

ENVIRON

August 16, 2005

Mr. Rafat Abbasi
Hazardous Substances Scientist/Project Manager
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

Via E-Mail and U.S. Mail

Re: Data Transmittal
Norco High School, Norco Intermediate School, and Norco Elementary School, and the
Residences Located at 771 and 781 Third Street, Norco, California

Dear Mr. Abbasi:

Attached please find the following:

- Table 1, summarizing the detected volatile organic compounds (VOCs) in active soil gas samples collected from Norco High School, Norco Intermediate School, and Norco Elementary School. Figures 1 through 3, respectively, show the approximate active soil gas sample locations at each of the three schools.
- Table 2, summarizing the detected VOCs in indoor air quality (IAQ) samples and ambient outdoor air samples collected from Norco High School, Norco Intermediate School, and Norco Elementary School. Figures 1 through 3, respectively, show the approximate IAQ sample locations at each of the three schools.
- Tables 3a and 3b, summarizing the detected VOCs and emergent compounds detected in grab ground water samples collected from Norco High School and Norco Intermediate School. Ground water was not encountered at Norco Elementary School. Figures 1 and 2 show the approximate grab ground water sample locations collected at Norco High School and Norco Intermediate School, respectively.
- Table 4, summarizing the detected VOCs in active soil gas samples collected from 771 and 781 Third Street; Figure 4 shows the approximate sample locations.

VOCs were detected in certain soil gas samples at trace concentrations. These detected concentrations are well below Department of Toxic Substances Control's (DTSC) "risk-based soil gas concentrations for Wyle-related VOCs that have migrated off site," as provided in DTSC's letter to Wyle dated June 2, 2005. Tetrachloroethene (PCE) concentrations detected in IAQ samples at the three schools generally are consistent with PCE concentrations detected in ambient outdoor air samples. When taken in conjunction with soil gas results and ambient outdoor air results, IAQ VOC results do not indicate vapor intrusion at the three schools. As required by the DTSC, IAQ, ambient outdoor air, and active soil gas sampling will be repeated at the same locations in the winter (likely during Christmas break).

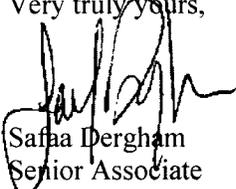
The northerly-most grab ground water sample collected from Norco High School, ASG-HS5, contained trichloroethene (TCE) at 61 micrograms per liter (µg/l). This grab ground water sample was the only grab ground water sample collected from either Norco High School or Norco Intermediate School that indicated a detected TCE concentration above the respective laboratory reporting limit. This detection will be addressed as part of the Technical Memorandum for Step Out Sampling in the Northwest Area that is due to the DTSC on August 17, 2005.

Soil gas and potentially grab ground water sampling was planned at 8 locations at 771 and 781 Third Street. Due to access constraints, use of direct-push equipment and the presence of shallow bedrock, locations ASG-20 and ASG-27 could not be advanced beyond approximately 2 feet below ground surface (bgs). Therefore, in accordance with DTSC's directions, soil gas samples were not collected from the borings. With the exception of ASG-23, the maximum depth of penetration of the remaining 6 borings was approximately 4 to 5 feet bgs (ASG-23 was advanced to 9 feet bgs). Ground water was not encountered in any of the 8 sampling locations.

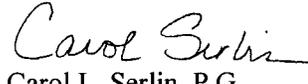
Certain VOCs were detected in soil gas samples. Detected VOC concentrations were well below DTSC's "risk-based soil gas concentrations for Wyle-related VOCs that have migrated off site." However, because investigations depths were not reached at ASG-20 and ASG-21, ENVIRON will return to the residences with limited access hollow stem auger drilling equipment to obtain samples at these locations. Wyle will inform DTSC of the planned drilling schedule once such is obtained so DTSC can contact the residents.

If you should have any questions, please contact any of the undersigned at (949) 261-5151.

Very truly yours,


Safaa Dergham
Senior Associate


Rebekah J. Wale
Manager


Carol L. Serlin, P.G.
Principal

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cc: Distribution



T A B L E S

TABLE 1
Summary of Detected VOCs in Active Soil Gas - Norco Schools
Wyle Laboratories, Norco, California
Results in micrograms per liter (µg/L)

Sample Number	Date Sampled	Sample Depth (ft)	Compound			
			cis-1,2-DCE	PCE	TCE	Vinyl Chloride
Norco Elementary School						
ASG-ES1	7/30/05	5.0	<0.0040	0.0041	<0.0055	<0.0026
ASG-ES1	7/30/05	5.0	<0.0040	0.0039	<0.0055	<0.0026
ASG-ES1	7/30/05	15.0	<0.0040	0.0043	<0.0055	<0.0026
ASG-ES2	7/30/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-ES2	7/30/05	10.0	<0.0040	0.0038	<0.0055	<0.0026
ASG-ES3	7/30/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-ES3	7/30/05	15.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-ES4	7/30/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-ES4	7/30/05	15.0	<0.0040	0.0053	<0.0055	<0.0026
ASG-ES5	7/30/05	5.0	<0.0040	0.0041	<0.0055	<0.0026
ASG-ES5	7/30/05	15.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-ES6	7/30/05	5.0	<0.0040	0.011	<0.0055	<0.0026
ASG-ES6	7/30/05	15.0	<0.0040	0.0053	<0.0055	<0.0026
ASG-ES7	7/30/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-ES7	7/30/05	15.0	<0.0040	0.011	<0.0055	<0.0026
Norco High School						
ASG-HS1	7/28/05	4.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS2	7/28/05	5.0	<0.0040	0.0057	<0.0055	<0.0026
ASG-HS2	7/28/05	10.0	<0.0040	0.017	0.0068	<0.0026
ASG-HS3	7/28/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS4	7/28/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS4	7/28/05	10.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS5	7/28/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS6	7/28/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS7	7/28/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS7	7/28/05	10.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS7	7/28/05	15.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS8	7/28/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS8	7/28/05	15.0	<0.0040	0.0057	0.065	<0.0026
ASG-HS9	7/28/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS9	7/28/05	10.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS9	7/28/05	15.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-HS10	7/28/05	5.0	<0.0040	<0.0038	0.014	0.016
ASG-HS10	7/28/05	15.0	0.008	0.03	0.49	0.0095
ASG-HS11	7/28/05	5.0	<0.0040	0.0077	<0.0055	<0.0026
ASG-HS11	7/28/05	10.0	<0.0040	<0.0038	<0.0055	<0.0026

TABLE 1
Summary of Detected VOCs in Active Soil Gas - Norco Schools
Wyle Laboratories, Norco, California
Results in micrograms per liter ($\mu\text{g/L}$)

Sample Number	Date Sampled	Sample Depth (ft)	Compound			
			cis-1,2-DCE	PCE	TCE	Vinyl Chloride
Norco Intermediate School						
ASG-IS1	7/29/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS1	7/29/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS1	7/29/05	10.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS2	7/29/05	5.0	<0.0040	0.014	0.0056	<0.0026
ASG-IS2	7/29/05	15.0	<0.0040	0.007	0.0073	<0.0026
ASG-IS3	7/29/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS3	7/29/05	10.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS4	7/29/05	5.0	<0.0040	0.0057	0.032	<0.0026
ASG-IS4	7/29/05	10.0	<0.0040	0.013	0.0062	<0.0026
ASG-IS5	7/29/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS5	7/29/05	15.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS6	7/29/05	5.0	<0.0040	0.0042	<0.0055	<0.0026
ASG-IS6	7/29/05	10.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS7	7/29/05	5.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS7	7/29/05	15.0	<0.0040	<0.0038	<0.0055	<0.0026
ASG-IS8	7/29/05	5.0	<0.0040	<0.0038	0.0079	<0.0026
ASG-IS8	7/29/05	10.0	<0.0040	<0.0038	<0.0055	<0.0026

Abbreviations

cis-1,2-DCE = cis-1,2-Dichloroethylene
PCE = Tetrachloroethylene
TCE = Trichloroethylene
ft = feet
Duplicate results are shown in italics.

TABLE 2
Summary of Detected VOCs in School Indoor Air Quality Samples
Wyle Laboratories, Norco, California
Results in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Sample Number	Date Sampled	Compound		
		PCE	TCE	Vinyl Chloride
Norco Elementary School				
IAQ-ES-1	7/29/05	0.55	0.35	<0.072
IAQ-ES-2	7/29/05	0.34	1.6	<0.075
IAQ-ES-3	7/29/05	0.35	<0.13	<0.064
IAQ-ES-4	7/29/05	0.35	<0.18	<0.085
IAQ-ES-5	7/29/05	0.45	<0.18	<0.084
IAQ-ES-5	7/29/05	<i>0.43</i>	<0.24	<0.12
IAQ-ES-OUT1	7/29/05	0.35	<0.18	<0.085
IAQ-ES-OUT2	7/29/05	0.38	<0.30	<0.14
Norco High School				
IAQ-HS-1	7/27/05	0.28	<0.13	<0.064
IAQ-HS-2	7/27/05	0.39	0.33	<0.068
IAQ-HS-3	7/27/05	0.39	1.3	<0.064
IAQ-HS-4	7/27/05	0.37	<0.13	<0.064
IAQ-HS-5	7/27/05	0.27	<0.13	<0.064
IAQ-HS-6	7/27/05	0.29	0.25	0.17
IAQ-HS-7	7/27/05	0.33	<0.13	<0.064
IAQ-HS-8	7/27/05	0.34	<0.13	<0.064
OUT-HS-1	7/27/05	<1.1	<0.91	<0.43
OUT-HS-2	7/27/05	<68	<54	<26
Norco Intermediate School				
IAQ-IS-1	7/28/05	0.44	<0.24	<0.12
IAQ-IS-2	7/28/05	0.39	0.24	<0.078
IAQ-IS-3	7/28/05	0.40	0.26	<0.084
IAQ-IS-4	7/28/05	0.41	<0.19	<0.088
IAQ-IS-5	7/28/05	0.35	0.16	<0.070
IAQ-IS-6	7/28/05	0.43	0.17	<0.082
OUT-IS-1	7/28/05	<0.18	<0.14	<0.067
OUT-IS-2	7/28/05	0.39	<0.19	<0.092

PCE = Tetrachloroethylene

TCE = Trichloroethylene

Duplicate results are shown in italics.

Due to small sample volumes collected for samples OUT-HS-1 and OUT-HS-2, samples were diluted, resulting in elevated detection limits.

TABLE 3a
Summary of Detected VOCs in Ground Water - School Sampling
Wyle Laboratories, Norco, California
Results in micrograms per liter (µg/L)

Sample Number	Date Sampled	Sample Depth (ft)	Compound				
			m&p xylenes	PCE	p-Cymene	TCE	TCFM
Norco High School							
ASG-HS3	7/28/05	15	<1.0	<1.0	<1.0	<1.0	<1.0
ASG-HS4	7/28/05	15	<1.0	<1.0	<1.0	<1.0	<1.0
ASG-HS5	7/28/05	15	1.6	8.3	<1.0	61	1.1
ASG-HS11	7/28/05	15	<1.0	<1.0	<1.0	<1.0	<1.0
Norco Intermediate School							
ASG-IS1	7/29/05	15	<1.0	<1.0	1.0	<1.0	<1.0
ASG-IS3	7/30/05	15	<1.0	<1.0	<1.0	<1.0	<1.0
ASG-IS8	7/30/05	15	<1.0	<1.0	<1.0	<1.0	<1.0

Abbreviations

PCE = Tetrachloroethylene
TCE = Trichloroethylene
TCFM = Trichlorofluoromethane
ft = feet

TABLE 3b
Summary of Detected Emergent Compounds in Ground Water - School Sampling
Wyle Laboratories, Norco, California
Results in micrograms per liter ($\mu\text{g/L}$)

Sample Number	Date Sampled	Sample Depth (feet)	Compound
			Perchlorate
Norco High School			
ASG-HS3	7/28/05	15	12
ASG-HS4	7/28/05	15	<0.80
ASG-HS5	7/28/05	15	4.8
ASG-HS11	7/28/05	15	<0.80
Norco Intermediate School			
ASG-IS1	7/30/05	15	14
ASG-IS3	7/30/05	15	3.3
ASG-IS8	7/30/05	15	4.8

TABLE 4
Summary of Detected VOCs in Soil Gas - 771 and 781 Third Street
Wyle Laboratories, Norco, California
Results in micrograms per liter (µg/L)

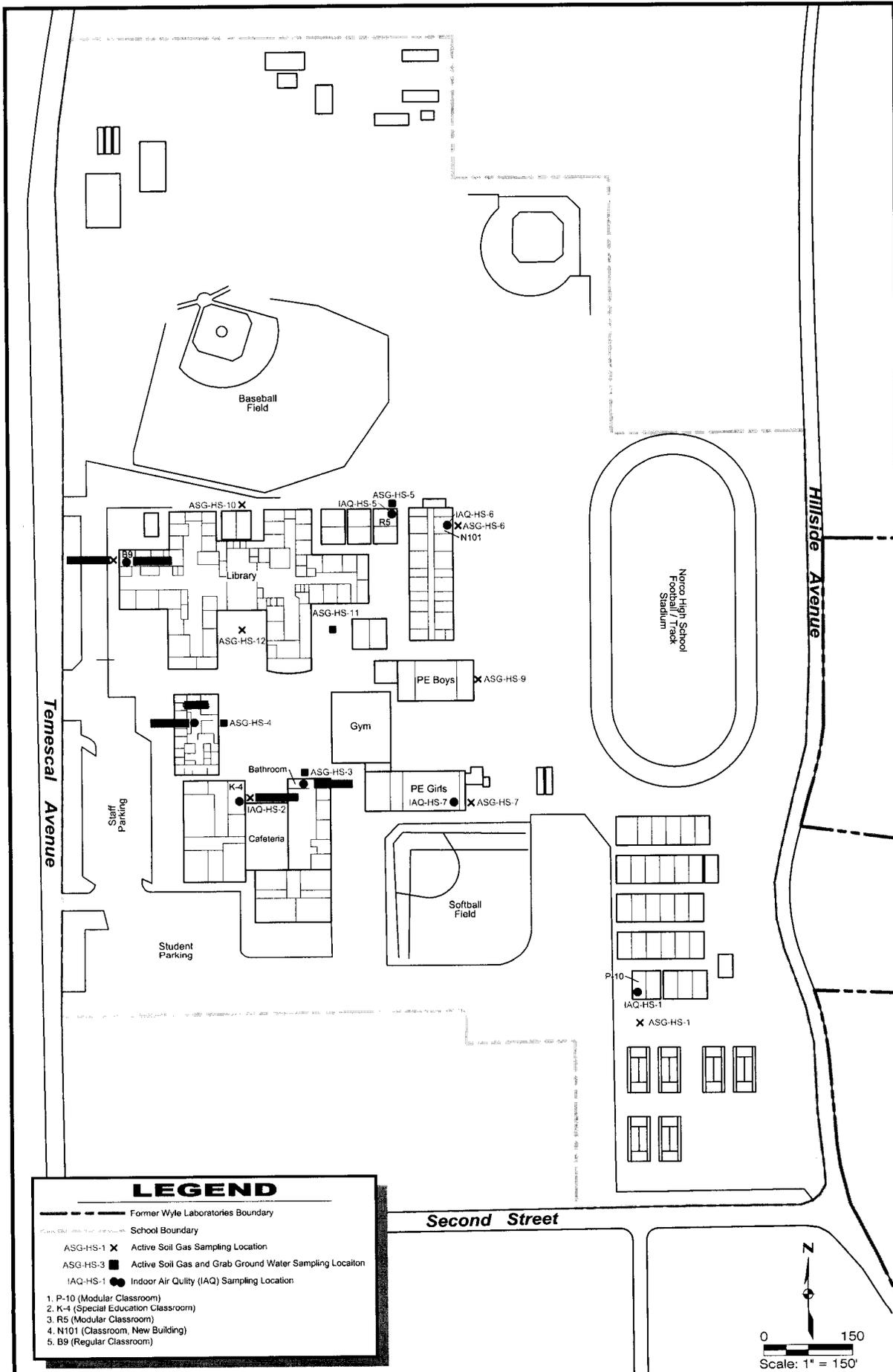
Sample Number	Date Sampled	Sample Depth (ft)	Compound																			
			1,1,1-TCA	1,1-DCA	1,1-DCE	1,2,4-TMB	1,3,5-TMB	Acetone	Benzene	CS2	Ethyl benzene	Freon 113	m,p- xylene	MEK	Methyl chloride	MIBK	o- xylene	PCE	PET	Styrene	TCE	Toluene
771 Third Street																						
ASG-21	7/20/05	4.0	<0.0028	<0.0021	0.23	0.56	0.19	0.56	0.072	0.049	0.2	<0.0039	0.44	0.14	0.0028	0.0054	0.33	0.017	0.15	0.0057	<0.0055	0.59
ASG-22	7/20/05	5.0	<0.0028	<0.0021	0.13	0.54	0.18	0.14	0.047	0.066	0.2	0.0085	0.45	0.046	<0.0020	<0.0021	0.33	0.011	0.14	0.0044	<0.0055	0.58
ASG-23	7/20/05	5.0	0.0097	0.0047	0.56	0.32	0.093	0.16	0.021	0.025	0.091	<0.0039	0.21	0.041	<0.0020	<0.0021	0.16	0.025	0.084	<0.0043	<0.0055	0.23
ASG-23	7/20/05	9.0	0.0053	<0.0021	0.28	0.24	0.074	0.56	0.13	0.057	0.1	<0.0039	0.18	0.13	0.04	<0.0021	0.14	0.017	0.061	0.0076	<0.0055	0.34
781 Third Street																						
ASG-24	7/20/05	5.0	0.012	0.0056	0.51	0.41	0.14	0.2	0.054	0.024	0.16	<0.0039	0.34	0.049	0.003	<0.0021	0.25	0.03	0.11	<0.0043	0.0088	0.44
ASG-25	7/20/05	5.0	<0.0028	<0.0021	0.13	0.32	0.088	0.14	0.03	0.071	0.078	<0.0039	0.18	0.056	<0.0020	0.0046	0.14	0.011	0.071	<0.0043	<0.0055	0.17
ASG-26	7/20/05	4.0	<0.0028	<0.0021	0.13	0.3	0.083	0.24	0.042	0.12	0.18	<0.0039	0.38	0.071	<0.0020	<0.0021	0.25	0.011	0.066	0.0059	<0.0055	0.19

Abbreviations

1,1,1-TCA = 1,1,1-Trichloroethane
 1,1-DCA = 1,1-Dichloroethane
 1,1-DCE = 1,1-Dichloroethylene
 1,2,4-TMB = 1,2,4-trimethylbenzene
 1,3,5-TMB = 1,3,5-trimethylbenzene
 CS2 = Carbon disulfide
 Freon 113 = 1,1,2-trichloro-1,2,2-trifluoroethane
 MEK = 2-butanone (methyl ethyl ketone)
 MIBK = 4-methyl-2-pentanone
 PET = p-Ethyltoluene
 PCE = Tetrachloroethylene
 TCE = Trichloroethylene

ft = feet

FIGURES



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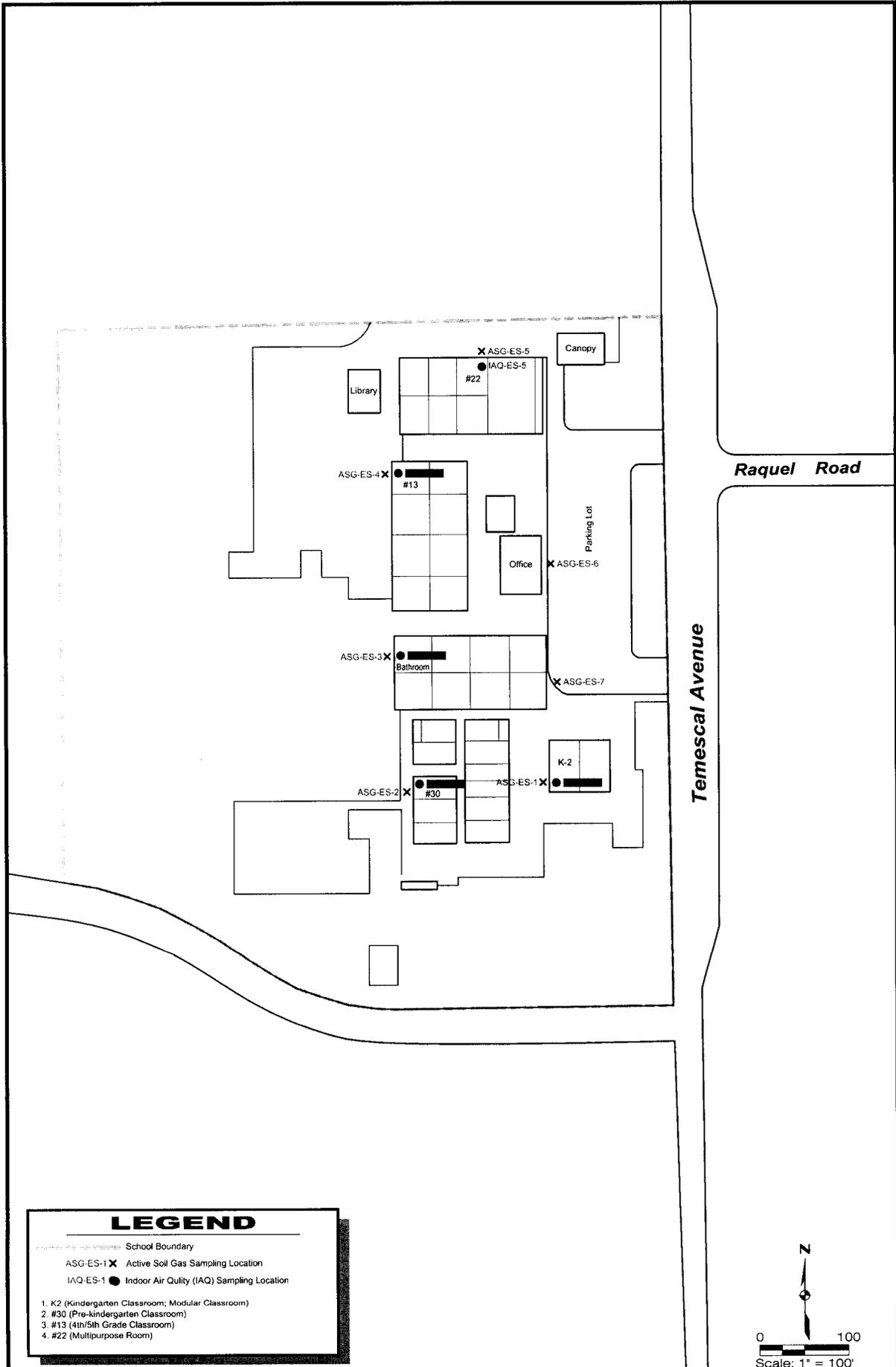
DRAWN BY: JJC DATE: 8/24/05 REVISED: 8/18/05

Active Soil Gas, Grab Ground Water, and Indoor Air Quality Sampling Locations
 Norco High School
 2065 Temescal Avenue, Norco, California

PROJECT NO.: 04-8099P

Figure
1

FILE: P:\W\Wyle Lab\Sanjose\High School Samples



LEGEND

--- School Boundary

ASG-ES-1 X Active Soil Gas Sampling Location

IAQ-ES-1 ● Indoor Air Quality (IAQ) Sampling Location

1. K2 (Kindergarten Classroom; Modular Classroom)

2. #30 (Pre-kindergarten Classroom)

3. #13 (4th/5th Grade Classroom)

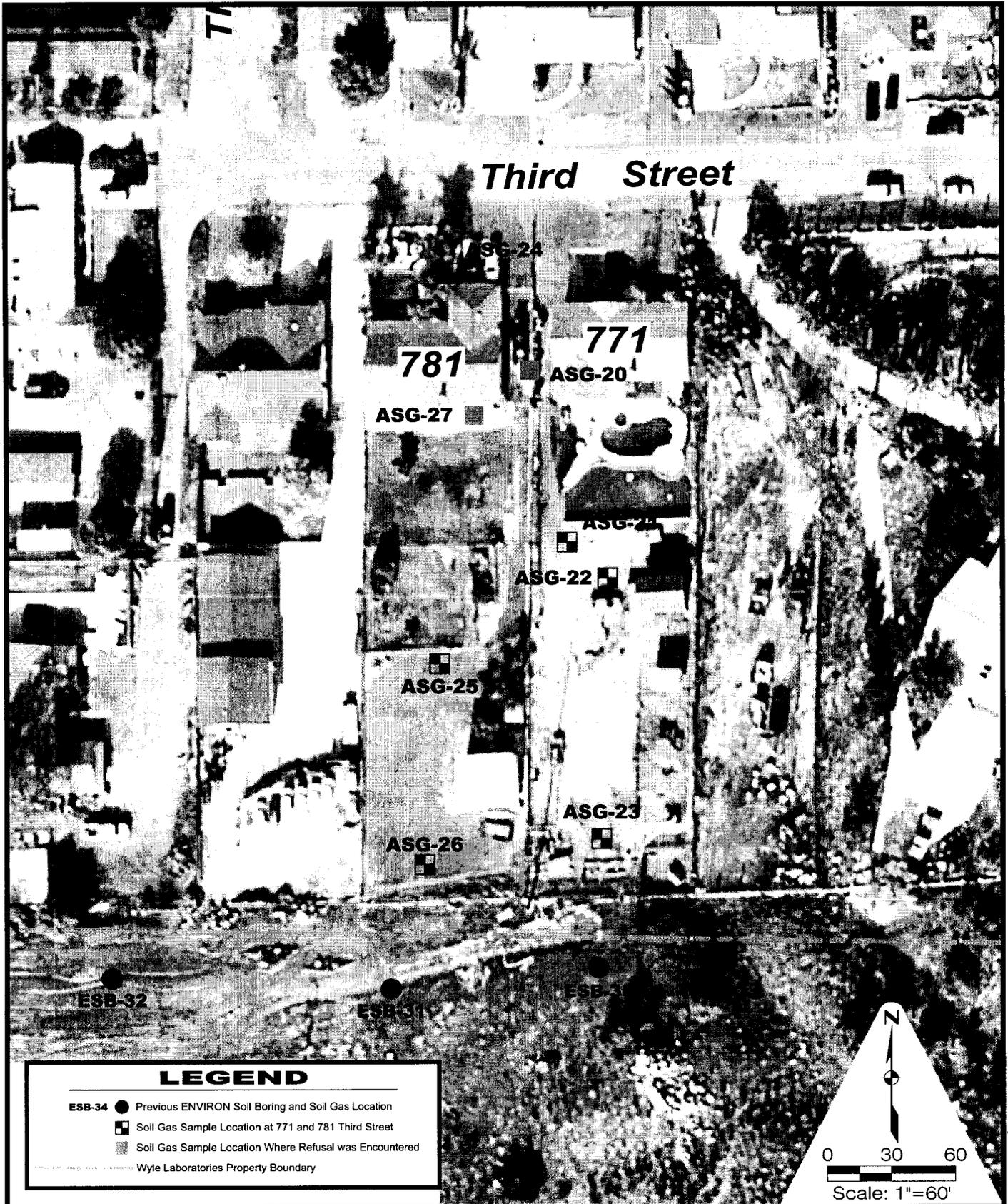
4. #22 (Multipurpose Room)

N

0 100

Scale: 1" = 100'

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Soil Gas Sampling Locations
Wyle Laboratories
Norco, California

Figure
4

Drafter: JJC

Date: 8/16/05

Contract Number: 04-8099P

Approved:

Revised: