North Carolina Department of Transportation

PRELIMINARY SITE ASSESSMENT FOR PARCEL 65

State Project U-4020, WBS Element 35015.1.1 US 421 (King Street) from US 321 (Hardin Street) to East of NC 194 (Jefferson Road) in Boone Watauga County, North Carolina



May 29, 2008 Revised June 10, 2008 Project Number 07210023.07



11-A Oak Branch Drive, Greensboro, North Carolina 27407 Phone (336) 274-9456; Fax (336) 274-9486

North Carolina Department of Transportation PRELIMINARY SITE ASSESSMENT FOR PARCEL 65 State Project U-4020, WBS Element 35015.1.1 US 421 (King Street) from US 321 (Hardin Street) to East of NC 194 (Jefferson Road) in Boone, Watauga County, North Carolina

TABLE OF CONTENTS

- 1.0 INTRODUCTION
- 2.0 BACKGROUND AND SITE DESCRIPTION
- 3.0 FIELD METHODOLOGY
- 4.0 DISCUSSION OF RESULTS
- 5.0 CONCLUSIONS
- 6.0 RECOMMENDATIONS
- 7.0 LIMITATIONS

TABLES

Table 1	Sampling Intervals
Table 2	Summary of Laboratory Results

FIGURES

- Figure 1 Vicinity Map
- Figure 2 Site Map
- Figure 3 Boring Locations

APPENDICES OR ATTACHMENTS

- Appendix A Photographs
- Appendix B Geophysics Report
- Appendix C Soil Boring Logs
- Appendix D Soil Boring GPS Coordinates
- Appendix E Prism Lab Report

1.0 INTRODUCTION

The North Carolina Department of Transportation (NCDOT) is widening the existing alignment of US Highway 421 (King Street) in the town of Boone, located in Watauga County, North Carolina. Acquisition of properties within the right-of-way is necessary prior to road construction. Schnabel Engineering conducted Preliminary Site Assessments (PSAs) on six sites (seven parcels) located within the proposed right-of-way that are of concern to the NCDOT.

This report summarizes the results of field activities conducted during the PSA for property identified by NCDOT as Parcel 65 (Clyde Jones Auto, 994 East King Street), currently owned by Clyde Jones (Figure 1). This property is located on the south side of East King Street at the NC 194 intersection. The vicinity of the Study Area is more clearly identified on Figure 2. The approximate NCDOT project limits that delineate the property acquisition area are shown on Figure 3.

2.0 BACKGROUND AND SITE DESCRIPTION

A one-story brick and cinder block building used as an automotive supply retailer is located on Parcel 65. The surface of the site is covered with an asphalt parking lot, discarded utility poles, an auto parts building, grass, and a storage trailer. Several utilities cross the site including buried water and sewer pipes, as well as overhead electric lines. Photographs of the Study Area are presented in Appendix A. The information regarding prior site use provided to Schnabel Engineering by NCDOT was that one heating oil UST was noted on the Study Area, the business may have operated as a gas station in the past, and that the western part of the site was reportedly operated as a radiator shop. This preliminary site assessment was for the investigation of the entire parcel.

3.0 FIELD METHODOLOGY

Prior to mobilizing to the site to conduct subsurface sampling, Schnabel Engineering contacted North Carolina One Call to locate underground utilities in the proposed property acquisition areas (Study Area) of the site. Schnabel Engineering performed an electromagnetic survey of the subsurface of the Study Area on March 12, 2008. The electromagnetic survey equipment (EM61-MK2) identified various buried metal anomalies within the Study Area. Schnabel returned to the Study Area to perform a ground penetrating radar (GPR) survey on March 21, 2008 utilizing a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna. Results of the survey suggested the presence of buried utility lines or conduits, and the probable presence of a UST within the Study Area. The report on the geophysical surveys is included in Appendix B and was previously sent to the NCDOT on May 2, 2008.

After reviewing the background information and geophysical data, Schnabel returned to Parcel 65 to obtain soil and water samples for chemical analysis from within the Study Area. Soil samples were collected to test for total petroleum hydrocarbon gasoline and diesel range volatile organic carbons (TPH-GRO and TPH-DRO), oil and grease, and glycol. Water samples were collected to test for total petroleum hydrocarbon gasoline and diesel range volatile organic carbons (TPH-GRO and TPH-DRO) and glycol. NCDOT requested that soil samples at Parcel 65 be analyzed for glycol because a reported radiator shop had previously operated on the property. Four borings designated B-65-01 through B-65-04 were advanced by Subsurface Environmental Investigations, Statesville, NC on Parcel 65 on April 1, 2008. The locations of the four soil borings are shown on Figure 3. The borings were each advanced to a total depth of eight feet below ground surface. Borings B-65-03 and B-65-04 installed within the Study Area were advanced with a track-mounted Geoprobe[®] (Model 6610-DT) with direct push probe technology. Borings B-65-01 and B-65-02 were installed using a hand auger because the Geoprobe could not access these boring locations. At the completion of the sampling activities, each boring was backfilled with soil removed from the boring during sampling and/or bentonite chips.

Soil samples were obtained from Geoprobe borings B-65-03 and B-65-04 using a MacroCore[®] sampler fitted with a new, single-use, disposable polyvinyl chloride (PVC) liner. Each liner was 4

feet in length. Soil samples were obtained from hand auger borings B-65-01 and B-65-02 by placing material from the hand auger in piles on a clean plastic sheet for every two feet advanced by the augering. A portion of each 2-foot interval was placed in separate resealable plastic bags. These bags were sealed and placed at ambient temperature for field screening with a MultiRAE Plus photo ionization detector (PID). Volatile organic compounds were allowed to accumulate in the headspace of each bag for approximately 15 minutes, and then the headspace of each sealed bag was scanned with the PID. Headspace screening of the soil samples indicated a concentration of 0 ppm at each boring location at intervals of two, four, six, and eight feet below ground surface. The PID was calibrated on March 29, 2008 in general accordance with the manufacturer's recommended calibration procedures. The PID readings were recorded along with the soil descriptions and indications of staining or odors, if present. Logs for each boring are presented in Appendix C.

Soil samples for laboratory analysis were collected from each boring at the sample intervals identified in Table 1. These samples were obtained from the bottom of each boring above the water table. A glycol soil sample was collected at each geoprobe boring at ground surface to two feet depth except B-65-04 which also had a water sample collected and analyzed for glycol. A water sample was collected at B-65-04 using a peristaltic Geopump 1 with a polyethylene tube with Teflon liner on the water discharge tube. All soil and water samples were placed in laboratory-supplied containers and stored on ice pending shipment to Prism Laboratories, Inc. (Prism) in Charlotte, NC. Sample information was recorded on the Chain-of-Custody form and the samples were submitted for chemical analysis of TPH-GRO by Modified EPA Method 5030/8015, TPH-DRO by Modified EPA Method 3545/8015, and glycol. An Oil and Grease soil sample was collected at B-65-01 because of its proximity to the probable UST.

Soils collected from borings within the Study Area generally consisted of silty sand (SM) or sandy silt (ML). GPS coordinates for each boring were obtained using a Trimble Pro-XRS DGPS system (Appendix D) with coordinates reported in US State Plane 1983 system, North Carolina 3200 zone, using the NAD 83 datum, with units in US survey feet.

4.0 <u>DISCUSSION OF RESULTS</u>

TPH-DRO was detected in samples from the 6 to 8 foot depth interval of B-65-03 and from the 4 to 6 foot interval of B-65-04 at estimated concentrations of 16.0 mg/kg and 6.0J mg/kg, respectively. TPH-GRO was detected in the soil sample from the 6 to 8 foot depth interval of B-65-03 at an estimated concentration of 0.40J mg/kg. A "J" value indicates that the analyte was positively identified but the value is estimated below the reporting limit. Results from the remaining soil and water samples submitted for analysis did not reveal the presence of TPH-GRO or TPH-DRO at levels above the laboratory reporting limits.

Glycol was detected in soil samples from the 0 to 2 foot depth interval of B-65-02 and B-65-03 at estimated concentrations of 7.15 mg/kg and 4.54 mg/kg, respectively. Results from the remaining soil and water samples submitted for analysis did not reveal the presence of glycol at levels above the laboratory reporting limits.

Laboratory analytical results are summarized in Table 2. Laboratory reports for these samples are presented in Appendix E.

5.0 <u>CONCLUSIONS</u>

The geophysical survey conducted at the site indicated the probable presence of a UST located at the southern edge of the Clyde Jones Auto building near the innermost corner of the building. The geophysical survey also indicated the presence of buried utility lines or conduits. Four soil borings B-65-01 through B-65-04 were advanced to sample and analyze for petroleum, oil and grease, and glycol within the Study Area, and to document soil conditions.

The laboratory analytical results showed that TPH-DRO was present in soil boring B-65-03 at an estimated concentration of 16 mg/kg and that glycol was present in B-65-02 and B-65-03 at estimated concentrations of 7.15 mg/kg and 4.54 mg/kg, respectively. These results are below the TPH Action Level of 40 mg/kg for DRO and the NCDENR Maximum Soil Contaminant Concentration (MSCC) levels for glycol (*UST Section Guidelines for the Investigation and*

Remediation of Contamination from Non-UST Petroleum Releases, Department of Environment and Natural Resource, Division of Waste Management, UST Section, July, 2007).

Laboratory analytical results showed that TPH-GRO was detected in the soil sample from the 6 to 8 foot depth interval of B-65-03 at an estimated concentration of 0.40J mg/kg/. This concentration is below the laboratory reporting limit.

Laboratory analytical results showed that the water sample from geoprobe boring B-65-04 was below the laboratory reporting limit for TPH-DRO, TPH-GRO, Method 8260 Organics, and glycol.

6.0 <u>RECOMMENDATIONS</u>

Based on the currently available information presented in this report, additional assessment is not recommended. Concentrations of the constituents selected for laboratory analysis were below the TPH Action Level and NCDENR MSCC levels, so excavation and treatment of soils for these constituents is not recommended. However, NCDOT may choose to properly transport and treat the excavated soil in the vicinity of these soil borings. During roadway construction, the NCDOT transportation/disposal contractor may use different criteria for estimating impacted soil.

7.0 <u>LIMITATIONS</u>

This Preliminary Site Assessment was prepared for the use of the North Carolina Department of Transportation. It is not intended to represent an exhaustive research of all potential hazards that may exist. Schnabel makes no other declarations, or any express or implied warranty, as to the professional services provided under the terms of the agreement.

TABLES

TABLE 1 SAMPLING INTERVALS AND FIELD VOLATILE MEASUREMENTS PARCEL 65 NCDOT U-4020, Watauga County

Sample Dopth Polow		Soil B	orings	
Sample Depth Below Ground Surface	B-65-01	B-65-02	B-65-03	B-65-04
Ground Surface		PID (ppm)	
0 - 2 feet	ND	ND	ND	ND
2 - 4 feet	ND	ND	ND	ND
4 - 6 feet	ND	ND	ND	ND**
6 - 8 feet	NS	ND	ND*	NS

Shaded cells were submitted for laboratory analysis

NS = Not Sampled

ND = Volatiles Not Detected by field measurements (0 ppm headspace reading with PID) ND* = Water Encountered

ND** = Water Sample Taken

PID readings were obtained using a MiniRae Photo Ionization Detector ppm = parts per million

TABLE 2 SUMMARY OF LABORATORY RESULTS PARCEL 65 NCDOT U-4020, WATAUGA COUNTY

Boring No.	Depth (ft)	Matrix	C5-C8 (TPH-GRO)	C9-C12 (TPH DRO)	C9-C10 (Oil and Grease)	Ethylene Glycol	Propylene Glycol
B-65-01	0-2'	Soil	NS	NS	BRL	7.15	BRL
B-65-01	2-4'	Soil	NS	NS	NS	NS	NS
B-65-01	4-6'	Soil	NS	NS	NS	NS	NS
B-65-01	6-8'	Soil	BRL	BRL	NS	NS	NS
B-65-02	0-2'	Soil	NS	NS	NS	4.54	BRL
B-65-02	2-4'	Soil	NS	NS	NS	NS	NS
B-65-02	4-6'	Soil	NS	NS	NS	NS	NS
B-65-02	6-8'	Soil	BRL	BRL	NS	NS	NS
B-65-03	0-2'	Soil	NS	NS	NS	BRL	BRL
B-65-03	2-4'	Soil	NS	NS	NS	NS	NS
B-65-03	4-6'	Soil	NS	NS	NS	NS	NS
B-65-03	6-8'	Soil	0.40 J	16	NS	NS	NS
B-65-04	0-2'	Soil	NS	NS	NS	BRL	BRL
B-65-04	2-4'	Soil	NS	NS	NS	NS	NS
B-65-04	4-6'	Soil	NS	NS	NS	NS	NS
B-65-04	6-8'	Soil	BRL	6.0 J	NS	NS	NS
B-65-04	4-6'	Water	BRL	BRL	NS	BRL	BRL
		Re	egulatory Con	centrations			
TPH Action Levels		Soil	10	40	250	56	56
NC 2L		Water	4.2	42	NS	14	14

Units in mg/kg for soils

and mg/L for water

J: The analyte was positively identified but the value is estimated below the reporting limit.

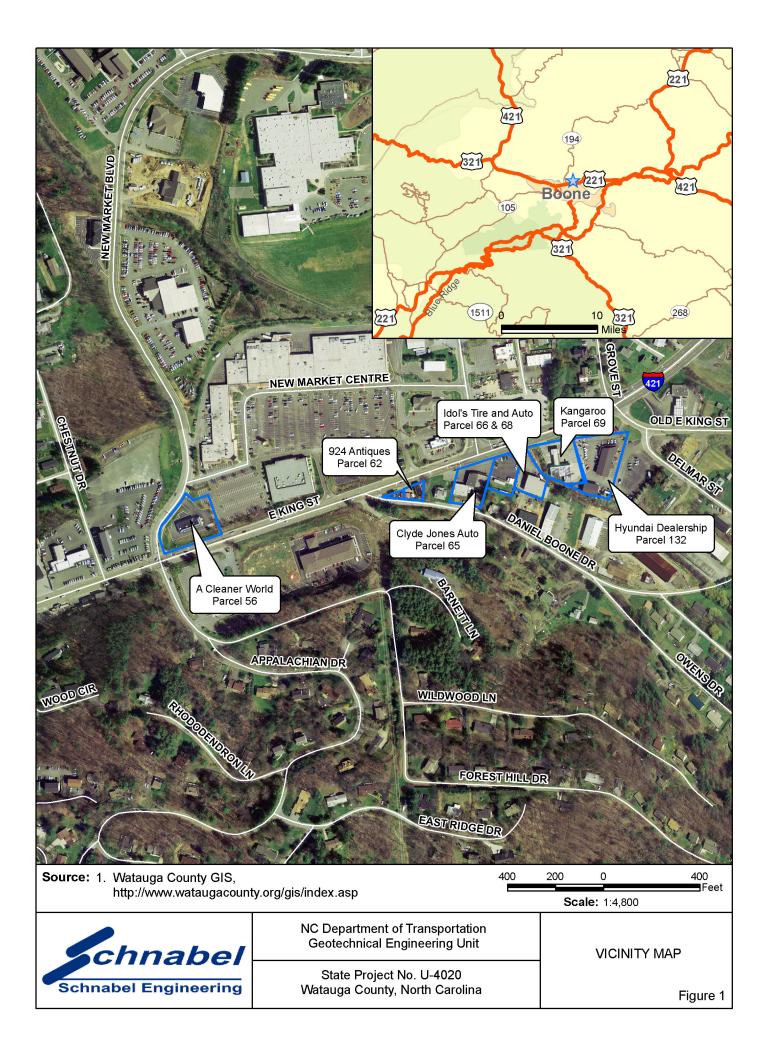
mg/kg = parts per million

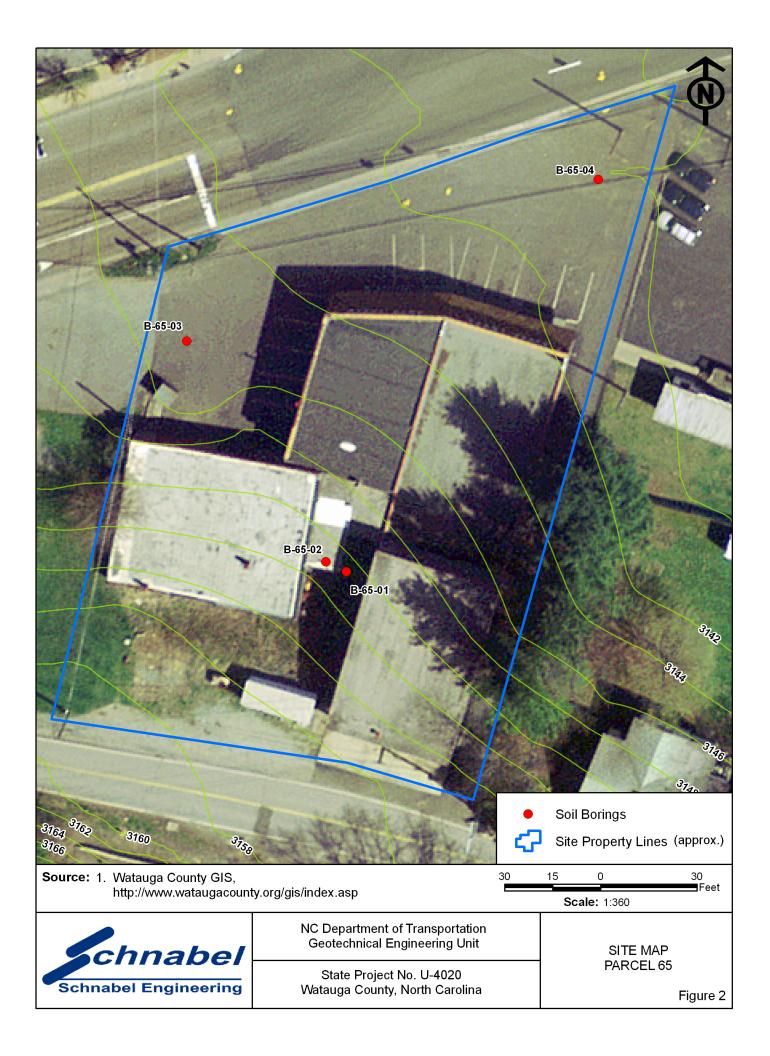
BRL - Below Reporting Limit

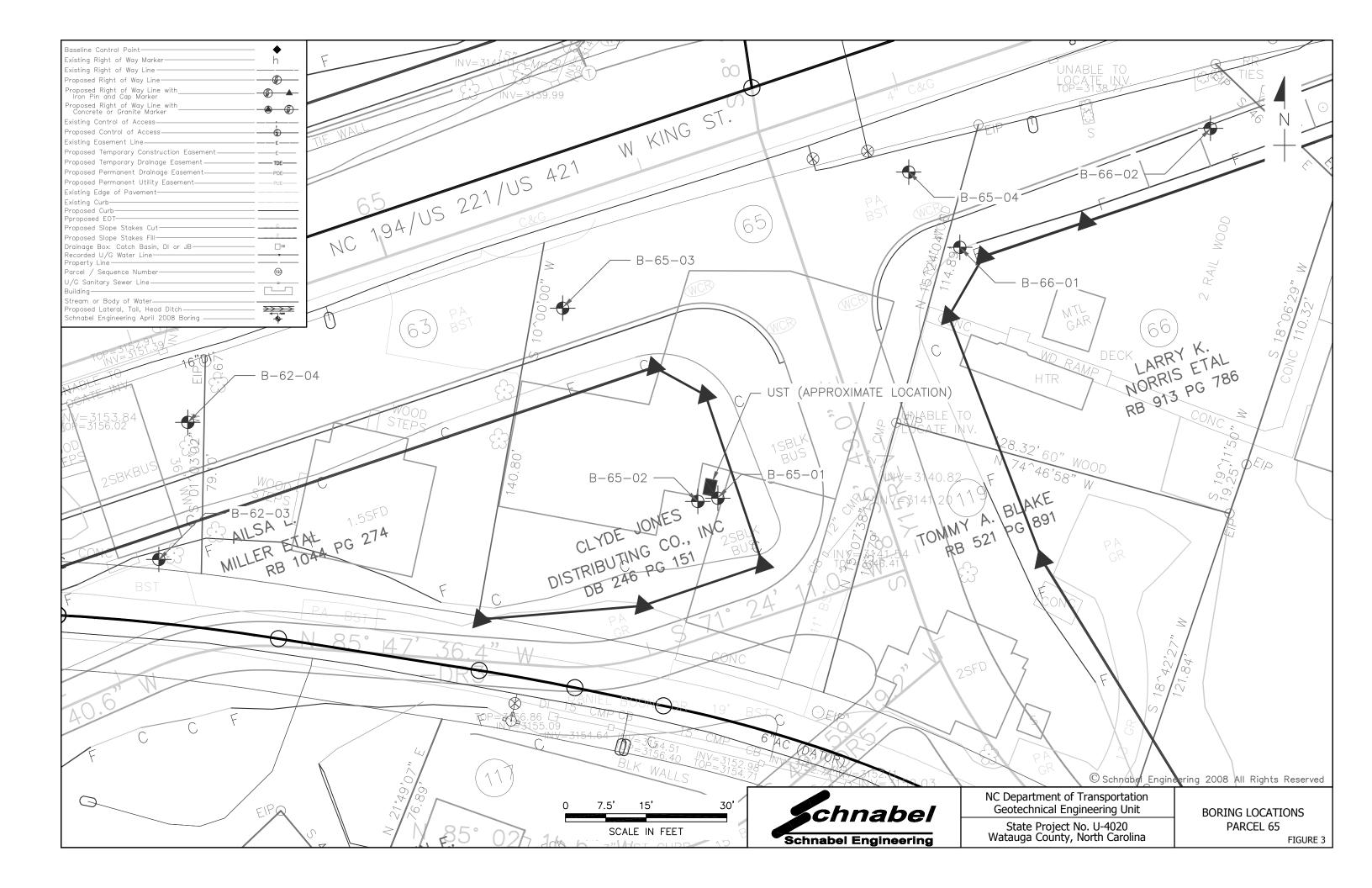
NS - Not Sampled

Listed Regulatory Concentrations are from UST Section Guidelines

FIGURES







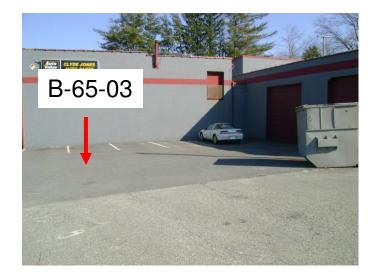
APPENDIX A Photographs

Parcel 65, Clyde Jones Auto









APPENDIX B Geophysics Report



11-A Oak Branch Drive Greensboro, NC 27407

Phone (336) 274-9456 Fax (336) 274-9486 www.schnabel-eng.com

May 2, 2008

Mr. Cyrus Parker NCDOT, Geotechnical Unit 1020 Birch Ridge Drive Raleigh, NC 27610

Via email (pdf)

- RE: State Project: U-4020 WBS Element: 35015.1.1 County: Watauga Description: US 421 (King Street) from US 321 (Hardin Street) to east of NC 194 (Jefferson Road) in Boone
- SUBJECT: Report on Geophysical Surveys of Parcel 65 Schnabel Engineering Project No. 07210023.07

Dear Mr. Parker:

This letter contains our report on the geophysical surveys we conducted on the subject property. The report includes one 8.5x11 color figure and two 11x17 color figures.

1.0 INTRODUCTION

Schnabel Engineering conducted geophysical surveys on March 12 and March 21, 2008, in the accessible areas of Parcel 65 (Clyde Jones Distributing Property, Clyde Jones Auto) under our 2007 contract with the NCDOT. Parcel 65 is located on the south side of US 421 (King Street) at the NC 194 intersection. The work was conducted at the location indicated by the NCDOT to support their environmental assessment of the subject parcel. The purpose of the geophysical surveys was to locate possible metal underground storage tanks (UST's) and associated metal product lines in the accessible areas of the site.

2.0 FIELD METHODOLOGY

Locations of geophysical data points were obtained using a sub-meter Trimble Pro-XRS DGPS system. References to direction and location in this report are based on the US State Plane 1983 system, North Carolina 3200 zone, using the NAD 83 datum, with units in US survey feet. The locations of existing site features (building, curbs, signs, etc.) were recorded for later correlation with the geophysical data and for location references to the NCDOT drawings. The geophysical investigation consisted of an electromagnetic (EM) induction survey using a Geonics EM61-MK2 instrument, and a ground-penetrating radar survey using a Geophysical Survey Systems SIR-3000 system equipped with a 400 MHz antenna.

The EM61 data were collected along parallel survey lines spaced about 2.5 feet apart. The EM61 and DGPS data were recorded digitally using a field computer and later transferred to a desktop computer for data processing. The GPR data were collected along survey lines spaced one to two feet apart in orthogonal directions over areas of reinforced concrete and anomalous EM readings not attributed to cultural features. A possible UST was located and marked on the ground at this site. Pictures of the location of this possible UST as marked in the field are shown in Figure 1.

3.0 DISCUSSION OF RESULTS

The contoured EM61 data are shown on Figures 2 and 3. The EM61 early time gate results are plotted on Figure 2. The early time gate data provide the most sensitive detection of metal object targets, regardless of size. Figure 3 shows the difference between the response of the top and bottom coils of the EM61 instrument (differential response). The difference is taken to remove the effect of surface and very shallowly buried metallic objects. Typically, the differential response emphasizes anomalies from deeper and larger objects such as UST's.

The early time gate and differential results show linear anomalies probably caused by buried utilities, reinforced concrete, and anomalies caused by known site features (Figures 2 and 3). GPR surveys along the southern edge of the building indicated the presence of a possible UST near the innermost corner of the building. An example GPR image showing the reflection from the possible

UST is shown on Figures 2 and 3. Figures 2 and 3 also include the location of the possible UST as marked in the field. The GPR data indicate that the possible UST is buried about 1 to 2 feet below ground surface and is about 3 feet in diameter and about 5 feet long, equivalent to a capacity of approximately 270 gallons.

4.0 CONCLUSIONS

Our evaluation of the geophysical data collected on Parcel 65 of Project U-4020 in Boone, NC indicates the following:

• The geophysical data indicate the presence of a possible UST on Parcel 65. The possible UST is about 270-gallon capacity and is buried about 1 to 2 feet below ground surface.

5.0 LIMITATIONS

These services have been performed and this report prepared for the North Carolina Department of Transportation in accordance with generally accepted guidelines for conducting geophysical surveys. It is generally recognized that the results of geophysical surveys are non-unique and may not represent actual subsurface conditions.

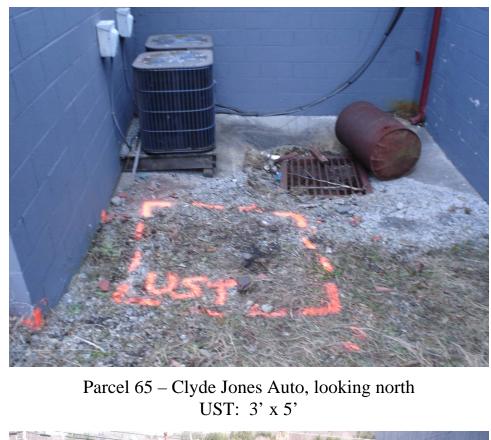
Thank you for the opportunity to serve you on this project. Please call if you need additional information or have any questions.

Sincerely,

huere

Jeremy S. Strohmeyer, P.G. Project Manager

Edward D. Billington, P.G. Senior Vice President



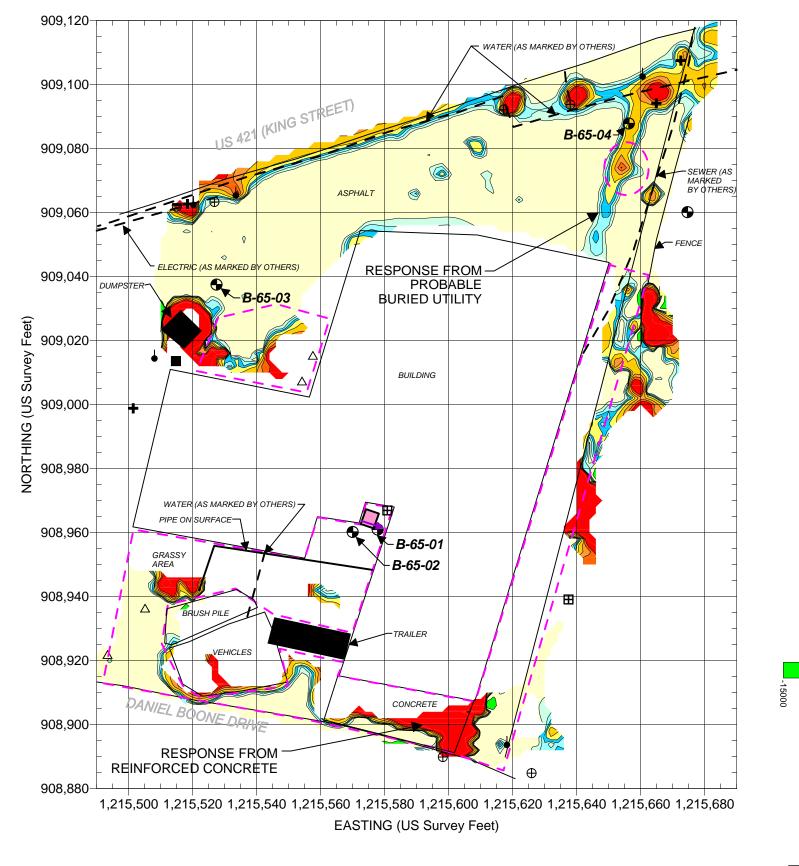


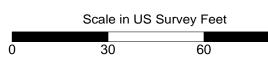
Parcel 65 – Clyde Jones Auto, looking north UST: 3' x 5'

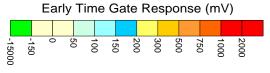


NC Department of Transportation Geotechnical Engineering Unit

State Project No. U-4020 Watauga County, North Carolina PARCEL 65 PHOTOS OF POSSIBLE UST LOCATION

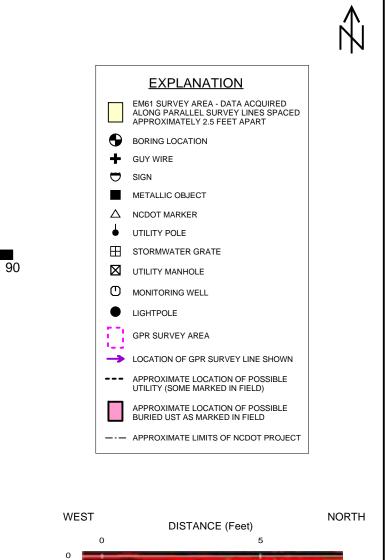


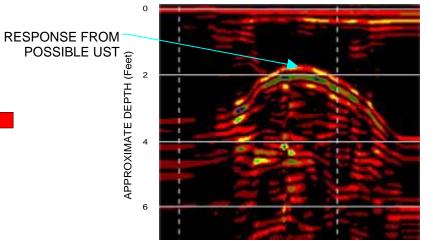




Note: The contour plot shows the earliest and most sensitive time gate of the EM61 bottom coil/channel in millivolts (mV). The EM data were collected on March 12, 2008, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina Zone 3200, using the NAD 1983 datum. GPR data were acquired on March 21, 2008, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.





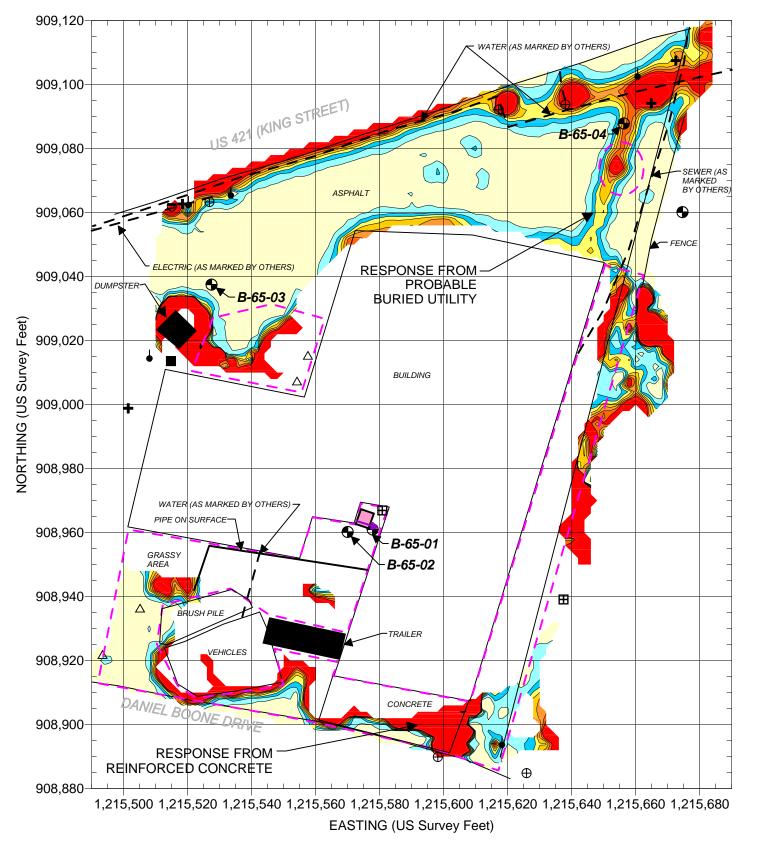


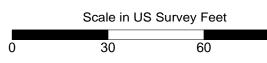
NC Department of Transportation Geotechnical Engineering Unit

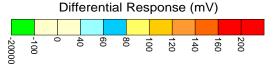
State Project No. U-4020 Watauga County, North Carolina

PARCEL 65 **EM61 EARLY TIME GATE RESPONSE**

FIGURE 2

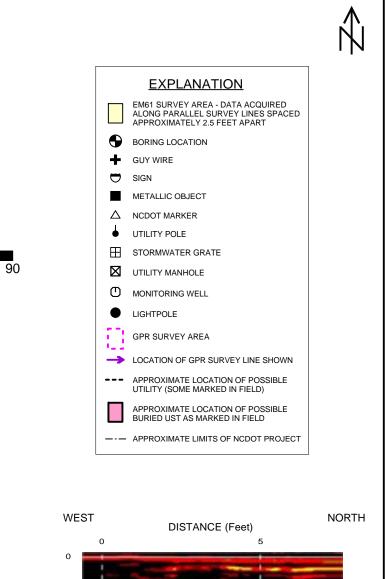


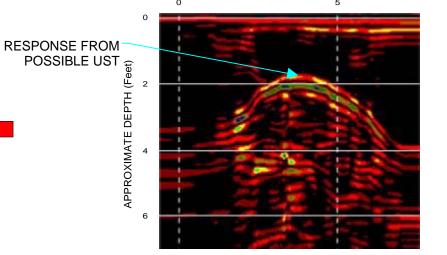




Note: The contour plot shows the difference, in millivolts (mV), between the readings from the top and bottom coils of the EM61. The difference is taken to reduce the effect of shallow metal objects and emphasize anomalies caused by deeper metallic objects, such as pipes and tanks. The EM data were collected on March 12, 2008, using a Geonics EM61-MK2 instrument. Positioning for the EM61 survey was provided using a submeter Trimble ProXRS DGPS system. Coordinates are in the US State Plane 1983 System, North Carolina 3200 Zone, using the NAD 1983 datum. GPR data were acquired on March 21, 2008, using a Geophysical Survey Systems SIR 3000 equipped with a 400 MHz antenna.







NC Department of Transportation Geotechnical Engineering Unit

State Project No. U-4020 Watauga County, North Carolina

PARCEL 65 **EM61 DIFFERENTIAL** RESPONSE

FIGURE 3

APPENDIX C Soil Boring Logs

	hand Chnabel AUGER	-			-	Site Ass	essment	S		uger Numb		65-01
	abel Engineering LOG		Watauga Count Boone, North C						Contrac Sheet:	t Number: 1 of 1	7210023	.07
Contrac	tor: Subsurface Environmental Statesville, NC	Investigation	IS						water Obs			
Contrac	tor Foreman: Walt Davis							Date	Time	Depth	Casing	Caved
Schnab	el Representative: Ben Bradley				Af	ter Drill	ing	4/1	10:54 AM	Dry		
Equipm	ent: AMS Hand Auger											
Method:	: Hand Auger											
	Started: 4/1/08 Finished: 4	/1/08										
X: 12159	938 ft Y: 909192 ft											
Ground	Surface Flowetion: 2151+ (ft)	Total Dan	th , 50	#								
Ground	Surface Elevation: 3151± (ft)	Total Dep	un. 5.0									
DEPTH (ft)	MATERIAL DESCRIPTI	ON	SYMB		LEV (ft)	STRA TUM	S/ DEPTH	AMPLING		TESTS	RE	MARKS
				LA L			DEPTH		•			
0.2	Topsoil			3	150.8							
	FILL, sampled as sandy silt, r brownish gray	noist,										
-			FILL	×	-							
2.0 -	FILL, sampled as sandy silt, r	noist.		₩3 ⁻ 3	49.0-	-	- +	S-1 and s	S-2, PI	D = 0 ppm		
	dark yellowish brown, estimat coarse grained sand	ed <5%						AUGER		- 1-1-		
	coarse grained sand											
_			FILL		-	1	- 1					
4.0 -				3	147.0-		- +					
_	SILTY SAND, dry, light brown estimated 15 - 25% rock fragr	, nents.			-				PI	D = 0 ppm		
	probable RESIDUAL material		SM									
5.0				LIL3	46.0-		_ 5	L S-3, AUG	ER ∬PI	D = 0 ppm		
	Bottom of Hand Auger at 5.0	÷+										
	Auger refusal at 5.0 ft.											
	Boring terminated at auger rea Boring backfilled with bentonit		alation									
	Boring backinied with bentonin	e upon com	Jielion.									

	chnabel _{AU}	AND PI IGER .OG	V	Vataug	「Prelimi ga Coun North C	ty		sessmen	ts	Contra	Auger Numb act Number:		65-02
	tor: Subsurface Environ								Ground		servations		
	Statesville, NC								Date	Time	Depth	Casing	Caved
	tor Foreman: Walt Davi					Af	ter Dril	ling	4/1	10:54 A	M Dry		
	el Representative: Ben	Bradley											
	ent: AMS Hand Auger : Hand Auger												
Dates	Started: 4/1/08 Finis	hed: 3/31/	/08										
	896 ft Y: 909149 ft	neu. 0/01/											
Ground	Surface Elevation: 315	2± (ft)	Total Deptl	h: 8.0) ft								
DEDTU						LEV	OTDA		AMPLING		·		
DEPTH (ft)	MATERIAL DES	SCRIPTION	l	SYME		(ft)	STRA TUM	DEPTH		4	TESTS	RE	MARKS
0.2	Topsoil				3	151.8							
	PROBABLE FILL, san silt, moist, brownish gi		andy										
-				FILL		-	-						
									ľ				
2.0 -	PROBABLE FILL, san	npled as sil	ty		\bigotimes	150.0-	1	F T	S-1, AUG	ER F	PID = 0 ppm		
	sand, dry, light brown, rock fragments	estimated	<5%										
_						-	-						
-				FILL		-	-	+ +	-	F	PID = 0 ppm		
_						_		- 5 -					
6.0 -	SILTY SAND, moist, g	gray, estima	ated		*** 3	146.0	1	- +		F	PID = 0 ppm		
1	<5% rock fragments, p RESIDUAL material	brobable											
_				SM									
				e.u.									
									2				
8.0					<u>111</u> 3	144.0-			S-2, AUG	ER ÅF	PID = 0 ppm		
	Bottom of Hand Auger	rat 8.0.ft							<u> </u>	(- 111	/	
	Boring terminated at s	elected dep											
	Boring backfilled with	bentonite u	pon compl	etion.									

	Chnabel GEO PROBE LOG	-	NCDOT Wataug Boone,	ga Co	unty	-		sessmer	its		Contra	obe Numbe ct Number: 1 of 1		65-03
	tor: Subsurface Environmental Statesville, NC										vater Ob	servations		
Contrac	tor Foreman: Walt Davis				-				Dat	te	Time	Depth	Casing	Caved
Schnab	el Representative: Ben Bradley					En	counte	red ∑	. 4/*	1	11:18 AN	1 7.8'		
Equipm	ent: Geoprobe 6610DT													
Method	: Geoprobe, Macrocore													
Hamme	r Type: NA													
Dates	Started: 4/1/08 Finished: 4	/1/08												
X: 1215	880 ft Y: 909131 ft													
Ground	Surface Elevation: 3144± (ft)	Total Dep	th: 8.0) ft			1	1						
DEPTH (ft)	MATERIAL DESCRIPT	ON	SYME	BOL	ELE (ft		STRA TUM	S DEPTH	AMPL	ING ATA		TESTS	RE	MARKS
0.3	Asphalt				3143	3.2								
	SILTY SAND, dry, dark gray, <5% mica, estimated <5% roo fragments	estimated xk			_	_								
			SM											
2.0 -	SILTY SAND, moist, light bro	wn,			-314 ⁻	1.5-	-		S-1		Р	ID = 0 ppm		
	probable RESIDUAL material													
-			SM		-	-	-							
4.0 -	SANDY SILT, moist, dark gra probable RESIDUAL material	у,			-3139	9.5-					Ρ	ID = 0 ppm		
			ML				-	- 5 -						
6.0 -	PARTIALLY WEATHERED R	OCK,		15/11	-313	7.5-	-		_		Р	ID = 0 ppm		
	sampled as silty sand, moist, brown	light												
-			PWR		-	-	-							
		$\overline{\Delta}$		Pra										
8.0 -				NELLN	-313	5.5-			S-2		\P	ID = 0 ppm		
	Bottom of Geo Probe at 8.0 ft Boring terminated at selected													
	Boring backfilled with bentoni		oletion.											
5														
5														

	GEO Chnabel PROBE	-	Project: NCDOT Prelimin Watauga Count					essmei	nts		Geo Probe Number: Contract Number:				
	abel Engineering LOG		Boone, North Ca									act Number: 1 of 1	7210023	.07	
	tor: Subsurface Environmental Statesville, NC	Investigation	IS							Ground Date	water Ob Time	servations Depth	Casing	Caved	
	etor Foreman: Walt Davis					Enco	ounter	red Σ	Z	4/1	11:49 A	M 5.0'		5.0'	
	el Representative: Ben Bradley				-										
	ent: Geoprobe 6610DT : Geoprobe,														
	Macrocore														
Hamme	r Type: NA														
	Started: 4/1/08 Finished: 4/	′1/08													
X: 1215	829 ft Y: 909136 ft														
Ground	Surface Elevation: 3140± (ft)	Total Dep	th 80) ft											
DEPTH		10101 200					STRA		2 4 1	MPLING					
(ft)	MATERIAL DESCRIPTI	ON	SYME	BOL	ELE (ft)		TINA	DEPTH	-	DATA		TESTS	RE	MARKS	
0.3	Asphalt				3139	.7									
_	SILTY SAND, dry, dark gray, <5% mica, estimated <5% roc fragments	estimated k													
			SM												
2.0 -					-3138	.0-				_					
	SILTY SAND, moist, light brow probable RESIDUAL material	vn,								S-1	F	PID = 0 ppm			
_	-		SM		-	-									
4.0 -	SANDY SILT, moist, dark gra	/			-3136	5.0-					F	PID = 0 ppm			
	probable RESIDUAL material	,										10 – 0 ppm			
_		$\overline{\Delta}$	ML					- 5 -							
								Ţ							
6.0 -	SILTY SAND, wet, gray, proba				-3134	.0-				S-2, S-3	F	PID = 0 ppm			
	RESIDUAL material, <5% qua fragments <3mm	ITIZITE			-										
-			SM		-	_									
8.0 -						₀⊥									
0.0					0102						\F	PID = 0 ppm			
	Bottom of Geo Probe at 8.0 ft Boring terminated at selected														
6.0 -	Boring backfilled with bentonit		oletion.												

<u>APPENDIX D</u> Soil Boring GPS Coordinates

SOIL BORING GPS COORDINATES NCDOT U-4020, WATAUGA COUNTY

Soil Boring GPS Coordinates									
Boring Identification	Easting	Northing							
boning identification	Х	Y							
B-65-01	1215938	909192							
B-65-02	1215896	909149							
B-65-03	1215880	909131							
B-65-04	1215829	909136							

* NC State Plane 1983 System, NC 3200 Zone, NAD 83 Datum, US Survey Feet

<u>APPENDIX E</u> Prism Lab Report





Date: 04/18/08 Company: N. C. Department of Transportation Contact: Ben Bradlev Address: c/o Schnabel Engineering 11 A Oak Branch Drive Greensboro, NC 27407

Client Project ID: Prism COC Group No: Collection Date(s): Lab Submittal Date(s):

NCDOT Parcel 65 G0408096 04/01/08 04/03/08

Client Project Name Or No: Clyde Jones Auto, Boone, NC WBS

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report, Quality Control and a Subcontracted Laboratory Report with corresponding Chain-of-Custody totaling 25 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

Glycol analyses subcontracted to GCAL. Laboratory report is attached.

Volatile Analysis

No Anomalies Reported

Metals Analysis

N/A

Wet Lab and Micro Analysis

N/A

Please call if you have any questions relating to this analytical report.

Date Reviewed by:

Signature:

Review Date:

Robbi A. Jones me

Signature: Approval Date:

Project Manager:

Robbi A. Jones over 04/18/08

Data Qualifiers Key Reference:

B: Compound also detected in the method blank.

#: Result outside of the QC limits.

DO: Compound diluted out,

E: Estimated concentration, calibration range exceeded.

J: The analyte was positively identified but the value is estimated below the reporting limit.

H: Estimated concentration with a high bias.

L: Estimated concentration with a low bias.

M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



04/18/08

N. C. Department of Transportation	Project Name:	Clyde Jones Auto,	Client Sample ID:	B-65-01	
Attn: Ben Bradley		Boone, NC	Prism Sample ID:	210428	
c/o Schnabel Engineering	Project ID:	NCDOT Parcel 65	COC Group:	G0408096	
11 A Oak Branch Drive	Project No.:	WBS #7210023.07	Time Collected:	04/01/08	11:00
Greensboro, NC 27407	Sample Matrix:	Soil	Time Submitted:	04/03/08	8:30

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	78.7	%			1	SM2540 G	04/07/08 13:45	mbarber	
Nonhalogenated Organics by GC/FII	<u>D</u>								
Subcontract Report	See Attached				1	8015B			
* Analysis Note for Su	bcontract	: Report	t: Sub	contra	cted to	NC Certifi	led Lab ID 618	В.	
Oil and Grease by Soxhlet Extractio	n								
Oil and Grease	BRL	mg/kg	44	44	1	9071A	04/17/08 10:00	smanivanh	Q31844
Diesel Range Organics (DRO) by GO	-FID								
Diesel Range Organics (DRO)	BRL	mg/kg	8.8	1.4	1	8015B	04/10/08 22:42	jvogel	Q31647
Sample Preparation:			2	5.4g /	1 mL	3545	04/09/08 10:00	wconder	P21297
					Surrogate)	% Recovery	Cont	rol Limits
					o-Terphen	ıyl	68	4	9 - 124
Gasoline Range Organics (GRO) by	GC-FID								
Gasoline Range Organics (GRO)	BRL	mg/kg	1.3	0.026	1	8015B	04/08/08 20:22	wbradley	Q31561

Surrogate	% Recovery	Control Limits
aaa-TFT	69	55 - 129

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NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

04/18/08

N. C. Department of Transportation Attn: Ben Bradley c/o Schnabel Engineering 11 A Oak Branch Drive Greensboro, NC 27407	Project Name: Project ID: Project No.: Sample Matrix:	Clyde Jones Auto, Boone, NC NCDOT Parcel 65 WBS #7210023.07 Soil	Client Sample ID: Prism Sample ID: COC Group: Time Collected: Time Submitted:		5 11:00 8:30	
--	--	--	---	--	--------------------	--

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID

Sample Comment(s):

GRO/5035 vials contained too much soil so laboratory used DRO sample to perform GRO/5030.

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

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Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



04/18/08

N. C. Department of Transportation	Project Name:	Clyde Jones Auto,	Client Sample ID:	B-65-02		
Attn: Ben Bradley		Boone, NC	Prism Sample ID:	210429		
c/o Schnabel Engineering		NCDOT Parcel 65	COC Group:	G0408096		
11 A Oak Branch Drive	Project No.:	WBS #7210023.07	Time Collected:	04/01/08	10:45	
Greensboro, NC 27407	Sample Matrix:	Soil	Time Submitted:	04/03/08	8:30	

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	82.2	%			1	SM2540 G	04/07/08 13:45	mbarber	
Nonhalogenated Organics by GC/F	-ID								
Subcontract Report	See Attached				1	8015B			
* Analysis Note for S	ubcontract	Report	: Subo	contra	cted to	NC Certifi	ied Lab ID 618	3.	
Diesel Range Organics (DRO) by G	iC-FID								
Diesel Range Organics (DRO)	BRL	mg/kg	8.4	1.4	1	8015B	04/10/08 23:18	jvogel	Q31647
Sample Preparation:			25	.44g /	1 mL	3545	04/09/08 10:00	wconder	P21297
					Surrogate	•	% Recovery	Cor	trol Limits
					o-Terphen	yl	67		49 - 124
Gasoline Range Organics (GRO) b Gasoline Range Organics (GRO)	<u>y GC-FID</u> BRL	mg/kg	1.2	0.025	1	8015B	04/08/08 20:54	wbradley	Q31561
					Surrogate	3	% Recovery	Cor	trol Limits

Sample Comment(s):

GRO/5035 vials contained too much soil so laboratory used DRO sample to perform GRO/5030.

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

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aaa-TFT

85

55 - 129



04/18/08

N. C. Department of Transportation	Project Name:	Clyde Jones Auto,	Client Sample ID:	B-65-03	
Attn: Ben Bradley		Boone, NC	Prism Sample ID:	210430	
c/o Schnabel Engineering	Project ID:	NCDOT Parcel 65	COC Group:	G0408096	
11 A Oak Branch Drive	Project No.:	WBS #7210023.07	Time Collected:	04/01/08	11:30
Greensboro, NC 27407	Sample Matrix:	Soil	Time Submitted:	04/03/08	8:30

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	77.6	%			1	SM2540 G	04/07/08 13:45	mbarber	
Nonhalogenated Organics by GC/F	D								
Subcontract Report	See Attached				1	8015B			
* Analysis Note for Su	lbcontract	Repor	t: Sub	contra	cted to	NC Certifi	ied Lab ID 618	3.	
Diesel Range Organics (DRO) by G	<u>C-FID</u>								
Diesel Range Organics (DRO)	16	mg/kg	8.9	1.4	1	8015B	04/10/08 23:54	jvogel	Q31647
Sample Preparation:			25	.23 g /	1 mL	3545	04/09/08 10:00	wconder	P21297
					Surrogate	•	% Recovery	Con	trol Limits
					o-Terphen	yl	78		49 - 124
Gasoline Range Organics (GRO) by Gasoline Range Organics (GRO)	<u>GC-FID</u> 0.40 J	mg/kg	1.3	0.027	1	8015B	04/08/08 21:26	wbradley	Q31561
					Surrogate)	% Recovery	Con	trol Limits
					aaa-TFT		66		55 - 129

Sample Comment(s):

GRO/5035 vials contained too much soil so laboratory used DRO sample to perform GRO/5030.

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

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04/18/08

N. C. Department of Transportation	Project Name:	Clyde Jones Auto,	Client Sample ID: B-65-04				
Attn: Ben Bradley		Boone, NC	Prism Sample ID:	210431			
c/o Schnabel Engineering	Project ID:	NCDOT Parcel 65	COC Group:	G0408096			
11 A Oak Branch Drive	Project No.:	WBS #7210023.07	Time Collected:	04/01/08	12:00		
Greensboro, NC 27407	Sample Matrix:	Soil	Time Submitted:	04/03/08	8:30		

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination			and a second second second						
Percent Solids	77.2	%			1	SM2540 G	04/07/08 13:45	mbarber	
Nonhalogenated Organics by GC/FI	<u>D</u>								
Subcontract Report	See Attached				1	8015B			
* Analysis Note for Su		Report	t: Subo	contra	cted to	NC Certif:	ied Lab ID 61	3.	
Diesel Range Organics (DRO) by GO	-FID								
Diesel Range Organics (DRO)	6.0 J	mg/kg	9.0	1.5	1	8015B	04/11/08 0:30	jvogel	Q31647
Sample Preparation:			25	.12 g /	1 mL	3545	04/09/08 10:00	wconder	P21297
					Surrogate	•	% Recovery	Con	trol Limits
					o-Terphen	ıyl	74		49 - 124
Gasoline Range Organics (GRO) by	GC-FID								

improvement in recovery. Matrix interference is suspected.

Surrogate	% Recovery	Control Limits		
aaa-TFT	52 #	55 - 129		

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04/18/08

N. C. Department of Transportation Attn: Ben Bradley c/o Schnabel Engineering 11 A Oak Branch Drive Greensboro, NC 27407	Project Name: Project ID: Project No.: Sample Matrix:	Clyde Jones Auto, Boone, NC NCDOT Parcel 65 WBS #7210023.07 Soil		210431 G0408096 04/01/08	12:00 8:30
--	--	--	--	--------------------------------	---------------

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID

Sample Comment(s):

GRO/5035 vials contained too much soil so laboratory used DRO sample to perform GRO/5030.

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

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04/18/08

N. C. Department of Transportation Attn: Ben Bradley	-	Clyde Jones Auto, Boone, NC NCDOT Parcel 65	Client Sample ID: B-65-04 Prism Sample ID: 210432				
c/o Schnabel Engineering	,		COC Group:				
11 A Oak Branch Drive	Project No.:	WBS #7210023.07	Time Collected:	04/01/08	12:00		
reensboro, NC 27407 Sample Matri	Sample Matrix:	: water	Time Submitted:	04/03/08	8:30		

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Nonhalogenated Organics by GC	:/FID							NY NY ALAMANA AMIN'NY ALAMANA AMIN'NY A	<u> </u>
Subcontract Report	See Attached				1 5	See Attached			
* Analysis Note for	Subcontract	t Report	: Sub	contra	cted to N	NC Certif:	ied Lab ID 61	8.	
Diesel Range Organics (DRO) by	GC-FID								
Diesel Range Organics (DRO)	BRL	mg/L	1.0	0.074	1	8015B	04/07/08 12:21	jvogel	Q31539
Sample Preparation	n:		10	000 mL	/ 2 mL	3510C	04/05/08 11:00	grappacciol	i P21258
					Surrogate		% Recovery	r Contr	ol Limits
					o-Terpheny	4	96	5	0 - 144
Gasoline Range Organics (GRO)	by GC-FID								
Gasoline Range Organics (GRO)	BRL	mg/L	0.20	0.031	1	8015B	04/04/08 13:19	wbradley	Q31497
					Surrogate		% Recovery	contr	ol Limits
					aaa-TFT		85	5	7 - 132

Sample Comment(s):

GRO/5035 vials contained too much soil so laboratory used DRO sample to perform GRO/5030.

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a wet-weight basis

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Level II QC Report

04/18/08

N. C. Department of Transportation	Project	Clyde Jones Auto, Boone,	COC Group Number:	G0408096
Attn: Ben Bradley	Name:	NČ	Date/Time Submitted:	4/3/2008 8:30
c/o Schnabel Engineering	Project ID:	NCDOT Parcel 65		
11 A Oak Branch Drive	Project No.:	WBS #7210023.07		
Greensboro, NC 27407				

Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank									QC Batch
	Result	RL,	Control Limit	Units					ID
Gasoline Range Organics (GRO)	ND	0.2	<0.1	mg/L					Q31497
Laboratory Control Sample					Recovery	Recovery Ranges			QC Batch
	Result	Spike Amoun	1	Units	%	%			ID
Gasoline Range Organics (GRO)	1.774	2		mg/L	89	60-138			Q31497
Matrix Spike					Recovery	Recovery			QC Batch
Sample ID:	Result	Spike Amount	t	Units	%	Ranges %			ID
210432 Gasoline Range Organics (GRO)	1.784	2		mg/L	89	69-130			Q31497
Matrix Spike Duplicate					Recovery	Recovery	RPD	RPD	QC Batch
Sample ID:	Result	Spike Amount	1	Units	%	Ranges %	%	Range %	ID
210432 Gasoline Range Organics (GRO)	1.910	2		mg/L	96	69-130	7	0 - 24	Q31497
Diesel Range Organics (DRO) by GC-	FID, meth	od 8015B							
Method Blank									QC Batch
	Result	RL	Control Limit	Units					ID
Diesel Range Organics (DRO)	ND	1	<0.5	mg/L					Q31539
Laboratory Control Sample					Recovery	Recovery Ranges			QC Batch
	Result	Spike Amoun	t	Units	%	%			ID
Diesel Range Organics (DRO)	1.59	2		mg/L	80	53-135			Q31539
Matrix Spike					Recovery	Recovery			QC Batch
Sample ID:	Result	Spike Amoun	۱	Ųnits	%	Ranges %			ID
210435 Diesel Range Organics (DRO)	1.83	2		mg/L	92	51-145			Q31539

Matrix Spike Duplicate Recovery RPD Recovery QC Batch ID RPD Ranges Range Spike Amount Result Units % Sample ID: % % % 210435 Diesel Range Organics (DRO) 1.57 2 mg/L 79 0-22 Q31539 51-145 15

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Result

Result

84.2

Diesel Range Organics (DRO)

210414 Diesel Range Organics (DRO) 69.4

210414 Diesel Range Organics (DRO) 77.5

Matrix Spike

Matrix Spike Duplicate

Sample ID:

Sample ID:

Spike Amount

Spike Amount

80

80

80

Level II QC Report

Q31647

QC Batch ID

Q31647

0-24 Q31647

QC Batch

ID.

RPD

Range

%

RPD

%

11

04/18/08

N. C. Department of Transportation	Project	Clyde Jones Auto, Boone,	COC Group Number:	G0408096
Attn: Ben Bradley	Name:	NČ	Date/Time Submitted:	4/3/2008 8:30
c/o Schnabel Engineering	Project ID:	NCDOT Parcel 65		
11 A Oak Branch Drive	Project No .:	WBS #7210023.07		
Greensboro, NC 27407				

Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank									QC Batch
	Result	RL	Control Limit	Units					ID
Gasoline Range Organics (GRO)	ND	1	<0.5	mg/kg					Q31561
Laboratory Control Sample	Result	Spike Amoun	t	Units	Recovery %	Recovery Ranges %			QC Batch ID
Gasoline Range Organics (GRO)	1.603	2		mg/kg	80	64-124			Q31561
Matrix Spike					Recovery	Recovery			QC Batch
Sample ID:	Result	Spike Amoun	t	Units	%	Ranges %			ID
210434 Gasoline Range Organics (GRO)	1.659	2		mg/kg	83	37-126			Q31561
Matrix Spike Duplicate					Recovery	Recovery	RPD	RPD	QC Batch
Sample ID:	Result	Spike Amoun	t	Units	%	Ranges %	%	Range %	D
210434 Gasoline Range Organics (GRO)	1.367	2		mg/kg	68	37-126	19	0 - 34	Q31561
Diesel Range Organics (DRO) by GC-	FID, meth	od 8015B							
Method Blank						·····			QC Batch
	Result	RL	Control Limit	Units					ID
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg					Q31647
Laboratory Control Sample	Result	Spike Amoun	t.	Units	Recovery %	Recovery Ranges %			QC Batch ID

mg/kg

Units

mg/kg

Units

mg/kg

105

Recovery

%

87

Recovery

%

97

%

Recovery

Ranges

%

Recovery

Ranges

%

50-117

50-117

55-109

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Level II QC Report

04/18/08

N. C. Department of Transportation	Project	Clyde Jones Auto, Boone,	COC Group Number:	G0408096
Attn: Ben Bradley	Name:	NČ	Date/Time Submitted:	4/3/2008 8:30
c/o Schnabel Engineering	Project ID:	NCDOT Parcel 65		
11 A Oak Branch Drive	Project No.:	WBS #7210023.07		
Greensboro, NC 27407				

Oil and Grease by Soxhlet Extraction, method 9071A

Method Blank			o						QC Batch
· · · · · · · · · · · · · · · · · · ·	Result	RL	Control Limit	Units					ID
Oil and Grease	ND	35	<17.5	mg/kg					Q31844
Laboratory Control Sample	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %			QC Batch ID
Oil and Grease	5259	5249		mg/kg	100	80-120			Q31844
Matrix Spike					Recovery	Recovery	· · · -		QC Batch
Sample ID:	Result	Spike Amou	nt	Units	%	Ranges %			ID
210408 Oil and Grease	24951	24793		mg/kg	101	80-120			Q31844
Matrix Spike Duplicate					Recovery	Recovery	RPD	RPD	QC Batch
Sample ID:	Result	Spike Amou	nt	Units	%	Ranges %	%	Range %	ID
210408 Oil and Grease	25235	24504		mg/kg	103	80-120	1	0 - 20	Q31844
# See Core Nerretive									

#-See Case Narrative



ANALYTICAL REPORT

CLIENT

Prism Laboratories Inc. PO BOX 240543 Charlotte, NC 28224

ATTENTION

Robbi Jones

PROJECT ID G0408096

LABORATORY REPORT NUMBER 208040444

DATE 04/17/2008

Primary Data Review By

Curtis Ekker Data Validation Manager, GCAL

PLEASE NOTE:

Secondary Data Review By

<u>Ashley B. Amick</u> Project Manager, Access Analytical, Inc. aamick@accessanalyticalinc.com

- Unless otherwise noted, all analysis on this report performed at Gulf Coast Analytical Labs (GCAL), 7979 GSRI Rd. Baton Rouge, LA 70820.
- GCAL is SCDHEC certified laboratory # 73006, NCDENR certified lab # 618, GA certified lab # LA-01955, NELAP certified laboratory # 01955
- Local support services for this project are provided by Access Analytical, Inc.. Access Analytical is a representative of GCAL serving clients in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll free at 888.315.4243.

NELAP CERTIFICATE NUMBER 01955

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

Report Date 04/14/2008



Deliver To Prism Laboratories Inc. PO BOX 240543 Charlotte, NC 28224 706-529-6364

Attn Robbi Jones

Project G0408096

CASE NARRATIVE

Client: Prism Laboratories Inc. Report: 208040444

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

- ND Indicates the result was Not Detected at the specified RDL
- DO Indicates the result was Diluted Out

MI Indicates the result was subject to Matrix Interference

TNTC Indicates the result was Too Numerous To Count

- SUBC Indicates the analysis was Sub-Contracted
- FLD Indicates the analysis was performed in the Field
- PQL Practical Quantitation Limit
- MDL Method Detection Limit
- **RDL** Reporting Detection Limit
- 00:00 Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

- J Indicates an estimated value
- U Indicates the compound was analyzed for but not detected
- B (ORGANICS) Indicates the analyte was detected in the associated Method Blank
- B (INORGANICS) Indicates the result is between the RDL and MDL

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with ISO Guide 25 and NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

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Cortin Eldent Mon Apr 14 11:58:55 2008

CURTIS EKKER DATA VALIDATION MANAGER GCAL REPORT 208040444

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

Client ID	Matrix	Collect Date/Time	Receive Date/Time
210428	Solid	04/01/2008 11:00	04/04/2008 10:06
210429	Solid	04/01/2008 10:45	04/04/2008 10:06
210430	Solid	04/01/2008 11:30	04/04/2008 10:06
210431	Solid	04/01/2008 12:00	04/04/2008 10:06
210432	Water	04/01/2008 12:00	04/04/2008 10:06
	210428 210429 210430 210431	210428 Solid 210429 Solid 210430 Solid 210431 Solid	210428 Solid 04/01/2008 11:00 210429 Solid 04/01/2008 10:45 210430 Solid 04/01/2008 11:30 210431 Solid 04/01/2008 12:00

Summary of Compounds Detected

GCAL ID 20804044402	Client ID 210429	Matrix Solid	Collect Date/Time 04/01/2008-10:45	Rec 04/0	elve Date/Time 4/2008-10:06	
SW-846 80 ⁻						nananggi ing dang bang bang bang bang bang bang bang b
CAS#	Parameter		Result	RDL	MDL	Units
107-21-1	Ethylene Glycol		7150	4040	1430	ug/Kg
GCAL D	Client ID 210430	Matrix	Collect Date/Time	Rec	eive Date/Time	
20804044403	210430	Solid	04/01/2008 11:30	04/0	4/2008 10:06	
SW-846 801	15B					
CAS#	Parameter		Result	RDL	MDL	Units
107-21-1	Ethylene Glycol		4540	3920	1380	ug/Kg

/-846 801	5B						
Prep Date	Prep Batch	Prep Method	Dilution 1	Analyzed 04/11/2008 10:15	By SMH	Analytical Batch 371039	
CAS#	Parameter		Result	RDL		MDL.	Ur
107-21-1	Ethylene Glycol		1360U	3840		1360	ug/
57-55-6	Propylene Glycol		6560U	15400		6560	ug/

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NL ID 04044402	Client ID 210429 6-65-	02Solid	Collect Date/ 04/01/2008 1	Time 0:45	Receiv 04/04/2	e Date/Time 008 10:06	
V-846 801							
Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	Ву	Analytical Batch	
			1	04/11/2008 12:31	SMH	371039	
CAS#	Parameter		Result	RDL		MDL	Ur
107-21-1	Ethylene Glycol		7150	4040		1430	ug/
57-55-6	Propylene Glycol		6900U	16200		6900	ug.

	Client ID	Motely	Collect Date/ 04/01/2008 1			e Date/Time 008 10:06	61. D
/-846 801	5B						
Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	Ву	Analytical Batch	
			1	04/11/2008 12:49	SMH	371039	
CAS#	Parameter		Result	RDL		MDL	Ųn
107-21-1	Ethylene Glycol		4540	3920		1380	ug/
57-55-6	Propylene Glycol		6690U	15700		6690	ug

	210401	o4 Matrix Solid	04/01/2008 1	2:00	-04/04/2		
V-846 801	<u>5B</u>						
Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	Ву	Analytical Batch	
			1	04/11/2008 13:06	SMH	371039	
CAS#	Parameter		Result	RDL		MDL	Un
107-21-1	Ethylene Glycol		1460U	4150		1460	ug/
57-55-6	Propylene Glycol		7080U	16600		7080	ug/

/-846 801	5B			Time 2:00			
Prep Date	Prep Batch	Prep Method	Dilution 1	Analyzed 04/09/2008 12:39	By SMH	Analytical Batch 370880	
CAS#	Parameter		Result	RDL		MDL	Ur
107-21-1	Ethylene Glycol		212U	1000		212	u
57-55-6	Propylene Glycol		762U	5000		762	u

General Chromatography Quality Control Summary

Analytical Batch 370880	Client ID	Client ID MB370880			LCS370880		
Prep Batch N/A	GCAL ID 591805	591805			591806		
	Sample Type Method Blank	Method Blank			LCS		
	Analytical Date	Analytical Date 04/09/2008 10:18			04/09/2008 10:36		
	Matrix Water	Water			Water		
SWI-846 8015B	8015E	Units	ng/L	Spike	000114		Control
			Result	RCHded	lineou	% R	% R Limits % R
107-21-1 Ethylene Glycol	Glycol	212U	212	25000	22000	88	50 - 150
57-55-6 Propylene Glycol	e Glycol	762U	762	25000	22100	88	40 - 140

Analytical Batch 370880	Client ID U43TIT	U43TITLEV			591211MS			591211MSD			<u> </u>
Prep Batch N/A	GCAL ID	GCAL ID 20804071001			591807			591808			
	Sample Type SAMPLE	SAMPLE			MS			MSD			
	Analytical Date 04/09/2008 11:11	04/09/2008 11:11			04/09/2008 11:29			04/09/2008 12:22			
	Matrix Water	Water			Water			Water			
CML846 8015B	150	Units	ng/L	Spike	Desult		Control				RPD
				Added	result % R Linuts % R	% R	Lirans % R		% R	RPD Limit	Limit
107-21-1 Ethylene Glycol	lo.	00.0	212	25000	21600	86	86 50 - 150	23600	94	ი	40

Analytical Batch 371039	Client ID	Client ID MB371039			LCS371039		
Prep Batch N/A	GCAL ID 592710	592710			592711		
	Sample Type	Sample Type Method Blank			LCS		
	Analytical Date	Analytical Date 04/11/2008 09:22			04/11/2008 09:40		
	Matrix Solid	Solid			Solid		
CIM BIE BUIED		Units	ug/Kg	Spike	1		Control
		œ	Result	RDDded		% R	% R Limits % R
107-21-1 Ethylene Glycol	0	1100U	1100	62500	51000	82	50 - 150
57-55-6 Propylene Glycol	(col	5340U	5340	62500	54900	88	40 - 140

GCAL Report 208040444

General Chromatography Quality Control Summary

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Analytical Batch 371039	71039 Client ID 210428	210428			590753MS			590753MSD			
Prep Batch N/A		GCAL ID 20804044401			592712			592713			
	Sample Type SAMPLE	SAMPLE			MS			MSD			
	Analytical Date	Analytical Date 04/11/2008 10:15			04/11/2008 10:32			04/11/2008 12:14			
	Matrix	Matrix Solid			Solid			Solid			-
-MS	CIM PAG BOAED	Units	ug/Kg	Spike			Control				RPD
				Added	Result %	R	Lirents % R	Insau	% R	RPD	Limit
107-21-1 Eth	Ethylene Glycol	0.00	1080	62500	49800	80	50 - 150	52900	85	9	40
57-55-6 Pro	Propylene Glycol	0.00	5240	62500	58800	94	40 - 140	57200	92	e0	40

GCAL Report 208040444

Full Sector Auto Feed & Evaturament al Solution Full Sector Auto Feed & Evaturament al Solution Plasmin, Tukubao- 6004 • Fac. Tuky565-Aug Claim Company Name: <u>F.C.S.Y.A. Colos</u> Reporting Address: <u>F.S.Y.A. Sector</u>	rui Sarrea Austreal Alla atomerad Solution of Rhoud - P.O. Bon 200049 - Chandra NC 2 0-0004 - Faz 704-9004-900 eriv Name: <u>Vision, Jaches</u> attact Name: <u>Nision, Jaches</u> dross:	armartat Sociation - Chemotica NC 282		#4deroedue Project Nimmec(Short Hold Anatysia Preses at TACH any provision Stors and/or QC Invoice Tor	L autora avaita (G.2) avaita (G	core + To ensure C-D4-D3C-946 . (Van Mo) . (Van Mo) . (Van Mo) . (Van Mo) . (Van Core . (Guotre P To Enguade endorum Init. Bolo. C-34 3:3:3:046 Bile: (Yean) (No) UST Project: (Yaa) ary project specific extenting (GC LEVEL II II OG Requirements			Santone IVITA Reserved ON PERCERT PINE Reserved With Reserved With CUSTION (11) VICUTIN (11) VIC	Suppose (NTACT, avoir annea?) Casaleel ON une: ACET from Foreth the support (CET from) Adde and furthing HOLCONS, TAXES of CUSTOPY SEPALS (NTACT? VCUNT ALE and a word of the ACSS of CE Proceeding CONTA NETRS search		8 8 1 	<u> </u>
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PRISM LABORATORIES, INC.	Full Service Analytical & Environmental Solutions ok Road • P.O. Box 240543 • Charlotte, NC 2: 9-6384 • Fax: 704/525-0409 ny Name: <u>Schry ob</u> ny Name: <u>Schry ob</u> ntact Name: <u>Schr Stradb</u>	<u>94∫(A</u> Fax (Yes) majyAddress <i>Dproc</i> Excel Other ie: <u>Cl/dl</u> <u>)</u> ical Address: <u>A</u> U	DATE	<u>ଟ</u> ୍ଚ	4-1-08	4-1-08	4-1-08		80-1-6		Blurme	this Chain of Custo to the Prism Projec	Denold	Bur 43	a) E- ALL CANNOLE COOLEC	SAMPLES ARE NOT ACCEPT D Hand-chelivered		_
	Full Service Analytical & Environmental Solutions Full Service Analytical & Environmental Solutions 449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543 Phone: 704/529-6364 • Fax: 704/525-0409 Client Company Name: 54/1/2009 Report To/Contact Name: 34/1/2000	Phone: <u>20-274-7456</u> Fax Yes) (No): Email (Yes) (No) Email/Address <u>brad by DSL44450</u> EDD Type: PDF Excel Other Dther Site Location Name: <u>CM/de</u> <u>1000</u> NC. Site Location Physical Address: <u>5</u> .0000 NC.	CLIENT	SAMPLE DESCRIPTION	B.6501	20-59 Z	R. 65-03	Z 65-04	4 B. 65-04		Sampler's Signature	Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be barges for any changes after analyses have been initialized.	Relignished By: (Signature	Relightuished By: (Signature)	Relinquished By: (Signatule)	MEMOD OI SNIPMENL. NUTE ALL SAMPLES ARE NOT ACCEPTED AND VENTIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.	NPDES: UST: NC D SC D NC	CONTAINER TYPE CODES: