

COPY

Independent Cleanup Action Report Eastmont Junior High Site

for

**Eastmont School District
East Wenatchee, WA**

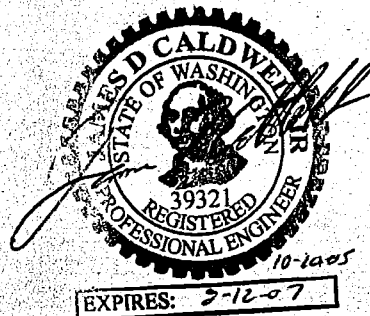


Prepared By:

Jim Caldwell, P.E.
Forsgren Associates, Inc.
112 Olds Station Road
Suite A
Wenatchee, WA 98801

800-106.008

October 20, 2005



**FORSGREN
ASSOCIATES / INC.**

INDEPENDENT CLEANUP ACTION REPORT
Eastmont Junior High School Site
East Wenatchee, Washington

1.0 Introduction

Remedial action has been completed at the Eastmont Junior High School property in East Wenatchee, Washington. This work was accomplished under the Washington State Department of Ecology's (Ecology) Voluntary Cleanup Program (VCP) and in accordance with the Remedial Action Plan previously submitted (Forsgren, 2001a). Ecology's Central Region Office in Yakima, Washington, has provided guidance for this voluntary cleanup. This report describes the independent cleanup actions taken by Eastmont School District (ESD) No. 206 at the site during redevelopment of the former orchard property into an educational facility.

2.0 Site Location and Background

The subject property consists of an approximately 36-acre rectangular parcel of land in East Wenatchee, Washington as shown on Figure 1. The property is a former apple orchard located immediately west of North Iowa Avenue between 8th Street NE and 10th Street NE. Apple growing and harvesting occurred on the site beginning in the early 1900s and continued through the year 2000. The trees were removed in spring, 2001. Residual concentrations of agricultural chemicals were present in the site soils.

Organochlorine and lead arsenate pesticides were common agricultural chemicals utilized in apple orchard operations in Washington State. These chemicals were applied to the orchard that formerly occupied the subject property to control pests that affect orchard productivity. In the early years of orchard operation, these chemicals were mixed on site and distributed to all areas of the orchard through a subsurface piping system. Chemical preparation took place at a mixing facility that was located on the center-west border of the property (Figure 2). In later years mobile sprayers, consisting of a tank with sprayer mounted on a wheeled trailer were used. These mobile sprayers were filled at a filling station in the north central portion of the site (Figure 2).

Three residences and associated outbuildings were present on the site. These buildings were previously removed from the site. An underground storage tank was present in the south center of the property (Figure 2). It appears to have been a tank for storage of vehicle fuel. There was a small concrete pad adjacent to the tank location that may have supported a pump.

3.0 Previous Investigations

Forsgren Associates performed a Phase 1 Environmental Site Assessment in January 2001 according to ASTM Standard Practices (Forsgren 2001c). In June 2001, Forsgren Associates completed an Environmental Site Assessment and Remedial Action Plan (Forsgren, 2001a). Property development and construction plans were completed concurrently with the Remedial Action Plan. Upon completion of the site assessment work and plan development, construction began in August 2001.

4.0 Purpose and Scope of Work

This report documents an Independent Cleanup Action undertaken by ESD at the Eastmont Junior High School property. A Remedial (Cleanup) Action Plan was previously discussed with Ecology and remedial measures were designed to meet Washington State requirements for protection of human health and the environment (Forsgren, 2001a). This Remedial Action Report is submitted in compliance with Washington State MTCA, Ecology policy, and provisions contained in WAC 173-340-300.

5.0 Independent Cleanup Action

Under the State's Voluntary Cleanup Program (VCP), independent cleanups may proceed with guidance from Ecology. A Final Cleanup Report or Independent Cleanup Action Report must be submitted to comply with VCP guidance. If the cleanup meets State requirements, Ecology may issue a written "No Further Action" determination. Ecology consultations and assistance under the VCP were requested by Eastmont School District (ESD) in its VCP application to Ecology. A monetary deposit accompanied this application (Forsgren, 2001b). To defray Ecology's costs, we anticipate review of this final cleanup report and preparation of the "No Further Action" letter will be billed against ESD's deposit.

5.1 Proposed Independent Cleanup Action.

According to the Remedial Action Plan, arsenic-, lead-, and DDT-contaminated soils were to be interred on-site and placed under either an impervious cap (in this case asphalt parking areas and driveways; tennis courts and building foundations) or a suitable thickness of clean topsoil and/or a combination of borrow cap and clean top soil in areas where play fields and landscaping were to be developed. Drainage was to be controlled so that runoff from the site would be directed away from and prevented from contacting contaminated materials. Institutional controls included asphalt and topsoil cap maintenance, property deed notice, and limitations on landscape irrigation.

5.2 General Orchard Soils.

No soils were permanently removed from the site. Although it was not ultimately necessary, prior arrangements were made with the East Wenatchee landfill for

soil disposal in the event it was necessary to excavate and transport site soils for off-site disposal. Orchard soils were acceptable to the landfill based on the results of TCLP analysis of site soil samples.

5.3 Excavation, Grading and Backfill

Site soil was graded as appropriate for construction of the school building, driveways and level parking areas and as appropriate for landscaped grounds around the school facilities. In general, soil was relocated on site to produce a series of level terraces consistent with the original northeast-to-southwest slope of the site. Original topographic relief was on the order of one hundred feet.

Grading of the north and west portions of the site, which originally sloped from east to west, involved construction of several level areas to accommodate sports fields. The southeast quarter of the site was graded into a series of level tiers or slopes for placement of the school building as well as parking and driveway areas. This slope reflected the original north-to-south slope in this area of the site with topographic relief of approximately seventy feet (see "Grading Plans" in Forsgren, 2001a).

Excess site soil was selectively placed in two topsoil disposal areas onsite as shown on the grading plan. One is a rectangular area south of the school building oriented lengthwise along 8th Street. The second is a triangular area in the northwest corner of the property. Later in the project, with permission from DOE, some of these soils were utilized as backfill under the floor slabs of the building.

Lawn, landscape, topsoil disposal, and sports field areas received a cap of 6 inches uncontaminated, compacted fill followed by 6 inches of topsoil, as approved with Ecology representatives. The fill consists of graded material containing some angular rock that was compacted to a firm layer to prevent children and others from accidentally reaching the contaminated soils when digging by hand. This layer provides not only a physical barrier, but a visual and tactile warning to potential future excavation in these areas.

Both cap and topsoil sources were tested for contamination and found to be clean for project purposes. Analytical laboratory results and chain-of-custody documents for samples collected from these sources are contained in Appendix A.

Water and sewer lines were connected to existing service lines at the south end of the property from 8th Street NE. Utility trenches were excavated from the south property boundary to the new building location for connection of gas, electric, and telephone systems to existing services beneath 8th Street NE.

Material excavated for the placement of the building foundation, utility lines and rockery structures were incorporated into the overall grading. Utility and irrigation system trenches were filled with clean bedding and backfill so that future utility work can be accomplished without concern about working in contaminated soils.

The Remedial Action Plan required soil testing in the area of the proposed storm water retention/infiltration basin. This testing was to ensure that the bottom of the basin was below the contaminated soil horizon. The bottom of the pond was excavated beyond the fine-grained soils and into the underlying gravel layer. This was then backfilled with soils that would support vegetation and landscaping.

5.4 Debris

Steel irrigation piping was removed from the site. The target contaminant levels of the residue in the pipe had been determined to exceed the MTCA thresholds. The exact lineal footage of pipe was not determined, however approximately 20 cubic yards was transported to the Regional Landfill owned and operated by Waste Management of Greater Wenatchee.

5.5 Underground Storage Tank

The underground storage tank located on the south-central site border reportedly was removed by the construction contractor according to Washington State regulations. According to section 2298 of the Construction documents the contractor was to conduct the UST removal as follows:

UST Removal Performance: Remove the UST(s) and perform tank site closure as required by the Washington State Department of Ecology (DOE) under; RCW Chapter 90-76, WAC Chapter 173-360 and other applicable state and federal regulations. All work shall be performed by a contractor licensed and certified by the State of Washington to perform the work.

1. Evacuate and properly dispose of the liquid and any sludge contained within the tank(s) .
2. Remove and dispose of the tank and all contaminated materials as required.
3. Perform decommissioning and site closure.

However, no decommissioning information or confirmatory sampling and analysis data was provided by the contractor for this report.

5.6 Imperious Surfacing and Clean Topsoil Caps

School building foundations provide an impermeable cap over approximately 2.11 acres (approximately 6%) of the Eastmont School site. Another 6.4 acres, 18%, was covered with an impervious cap in the form of asphalt parking areas,

paved driveways, tennis courts, track and field facilities, and concrete bleachers at the football/track field. Approximately 1.4 acres, 4%, was deeded to the City of East Wenatchee as the Grover Street extension. These surfaces provide a barrier to exposure to contaminated soil. They also effectively eliminate hydraulic head preventing contaminant leaching from underlying contaminated soil.

The remaining 26 acres, 62% of the site was covered with a 12-inch cap as previously discussed. This layer acts as an exposure barrier to underlying contaminated soil. Sports fields, play areas and landscaped areas received a layer of clean material to prevent exposure to the interred soil beneath. The cap depth was randomly observed during installation by Forsgren Associates staff. Additionally upon completion, small holes were exposed by hand to verify that the minimum depths had been achieved. The approximate hole locations are shown on figure 1. All of the verification holes met the minimum cap depth as required by the project plans. Landscaped areas received a minimum of 18 inches of clean topsoil. These areas will receive applications of irrigation water at agronomic rates to reduce the risk of contaminant migration in subsurface water.

5.7 Site Drainage

A drainage system was installed at the site to direct storm water runoff from all areas of the site to the retention/infiltration pond constructed at the topographic low point in the southwest corner of the site.

There is one location where drainage enters from off the site and must be conveyed across the site. Storm drainage from Iowa Street enters near the soccer field in the northeast corner of the site. This drainage is then piped underground and conveyed through a swale-like feature to a parking lot where it is collected and routed to the detention/infiltration pond. Rainfall on the tennis courts sheetflows to the north, across a short stretch of lawn and into this same swale where it is routed along with other runoff.

All impervious surfaces, except the tennis courts, were constructed to collect rainfall runoff and route it to storm drain collection piping, which will then route the runoff to the detention/infiltration pond.

Rainfall on the ball fields and grass areas will sheetflow until it reaches an impervious area where it is routed to the piping system, or will infiltrate into the ground. Rainfall on the track is directed to drains along the perimeter and then routed to the site storm drainage pipe system.

Building roof drains are tight-lined into the storm water collection system beneath 8th Street NE.

The retention/infiltration pond is an approximately 18,000 square-foot trapezoid-shaped basin located in the extreme southwest corner of the Eastmont site. The basin is 4 feet deep with nearly 4:1 side slopes. An overflow structure was placed in the southwest corner of the basin to direct storm water overflow into the city collection system. The area for the retention/infiltration pond was excavated and native soils spread over nearby portions of the site to the east. The basin area was excavated to the bottom of the local surface soil layer exposing the coarse gravel material beneath. This depth was sufficient to ensure that the basin bottom was completed below the contaminated soil horizon. Clean fill was imported to backfill the basin.

5.8 Confirmation Sampling.

In an effort to confirm the effectiveness of the remediation program at the Eastmont School Site, Forsgren Associates and Department of Ecology representatives visited the site on April 16, 2003 to sample selected areas for metals analysis. Ecology provided and operated a hand-held field x-ray fluorescence (XRF) instrument for on-site analysis of lead and arsenic. The instrument was a Niton XL700 Series detector. Ten tests were completed using the XRF instrument at locations shown on Figure 1. Test results are shown in Table 5-1.

Table 5-1
Eastmont Junior High School Site Contaminant Testing

No	XLNo	Site	Ssec	Date/Time	Pb	Pb Error	As	As Error
1	362	Eastmont Jr High NEW	43	4/16/2003 9:49	39.1	18.3	<LOD	27.45
2	363	Eastmont Jr High NEW	30.8	4/16/2003 9:52	<LOD	29.25	<LOD	28.8
3	364	Eastmont Jr High NEW	35	4/16/2003 9:55	40.4	18.3	<LOD	27.3
4	365	Eastmont Jr High NEW	33.6	4/16/2003 10:04	36.6	21.4	<LOD	32.55
5	366	Eastmont Jr High NEW	41	4/16/2003 10:08	<LOD	24.15	<LOD	24.9
6	367	Eastmont Jr High NEW	30.8	4/16/2003 10:13	38.4	21.8	<LOD	33.15
7	368	Eastmont Jr High NEW	31.1	4/16/2003 10:17	<LOD	29.25	<LOD	29.4
City ROW	369	Eastmont Jr High NEW	10.3	4/16/2003 10:21	571.2	98.4	<LOD	141.15
8	370	Eastmont Jr High NEW	30.1	4/16/2003 10:24	<LOD	21.6	<LOD	24.45
9	371	Eastmont Jr High NEW	30.1	4/16/2003 10:27	<LOD	28.65	<LOD	30.75

Table notes: Performed by Norm Hepner of the Washington State DOE using a Niton XL700 Serial #XL700-U35737059LY.

XLNo is a number generated by Niton XL700 giving an individual test number relative to the sequence of tests.

Ssec is a recording of nominal seconds used for an individual test.
 All recordings are in units of mg/Kg
 Error recordings are a +/- range for the recorded element.

All arsenic tests indicated concentrations below the detection limits for the XRF instrument. One half of the lead tests showed concentrations below instrument detection limits. Four samples showed concentrations above the detection limit but below the Washington State Method A cleanup level for lead of 250 mg/kg. The remaining sample was analyzed in the City of East Wenatchee right-of-way south of the Eastmont School property boundary. That sample showed a concentration of lead in the soil above the Method A cleanup level. The arsenic concentration in this sample was below the instrument detection limit. This area was addressed as part of the City of East Wenatchee 8th Street Improvements.

5.9 City of East Wenatchee Improvements

The City of East Wenatchee conducted improvements to 8th Street NE after the school had been completed. These improvements included cuts and fills on school district property along 8th Street and in the triangular shaped wedge on the west side of Grover St. The capping methods were either as utilized on the site previously or as approved on a case by case basis by DOE. Hammond Collier Wade and Livingstone (HCWL) of Wenatchee, WA preformed the plan and implementation of this project. Upon completion of this project we were provided certification from HCWL that the capping had been completed in accordance with approved methods. Forsgren provided oversight during the capping procedure. The Certification and map are provided in Appendix B. On November 18, 2003 Forsgren Associates and Dept. of Ecology representatives conducted onsite metals analysis. This analysis was conducted using an Inno-X XRF Environmental Metals Analyzer. The results are shown in Table 5.2.

Table 5-2

Eastmont Junior High School - 8th Street Slope and Grover Triangle Contaminant Testing

Date	Reading	Live Time	Mode	Pass Fail Standard	Pass/Fail	As	As +/-	Pb	Pb +/-
18-Nov-03	1	53.46	Standardization	PASS	-0.023				
18-Nov-03	2	52.1	Standardization	PASS	0.0243				
18-Nov-03	3	59.53	Soil			<LOD	9.18	<LOD	13.78
18-Nov-03	4	57.47	Soil			<LOD	9.12	16.27	4.57
18-Nov-03	5	63.68	Soil			<LOD	9.98	17.26	5.03
18-Nov-03	6	62.75	Soil			<LOD	10.39	21.9	5.22
18-Nov-03	7	65.06	Soil			<LOD	10.35	16.48	5.21
18-Nov-03	8	60.08	Soil			<LOD	9.68	<LOD	14.53
18-Nov-03	9	57.03	Soil			<LOD	9.06	22.77	4.59
18-Nov-03	10	57.48	Soil			<LOD	9.22	20.03	4.65
18-Nov-03	11	66.1	Soil			<LOD	10.98	<LOD	16.76
18-Nov-03	12	58.52	Soil			<LOD	8.85	15	4.43
18-Nov-03	13	59.03	Soil			<LOD	9.37	15.64	4.73

18-Nov-03	14	61.58	Soil			<LOD	9.88	18.28	4.9
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Table Notes: Only target elements are listed in this table. Other recorded elements from the original DOE report are available upon request
Performed by Rachel Caron, WSDOE, using an Innov-X XRF Environmental Metals Analyzer.
Live time is defined as the actual time that the sample is exposed to radiation.

5.10 Institutional Controls

Institutional controls are planned to maintain the integrity of the isolation measures and to notify future property users or buyers of the existence of contamination on the site. These controls include a notice on the property deed as required by the VCP. Cap and drainage system maintenance are critical to the isolation of contamination and both are to be inspected annually. Any problems identified during inspection must be addressed. Irrigation of landscaped areas must be monitored to assure that they receive only agronomic rates of application. Future excavation in utility corridors or landscape areas will be restricted to clean topsoil zones above the cap material.

6.0 Conclusions

Contaminated site soils have been capped onsite at the Eastmont Junior High School property. An impervious cap was placed over a part of the site while the remainder of the property was covered by a thick layer of uncontaminated fill and topsoil. Field testing confirmed that contaminated soils have been successfully isolated beneath cap materials. No native soil was permanently transported offsite for disposal. A site drainage system was installed that directs storm water away from contaminated material. Institutional controls have been arranged that restrict future site use. These measures will isolate contaminated site soils from contact with surface water and humans.

7.0 Limitations

Within the limitations of the scope of work, schedule and budget for this project, Forsgren Associates, Inc. services have been performed in accordance with generally accepted industry practices in the area at the time this work was executed. No warranty, guarantee or other condition, express or implied, should be understood.

We have prepared this report for use by the Eastmont School District No. 206 in developing the subject property in East Wenatchee, Washington. This report may be made available to regulatory agencies as necessary. However, it is not intended for use by any other party. The information contained herein is not applicable to other sites.

Our interpretation of the nature and extent of pesticide contamination on the site, the effectiveness of clean topsoil cap placement, and the uncontaminated nature

of imported clean topsoil is based on data collected at the reported sampling points and from onsite analysis. It is possible that differing contamination levels exist in soils on the site in areas that were not sampled and tested by analytical laboratory methods.

8.0 References

Forsgren Associates, 2001a. *Site Assessment and Remedial Action Report for the Proposed Eastmont Junior High School, East Wenatchee, Washington. Draft. June 2001.*

Forsgren Associates, 2001b. *Letter to Ecology Central Region Office, Yakima, Washington. Voluntary Cleanup Program assistance request form and deposit check. May 24, 2001.*

Forsgren Associates, 2001c. *Phase I Environmental Site Assessment for Eastmont Junior High School Site, East Wenatchee, Washington. January 2001.*

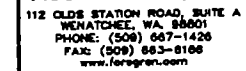
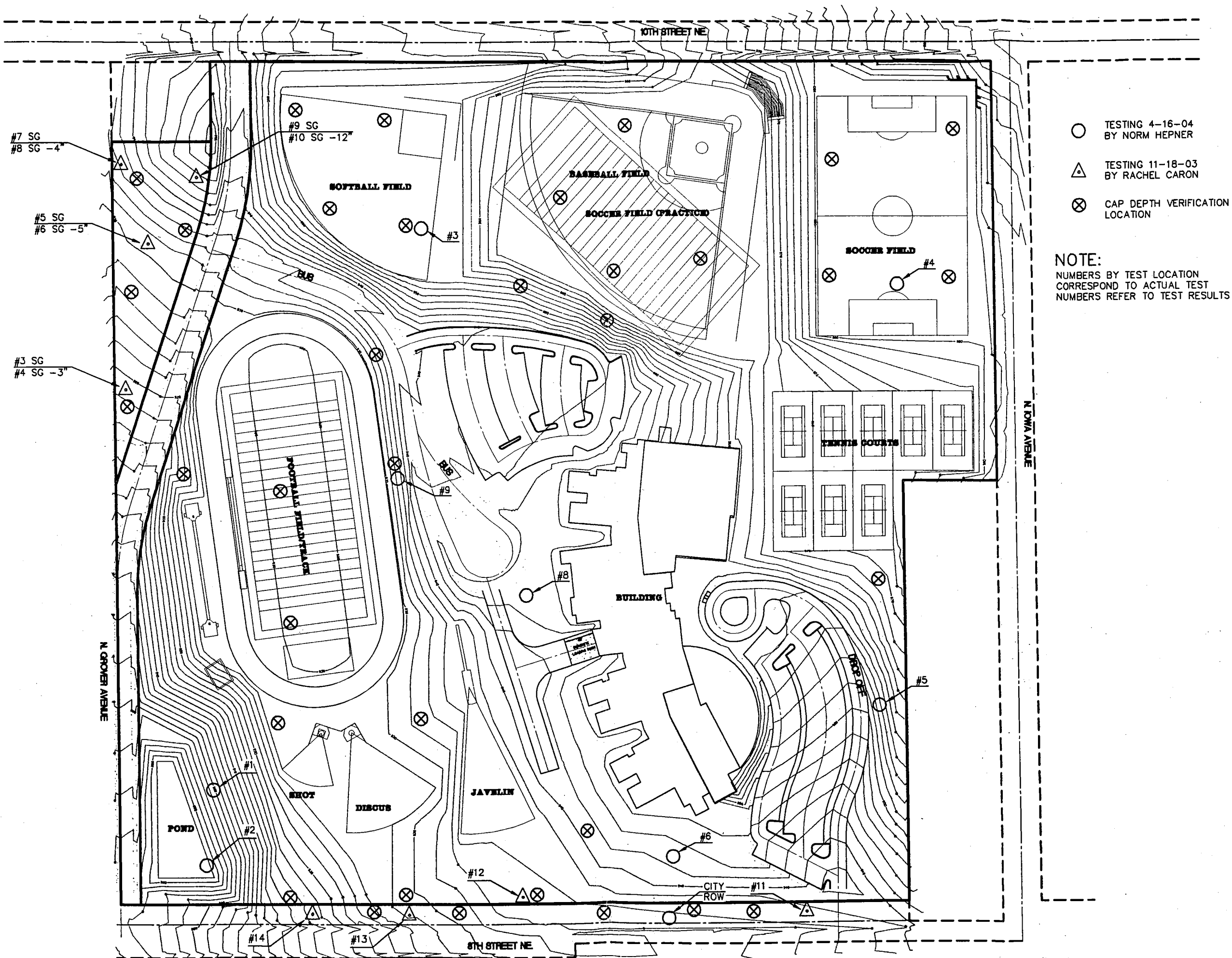
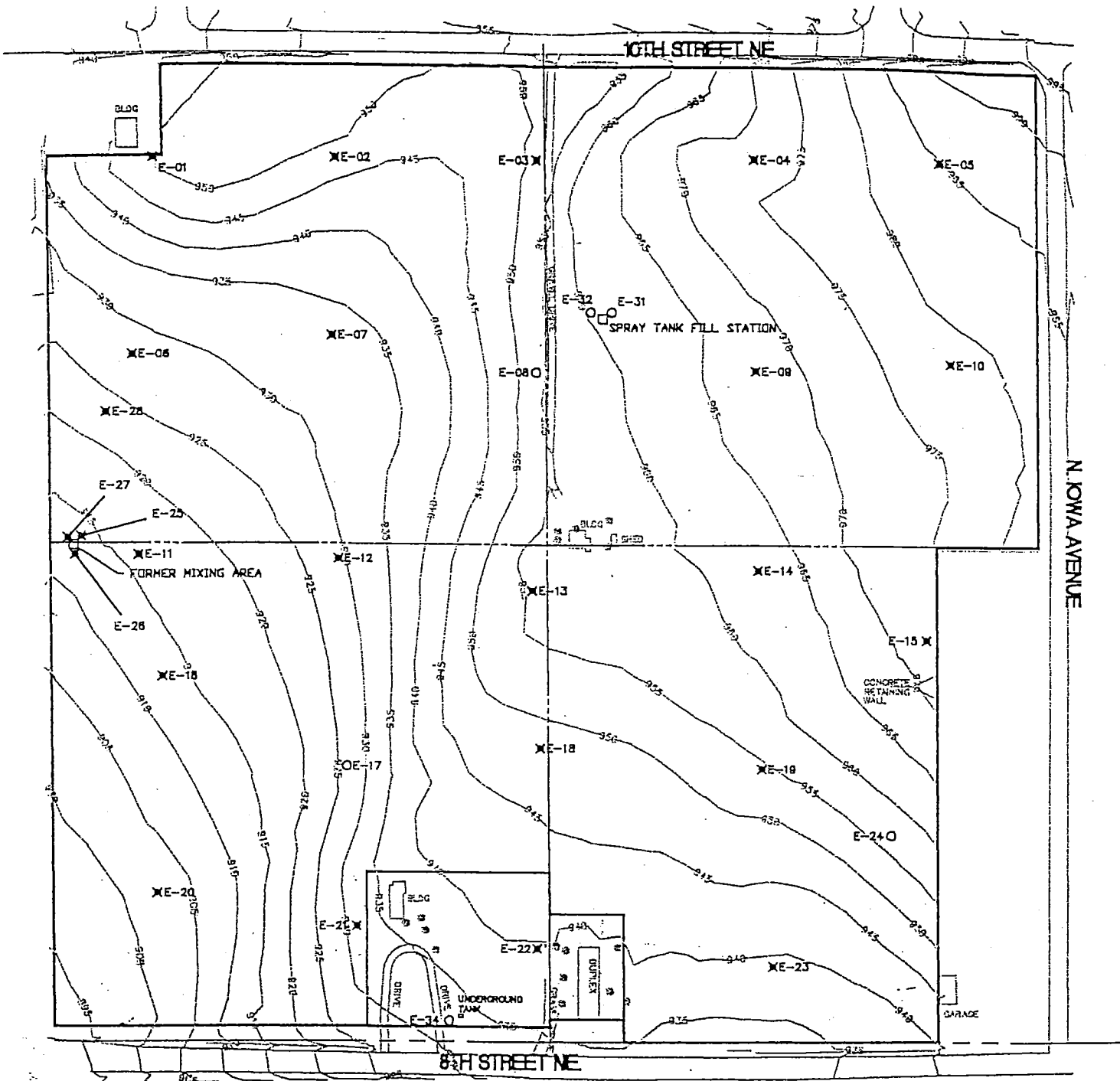
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FIGURE 1
EASTMONT JR. HIGH SCHOOL
SOIL CAP LEAD AND
ARSNIC LEVEL VERIFICATION

OWNED BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE
PROJECT ENGINEER	DATE
PROJECT MANAGER	DATE
APPROVED	DATE
SCALE	
FILE NAME	
PROJECT NO.	
SHEET NO.	





LEGEND

- ✕ SURVEYED LOCATION OF SAMPLING STATION
- APPROXIMATE LOCATION OF SAMPLING STATION

NOTE: SOME STAKES MARKING SAMPLING LOCATIONS WERE DESTROYED BY UNKNOWN PARTIES PRIOR TO SURVEYING.

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AWN JW	SCALE 1"=200'
DATE 5/17/01	800-106.008

EASTMONT JR. HIGH SOIL SAMPLING MAP

Fig. 2

Appendix A
Imported Fill Material
Lab Analysis and Chain of Custody

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

RECEIVED

MAY 14 2003

FORSGREN ASSOCIATES, INC.

DAVID NITCHALS

112 OLDS STATION RD

WENATCHEE WA 98801

Project: EJH Fill

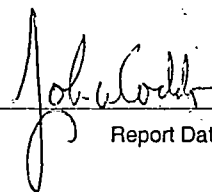
Certificate of Analysis

Total Metals - Method EPA 6020/200.8

Sample Name:	Fill 1 - GRAVEL Below	Analyte	Result	Units	PQL	Method
Sample Location:		Arsenic	1.6	mg/Kg	0.5	EPA 6020
Sampling Date:	11/19/2001	Lead	2.7	mg/Kg	0.5	EPA 6020
Sampling Time:	12:05					
Date Received:	11/20/2001					
Lab #:	01X1661-01					
Matrix:	SOIL					
Analysis Date:	12/5/2001					
% Solid:	96.6					

Sample Name:	Fill 2 - TOP SOIL	Analyte	Result	Units	PQL	Method
Sample Location:		Arsenic	2.2	mg/Kg	0.5	EPA 6020
Sampling Date:	11/19/2001	Lead	4.3	mg/Kg	0.5	EPA 6020
Sampling Time:	12:08					
Date Received:	11/20/2001					
Lab #:	01X1661-02					
Matrix:	SOIL					
Analysis Date:	12/5/2001					
% Solid:	96.2					

Lab Supervisor:



Report Date:

06-Dec-01

Appendix B
City of East Wenatchee
8th Street Improvements Information

Appendix B
City of East Wenatchee
8th Street Improvements Information

Draft



HAMMOND COLLIER
WADE LIVINGSTONE

TEL: 509.662.1762
FAX: 509.663.8534

RECEIVED
JUL 15 2004

July 14, 2004

Jim Caldwell
Forsgren Associates, Inc.
112 Olds Station Road, Suite A
Wenatchee, WA 98801

Re: Soil Capping on 8th Street frontage for Eastmont School District
8th Street NE Street Improvements
East Wenatchee, WA TIB Proj. No. 8-3-161(006)-1

Dear Jim:

The 8th Street project originally called for 6" of topsoil to be placed over 6" of common borrow along the ESD sloped frontage of 8th Street. This was changed to either placing 12" of topsoil with 6 oz. geotextile fabric placed between the two 6" minimum layers or placing 12" minimum quarry spalls. Quarry spalls were to be used where the slope was steeper than 3:1 and the fabric option was used for the remainder of the sloped area in question.

The enclosed map details the locations where the various approaches were constructed.

The Eastmont School District triangular parcel, near the southwest corner of Grover and 10th Street, was covered with 6 oz. geotextile fabric and 6" minimum depth of topsoil.

If you have questions, feel free to contact Dave Allen or James Bartleson of Hammond Collier Wade Livingstone at 662-1762.

Sincerely,
HAMMOND COLLIER
WADE LIVINGSTONE

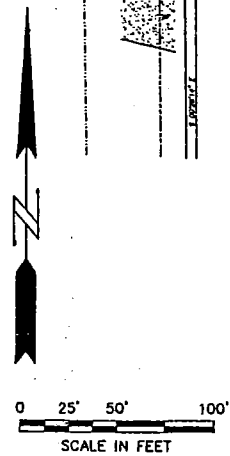
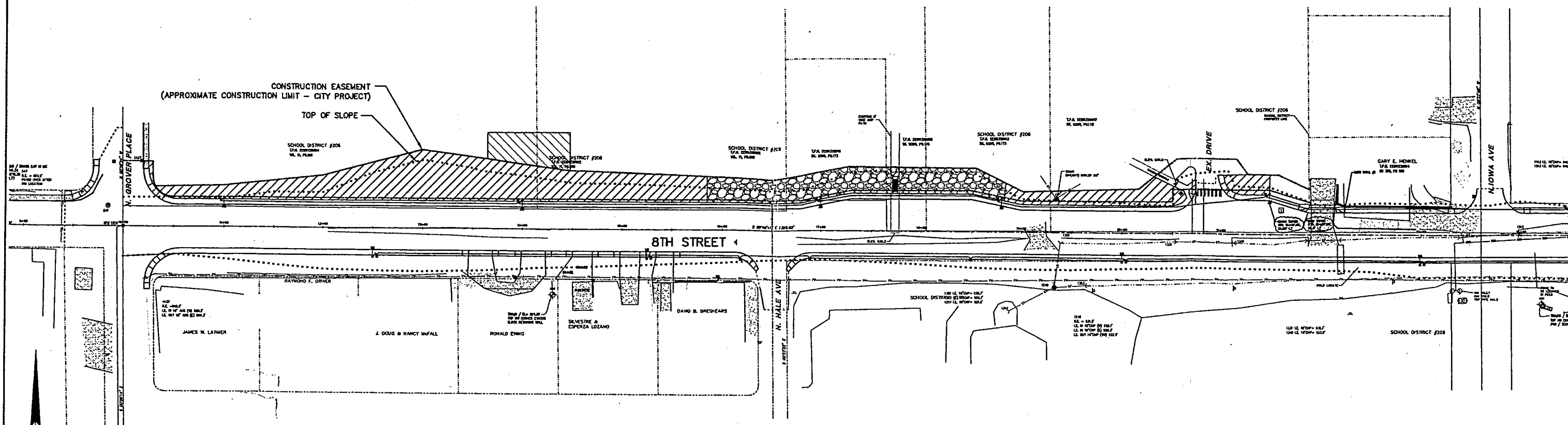
David Allen, P.E.

Cc: Bob Goodman – City of East Wenatchee
John Hultman – KJM Associates


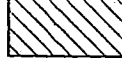

Attachments


DA

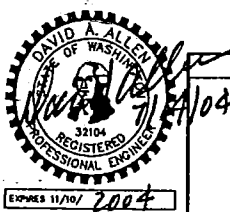
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LEGEND

-  6" MIN TOPSOIL
6 OZ. GEOTEXTILE FABRIC
6" TOPSOIL
NATIVE SUBGRADE
-  6" TOPSOIL
6" MIN. IMPORTED MATERIAL - (PLACED BY ESD CONTRACTOR)
NATIVE MATERIAL
-  12" QUARRY SPALLS
NATIVE MATERIAL

RECORD DRAWING
THIS DRAWING HAS BEEN PREPARED
BASED ON INFORMATION COMPILED
FROM THE CONTRACTOR AND OTHERS
BY 
DATE 7/14/04
HAMMOND COLLIER
WADE LIVINGSTONE
104 EAST 9th STREET
WENATCHEE, WASHINGTON 98801



REVISIONS	GENERAL NOTES	DESIGNED BY JB DRAWN BY DJ CHECKED BY APPROVED BY DATE PRINTED 7-14-04 SCALE AS SHOWN F.B. NO.	HAMMOND COLLIER WADE LIVINGSTONE SEATTLE (206) 632-2664 WENATCHEE (509) 662-1762 OMAK (509) 826-5861	CITY OF EAST WENATCHEE 8TH STREET NE STREET IMPROVEMENTS ESD SOL COVER	JOB NO. 0280056 DRAWING NO. SHEET 1 OF 1
	CALL 3 FULL WORKING DAYS BEFORE YOU DIG 1-800-424-5555				



FORSGREN
ASSOCIATES / INC.

A COMPANY OF ENGINEERS AND SCIENTISTS

Jack Davis
J & K Earthworks
PO Box 2425
Wenatchee, WA 98801

October 7, 2003

Re: Grover Street Contaminated Fill Cover

Dear Jack,

I am writing at your request to clarify the cover requirement for the fill area on the west side of Grover Avenue. As per my discussion with Norm Hepner of the Washington State Dept of Ecology, a 6 oz. Geotextile fabric overlaid with 6 inches or clean topsoil will satisfy the capping requirement. The issue at hand is the capping on the edges of the site. The intent of the requirement is that the entire site must contain the stated cap. The property line shall not be allowed to unravel or erode and end up with exposed geofabric or a substandard cover. There are many methods which will meet this requirement. I have attached a detail that will work and shows my intent.

Please let me know what method will be used so that I can verify its adequacy and installation.

If have any questions or we can be of further assistance, please give us a call.

Sincerely,

Forsgren Associates, Inc.

Jim Caldwell, PE
Project Manager

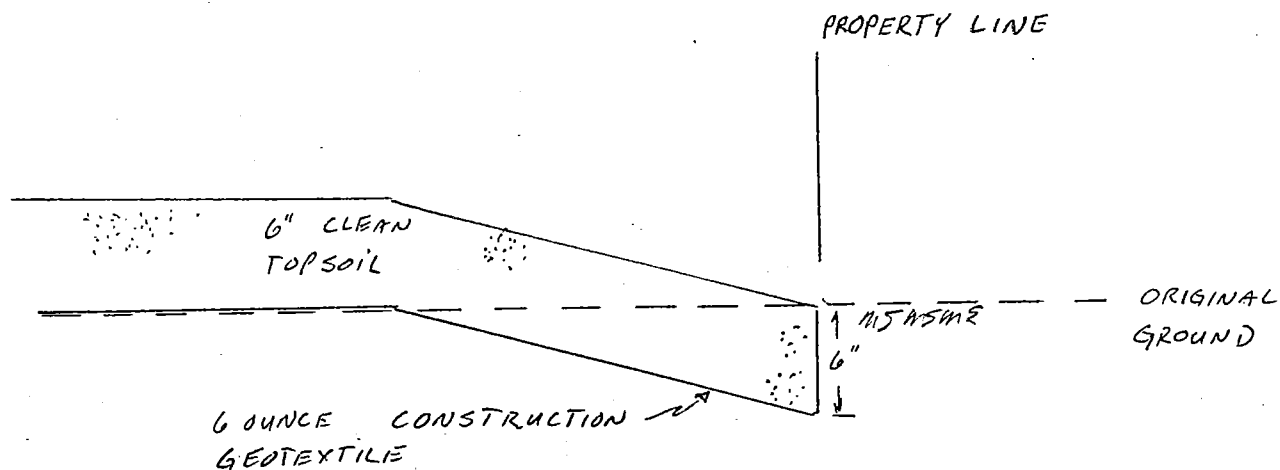
A COMPANY OF ENGINEERS AND SCIENTISTS

112 OLDS STATION ROAD, SUITE A / WENATCHEE, WA 98801 / (509) 667.1426 / FAX (509) 663.6166
REXBURG / BOISE / EVANSTON / WENATCHEE / FARMINGTON / SALT LAKE CITY / SACRAMENTO
WWW.FORSGREN.COM



FORSGREN
ASSOCIATES INC.

OWNER-PROJECT	BY	DATE	PROJECT NO.
1ST MONT JR HIGH SCHOOL	J. CALDWELL	10-7-03	900-106.008
FEATURE	CHK'D BY	DATE	SHEET 1 OF 1
GROVER ST TRIANGLE CAP DETAIL			



Appendix C
Underground Pipe Removal
and Disposal

Employee # 1498

Selland Construction, Inc.

START TIME 7:00 STOP TIME 3:00

Employee Name Greg Reed

DRIVERS DAILY TIME CARD

DATE 5.20.01

DATE	(D)	(W)	(TH)	(F)	(SA)	(S)	EQUIPMENT			
ICE #	JOB NAME	PHASE	MATERIAL HANDED	LOADS	PAY RATE	TOTAL HOURS	TRACTOR	TRAILERS	DRIVING	DOWN TIME
2104	Eastmont Skid	1	Pipe - mix to Landfill		1.00	1.5	1634	Tractor	1.5	
2104	"	10	Labr. pickup Pipe		1.00	4	1634	-		4
2104	WISG	98	Small Gravel	3		2.5	Tractor	FL300	2.5	
TOTAL						8				

Beginning Odometer 384,412
 Ending Odometer 385,848

Gallons of Fuel: On-Hwy 15

Off-Hwy

Accident: Yes No

If Accident was Truck/Trailer Loaded: Yes

Comments:

Employee Signature [Signature]

Foreman Approval

[Signature] [Signature]



**GREATER WENATCHEE REGIONAL LANDFILL
AND RECYCLING FACILITY**
A WASTE MANAGEMENT COMPANY

P.O. Box 2963
Wenatchee, WA 98807-2963
(509) 884-2822
(509) 884-3724 Fax

(Continued from previous page)

740-227322
SELLAND CONSTRUCTION
PO BOX 119
WENATCHEE, WA 98807

08/31/2001

Invoice #1048-0003464

Ticket	Description	Quantity	Rate	Extended
	REFUSE TAX			.60
	Ticket Total			17.30
012642	08/08/2001 VEH#:			
	MSW--LANDFILL	24.00 LYD	8.87	212.88
	192705			
	REFUSE TAX			7.66
	Ticket Total			220.54
012643	08/08/2001 VEH#:			
	MSW--LANDFILL	24.00 LYD	8.87	212.88
	192696			
	REFUSE TAX			7.66
	Ticket Total			220.54
012696	08/10/2001 VEH#:			
	MSW--TRANSFER STATION	8.33 LYD	11.13	92.71
	227421			
	REFUSE TAX			3.34
	Ticket Total			96.05
012796	08/20/2001 VEH#:			
	MSW--LANDFILL	20.00 LYD	8.87	177.40
	192907			
	REFUSE TAX			6.39
	Ticket Total			183.79
012854	08/22/2001 VEH#:			
	MSW--LANDFILL	18.00 LYD	8.87	159.66
	192948			
	REFUSE TAX			5.75
	Ticket Total			165.41
012858	08/22/2001 VEH#:			
	MSW--LANDFILL	12.00 LYD	8.87	106.44
	192961			
	REFUSE TAX			3.83
	Ticket Total			110.27
012863	08/23/2001 VEH#:			
	MSW--LANDFILL	14.00 LYD	8.87	124.18
	192975			
	REFUSE TAX			4.47



**GREATER WENATCHEE REGIONAL LANDFILL
AND RECYCLING FACILITY**
A WASTE MANAGEMENT COMPANY

PO Box 260
Wenatchee, WA 98807-0260
(509) 841-1801
(509) 844-0146 Fax

(Continued from previous page)

745-227332
SKILLAND CONSTRUCTION
PO BOX 119
WENATCHEE, WA 98807

08/31/2001

Invoice #1045-0003454

Ticket	Description	Quantity	Rate	Extended
	REFUSE TAX			.60
	Ticket Total			17.30
012542	08/08/2001 VEH#:			
	MSW--LANDFILL	24.00 LYT	8.87	212.88
	192705			
	REFUSE TAX			7.66
	Ticket Total			220.54
012643	08/08/2001 VEH#:			
	MSW--LANDFILL	24.00 LYT	8.87	212.88
	192686			
	REFUSE TAX			7.66
	Ticket Total			220.54
013698	08/10/2001 VEH#:			
	MSW--TRANSFER STATION	8.33 LYT	11.13	92.71
	227821			
	REFUSE TAX			3.34
	Ticket Total			96.05
012796	08/28/2001 VEH#:			
	MSW--LANDFILL	20.00 LYT	8.87	177.40
	192807			
	REFUSE TAX			8.29
	Ticket Total			185.79
013854	08/30/2001 VEH#:			
	MSW--LANDFILL	18.00 LYT	8.87	159.66
	192848			
	REFUSE TAX			5.75
	Ticket Total			165.41
012558	08/22/2001 VEH#:			
	MSW--LANDFILL	12.00 LYT	8.87	106.44
	192861			
	REFUSE TAX			3.83
	Ticket Total			110.27
012863	08/23/2001 VEH#:			
	MSW--LANDFILL	14.00 LYT	8.87	124.18
	192978			
	REFUSE TAX			4.47

(Continued on next page)

Jim Caldwell

From: Hepner, Norm [NHEP461@ECY.WA.GOV]
Sent: Thursday, April 21, 2005 8:44 AM
To: 'jcaldwell@forsgren.com'
Subject: FW: EJH Report

Jim,

I reviewed the Eastmont Junior High Submittal. The following are requirements:

1. Provide site inspection documentation for cap construction. If site inspection documentation is not available, a statistically significant number of samples will have to be taken throughout the site to demonstrate that the cap was constructed as designed. See earlier comment in previous email below.
2. A restrictive covenant is required for the property
3. A maintenance and operations plan is required for the property
4. The underground storage tank section needs additional information provided. You may want to consider using information provided during the site assessment or gather 'statements' from the contractor that no release was present.
5. Explain what the WM tickets for Selland construction are ... the last two pages of the document.
6. Include section on imported clean fill including analytical data and site history of fill site.

All the information requested can be provided as an addendum to the Independent Cleanup Action Report. Thanks

Norman T. Hepner, P.E.
Toxics Cleanup Program
15 W. Yakima Ave, Suite 200
Yakima, WA 98902
Phone: 509 457-7127
Fax: 509 575-2809

-----Original Message-----

From: Hepner, Norm
Sent: Tuesday, December 07, 2004 1:53 PM
To: 'jcaldwell@forsgren.com'
Subject: RE: EJH Report

Two concerns:

Was the UST a regulated tank or just a home heating oil tank?

5.5 Underground Storage Tank

The underground storage tank located on the south-central site border reportedly was removed by the construction contractor according to Washington State regulations. However, no decommissioning information or confirmatory sampling and analysis data was provided by the contractor for this report.

AND LIMITATIONS SECTION. Would like to see greater reliance that the site was covered based on site inspections not limited analytical data. Site inspection logs should be attached showing project oversight on cap construction and utility excavations. Sampling data should be used as a quality assurance 'feel good' ... nothing more.

Our interpretation of the nature and extent of pesticide contamination on the site, the

10/20/2005

effectiveness of clean topsoil cap placement, and the uncontaminated nature of imported clean topsoil is **based mainly on project inspection and oversight and the** on data collected at the reported sampling points **was used for quality assurance**. It is possible that differing contamination levels exist in soils on the site in areas that were not sampled and tested by analytical laboratory methods.

Hope this helps.

Norman T. Hepner, P.E.
Toxics Cleanup Program
15 W. Yakima Ave, Suite 200
Yakima, WA 98902
Phone: 509 457-7127
Fax: 509 575-2809



Hepner, Norm.vcf
(3 KB)

-----Original Message-----

From: Jim Caldwell [mailto:jcaldwell@forsgren.com]
Sent: Tuesday, December 07, 2004 1:39 PM
To: Hepner, Norm
Subject: EJH Report

Norm, attached is the draft report. I have not included any of the figures or addenda. Please take a look and let me know if you see anything that is missing or if you would like to see something presented another way.

Thanks for your help.

Jim Caldwell, P.E.
Forsgren Associates, Inc.
112 Olds Station Rd, Suite A
Wenatchee, WA 98801
Phone 509.667.1426, Fax 509.663.6166
jcaldwell@forsgren.com <http://www.forsgren.com/>



FORSGREN
ASSOCIATES / INC.

A COMPANY OF ENGINEERS AND SCIENTISTS

September 16, 2005

Washington State Dept. of Ecology
Central Regional Office
Norm Hepner P.E.
15 W. Yakima, Suite 200
Yakima, WA 98902-3387

Re: Addendum to the Eastmont Junior High independent Cleanup Action Report

Dear Norm,

I am writing in response to your email dated April 21, 2005. I will address each item of your email in the order provided:

1. As per our earlier phone conversation the site inspection documentation was addressed in paragraph 2 on page 5 of the report. "The cap depth was randomly observed during installation by Forsgren Associates staff. Additionally upon completion, small holes were exposed by hand to verify that the minimum depths had been achieved." The figure 1 attached to the report shows circles with an X in the areas which were verified for cap depth, 34 places. Per our conversation this was deemed to be a significant number of samples.
2. A restrictive covenant for this property is attached.
3. The M&O checklist as discussed is attached.
4. A Tank removal certificate was provided from Selland Construction on September 16, 2005 and is attached.
5. The WM tickets attached to the report were for disposal of the underground piping located on the site. This is proof of proper disposal as stated in the site assessment report.
6. The imported clean fill material was originally tested prior to installation and final confirmation testing done with assistance from WSDOE. The material sources were as follows:
 - a. The borrow cap was imported from pit site on Daniels Drive in East Wenatchee. This site had been a gravel pit for many years with thousands of cubic yards of overburden removed prior to this project. No evidence of imported material was evident at the site.
 - b. The topsoil was imported from a site located approximately 2 miles north of town commonly known as Blue Grade. The site was a cut bank with no known previous use other than a topsoil or fill source.

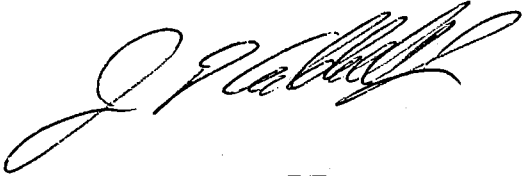
A COMPANY OF ENGINEERS AND SCIENTISTS

112 OLDS STATION ROAD, SUITE A / WENATCHEE, WA 98801 / (509) 667.1426 / FAX (509) 663.6166
REXBURG / BOISE / EVANSTON / WENATCHEE / FARMINGTON / SALT LAKE CITY / SACRAMENTO
WWW.FORSGREN.COM

Please give me a call if you have any questions.

Sincerely,

FORSGREN ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "J Caldwell", written in a cursive style.

Jim Caldwell, PE
Project Manager



Appleland Pump and Equipment

Certificate # 12630

(509) 662-0832 • Fax (509) 662-9616 • P.O. Box 3011 • Wenatchee, WA 98807-3011
In State Watts Line 1-800-832-6010

TANK REMOVAL

DATE OF REMOVAL 8/14/01
LOCATION 8th Street
CITY East Wenatchee, WA
OWNER OF TANK Eastmont School System
SIZE OF TANK 550 gallon
TANK CONSTRUCTION Single wall steel
APPROXIMATE AGE OF TANK 20+ years
DATE OF LAST USE unknown
GEOLOGIST N/A
SUBSTANCE STORED IN TANK gasoline
LEL LEVELS 0 OXYGEN LEVELS 0

CONDITION OF TANK good
CONDITIONS OF SOIL good

SOIL TEST TAKEN ☐ YES ☒ NO

PIPING REMOVED ☒ YES ☐ NO

TYPE OF PIPING Steel 2" x 1/2" galv.

DESTINATION OF REMOVED TANK Scrap

Comments Tank had approximately 490 gallons of water in it. Tank was pumped & cleaned & removed.

Technician's Signature MhD Inspector N/A

License # 1238040-26

DOE License Number for:
Appleland Pump and Equipment S000118