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Joint Motion for Entry of Consent Decree
No. 92 2 00618 1

INTERIM ACTION CLEANUP REPORT
TRUCK CITY TRUCK STOP
1731 OLD HIGHWAY 99 SOUTH
MOUNT VERNON, WASHINGTON

January 8, 1993

#2049

DEPARTMENT OF ECOLOGY
NWRO/TCP TANK UNIT

INTERIM CLEANUP REPORT	☒
SITE CHARACTERIZATION	☐
FINAL CLEANUP REPORT	☐
OTHER _____	☐
AFFECTED MEDIA: SOIL	☒
OTHER _____ GW	☒
INSPECTOR (INIT.) _____ DATE 1-14-93	

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INTERIM ACTION CLEANUP REPORT
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1731 OLD HIGHWAY 99 SOUTH
MOUNT VERNON, WASHINGTON

INTRODUCTION

An interim cleanup action at Truck City Truck Stop in Mount Vernon, Washington took place between July, 27, 1992 and September 30, 1992. The action focused on the removal of contaminant sources associated with underground storage tanks (UST's) in two nests on the western side of the site. A third tank nest, located to the east of the truck service area, is still in operation. The goal of the interim action was to remove six 5,000 gallon UST's, remove the associated piping and excavate the most contaminated soil in the tank area. During the excavation process two 500 gallon UST's and a septic system full of waste oil were discovered and removed. The interim action resulted in the excavation of 6,244 cubic yards(c.y.) of contaminated soil and the removal of 89,991 gal. of free product and contaminated water. The excavated soil was placed in an on site treatment pad and the contaminated water was disposed of off site.

SITE HISTORY

Truck City Truck Stop is a parcel of 8.01 acres located at 1731 Old Highway 99 South, Mount Vernon, Washington (SW1/4, NW1/4, Sec 32, T 34 N, R 4 E, WM). In 1953, the property was sold by Signe P. Garberger to Home Transfer and Storage which was owned by Ernest B. Olmsted and Neil D. Olmsted. Property use prior to this sale is unclear. Ownership was transferred to Truck City Inc. in 1954 and to Ernest B. Olmsted and Neil D. Olmsted in 1961. The current owners, Ernest J. Olmsted and Susan R. Olmsted, gained title to the property in 1983.

The fueling facility was built under a lease to Standard Oil Co. in the mid-1950's. Standard Oil's construction plans dated 10/15/53 show the Cafe and Tire Center buildings already on site. The station operated under a Standard Oil Co. lease until June 30, 1976 and has been operated independently since. After the original station building burned in 1976, the current truck fueling facility and eastern tank nest were built to replace it. The tank nests which were removed as part of this interim action were the original tanks installed in the 1950's and were used as a self-service auto fuel island from 1976 until October, 1991. A surface spill of 200-300 gallons of diesel fuel occurred in 1987 in the area of the eastern tank nest.

TRUCK CITY TRUCK STOP

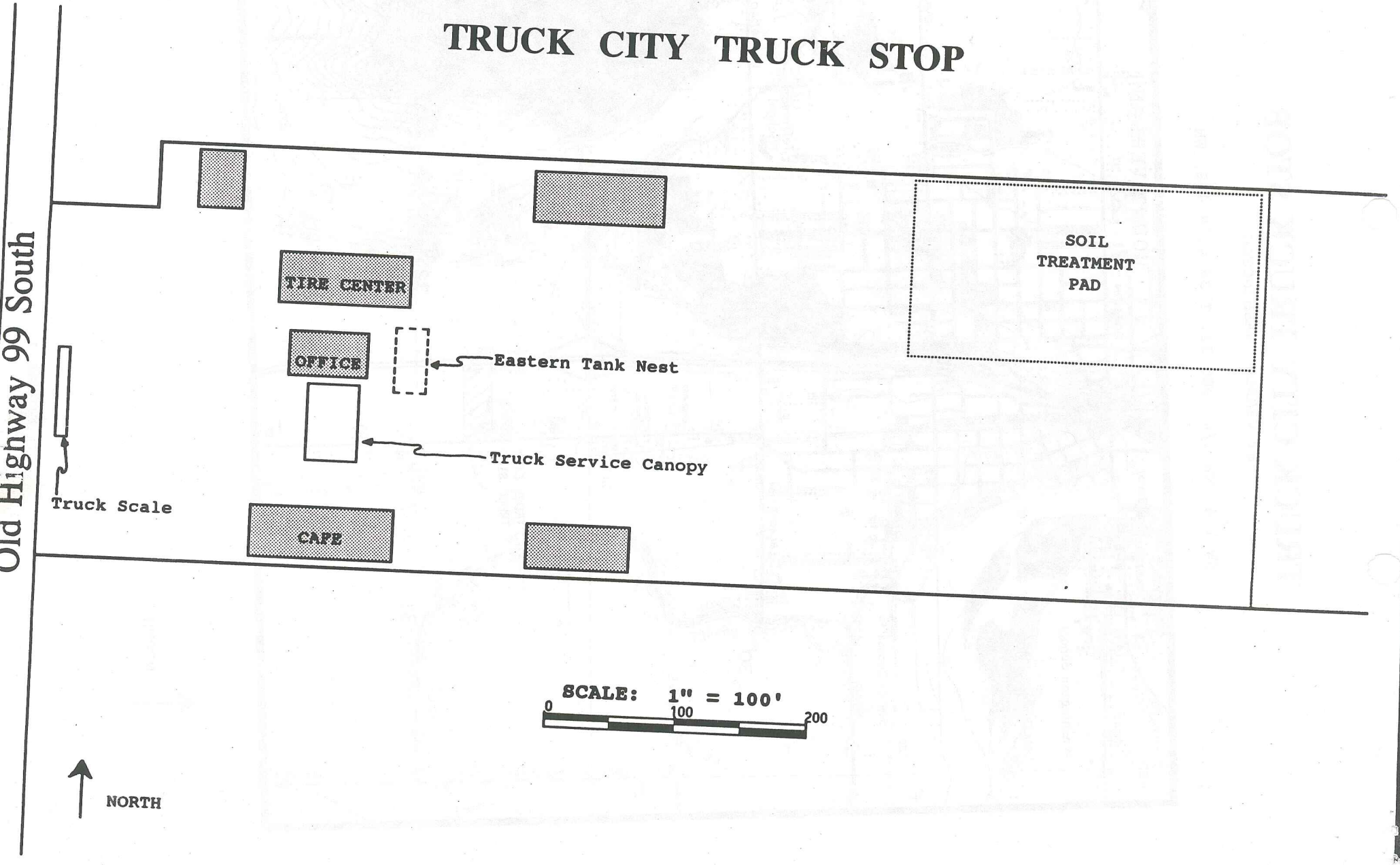
MT VERNON, WASHINGTON

SW 1/4, NW 1/4, SEC 32, T 34 N, R 4 E, WM

NORTH

FIGURE 1

TRUCK CITY TRUCK STOP



TRUCK CITY TRUCK STOP

WESTERN PORTION

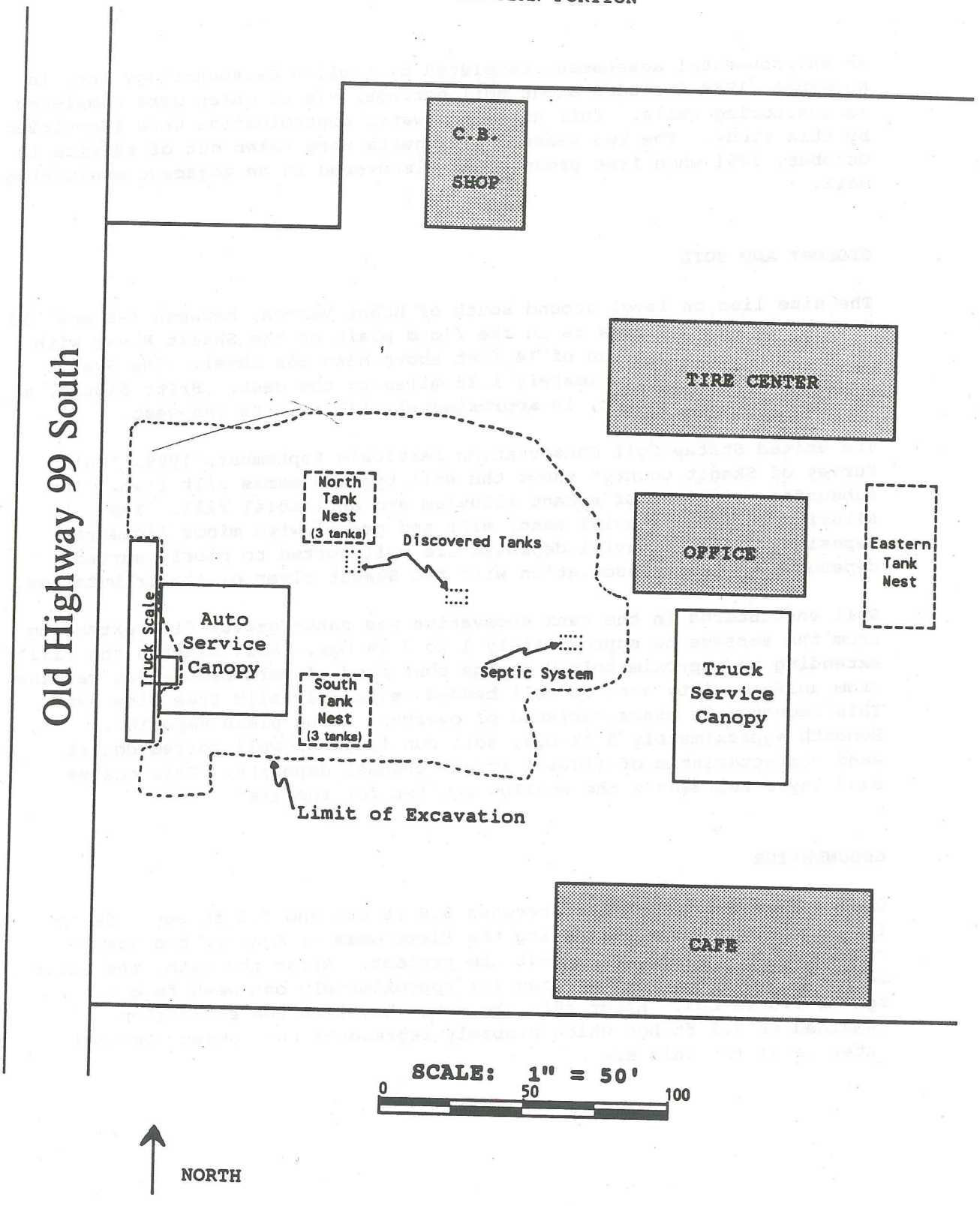


FIGURE 3

An environmental assessment completed by Applied Geotechnology Inc. in November, 1989 included eight soil borings, six of which were completed as monitoring wells. Soil and groundwater contamination were identified by this study. The two western tank nests were taken out of service in October, 1991 when free product was discovered in an adjacent monitoring well.

GEOLOGY AND SOIL

The site lies on level ground south of Mount Vernon, between I-5 and Old Highway 99 South. This is in the flood plain of the Skagit River with an approximate elevation of 14 feet above Mean Sea Level. The Skagit River is located approximately 1.25 miles to the west. Britt Slough, a tributary of the Skagit, is approximately 1/3 mile to the west.

The United States Soil Conservation Service's September, 1989, "Soil Survey of Skagit County" shows the soil type as Sumas silt loam. The subsurface consists of recent alluvium and artificial fill. The alluvium includes fluvial sand, silt and gravel with minor lacustrine deposits. These alluvial deposits are well sorted to poorly sorted, depending on their association with the Skagit river or its tributaries.

Soil encountered in the tank excavation was sandy gravel fill extending from the surface to approximately 1 to 3 ft bgs. Soil beneath the fill extending to approximately 8 ft bgs consisted of variable lenses ranging from uniform silty sand to well bedded relatively silt free fine sand. This sequence is characteristic of overbank flood plain deposits. Beneath approximately 8 ft bgs, soil consisted of well sorted coarse sand characteristic of fluvial stream channel deposits. This coarse sand layer represents the shallow aquifer for the area.

GROUNDWATER

Groundwater was encountered between 6.5 ft bgs and 7.5 ft bgs. Except for significant rainfall during the first week of August, the weather remained hot and dry throughout the project. After the rain, the water level in the excavation dropped for approximately one week from 6.5 ft bgs to 7.5 ft bgs. After this the water level in the excavation remained at 7.5 ft bgs which probably represents the lowest seasonal water level for this area.

TANK REMOVAL

The tanks removed as part of this cleanup action were located in two nests at the west side of the site. Three 5,000 gallon tanks were identified in each nest. On July 27, 1992, all liquid was pumped from the tanks and piping by Vintage Oil Co. of Anacortes, Washington, and the area was then excavated to the top of the tanks in preparation for inerting. A strong petroleum odor was encountered immediately upon removal of the asphalt cap over these tanks. Two additional 500 gallon tanks were discovered during the excavation of contaminated soil.

On July 29, 1992, six 5,000 gallon tanks were inerted and removed from the two western nests. The tanks appeared to be in good condition with no holes and very little rust or corrosion. Stained soil was apparent on the excavation sidewalls and water in the base of the excavation had a visible sheen. On August 19 and 20, 1992, the two 500 gallon tanks, discovered during excavation activities, were inerted and removed.

All tanks were labeled, cut up and cleaned before being transported off site.

EXCAVATION AND SOIL SAMPLING

Soil and groundwater contamination were visually identified upon removal of the tanks. The base of the excavation began to fill with water and product immediately after tank removal. Excavation of contaminated soil began on July 30, 1992. The excavation was completed in two segments because gas, telephone and water utility lines for the truck stop are located across the center of the contaminated area. A small bridge of contaminated soil was left between the excavations to support the utilities. This bridge was excavated as a final step while the two segments were backfilled.

Excavation continued on the north, east and south sides until MTCA method A cleanup levels for soil were attained. The west side of the excavation was controlled by the right of way for Old Highway 99 and the location of the truck scale. At the western extent of the excavation, adjacent to the truck scale, soil contaminant levels were 497ppm TPH gasoline. The depth of the excavation was approximately 1 to 2 feet below the water table, where clean soil was encountered. A total of 6,244 c.y. of contaminated soil was removed from the excavation.

Soil samples were analyzed by Materials Testing and Consulting, Inc. of Mount Vernon, Washington. Soil sample locations are shown on Figure 4, laboratory results are compiled in Tables 1 & 2 and the original lab reports are included in the Appendix.

TABLE # 1 TRUCK CITY TRUCK STOP

SOIL SAMPLES FROM NORTH EXCAVATION								
Sample#	Date Sampled	Depth (ft)	TPH-G (ppm)	TPH-D (ppm)	Benzene (ppb)	Toluene (ppb)	E-benz. (ppb)	Xylenes (ppb)
1-1*	07/29/92	6.5	1292	919	19,124	20,631	8497	62,167
1-2	08/10/92	6.5	<10	43	<10	<10	<10	<10
1-3	08/10/92	6.5	<10	18	<10	<10	<10	<10
1-4	08/10/92	6.5	<10	<10	<10	<10	<10	<10
1-5	08/10/92	6.5	<10	<10	<10	<10	<10	<10
1-6	08/13/92	7.0	<10	<10	<10	<10	<10	<10
1-7*	08/13/92	7.0	<10	346	<10	<10	<10	<10
1-8*	08/13/92	6.0	280	443	1412	1599	2374	19187
1-9	08/13/92	6.5	<10	<10	<10	<10	<10	<10
1-10	08/17/92	6.5	<10	<10	<10	<10	<10	<10
1-11	08/17/92	6.5	<10	<10	<10	<10	<10	<10
1-12	08/17/92	6.5	<10	<10	<10	<10	<10	<10
1-13	08/17/92	6.5	<10	<10	<10	<10	<10	<10
MODEL TOXICS CONTROL ACT METHOD A CLEANUP LEVELS								
			100	200	500	40,000	20,000	20,000

* - Excavation continued after sample taken.

TABLE # 2 TRUCK CITY TRUCK STOP

SOIL SAMPLES FROM SOUTH EXCAVATION								
Sample#	Date Sampled	Depth (ft)	TPH-G (ppm)	TPH-D (ppm)	Benzene (ppb)	Toluene (ppb)	E-benz. (ppb)	Xylenes (ppb)
2-2*	08/25/92	5.5	**10,132**	NA	**4312**	8991	19,221	**54,922**
2-3*	08/25/92	5.0	**8249**	NA	**2973**	7542	14,531	**32,176**
2-4	08/26/92	6.5	26	<10	<10	<10	<10	<10
2-5	08/26/92	6.5	14	<10	<10	<10	<10	<10
2-6	08/26/92	6.5	<10	<10	<10	<10	<10	<10
2-7	08/26/92	6.5	<10	<10	<10	<10	<10	<10
2-8*	08/26/92	6.5	33	<10	<10	<10	<10	<10
2-9	08/26/92	6.5	<10	<10	<10	<10	<10	<10
2-10	08/26/92	4.5	**497**	<10	**12,110**	8978	2340	**112,879**
2-11	08/27/92	6.5	<10	<10	<10	<10	<10	<10
2-12	08/27/92	5.5	<10	<10	<10	<10	<10	<10
2-13	08/27/92	6.5	<10	<10	<10	<10	<10	<10
2-14	08/27/92	6.5	<10	<10	<10	<10	<10	<10
2-15	08/27/92	6.5	<10	<10	<10	<10	<10	<10
2-16	08/28/92	5.5	<10	<10	<10	<10	<10	<10
2-17	08/28/92	6.5	<10	<10	<10	<10	<10	<10
2-18	08/28/92	4.5	<10	<10	<10	<10	<10	<10
2-19	08/28/92	6.5	<10	<10	<10	<10	<10	<10
MODEL TOXICS CONTROL ACT METHOD A CLEANUP LEVELS								
			100	200	500	40,000	20,000	20,000

NA - Not Analyzed
* - Excavation continued after sample taken.

TRUCK CITY TRUCK STOP

WESTERN PORTION

SOIL SAMPLE LOCATIONS

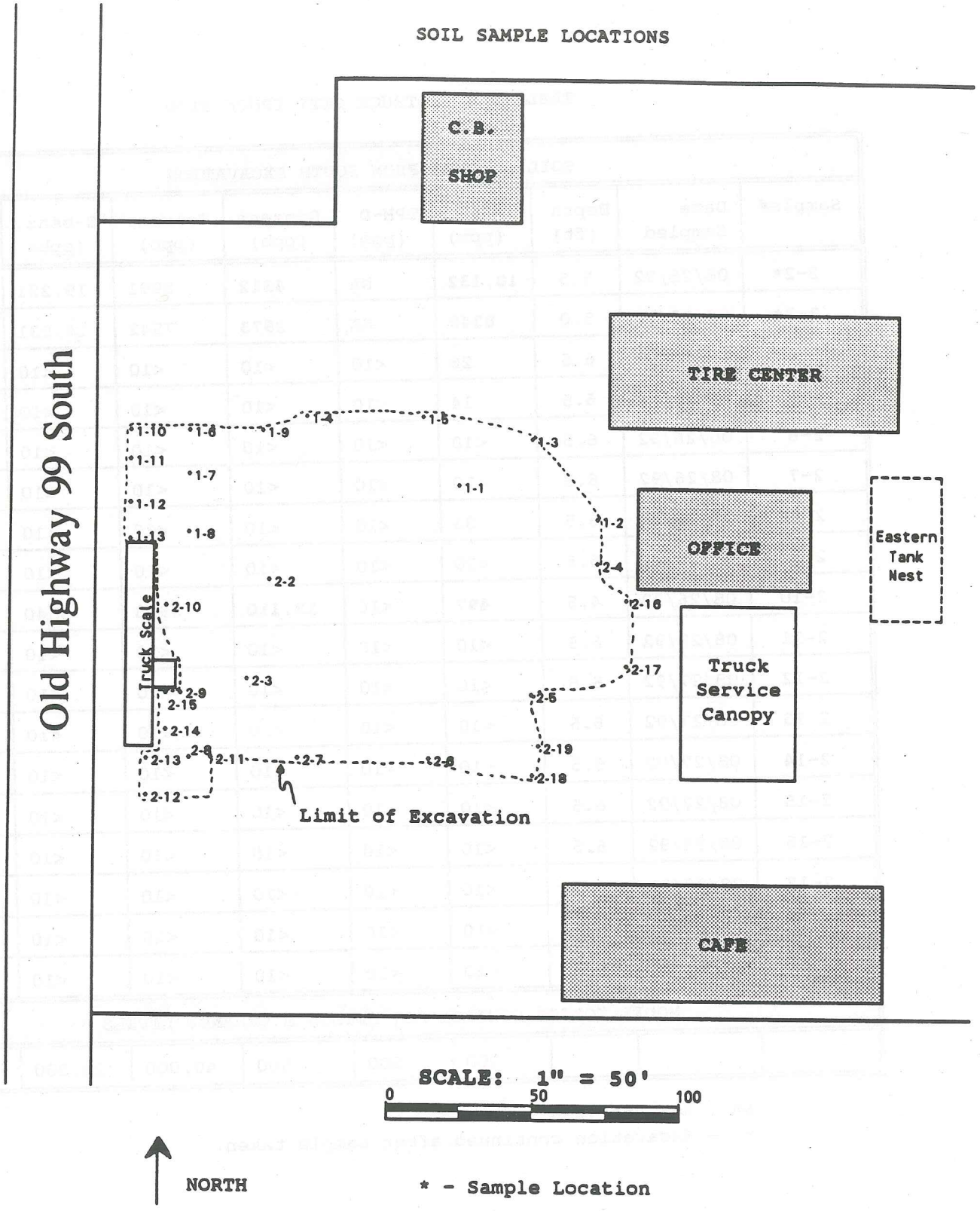


FIGURE 4

SEPTIC SYSTEM

On August 17, 1992 a septic tank was discovered during excavation. This septic system is believed to have served the old truck stop which burned in 1976. The system was connected to the storm drains for the truck stop and may have caused the groundwater mounding observed in Applied Geotechnology's November, 1989 environmental assessment.

The septic tank was accidentally ruptured by the excavator and its contents spilled into the excavation. This sludge was a dark viscous liquid with a strong petroleum smell and sank beneath the water in the base of the excavation. A sample was obtained for analysis from the material remaining in the septic tank. (Sample #2-1)

A bermed and lined area was prepared for this material. The septic tank was removed and the sludge was scraped from the base of the excavation. Removing the sludge in this manner unavoidably mixed soil with the sludge which approximately tripled the volume of the excavated material. Samples #S-1 and S-2 were taken to characterize the mixture for disposal. The lab reports are included in the Appendix.

The septic system had been used for waste oil disposal and its connection to the storm drain system for the truck stop caused water to flush through with every storm event. The upgradient limit of soil contamination was encountered within twenty feet of the septic system. This septic system was a major contaminant source for the site and probably the cause for the larger than expected contaminated area.

CONTAMINATED WATER AND FREE PRODUCT

Water began to fill the excavation as soon as the tanks were removed and continued to infiltrate throughout the excavation process. A 2 inch water main, which had not been located by the utility, was broken during excavation. No shutoff valve was found for this main and water flowed into the excavation for over two hours before the line could be capped.

Free product was encountered in various areas of the excavation in the form of fuel seeps from the excavation sidewalls. The septic tank area had some of the largest fuel seeps.

Water and free product were removed from the excavation by Vintage Oil Co. of Anacortes, Washington. Water was removed from the excavation when the quantity of floating product became hazardous and just prior to backfilling. The high permeability of the area soil allowed water in the excavation to return to prepumping levels within twenty four hours of removal. A total of 89,991 gallons of contaminated water and product were removed from the excavation.

Analyses of water samples from the excavation are compiled in Table 3 and the original laboratory reports are included in the Appendix. The final water sample was taken from the excavation on September 1, 1992. This sample had contaminant levels of 143 ppm TPH diesel. This water was pumped from the excavation immediately after sampling so that backfilling could begin.

TABLE # 3 TRUCK CITY TRUCK STOP

WATER SAMPLES FROM EXCAVATION						
Sample#	Date Sampled	TPH (ppm)	Benzene (ppb)	Toluene (ppb)	E-benz. (ppb)	Xylenes (ppb)
W-1	08/13/92	<0.1	<1	<1	<1	<1
W-3	08/25/92	89	14,122	9091	6873	98,977
W-4	09/01/92	143	<10	<10	<10	483
MODEL TOXICS CONTROL ACT METHOD A CLEANUP LEVELS						
		1	5	40	30	20

SOIL TREATMENT PAD

A soil treatment pad was constructed at the northeast corner of the site. A 270 ft by 140 ft area was leveled and a three foot gravel berm was constructed around the perimeter. The pad was lined with a 15 mil. continuous liner which was then covered with six inches of sand.

Excavated soil was temporarily stockpiled on asphalt adjacent to the treatment pad. It was then screened to remove debris and oversized material before placement on the treatment pad. Depth of soil on the treatment pad is approximately four feet and will require periodic turning for proper aeration/biodegradation.

Characterization sampling of the treatment pad was completed on October 1, 1992. The results of this sampling are compiled in Table 4 and the original laboratory reports are included in the Appendix. The soil characterization sampling results indicate that gasoline range contaminants have already been brought below MTCA method A cleanup levels, but diesel range contaminants remain elevated.

SEPTIC SYSTEM SLUDGE

Laboratory analysis of the septic tank contents indicate that this material does not classify as a hazardous waste. The material is contaminated with petroleum which appears to be waste oil. Contaminants of heavy petroleum such as waste oil are not readily removed by aeration/biodegradation; therefore, this material was removed from the site for landfill disposal. On December 22, 1992, Regional Disposal Company hauled this sludge (46.09 tons) to their Seattle transfer station for final disposal at the Roosevelt Regional Landfill in Klickitat County, Washington.

CONCLUSIONS

The interim cleanup action at Truck City Truck Stop removed six 5,000 gallon UST's, two 500 gallon UST's and a septic tank full of waste oil as part of a consent decree for the cleanup of the entire site. 6,244 c.y. of contaminated soil were excavated and are being treated on site. MTCA method A cleanup levels for soil were attained on the north, east and south sides of the excavation. Contaminated soil(497 ppm TPH gasoline) remains in place adjacent to the truck scale on the western edge of the excavation. Natural biodegradation will likely reduce the remaining contamination in the truck scale area to MTCA method A cleanup levels now that contaminant sources have been removed.

89,991 gallons of contaminated water and fuel were pumped from the excavation. Water in the excavation prior to backfilling remained contaminated (143ppm TPH diesel) above MTCA method A cleanup levels for groundwater. All downgradient groundwater monitoring wells were destroyed during excavation; at this time, it is not possible to determine contaminant levels in the groundwater.

The major contaminant sources on the western portion of the site have been removed. Groundwater contamination may continue to be a problem. Contaminant sources which have not been discovered may exist in other areas of this site.

Truck City Truck Stop
January 8, 1993

TABLE # 4 TRUCK CITY TRUCK STOP

SAMPLES FROM SOIL TREATMENT PAD							
Sample#	Date Sampled	TPH-G (ppm)	TPH-D (ppm)	Benzene (ppb)	Toluene (ppb)	E-benz. (ppb)	Xylenes (ppb)
TP-1	10/01/92	<10	317	<10	<10	<10	<10
TP-2	10/01/92	<10	199	<10	<10	<10	<10
TP-3	10/01/92	<10	197	<10	<10	<10	<10
TP-4	10/01/92	81	337	<10	132	260	586
TP-5	10/01/92	<10	353	<10	<10	<10	<10
TP-6	10/01/92	<10	711	<10	<10	<10	<10
TP-7	10/01/92	81	298	<10	<10	198	422
TP-8	10/01/92	<10	329	<10	<10	<10	<10
TP-9	10/01/92	<10	588	<10	<10	<10	<10
TP-10	10/01/92	<10	399	<10	<10	<10	<10
TP-11	10/01/92	<10	545	<10	<10	<10	<10
TP-12	10/01/92	<10	254	<10	<10	<10	<10
TP-13	10/01/92	<10	425	<10	<10	<10	<10
TP-14	10/01/92	<10	521	<10	<10	<10	<10
TP-15	10/01/92	<10	530	<10	<10	<10	<10
TP-16	10/01/92	<10	178	<10	<10	<10	<10
TP-17	10/01/92	<10	234	<10	<10	<10	<10
TP-18	10/01/92	27	208	<10	<10	111	319
TP-19	10/01/92	<10	387	<10	<10	<10	<10
TP-20	10/01/92	<10	789	<10	<10	<10	<10
MODEL TOXICS CONTROL ACT METHOD A CLEANUP LEVELS							
		100	200	500	40,000	20,000	20,000