	06/17/13	06/17/13
TIME:	09:54	10:16
ID:	DLB	LKB

CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

TRUCK:TRI 15
GROSS: 94780 LBS TARE: 37860 LBS

MATERIAL:95 - Earth Cover
NET LBS: 56920 LBS TIP FEE: 270.37
NET TONS: 28.46 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $270.37

NOTE:
SPECIALS FEES QTY

X_____

TERRACE HEIGHTS LANDFILL
7151 ROZA HILL DRIVE
YAKIMA, WA 98901
PHONE #:509-574-2450

R E C E I P T

TICKET #: 1914039

	---IN---	---OUT--
DATE:	06/17/13	06/17/13
TIME:	08:58	09:22
ID:	DLB	LKB

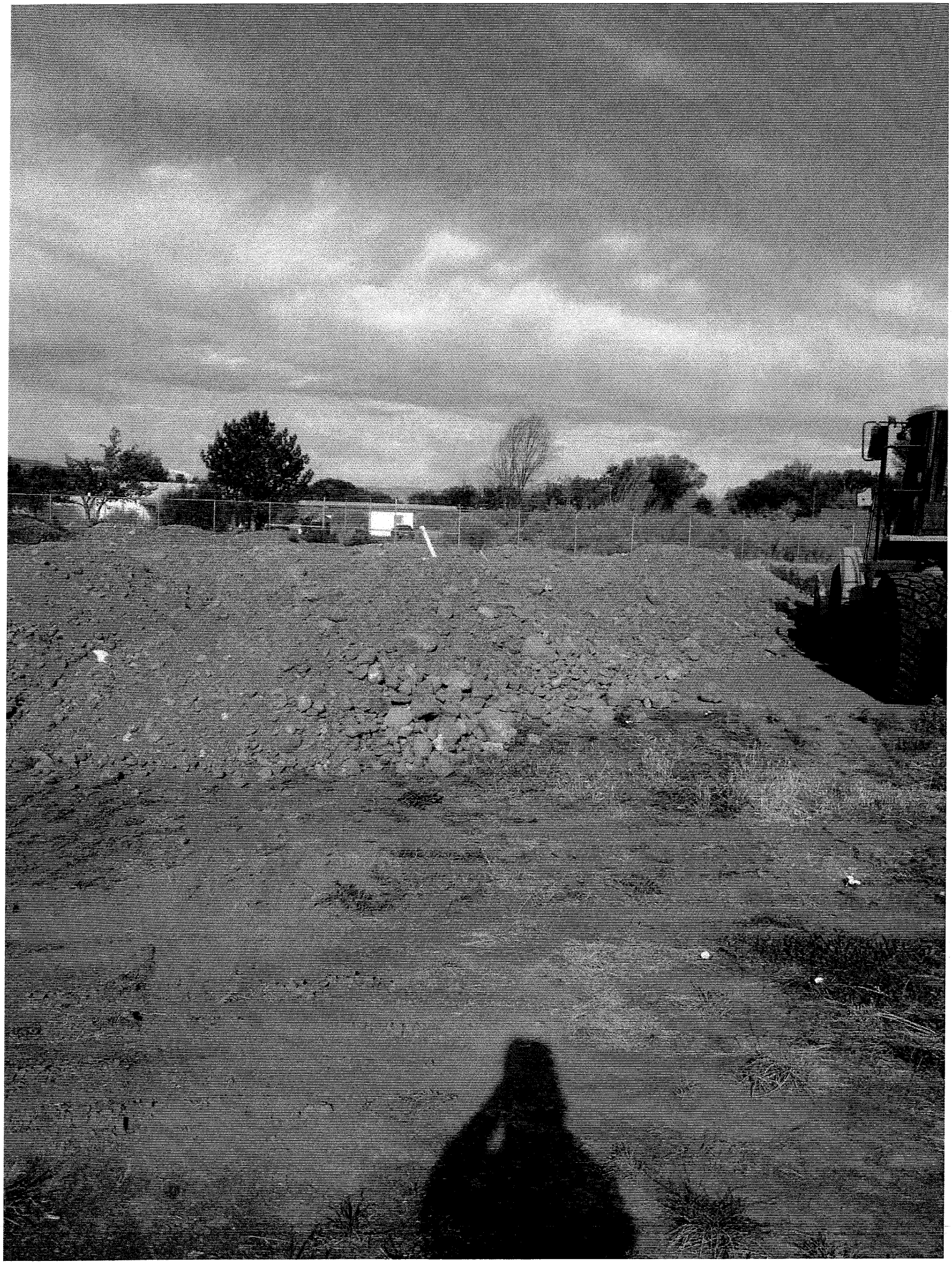
CUSTOMER:0925
TRI VALLEY CONSTRUCTI
1008 NORTH FIRST STREET
YAKIMA WA 98901

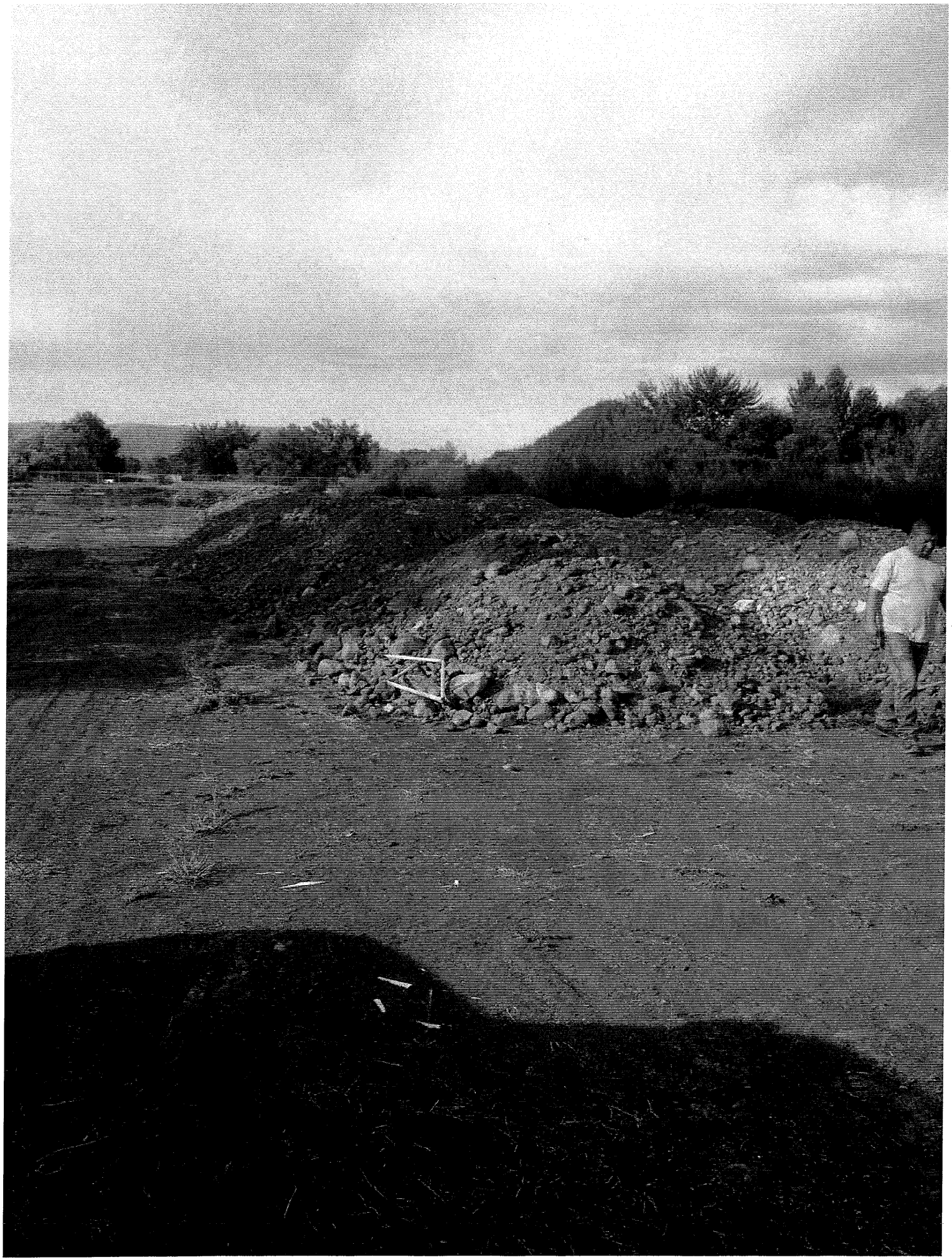
TRUCK:ELEM DIRT
GROSS:104020 LBS TARE: 37840 LBS

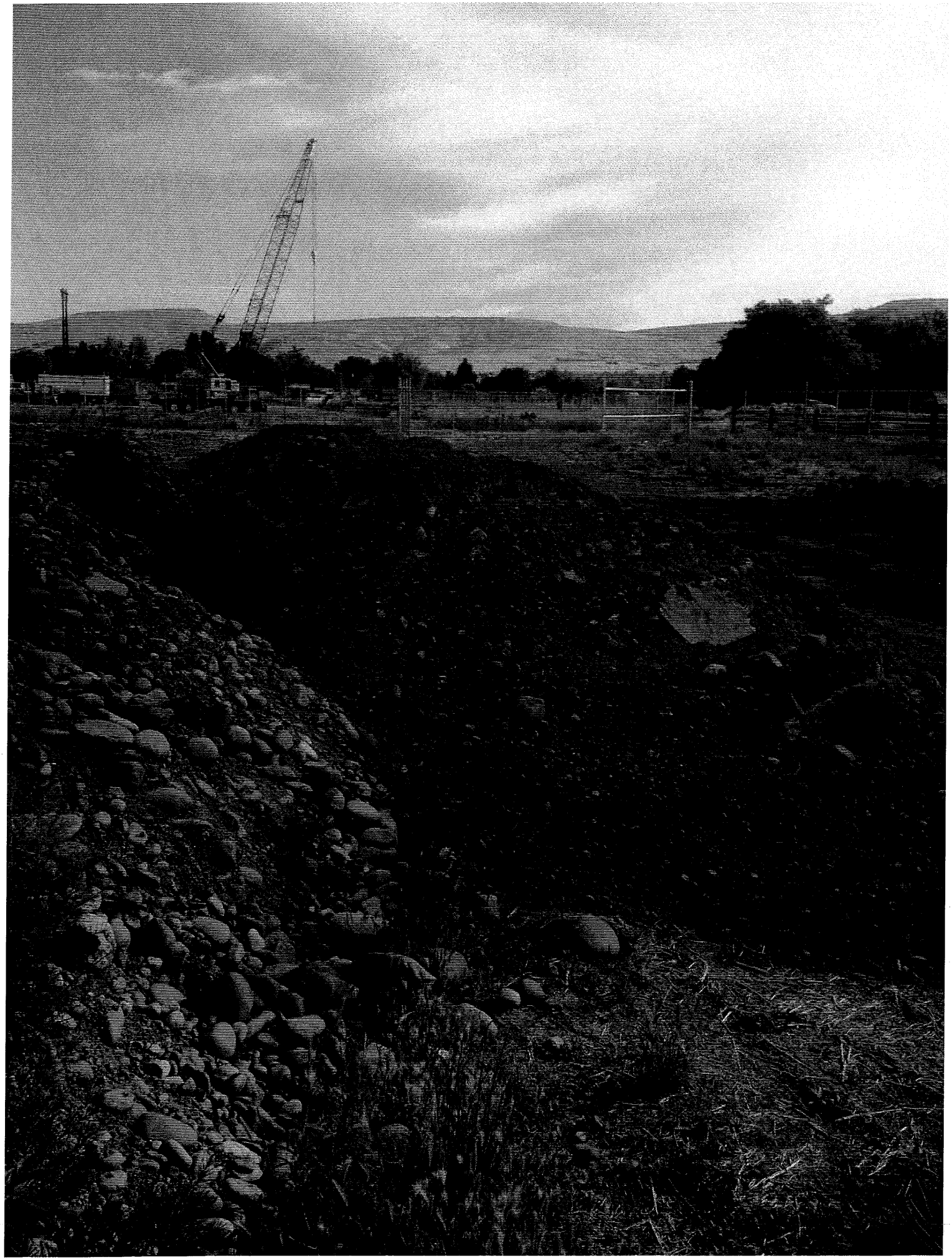
MATERIAL:95 - Earth Cover
NET LBS: 66180 LBS TIP FEE: 314.36
NET TONS: 33.09 SPEC FEE: 0.00
TAX FEE: 0.00
TOTAL FEE: $314.36

NOTE:
SPECIALS FEES QTY

X_____







FULCRUM
environmental consulting

MEMORANDUM

DATE May 22, 2013
TO John Hultman, P.E., Hill International, Inc.
FROM Jeremy M. Lynn, L.H.G, Fulcrum Environmental Consulting, Inc.
RE Laboratory Results of Stockpiled Soils
SUBJECT Terrace Heights Elementary Modernization Project

On May 15, 2013, Jeremy Lynn, a Professional Geologist (P.G.) with Fulcrum Environmental Consulting, Inc. (Fulcrum) collected one composite sample of stockpiled soils located at the eastern site border of the Terrace Heights Elementary campus. The campus is located at 4300 Maple Court in Yakima, Washington. The stockpiled soils were reportedly excavated from the current playground area within the northern portion of the campus and from an elevation well below previously identified lead and arsenic impacted near surface soils. The soil has been designed for offsite disposal or reuse. The purpose of Fulcrum's sampling was to complete waste characterization of the soil.

The stockpile was estimated by Fulcrum to contain approximately 100-cubic yards of soil consisting of silty-sand with gravels, cobbles, and boulders.

Based on the estimated volume of soil, Fulcrum collected five subsamples from the stockpile. Samples were collected in conformance with Washington State Department of Ecology (Ecology) sampling guidance criteria for waste characterization. Samples were packaged on ice and shipped via commercial carrier to Fremont Analytical, Inc. in Seattle, Washington for analysis.

Based on known site conditions, the samples were submitted for analysis by Environmental Protection Agency Method 6020 for lead and arsenic. Analysis was selected to conform to Washington Administrative Code (WAC) 173-303-090 for waste characterization. Results identified concentrations of total lead at 30.2 milligrams per kilograms (mg/Kg) and total arsenic at 14.7 mg/Kg. See attached laboratory analysis.

Concentrations of total lead and arsenic are above the dangerous waste threshold of 5 milligrams per liter (mg/L) for leachable lead and arsenic; however, using the 20 to 1 dilution criteria for Toxicity Characteristic Leaching Procedure (TCLP) analysis, the maximum leachable concentrations of lead and arsenic are 1.5 and 0.74 mg/L respectively and would be below the dangerous waste threshold. As such, soils are considered to be solid waste and are slightly above the background soils concentrations for lead and arsenic within the Yakima Valley.

P. 509.574.0839 F. 509.575.8453
406 North 2nd Street
Yakima, Washington 98901
efulcrum.net

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Fulcrum Environmental
Jeremy Lynn
406 N. 2nd Street
Yakima, Washington 98901

RE: Terrace Heights Elementary
Lab ID: 1305103

May 16, 2013

Attention Jeremy Lynn:

Fremont Analytical, Inc. received 6 sample(s) on 5/16/2013 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michelle Clements
Sr. Chemist / Lab Manager

Fremont Analytical

Date: *05/16/2013*

CLIENT: Fulcrum Environmental
Project: Terrace Heights Elementary
Lab Order: 1305103

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1305103-001	51513-Comp	05/15/2013 12:55 PM	05/16/2013 9:15 AM
1305103-002	51513-01	05/15/2013 12:55 PM	05/16/2013 9:15 AM
1305103-003	51513-02	05/15/2013 12:57 PM	05/16/2013 9:15 AM
1305103-004	51513-03	05/15/2013 12:59 PM	05/16/2013 9:15 AM
1305103-005	51513-04	05/15/2013 1:01 PM	05/16/2013 9:15 AM
1305103-006	51513-05	05/15/2013 1:05 PM	05/16/2013 9:15 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1305103**
Date: **5/16/2013**

CLIENT: Fulcrum Environmental
Project: Terrace Heights Elementary

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1305103**
Date Reported: **5/16/2013**

Client: Fulcrum Environmental
Collection Date: 5/15/2013 12:55:00 PM
Project: Terrace Heights Elementary
Lab ID: 1305103-001
Matrix: Soil
Client Sample ID: 51513-Comp

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 4623		Analyst: MC
Arsenic	14.7	0.0790		mg/Kg-dry	1	5/16/2013 1:44:30 PM
Lead	30.2	0.158		mg/Kg-dry	1	5/16/2013 1:44:30 PM
Sample Moisture (Percent Moisture)				Batch ID: R8522		Analyst: JS
Percent Moisture	3.37			wt%	1	5/16/2013 8:55:58 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1305103
CLIENT: Fulcrum Environmental
Project: Terrace Heights Elementary

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: **MB-4623**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **5/16/2013**		RunNo: **8539**			
Client ID: **MBLKS**	Batch ID: **4623**					Analysis Date: **5/16/2013**		SeqNo: **170359**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.100									
Lead	ND	0.200									

Sample ID: **LCS-4623**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **5/16/2013**		RunNo: **8539**			
Client ID: **LCSS**	Batch ID: **4623**					Analysis Date: **5/16/2013**		SeqNo: **170360**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	107	0.100	102.0	0	105	83.4	116				
Lead	67.9	0.200	71.80	0	94.6	84.3	116				

Sample ID: **1305103-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **5/16/2013**		RunNo: **8539**			
Client ID: **51513-Comp**	Batch ID: **4623**					Analysis Date: **5/16/2013**		SeqNo: **170362**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	15.0	0.0821						14.75	1.37	30	
Lead	31.4	0.164						30.21	3.81	30	

Sample ID: **1305103-001AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **5/16/2013**		RunNo: **8539**			
Client ID: **51513-Comp**	Batch ID: **4623**					Analysis Date: **5/16/2013**		SeqNo: **170364**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	58.3	0.0828	41.39	14.75	105	75	125				
Lead	49.2	0.166	20.70	30.21	91.6	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1305103
CLIENT: Fulcrum Environmental
Project: Terrace Heights Elementary

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: **1305103-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/16/2013** RunNo: **8539**
Client ID: **51513-Comp** Batch ID: **4623** Analysis Date: **5/16/2013** SeqNo: **170365**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	57.0	0.0796	39.80	14.75	106	75	125	58.30	2.30	30	
Lead	51.9	0.159	19.90	30.21	109	75	125	49.17	5.31	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Sample Log-In Check List

Client Name: **FE**	Work Order Number: **1305103**
Logged by: **Chelsea Ward**	Date Received: **5/16/2013 9:15:00 AM**

Chain of Custody

1.	Were custodial seals present?	Yes ☑	No ☐	Not Required ☐
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?	UPS		

Log In

4.	Coolers are present?	Yes ☑	No ☐	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6.	Were all coolers received at a temperature of >0° C to 10.0°C	Yes ☐	No ☑	NA ☐
	Exceeded recommended temperature (Metals Analysis)			
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is there headspace present in VOA vials?	Yes ☐	No ☐	NA ☑
12.	Did all sample containers arrive in good condition?(unbroken)	Yes ☑	No ☐	
13.	Does paperwork match bottle labels?	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

17.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

18. Additional remarks/Disrepancies

Item Information

Item #	Temp °C	Condition
Cooler	13.7	
Sample	14.2	

Fremont Analytical

Chain of Custody Record

1311 N. 35th Street
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1305103
Date: 5/15/2013
Page: 1 of: 1

Client: Fulcrum Enviro. Cons.
Address: 406 N. 2nd St
City, State, Zip: Yakima, WA, 98901 Tel: 509.574.0839
Reports To (PM): J. Lyons Fax: 509.575.8453 Email: jlyons@fulcrum.net

Project Name: Terrace Heights Elementary
Location: Yakima, WA
Collected by: J. Lyons
Project No: 11586.05

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)	VOC (EPA 8260)	GX/BTEX by EPA 8021b	BTEX by 8260	Gasoline Range Organics	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics	SEMI VOC (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Cl Pesticides (EPA 8081)	Cl Herbicides (EPA 8151A)	Metals* (6010 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)**	Total Arsenic	Total Lead	Comments/Depth
1	5-15-13 -01	5/15	12:55	Soil																	Composite all samples prior to analysis
2	-02		12:57																		
3	-03		12:59															X	P		
4	-04		13:01																		
5	-05	V	13:05	V																	
6																					
7																					
8																					
9																					
10																					

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Special Remarks: Same day

Relinquished	Date/Time	Received	Date/Time
x	5/16/2013 16:10	x	5/16/13 9:15
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT --> Next Day 2 Day 3 Day STD

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

FULCRUM
environmental consulting

MEMORANDUM

DATE	June 7, 2013
TO	John Hultman, P.E., Hill International, Inc.
FROM	Jeremy M. Lynn, L.H.G, Fulcrum Environmental Consulting, Inc.
RE	**Laboratory Results of Stockpiled Soils – June 3, 2013 Sampling Event**
SUBJECT	Terrace Heights Elementary Modernization Project

On June 3, 2013, Jeremy Lynn, a Professional Geologist with Fulcrum Environmental Consulting, Inc. (Fulcrum) collected one composite sample of stockpiled soils located at the eastern site border of the Terrace Heights Elementary School campus construction area. The campus is located at 4300 Maple Court in Yakima, Washington. The stockpiled soils were reportedly excavated from within the campus boundary and from an elevation well below previously identified lead and arsenic impacted near surface soils. The soil has been designed for offsite disposal or reuse. The purpose of Fulcrum's sampling was to complete waste characterization of the soil.

The stockpile was estimated by Fulcrum to contain approximately 450-cubic yards of soil consisting of silty-sand with gravels, cobbles, and boulders.

Based on the estimated volume of soil, Fulcrum collected seven subsamples from the stockpile. Samples were collected in conformance with Washington State Department of Ecology (Ecology) sampling guidance criteria for waste characterization. Samples were packaged on ice and shipped via commercial carrier to Fremont Analytical, Inc. in Seattle, Washington for analysis.

Based on known site conditions, the samples were submitted for analysis by Environmental Protection Agency Method 6020 for lead and arsenic. Analysis was selected to conform to Washington Administrative Code (WAC) 173-303-090 for waste characterization. Results identified concentrations of total lead at 68.5 milligrams per kilograms (mg/Kg) and total arsenic at 26.9 mg/Kg. See attached laboratory analysis.

Concentrations of total lead and arsenic are above the dangerous waste threshold of 5 milligrams per liter (mg/L) for leachable lead and arsenic; however, using the 20 to 1 dilution criteria for Toxicity Characteristic Leaching Procedure (TCLP) analysis, the maximum leachable concentrations of lead and arsenic are 3.4 and 1.3 mg/L respectively and would be below the dangerous waste threshold. As such, soils are considered to be solid waste. The total arsenic concentrations are above the Washington State Model Toxics Control Act Method A cleanup level of 20 mg/Kg and should not be reapplied to the site unless they are placed under conditions provided in the site remediation plan.

P. 509.574.0839 F. 509.575.8453
406 North 2nd Street
Yakima, Washington 98901
efulcrum.net

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Fulcrum Environmental
Kendra Williams
406 N. 2nd Street
Yakima, Washington 98901

RE: THE Waste Characterization
Lab ID: 1306012

June 05, 2013

Attention Kendra Williams:

Fremont Analytical, Inc. received 8 sample(s) on 6/4/2013 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Michelle Clements
Sr. Chemist / Lab Manager

Fremont Analytical

Date: *06/05/2013*

CLIENT: Fulcrum Environmental
Project: THE Waste Characterization
Lab Order: 1306012

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1306012-001	60313-Comp	06/03/2013 12:50 PM	06/04/2013 9:15 AM
1306012-002	60313-01	06/03/2013 12:50 PM	06/04/2013 9:15 AM
1306012-003	60313-02	06/03/2013 12:52 PM	06/04/2013 9:15 AM
1306012-004	60313-03	06/03/2013 12:55 PM	06/04/2013 9:15 AM
1306012-005	60313-04	06/03/2013 12:57 PM	06/04/2013 9:15 AM
1306012-006	60313-05	06/03/2013 12:59 PM	06/04/2013 9:15 AM
1306012-007	60313-06	06/03/2013 1:01 PM	06/04/2013 9:15 AM
1306012-008	60313-07	06/03/2013 1:03 PM	06/04/2013 9:15 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1306012**
Date: **6/5/2013**

CLIENT: Fulcrum Environmental
Project: THE Waste Characterization

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Analytical Report

WO#: **1306012**
Date Reported: **6/5/2013**

Client: Fulcrum Environmental
Collection Date: 6/3/2013 12:50:00 PM
Project: THE Waste Characterization
Lab ID: 1306012-001
Matrix: Soil
Client Sample ID: 60313-Comp

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020				Batch ID: 4728		Analyst: MC
Arsenic	26.9	0.0820		mg/Kg-dry	1	6/4/2013 9:22:31 PM
Lead	68.5	0.164		mg/Kg-dry	1	6/4/2013 9:22:31 PM
Sample Moisture (Percent Moisture)				Batch ID: R8739		Analyst: AO
Percent Moisture	3.25			wt%	1	6/4/2013 11:36:27 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *6/5/2013*

Work Order: 1306012
CLIENT: Fulcrum Environmental
Project: THE Waste Characterization

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: **MB-4728**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **6/4/2013**		RunNo: **8754**			
Client ID: **MBLKS**	Batch ID: **4728**					Analysis Date: **6/4/2013**		SeqNo: **175555**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.100									
Lead	ND	0.200									

Sample ID: **LCS-4728**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **6/4/2013**		RunNo: **8754**			
Client ID: **LCSS**	Batch ID: **4728**					Analysis Date: **6/4/2013**		SeqNo: **175556**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	112	0.200	102.0	0	110	83.4	116				
Lead	78.0	0.400	71.80	0	109	84.3	116				

Sample ID: **1305210-009BDUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **6/4/2013**		RunNo: **8754**			
Client ID: **BATCH**	Batch ID: **4728**					Analysis Date: **6/4/2013**		SeqNo: **175558**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	3.66	0.0913						2.735	28.9	30	
Lead	2.43	0.183						1.769	31.6	30	R

NOTES:
R - High RPD noted. The RPD between the MS/MSD was within range.

Sample ID: **1305210-009BMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **6/4/2013**		RunNo: **8754**			
Client ID: **BATCH**	Batch ID: **4728**					Analysis Date: **6/4/2013**		SeqNo: **175560**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	56.4	0.0956	47.82	2.735	112	75	125				
Lead	30.3	0.191	23.91	1.769	119	75	125				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Date: *6/5/2013*

Work Order: 1306012
CLIENT: Fulcrum Environmental
Project: THE Waste Characterization

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: **1305210-009BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/4/2013** RunNo: **8754**
Client ID: **BATCH** Batch ID: **4728** Analysis Date: **6/4/2013** SeqNo: **175561**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	55.4	0.0920	45.98	2.735	114	75	125	56.41	1.87	30	
Lead	28.8	0.184	22.99	1.769	118	75	125	30.32	5.16	30	

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Fremont Analytical

Sample Log-In Check List

Client Name: **FE**	Work Order Number: **1306012**
Logged by: **Chelsea Ward**	Date Received: **6/4/2013 9:15:00 AM**

Chain of Custody

1.	Were custodial seals present?	Yes ☑	No ☐	Not Required ☐
2.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3.	How was the sample delivered?	UPS		

Log In

4.	Coolers are present?	Yes ☑	No ☐	NA ☐
5.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
6.	Were all coolers received at a temperature of >0° C to 10.0°C	Yes ☑	No ☐	NA ☐
7.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
8.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
9.	Are samples properly preserved?	Yes ☑	No ☐	
10.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
11.	Is there headspace present in VOA vials?	Yes ☐	No ☐	NA ☑
12.	Did all sample containers arrive in good condition?(unbroken)	Yes ☑	No ☐	
13.	Does paperwork match bottle labels?	Yes ☑	No ☐	
14.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
15.	Is it clear what analyses were requested?	Yes ☑	No ☐	
16.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person	
Regarding:			
Client Instructions:			

18. Additional remarks/Disrepancies

Item Information

Item #	Temp °C	Condition
Cooler	9.2	Good
Sample	9.4	Good

Fremont

Chain of Custody Record

1311 N. 35th Street
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 6/3/13

Laboratory Project No (internal): 1301012

Page: 1 of: 1

Client: Fulcrum Environmental Consulting, Inc.
Address: 406 North 2nd Street
City, State, Zip: Yakima, WA 98901 Tel: 509-574-0839

Project Name: THE Waste Characterization
Location: Yakima, WA
Collected by: Kendra Williams

Reports To (PM): Kendra Williams Fax: 509-575-8453 Email: kwilliams@efulcrum.net Project No: 11586.05

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)	VOC (EPA 8260)	BTEX: EPA 8260	Gasoline Range Organics	EPA 8021b Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics	SEMI VOL (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Cl Pesticides (EPA 8081)	Cl Herbicides (EPA 8151A)	Metals (6020 / 200.8)	Total (T) / Dissolved (D)	Anions (E)**	Comments/Depth
1	60313-01	6/3/13	~~12:50~~ 8:00	Soil										X	T			Please composite all samples prior to analyzing.
2	-02		12:52															
3	-03		12:55															
4	-04		12:57															
5	-05		12:59															
6	-06		13:01															
7	-07		15:05															
8																		
9																		
10																		

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Special Remarks:

Relinquished	Date/Time	Received	Date/Time
x	6/3/13 2:00		6/4/13 9:15AM
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT - Next Day 2 Day 3 Day STD

7

SUBMITTAL TRANSMITTAL

Project: Terrace Heights Elementary remediation project
East Valley School District No. 90

Date: Feb. 27, 2013

A/E Project Number: 11005.1

Transmittal A

To: Loofburrow Wetch Architects
201 West Yakima Avenue
Yakima, WA. 98902

Submittal Number: 07

From: Wyser Construction Co., Inc.
19015 – 109th Ave. S.E.
Snohomish, WA. 98296

By: Dan Reynolds Resubmission

Qty.	Submittal Checklist Item No.	Description	Spec. Section Title and Paragraph / Drawing Detail Reference
1	07	Topsoils	300600

☒ Submitted for review and approval

☐ Resubmitted for review and approval

☐ Will be available to meet construction schedule

☐ Other remarks on above submission:

☐ Substitution involved – Substitution request attached with point-by-point comparative data or preliminary details.

☐ Complies with contract requirements

☐ One copy retained by sender

Approved supplier by Architect Morton and Sons

Transmittal B

To: Wyser Construction Co., Inc. Attn: Dan Reynolds Date Received by A/E:

From: Loofburrow Wetch Arch., PS By: Gary Wetch Date Transmitted by A/E:

☐ Approved

☐ Approved as noted

☐ Not subject to review

☐ No action required

☐ Other remarks on above submission:

☐ Approved as noted / Resubmit

☐ Rejected / Resubmit

☒ Submission Incomplete / Resubmit

SHOP DRAWING REVIEW

ARCHITECTS REVIEW	RESPONSE REQUIRED OF CONTRACTOR
NO EXCEPTIONS TAKEN ☒ REJECTED ☐	CONFIRM ☐
NOTE MARKINGS ☐ ATTACHED ☐	RESUBMIT ☐

Architects review is for general conformance with the design concept and contract documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the project plans and specifications, nor departure there-from. The Contractor remains responsible for the details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes for techniques of assembly and for performing his or her work in a safe and satisfactory manner.

By G. Wetch Date 3-6-13

Copies: ☐ Owner ☐ Consultants ☐ One copy retained by sender

Environmental Laboratory

Washington State Certified Lab #153 - DOE Accredited Lab C345

Complete Soil Test

Date Collected: 02/16/12	
Lab/Sample No: 153-21705	**County: YAKIMA**
Sample Location: Soil	
	Date Received: 02/17/12
	Date Reported: 03/01/12
	Sample Collected By: Jim Caton
Send Report To:	**SAMPLE COMMENTS** **Matrix: Soil**
Caton Landfill **1251 Humphrey Rd.** **Tieton, WA 98947**	**Fill Dirt**

Complete Soil Test

DOH#	Analytes	Results	Units	MRL	Trigger	MCL	Method	Analyzed	Analyst
	pH	8.5	pH units					02/28/12	AGC
	Soluble Salts	0.2	mmhos					02/28/12	AGC
	Boron	0.3	ppm					02/28/12	AGC
	O.M.	0.4	%					02/28/12	AGC
	Nitrate	4	#/Ac					02/28/12	AGC
	Potassium	389	ppm					02/28/12	AGC
	Phosphorus	7	ppm					02/28/12	AGC
	Calcium	18.6	meq					02/28/12	AGC
	Magnesium	6	meq					02/28/12	AGC
	Sulfur	7.6	ppm					02/28/12	AGC
	Ammonia	5	#/Ac					02/28/12	AGC
	Zinc	0.2	ppm					02/28/12	AGC
	Manganese	1	ppm					02/28/12	AGC
	Copper	1.5	ppm					02/28/12	AGC
	Iron	11	ppm					02/28/12	AGC
	Total Bases	25.6	tb					02/28/12	AGC

MRL (Method Reporting Level): Indicates the minimum reporting level required and obtained by the laboratory (MDL<MRL<SRL).

Trigger: DOH Drinking Water response level. Public Systems in excess of this level must take additional samples. Recommended range on packages.

MCL (maximum contaminant level): Highest level recommended by the federal government for public water systems.

ND (Not Detected): Indicates this compound was analyzed and not detected at a level greater than or equal to the MRL or SRL.

Approved By:

CASCADE ANALYTICAL, INC.
1-800-545-4206
Fax: (509) 662-8183
3019 G.S. Center Road
Wenatchee, WA 98801
(509) 452-7707
Fax: (509) 452-7773
1008 W. Ahtanum Rd.
Union Gap, WA 98903

Batch: 264085
Client: Caton Landfill
Account: 13276
Sampler: Randy
PO Number:

--- Analytical Services Report ---

Report Date: 3/16/12

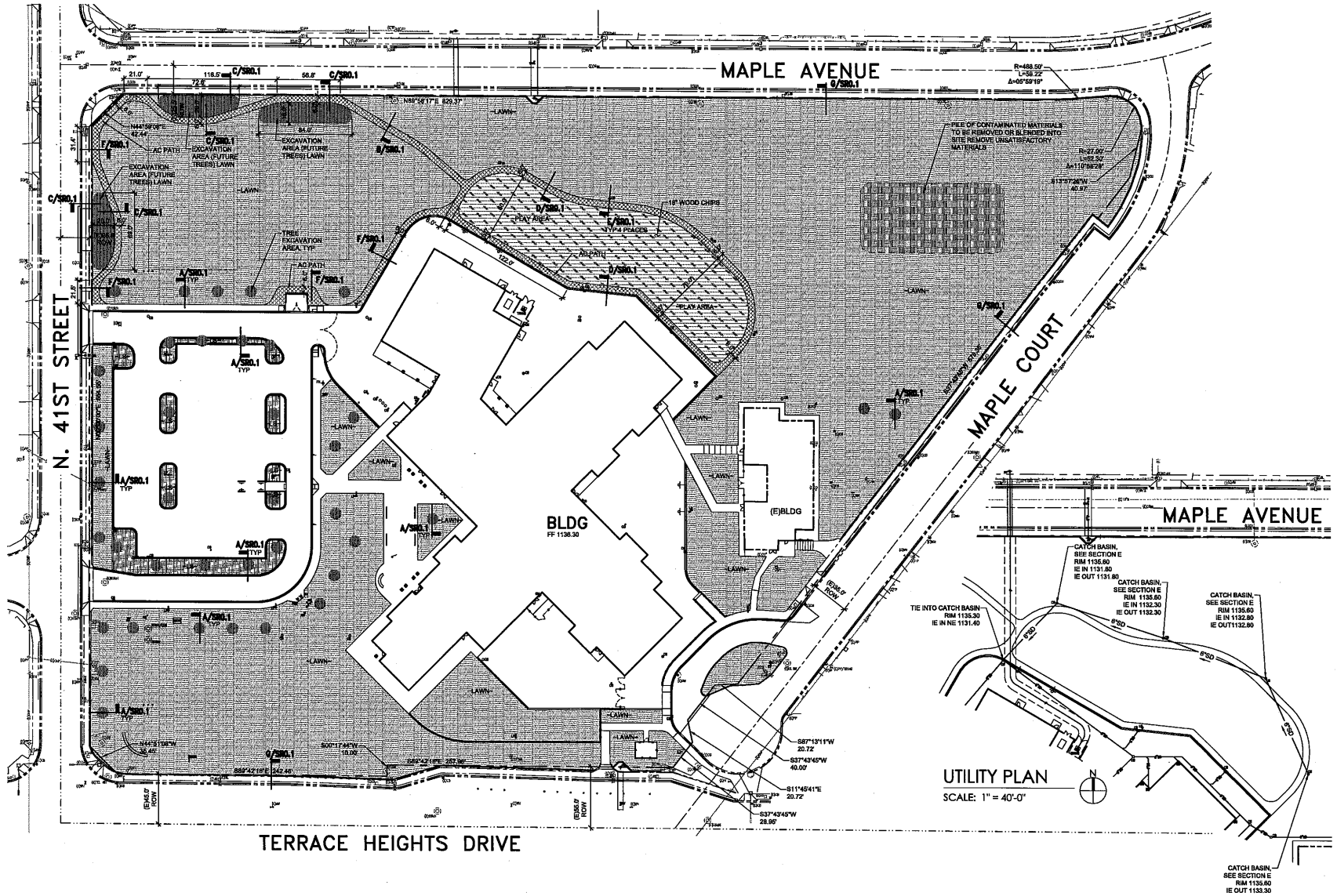
Caton Landfill
1251 Humphrey RD
Tieton, WA 98947

Laboratory Number: 12-E004070
Sample Identification: Caton Landfill

Date Received: 3/13/12
Date Sampled: 3/13/12

Test Requested	Results	Units	RL	Method	Date Analyzed	Flags
Arsenic Solid	< 2.5	mg/Kg	2.5	SW846 6010	3/15/12	
Lead Solid	5.4	mg/Kg	2.5	SW846 6010	3/15/12	
Total Metals Digest Solid	Metals Digest			SW846 3050	3/15/12	

Approved By:



SOIL REMEDIATION PLAN

SCALE: 1" = 40'-0"

0 40 80 120

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG

SHEET NOTES

1. SEE SR0.1 FOR GENERAL NOTES AND LEGEND.
2. REFER TO LANDSCAPE FOR TREE LOCATIONS.
3. SEE SR0.1 FOR IRRIGATION LATERAL AND MAIN PIPE SECTIONS.

LOOFBURROW WETCH ARCHITECTS

Architecture
Planning
Energy Management

201 W. Yakima Ave.
Yakima, Washington 98902
Telephone (509) 457-5121
Fax (509) 457-5271

CONSULTANTS

CIVIL ENGINEER
MEIER ENTERPRISES
6697 GAGE BOULEVARD
KENNEWICK, WA 99338
509-735-1589

STRUCTURAL ENGINEER
MEIER ENTERPRISES
6697 GAGE BOULEVARD
KENNEWICK, WA 99338
509-735-1589

ELECTRICAL ENGINEER
CONLEY ENGINEERING, INC.
1433 LAKESIDE COURT, SUITE 100
YAKIMA, WA 98902
509-965-9572

MECHANICAL ENGINEER
MEIER ENTERPRISES
6697 GAGE BOULEVARD
KENNEWICK, WA 99338
509-735-1589

FOOD FACILITIES ENGINEER
GEORGE E. BUNDY & ASSOCIATES
718 GRIFFIN AVENUE, #192
ENUMCLAW, WA 98022
206-579-1461

GEOTECHNICAL ENGINEER
GN Northern, Inc.
722 N 16th Avenue, Suite 31
Yakima, WA 98902
509-348-9798

REGISTRATION

PAUL T. KNUTSEN
STATE OF WASHINGTON
44013
REGISTERED
PROFESSIONAL ENGINEER

11/15/12

MILESTONES

PROJECT

TERRACE HEIGHTS ELEMENTARY SCHOOL

4300 MAPLE COURT
YAKIMA, WA 98901

Approved for the Owner

Approved for the Owner

SHEET TITLE

SOIL REMEDIATION PLAN

11006 — Project No. — 11/15/12 — Date
676700C01.DWG — Data File
SJT — Drawn
PTK — Checked
SHEET NO.

SR1.0

GENERAL NOTES

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2010 EDITION OF WSDOT STANDARD SPECIFICATIONS M41-10, AND 2009 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), YAKIMA COUNTY PUBLIC WORKS SPECIFICATIONS AND STANDARDS,TERRACE HEIGHTS SEWER DISTRICT SPECIFICATIONS AND STANDARDS, AND LOCAL RULES AND STANDARDS OF GOVERNING AGENCIES HAVING JURISDICTION.
2. PRIOR TO DIGGING VERIFY LOCATION AND DEPTH OF UTILITIES AND ANY OTHER UNDERGROUND INTERFERENCE. CALL TWO BUSINESS DAYS BEFORE YOU DIG AT 811.
3. STATEMENT OF ERRORS, AMBIGUITIES AND OMISSIONS: ANY ERRORS, AMBIGUITIES, AND OMISSION IN DRAWINGS AND/OR SPECIFICATIONS SHALL BE REPORTED TO MEIER ARCHITECTS/ENGINEERS FOR CORRECTION BEFORE ANY PART OF THE WORK IS STARTED. UNLESS EXPRESSLY STIPULATED NO ADDITIONAL ALLOWANCE WILL BE MADE IN THE CONTRACTOR AND/OR MANUFACTURES FAVOR BY VIRTUE OF ERRORS, AMBIGUITIES, AND/OR OMISSIONS WHICH SHOULD HAVE BEEN DISCOVERED DURING THE PREPARATION OF BID ESTIMATE AND DIRECTED TO THE ATTENTION OF MEIER ARCHITECTS/ENGINEERS IN A TIMELY MANNER. MEIER ARCHITECTS/ENGINEERS ACCEPTS NO RESPONSIBILITY FOR WORK DONE BY THE CONTRACTOR OR SUBCONTRACTORS CONTRARY TO THE PLANS OR SPECIFICATIONS. SUBSTITUTION OR CHANGES WILL NOT BE ACCEPTED UNLESS APPROVED IN WRITING. THE SUBCONTRACTOR SHALL REVIEW ALL SECTIONS OF SPECIFICATIONS AND ALL SHEETS OF THE PLANS FOR ANY INFORMATION OR DETAILS PERTAINING TO THEIR SPECIFIC TRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF SITE CONDITIONS, INSTALLATION STANDARDS AND CONSTRUCTION CONDITIONS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO SHOP FABRICATION AND/OR FIELD ERECTION. DISCREPANCIES BETWEEN SITE CONDITIONS AND THE CONSTRUCTION DRAWINGS SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER. WORK DONE WITHOUT THE ENGINEERS APPROVAL IS THE RESPONSIBILITY OF THE CONTRACTOR. LOCATIONS OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE WHICH MIGHT OCCUR TO EXISTING UTILITIES.
5. ALL SPECIAL INSPECTION AND TESTING SHALL BE PERFORMED BY AN INDEPENDENT INSPECTION AND TESTING AGENCY HIRED BY THE OWNER. CONTRACTOR TO COORDINATE WITH INSPECTION AND TESTING AGENCY FOR REQUIRED CONSTRUCTION INSPECTIONS AND MATERIAL TESTING.
6. CONTRACTOR SHALL PROTECT EXISTING PROPERTY CORNERS. IF CORNERS ARE DISTURBED THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING A PROFESSIONAL LAND SURVEYOR TO RE-ESTABLISH PROPERTY CORNERS.

EARTHWORK

1. FILL OR BACKFILL IN LAWN OR LANDSCAPED AREAS SHALL BE COMPACTED TO 85% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D1557.
2. REMOVE ALL DEBRIS FROM THE AREA TO BE BACKFILLED PRIOR TO BACKFILLING.
3. PLACE BACKFILL IN LAYERS NOT MORE THAN 8" THICK, LOOSE MEASUREMENT. SPREAD AND COMPACT EACH LAYER UNIFORMLY TO THE REQUIRED DENSITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE IN KIND ANY UTILITIES DISTURBED AND OR DAMAGED DURING THE WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE SOD AND LANDSCAPE FEATURES REMOVED OR DAMAGED DURING THE WORK.
6. THE CONTRACTOR SHALL ADHERE TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT PREPARED BY GN NORTHERN FOR TERRACE HEIGHTS ES REPLACEMENT DATED JANUARY 2012, AND THE RECOMMENDATIONS PREPARED IN ADDENDUM 1 SUPPLEMENTAL GEOTECHNICAL BORINGS DATED FEBRUARY 10TH, 2012.
7. CEMENTED SOILS WILL PRODUCE UNEVEN AND NON-UNIFORM OVERSIZED MATERIALS NOT SUITABLE FOR USE AS GENERAL FILL. CEMENTED SOLIDS MAY BE USED FOR GENERAL FILL PROVIDED THEY ARE BROKEN INTO PIECES LESS THAN 4" IN NOMINAL DIAMETER.
8. ONSITE SOILS ENCOUNTERED ACROSS THE SITE ARE CLASSIFIED AS TYPE C SOILS. FOR EXCAVATION PURPOSES IT IS RECOMMENDED THAT TEMPORARY, UNSUPPORTED, OPEN CUT SLOPES SHALL BE NO STEEPER THAN 1.5H:1.0V IN TYPE C SOILS. WHERE UNSTABLE SOILS ARE ENCOUNTERED FLATTER SLOPES MAY BE REQUIRED. DEEP EXCAVATIONS INTO THE CALICHE UNIT MAY BE CLASSIFIED AS TYPE B SOILS AND MAY BE CUT AT A SLOPE NO STEEPER THAN 1.0H:1.0V. EXCAVATIONS SHALL CONFORM TO APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SAFE TEMPORARY SLOPE CONFIGURATIONS AND OBSERVE THE NATURE AND CONDITION OF THE CUT SLOPES.
9. FILL SLOPES SHALL BE CONSTRUCTED AT A MAXIMUM 1.5H:1.0V. FILL SLOPES SHALL BE CONSTRUCTED OF SUITABLE STRUCTURAL FILL THAT HAS BEEN PROPERLY MOISTURE CONDITIONED AND COMPACTED AS RECOMMENDED IN THE GEOTECHNICAL REPORT.

SPECIAL INSPECTION

1. PER ISC 1704.7, PRIOR TO PLACEMENT OF PREPARED FILL, THE SPECIAL INSPECTOR SHALL DETERMINE THAT THE SITE HAS BEEN PREPARED IN ACCORDANCE WITH THE APPROVED SOILS REPORT.
2. PER ISC 1704.7, WHERE FILL EXCEEDS 12" IN DEPTH, THE SPECIAL INSPECTOR SHALL HAVE CONTINUOUS INSPECTION OF FILL PLACEMENT AND COMPACTION.
3. TESTING AGENCY WILL TEST COMPACTION OF SOILS IN PLACE ACCORDING TO ASTM D 1557, ASTM D 2167, ASTM D 2922, AND ASTM D 2937, AS APPLICABLE. TESTS WILL BE PERFORMED AT THE FOLLOWING LOCATIONS AND FREQUENCIES:
   A. AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST 1 TEST FOR EVERY 5,000 SQ. FT. OR LESS OF PAVED AREA OR BUILDING SLAB, BUT IN NO CASE FEWER THAN 1 TEST PER DAY.
   B. TRENCH BACKFILL: AT EACH COMPACTED INITIAL AND FINAL BACKFILL LAYER, AT LEAST 1 TEST FOR EACH 150 FEET OR LESS OF TRENCH LENGTH, BUT NO LESS THAN 1 TEST PER DAY.
4. COMPACTION TESTING IS REQUIRED AT THE ABOVE SCHEDULE UNLESS GREATER TESTING IS RECOMMENDED BY STRUCTURAL DRAWINGS. LESS TESTING WOULD BE ACCEPTABLE IF APPROVED IN WRITING BY GEOTECHNICAL ENGINEER, SPECIAL INSPECTOR, FOUNDATION ENGINEER, AND MEIER ARCHITECTS/ENGINEERS.

SITE UTILITIES

1. STORM DRAINAGE PIPE SHALL BE PVC OR CORRUGATED POLYETHYLENE (PE). PVC PIPE SHALL BE MANUFACTURED TO ASTM D3034-SDR 35 WITH RUBBER GASKETED JOINTS. PE PIPE SHALL BE MANUFACTURED TO ASTM F405 AND/OR F667 WITH SMOOTH INTERIOR.
2. BEDDING AND BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D1557. REMOVE ALL DEBRIS FROM THE AREA TO BE BACKFILLED PRIOR TO BACKFILLING. PLACE BACKFILL IN LAYERS NOT MORE THAN 12" THICK, LOOSE MEASUREMENT. SPREAD AND COMPACT EACH LAYER UNIFORMLY TO THE REQUIRED DENSITY.
3. COSTS FOR GENERAL CONSTRUCTION ITEMS WHICH ARE NOT SHOWN ON THESE DRAWINGS, BUT ARE NECESSARY AND NORMAL FOR COMPLETION OF THIS PROJECT, SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE CONTRACTORS BID FOR THIS PROJECT.

ASPHALT PAVEMENT

1. PRIOR TO BEGINNING WORK, CONTACT THE ARCHITECT TO COORDINATE TRAFFIC FLOW, AND WORK SCHEDULES.
2. ASPHALT PLACEMENT SHALL BE IN ACCORDANCE WITH STATE OF WASHINGTON STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION M41-10, SECTION 5-04.
3. ASPHALT SHALL BE HMA CLASS 1/2" PG 64-28. ASPHALT MATERIAL SHALL CONFORM TO 2010 WSDOT STANDARD SPECIFICATION M41-10, SECTION 5.
4. ALL ASPHALT AND BASE THICKNESSES NOTED ARE COMPACTED THICKNESS.
5. ONE DAY PRIOR TO PLACEMENT OF BITUMINOUS MATERIAL ON THE BASE, THE SURFACE SHALL BE STERILIZED WITH A SOIL HERBICIDE.

EROSION CONTROL

1. PROVIDE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
2. ESTABLISH CONSTRUCTION ACCESS. WORK WITH CURRENT CONTRACTOR TO USE EXISTING ACCESS AND HELP MAINTAIN OR ESTABLISH NEW.
   A. CONSTRUCTION VEHICLE ACCESS AND EXIT SHALL BE LIMITED TO ONLY NECESSARY LOCATIONS. ACCESS POINTS SHALL BE STABILIZED WITH QUARRY SPALL OR CRUSHED ROCK TO MINIMIZE THE TRACKING OF SEDIMENT ONTO PUBLIC ROADS, MINIMUM 50 FEET LONG.
   B. WHEEL WASH OR TIRE BATHS SHOULD BE LOCATED ON-SITE, IF NEEDED TO PREVENT EXCESSIVE TRACKING OF SEDIMENT ON ROADS.
   C. PUBLIC ROADS SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY THROUGHOUT. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR PICKUP SWEEPING AND SHALL BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA. STREET WASHING WILL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
   D. STREET WASH WASTEWATER SHALL BE CONTROLLED BY PUMPING BACK ON-SITE, OR OTHERWISE BE PREVENTED FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO STATE SURFACE WATERS.
   E. A SEPARATION GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENT FROM PUMPING UP INTO THE ROCK PAD. THE GEOTEXTILE SHALL MEET THE FOLLOWING STANDARDS:
      I. GRAB TENSILE STRENGTH (ASTM D4751) 200 PSI MINIMUM.
      II. GRAB TENSILE ELONGATION (ASTM D4632) 30% MAXIMUM.
      III. MULLEN BURST STRENGTH (ASTM D3786-80A) 400 PSI MINIMUM.
      IV. AOS (ASTM D4751) 20 TO 45 (US STANDARD SIEVE SIZE).
   F. WHENEVER POSSIBLE, THE ENTRANCE SHALL BE CONSTRUCTED ON A FIRM, COMPACTED SUBGRADE. THIS CAN SUBSTANTIALLY INCREASE THE EFFECTIVENESS OF THE PAD AND REDUCE THE NEED FOR MAINTENANCE.
   G. QUARRY SPALLS SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
   H. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH.
   I. ANY QUARRY SPALLS THAT ARE LOOSENED FROM THE PAD, WHICH END UP ON THE ROADWAY, SHALL BE REMOVED IMMEDIATELY.
   J. UNTIL PROJECT COMPLETION AND SITE STABILIZATION, ALL CONSTRUCTION ACCESSES INTENDED AS PERMANENT ACCESS FOR MAINTENANCE SHALL BE PERMANENTLY STABILIZED.
3. CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY SILT FENCING TO PREVENT ANY WATER RUNOFF FROM ANY DISTURBED AREAS. AT A MINIMUM, SILT FENCE WILL BE ALONG THE DOWN SLOPE PROPERTY LINES AND AGAINST ADJACENT CONSTRUCTION. THE SILT FENCES SHALL BE CONSTRUCTED IN THE AREAS OF CLEARING, GRADING, OR DRAINAGE PRIOR TO STARTING THOSE ACTIVITIES. THE SILT FENCE SHALL PREVENT SOIL CARRIED BY RUNOFF WATER FROM GOING BENEATH, THROUGH, OR OVER THE TOP OF THE SILT FENCE, BUT SHALL ALLOW THE WATER TO PASS THROUGH THE FENCE.
4. INSPECT, REPAIR, AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED.
5. REMOVE EROSION AND SEDIMENTATION CONTROLS ONCE THEY ARE NO LONGER NEEDED AND RESTORE AND STABILIZE AREAS DISTURBED DURING REMOVAL.

SOIL REMEDIATION

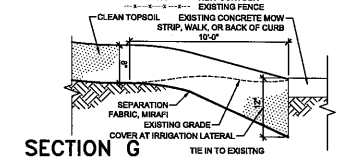
1. CLEAN TOP SOIL CAP SHALL CONSIST OF TILLING THE CONTAMINATED LAWN INTO THE TOP 6" OF CONTAMINATED TOPSOIL AND CAPPING WITH A NONWOVEN SEPARATION FABRIC AND A MINIMUM OF 6" OF CLEAN TOPSOIL IN ALL LAWN AREAS AND 12" IN ALL LANDSCAPED AREAS UNLESS OTHERWISE INDICATED.
2. NONWOVEN SEPARATION FABRIC SHALL BE A MINIMUM OF 4.0 OZ/SY SUCH AS MIRAFI 140N NONWOVEN GEOTEXTILE COMPOSED OF POLYPROPYLENE FIBERS OR ANOTHER ENGINEER.
3. GEOGRID SHALL BE MIRAFI 8XT OR ENGINEER APPROVED PRODUCT.
4. PROPOSED SEQUENCE
   A. REMOVE ALL IRRIGATION SPRINKLER HEADS IN EXISTING LAWN AREAS INCLUDING VERTICAL PIPE TO A POINT 1'-0 BELOW EXISTING GRADE.
   B. TILL EXISTING LAWN IN TO THE TOP 6" OF EXISTING TOPSOIL.
   C. AT PERIMETER EDGES OF LAWN AREAS EXCAVATE THE TILLED LAWN AND TOPSOIL MIX DOWN 6" - 12" (WHERE IRRIGATION SYSTEM TO BE INSTALLED) TAPERING UP TO THE EXISTING GRADE OVER A 10'-0 WIDTH.
   D. EXCAVATE DEPRESSIONS FOR IRRIGATION LINES INTO THE EXISTING GRADE AS INDICATED IN TRENCH DETAILS BEFORE PLACING NEW TOPSOIL.
   E. SPREAD EXCAVATED SOIL MATERIALS EVENLY INTO THE ADJACENT AREAS SO AS NOT TO MAKE A MOUND
   F. ROLL AND COMPACT THE SURFACE OF EXISTING SOILS TO PROVIDE A SMOOTH SURFACE FOR PLACEMENT OF THE NON-WOVEN SEPARATION FABRIC.
   G. PLACE THE NONWOVEN SEPARATION FABRIC. THE SEPARATION FABRIC SHALL BE LAPPED A MINIMUM OF 1'-0 AT ALL JOINTS. AT PERIMETER OF LANDSCAPED AREAS PROVIDE EXTRA FABRIC TO EXTEND. THE SEPARATION FABRIC SHALL ALSO BE PLACED INTO THE EXCAVATED IRRIGATION LINE DEPRESSIONS TAKING CARE NOT TO CREATE VOIDS BELOW THE FABRIC.
   H. PLACE IRRIGATION LINES AND BACKFILL DEPRESSIONS WITH CLEAN BACKFILL MATERIALS AND COMPACT.
   I. PLACE A MINIMUM OF 6" OF COMPACTED CLEAN TOPSOIL OVER THE SEPARATION FABRIC IN LAWN AREAS AND 12" OF COMPACTED CLEAN TOPSOIL OVER THE SEPARATION FABRIC IN LANDSCAPED AREAS.
5. AT TREES
   A. REMOVE CONTAMINATED SOILS COMPLETELY FROM EXCAVATION FOR TREES WITHIN LAWN AND LANDSCAPED AREAS. SEE SECTION A AND C.
   B. SPREAD EXCAVATED CONTAMINATED SOIL MATERIALS EVENLY INTO THE ADJACENT AREAS SO AS NOT TO MAKE A MOUND.
   C. ROLL AND COMPACT THE EVENLY SPREAD CONTAMINATED MATERIALS TO PROVIDE A SMOOTH SURFACE FOR PLACEMENT OF THE NON-WOVEN SEPARATION FABRIC.
   D. PLACE THE NONWOVEN SEPARATION FABRIC OVER THE COMPACTED SOILS EXTENDING IT INTO THE TREE EXCAVATION. THE SEPARATION FABRIC SHALL BE LAPPED A MINIMUM OF 1'-0 AT ALL JOINTS. PLACE THE GEOGRID AT BOTTOM OF THE EXCAVATION AND OVERLAP THE SEPARATION FABRIC 6".
   E. BACKFILL EXCAVATIONS WITH CLEAN TOPSOIL MATERIALS AND COMPACT.
6. AT UTILITIES OTHER THAN IRRIGATION
   A. EXCAVATE, PLACE UTILITIES, AND BACKFILL PRIOR TO CONSTRUCTING FABRIC AND TOPSOIL CAP.
   B. PLACE THE NONWOVEN SEPARATION FABRIC OVER THE COMPACTED BACKFILL AS INDICATED FOR THE TOPSOIL CAP AND COVER WITH CLEAN TOP SOIL.
7. CONSTRUCTION OF CLEAN TOP SOIL CAP SHALL BE ACCOMPLISHED IN PHASES THAT WILL CORRESPOND WITH THE IRRIGATION SYSTEM ZONES AS MUCH AS POSSIBLE SO THAT WATER TRUCKS ARE NOT USED FOR DUST CONTROL OF THE NEW TOPSOIL CAP.

LEGEND

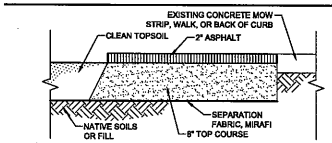
NEW / EXISTING

- AD / AREA DRAIN
- BOLLARD
- CAP / CAP
- CB / CATCH BASIN
- CB / CATCH BASIN WITH SOLID COVER
- CO / CLEAN OUT TO GRADE
- CONCRETE THRUST BLOCK
- DS / DOWN SPOUT
- DW / DRYWALL
- EM/GM / ELECTRICAL/NATURAL GAS METER
- EV / ELECTRICAL VAULT
- FDC / FIRE DEPARTMENT CONNECTION
- FH / FIRE HYDRANT
- FLAG
- LP / LIGHT POLE
- MH / MANHOLE
- TP / TELEPHONE PEDESTAL
- PIV / POST INDICATOR VALVE
- PP / POWER POLE
- POWER POLE GUY
- REDUCER
- SB / STORM BUBBLER
- SL / STREET LIGHT
- TRAFFIC SIGN
- TRANS / TRANSFORMER
- WM/IM / WATER/IRRIGATION METER
- WV/IV / WATER/IRRIGATION VALVE
- WP / WORK POINT
- TREE
- PAVEMENT MARKING
- HANDICAP MARKING
- (ABAND) / ABANDONED
- BW / BOTTOM OF WALL ELEVATION
- C/C / CENTER TO CENTER
- CONT / CONTINUOUS
- HB / HOSE BIB
- (E) / EXISTING
- IR / IRRIGATION
- IV / IRRIGATION VALVE
- LS / LANDSCAPE
- MON / MONUMENT
- NG / NATURAL GAS
- NIC / NOT IN CONTRACT
- NTS / NOT TO SCALE
- OHP / OVERHEAD POWER
- P / POWER
- R / RADIUS
- SS / SANITARY SEWER
- SD / STORM DRAIN
- TEL / TELEPHONE
- TV / TELEVISION
- YC / YAKIMA COUNTY
- TYP / TYPICAL
- W / WATER
- 100 / EXISTING CONTOUR
- 100 / NEW CONTOUR
- EXISTING FENCE

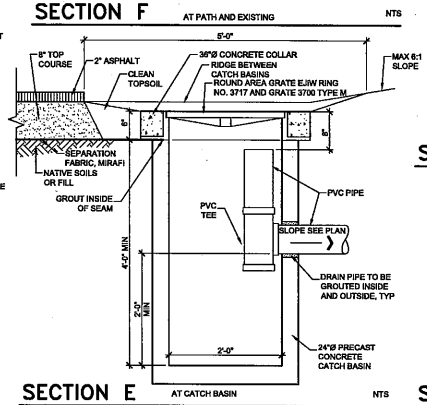
LAWN, LANDSCAPE, LAWN AT TREE, ASPHALT, STOCK PILE MATERIAL, WOOD CHIPS, EXISTING HARDSCAPE



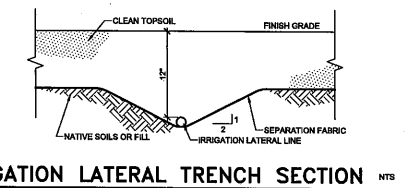
SECTION G — TIE IN TO EXISTING — NTS



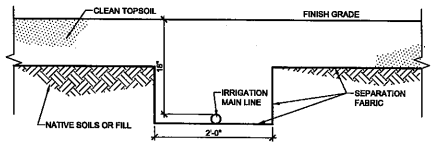
SECTION F — AT PATH AND EXISTING — NTS



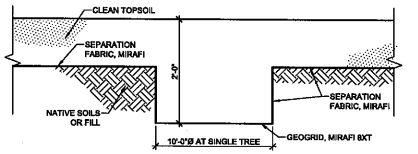
SECTION E — AT CATCH BASIN — NTS



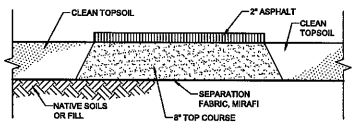
IRRIGATION LATERAL TRENCH SECTION — NTS



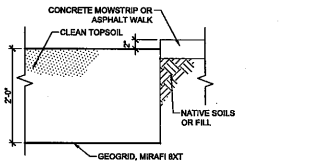
IRRIGATION MAIN TRENCH SECTION — NTS



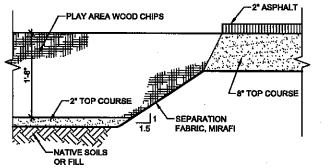
SECTION A — AT SINGLE TREE AREA — NTS



SECTION B — AT PATH — NTS



SECTION C — AT FUTURE TREE AREA — NTS



SECTION D — AT PLAY AREA — NTS

LOOFBURROW WETCH ARCHITECTS

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509-248-9786

REGISTRATION

PAUL T. KNUTSON — STATE OF WASHINGTON — 44313 — REGISTERED PROFESSIONAL ENGINEER

11/15/12

MILESTONES

PROJECT

TERRACE HEIGHTS ELEMENTARY SCHOOL

4300 MAPLE COURT
YAKIMA, WA 98901

Approved for the Owner

Approved for the Owner

SHEET TITLE

SOIL REMEDIATION GENERAL NOTES, LEGEND AND SECTIONS

11005 — Project No. — 11/15/12 — Date

676700C01.DWG — Data File

SJT — Drawn

PTK — Checked

SHEET NO.

SR0.1

EAST VALLEY SCHOOL DISTRICT NO. 90

2002 Beaudry Road
Yakima, Washington 98901
(509) 573-7300 / FAX 573-7340

December 2, 2014

Valerie Bound
Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Environmental Covenant

Grantor: East Valley School District
Grantee: State of Washington, Department of Ecology
Address: 101 North 41st Street, Yakima, WA 98901
Legal: SE ¼ NW ¼ NW ¼ EX S & WCO RD R/W EX N & E 30 FT CO RD R/W
Tax Parcel Number: S-22; T-13; R-18
Cross Reference: N/A

Grantor, East Valley School District, hereby binds Grantor, its successors and assigns to the land use restrictions indentified herein and grants such other rights under this environmental covenant (hereafter "Covenant") made this 2nd day of December, 2014 in favor of the State of Washington Department of Ecology (Ecology). Ecology shall have full right of enforcement of the rights conveyed under this Covenant pursuant to the Model Toxics Control Act, RCW 70.105D.030(1)(g), and the Uniform Environmental Covenants Act, 2007 Wash. Laws ch. 104, sec 12.

This Declaration of Covenant is made pursuant to RCW 70.105D030(1)(f) and (g) and WAC 173-340-440 by East Valley School District, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

A remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Covenant. The Remedial Action conducted at the property is described as follows:

This document is on file at Ecology's Central Region Office, located at 15 West Yakima Avenue, Suite 200, in Yakima, WA.

This Covenant is required because the Remedial Action resulted in residual concentrations of lead and arsenic which exceed the Model Toxics Control Act Method A Cleanup Level(s) for soil established under WAC 173-340-900.

The undersigned, East Valley School District, is the fee owner of the real property (hereafter "Property") in the County of Yakima, State of Washington that is subject to this Covenant. East Valley School District uses the property as an elementary school consistent with the laws of the State of Washington. The property is legally described as follows: (SE ¼ NW ¼ NW ¼ EX S & WCO RD R/W EX N & E 30 FT CO RD R/W).

East Valley School District 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").

Section 1. Any activity on the Property that may result in the significant release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited in the capped areas include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, bulldozing or earthwork. This does not include normal maintenance and/or operational activities, including: soil aeration and irrigation system repair.

Section 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.

Section 3. Any activity on the Property that may result in the significant 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.

Section 4. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without the proper written notice to Ecology.

Section 5. The Owner must restrict leases to uses and activities consistent with the Covenant and notify all lessees of the restrictions on the use of the Property.

Section 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 Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 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, to determine compliance with this Covenant, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument the provides that this 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, concurs.

East Valley School District

_____

John J. Schieche
Superintendent

Dated: 12/2/14

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

_____

Valerie Bound
Section Manager

Dated: _____

STATE OF _____
COUNTY OF _____

On this _____day of _____, 20___, I certify that _____ personally appeared before me, acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute this instrument, and acknowledged it as the _____ [type of authority] of _____ [name of party being represented] to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

_____

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

Policy No. 6800
Management Support

SAFETY, OPERATIONS AND MAINTENANCE OF SCHOOL PROPERTY

A. Facilities Maintenance

The superintendent or designee shall provide for a program to maintain the district physical plant and grounds by way of a continuous program of repair, maintenance and reconditioning. Budget recommendations shall be made each year to meet these needs and any such needs arising from an emergency.

B. Infrastructure Management

The East Valley School District Board of Directors also desires to maintain the infrastructure of district facilities.

In order to assure state funding, for facilities constructed new or new in lieu after 1994, the board will adopt an asset preservation program (APP). The APP will preserve the district facilities by employing a system of predictive, preventative, and proactive processes. Annually, the superintendent or designee will report to the board on the condition of the facilities and the effectiveness of the APP. Every sixth year an independent assessment will be conducted and reported to the board and the Office of Superintendent of Public Instruction.

Additionally, the superintendent or designee will develop a process to evaluate all pre-1994 facilities for possible participation in the asset preservation program. For initial participation in the APP, the board will submit a resolution to the Office of Superintendent of Public Instruction committing the district to implement the program.

The superintendent or designee will develop procedures for the asset preservation program.

C. Playground Equipment

The board recognizes that playground equipment is an essential part of a complete school facility. All playground equipment, whether purchased by the district or donated by a community or school-related group, should be assessed in terms of suitability and durability and for possible health or safety hazards. Consideration will also be given to potential hazards when the playground is unsupervised during non-school hours.

The superintendent or designee will develop specifications for playground equipment and related play surfaces. These specifications shall serve as criteria for the selection of playground equipment. Selection and installation of playground equipment will be based upon safety and contribution to child development.

D. Chemical and Laboratory Safety

The board recognizes the potential health and safety hazards that exist as a result of chemical storage and handling. Instruction will be emphasized in the safe and proper use of chemicals and substances and proper laboratory techniques. All students and staff are to wear safety glasses or goggles whenever they are working under potentially hazardous conditions. Laboratories should be ventilated sufficiently enough to provide a healthful, nonhazardous environment.

The superintendent or designee is directed to establish safety guidelines and procedures which will minimize the hazards inherent in the science classes and laboratories in the schools.

E. Destruction of School Property

Staff shall insure that buildings, grounds, equipment and furniture are not abused. Students or nonstudents who abuse school property may be disciplined and required to pay for the damage incurred.

The superintendent or designee shall establish procedures for the investigation and reporting of damage or loss and shall initiate action to collect for damages. A student's grades, transcript or diploma may be withheld until restitution is made.

F. Mitigated Property

The East Valley Elementary and Terrace Heights Elementary school grounds and sports fields located adjacent to East Valley Elementary School are contaminated with lead/arsenic soils below the black geotextile fabric and/or topsoil. Special handling and work restriction of these properties are required as defined in an agreement with the Department of Ecology.

Cross Reference:	Board Policy	3520	Student Fees, Fines, Charges
		6510	Safety
		6511	Staff Safety
Legal Reference:	RCW	28A.335.300	Playground Matting
	RCW	28A.635.060	Defacing or injuring school property--Liability of Parent or guardian
	WAC	392-347-023	State assistance in Post 1993 Facilities

Adoption Date: February 12, 2001
School District Name: East Valley No. 90