RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

DELANO MARKETPLACE

SCH# 2005011089

VOLUME II OF III - APPENDICES

PREPARED FOR:

CITY OF DELANO
Community Development Department
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PREPARED BY:

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APRIL 2007

TECHNICAL APPENDICES

Appendix B – Air Quality

AMBIENT Air Quality & Noise Consulting. *URBEMIS; Caline4, Detention Basin Worksheet, Road Construction Emissions Model, Version 5.2.* March 31, 2007

San Joaquin Valley Air Pollution Control District. *CEQA Modeling Memo.* Matthew Cegielski, AQS, Technical Services. July 14, 2006.

(The technical air quality modeling is available for review at the City of Delano under separate cover.)

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Delano SR99NB&Woollomes
RUN: Hour 1
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	.0 DEGREES	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	15.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	*	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. SR99SB1	*	6948	8703	7099	8198	*	AG	2000	3.1	.0	14.0
B. SR99SB2	*	7099	8198	7189	7915	*	AG	2000	3.1	.0	14.0
C. SR99SB3	*	7189	7915	7220	7695	*	AG	2000	3.1	.0	14.0
D. SR99NB1	*	7254	7696	7214	7914	*	AG	2000	3.1	.0	14.0
E. SR99NB2	*	7214	7914	7121	8199	*	AG	2000	3.1	.0	14.0
F. SR99NB3	*	7121	8199	7043	8435	*	AG	2000	3.1	.0	14.0
G. SR99NB4	*	7043	8435	6965	8705	*	AG	2000	3.1	.0	14.0
H. WoolEB1	*	6885	8197	7177	8188	*	BG	927	6.3	.0	10.0
I. WoolEB2	*	7177	8188	7370	8182	*	AG	908	4.8	.0	10.0
J. WoolWB1	*	7374	8188	7172	8197	*	AG	763	6.3	.0	10.0
K. WoolWB2	*	7172	8197	6891	8202	*	BG	1625	4.8	.0	10.0
L. OffRamp	*	7214	7914	7177	8188	*	AG	1038	6.3	.0	10.0
M. OnRamp	*	7172	8197	7043	8435	*	AG	304	4.8	.0	10.0
N. Link N	*	7027	8431	7046	8201	*	AG	231	4.8	.0	10.0
O. Link O	*	7047	8191	7188	7915	*	AG	846	6.3	.0	10.0

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CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Delano SR99NB&Woollomes
RUN: Hour 1
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III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	7199	8169	1.8
2. Recpt 2	7182	8223	1.8
3. Recpt 3	7009	8216	1.8
4. Recpt 4	7009	8180	1.8
5. Recpt 5	7214	8159	1.8
6. Recpt 6	7199	8237	1.8
7. Recpt 7	6995	8237	1.8
8. Recpt 8	6999	8159	1.8

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H	I	J
1. Recpt 1	.3	.0	.0	.0	.0	.0	.0	.0	.0	.2	.2
2. Recpt 2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	.3	.2	.0	.0	.0	.0	.0	.2	.0	.0	.0
4. Recpt 4	.8	.2	.0	.0	.0	.0	.0	.1	.3	.0	.0
5. Recpt 5	.3	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1
6. Recpt 6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. Recpt 7	.3	.2	.0	.0	.0	.0	.0	.1	.0	.0	.0
8. Recpt 8	.6	.1	.0	.0	.0	.0	.0	.1	.2	.0	.0

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CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Delano SR99NB&Woollomes
RUN: Hour 1
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.) (CONT.)

RECEPTOR	CONC/LINK (PPM) K	L	M	N	O
1. Recpt 1	.0	.0	.0	.0	.0
2. Recpt 2	.0	.0	.0	.0	.0
3. Recpt 3	.0	.0	.0	.0	.0
4. Recpt 4	.3	.0	.0	.0	.0
5. Recpt 5	.0	.0	.0	.0	.0
6. Recpt 6	.0	.0	.0	.0	.0
7. Recpt 7	.0	.0	.0	.0	.0
8. Recpt 8	.2	.0	.0	.0	.0

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URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Delano Market 07Update.urb
Project Name: Delano Marketplace
Project Location: San Joaquin Valley
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Tons/Year)

CONSTRUCTION EMISSION ESTIMATES

PM10 *** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL
EXHAUST TOTALS (tpy, unmitigated)	0.68	4.77	5.41	0.00	2.42
DUST TOTALS (tpy, unmitigated)					0.19
PM10 TOTALS (tpy, unmitigated)					2.23

PM10 *** 2008 ***	ROG	NOx	CO	SO2	PM10 TOTAL
EXHAUST TOTALS (tpy, unmitigated)	0.52	3.09	4.47	0.00	0.15
DUST TOTALS (tpy, unmitigated)					0.13
PM10 TOTALS (tpy, unmitigated)					0.02

PM10 *** 2009 ***	ROG	NOx	CO	SO2	PM10 TOTAL
EXHAUST TOTALS (tpy, unmitigated)	0.52	2.94	4.60	0.00	0.14
DUST TOTALS (tpy, unmitigated)					0.12
PM10 TOTALS (tpy, unmitigated)					0.02

PM10 *** 2010 ***	ROG	NOx	CO	SO2	PM10 TOTAL
EXHAUST TOTALS (tpy, unmitigated)	5.43	1.30	2.32	0.00	0.06
DUST TOTALS (tpy, unmitigated)					0.05
PM10 TOTALS (tpy, unmitigated)					0.01

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.93	0.79	0.96	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	31.82	49.41	420.82	0.30	52.99

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	32.74	50.20	421.78	0.30	52.99

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Delano Market 07Update.urb
Project Name: Delano Marketplace
Project Location: San Joaquin Valley
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

Construction Start Month and Year: June, 2007
Construction Duration: 36
Total Land Use Area to be Developed: 20.4 acres
Maximum Acreage Disturbed Per Day: 5.1 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 446258

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (tons/year)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.21	-	0.21
Off-Road Diesel	0.01	0.08	0.12	-	0.00	0.00	0.00
On-Road Diesel	0.04	0.59	0.13	0.00	0.02	0.02	0.00
Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Total tons/year	0.05	0.67	0.26	0.00	0.23	0.02	0.21
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	2.02	-	2.02
Off-Road Diesel	0.55	3.66	4.52	-	0.15	0.15	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Total tons/year	0.55	3.66	4.54	0.00	2.17	0.15	2.02
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.06	0.43	0.41	-	0.02	0.02	0.00
Bldg Const Worker Trips	0.02	0.01	0.20	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-

Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Asphalt Off-Gas	0.00	-	-	-	-
- -					
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.08	0.44	0.61	0.00	0.02
0.02 0.00					
Total all phases tons/yr	0.68	4.77	5.41	0.00	2.42
0.19 2.23					
*** 2008***					
Phase 1 - Demolition Emissions					
Fugitive Dust	-	-	-	-	0.00
- 0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Phase 2 - Site Grading Emissions					
Fugitive Dust	-	-	-	-	0.00
- 0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Phase 3 - Building Construction					
Bldg Const Off-Road Diesel	0.42	3.04	3.22	-	0.13
0.13 0.00					
Bldg Const Worker Trips	0.10	0.05	1.25	0.00	0.02
0.00 0.02					
Arch Coatings Off-Gas	0.00	-	-	-	-
- -					
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Asphalt Off-Gas	0.00	-	-	-	-
- -					
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.52	3.09	4.47	0.00	0.15
0.13 0.02					
Total all phases tons/yr	0.52	3.09	4.47	0.00	0.15

0.13 0.02

*** 2009***

Page: 3
03/31/2007 9:23 AM

Phase 1 - Demolition Emissions					
Fugitive Dust	-	-	-	-	0.00
- 0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Phase 2 - Site Grading Emissions					
Fugitive Dust	-	-	-	-	0.00
- 0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Phase 3 - Building Construction					
Bldg Const Off-Road Diesel	0.42	2.88	3.33	-	0.12
0.12 0.00					
Bldg Const Worker Trips	0.10	0.06	1.27	0.00	0.02
0.00 0.02					
Arch Coatings Off-Gas	0.00	-	-	-	-
- -					
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Asphalt Off-Gas	0.00	-	-	-	-
- -					
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.52	2.94	4.60	0.00	0.14
0.12 0.02					
Total all phases tons/yr	0.52	2.94	4.60	0.00	0.14
0.12 0.02					

*** 2010***

Phase 1 - Demolition Emissions					
Fugitive Dust	-	-	-	-	0.00
- 0.00					

Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Phase 2 - Site Grading Emissions					
Fugitive Dust	-	-	-	-	0.00
- 0.00					
Off-Road Diesel	0.00	0.00	0.00	-	0.00
0.00 0.00					
On-Road Diesel	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Phase 3 - Building Construction					
Bldg Const Off-Road Diesel	0.17	1.14	1.44	-	0.05
0.05 0.00					
Bldg Const Worker Trips	0.03	0.02	0.45	0.00	0.01
0.00 0.01					
Arch Coatings Off-Gas	5.18	-	-	-	-
- -					
Arch Coatings Worker Trips	0.02	0.01	0.27	0.00	0.01
0.00 0.00					
Asphalt Off-Gas	0.01	-	-	-	-
- -					
Asphalt Off-Road Diesel	0.02	0.11	0.16	-	0.00
0.00 0.00					
Asphalt On-Road Diesel	0.00	0.02	0.00	0.00	0.00
0.00 0.00					
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00
0.00 0.00					
Total tons/year	5.43	1.30	2.32	0.00	0.06
0.05 0.01					
Total all phases tons/yr	5.43	1.30	2.32	0.00	0.06
0.05 0.01					

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jun '07
Phase 1 Duration: 1.8 months
Building Volume Total (cubic feet): 850000
Building Volume Daily (cubic feet): 25000
On-Road Truck Travel (VMT): 1389
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Rubber Tired Loaders	165	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '07
Phase 2 Duration: 3.6 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
3	Crawler Tractors	143	0.575	8.0

1	Graders	174	0.575	8.0
2	Off Highway Trucks	417	0.490	8.0
1	Rubber Tired Loaders	165	0.465	8.0

1	Scrapers	313	0.660	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Nov '07
Phase 3 Duration: 30.6 months
Start Month/Year for SubPhase Building: Nov '07
SubPhase Building Duration: 30.6 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	8.0

Start Month/Year for SubPhase Architectural Coatings: Feb '10
SubPhase Architectural Coatings Duration: 3.1 months
Start Month/Year for SubPhase Asphalt: Apr '10
SubPhase Asphalt Duration: 1.5 months
Acres to be Paved: 5.1
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Pavers	132	0.590	8.0
1	Rollers	114	0.430	8.0

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.06	0.79	0.66	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.04	0.00	0.30	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.83	-	-	-	-
TOTALS (tpy, unmitigated)	0.93	0.79	0.96	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Fast food rest. w/ drive	4.89	7.73	65.94	0.05	8.29
Free-standing discount st	15.74	24.44	208.06	0.15	26.21
Regnl shop. center	1.91	2.94	25.06	0.02	3.16
Home improvement supersto	6.42	9.80	83.44	0.06	10.51

Gasoline/service station	2.86	4.50	38.32	0.03	4.83
TOTAL EMISSIONS (tons/yr)	31.82	49.41	420.82	0.30	52.99

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive		496.12 trips/1000 sq. ft	8.10	4,018.57
Free-standing discount st		56.02 trips/1000 sq. ft.	228.75	12,814.63
Regnl shop. center		42.94 trips/1000 sq. ft.	35.94	1,543.44
Home improvement supersto		29.80 trips/1000 sq. ft.	172.46	5,139.40
Gasoline/service station		168.57 trips/Pumps	14.00	2,359.98
		Sum of Total Trips		25,876.02
		Total Vehicle Miles Traveled		191,560.58

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Free-standing discount store				2.0	1.0	97.0
Regnl shop. center				2.0	1.0	97.0
Home improvement superstore				2.0	1.0	97.0
Gasoline/service station				2.0	1.0	97.0

CONSTRUCTION EMISSIONS ESTIMATE: DETENTION BASIN CONSTRUCTION

Construction Year:	2007			
Duration:	3	months		
Onsite Travel Distance:	0.5	miles one-way	1 roundtrip	
Project Area (Total)	0.25	acre		
Amount of Soil Excavated (Total)	14000	cyds		
Average Haul Capacity	20	cyds		
Maximum Area Disturbed/Day	0.25	acre		
Total Haul Trips	350			
PM2.5 Fraction of PM10-Fugitive	0.99			SCAQMD 2006
PM2.5 Fraction of PM10-Mobile	0.21			SCAQMD 2007

Construction Period	Months
Grubbing/Land Clearing	0.25
Grading/Excavation	2
Utility Installation	0.75
Total	3

HAULING	ROG	NOx	PM10	PM2.5
Emission Rate (grams/mile)	0.89	9.3	0.29	
Total (lbs):	0.6867	7.1759	0.2238	0.0036
Total (tons):	**0.000**	**0.004**	**0.000**	**0.000**

WORKER COMMUTE

Miles one/way	20
One-way trips/day	2
No. of employees: Grubbing/Land Clearing	4
No. of employees: Grading/Excavation	6
No. of employees: Utility Installation	6

	ROG	NOx	PM10	PM2.5
Emission rate (grams/trip)	1.83	0.77	0.02	
Tons - Grub/Land Clear	0.0005	0.0001	0.0000	
Tons - Grading/Excavation	0.0171	0.0023	0.0012	
Tons - Utility Installation	0.0026	0.0003	0.0002	
Total (tons):	**0.020**	**0.003**	**0.001**	**0.001**

FUGITIVE DUST EMISSIONS	PM10	PM2.5
Emission Rate (lbs/acre exposed)	0.4280	0.0899
Total (tons):	**0.107**	**0.022**

EQUIPMENT EMISSIONS

Grubbing/Land Clearing

Number	Type	ROG pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5
1	Dozer	8.68	56.96	2.90	
1	Scraper	8.74	41.88	2.22	
1	Signal Boards	1.56	5.75	0.55	
	tons	**0.052**	**0.288**	**0.016**	**0.015**

Grading/Excavation

Number	Type	ROG pounds/day	NOx pounds/day	PM10 pounds/day	
4	Scraper	14.57	69.81	3.70	
1	Signal Boards	0.65	2.40	0.23	
	tons	**0.335**	**1.589**	**0.086**	**0.086**

Utility Installation

Number	Type	ROG pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5
1	Compactor	2.08	10.44	0.57	
1	Backhoe/Tractor	1.20	10.42	0.56	
1	Signal Boards	0.65	2.40	0.23	
1	Trenchers	0.99	6.18	0.47	
	tons	**0.041**	**0.243**	**0.015**	**0.015**

TOTAL (tons)	ROG	NOx	PM10	PM2.5
	0.4	**2.1**	**0.2**	**0.1**
		EXHAUST	0.1	0.1
		FUGITIVE	0.1	0.0
			0.2	0.1

CONSTRUCTION EMISSIONS ESTIMATE: DETENTION BASIN CONSTRUCTION

Construction Year:	2007			
Duration:	3	months		
Onsite Travel Distance:	0.5	miles one-way	1	roundtrip
Project Area (Total)	0.25	acre		
Amount of Soil Excavated (Total)	14000	cyds		
Average Haul Capacity	20	cyds		
Maximum Area Disturbed/Day	0.25	acre		
Total Haul Trips	350			
PM2.5 Fraction of PM10-Fugitive	0.99			SCAQMD 2006
PM2.5 Fraction of PM10-Mobile	0.21			SCAQMD 2007

Construction Period	Months
Grubbing/Land Clearing	0.25
Grading/Excavation	2
Utility Installation	0.75
Total	3

HAULING	ROG	NOx	PM10	PM2.5
Emission Rate (grams/mile)	0.89	9.3	0.29	
Total (lbs):	0.6867	7.1759	0.2238	0.0036
Total (tons):	**0.000**	**0.004**	**0.000**	**0.000**

WORKER COMMUTE

Miles one/way	20
One-way trips/day	2
No. of employees: Grubbing/Land Clearing	4
No. of employees: Grading/Excavation	6
No. of employees: Utility Installation	6

	ROG	NOx	PM10	PM2.5
Emission rate (grams/trip)	1.83	0.77	0.02	
Tons - Grub/Land Clear	0.0005	0.0001	0.0000	
Tons - Grading/Excavation	0.0171	0.0023	0.0012	
Tons - Utility Installation	0.0026	0.0003	0.0002	
Total (tons):	**0.020**	**0.003**	**0.001**	**0.001**

FUGITIVE DUST EMISSIONS	PM10	PM2.5
Emission Rate (lbs/acre exposed)	0.4280	0.0899
Total (tons):	**0.107**	**0.022**

EQUIPMENT EMISSIONS

Grubbing/Land Clearing

Number	Type	ROG pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5
1	Dozer	8.68	56.96	2.90	
1	Scraper	8.74	41.88	2.22	
1	Signal Boards	1.56	5.75	0.55	
	tons	**0.052**	**0.288**	**0.016**	**0.015**

Grading/Excavation

Number	Type	ROG pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5
4	Scraper	14.57	69.81	3.70	
1	Signal Boards	0.65	2.40	0.23	
	tons	**0.335**	**1.589**	**0.086**	**0.086**

Utility Installation

Number	Type	ROG pounds/day	NOx pounds/day	PM10 * pounds/day	PM2.5
1	Compactor	2.08	10.44	0.57	
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1	Trenchers	0.99	6.18	0.47	
	tons	**0.041**	**0.243**	**0.015**	**0.015**

TOTAL (tons)	ROG	NOx	PM10	PM2.5
	0.4	2.1	0.2	0.1
EXHAUST			0.1	0.1
FUGITIVE			0.1	0.0
			0.2	0.1

Road Construction Emissions Model

Version 5.2

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C28.

Input Type		
Project Name	Delano	
Construction Start Year	2007	Enter a Year between 2000 and 2010 inclusive
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	6	months
Predominate Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
On-Road Emission Factors: Enter 1, 2, 3, or 4	4	1. Emfac7fv1.1 4. Emfac2002 (default) 2. Emfac7G 3. Emfac2001
Project Length	0.5	miles
Total Project Area	7	acres
Maximum Area Disturbed/Day	1	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0	yd^3/day
Soil Exported	0	yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Road Construction Emissions Model, Version 5.2

Emission Estimates for -> Delano					Exhaust	Fugitive Dust	
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	
Grubbing/Land Clearing	8	41	44	5	2	3	
Grading/Excavation	9	43	47	5	3	3	
Drainage/Utilities/Sub-Grade	9	46	48	5	3	3	
Paving	3	16	23	1	1	0	
Maximum (pounds/day)	9	46	48	5	3	3	
Total (tons/construction project)	0.52	2.32	3.11	0.30	0.16	0.14	<-tons

Notes:

Project Start Year ->	2007
Project Length (months) ->	6
Total Project Area (acres) ->	7
Maximum Area Disturbed/Day (acres) ->	1
Total Soil Imported/Exported (yd^3/day)->	0

PM10 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I.

San Joaquin Valley Air Pollution Control District
CEQA Modeling Memo

TO: Kurt Legleiter, Ambient Consulting

FROM: Matthew Cegielski, AQS – Technical Services

DATE: 07/14/06

FACILITY NAME: Delano Marketplace

LOCATION: Woollomes and Garizolli street Delano, CA

APPLICATION NO. C-7076 **PROJECT NO.** 1061533

RMR SUMMARY

RMR Summary	
Categories	**Facility Totals**
Acute Hazard Index	0.0
Chronic Hazard Index	0.0
Maximum Individual Cancer Risk (10^{-6})	1.4
Maximum Receptor Cancer Risk (10^{-6})	1.8

On the request of Ambient Consulting a modeling run for the Delano Marketplace CEQA project was completed by Technical services. The ISCST 3 model was used to determine the maximum concentration at the residential and business receptors. This information along with the emissions data was entered into the HARP 1.0 model. This concentration was used in the HARP 1.0 model to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The associated spreadsheets and modeling files are included on the enclosed compact disc.

For the current parameters and sources provided for this project the risk was deemed less than significant.

Please inform technical services of any changes in modeling input when resubmitting the CEQA report.

For more information or help with modeling, please contact Glenn Reed at (559) 230-5923 or mailto:glenn.reed@valleyair.org

TECHNICAL APPENDICES

Appendix C – Biological Resources

PMC. *Surveys for San Joaquin Kit Fox and Burrowing Owl at the Delano Marketplace Project Site.* December 19, 2006.

PMC. *Delano Interchange Site Reconnaissance Memo.* December 19, 2006.

PMC

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December 19, 2006

Mr. King Leonard, Interim Community Development Director
CITY OF DELANO
1015 Eleventh Avenue
Delano, California 93216

RE: SURVEYS FOR SAN JOAQUIN KIT FOX AND BURROWING OWL AT THE DELANO MARKETPLACE PROJECT SITE

Dear Mr. Leonard:

At the request of the City of Delano, Pacific Municipal Consultants' (PMC) biologists performed surveys for active San Joaquin kit fox (*Vulpes macrotis mutica*) dens and burrowing owl (*Athene cunicularia*) nests at the Delano Marketplace project site. This letter is intended to provide the City of Delano recent information about the potential occurrence of either species at the project site and provides background information regarding San Joaquin kit fox and burrowing owl, a discussion of site characteristics, as well as survey results. These data will ultimately support consultation between the project applicant and the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG).

Den Survey for San Joaquin Kit Fox

Species Account

The San Joaquin kit fox is a federal endangered and California threatened listed species. As described in the California Wildlife Habitat Relationship (CWHR) system, this fox is believed to have ranged historically from southern Kern County to Contra Costa and Stanislaus Counties in the San Joaquin Valley. They inhabited several San Joaquin Valley vegetation communities, including annual grassland and a variety of scrub habitats. The USFWS (2005) reports current San Joaquin kit fox populations to be extremely fragmented. In their northern range, kit fox are found primarily in foothill grassland, oak savannah, and adjacent agricultural areas. In the southern range, kit fox inhabit grassland and scrubland communities, including those that have been modified by development, such as with oil exploration, wind turbines, agriculture and grazing.

The CWHR system states that San Joaquin kit fox are primarily carnivorous, feeding on small mammals (i.e., black-tailed jackrabbit [*Lepus californicus*], desert cottontail [*Sylvilagus audubonii*], kangaroo rat [*Dipodomys sp.*], and ground squirrel [*Spermophilus sp.*]), insects, reptiles, ground-nesting birds, and bird eggs. According to the USFWS (2005), dens are used for temperature regulation, shelter from adverse weather, protection from predators,

and refuge for pups. Kit fox excavate dens in open, level areas with loose-textured soils. However, kit fox also use dens constructed by other animals as well as man-made structures, such as culverts, abandoned pipelines, or banks in sumps or roadbeds. Kit fox often change dens; so many different areas may be used throughout the year.

The CWHR system reports that adult breeding pairs of kit fox stay together throughout the year. Females begin to clean and enlarge pupping dens between September and October and mating occurs between December and March. Litters of typically two to six pups are born in February or March. Pups emerge from the den about one month later. The USFWS (2005) considers disturbance or loss of dens, fragmentation of habitat, hunting, trapping, off-road vehicles, and use of rodenticides and other poisons as contributors to San Joaquin kit fox decline.

Site Characteristics

The California Natural Diversity Database (CNDDB) reports that the Delano Marketplace project site is located within the distributional range of the San Joaquin kit fox. The most notable recorded occurrences of this species in relation to the project site are from 1997 in Tulare County. San Joaquin kit foxes were documented in the CNDDB from the Pixley National Wildlife Refuge and southwest of the City of Earlimart, which are both within approximately ten miles from the project site (north from the site) and considered within the dispersal range of this species.

On August 29, 2006, the project site was found to be barren and had presumably been graded. However, burrows that were large enough to be possible dens were present onsite. The area consisted of friable soils, an essential element for the presence of kit fox according to the CWHR system, and was suitable to potentially support kit fox prey. Furthermore, the City of Delano General Plan (2000) recognizes that San Joaquin kit fox potentially occur within and near their area of influence.

Survey Methods

During the afternoon of August 29, 2006, Joyce Hunting (Director of Biological Resources at PMC), Jeanette Owen, and Jessica Nadolski performed pedestrian linear transects of the Delano Marketplace project site at fifty foot intervals. Transects were spaced to ensure 100 percent visual coverage of the site. The location of burrows with an entrance measuring approximately four inches in diameter and greater was noted using pin flags and later recorded using a Trimble Global Positioning System (GPS) capable of sub-meter accuracy. These data were then overlain onto an aerial of the project site (attached). A total of sixteen burrows were identified (in this manner) as possible den for San Joaquin kit fox and labeled sequentially. In addition to possible dens, other signs of kit fox, including tracks, scat, and prey remains, were also surveyed for while performing the transects.

Prior to sunset on the evening of the 29th, the entrance to each of the sixteen potential dens was dusted with tracking medium (flour) and photographed before and after initial dusting (attached). After sunrise on the morning of the 30th, each of the sixteen entrances was checked for presence/absence of canid tracks and photographed. Due to the likelihood of similar species in the area (i.e., coyote, red fox, and domestic dogs) and possible difficulty distinguishing kit fox tracks, presence of any canid track was considered a sign of occupancy

for all potential dens. Prior to sunset on the 30th, each potential den entrance was re-dusted and photographed then evaluated the following morning for signs of activity. Dusting in the evening followed by morning evaluations and photography, were continued through dawn of September 1, 2006.

Findings

As stated above, sixteen burrows were identified as potential dens at the project site. During the initial transects, one possible sign of kit fox, old (not fresh) scat, was observed in the northwest corner of the project site and the location noted with the Trimble GPS (attached). At burrow fourteen, most of the tracking medium was removed during the day of August 30, 2006 (see attached photograph 97), but no identifiable tracks were found and the cause was determined to be something other than a canine. Throughout the rest of the survey, no canid tracks of any kind were noted around or near the entrances to possible dens. Also, no fresh scat or prey remains were observed onsite. Therefore, it is unlikely that San Joaquin kit fox recently inhabited the project site or that an active den existed onsite at the time of this survey. However, due to site characteristics (discussed above) and the location of the proposed project, it is possible that transient kit fox disperse throughout the area and may seek potential dens onsite in the future.

Special status wildlife species, such as the San Joaquin kit fox, are considered to be a sensitive resource by federal and state agencies. Take of an individual, as defined by the Federal Endangered Species Act, from activities related to the Delano Marketplace proposed project is considered a potentially significant impact under the California Environmental Quality Act. Mitigation to reduce this impact to a less than significant level is discussed below.

Mitigation

The project applicant shall retain a qualified biologist approved by the City of Delano to ensure no incidental take of San Joaquin kit fox occurs during construction or through any project-related activity occurring onsite. Consequently, no more than 30 days prior to ground disturbance the biologist shall conduct a survey for San Joaquin kit fox within and in the immediate vicinity of the project site to ensure take avoidance. Survey results shall be submitted to the USFWS and CDFG for evaluation and comment prior to the onset of construction activities.

The regulatory agencies (USFWS and CDFG) may recommend project modifications or additional actions, such as biological monitoring, further avoidance measures, minimization, restoration, preservation, or compensation. Compensation for loss of habitat could include the acquisition and preservation of equivalent acreage of suitable San Joaquin kit fox habitat (minimum acreage loss-replacement ratio 1:1) at an approved mitigation bank. The project applicant shall implement actions recommended by the USFWS and CDFG.

Furthermore, minimum construction requirements as outlined in the USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance (1999) shall be implemented by the biologist in coordination with the project applicant as follows:

a) Restrict project-related vehicle traffic to established roads or other designated areas onsite. Vehicles should observe a 20-mile per hour speed limit in all project areas (except on paved pre-existing roads with an established speed limit). Off-road traffic outside of the designated project areas should be prohibited;

b) Night-time construction should be prohibited;

c) All excavated, steep-walled holes or trenches more than two feet deep shall be covered at the close of each working day by plywood or similar materials or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, each shall be thoroughly inspected for trapped animals. If at any time a trapped or injured San Joaquin kit fox is discovered, the procedures described under subsection "n" must be followed;

d) All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored onsite for one or more nights shall be thoroughly inspected for San Joaquin kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a San Joaquin kit fox is discovered inside a pipe, that section of pipe shall not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved once to remove it from the path of construction activity, until the fox has escaped;

e) All food-related trash items, such as wrappers, cans, bottles, and food scraps, shall be disposed of in closed containers and removed at least once a week from the project site;

f) No firearms shall be allowed on the project site;

g) No pets (e.g., dogs, cats, etc.) shall be permitted onsite;

h) Use of rodenticides and herbicides in project areas shall be prohibited. If rodent control must be conducted, zinc phosphide should be used because of a proven (and recognized by the USFWS) lower risk to kit fox;

i) The biologist shall be the appointed contact source for any employee or contractor who might inadvertently kill or injure a San Joaquin kit fox or who finds a dead, injured, or entrapped animal. The biologist will be identified during the employee education program (see below). Furthermore, the biologist's name and telephone number shall be provided to the USFWS;

j) An employee education program shall be instituted for all site personnel. The program will consist of a brief presentation by the biologist that includes a description of the San Joaquin kit fox and its habitat needs, a report of the occurrence of San Joaquin kit fox in the project area, an explanation of the status of the species and its protection under FESA and CESA, as well as a list of measures being taken to reduce impacts to the species during project

implementation. A fact sheet conveying this information shall be prepared by the biologist and distributed to any personnel who may enter the project site;

k) Upon completion of the proposed project, all areas subject to temporary ground disturbance, including storage and staging areas, temporary roads, pipeline corridors, etc. shall be re-contoured if necessary and revegetated to promote restoration of the area to pre-project conditions to the extent possible. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the USFWS, CDFG, and revegetation experts;

l) Should any San Joaquin kit fox be found trapped onsite, escape ramps or structures shall be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for advice;

m) Any onsite personnel who inadvertently kills or injures a San Joaquin kit fox (or witnesses such an occurrence) shall immediately report the incident to the biologist. Subsequently, the biologist shall contact the CDFG immediately in the case of a dead, injured, or entrapped fox; and

n) The biologist shall notify the USFWS and CDFG in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project-related activities. Notification shall include the date, time, and location of the incident or of the finding of a dead or injured animal as well as any other pertinent information.

Nest Survey for Burrowing Owl

Species Account

Burrowing owl is a federal and California species of concern. As described in the CWHR system, this gregarious owl is found commonly in fallow agricultural fields and low-growing grassland, and also frequents habitats such as airport fields, highway shoulders, golf courses, and vacant lots. As a subterranean nester, the burrowing owl is dependant on ground squirrels or other small mammals for ideal nest sites and tends to reuse the same burrows year after year. Man-made structures such as cement culverts, debris piles, or openings beneath pavement can also provide suitable nest areas. Burrowing owls can often be seen in the daytime perching near their burrow.

Stokes (1996) describes nesting season as beginning as early as February 1 and continuing through August 31, peaking between April 15 and July 15. An average nest consists of 6 to 11 white eggs that need to be incubated for 21 to 28 days. The young are initially dependent on their parents for food and warmth and generally leave the nest about 28 days from hatching. According to the California Burrowing Owl Consortium (1993), disturbance of nest sites (harassment within 160 feet of the burrow) and habitat loss contribute to the decline of this species.

Site Characteristics

The CNDDB includes several records of burrowing owl occurrence in Kern County, the most relevant to the Delano Marketplace project site being a single record from 1982 of a burrowing owl one mile west of the City of Delano. Recent unpublished studies being conducted in the area also suggest that burrowing owl commonly occupy abandoned kit fox dens, which also potentially occur onsite (see kit fox discussion above).

On August 29, 2006, the project site was found to be barren and had presumably been graded. However, burrows, an essential element for presence of burrowing owl according to the CWHR system, were present. Furthermore, the City of Delano General Plan (2000) recognizes that burrowing owl potentially occur within and near their area of influence

Survey Methods

During the afternoon of August 29, 2006, Joyce Hunting, Jeanette Owen, and Jessica Nadolski performed pedestrian linear transects of the Delano Marketplace project site at fifty foot intervals. Transects were spaced to ensure 100 percent visual coverage of the site as biologists looked for potential nests, pellets, and prey remains. The location of burrows with an entrance measuring less than four inches in diameter (but large enough to be potential nests) was noted using a Trimble Global Positioning System (GPS) capable of sub-meter accuracy. These data were then overlain onto an aerial of the project site (attached). For three consecutive days (from the evening of August 29th through the morning of September 1st), burrows were observed from a distance through binoculars for the presence of owl at dawn and dusk.

Findings

Several burrows were identified as potential nests for burrowing owl at the project site, including the sixteen possible kit fox dens. Throughout the duration of the survey, no burrowing owls were observed around or near the entrances to possible nests or anywhere else on or near the project site. Also, no pellets or prey remains were observed onsite. Therefore, it is unlikely that burrowing owl recently inhabited the project site or that an active nest existed onsite at the time of this survey. However, due to site characteristics (discussed above) and the location of the proposed project, it is possible that burrowing owl dispersing through the area may seek potential nests or cover onsite in the future.

Substantial adverse effect from project activities to sensitive wildlife species, such as the burrowing owl, is considered a potentially significant impact under the California Environmental Quality Act. Mitigation to reduce this impact to a less than significant level is discussed below.

Mitigation

The project applicant shall retain a qualified biologist approved by the City of Delano to complete mitigation established by the CDFG in 1995 to "avoid and minimize impacts to burrowing owls at a project site and preserve habitat that will support viable owl populations." The biologist shall complete preconstruction surveys of suitable burrowing owl habitat at the project site and within surrounding areas (up to 150 feet outside the project area) no more than 30 days prior to ground disturbance activities. If no burrowing owls are detected during the preconstruction surveys, no action is necessary. However, if

burrowing owls are detected within the project area, the following shall apply (as outlined in CDFG guidance):

- During the nonbreeding season (September 1st through January 31st), no disturbance should occur within approximately 160-foot radius of an occupied burrow. During the nesting season (February 1st through August 31st), occupied burrows should not be disturbed within a 250-foot radius unless a qualified biologist approved by the CDFG verifies through noninvasive methods that either: (1) the birds have not begun egg-laying and incubation or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival;

- The project applicant shall acquire and permanently protect, either through conservation easement or through an approved mitigation bank, a minimum of 6.5 acres (amount established by the CDFG) of foraging habitat (calculated on an approximate 300-foot foraging radius around the burrow) per pair or unpaired resident bird to offset the loss of foraging and burrow habitat on the project site. The protected lands should be adjacent to occupied burrowing owl habitat and at a location acceptable to the CDFG. Protection of additional habitat acreage per pair or unpaired resident bird may be applicable based on CDFG guidance;

- When destruction of occupied burrows is unavoidable, existing unsuitable burrows should be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows per CDFG design specifications) at a ratio of 2:1 on the protected lands site;

- If owls must be moved away from the disturbance area, passive relocation techniques (as outlined by the CDFG [i.e., use of one-way doors]) should be used rather than trapping. At least one or more weeks will be necessary to accomplish this and allow the owls to acclimate to alternate burrows;

- The project applicant shall provide funding for long-term management and monitoring of the protected lands. The monitoring plan should include success criteria, remedial measures, and an annual report to the CDFG.

In summary, it is unlikely either San Joaquin kit fox or burrowing owl have recently inhabited the Delano Marketplace project site, as no individuals were found during the surveys. However, it is possible that these species, especially transient kit fox known to range throughout the surrounding areas, may seek potential dens/nests onsite. Take, such as harassment or loss, of these individuals from development activities related to the Delano Plaza proposed project would be considered a potentially significant impact under the California Environmental Quality Act. Therefore, mitigation measures (as outlined above in this report) are necessary to reduce impact to a less than significant level. Subsequent to their review, the regulatory agencies (USFWS and CDFG) may also require/recommend additional measures to reduce potential impact from project activities.

If you have any questions regarding the information contained in this letter, please contact Erika Spencer at 831.644.9174.

Sincerely,

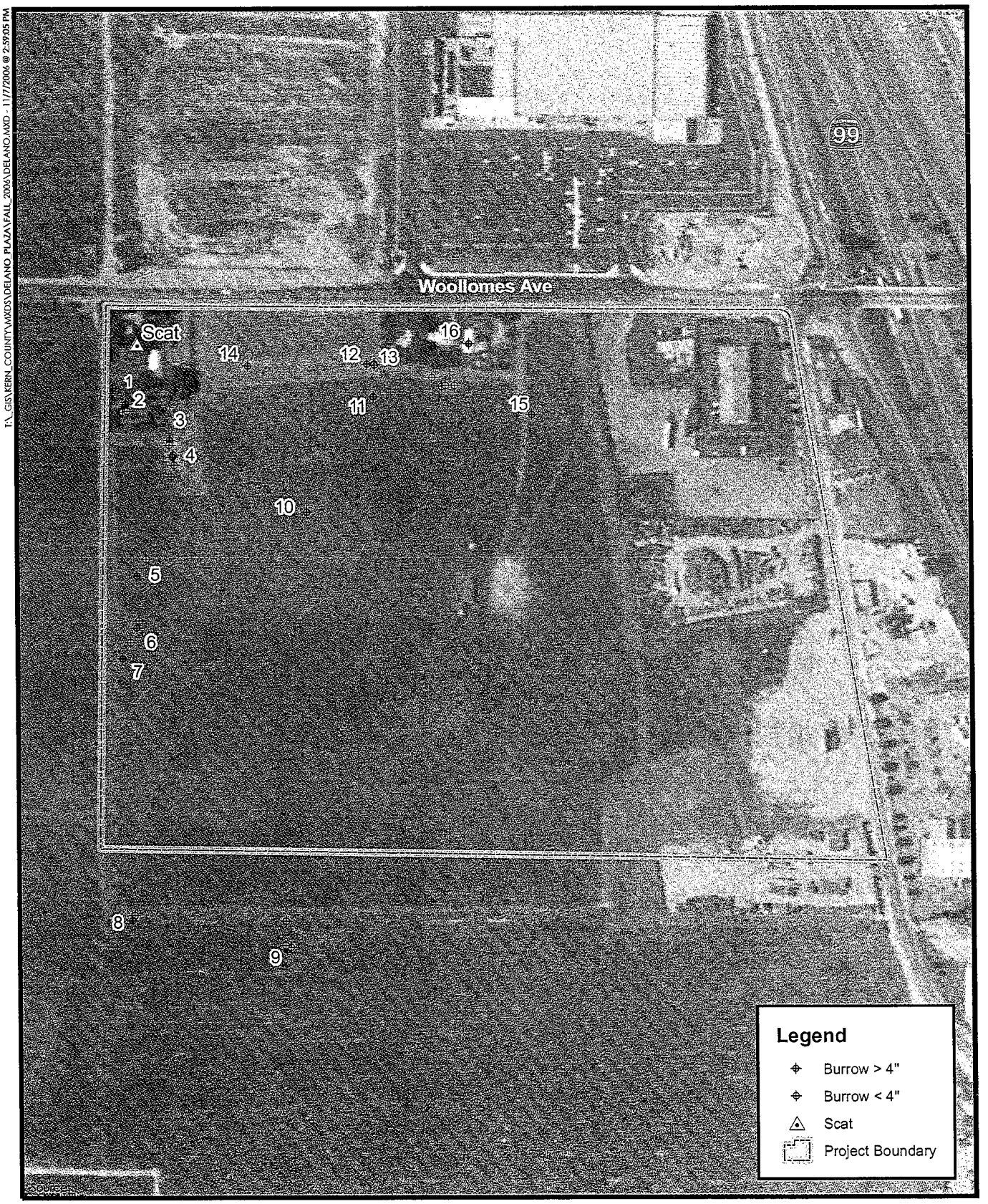
PACIFIC MUNICIPAL CONSULTANTS

Erika Spencer for
Jessica A. Nadolski
Conservation Biologist

JAN:JAN:JH

Attachments (2)

Cc: Erika Spencer
Joyce Hunting



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BURROWS WITHIN AND NEAR THE PROJECT SITE

PMC

PMC

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Memo

To: Erika Spencer

PACIFIC MUNICIPAL CONSULTANTS

From: Jessica A. Nadolski

Cc: Joyce Hunting

Date: December 19, 2006

Re: Delano Interchange Site Reconnaissance

At the request of the City of Delano, Pacific Municipal Consultant biologists surveyed the Delano Interchange project site on November 8, 2006. The Interchange site is to be included as proposed mitigation in the environmental documentation for the previously surveyed Delano Marketplace project. A general inspection of the project site was performed to adequately characterize current habitat and to ascertain the potential need for additional mitigation (other than what was stipulated for the original Delano Plaza site).

The Interchange site consists primarily of urban areas and ruderal annual grassland (see Photos 1 and 2), which is consistent with habitat described for the original Delano Marketplace project site. Therefore, no additional mitigation is recommended beyond the three measures previously outlined in the biological section of the Environmental Impact Report for the Delano Marketplace.

Photo 1: Garzoli Avenue

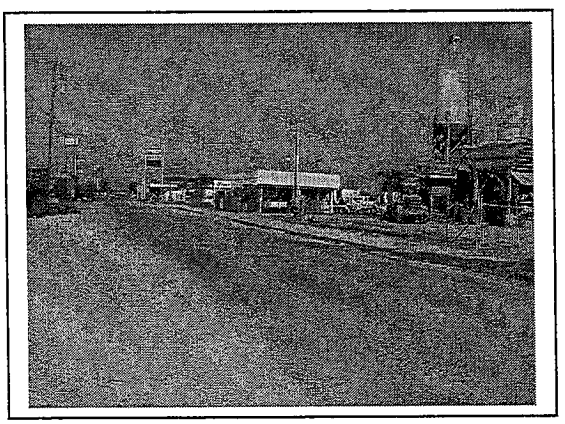
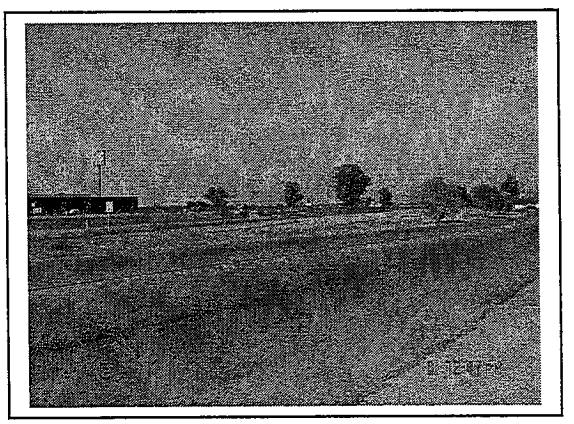


Photo 2: High Street



TECHNICAL APPENDICES

Appendix D – Cultural Resources

PMC. *Cultural Resources Investigations for the Delano Marketplace Project.* March 2005.

PMC. *Delano Interchange Site Reconnaissance Memo.* December 19, 2006.

CULTURAL RESOURCES INVESTIGATIONS
for the
DELANO MARKETPLACE PROJECT
in the
CITY OF DELANO, KERN COUNTY

Report Prepared For:

The City of Delano

Report Prepared By:

Pacific Municipal Consultants
585 Cannery Row
Suite 304
Monterey, CA 93940

March 2005

MANAGEMENT SUMMARY

The Delano Plaza Project is located at the southwest corner of Woollomes Avenue and South Garzoli Avenue, near the intersection of State Route 99 and Woollomes Avenue in the City of Delano, Kern County, California. The project encompasses approximately 45 acres and includes demolition of existing buildings and structures on the property and construction of a retail center totaling approximately 454,000 square feet. The retail center would likely include construction of: a large retail facility; a home improvement center; specialty retail shops; restaurants (i.e., sit-down and fast food facilities); and a gas station. The project also includes the installation of infrastructure such as sewer, water, and electrical facilities. The project is subject to the legal requirements of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.) 1970, as amended.

The City of Delano contracted Pacific Municipal Consultants to conduct cultural resources investigations for the proposed Delano Plaza Project. Cultural resources investigations included: a record search at the Southern San Joaquin Valley Archaeological Information Center at California State University, Bakersfield; a scared lands search; archival research at the Kern County Assessor's Office; Native American consultation; and pedestrian surface survey of the Area of Potential Effects (APE) for the project. The records search did not identify any cultural resources (e.g., prehistoric sites, historic sites, isolated artifacts, and/or historic buildings) within the project APE. Similarly, the sacred lands search did not identify any sensitive Native American cultural resources either within or near the project APE. Pedestrian surface survey did not identify any prehistoric or historic sites, but did identify buildings and structures within the project APE that were built between 1932 and 1961. None of these buildings and structures appears to meet the eligibility criteria for inclusion in the California Register of Historical Resources or for consideration as unique archaeological resources. Therefore, construction of the Delano Plaza in the City of Delano, as currently proposed, would not likely affect any historical resources or unique archaeological resources.

TABLE OF CONTENTS

MANAGEMENT SUMMARY i

1.0 INTRODUCTION 1
1.1 PROJECT DESCRIPTION 1
1.2 PROJECT LOCATION 1
1.3 SCOPE OF WORK 1
1.3.1 Cultural Resources Identification 1
1.3.2 Site Recording 5
1.4 NATIVE AMERICAN CONSULTATION 5
1.5 PROJECT PERSONNEL 5

2.0 ENVIRONMENTAL CONTEXT 6
2.1 GEOLOGY and GEOGRAPHY 6
2.2 FLORA and FAUNA 6

3.0 CULTURAL CONTEXT 7
3.1 REGIONAL PREHISTORY 7
3.2 REGIONAL ETHNOGRAPHY 7
3.2 EUROAMERICAN CONTACT 8

4.0 RESULTS OF CULTURAL RESOURCES INVESTIGATIONS 10
4.1 SITE CHARACTERIZATION and ELIGIBILITY for the CALIFORNIA REGISTER OF HISTORICAL RESOURCES 10
4.1.1 450 Woollomes Avenue 11
4.1.2. 456 Woollomes Avenue 11
4.1.3. 542 Woollomes Avenue 12
4.1.4. 548 Woollomes Avenue 13
4.1.5. 554 Woollomes Avenue 13
4.1.6. 727 Woollomes Avenue 14
4.1.7. Parcel 5 Structure 15
4.2 SITE MANAGEMENT RECOMMENDATIONS 15

5.0 MANAGEMENT CONSIDERATIONS 17

6.0 BIBLIOGRAPHY 18

APPENDIX A – SITE RECORDS

APPENDIX B – NATIVE AMERICAN CONSULTATION

LIST OF FIGURES

Figure 1 Project Vicinity Map 2

Figure 2 Project Location Map 3

Figure 3 Site Location Map 4

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The Delano Plaza Project encompasses approximately 45 acres and includes demolition of existing buildings and structures on the property and construction of a retail center totaling approximately 454,000 square feet. The retail center would likely include construction of: a large retail facility; a home improvement center; specialty retail shops; restaurants (i.e., sit-down and fast food facilities); and a gas station. The project also includes the installation of infrastructure such as sewer, water, and electrical facilities.

1.2 PROJECT LOCATION

The Delano Plaza Project is located at the southwest corner of Woollomes Avenue and South Garzoli Avenue, near the intersection of State Route 99 and Woollomes Avenue in the City of Delano, Kern County, California (Figures 1-2). The project site is in a commercial area, adjacent to State Route 99 and a new Home Depot.

1.3 SCOPE OF WORK

Cultural resources staff of Pacific Municipal Consultants (PMC) conducted archaeological and historical investigations for the Delano Plaza Project in January 2005. These investigations included: a records search at the Southern San Joaquin Valley Archaeological Information Center at California State University, Bakersfield; archival research at the Kern County Assessor's Office; a sacred lands search conducted by the Native American Heritage Commission (NAHC); consultation with the Native American community; pedestrian surface survey of the project Area of Potential Affects (APE); and completion of a report that documents the results of archaeological and historical investigations and presents management recommendations, as appropriate, for cultural resources (e.g., prehistoric sites, historic sites, and/or historic buildings) within project boundaries.

1.3.1 Cultural Resources Identification

The record search identified a previous survey (cf., Yohe 1991) that covered a small section of the project APE and 3 surveys (cf., Hatoff et al. 1995; Mellon 2001; Nadolski 2004) within ¼ mile of the project APE. None of these surveys identified any cultural resources either within or near the project APE. Regardless, nearly the entire project APE was not previously surveyed. Consequently, PMC conducted a pedestrian surface survey across the project APE using 20-30 meter transects. Surface survey did not identify any prehistoric or historic sites, but did identify: the Pioneer Motel at 1001 Garzolli Avenue; the Garzolli Pallet Company at 1051 Garzolli Avenue; 5 residences and associated structures (e.g., garages and storage sheds) at 450, 456, 542, 548, and 554 Woollomes Avenue; a restaurant at 727 Woollomes Avenue; an abandoned garage and machine shop on Parcel 5; and an area owned by the Garzolli Pallet Company that is covered with modern trash and other debris (Figure 3). In addition, there were several piles of modern household trash scattered across the project APE, and it appears to be disturbed by grading or other similar activities.

Archival research at the Kern County Assessor's Office regarding the buildings/structures in the project APE determined that: the 5 residences were built between 1940 and 1961; the restaurant was built in 1932, and moved to its present location in 1955; and the abandoned garage/machine shop was built in 1943. The other structures (e.g., the Pioneer Motel) within the project APE do not meet the age requirement to be considered for inclusion in the CRHR. Similarly, the area owned by the Garzolli Pallet Company that contains modern trash does not meet the eligibility criteria to be considered for inclusion in the CRHR or for consideration as a unique archaeological resource. Surface visibility across the project APE was limited by vegetation (e.g., grasses), but areas of native surface were visible and overall surface visibility was adequate to identify prehistoric and/or historic sites and features in the project APE. Cultural resources investigations are adequate for the project, as currently proposed, and a reasonable effort has been made to identify cultural resources

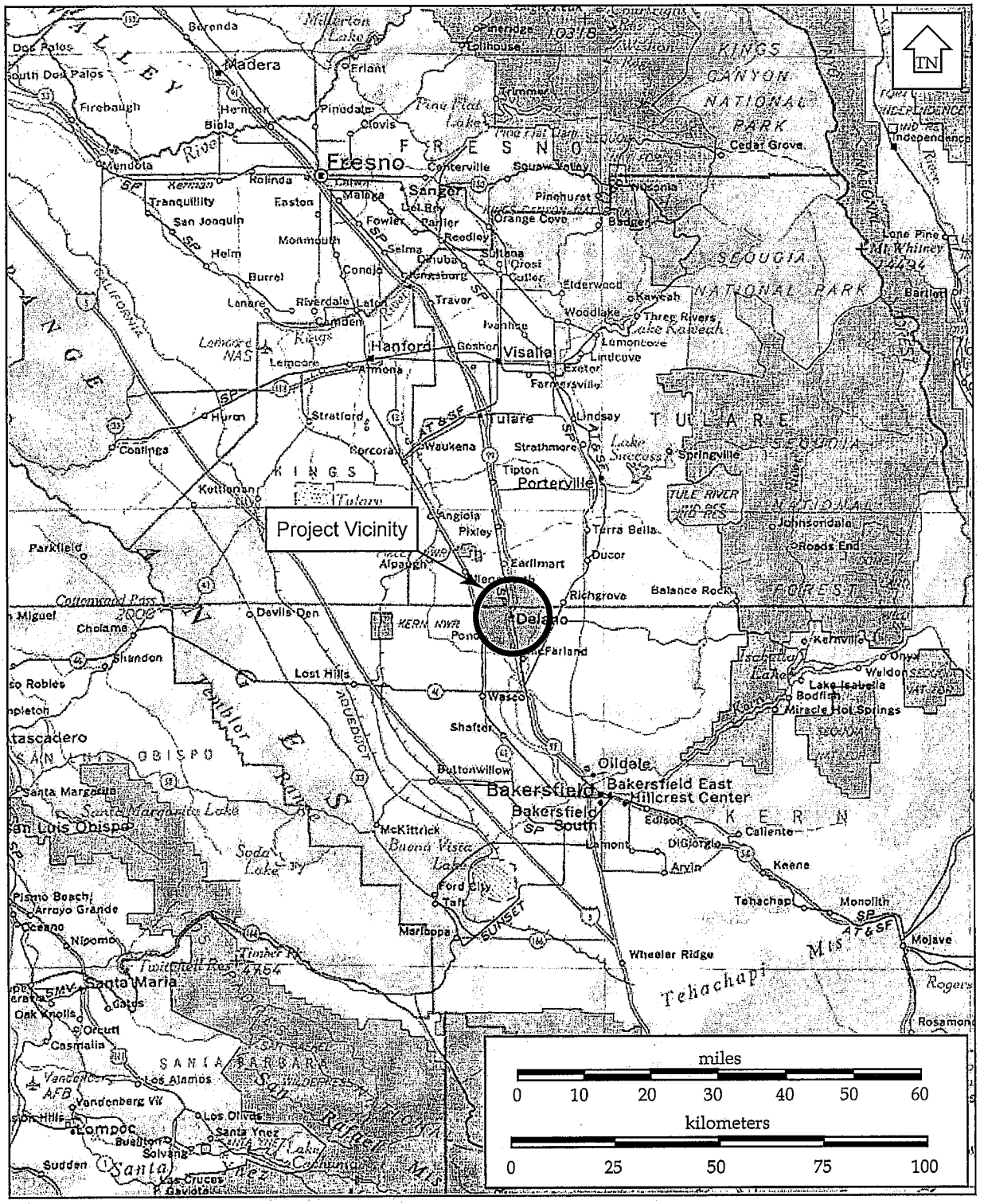


Figure 1. Project Vicinity Map.

SOURCE: National Geographic TOPO!; Bakersfield CD; 2000

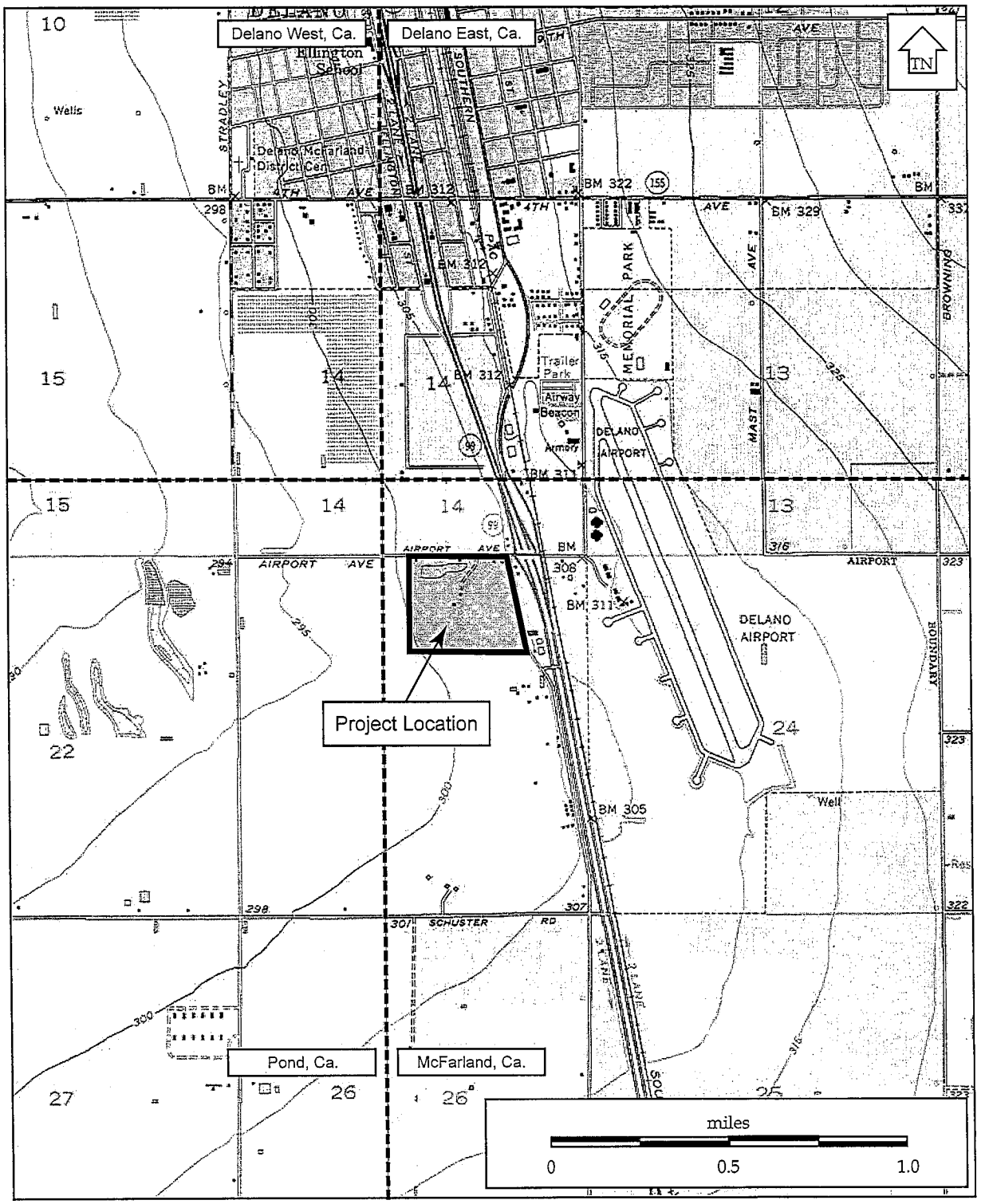


Figure 2. Project Location Map.

SOURCE: National Geographic TOPO!; Bakersfield CD; 2000 showing Delano East, Ca., Delano West, Ca., Pond, Ca., and McFarland, Ca. quadrangles; T25S, R25E.

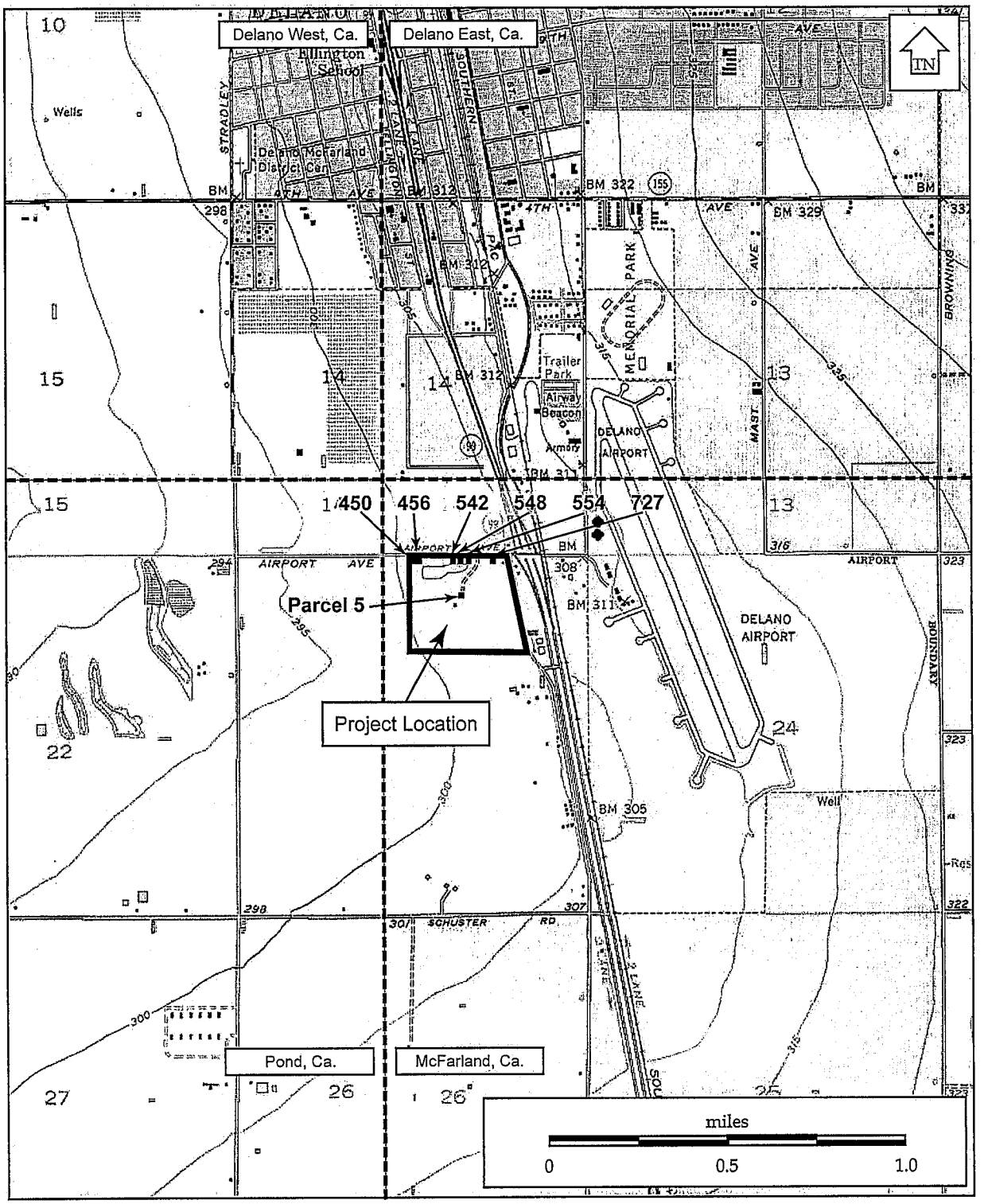


Figure 3. Site Location Map.

SOURCE: National Geographic TOPOI; Bakersfield CD; 2000 showing Delano East, Ca., Delano West, Ca., Pond, Ca., and McFarland, Ca. quadrangles; T25S, R25E.

within the APE for the Delano Plaza Project.

1.3.2 Site Recording

Current cultural resources investigations identified 5 private residences, a restaurant, and a garage/machine shop within the project APE that were built between 1932 and 1961. PMC cultural resources staff adequately recorded these buildings/structures in January 2005 using Department of Parks and Recreation site record forms (e.g., Primary Record Forms and Building, Structure, and Object Record Forms). The site records are included with this report in Appendix A.

1.4 NATIVE AMERICAN CONSULTATION

PMC cultural resources staff requested a sacred lands search and a list of Native American contacts from the Native American Heritage Commission. The sacred lands search was received on January 25, 2005 and did not identify any Native American cultural resources either within or near the APE for the Delano Plaza Project. PMC contacted all groups and/or individuals on the list provided by the NAHC regarding the proposed project (Appendix B, Native American Consultation). PMC, to date, has not received any comments regarding the project from any interested parties.

1.5 PROJECT PERSONNEL

Professional staff of Pacific Municipal Consultants performed all current archaeological and historical investigations for the Delano Plaza Project. Field and archival research for the project was conducted in January 2005. John A. Nadolski, M.A. was responsible for overall project management and implementation, including report writing. Kurt E. Lambert, B.A. assisted Mr. Nadolski in the completion of archaeological and historical investigations. All project personnel meet the Secretary of the Interior's Standards and Guidelines for Professional Qualifications.

2.0 ENVIRONMENTAL CONTEXT

The Delano Plaza Project is located in the San Joaquin Valley in the City of Delano. The valley provided an exceptionally rich resource base that was exploited by prehistoric and historic Native American populations. Euroamericans also used the area for agricultural and petroleum production.

2.1 GEOLOGY AND GEOGRAPHY

The Central Valley of California stretches 430 miles northwest by southeast, with a maximum width of 50 miles, and is divided into the Sacramento Valley in the north and the San Joaquin Valley in the south. The San Joaquin Valley primarily consists of alluvial deposits that were accumulated while shallow brackish and freshwater lakes occupied the valley (Norris and Webb 1990). These lakes dried up, leaving the surface of the valley covered by unconsolidated sediments that are generally very fertile. Currently, the San Joaquin Valley is a broad semi-arid plain that only receives 5-10 inches of annual rainfall. Regardless, the Kings, Kaweah, Tule, and Kern Rivers, and other smaller rivers and creeks bring water to the San Joaquin Valley from the southern Sierra Nevada. Prior to Euroamerican occupation of the area these rivers produced a complex pattern of streams, sloughs, lakes (e.g., Tulare Lake and Buena Vista Lake), and marshlands throughout the area (Beckman 1998). The valley wetlands provided virtual forests of tules, which grew to 10-12 feet in height and provided habitat for waterfowl, turtles and fresh-water mussels (Beckman 1998). In addition, willows, cottonwoods, and sycamores lined the rivers that flowed into the valley. This environment, however, was dramatically affected by Euroamerican occupation and use of the area. For example, much of the water entering the valley was diverted to irrigation canals and the valley floor was converted to agricultural use. Agricultural use of the valley has continued and intensified since initial Euroamerican settlement in the area.

2.2 FLORA AND FAUNA

The project area is changing from agricultural use to an urban environment. Former agricultural lands in the area are gradually being developed for commercial and residential use. Therefore, the plant and animal communities encompassing the project area are a mixture of annual grassland (Kie1988) and urban habitats (McBride and Reid 1988).

3.0 CULTURAL CONTEXT

3.1 REGIONAL PREHISTORY

There is a long history of regional archaeological research for the project area. The earliest archaeological surveys in the San Joaquin Valley date to the 1920s, and were accomplished by Gifford and Schenck (1926) and Schenck and Dawson (1929). This work was followed in 1941 by Hewes' survey of a 160-mile long stretch of the central San Joaquin Valley and the adjacent foothills of the Sierra Nevada. Subsequent research broadened both the scope and database of earlier work, and also became more systematic and intensive. Some of this more recent research includes work: near Porterville (cf., Schiffman 1974; Gehr 1981; Gehr et al 1979); at Pine Flat Lake (Meighan et al 1988a); at Lake Success (Meighan et al 1988b); at Hensley Lake (also known as Hidden Reservoir) (Fenega 1973; Wallace 1968, 1970); Kerkoff Lake (Varner and McCormick 1977); on the Fresno Plains (Lagenwalter et al 1989; Meighan and Dillon 1987); in Mountain Home State Forest (Wallace et al 1989); at Buchanan Reservoir (also known as Eastman Lake) (King 1976; Moratto 1972; Peak 1976); in the Yokohl Valley (Varner and Stuart 1975); near Tulare and Buena Vista Lakes (cf., Wedel 1941; Riddell and Olson 1969; Fredrickson and Grossman 1977); at Isabella Lake (Schiffman 1976; Glassow and Moore 1978; Meighan and Dillon 1988); and on the Kern Plateau (cf., Garfinkel et al 1980; McGuire and Garfinkel 1980).

In general, the prehistory of the San Joaquin Valley may be divided into three periods (Wallace 1978; Moratto 1984). The first period is characterized by big game hunting and dates to approximately 8,000 years ago. The second period dates from approximately 5,000 years ago to A.D. 1200, and is characterized by a shift in subsistence strategy from hunting to the collection of plant resources. This shift in economic pursuits is evidenced in typical artifact assemblages from this period that include seed-grinding implements. The third period dates from approximately A.D. 1200-1700, and represents habitation of the area by Yokuts.

3.2 REGIONAL ETHNOGRAPHY

Prior to the arrival of Euroamericans in the region, California was inhabited by groups of Native Americans speaking more than 100 different languages and occupying a variety of ecological settings. Kroeber (1925, 1936) acknowledged this diversity, but also identified regional similarities and divided California into four subculture areas, Northwestern, Northeastern, Southern, and Central. The Central area encompasses the current project area and includes the Yokuts. Yokuts inhabit the San Joaquin Valley and are members of the Penutian language family (Latta 1977; Wallace 1978, 1981). Yokuts are generally divided into three groups, Northern Yokuts, Foothill Yokuts, and Southern Yokuts. Southern Yokuts occupy the project area and developed a distinctive subsistence strategy that exploited the wetlands that previously covered large areas of the southern San Joaquin Valley.

Tribelets were the principal political units of Yokuts (Latta 1977; Wallace 1978, 1981). These groups were organized around a male chief or headman. The role of chief was a hereditary position passed from father to son. Chiefs exercised considerable authority in coordinating and implementing various cultural activities. Tribelets consisted of family groups that were organized into moieties, which were identified by totem symbols.

Yokuts generally built circular, or oval, thatched frame houses (Latta 1977; Wallace 1978, 1981). The typical house was built by digging a shallow pit approximately ten to twelve feet in diameter and one to two feet in depth and securing long slender poles, usually green willows, in holes around the inside of the pit. The poles were bent downward to meet each other and were lashed together, forming a hemispheric dome. The top was secured by lashing a willow ring to all of the poles. Willows were then lashed in larger rings around the exterior of the structure, making a solid framework. The house was made weather tight by thatching it with tules. Mud would then be applied to the outside of the tule thatch for additional insulation. The doorway was usually oriented to the south and had an animal skin flap at the entrance. Yokuts also built mat-covered

buildings as granaries. These structures were owned by the entire community and usually were elevated to keep them dry and free of pests.

Yokuts subsistence patterns included hunting, fishing, and collecting plant resources (Latta 1977; Wallace 1978, 1981). Yokuts hunted a variety of game using an un-backed bow and arrows with simple, hardened wood points. Prey species included tule elk, antelope, rabbits, and squirrels. Waterfowl also were netted or trapped, and fish were netted or speared. In addition, lakes, sloughs, and marshes were exploited for other resources such as fresh-water mussels and turtles. Oak trees and acorns were not plentiful in the southern San Joaquin Valley, but Yokuts used a wide variety of other plant resources, particularly roots and seeds, for food.

Yokuts exploited rivers, sloughs, and lakes for food resources and also for transportation using a canoe made from tules (Latta 1977; Wallace 1978, 1981). The tules were harvested when dry, tied into three long bundles and then lashed together, forming a base and two sides with a pointed bow and stern. Tule canoes were built to hold six people and their gear. Yokuts culture prospered until the arrival of Euroamericans in their territory. Contact with Euroamericans affected and dramatically altered the Yokuts culture. As the Euroamerican population increased in California, Yokuts and other Native American groups and their traditional cultures declined across California.

3.2 EUROAMERICAN CONTACT

Spanish expeditions into the Tulare Lake Basin in the vicinity of Visalia occurred between 1772 and 1824 (Mundy 1990). The initial expeditions were exploratory in nature, followed by punitive campaigns to either remove or return Native Americans to coastal missions. Coastal missions dominated the social, political, and economic lives of both Spanish and Native Americans across much of California during the Spanish Period (ca. 1769-1821). Many Native American groups, however, were reluctant to adapt to the feudal style mission "system" and convert to Catholicism. This factor in combination with the onset of many European diseases virtually ended the traditional lifeways of many Native American groups in California.

The Mexican Period (ca. 1821-1848) in California is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system. In 1833 the missions were secularized and their lands divided among the *Californios* as *ranchos* in the form of land grants. The *ranchos* facilitated the growth of a semi-aristocratic group that controlled large *ranchos* or land grants. Local Native American populations, who were essentially used as forced labor, worked on these large tracts of land. This was a period of growing antagonism of Native Americans toward Euroamericans and also declines in Native American populations due to both disease and abuse.

The end of the Mexican-American War and the signing of the Treaty of Guadalupe Hidalgo in 1848 mark the beginning of the American Period (ca. 1848-present) in California history. The onset of this period did not initiate a change in the economic condition of the Native American populations. For example, militia groups such as the Mariposa Battalion were established to "control" Native Americans (Crampton 1957). The Mariposa Battalion reports armed encounters with Native Americans in the upper drainage of the Kings and Kaweah Rivers (Crampton 1957). The *rancho* system also generally remained intact until 1862-1864 when a drought forced many landowners to sell off or subdivide their holdings. At this time open ranges began to be fenced and the economy began to shift from cattle ranching to dairy farming and agriculture based on new crops such as wheat. Regardless of a change of economic focus, the plight of Native American populations remained, at best, relatively unchanged (e.g., the U.S. Senate rejected treaties between the government and Native Americans in 1851 and 1852, and military reserves were established to maintain various groups) (Heizer 1974). Subsequent conflicts regarding reservation lands (e.g., the Tule Indian Reservation near Porterville was established in 1857) and local and federal recognition continue to the present.

Euroamericans initially used the San Joaquin Valley for cattle and sheep ranching. The climate, however, was suited for agriculture, and by 1870 much of the land in the valley was primarily used for wheat farming.

Farming continued to expand in the area and currently the San Joaquin Valley includes five of the top ten agricultural counties in the United States, with Fresno, Kern, and Tulare counties typically ranking in the top three. In addition to agriculture, the petroleum industry has a long history in the southern San Joaquin Valley. Kern County is one of the nation's most productive oil-producing counties, and extraction of oil in the area dates to 1899. The development of cities such as Taft, named for president William Howard Taft, is related to the growth of the petroleum industry in the area. Today, the project area is changing from agricultural use to an urban environment. This changed has created a demand for facilities such as the Delano Plaza.

4.0 RESULTS OF CULTURAL RESOURCES INVESTIGATIONS

Cultural resources investigations for the Delano Plaza Project are complete. These investigations included: a records search at the Southern San Joaquin Valley Archaeological Information Center at California State University, Bakersfield; archival research at the Kern County Assessor's Office; a sacred lands search conducted by the Native American Heritage Commission; consultation with the Native American community; and pedestrian surface survey of the project APE. Cultural resources investigations for the project APE identified: the Pioneer Motel at 1001 Garzolli Avenue; the Garzolli Pallet Company at 1051 Garzolli Avenue; 5 residences and associated structures (e.g., garages and storage sheds) at 450, 456, 542, 548, and 554 Woollomes Avenue; a restaurant at 727 Woollomes Avenue; a garage/machine shop on Parcel 5; and an area owned by the Garzolli Pallet Company that is covered with modern trash and other debris (Figure 3). The Pioneer Motel and the Garzolli Pallet Company do not meet the age criteria to be considered for inclusion in the CRHR, and do not require any additional research or mitigation during project implementation. Similarly, the area owned by the Garzolli Pallet Company that contains modern trash does not meet the eligibility criteria to be considered for inclusion in the CRHR or for consideration as a unique archaeological resource. The 5 residences, the restaurant, and the garage/machine shop, however, were built between 1932 and 1961 and may be eligible for inclusion in the CRHR. Therefore, current cultural resources investigations addressed the eligibility of these buildings/structures for inclusion in the CRHR and for designation as unique archaeological resources.

4.1 SITE CHARACTERIZATION AND ELIGIBILITY FOR THE CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The APE for the Delano Plaza Project includes: 5 residences at 450, 456, 542, 548, and 554 Woollomes Avenue; a restaurant at 727 Woollomes Avenue; and a garage/machine shop on Parcel 5 within project boundaries. CEQA presents guidelines at §15064.5 and §21083.2 for the identification of historical resources and determining their historical significance. CEQA §15064.5(a)(3) presents the following eligibility criteria for inclusion of historical resources in the CRHR:

> (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
> (2) Is associated with lives of persons important in our past;
> (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
> (4) Has yielded, or may be likely to yield, information important in prehistory or history.

CEQA also presents criteria for the identification of unique archaeological resources at §21083.2(g):

> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> (2) It has a special and particular quality such as being the oldest of its type or the best available example of its type.
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event.

In addition to the eligibility criteria at CEQA §15064.5(a)(3), the California Code of Regulations (CCR), Title 14, Division 3, Chapter 11.5 § 4852 (c) also states that integrity of historical resources should be considered when addressing their eligibility for inclusion in the CRHR. This section of the CCR describes integrity as the

> ...authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Historical resources eligible for listing in the California Register must...retain enough of their historic character to be recognizable as historical resources and to convey the reasons for their significance.

Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.

4.1.1 450 Woollomes Avenue

The residence at 450 Woollomes Avenue (APN: 521-050-01) is a single story, vernacular building constructed in 1940 that is reminiscent of the Ranch Style (Attachment B, Site Records). The rectangular building has a: side-gabled roof covered with redwood shakes and corrugated metal; a stucco exterior; and an addition on its south side. It was not possible to identify the type of windows used in the building because they were covered with sheets of plastic. The building is relatively well maintained, but appears to have undergone episodes of remodeling and/or reconstruction (e.g., construction of an addition on the south side of the building). There is also a wooden storage shed near the southwest corner of the building. Remodeling and/or reconstruction have compromised the overall integrity (i.e., integrity of design, materials, and workmanship) of the building. In addition, commercial developments surrounding the property have comprised its integrity of setting, feeling, and association.

Archival research regarding the residence at 450 Woollomes Avenue did not identify any information to suggest that it is associated with events that made a broad contribution to California's history. Therefore, the residence and structures do not appear to meet eligibility Criterion 1 for inclusion in the CRHR.

Archival research regarding the residence at 450 Woollomes Avenue did not identify any information to suggest that it is associated with individuals important in our past. Therefore, the residence and structures do not appear to meet eligibility Criterion 2 for inclusion in the CRHR.

Field and archival research for the residence at 450 Woollomes Avenue determined that it does not embody any distinctive elements of design or methods of construction that are representative of a particular type or period of construction. Remodeling and/or reconstruction (e.g., shake and corrugated metal roof) have compromised the integrity of the residence. Therefore, the residence does not appear to meet eligibility Criterion 3 for inclusion in the CRHR.

The residence at 450 Woollomes Avenue is adequately recorded, and additional research regarding the property does not appear to possess the potential to yield additional information important in history. Therefore, the residence does not appear to meet eligibility Criterion 4 for inclusion in the CRHR.

In summary, the residence at 450 Woollomes Avenue was originally built in 1940. Regardless, remodeling and/or reconstruction (e.g., roof and additions to the building) and encroaching commercial developments have compromised the integrity of the building. The residence is not associated with any events or persons important in history and does not exhibit distinctive elements of design or construction. Current research appears to have exhausted the potential of the property to yield any additional information important in history. Therefore, the property does not appear to meet the eligibility criteria for inclusion in the CRHR or for consideration as a unique archaeological resource.

4.1.2. 456 Woollomes Avenue

The residence at 456 Woollomes Avenue (APN: 521-050-01) is a single story, vernacular building constructed in 1951 that is reminiscent of the Ranch Style (Attachment B, Site Records). The building has a: side-gabled roof covered with redwood shakes; a stucco exterior with stonework finish along the lower half of the north (front) side of the building; aluminum sliding windows; an addition on the south side of the building; and a carport on the east side of the building. The building is relatively well maintained, but has undergone episodes of remodeling and/or reconstruction (e.g., construction of an addition on the south side of the building) that have changed the shape of the building from a rectangle to a "T" shape. The addition on the south end of the building has a brick chimney and a roof covered with redwood shakes and corrugated metal. The carport on the east side of the building has a flat corrugated metal roof. There is also a garage constructed of cement blocks at the southwest corner of the building and two small wooden sheds with dirt floors south of the building. Remodeling and/or reconstruction have compromised the overall integrity (i.e.,

integrity of design, materials, and workmanship) of the building. In addition, commercial developments surrounding the property have comprised its integrity of setting, feeling, and association.

Archival research regarding the residence at 456 Woollomes Avenue did not identify any information to suggest that it is associated with events that made a broad contribution to California's history. Therefore, the residence and structures do not appear to meet eligibility Criterion 1 for inclusion in the CRHR.

Archival research regarding the residence at 456 Woollomes Avenue did not identify any information to suggest that it is associated with individuals important in our past. Therefore, the residence and structures do not appear to meet eligibility Criterion 2 for inclusion in the CRHR.

Field and archival research for the residence at 456 Woollomes Avenue determined that it does not embody any distinctive elements of design or methods of construction that are representative of a particular type or period of construction. Remodeling and/or reconstruction (e.g., aluminum windows and additions to the building) have compromised the integrity of the residence. Therefore, the residence does not appear to meet eligibility Criterion 3 for inclusion in the CRHR.

The residence at 456 Woollomes Avenue is adequately recorded, and additional research regarding the property does not appear to possess the potential to yield additional information important in history. Therefore, the residence does not appear to meet eligibility Criterion 4 for inclusion in the CRHR.

In summary, the residence at 456 Woollomes Avenue was originally built in 1951. Regardless, remodeling and/or reconstruction (e.g., aluminum windows and additions to the building) and encroaching commercial developments have compromised the integrity of the building. The residence is not associated with any events or persons important in history and does not exhibit distinctive elements of design or construction. Current research appears to have exhausted the potential of the property to yield any additional information important in history. Therefore, the property does not appear to meet the eligibility criteria for inclusion in the CRHR or for consideration as a unique archaeological resource.

4.1.3. 542 Woollomes Avenue

The residence at 542 Woollomes Avenue (APN: 521-050-01) was constructed in 1949. The single story Minimal Traditional style building is L-shaped with: a shed roof covered entry; a cross-gabled composition shingle roof; a stucco exterior; double hung wood framed windows; and an addition on its the west side (Attachment B, Site Records). The building is relatively well maintained, but appears to have undergone episodes of remodeling and/or reconstruction (e.g., construction of an addition on the west side of the building). There is also a front gabled single car garage with a composition shingle roof and a stucco exterior near the southwest corner of the building. Remodeling and/or reconstruction have compromised the integrity (i.e., integrity of design) of the building. In addition, commercial developments surrounding the property have comprised its integrity of setting, feeling, and association.

Archival research regarding the residence at 542 Woollomes Avenue did not identify any information to suggest that it is associated with events that made a broad contribution to California's history. Therefore, the residence and structures do not appear to meet eligibility Criterion 1 for inclusion in the CRHR.

Archival research regarding the residence at 542 Woollomes Avenue did not identify any information to suggest that it is associated with individuals important in our past. Therefore, the residence and structures do not appear to meet eligibility Criterion 2 for inclusion in the CRHR.

Field and archival research for the residence at 542 Woollomes Avenue determined that it does not embody any distinctive elements of design or methods of construction that are representative of a particular type or period of construction. Remodeling and/or reconstruction (e.g., shake and corrugated metal roof) have compromised the integrity of the residence. Therefore, the residence does not appear to meet eligibility Criterion 3 for inclusion in the CRHR.

The residence at 542 Woollomes Avenue is adequately recorded, and additional research regarding the property does not appear to possess the potential to yield additional information important in history. Therefore, the residence does not appear to meet eligibility Criterion 4 for inclusion in the CRHR.

In summary, the residence at 542 Woollomes Avenue was originally built in 1949. Regardless, remodeling and/or reconstruction (e.g., roof and additions to the building) and encroaching commercial developments have compromised the integrity of the building. The residence is not associated with any events or persons important in history and does not exhibit distinctive elements of design or construction. Current research appears to have exhausted the potential of the property to yield any additional information important in history. Therefore, the property does not appear to meet the eligibility criteria for inclusion in the CRHR or for consideration as a unique archaeological resource.

4.1.4. 548 Woollomes Avenue

The residence at 548 Woollomes Avenue (APN: 521-050-01) was constructed in 1958. The single story Ranch Style building has: a side-gabled composition shingle and corrugated metal roof; a half-width, shed roofed front porch (along the north side of the residence); horizontal wood siding on its north, east, and west sides (the siding has also covered a window next to the front entryway, but its wood frame is still visible) and board and batten covering its south side; double-hung windows with wood frames; and an attached carport with a flat roof and an addition on its south end (Attachment B, Site Records). The building is relatively well maintained, but appears to have undergone episodes of remodeling and/or reconstruction (e.g., wood siding and construction of an addition at the rear [south end] of the carport). There is also a side gabled wooden storage shed with wood siding along the west side of the building. Remodeling and/or reconstruction have compromised the overall integrity (i.e., integrity of design, materials, and workmanship) of the building. In addition, commercial developments surrounding the property have comprised its integrity of setting, feeling, and association.

Archival research regarding the residence at 548 Woollomes Avenue did not identify any information to suggest that it is associated with events that made a broad contribution to California's history. Therefore, the residence and structures do not appear to meet eligibility Criterion 1 for inclusion in the CRHR.

Archival research regarding the residence at 548 Woollomes Avenue did not identify any information to suggest that it is associated with individuals important in our past. Therefore, the residence and structures do not appear to meet eligibility Criterion 2 for inclusion in the CRHR.

Field and archival research for the residence at 548 Woollomes Avenue determined that it does not embody any distinctive elements of design or methods of construction that are representative of a particular type or period of construction. Remodeling and/or reconstruction (e.g., siding and corrugated metal roof) have compromised the integrity of the residence. Therefore, the residence does not appear to meet eligibility Criterion 3 for inclusion in the CRHR.

The residence at 548 Woollomes Avenue is adequately recorded, and additional research regarding the property does not appear to possess the potential to yield additional information important in history. Therefore, the residence does not appear to meet eligibility Criterion 4 for inclusion in the CRHR.

In summary, the residence at 548 Woollomes Avenue was originally built in 1958. Regardless, remodeling and/or reconstruction (e.g., siding and corrugated metal roof) and encroaching commercial developments have compromised the integrity of the building. The residence is not associated with any events or persons important in history and does not exhibit distinctive elements of design or construction. Current research appears to have exhausted the potential of the property to yield any additional information important in history. Therefore, the property does not appear to meet the eligibility criteria for inclusion in the CRHR or for consideration as a unique archaeological resource.

4.1.5. 554 Woollomes Avenue

The residence at 554 Woollomes Avenue (APN: 521-050-01) is a single story, vernacular building constructed in 1961 that is reminiscent of the Craftsman Style (Attachment B, Site Records). The building has: a front-

gabled corrugated metal roof; a front-gabled canopy covering the front entrance; horizontal wood siding that consists of boards of varying sizes, but with uniform boards widths on each side of the residence; double hung windows with wood frames, aluminum frame sliding windows, and fixed windows in wood frames; and a bump-out at its southwest corner (Attachment B, Site Records). The building is not well maintained, and appears to have undergone episodes of remodeling and/or reconstruction (e.g., installation of aluminum frame windows and construction of the bump-out). There is also a carport framed with wood lattice east of the building and a small wooden storage shed southeast of the carport. Remodeling and/or reconstruction have compromised the overall integrity (i.e., integrity of design) of the building. In addition, commercial developments surrounding the property have comprised its integrity of setting, feeling, and association.

Archival research regarding the residence at 554 Woollomes Avenue did not identify any information to suggest that it is associated with events that made a broad contribution to California's history. Therefore, the residence does not appear to meet eligibility Criterion 1 for inclusion in the CRHR.

Archival research regarding the residence at 554 Woollomes Avenue did not identify any information to suggest that it is associated with individuals important in our past. Therefore, the residence does not appear to meet eligibility Criterion 2 for inclusion in the CRHR.

Field and archival research for the residence at 554 Woollomes Avenue determined that it does not embody any distinctive elements of design or methods of construction that are representative of a particular type or period of construction. Remodeling and/or reconstruction (e.g., shake and corrugated metal roof) have compromised the integrity of the residence. Therefore, the residence does not appear to meet eligibility Criterion 3 for inclusion in the CRHR.

The residence at 554 Woollomes Avenue is adequately recorded, and additional research regarding the property does not appear to possess the potential to yield additional information important in history. Therefore, the residence does not appear to meet eligibility Criterion 4 for inclusion in the CRHR.

In summary, the residence at 554 Woollomes Avenue was originally built in 1961. Regardless, remodeling and/or reconstruction (e.g., aluminum windows and construction of the bump-out) and encroaching commercial developments have compromised the integrity of the building. The residence is not associated with any events or persons important in history and does not exhibit distinctive elements of design or construction. Current research appears to have exhausted the potential of the property to yield any additional information important in history. Therefore, the property does not appear to meet the eligibility criteria for inclusion in the CRHR or for consideration as a unique archaeological resource.

4.1.6. 727 Woollomes Avenue

A commercial property, the Pioneer Family Restaurant, is located at 727 Woollomes Avenue (APN 521-050-06) (Attachment B, Site Records). The restaurant was originally built in 1932 and called the Curve-In Café because it was located along a curve in State Route 99. The structure was moved to its current location in 1955 as a result of the realignment of State Route 99. The single story structure has: a flat roof with a sloping parapet that is capped with two rows of redwood shakes; horizontal wood siding; large single pane windows and single pane windows divided into 20 lights (i.e., four rows and five columns) along the front of the structure; and blue awnings across the front and along the sides of the restaurant. Remodeling and relocation of the restaurant have compromised its overall integrity (i.e., integrity of design, materials, and workmanship). In addition, commercial developments surrounding the property have comprised its integrity of setting, feeling, and association (e.g., the relationship of the restaurant to the original alignment of State Route 99 and local transportation history).

Archival research regarding the structure at 727 Woollomes Avenue did not identify any information to suggest that it is associated with events that made a broad contribution to California's history. Therefore, the structure does not appear to meet eligibility Criterion 1 for inclusion in the CRHR.

Archival research regarding the structure at 727 Woollomes Avenue did not identify any information to suggest that it is associated with individuals important in our past. Therefore, the structure does not appear to meet eligibility Criterion 2 for inclusion in the CRHR.

Field and archival research for the structure at 727 Woollomes Avenue determined that it does not embody any distinctive elements of design or methods of construction that are representative of a particular type or period of construction. Remodeling and relocation have compromised the integrity of the structure. Therefore, the structure does not appear to meet eligibility Criterion 3 for inclusion in the CRHR.

The structure at 727 Woollomes Avenue is adequately recorded, and additional research regarding the property does not appear to possess the potential to yield additional information important in history. Therefore, the structure does not appear to meet eligibility Criterion 4 for inclusion in the CRHR.

In summary, the structure at 727 Woollomes Avenue was originally built in 1932. Regardless, remodeling, relocation, and encroaching commercial developments have compromised the integrity of the structure. The structure is not associated with any events or persons important in history and does not exhibit distinctive elements of design or construction. Current research appears to have exhausted the potential of the property to yield any additional information important in history. Therefore, the property does not appear to meet the eligibility criteria for inclusion in the CRHR or for consideration as a unique archaeological resource.

4.1.7. Parcel 5 Structure

A single story brick and corrugated metal structure is located on Parcel 5 (APN 521-050-05) within project boundaries (Attachment B, Site Records). This structure appears to be the remnants of a garage and machine shop that was built in 1943. A wrecking yard formerly occupied the area west of the garage/machine shop and an underground "concrete vault" is located east of the garage/machine shop (The Twining Laboratories, Inc. 2004). The structure is abandoned and in very poor condition.

Archival research regarding the structure on Parcel 5 did not identify any information to suggest that it is associated with events that made a broad contribution to California's history. Therefore, the structure does not appear to meet eligibility Criterion 1 for inclusion in the CRHR.

Archival research regarding the structure on Parcel 5 did not identify any information to suggest that it is associated with individuals important in our past. Therefore, the structure does not appear to meet eligibility Criterion 2 for inclusion in the CRHR.

Field and archival research for the structure on Parcel 5 determined that it does not embody any distinctive elements of design or methods of construction that are representative of a particular type or period of construction. Therefore, the structure does not appear to meet eligibility Criterion 3 for inclusion in the CRHR.

The structure on Parcel 5 is adequately recorded, and additional research regarding the property does not appear to possess the potential to yield additional information important in history. Therefore, the structure does not appear to meet eligibility Criterion 4 for inclusion in the CRHR.

In summary, the structure on Parcel 5 was originally built in 1932. The structure is not associated with any events or persons important in history and does not exhibit distinctive elements of design or construction. Current research appears to have exhausted the potential of the property to yield any additional information important in history. Therefore, the property does not appear to meet the eligibility criteria for inclusion in the CRHR or for consideration as a unique archaeological resource.

4.2 SITE MANAGEMENT RECOMMENDATIONS

Archaeological and historical investigations are adequate for the Delano Plaza Project. These investigations identified residences and other structures within the project APE. None of the residences or structures within the project APE appears eligible for inclusion in the CRHR. Therefore, the buildings and structures do not require any mitigation or special protective measures either prior to or during project implementation, and the Delano Plaza Project may be implemented as currently designed.

5.0 MANAGEMENT CONSIDERATIONS

The Delano Plaza Project is located at the southwest corner of Woollomes Avenue and South Garzoli Avenue, near the intersection of State Route 99 and Woollomes Avenue in the City of Delano, Kern County, California. The project encompasses approximately 45 acres and includes demolition of existing buildings and structures on the property and construction of a retail center totaling approximately 454,000 square feet. The retail center would likely include construction of: a large retail facility; a home improvement center; specialty retail shops; restaurants (i.e., sit-down and fast food facilities); and a gas station. The project also includes the installation of infrastructure such as sewer, water, and electrical facilities. The project is subject to the legal requirements of the California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq.) 1970, as amended.

Archaeological and historical investigations for the Delano Plaza Project were conducted to comply with regulations and criteria presented in CEQA and its guidelines at §15064.5 and §21083.2. The purpose of the current cultural resources report is to document the cultural resources identification efforts for the Delano Plaza Project. Archaeological and historical investigations included: a records search conducted by the Southern San Joaquin Valley Archaeological Information Center at California State University, Bakersfield; a sacred lands search conducted by the Native American Heritage Commission; consultation with local Native American individuals and groups identified by the NAHC; and field investigation of the project APE. Archaeological and historical investigations for the project were conducted during Jnauary 2005. These investigations did not identify any prehistoric sites or historic sites, but did identify: a motel; a pallet company; 5 residences and associated structures (e.g., garages and storage sheds); a restaurant; and an abandoned structure within the project APE. Archival research determined that: 5 residences and associated garages at 450, 456, 542, 548, and 554 Woollomes Avenue were built between 1940 and 1961; a restaurant at 727 Woollemes Avenue was built in 1932, and moved to its present location in 1955; and a garage/machine shop located on Parcel 5 within project boundaries was built in 1943. All of the buildings/structures within the project APE were adequately documented using Department of Parks and Recreation site record forms, and their eligibility for inclusion in the California Register of Historical Resources was determined for the current project. None of the buildings/structures within the project APE appear to meet any of the criteria for inclusion in the California Register of Historical Resources or for consideration as a unique archaeological resource. Therefore, implementation of the Delano Plaza Project would not likely affect any historical resources or unique archaeological resources and may be implemented as currently proposed.

Archaeological investigations for the Delano Plaza Project are complete and adequate for project needs. These investigations did not identify any historical resources or unique archaeological resources within the project APE. Regardless of these findings, it is always possible to inadvertently uncover cultural resources or human remains during ground disturbing project activity. Therefore, if any cultural resources or human remains are uncovered during ground disturbing project activity it is recommended that all activity cease within 25 feet of the discovery and a qualified archaeologist be retained to determine the significance of the discovery. If human remains are discovered, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and follow the procedures outlined in the CEQA Guidelines §15064.5(e).

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APPENDIX A
SITE RECORDS

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial #
NRHP Status Code
Other Listings
Review Code Reviewer Date

P1. Other Identifier: 450 Woollomes Avenue

***P2. Location:** ☐Not for publication ☒ Unrestricted
***a. County:** Kern
***b. USGS 7.5' Quad:** McFarland, Ca. 7.5'; 1984; Township 25 South, Range 25 East; Mt. Diablo B.M.
c. Address: NW ¼ of NE ¼ of Section 23
d. UTM: 3958201mN, 296571mE
e. Other Locational Data: APN 521-050-01

***P3a. Description:** The residence at 450 Woollomes Avenue is a single story, vernacular building constructed in 1940. The rectangular building has a: side-gabled roof covered with redwood shakes and corrugated metal; a stucco exterior; and an addition on its south side. It was not possible to identify the type of windows used in the building because they were covered with sheets of plastic. The building is relatively well maintained, but appears to have undergone episodes of remodeling and/or reconstruction (e.g., construction of an addition on the south side of the building. There is also a wooden storage shed near the southwest corner of the building.

***P3b. Resource Attributes:** HP2 Single-family property; AH15 Standing structures
***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐Site☐ District ☐ Element of District ☐ Other

P5b. Description of photo:
N/A – Caretaker denied a request to photograph the building

***P6. Date Constructed/Age:**
☐ Prehistoric ☒ Historic

***P7. Owner and Address:**
Delano Retail Center, LLC
10508 Lower Azusa Road
#200
El Monte, CA 91731

***P8. Recorded by:**
Kurt Lambert
Pacific Municipal Consultants
10461 Old Placerville Road
Suite 110
Sacramento, CA 95827

***P9. Date Recorded:** 01/13/05

***P10. Survey Type:** Intensive pedestrian surface and architectural inventory

P11. Report Citation: Archaeological and Historical Investigations for the Delano Plaza Project; John Nadolski, 2005

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☐Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other:

*NRHP Status Code
*Resource Name or # 450 Woollomes Avenue

B1. Historic Name: None
B2. Common Name: None
B3. Original Use: Residence
B4. Present Use: Residence

***B5. Architectural Style:** Vernacular, but reminiscent of the Ranch Style (1935-1975)

***B6. Construction History:** The residence at 450 Woollomes Avenue (APN 521-050-01) was constructed in 1940, according to Kern County Assessor's Office records. The building has been remodeled/reconstructed since its original construction. The south side of the structure was enlarged by an addition, but the date of the construction of the addition is unknown. In addition, it appears that part of the original redwood shake roof has been replaced with corrugated metal. There is also a wooden shed south of the building.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:**
Original Location:

***B8. Related Features:** None.

B9a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance: Theme:** Residential **Area:** Delano, CA

Period of Significance: 1940-1960 **Property Type:** Residence

Applicable Criteria: N/A: The property is evaluated as ineligible for inclusion in the California Register of Historical Resources (CRHR).

The residence at 450 Woollomes Avenue does not appear to meet any of the eligibility criteria presented in CEQA at §15064.5(a)(3) for inclusion in the CRHR. Historical investigations conducted for the property do not suggest that: it is associated with any significant events in regional or local history; it is associated with any persons significant in history; it embodies distinctive characteristics of type, period, or method of construction; or it is likely that additional research regarding the property would produce significant new information about the early residential development of the area. Therefore, the property does not appear to meet any of the eligibility criteria for inclusion in the CRHR.

In addition, the residence at 450 Woollomes has been remodeled/reconstructed and is located in an expanding commercial area (e.g., a new Home Depot is located on the north side of Woollomes, north of the residence). The property lacks integrity of design, materials, workmanship, setting, feeling, and association.

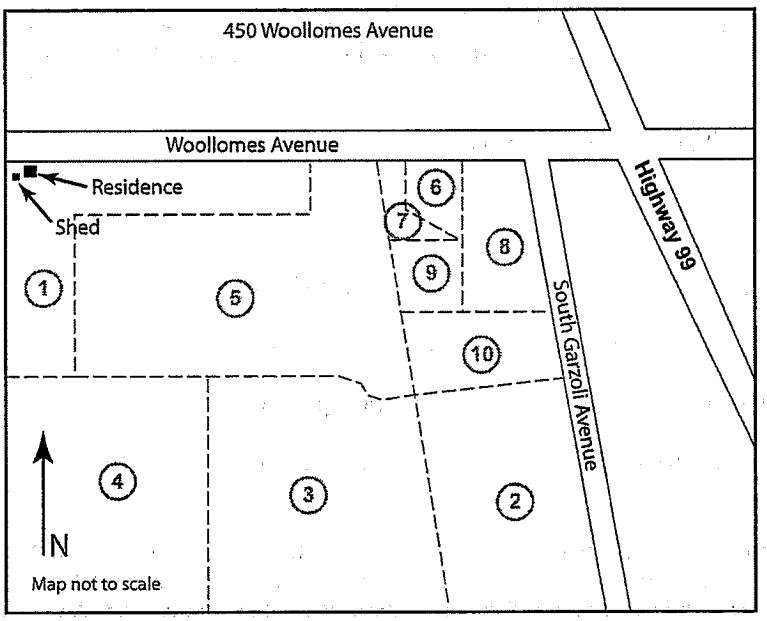
B11. Additional Resource Attributes: N/A

***B12. References:**
Kern County Assessor's Office Property Records
Blumenson, John J.G., 1981, Identifying American Architecture, W.W. Norton Company, New York.
McAlester, V. and L., 1984, A Field Guide to American Homes, Alfred A. Knopf, New York.

B13. Remarks: None.

***B14. Evaluator:** John Nadolski, M.A. ***Date of Evaluation:** 01/17/05

***NRHP Status Code**
***Resource Name or #** 450 Woollomes Avenue



(This space reserved for official comments.)

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial #
NRHP Status Code
Other Listings
Review Code Reviewer Date

P1. Other Identifier: 456 Woollomes Avenue

***P2. Location:** ☐ Not for publication ☒ Unrestricted ***a. County:** Kern
***b. USGS 7.5' Quad:** McFarland, Ca. 7.5'; 1984; Township 25 South, Range 25 East; Mt. Diablo B.M.
c. Address: NW ¼ of NE ¼ of Section 23
d. UTM: 3958201mN, 296601mE
e. Other Locational Data: APN 521-050-01

***P3a. Description:** The residence at 456 Woollomes Avenue is a single story, vernacular building constructed in 1951 that is reminiscent of the Ranch Style. The building has a: side-gabled roof covered with redwood shakes; a stucco exterior with stonework finish along the lower half of the north (front) side of the building; aluminum sliding windows; an addition on the south side of the building; and a carport on the east side of the building. The building is relatively well maintained, but appears to have undergone episodes of remodeling and/or reconstruction (e.g., construction of an addition on the south side of the building) that changed the shape of the building from a rectangle to a "T" shape. The addition on the south side of the building has a brick chimney and a roof covered with redwood shakes and corrugated metal. The carport on the east side of the building has a flat corrugated metal roof. There is also a garage constructed of cement blocks at the southwest corner of the building and two small wooden sheds with dirt floors south of the building.

***P3b. Resource Attributes:** HP2 Single family property; AH15 Standing structures
***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of photo:
N/A – Caretaker denied a request to photograph the building

***P6. Date Constructed/Age:**
☐ Prehistoric ☒ Historic

***P7. Owner and Address:**
Delano Retail Center, LLC
10508 Lower Azusa Road
#200
El Monte, CA 91731

***P8. Recorded by:**
Kurt Lambert
Pacific Municipal Consultants
10461 Old Placerville Road
Suite 110
Sacramento, CA 95827

***P9. Date Recorded:** 01/13/05

***P10. Survey Type:** Intensive pedestrian surface and architectural inventory

P11. Report Citation: Archaeological and Historical Investigations for the Delano Plaza Project; John Nadolski, 2005

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☐ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other:

B1. Historic Name: None
B2. Common Name: None
B3. Original Use: Residence
B4. Present Use: Residence

***B5. Architectural Style:** Vernacular, but reminiscent of the Ranch Style (1935-1975)

***B6. Construction History:** The residence at 456 Woollomes Avenue (APN 521-050-01) appears to have been constructed in 1951, according to Kern County Assessor's Office records. The building has been remodeled/reconstructed since its original construction. The south side of the structure was enlarged by an addition, but the date of the construction of the addition is unknown. In addition, it appears that part of the original redwood shake roof has been replaced with corrugated metal. There is also a carport attached to the east side of the building, a garage constructed of cement blocks southeast of the building, and 2 small wooden sheds south of the building. The date of construction of these structures is unknown.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:**
Original Location:

***B8. Related Features:** None.

B9a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance: Theme:** Residence **Area:** Delano, CA

Period of Significance: 1950-1970 **Property Type:** Residence

Applicable Criteria: N/A: The property is evaluated as ineligible for inclusion in the California Register of Historical Resources (CRHR).

The residence at 456 Woollomes Avenue does not appear to meet any of the eligibility criteria presented in CEQA at §15064.5(a)(3) for inclusion in the CRHR. Historical investigations conducted for the property do not suggest that: it is associated with any significant events in regional or local history; it is associated with any persons significant in history; it embodies distinctive characteristics of type, period, or method of construction; or it is likely that additional research regarding the property would produce significant new information about the early residential development of the area. Therefore, the property does not appear to meet any of the eligibility criteria for inclusion in the CRHR.

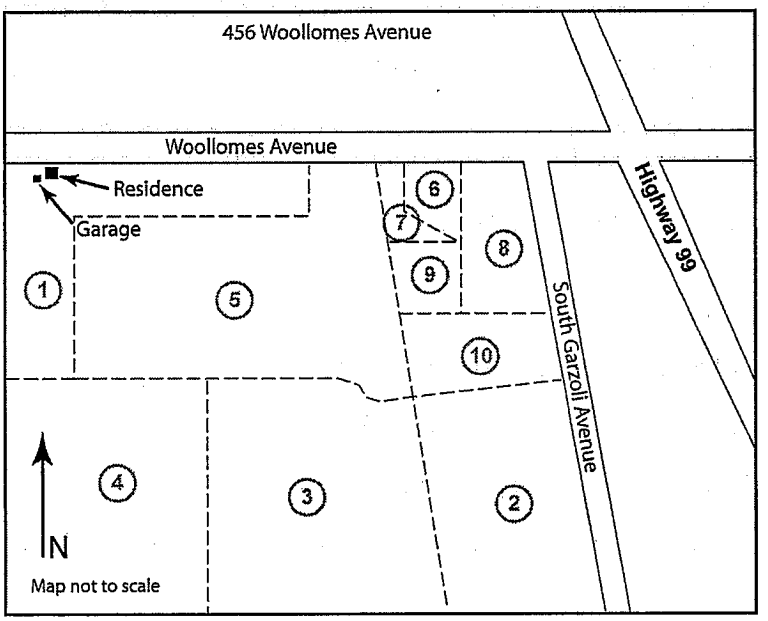
In addition, the residence at 456 Woollomes has been remodeled/reconstructed and is located in an expanding commercial area (e.g., a new Home Depot is located on the north side of Woollomes, north of the residence). The property lacks integrity of design, materials, workmanship, setting, feeling, and association.

B11. Additional Resource Attributes: N/A

***B12. References:**
Kern County Assessor's Office Property Records
Blumenson, John J.G., 1981, Identifying American Architecture, W.W. Norton Company, New York.
McAlester, V. and L., 1984, A Field Guide to American Homes, Alfred A. Knopf, New York.

B13. Remarks: None.

***B14. Evaluator:** John Nadolski, M.A. ***Date of Evaluation:** 01/17/05



(This space reserved for official comments.)

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

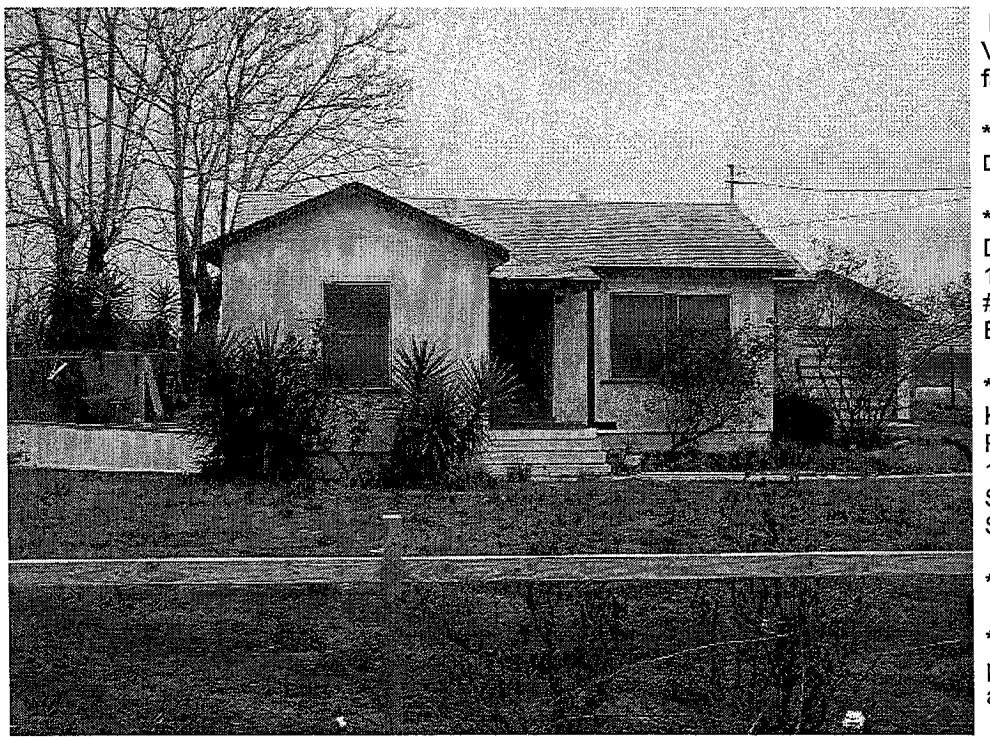
Primary #
HRI #
Trinomial #
NRHP Status Code
Other Listings
Review Code Reviewer Date

P1. Other Identifier: 542 Woollomes Avenue

***P2. Location:** ☐ Not for publication ☒ Unrestricted ***a. County:** Kern
***b. USGS 7.5' Quad:** McFarland, Ca. 7.5'; 1984; Township 25 South, Range 25 East; Mt. Diablo B.M.
c. Address: NW ¼ of NE ¼ of Section 23
d. UTM: 3958196mN, 296756mE
e. Other Locational Data: APN 521-050-01

***P3a. Description:** The residence at 542 Woollomes Avenue was constructed I 1949. The single story Minimal Traditional style building is L-shaped: with a shed roof covered entry; a cross-gabled composition shingle roof; a stucco exterior; double hung wood framed windows; and an addition on its west side. The building is relatively well maintained, but appears to have undergone episodes of remodeling and/or reconstruction (e.g., construction of an addition on the west side of the building). There is also a front-gabled single car garage with a composition shingle roof and a stucco exterior near the southwest corner of the building.

***P3b. Resource Attributes:** HP2 Single family property; AH15 Standing structures
***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other



P5b. Description of photo: View of 542 Woollomes Avenue facing south

***P6. Date Constructed/Age:** ☐ Prehistoric ☒ Historic

***P7. Owner and Address:**
Delano Retail Center, LLC
10508 Lower Azusa Road
#200
El Monte, CA 91731

***P8. Recorded by:**
Kurt Lambert
Pacific Municipal Consultants
10461 Old Placerville Road
Suite 110
Sacramento, CA 95827

***P9. Date Recorded:** 01/13/05

***P10. Survey Type:** Intensive pedestrian surface and architectural inventory

P11. Report Citation: Archaeological and Historical Investigations for the Delano Plaza Project; John Nadolski, 2005

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other:

B1. Historic Name: None
B2. Common Name: None
B3. Original Use: Residence
B4. Present Use: Residence

***B5. Architectural Style:** Minimal Traditional (1935-1950)

***B6. Construction History:** The residence at 542 Woollomes Avenue (APN 521-050-01) appears to have been constructed in 1949, according to Kern County Assessor's Office records. An addition was constructed on the west side of the building, but the date of its construction is unknown. There is also a garage, built in a similar style to the residence, located southwest of the residence. The garage appears to have been constructed in 1949.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:**
Original Location:

***B8. Related Features:** None.

B9a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance: Theme:** Residence **Area:** Delano, CA

Period of Significance: 1940-1960 **Property Type:** Residence

Applicable Criteria: N/A: The property is evaluated as ineligible for inclusion in the California Register of Historical Resources (CRHR).

The residence at 542 Woollomes Avenue does not appear to meet any of the eligibility criteria presented in CEQA at §15064.5(a)(3) for inclusion in the CRHR. Historical investigations conducted for the property do not suggest that: it is associated with any significant events in regional or local history; it is associated with any persons significant in history; it embodies distinctive characteristics of type, period, or method of construction; or it is likely that additional research regarding the property would produce significant new information about the early residential development of the area. Therefore, the property does not appear to meet any of the eligibility criteria for inclusion in the CRHR.

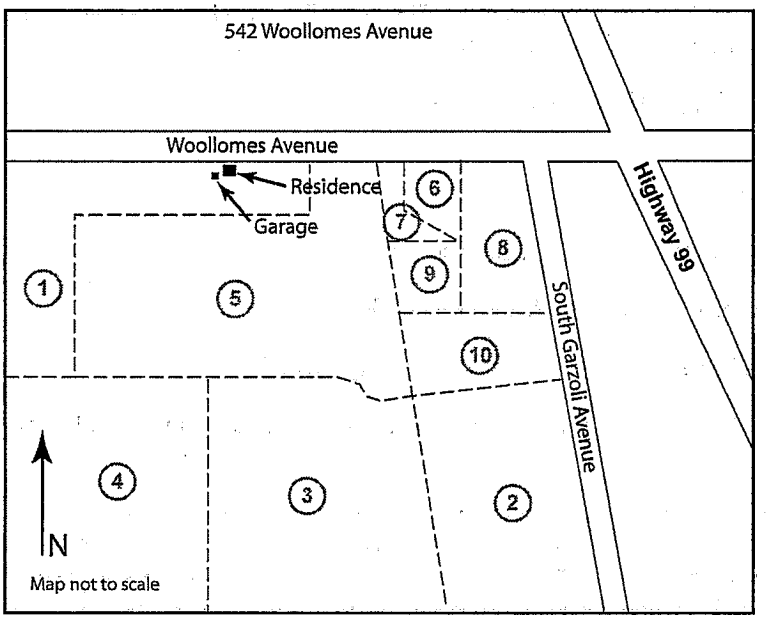
In addition, the residence at 542 Woollomes has been remodeled and is located in an expanding commercial area (e.g., a new Home Depot is located on the north side of Woollomes, north of the residence). The property lacks integrity of setting, feeling, and association.

B11. Additional Resource Attributes: N/A

***B12. References:**
Kern County Assessor's Office Property Records
Blumenson, John J.G., 1981, Identifying American Architecture, W.W. Norton Company, New York.
McAlester, V. and L., 1984, A Field Guide to American Homes, Alfred A. Knopf, New York.

B13. Remarks: None.

***B14. Evaluator:** John Nadolski, M.A. ***Date of Evaluation:** 01/17/05



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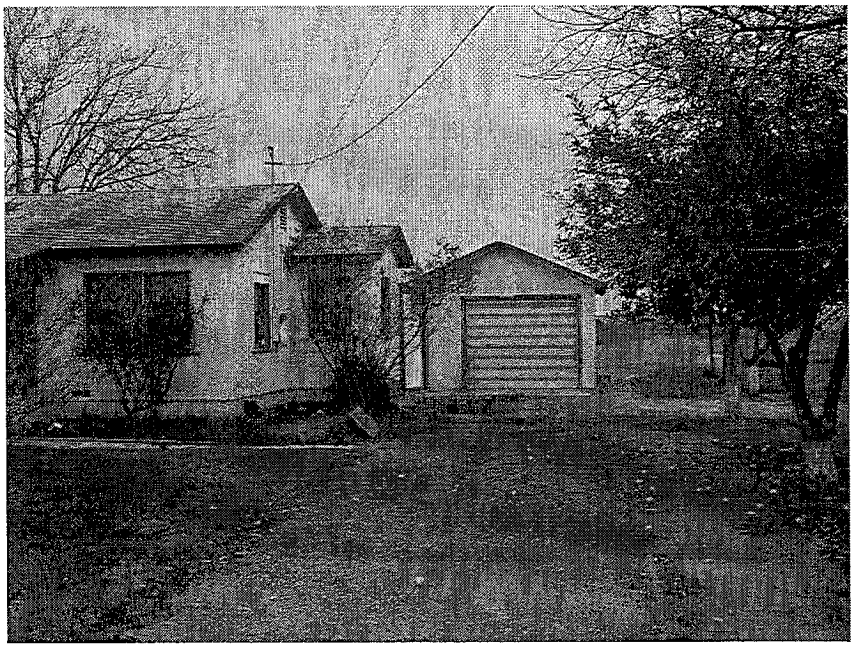
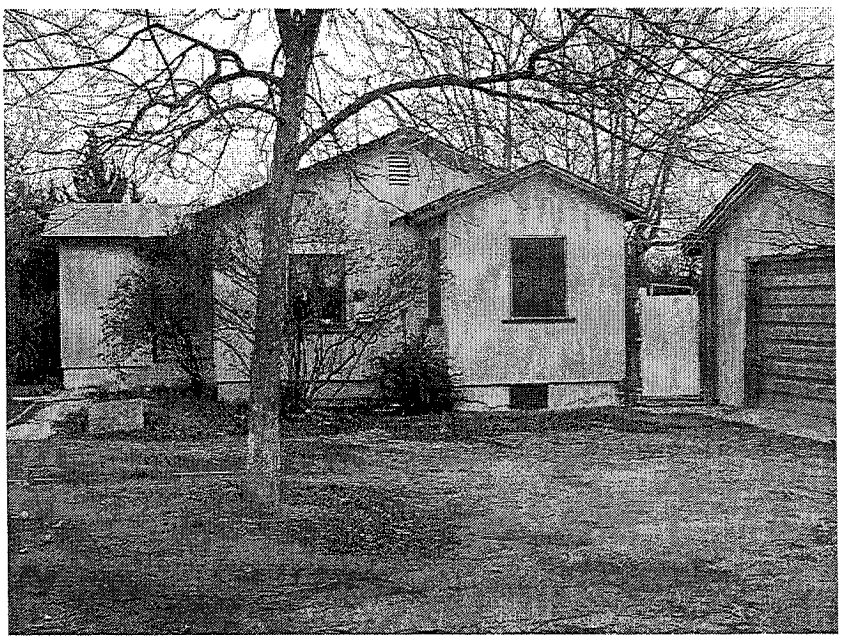
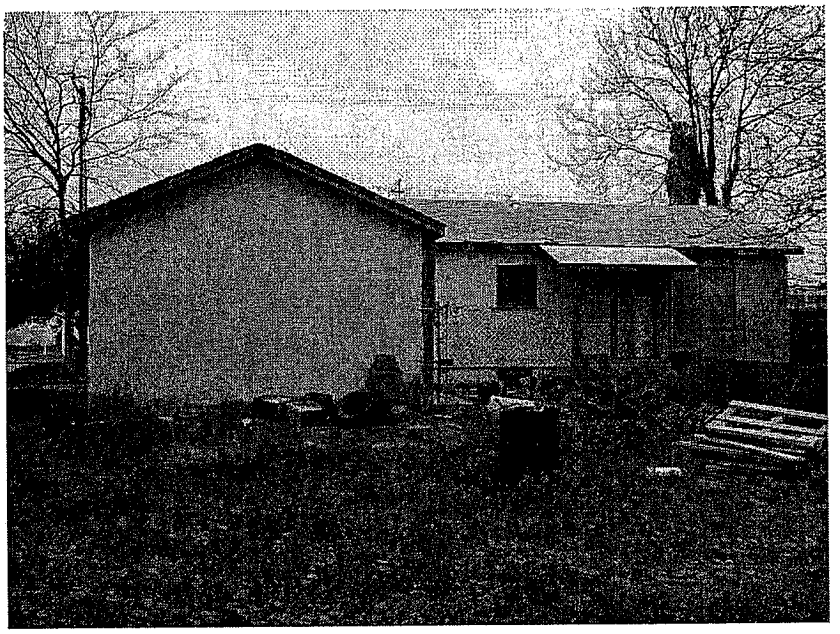


View of residence and garage facing south



View of the side of the residence facing east



View of the rear of the residence and garage facing north

*Required information

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial #
NRHP Status Code
Other Listings
Review Code Reviewer Date

P1. Other Identifier: 548 Woollomes Avenue

***P2. Location:** ☐ Not for publication ☒ Unrestricted ***a. County:** Kern
***b. USGS 7.5' Quad:** McFarland, Ca. 7.5'; 1984; Township 25 South, Range 25 East; Mt. Diablo B.M.
c. Address: NW ¼ of NE ¼ of Section 23
d. UTM: 3958196mN, 296802mE
e. Other Locational Data: APN 521-050-01

***P3a. Description:** The residence at 548 Woollomes Avenue was constructed in 1958. The single story Ranch Style building has: a side-gabled composition shingle and corrugated metal roof; a half-width, shed roofed front porch (along the north side of the residence); horizontal wood siding on its north, east, and west sides (the siding has also covered a window next to the front entryway, but its wood frame is still) and board and batten covering its south side; double hung windows with wood frames; and an attached carport with a flat tarpaper and composition shingle roof and an addition on its south end. The building is relatively well maintained, but appears to have undergone episodes of remodeling and/or reconstruction (e.g., wood siding and construction of an addition at the rear [south end] of the carport). There is also a side-gabled wooden storage shed with wood siding immediately to the west of the building.

***P3b. Resource Attributes:** HP2 Single family property; AH15 Standing structures
***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of photo: View of 548 Woollomes Avenue facing south

***P6. Date Constructed/Age:** ☐ Prehistoric ☒ Historic

***P7. Owner and Address:**
Delano Retail Center, LLC
10508 Lower Azusa Road
#200
El Monte, CA 91731

***P8. Recorded by:**
Kurt Lambert
Pacific Municipal Consultants
10461 Old Placerville Road
Suite 110
Sacramento, CA 95827

***P9. Date Recorded:** 01/13/05

***P10. Survey Type:** Intensive pedestrian surface and architectural inventory

P11. Report Citation: Archaeological and Historical Investigations for the Delano Plaza Project; John Nadolski, 2005

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other:

*NRHP Status Code
*Resource Name or # 548 Woollomes Avenue

B1. Historic Name: None
B2. Common Name: None
B3. Original Use: Residence
B4. Present Use: Residence

***B5. Architectural Style:** Ranch (1935-1975)

***B6. Construction History:** The residence at 548 Woollomes Avenue (APN 521-050-01) appears to have been constructed in 1958, according to Kern County Assessor's Office records. There is a carport on the east side of the building that may have been built after the original construction of the building. The carport includes an enclosed addition on its south end. In addition, there is a wooden storage shed on the west side of the building. The date of construction for the carport , the addition to the carport, and shed is unknown.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:**
Original Location:

***B8. Related Features:** None.

B9a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance: Theme:** Residence **Area:** Delano, CA

Period of Significance: 1950-1970 **Property Type:** Residence

Applicable Criteria: N/A: The property is evaluated as ineligible for inclusion in the California Register of Historical Resources (CRHR).

The residence at 548 Woollomes Avenue does not appear to meet any of the eligibility criteria presented in CEQA at §15064.5(a)(3) for inclusion in the CRHR. Historical investigations for the property do not suggest that: it is associated with any significant events in regional or local history; it is associated with any persons significant in history; it embodies distinctive characteristics of type, period, or method of construction; or it is likely that additional research regarding the property would produce significant new information about the early residential development of the area. Therefore, the property does not appear to meet any of the eligibility criteria for inclusion in the CRHR.

In addition, the residence at 548 Woollomes has been remodeled and is located in an expanding commercial area (e.g., a new Home Depot is located on the north side of Woollomes, north of the residence). The property lacks integrity of design, materials, workmanship, setting, feeling, and association.

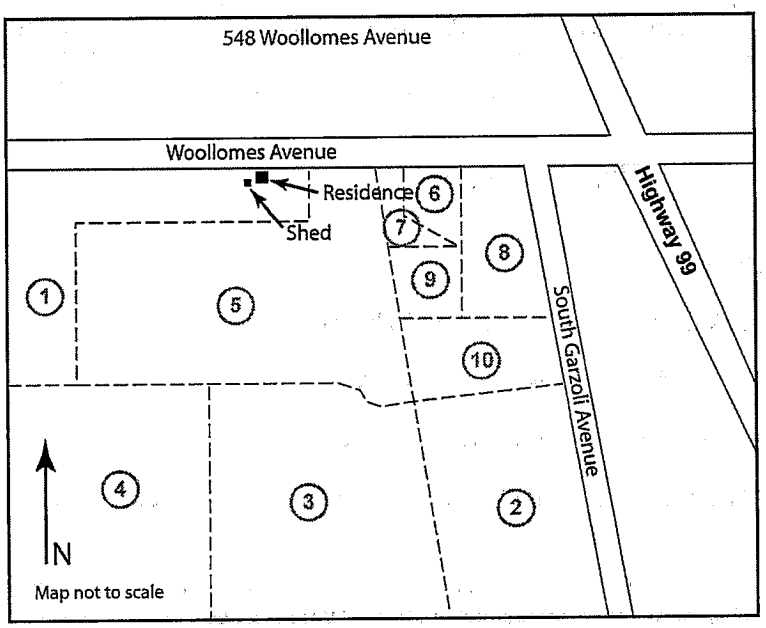
B11. Additional Resource Attributes: N/A

***B12. References:**
Kern County Assessor's Office Property Records
Blumenson, John J.G., 1981, Identifying American Architecture, W.W. Norton Company, New York.
McAlester, V. and L., 1984, A Field Guide to American Homes, Alfred A. Knopf, New York.

B13. Remarks: None.

***B14. Evaluator:** John Nadolski, M.A. ***Date of Evaluation:** 01/17/05

*NRHP Status Code
*Resource Name or # 548 Woollomes Avenue



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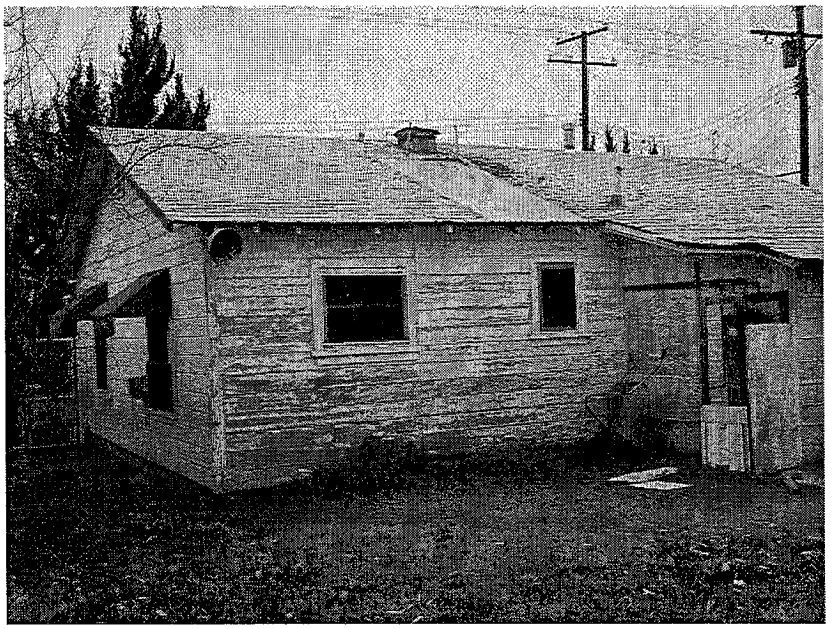
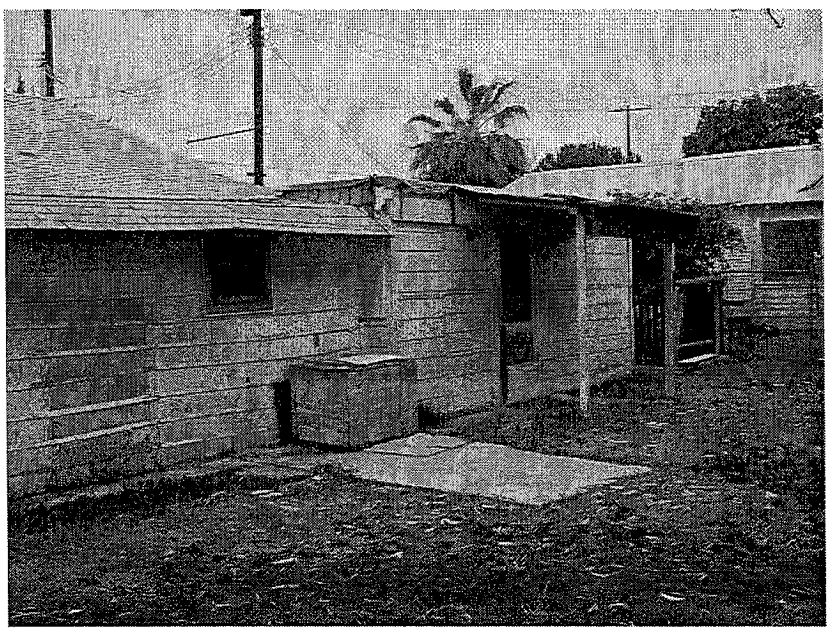
*Required information



View of the rear of the residence facing northeast



View of the rear of the residence facing northeast.

View of shed facing northwest

***Required information**

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

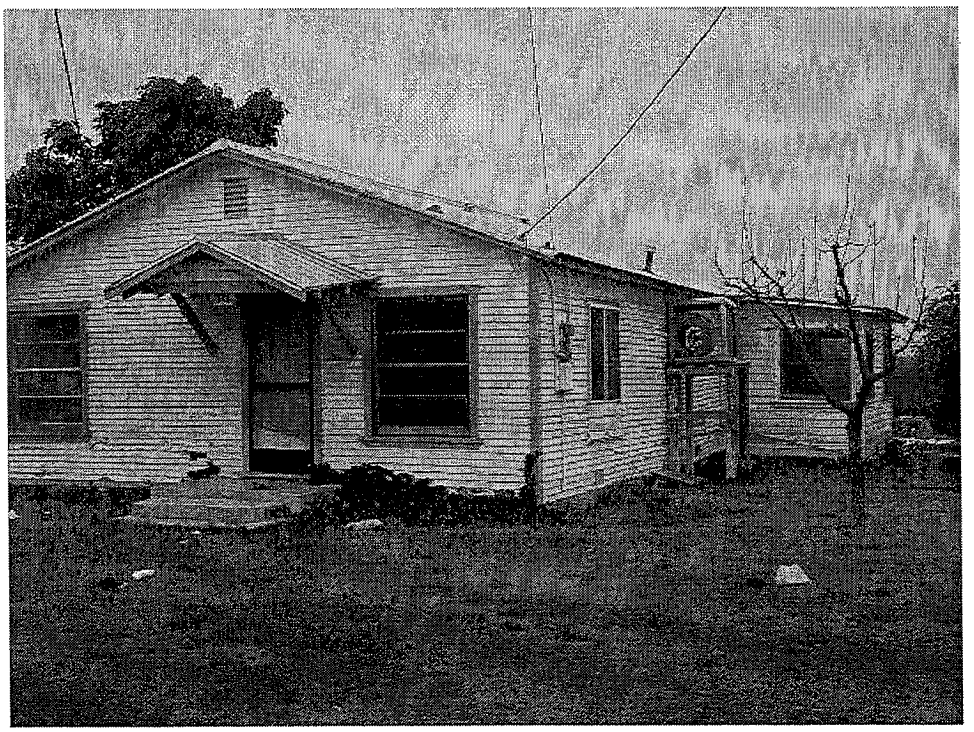
Primary #
HRI #
Trinomial #
NRHP Status Code
Other Listings
Review Code Reviewer Date

P1. Other Identifier: 554 Woollomes Avenue

***P2. Location:** ☐ Not for publication ☒ Unrestricted ***a. County:** Kern
***b. USGS 7.5' Quad:** McFarland, Ca. 7.5'; 1984; Township 25 South, Range 25 East; Mt. Diablo B.M.
c. Address: NW ¼ of NE ¼ of Section 23
d. UTM: 3958196mN, 296832mE
e. Other Locational Data: APN 521-050-01

***P3a. Description:** The residence at 554 Woollomes Avenue is a single story, vernacular building constructed in 1961 that is reminiscent of the Craftsman Style. The building has: a front-gabled corrugated metal roof; a front-gabled canopy coveribg the front entrance; horizontal wood siding that consists of boards of varying sizes, but with uniform board widthe on each side of the residence; double hung windows with wood frame, aluminum frame sliding windows, and fixed windows in wood frames; and a bump-out at its southwest corner. The building is not well maintained, and appears to have undergone episodes of remodeling and/or reconstruction (e.g., installation of aluminum frame windows and construction of the bump-out). There is also a carport framed with wood lattice to the east side of the building and a small wooden storage shed southeast of the carport.

***P3b. Resource Attributes:** HP2 Single family property; AH15 Standing structures
***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other



P5b. Description of photo: View of 554 Woollomes Avenue facing south

***P6. Date Constructed/Age:** ☐ Prehistoric ☒ Historic

***P7. Owner and Address:**
Delano Retail Center, LLC
10508 Lower Azusa Road
#200
El Monte, CA 91731

***P8. Recorded by:**
Kurt Lambert
Pacific Municipal Consultants
10461 Old Placerville Road
Suite 110
Sacramento, CA 95827

***P9. Date Recorded:** 01/13/05

***P10. Survey Type:** Intensive pedestrian surface and architectural inventory

P11. Report Citation: Archaeological and Historical Investigations for the Delano Plaza Project; John Nadolski, 2005

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other:

B1. Historic Name: None
B2. Common Name: None
B3. Original Use: Residence
B4. Present Use: Residence

***B5. Architectural Style:** Vernacular, but reminiscent of the Craftsman Style (1905-1935)

***B6. Construction History:** The residence at 554 Woollomes Avenue (APN 521-050-01) appears to have been constructed in 1961, according to Kern County Assessor's Office records. There is a bump-out on the southwest corner of the building, a carport to the east side of the building, and a wooden storage shed on the west side of the building. The date of construction of the bump-out, carport, and shed is unknown.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:**
Original Location:

***B8. Related Features:** None.

B9a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance: Theme:** Residence **Area:** Delano, CA

Period of Significance: 1960-1970 **Property Type:** Residence

Applicable Criteria: N/A: The property is evaluated as ineligible for inclusion in the California Register of Historical Resources (CRHR).

The residence at 554 Woollomes Avenue does not appear to meet any of the eligibility criteria presented in CEQA at §15064.5(a)(3) for inclusion in the CRHR. Historical investigations for the property do not suggest that: it is associated with any significant events in regional or local history; it is associated with any persons significant in history; it embodies distinctive characteristics of type, period, or method of construction; or it is likely that additional research regarding the property would produce significant new information about the early residential development of the area. Therefore, the property does not appear to meet any of the eligibility criteria for inclusion in the CRHR.

In addition, the residence at 554 Woollomes has been remodeled and is located in an expanding commercial area (e.g., a new Home Depot is located on the north side of Woollomes, north of the residence). The property lacks integrity of design, materials, workmanship, setting, feeling, and association.

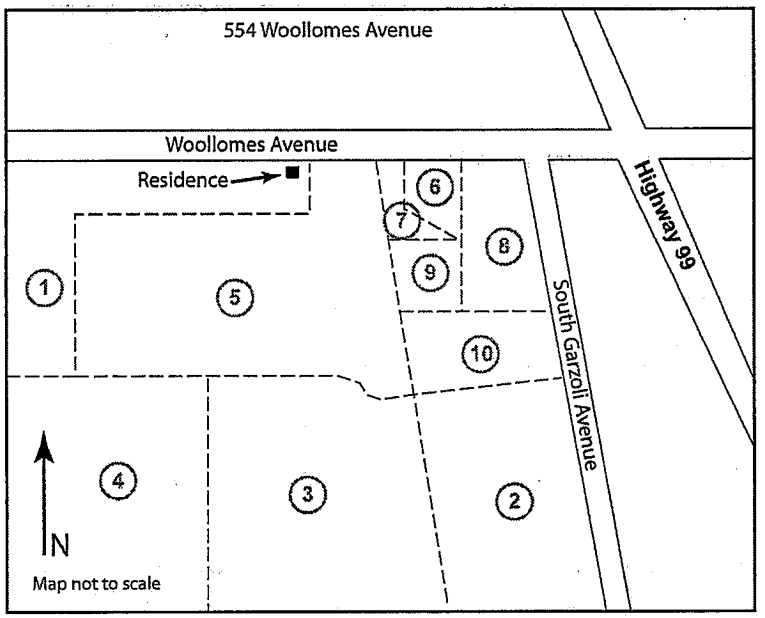
B11. Additional Resource Attributes: N/A

***B12. References:**
Kern County Assessor's Office Property Records
Blumenson, John J.G., 1981, Identifying American Architecture, W.W. Norton Company, New York.
McAlester, V. and L., 1984, A Field Guide to American Homes, Alfred A. Knopf, New York.

B13. Remarks: None.

***B14. Evaluator:** John Nadolski, M.A. ***Date of Evaluation:** 01/17/05

*NRHP Status Code
*Resource Name or # 554 Woollomes Avenue



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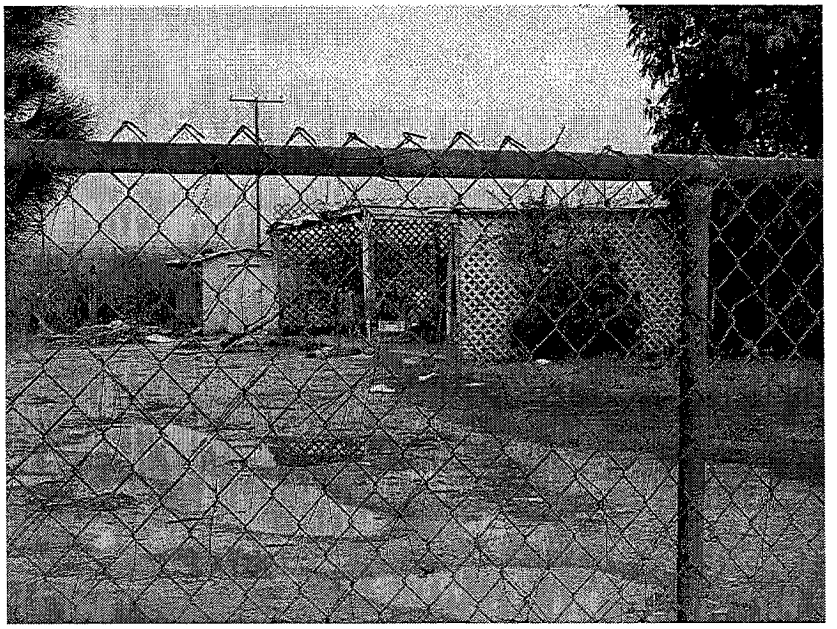
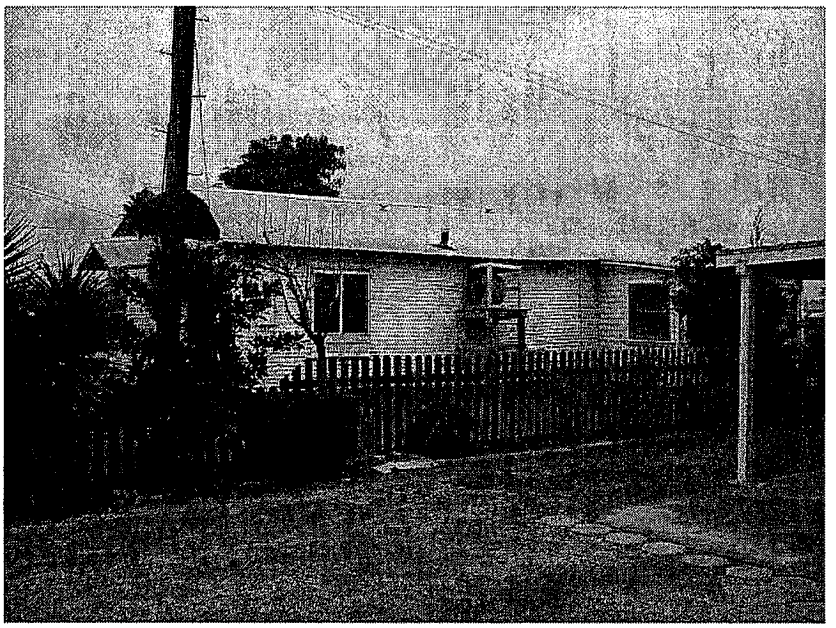
*Required information

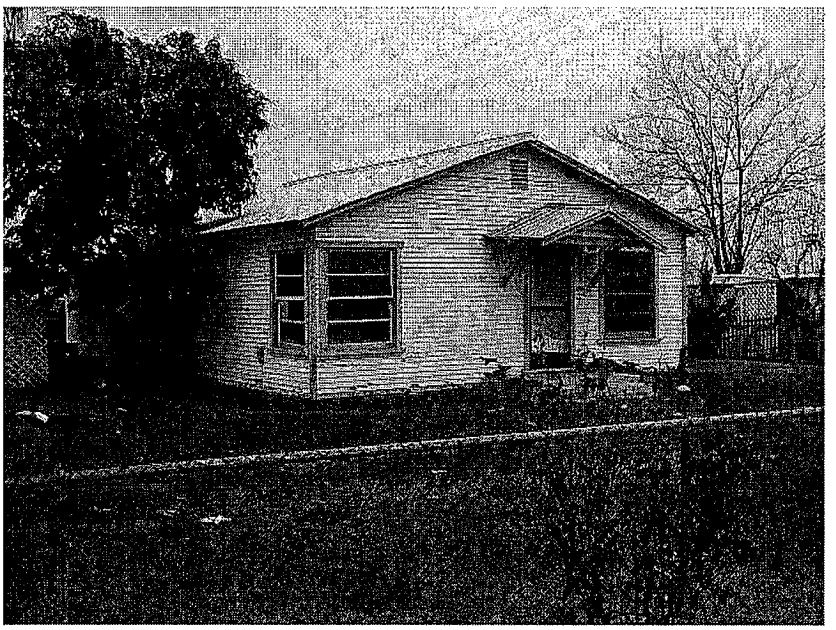


View of carport facing southwest

View of the side of the residence facing east



View of the side of the residence facing southeast



View of the residence facing southwest

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial #
NRHP Status Code
Other Listings
Review Code Reviewer Date

P1. Other Identifier: Pioneer Family Restaurant

***P2. Location:** ☐ Not for publication ☒ Unrestricted ***a. County:** Kern
***b. USGS 7.5' Quad:** McFarland, Ca. 7.5'; 1984; Township 25 South, Range 25 East; Mt. Diablo B.M.
c. Address: NW ¼ of NE ¼ of Section 23
d. UTM: 3958185mN, 296951mE
e. Other Locational Data: APN 521-050-06

***P3a. Description:** A commercial property, the Pioneer Family Restaurant, is located at 727 Woollomes Avenue. The restaurant was originally built in 1932 and called the Curve-In Café because it was located along a curve in State Route 99. The structure was moved to its current location in 1955 as a result of the realignment of State Route 99. The single story structure has: a flat roof with a sloping parapet that is capped with two rows of redwood shakes; horizontal wood siding; large single pane windows and single pane windows divided into 20 lights (i.e., four rows and five columns) along the front of the structure; and blues awnings across the front and along the sides of the restaurant.

***P3b. Resource Attributes:** HP6 1-3 story commercial building
***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of photo: View of restaurant facing southeast

***P6. Date Constructed/Age:** ☐ Prehistoric ☒ Historic

***P7. Owner and Address:**
Pioneer Family Restaurant
727 Woollomes Avenue,
Delano, CA 93216

***P8. Recorded by:**
Kurt Lambert
Pacific Municipal Consultants
10461 Old Placerville Road
Suite 110
Sacramento, CA 95827

***P9. Date Recorded:** 01/13/05

***P10. Survey Type:** Intensive pedestrian surface and architectural inventory

P11. Report Citation: Archaeological and Historical Investigations for the Delano Plaza Project; John Nadolski, 2005

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other:

*NRHP Status Code
*Resource Name or # 727 Woollomes Avenue

B1. Historic Name: Curve-In Café
B2. Common Name: Pioneer Family Restaurant
B3. Original Use: Restaurant
B4. Present Use: Restaurant

***B5. Architectural Style:** Commercial

***B6. Construction History:** The Pioneer Family Restaurant at 727 Woollomes Avenue (APN 521-050-06) was constructed in 1932, according to Kern County Assessor's Office records. The restaurant was moved to its current location in 1955. The restaurant has undergone episodes of remodeling and/or reconstruction associated with its relocation and maintenance.

***B7. Moved?** ☐No ☒Yes ☐Unknown **Date:** 1955
Original Location: Along the original alignment of State Route 99

***B8. Related Features:** None.

B9a. Architect: Unknown **b. Builder:** Unknown

***B10. Significance: Theme:** Transportation/Restaurant **Area:** Delano, CA

Period of Significance: 1930-1960 **Property Type:** Restaurant

Applicable Criteria: N/A: The property is evaluated as ineligible for inclusion in the California Register of Historical Resources (CRHR).

The Pioneer Family Restaurant at 727 Woollomes Avenue does not appear to meet any of the eligibility criteria presented in CEQA at §15064.5(a)(3) for inclusion in the CRHR. Historical investigations conducted for the property do not suggest that: it is associated with any significant events in regional or local history; it is associated with any persons significant in history; it embodies distinctive characteristics of type, period, or method of construction; or it is likely that additional research regarding the property would produce significant new information about the commercial development of the area. Therefore, the property does not appear to meet any of the eligibility criteria for inclusion in the CRHR.

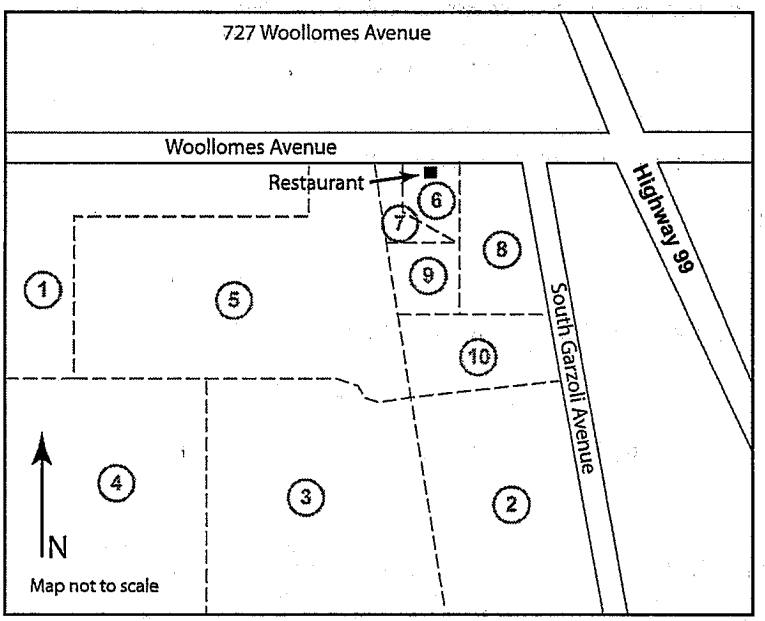
In addition, the restaurant has been relocated and remodeled/reconstructed. These activities have compromised the restaurant's integrity of materials, design, workmanship, location, setting, feeling, and association.

B11. Additional Resource Attributes: N/A

***B12. References:**
Kern County Assessor's Office Property Records
Blumenson, John J.G., 1981, Identifying American Architecture, W.W. Norton Company, New York.
McAlester, V. and L., 1984, A Field Guide to American Homes, Alfred A. Knopf, New York.

B13. Remarks: None.

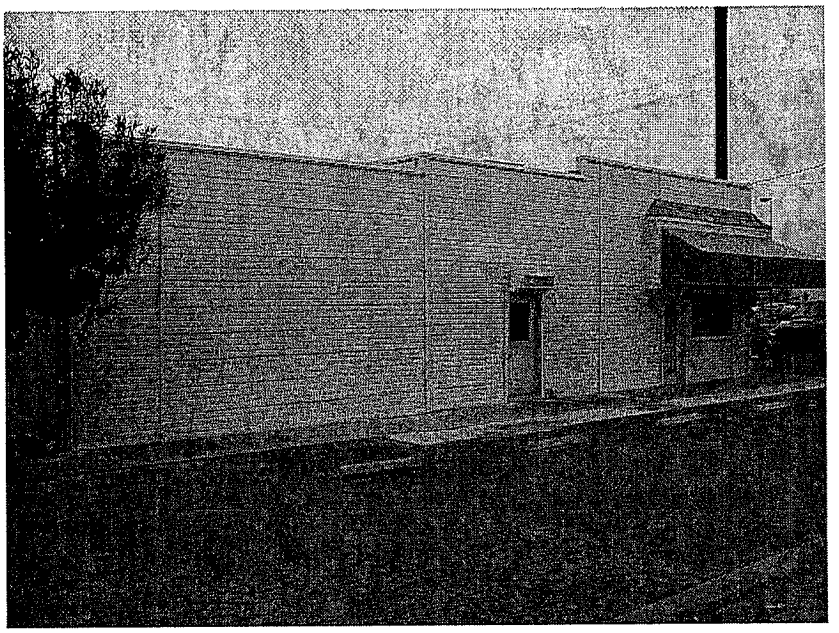
***B14. Evaluator:** John Nadolski, M.A. ***Date of Evaluation:** 01/17/05



(This space reserved for official comments.)

View of 727 Woollomes Avenue facing east

View of 727 Woollomes Avenue facing northeast



View of 727 Woollomes Avenue facing northwest

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

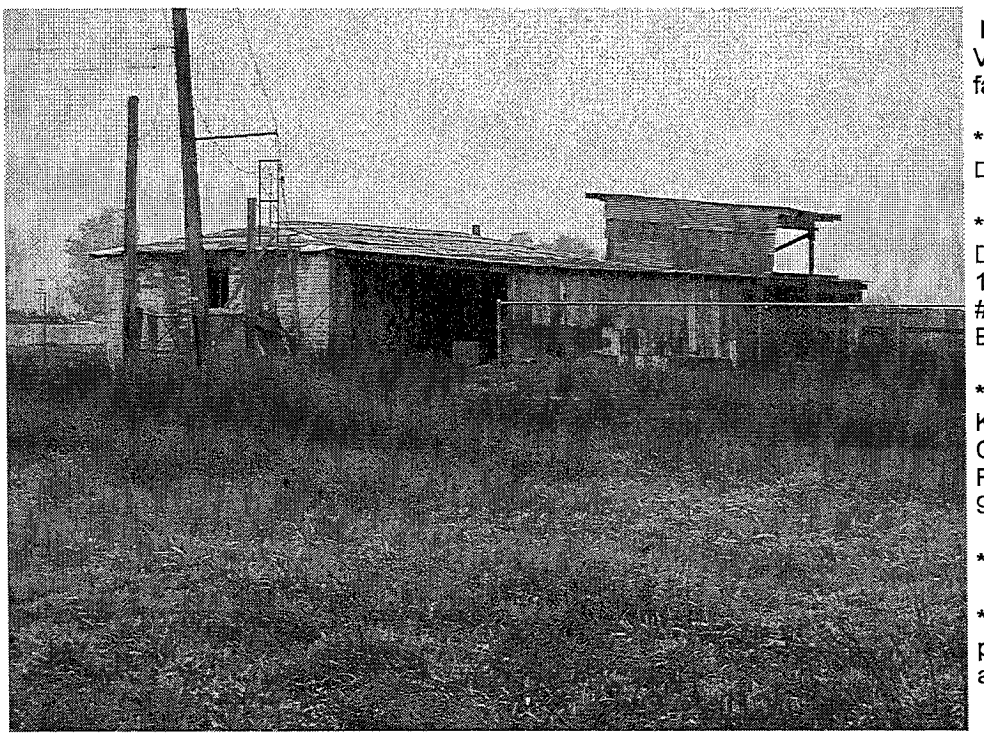
Primary #
HRI #
Trinomial #
NRHP Status Code
Other Listings
Review Code Reviewer Date

P1. Other Identifier: Parcel 5 Garage and Machine Shop

***P2. Location:** ☐ Not for publication ☒ Unrestricted ***a. County:** Kern
***b. USGS 7.5' Quad:** McFarland, Ca. 7.5'; 1984; Township 25 South, Range 25 East; Mt. Diablo B.M.
c. Address: NW ¼ of NE ¼ of Section 23
d. UTM: 3958043mN, 296799mE
e. Other Locational Data: APN 521-050-05

***P3a. Description:** A single story brick and corrugated metal structure is located on APN 521-050-05. This structure appears to be the remnants of a garage and machine shop that was built in 1943. A wrecking yard formerly occupied the area west of the garage/machine shop and an underground "concrete vault" is located east of the garage/machine shop. The structure is abandoned and in very poor condition.

***P3b. Resource Attributes:** HP39 Other (garage and shop)
***P4. Resources Present:** ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other



P5b. Description of photo: View of garage and machine shop facing southeast

***P6. Date Constructed/Age:** ☐ Prehistoric ☒ Historic

***P7. Owner and Address:**
Delano Retail Center, LLC
10508 Lower Azusa Road
#200
El Monte, CA 91731

***P8. Recorded by:**
Kurt Lambert, Pacific Municipal Consultants, 10461 Old Placerville Road, Suite 110, Sacramento, CA 95827

***P9. Date Recorded:** 01/13/05

***P10. Survey Type:** Intensive pedestrian surface and architectural inventory

P11. Report Citation: Archaeological and Historical Investigations for the Delano Plaza Project; John Nadolski, 2005

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other:

*NRHP Status Code
*Resource Name or # Parcel 5 Garage and Shop

B1. Historic Name: None
B2. Common Name: None
B3. Original Use: Garage and Machine shop
B4. Present Use: Vacant

***B5. Architectural Style:** Commercial

***B6. Construction History:** The garage and machine shop is located on APN 521-050-05, and was constructed in 1943 according to Kern County Assessor's Office records. The structure was remodeled/reconstructed in 1951 and also appears to have undergone additional episodes of remodeling/reconstruction. The date of remodeling activity subsequent to 1951 is unknown. Currently, the structure is abandoned and in poor condition.

***B7. Moved?** ☒No ☐Yes ☐Unknown **Date:**
Original Location:

***B8. Related Features:** None.

B9a. Architect: Unknown **b.** Builder: Unknown

***B10. Significance: Theme:** Commercial **Area:** Delano, CA

Period of Significance: 1940-1960 **Property Type:** Residence

Applicable Criteria: N/A: The property is evaluated as ineligible for inclusion in the California Register of Historical Resources (CRHR).

The garage and machine shop at APN 521-050-05 do not appear to meet any of the eligibility criteria presented in CEQA at §15064.5(a)(3) for inclusion in the CRHR. Historical investigations for the property do not suggest that: it is associated with any significant events in regional or local history; it is associated with any persons significant in history; it embodies distinctive characteristics of type, period, or method of construction; or it is likely that additional research regarding the property would produce significant new information about the commercial development of the area. Therefore, the property does not appear to meet any of the eligibility criteria for inclusion in the CRHR.

In addition, the integrity (i.e., materials, workmanship, setting, feeling, and association) of the garage and machine shop has been compromised by a lack of maintenance and the commercial development of the area.

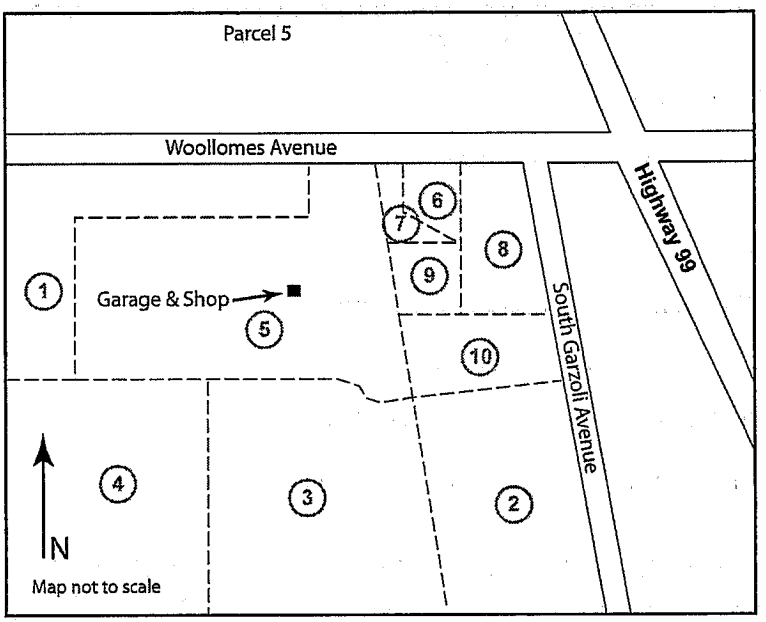
B11. Additional Resource Attributes: N/A

***B12. References:**
Kern County Assessor's Office
Blumenson, John J.G., 1981, Identifying American Architecture, W.W. Norton Company, New York.
McAlester, V. and L., 1984, A Field Guide to American Homes, Alfred A. Knopf, New York.

B13. Remarks: None.

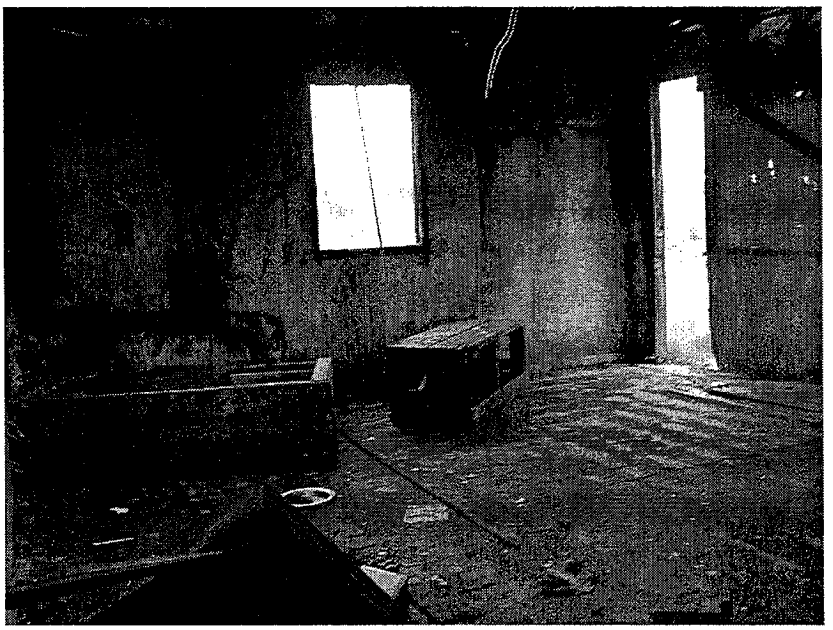
***B14. Evaluator:** John Nadolski, M.A. ***Date of Evaluation:** 01/17/05

*NRHP Status Code
*Resource Name or # Parcel 5 Garage and Shop

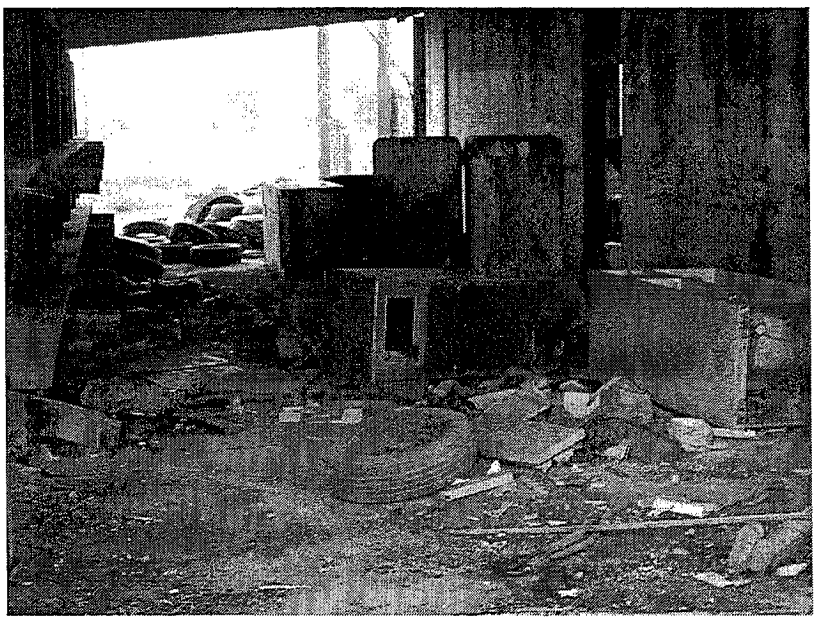


(This space reserved for official comments.)

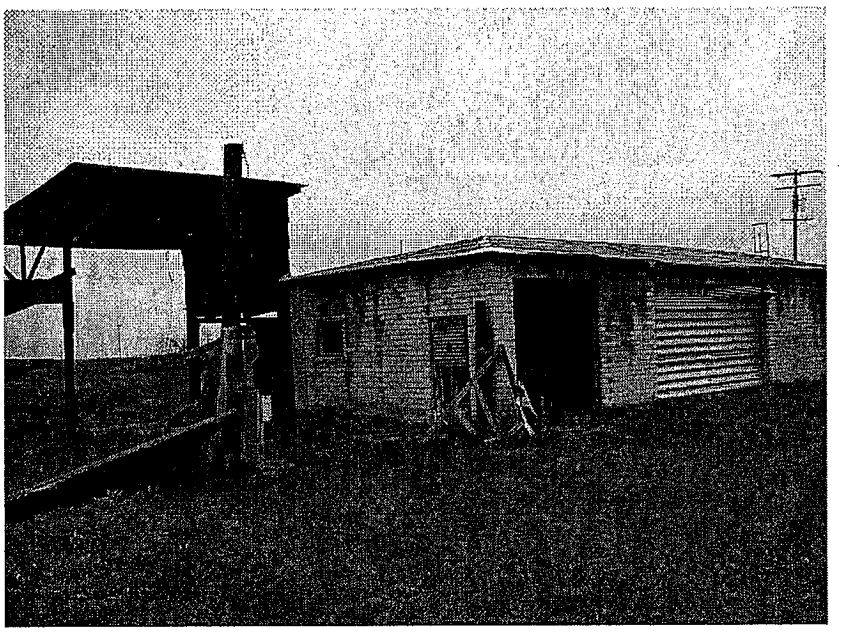
*Required information



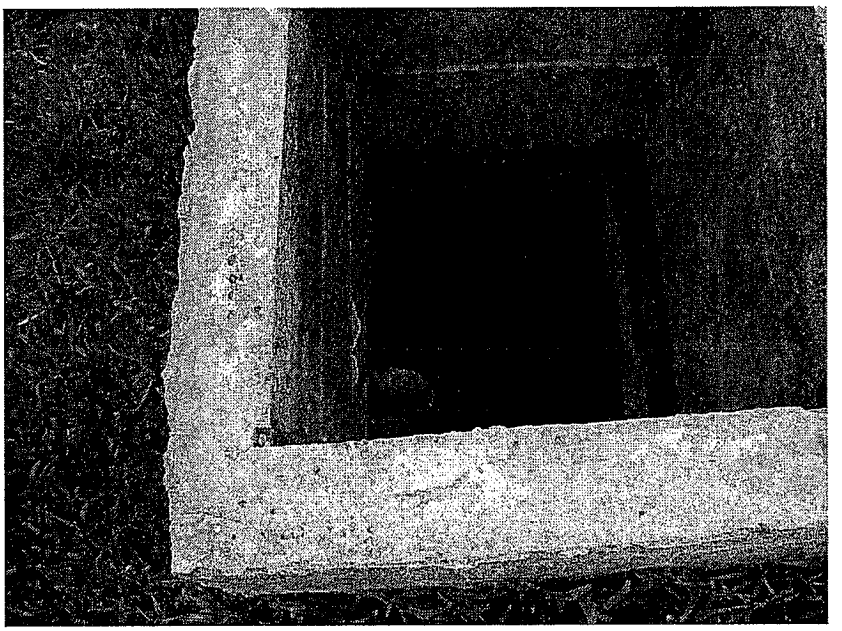
View of interior of garage facing northeast



View of area inside machine shop facing north



View of garage facing northwest



View of "concrete vault" east of garage

APPENDIX B
NATIVE AMERICAN CONSULTATION

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390
Web Site www.nahc.ca.gov

January 25, 2005

John Nadolski
Cultural Resources Specialist
PMC
Rancho Cordova Office

Sent by Fax: 916 361-1574
Number of Pages: 2

RE: Proposed Delano Shopping Center, Delano; Kern County

Dear Mr. Nadolski:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

Rob Wood
Environmental Specialist III

Native American Contacts
Kern County
January 25, 2005

Santa Rosa Rancheria
Clarence Atwell, Chairperson
P.O. Box 8 Tache
Lemoore , CA 93245 Tachi
Yokut
(559) 924-1278
(559) 924-3583 Fax

Tule River Indian Tribe
Neal Peyron, Chairperson
P.O. Box 589 Yokuts
Porterville , CA 93258
(559) 781-4271
(559) 781-4610 FAX

Kern Valley Indian Council
Ron Wermuth
P.O. Box 168 Tubatulabal
Kernville , CA 93238 Kawaiisu
rwermuth@water.ca.gov Koso
Yokuts
(760) 376-4240 - Home
(916) 802-4720- Cell Work
(916) 717-1176 - Cell
Kern Valley Indian Council
Robert Robinson, Chairperson
P.O. Box 401 Tubatulabal
Weldon , CA 93283 Kawaiisu
Koso
Yokuts
(760) 873-7493

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment fortthe proposed Delano Shopping Center, Delano; Kern County.

PMC

PACIFIC MUNICIPAL
CONSULTANTS

www.pacificmunicipal.com

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Fax (530) 894-6459

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Fax (916) 361-1574

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10951 Sorrento Valley Road
Suite 1-A
San Diego, CA 92121
Phone (858) 453-3602
Fax (858) 453-3628

January 31, 2005

Santa Rosa Rancheria
Clarence Atwell, Chairperson
PO Box 8
Lemoore, Ca. 93245

RE: DELANO SHOPPING CENTER

Dear Mr. Atwell:

I obtained your name from the Native American Heritage Commission in order to inform you of the proposed Delano Shopping Center in Kern County. The project will provide retail facilities for the City of Delano. If you have any questions and/or concerns regarding this project please do not hesitate to contact me.

Sincerely,

PACIFIC MUNICIPAL CONSULTANTS

John Nadolski
Cultural Resources Specialist
Rancho Cordova Office

PMC

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Fax (858) 453-3628

January 31, 2005

Tule River Indian Tribe
Neal Peyron, Chairperson
PO Box 589
Porterville, Ca. 93258

RE: DELANO SHOPPING CENTER

Dear Mr. Peyron:

I obtained your name from the Native American Heritage Commission in order to inform you of the proposed Delano Shopping Center in Kern County. The project will provide retail facilities for the City of Delano. If you have any questions and/or concerns regarding this project please do not hesitate to contact me.

Sincerely,

PACIFIC MUNICIPAL CONSULTANTS

John Nadolski
Cultural Resources Specialist
Rancho Cordova Office

PMC

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Fax (858) 453-3628

January 31, 2005

Kern Valley Indian Council
Ron Wermuth
PO Box 168
Kernville, Ca. 93238

RE: DELANO SHOPPING CENTER

Dear Mr. Wermuth:

I obtained your name from the Native American Heritage Commission in order to inform you of the proposed Delano Shopping Center in Kern County. The project will provide retail facilities for the City of Delano. If you have any questions and/or concerns regarding this project please do not hesitate to contact me.

Sincerely,

PACIFIC MUNICIPAL CONSULTANTS

John Nadolski
Cultural Resources Specialist
Rancho Cordova Office

PMC

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Fax (916) 361-1574

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Suite 1-A
San Diego, CA 92121
Phone (858) 453-3602
Fax (858) 453-3628

January 31, 2005

Kern Valley Indian Council
Robert Robinson, Chairperson
PO Box 401
Weldon, Ca. 93283

RE: DELANO SHOPPING CENTER

Dear Mr. Robinson:

I obtained your name from the Native American Heritage Commission in order to inform you of the proposed Delano Shopping Center in Kern County. The project will provide retail facilities for the City of Delano. If you have any questions and/or concerns regarding this project please do not hesitate to contact me.

Sincerely,

PACIFIC MUNICIPAL CONSULTANTS

John Nadolski
Cultural Resources Specialist
Rancho Cordova Office

PMC

MEMO

To: Erika Spencer

From: John Nadolski

Date: January 3, 2007

Re: Results of Cultural Rexsources Investigations for the Woollomes Avenue/State Route 99 Interchange Improvement Project

Erika:

PMC conducted archaeological and historical investigations for the Woollomes Avenue/State Route (SR) 99 Interchange Improvements Project in November 2006. These investigations included a review of previous record searches and sacred land searches for the area (e.g., Home Depot and Delano Marketplace projects) that were completed by the Southern San Joaquin Valley Information Center at California State University, Bakersfield and the Native American Heritage Commission. The previous record searches and sacred lands searches did not identify any previously recorded sites or sensitive Native American cultural resources in the project Area of Potential Effects (APE). Similarly, previous consultation with the Native American community did not identify any issues related to commercial developments in the area.

The project APE was not previously surveyed. Consequently, PMC cultural resources staff conducted a pedestrian surface survey across the project APE on November 7, 2006 using 1-3 meter transects. The surface survey did not identify any cultural resources (e.g., prehistoric sites, historic sites, or isolated artifacts) in the project APE. The survey did identify that the proposed alignment of the southwest on-ramp to SR 99 passes through a fuel station and near a cement facility. Neither of these facilities meets the criteria for inclusion in the California Register of Historical Resources or for consideration as unique archaeological resources. In summary, there are no historical resources or unique archaeological resources in the project APE. It is not anticipated that implementation and completion of the proposed Woollomes Avenue/SR 99 Interchange Improvements Project would likely impact any historical resources or unique archaeological resources and the project may be implemented as currently proposed.

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(858) 453-3602 Phone
(858) 453-3628 Fax

1-866-828-6762

Please contact me if you have any questions regarding the cultural resources investigations for the Woollomes Avenue/SR 99 Interchange Improvements Project.

Sincerely,

John A. Nadolski
Director, Archaeological & Historical Resources Group

TECHNICAL APPENDICES

Appendix E – Geology and Soils

The Twining Laboratories, Inc. *Draft Geotechnical Engineering Feasibility Investigation*. May 19, 2005

THE TWINING LABORATORIES, INC.
EST. 1898
ANALYTICAL CHEMISTRY • ENVIRONMENTAL SERVICES
GEOTECHNICAL ENGINEERING • SAMPLING SERVICES
CONSTRUCTION INSPECTION & MATERIALS TESTING

DRAFT
GEOTECHNICAL ENGINEERING FEASIBILITY INVESTIGATION PROPOSED RETAIL DEVELOPMENT 45 ACRE PARCEL, SOUTHWEST CORNER OF WOOLLOMES ROAD AND GARZIOLA AVENUE

DELANO, KERN COUNTY, CALIFORNIA

Project Number: C68503.01-01

For:

YK America International Group, Inc.
10508 Lower Azusa Road, #200
El Monte, California 91731

May 19, 2005

CORPORATE
2527 Fresno Street
Fresno, CA 93721-1804
(559) 268-7021
Fax 268-7126

MODESTO
5253 Jerusalem Court, Suite E
Modesto, CA 95356-9322
(209) 342-2061
Fax 579-1480

CORONA
840 East Parkridge Avenue, Suite 104
Corona, CA 92879
(951) 898-8932
Fax 898-8974

BAKERSFIELD
3651 Pegasus Drive, #117
Bakersfield, CA 93308-6843
(661) 393-5088
Fax 393-4643

MONTEREY
501 Ortiz Avenue
Sand City, CA 93955
(831) 392-1056
Fax 392-1059

SACRAMENTO
5675 Power Inn Road, Suite C
Sacramento, CA 95824
(916) 381-9477
Fax 381-9478

THE TWINING LABORATORIES, INC.
EST. 1898
ANALYTICAL CHEMISTRY • ENVIRONMENTAL SERVICES
GEOTECHNICAL ENGINEERING • SAMPLING SERVICES
CONSTRUCTION INSPECTION & MATERIALS TESTING

May 19, 2004 C68503.01-01

Mr. Geary Coats
YK America International Group, Inc.
10508 Lower Azusa Road, #200
El Monte, California 91731

Subject: DRAFT - Geotechnical Engineering Feasibility Investigation
Proposed Retail Development
45 Acre Parcel
Southwest Corner of Woollomes Road and Garziola Avenue
Delano, Kern County, California

Dear Mr. Coats:

We are pleased to submit this geotechnical engineering investigation report prepared for the proposed retail development to be located at the southwest corner of Woollomes Road and Garziola Avenue in Delano, Kern County, California. The contents of this report include the purpose of the investigation, scope of services, background information, investigative procedures, our findings, evaluation, conclusions, and recommendations.

The intent of this investigation was to provide an evaluation of the geotechnical engineering feasibility of the proposed project. The evaluation was based on a site reconnaissance and our review of published geotechnical and geologic data, and geotechnical data developed based on Twining's subsurface investigation at the sites This report should not be used for design or construction of the proposed retail development. Design level geotechnical investigations should be conducted prior to design and construction of the development.

We appreciate the opportunity to be of service to the YK America International Group, Inc. If you have any questions regarding this report, or if we can be of further assistance, please contact us at your convenience at (800) 268-7021.

Sincerely,
THE TWINING LABORATORIES, INC.

DRAFT

Allen H. Harker
Project Manager
Geotechnical Engineering Division

AHH/amh

EXECUTIVE SUMMARY

The Twining Laboratories, Inc. (Twining) was authorized by Mr. Geary Coats with YK America International Group, Inc. to conduct this investigation in accordance with Twining's proposal, 4905-0307, dated April 7, 2005. The purpose of our feasibility investigation was to provide preliminary geotechnical engineering parameters for preliminary planning purposes. It should be noted that recommendations provided in this report should be considered preliminary and not used for design purposes. Additional borings and laboratory testing should be performed during a design level investigation. Further, information regarding the proposed structures and the anticipated structural loads should be provided to Twining in order to make design level recommendations.

It is our understanding that the site is being considered for retail development. According to an undated site plan, provided by YK America International Group, Inc., the proposed layout consist of a Major Retail building in the southeast corner of the site and four Major Retail buildings, all adjacent to each other, in the south-central and southwestern portion of the site. The central portion of the site is proposed to consist of parking and drive areas. A Retail building is proposed in the northwest corner of the site. Finally, seven (7) smaller building pads are proposed throughout the remainder of the northern portion of the site. The proposed construction is anticipated to be supported on shallow foundation systems. Basements are not anticipated for the proposed development. In addition to the proposed structures, the project will include asphaltic concrete parking and driveways, and underground utilities. It should be noted that the existing Pioneer Family Restaurant in the northeastern portion of the site will remain.

Twining conducted a field exploration for the proposed retail development on April 28, 2005. The field exploration consisted of drilling six (6) borings to depths ranging from 20 to 50 feet BSG. The soils varied across the site. Possible fill soils were encountered in boring B-3, drilled in the western-central portion of the site. The possible fill soils consisted of silty sands with intermixed sandy lean clays to a depth of about 5½ feet BSG. In general, the native near surface soils consisted of silty sands to depths ranging between about 3½ and 8 feet BSG. In boring B-5, drilled within the borrow pit area (approximately three to four feet lower than the surrounding area), near surface silty sands only extended to about 1 foot BSG. Native, near surface sandy silts were encountered in boring B-2 to a depth of about 4 feet BSG. The near surface silty sands and sandy silts were underlain by interbeds of poorly graded sands, sandy lean clays, silty sands and sandy silts to the maximum depth explored, approximately 50 feet BSG. The sandy silt layer directly below the near surface silty sands was noted to be porous. The native, sandy lean clay layers were encountered at depths of 4 feet BSG or lower.

Perched groundwater was encountered at a depth of about 33 feet BSG in borings B-1 and B-2 which were both drilled to about 50 feet BSG. The groundwater encountered was considered to be a perched layer considering that a stiff to very stiff confining clay layer was encountered below the groundwater depth, and soil layers below the confining clay layer were moist but not wet. According to a maps published by the California Department of Water Resources entitled, "Lines of Equal Depth to Water in Wells, Spring 1990 to 2001," the depth to first encountered regional groundwater underlying the site is estimated to be 55 to 120 feet BSG.

EXECUTIVE SUMMARY (Continued)

Based on limited laboratory test results, the near surface silty sands are anticipated to exhibit moderate shear strength. In boring B-3, sandy lean clay soils, intermixed with the near surface silty sands, exhibited medium to high plasticity and medium expansion potential. In addition, these materials are anticipated to exhibit poor support characteristics for pavements when prepared as recommended herein. In areas where near surface, porous, sandy silts were encountered, the sandy silt soils exhibited high compressibility and high collapse potential.

From a geotechnical standpoint, the site is suitable for the proposed construction with regard to support of shallow spread foundations and the concrete slab-on-grade, provided the recommendations contained in this report are followed. The primary geotechnical concerns at the subject site are: 1) the presence of undocumented fill soils; 2) the presence of compressible, loose, near surface soils; 3) loose soils that will result from demolition of structures to be removed at the site; 4) the potential for differential fill thickness as a result of filling the borrow pit area and flood control basin, and 5) the expansive nature of the near surface soils in localized areas. As a result, remedial grading is considered necessary in order to provide foundation support for the proposed structures.

It is recommended that additional borings be drilled and additional laboratory testing be performed to determine whether these soils exist as a localized condition or are widespread throughout the site. Site preparation for the proposed retail development is anticipated to include over-excavation in order to remove all undocumented fill soils until firm, native soils are exposed. Compressible, loose, near surface soils, that may also have collapse potential, should also be over-excavated during site preparation. It is anticipated that site preparation will include demolition of the existing residential homes, wrecking yard, pallet company yards, and the motel. Consequently, removal of the buildings, foundations, underground utilities, as well as removal of the existing large trees will result in disturbance and loosening of the near surface soils. Therefore, over-excavation should extend at least 12 inches below disturbed, loose soils as a result of demolition activities in these areas. It is also anticipated that the borrow pit area and flood control basin will need to be filled in order to achieve relatively level site grades for the proposed development. Over-excavation should be conducted to provide a uniform thickness of engineered fill below the proposed structures. In order to limit differential fill thickness, engineered fill should not vary by more than 1 foot in height across a horizontal distance of 10 feet.

Based on the subsurface data and limited laboratory testing performed as part of this report, static settlement calculations were performed. Calculations indicate that static settlement of foundations placed directly on areas consisting of the native silty sand and sandy silt soils would exceed a total settlement of 1 inch. To reduce the estimated total and differential settlements to 1 inch and ½ inch in 40 linear feet, respectively, the foundations would need to be supported on a uniform thickness of engineered fill. The amount of engineered fill required to reduce the estimated total and differential settlements to 1 inch ½ inch in 40 linear feet, respectively, will need to be further evaluated once information regarding anticipated structural loads is made available.

EXECUTIVE SUMMARY (Continued)

It is anticipated that the structures for the proposed retail development may be supported on a uniform thickness of engineered fill using a net allowable soil bearing pressure of about 2,000 to 3,000 pounds per square foot for dead-plus-live loads. However, further evaluation of net allowable soil bearing pressure will be necessary when information regarding anticipated structural loads is provided.

Preliminary evaluations indicate that footings should have a minimum depth of 18 inches (or 24 inches for two-story buildings) below rough pad grade or adjacent exterior grade, whichever is lower.

The anticipated pavement subgrade characteristics are poor. The subgrade support characteristics of the native soils were evaluated by Resistance (R)-value tests. The results of limited laboratory tests conducted on two (2) samples obtained within the upper 3 feet BSG indicated the soils had R-values of 10 and 11. Pavement section recommendations can be provided when additional near surface samples the site have been tested and information regarding anticipated traffic indices are provided.

The results of chemistry tests indicated that the soils are "moderately corrosive." Additional laboratory testing should be performed during a design level recommendations in order to provide general recommendations for corrosion protection.

The site is not located in an Alquist-Priolo Earthquake Fault Zone or fault zone delineated in response to the Seismic Hazards Mapping Act. The nearest active fault to the site is the Great Valley fault (segment 14), approximately 69½ miles northwest of the site. No known faults are mapped as crossing the site; thus, the potential for ground rupture at the site is considered low.

The 2001 California Building Code (CBC), Figure 16.2 (Seismic Zone Map of the United States) indicates that the site is located in Seismic Zone 3. A probabilistic seismic hazard analysis was conducted to assess potential seismic ground shaking at the site. The results indicate the site area can expect a peak horizontal ground acceleration of about 0.22g as a result of the design basis Earthquake ground motion.

Considering that the groundwater encountered was a perched groundwater level, and that the regional groundwater table in the vicinity of the site in recent years is estimated to be approximately 100 feet deep, liquefaction is not expected to impact the proposed project.

One of the most common phenomena that occurs during seismic shaking is the induced settlement of loose, unconsolidated sediments. This can occur in unsaturated and saturated granular soils. Liquefaction analyses from borings B-1, which contained loose sandy soils from the ground surface to a depth of about 14 feet BSG, indicated that a total dry seismic settlement of about ¼ inch was estimated as a result of shaking caused by the design basis earthquake. This settlement may not occur uniformly over the site due to variations in the thicknesses of different soil layers; therefore, a differential seismic settlement of about ¼ inch across the proposed building pad should be anticipated.

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1

2.0 PURPOSE AND SCOPE OF INVESTIGATION 1

2.1 Purpose 1
2.2 Scope 2

3.0 BACKGROUND INFORMATION 3

3.1 Site History 3
3.2 Previous Studies 4
3.3 Site Description 4
3.4 Anticipated Construction 4

4.0 INVESTIGATIVE PROCEDURES 6

4.1 Field Exploration 6
4.1.1 Site Reconnaissance 6
4.1.2 Drilling Test Borings 6
4.1.3 Soil Sampling 7
4.2 Laboratory Testing 7

5.0 FINDINGS AND RESULTS 7

5.1 Surface Conditions 7
5.2 Soil Profile 8
5.3 Soil Engineering Properties 8
5.4 Groundwater Conditions 10

6.0 EVALUATION 10

6.1 Surface Conditions 10
6.2 Expansive Soils 11
6.3 Static Settlement and Bearing Capacity of Shallow Foundations 11
6.4 Interior Slab-on-Grade 12
6.5 Ground Rupture, Seismic Coefficients, and Seismic Ground Motion 12
6.6 Liquefaction and Seismic Settlement 13
6.7 Asphaltic Concrete (AC) Pavements 13
6.8 Corrosion Protection 13

TABLE OF CONTENTS

Page

7.0 CONCLUSIONS 14

8.0 NOTIFICATION AND LIMITATIONS 16

APPENDICES

APPENDIX A - Drawings A-1

Drawing No. 1 - Site Location Map
Drawing No. 2 - Test Boring and R-Value Location Map

APPENDIX B - Logs of Borings B-1

APPENDIX C - Results of Laboratory Tests C-1

DRAFT

GEOTECHNICAL ENGINEERING FEASIBILITY INVESTIGATION

PROPOSED RETAIL DEVELOPMENT, 45 ACRE PARCEL

SOUTHWEST CORNER OF WOOLLOMES ROAD AND GARZIOLA AVENUE

DELANO, KERN COUNTY, CALIFORNIA

Project Number: C68503.01-01

1.0 INTRODUCTION

This report presents the results of a geotechnical engineering feasibility investigation for the proposed retail development to be located at the southwest corner of Woollomes Road and Garziola Avenue in Delano, Kern County, California. The Twining Laboratories, Inc. (Twining) was authorized by Mr. Geary Coats with YK America International Group, Inc. to conduct this investigation in accordance with Twining's proposal, TLP 4905-0307, dated April 7, 2005.

The contents of this report include the purpose of the investigation and the scope of services provided. The site history, previous studies, existing site features, and anticipated construction are discussed. In addition, a description of the investigative procedures used and the subsequent findings obtained are presented. Finally, the report provides an evaluation of the findings, general conclusions, and related recommendations. The three report appendices contain the drawings (Appendix A); the logs of borings (Appendix B); and the results of laboratory tests (Appendix C).

The Geotechnical Engineering Division of Twining, headquartered in Fresno, California, performed the investigation.

2.0 PURPOSE AND SCOPE OF INVESTIGATION

2.1 Purpose: The purpose of the feasibility investigation was to conduct a field exploration and a laboratory testing program, evaluate the data collected during the field and laboratory portions of the investigation, and provide the following:

2.1.1 Summary of the subsurface soil conditions and groundwater;

2.1.2 General geotechnical parameters for use in design of foundations and slabs-on-grade.

2.1.3 General recommendations for site preparation including placement, moisture conditioning, and compaction of engineered fill soils;

2.1.4 Conclusions regarding the potential for liquefaction, magnitude of seismic settlement, recommendations for California Building Code (CBC) seismic near source factors and coefficients;

2.1.5 General recommendations for the design and construction of asphaltic concrete (AC) pavements; and

2.1.6 General recommendations for temporary excavations and utility trench backfill.

This report is provided specifically for the proposed retail development and pavements referenced in the Anticipated Construction section of this report. This report should not be used for design or construction of the proposed retail development. Design level geotechnical investigations should be conducted prior to design and construction of the development.

This investigation did not include a complete geologic/seismic hazards evaluation, flood plain investigation, compaction tests, environmental investigation, or environmental audit. The investigation is not intended to comply with the individual tenant requirements for geotechnical investigations. When the actual tenants become known, geotechnical design level investigations should be performed to meet the geotechnical requirements for the individual tenants.

2.2 **Scope:** Our proposal, dated April 7, 2005, outlined the scope of our services. The actions undertaken during the investigation are summarized as follows.

2.2.1 Aerial photographs of the site were reviewed.

2.2.2 An undated site plan, provided by YK America International Group, Inc., was reviewed.

2.2.3 Site reconnaissance and subsurface exploration were conducted.

2.2.4 Laboratory tests were conducted to determine selected physical and engineering properties of the subsurface soils.

2.2.5 A report entitled, Phase 1 Environmental Site Assessment, prepared by Twining (reference Report No. A65908.01, dated May 24, 2004) was reviewed. This report is referred to herein after as "Twining's Phase 1 Environmental Report."

2.2.6 Mr. Geary Coats was consulted during the investigation.

2.2.7 The data obtained from the investigation were evaluated to develop an understanding of the subsurface conditions and engineering properties of the subsurface soils.

2.2.8 This report was prepared to present the purpose and scope, background information, field exploration procedures, findings, evaluation, conclusions, and recommendations.

3.0 BACKGROUND INFORMATION

The site history, previous studies, existing site features, and the anticipated construction are summarized in the following subsections.

3.1 Site History: Although much of the site is undeveloped, existing development is present along the northern and eastern portions of the site. Based on our site reconnaissance performed on April 28, 2005, the following list describes the current development noted at the time of our investigation:

- Two residential homes at the northwest portion of the site bordering Woollomes Road;
- Three residential homes at the north-central portion of the site bordering Woollomes Road;
- Pioneer Motel and Pioneer Family Restaurant at the northeast portion of the site bordering Woollomes Road;
- Two commercial developments (pallet companies) in the southeast and eastern-central portions of the site bordering Garzioli Avenue;
- A shop building and wrecking yard in the central portion of the site.

According to a review of aerial photographs performed for Twining's Phase 1 Environmental Report (dated August 29, 2004, Reference Report No. E01406.01), the site was undeveloped in 1937; however, grading activities appeared to have taken place on the northern portion of the site. By 1952, the three residences in the north-central portion of the site were developed. In 1956, on-ramps and off-ramps were under construction from Highway 99, and it is presumed that soil material may have been borrowed from the northern-central portion of the site at this time for the construction. By 1974, the two residences at the northwest portion of the site, the restaurant in the northeast portion of the site, and the wrecking yard in the central portion of the site were developed. At this time, a gasoline station also existed in the northeast corner of the site. Records from the City of Delano Building Department (CDBD) indicate that on August 31, 1977, a permit was obtained to demolish the gasoline station and remove old tanks and fill tank holes. In addition, records also indicate that on March 25,1988, a permit was obtained for the construction of a 40-unit motel. A 1991 aerial photograph indicates that the motel was built. A 2005 aerial photograph indicated a small pad and structure existed in the western-central portion of the site; however, this pad and structure did not exist at the time of our investigation. The motel structure and the five (5) residential structures existed at the time of our field investigation.

3.2 **Previous Studies:** Twining prepared a report for the site entitled, "Phase I Environmental Site Assessment, Southwest of Woollomes Road and Garzioli Avenue, Delano, Kern County, California," (reference Report No. E01406.01, dated August 29, 2004).

No other reports of geotechnical engineering, geological, or environmental studies conducted for this site were provided for review during this investigation. If available, these reports should be provided for review and consideration for this project.

3.3 **Site Description:** The project site comprises approximately 45 acres located southwest of the intersection of Woollomes Road and Garzioli Avenue in Delano, Kern County, California. A site location map is presented on Drawing No. 1 in Appendix A. The site is bound to the north by Woollomes Road and a combination of commercial development and vacant land beyond, to the east by Garzioli Avenue and commercial buildings beyond, to the south by vacant land and agricultural land beyond, and to the west by agricultural land. The site topography is relatively flat; however, the borrow pit in the northern-central portion of the site is approximately three (3) to four (4) feet lower than the surrounding area and includes approximately 2 Horizontal to 1 Vertical (2H:1V) slopes around the perimeter of the borrow pit. In addition, in the northeastern portion of the site, south of the restaurant, Parcel 9 is undeveloped with the exception of a flood control basin located in the southwestern portion of the parcel. The basin is rectangular and approximately 5,000 square feet in area. The bottom of the basin was estimated to be approximately twelve (12) to fifteen (15) feet lower than the surrounding grades.

At the time of our investigation, the site was mostly covered by weeds ranging from one (1) to five (5) feet in height. The site was also covered by residences, a restaurant, motel, wrecking yard, and two pallet companies that are described in more detail in section 3.1 Site History. The motel is surrounded by asphaltic concrete (AC) pavements. Semi-trucks were noted to be parked between the two pallet companies along the eastern portion of the site. Overhead utilities were noted along the northern and eastern boundaries of the site as well as between Woollomes Road and the wrecking yard area. Tall trees and shrubs were noted surrounding the residential homes in the northern portion of the site bordering Woollomes Road.

According to the 7½ minute series topographic map (McFarland, California), produced by the United States Geological Survey (USGS), the elevation of the site is approximately 300 feet above mean sea level (MSL) along the western portion of the site to 305 feet above MSL along the eastern portion of the site. A 300-foot contour with hatch marks pointing inward is shown on the site surrounding the borrow pit area. The inward pointing hatch marks indicate that the area within the 300-foot contour is a depression.

3.4 **Anticipated Construction:** According to Mr. Geary Coats, the site is being considered for retail development. Details regarding the square footage of the proposed retail buildings are outlined below in Table 1.

Table 1
Proposed Buildings and Building Areas in Plan Dimension

Building	Building Area in Plan Dimension (in square feet)
Major 1 - Retail	61,814
Major 2 - Retail	84,875
Major 3 [A] - Retail	55,517
Major 3 [B] - Retail & Food	7,315
Major 4 [A] - Retail	55,517
Major 4 [B] - Retail & Food	7,315
Major 5 - Retail	36,155
Major 6 - Retail	29,588
Retail 1 - Retail	20,000
Pad 1 - Food	6,000
Pad 2 - Food	3,600
Pad 3 - Food	3,200
Pad 4 - Food	6,300
Pad 5 - Retail	5,000
Pad 6 - Retail	5,520
Pad 6 - Option - Retail	10,000
Pad 7 - Food	3,300

In addition to the proposed structures, it is anticipated that the project will include asphaltic concrete (AC) driveways and underground utilities. It is our understanding that the Pioneer Family Restaurant in the northeast portion of the site is to remain.

4.0 INVESTIGATIVE PROCEDURES

The field exploration and laboratory testing program conducted for this investigation are summarized in the following subsections.

4.1 Field Exploration: The field exploration consisted of a site reconnaissance, drilling test borings, soil sampling, and standard penetration tests.

4.1.1 Site Reconnaissance: The site reconnaissance consisted of walking the site and noting visible surface features. The reconnaissance was conducted on April 28, 2005 by Mr. Allen Harker, staff geologist with Twining. The features noted are described in the background information.

4.1.2 Drilling Test Borings: A subsurface exploration was performed on April 28, 2005 to characterize the subsurface conditions at the site. Six (6) test borings were drilled to depths ranging from 20 to 50 feet below site grades (BSG) to characterize the subsurface conditions at the site. The investigation was performed under the technical supervision of a registered civil engineer from our firm. The test borings were logged and the soils were classified in general accordance with the Unified Soil Classification System. The locations of the borings were selected to provide adequate spacing for determining the general subsurface soil profile across the site. At the time this report was written, only a portion of the proposed borings had been completed. The locations of the borings are shown on the Site Plan (Drawing No. 2).

The borings were advanced using a CME-75 drill rig equipped with 6⅝-inch outside diameter (O.D.) hollow stem augers. Soils encountered in the borings were sampled at approximate depth intervals of 5 feet and returned to our laboratory for testing. Relatively undisturbed samples were obtained by pushing a modified California sampler. Disturbed samples were obtained using a Standard Penetration Test Sampler (SPT) that was driven with a 140-pound hammer dropping 30 inches.

The presence and elevation of free water, if any, in the borings were noted and recorded during drilling and immediately following completion of borings.

Test boring locations were determined with a tape measure with reference to existing site features shown on the site plan. The majority of the borings were measured from a property corner stake at the southwest corner of the site. The locations, as described, should be considered accurate to within 5 feet. Elevations of the test borings were not measured as a part of the investigation. The test borings were loosely backfilled with material excavated during the drilling operations; thus, some settlement should be anticipated.

Test boring logs are provided as Figures B-1 through B-6 in Appendix B. A Key to Boring Logs is also presented in Appendix B following the logs. The description on the logs are based on field observations, sample inspection, and laboratory test results.

4.1.3 **Soil Sampling:** Standard penetration tests were conducted, and both disturbed and relatively undisturbed soil samples were obtained.

The standard penetration resistance, N-value, is defined as the number of blows required to drive a standard split barrel sampler into the soil. The standard split barrel sampler has a 2-inch O.D. and a 1⅜-inch inside diameter (I.D.). The sampler is driven by a 140-pound weight free falling 30 inches. The sampler is lowered to the bottom of the bore hole and set by driving it an initial 6 inches. It is then driven an additional 12 inches and the number of blows required to advance the sampler the additional 12 inches is recorded as the N-value.

Relatively undisturbed soil samples for laboratory tests were obtained by pushing or driving a California modified split barrel ring sampler into the soil. The soil was retained in brass rings, with a 2.5 inch O.D. and 1-inch in height. The lower 6-inch portions of the samples were placed in close-fitting, plastic, airtight containers which, in turn, were placed in cushioned boxes for transport to Twining's laboratory for classification and testing. In addition, three (3) bulk samples of soil were obtained to test for Resistance (R)-value, moisture-density relationship, and corrosion analyses. The samples were obtained from each corner of the site at depths extending from the ground surface to 3 feet BSG. The bulk sample locations are labeled as R-1 through R-3 and are shown on Drawing No. 2 in Appendix A.

4.2 **Laboratory Testing:** The laboratory tests were assigned to determine selected physical and engineering properties of the soils underlying the site. The tests were conducted on disturbed and undisturbed samples representative of the subsurface material.

The results of laboratory tests are summarized on Figure Numbers 1 through 13 in Appendix C. These data, along with the field observations, were used to prepare the final test boring logs in Appendix B.

5.0 FINDINGS AND RESULTS

The findings and results of the field exploration and laboratory testing are summarized in the following subsections.

5.1 **Surface Conditions**: The site is relatively flat with tall, dried grasses and weeds across the majority of the site. Rodent holes were noted across the majority of the site. A low lying areas exists in the northern-central portion of the site and is assumed to be a borrow pit. The borrow pit is irregularly shaped and is approximately three (3) to four (4) feet lower than the surrounding area. A flood control basin also exists in the northeastern portion of the site, southwest of the Pioneer Family Restaurant and north of northernmost pallet business. The rectangular-shaped flood control basin is approximately 12 to 15 feet deep and about 5,000 square feet in area. Structures were noted along the northern and eastern boundaries of the site and in the center of the site.

5.2 **Soil Profile:** The soils varied across the site. Possible fill soils were encountered in boring B-3, drilled in the western-central portion of the site. Although there was no construction debris that indicated fill soils were present in boring B-3, an aerial photograph of the site showed that a small pad and structure once existed in the general area of where this boring was drill. In addition, very loose soils were noted between the depths of 3½ to 5 feet BSG in boring B-3, indicating that this could have represented the depth to which the soils may have been disturbed. The possible fill soils consisted of silty sands with intermixed sandy lean clays to a depth of about 5½ feet BSG. In general, the native near surface soils consisted of silty sands to depths ranging between about 3½ and 8 feet BSG. In boring B-5, drilled within the borrow pit area (approximately three to four feet lower than the surrounding area), near surface silty sands only extended to about 1 foot BSG. Native, near surface sandy silts were encountered in boring B-2 to a depth of about 4 feet BSG. The near surface silty sands and sandy silts were underlain by interbeds of poorly graded sands, sandy lean clays, silty sands and sandy silts to the maximum depth explored, approximately 50 feet BSG. The sandy silt layer directly below the near surface silty sands was noted to be porous. The native, sandy lean clay layers were encountered at depths of 4 feet BSG or lower.

The foregoing is a general summary of the soil conditions encountered in the test borings drilled for this investigation. Detailed descriptions of the soils encountered at each test boring are presented on the logs of borings in Appendix B. The stratification lines shown on the logs represent the approximate boundary between soil types; the actual in-situ transition may be gradual.

5.3 **Soil Engineering Properties:** The following is a description of the soil engineering properties as determined from our field exploration and laboratory testing.

Fill Soils: The near surface, possible fill soils, encountered in borings B-3, consisted of silty sands with intermixed sandy lean clay. The fill soils were medium dense in the upper two feet BSG, as indicated by a standard penetration resistance, N-value, of 22 blows per foot. However, the fill soils were very loose to loose between the depths of about 2 and 6½ feet BSG, as indicated by standard penetration resistance, N-values, ranging from 2 to 10 blows per foot. The moisture content of the fill soils ranged from 2 to 12 percent. One in-place density test revealed that the fill soils had a dry density of 100 pounds per cubic foot. The intermixed sandy lean clays were generally encountered between the depths of about 2 to 4 feet BSG in boring B-3. An Atterberg Limits test indicated that the silty sands with intermixed sandy lean clays had medium to high plasticity as indicated by a liquid limit of 33 percent and a plasticity index of 20 percent. An expansion index (E.I.) test also indicated that these intermixed soils had a medium expansion potential (E.I. = 56).

Near Surface Silty Sands: In areas where fill soils were not encountered, the near surface, native silty sands generally extended from the ground surface to depths of about 1 to 8 feet BSG. These soils are loose, as indicated by standard penetration resistance, N-values, ranging from 5 to 9 blows per foot. The moisture content of the near surface silty sands ranged from 1 to 12 percent, and four (4) in-place density tests revealed dry densities of 101, 107, 108, and 115 pounds per cubic foot. One (1) direct shear test performed on a silty sand sample indicated an angle of internal friction of 31.7 degrees with a cohesion value of 0 pounds per square foot.

Sandy Silts: In boring B-2, near surface, native sandy silt soils extended from the ground surface to a depth of 4 feet BSG. In boring B-5, native sandy silt soils were encountered from depths of about 1 to 8 feet BSG. These soils were noted to be porous and were very stiff to hard, as indicated by standard penetration resistance, N-values, of 17 and 36 blows per foot. The moisture contents of the near surface sandy silts ranged from 4 to15 percent, and two (2) in-place density tests revealed dry densities of 91 and 102 pounds per cubic foot. Limited testing indicated that the near surface, porous, sandy silt soils had high compressibility characteristics and high collapse potential.

Poorly Graded Sands: Layers of poorly graded sands were encountered below the near surface silty sands and sandy silts. The poorly graded sands are very loose to medium dense as indicated by standard penetration, N-values, ranging from 8 to 22 blows per foot. The moisture contents of the poorly graded sands ranged from 1 to 3 percent.

Sandy Lean Clays: Below the near surface silty sands and sandy silts, interbedded sandy lean clay layers, encountered at depths of 4 feet BSG or lower, were stiff to hard, as indicated by standard penetration, N-values, ranging from 13 to 32 blows per foot. The moisture contents of the sandy lean clay layers ranged from 9 to 27 percent.

Deeper Sandy Silts: Deeper layers of sandy silts were stiff to hard as indicated by standard penetration, N-values, ranging from 13 to 36 blows per foot. The moisture contents of the deeper sandy silts ranged from 4 to 16 percent.

Deeper Silty Sands: Deeper layers of silty sands were medium dense as indicated by standard penetration resistance, N-values, ranging from 12 to 28 blows per foot. The moisture contents of the deeper silty sand soils ranged from 3 to 8 percent.

R-Value Tests: Limited laboratory testing on two (2) near surface soil samples collected within the upper 3 feet BSG indicated R-values of 10 and 11.

Moisture/Density Relationships: One near surface silty sand sample, collected from within the upper 3 feet BSG, was tested for maximum density and optimum moisture content. The results of the test indicated a maximum dry density of 131.4 pounds per cubic foot at an optimum moisture content of 7.7 percent.

Chemical Tests: The results of chemical analyses conducted on two (2) near surface silty sand samples indicated resistivity values of 6,400 and 7,800 ohm-centimeters, and pH values of 6.9 and 8.2, respectively. In addition, the results of soil sample analyses indicated 0.0011 and 0.0028 percent by dry weight concentrations of sulfate, and 0.0029 and 0.0029 percent by dry weight concentrations of chloride, respectively.

5.4 **Groundwater Conditions:** Perched groundwater was encountered at a depth of about 33 feet BSG in borings B-1 and B-2 which were both drilled to about 50 feet BSG. The groundwater encountered was considered to be a perched layer considering that a stiff to very stiff confining clay layer was encountered below the groundwater depth, and soil layers below the confining clay layer were moist but not wet. According to a maps published by the California Department of Water Resources entitled, "Lines of Equal Depth to Water in Wells, Spring 1990 to 2001," the depth to first encountered regional groundwater underlying the site is estimated to be 55 to 120 feet BSG.

It should be recognized, however, that water table elevations fluctuate with time, since they are dependent upon seasonal precipitation, irrigation, land use, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field exploration may vary from those encountered both during the construction phase and the design life of the project. The evaluation of such factors was beyond the scope of this investigation and report.

6.0 EVALUATION

The data and methodology used to develop conclusions and recommendations for project design and preparation of construction specifications are summarized in the following subsections. The evaluation was based upon the subsurface conditions determined from current and past investigations and our understanding of the proposed construction. The conclusions obtained from the results of our evaluations are described in the Conclusions section of this report (Section 7.0). Twining should be notified of any changes in proposed grading and should review grading plans. Changes to the grading could significantly impact our evaluations and recommendations for this site.

6.1 **Surface Conditions:** The primary geotechnical concerns at the subject site are: 1) the presence of undocumented fill soils; 2) the presence of compressible, loose, near surface soils; 3) loose soils that will result from demolition of structures to be removed at the site; 4) the potential for differential fill thickness as a result of filling the borrow pit area and flood control basin, and 5) the expansive nature of the near surface soils in localized areas. Site preparation for the proposed retail development is anticipated to include over-excavation in order to remove all undocumented fill soils until firm, native soils are exposed. Compressible, loose, near surface soils, that may also have collapse potential, should also be over-excavated during site preparation. It is anticipated that site preparation will include demolition of the existing residential homes, wrecking yard, pallet company yards, and the motel. Consequently, removal of the buildings, foundations, underground utilities, as well as removal of the existing large trees will result in disturbance and loosening of the near surface soils. Therefore, over-excavation should extend at least 12 inches below disturbed, loose soils as a result of demolition activities in these areas. It is also anticipated that the borrow pit area and flood control basin will need to be filled in order to achieve relatively level site grades for the proposed development. Over-excavation should be conducted to provide a near uniform thickness of engineered fill below the proposed structures. In order to limit differential fill thickness below the proposed foundations, engineered fill should not vary by more than 1 foot in height across a horizontal distance of 10 feet.

6.2 **Expansive Soils:** One of the geotechnical concerns evaluated at this site is the moderate expansion potential of the near surface soils encountered in localized areas of the site. Over time, expansive soils will experience cyclic drying and wetting as the dry and wet seasons pass. Expansive soils experience volumetric changes (shrink/swell) as the moisture content of the clayey soils fluctuate. These shrink/swell cycles can impact foundations and lightly loaded slabs-on-grade when not designed for the anticipated expansive soil pressures. Expansive soils cause more damage to structures, particularly light buildings and pavements, than any other natural hazard, including earthquakes and floods (Jones and Holtz, 1973). Expansion potential may not manifest itself until months or years after construction.

Near surface, expansive clay soils were encountered to be intermixed with near surface silty sands in boring B-3 drilled in the western-central portion of the site. In other borings, clay soils were encountered at depths of about 4 feet or deeper BSG.

In consideration of the expansive soils at the site, expansion testing was performed on a representative sample of the near surface soils which are anticipated to be within the zone of influence of planned improvements. The expansion testing was performed in accordance with UBC Standard 18-2. The soils tested were classified by expansion potential in accordance with UBC Table 18-1-B and are summarized in Appendix C of this report.

Some of the adverse effects of expansive soils can be reduced, not eliminated, by supporting the slabs-on-grade on non-expansive, granular engineered fill or by chemical stabilization (i.e., lime treatment). Recommendations for treatment of slabs and minimum footing depths are provided in the Recommendations section of this report. Based on the expansion potential of the soils encountered in localized areas, non-expansive fill soils are recommended below the slabs-on-grade.

6.3 **Static Settlement and Bearing Capacity of Shallow Foundations:** The potential for excessive total and differential settlements of foundations and slabs-on-grade is a geotechnical concern which was evaluated for the proposed retail development. The increases in effective stress to underlying soils which can occur from new foundations and structures, placement of fill, withdrawal of groundwater, etc. can cause vertical deformation of the soils, which can result in damage to the overlying structure and improvements. The differential component of the settlement is often the most damaging. In addition, the allowable bearing pressures for the soils supporting the foundations were evaluated to ensure shear, or punching type failure of the soils will not result due to the imposed foundation loads.

The near surface sandy silts encountered in the boring B-2 from the ground surface to 4 feet BSG and in boring B-5 from 1 foot to 8 feet BSG are porous, and limited laboratory testing indicated that these soils are also highly compressible and exhibited high collapse potential. It is recommended that additional borings be drilled and additional laboratory testing be performed to determine whether these soils exist as a localized condition or are widespread throughout the site.

Based on the subsurface data and limited laboratory testing performed as part of this report, static settlement calculations were performed. Calculations indicate that static settlement of foundations placed directly on areas consisting of the native silty sand and sandy silt soils would exceed a total settlement of 1 inch. To reduce the estimated total and differential settlements to 1 inch and ½ inch in 40 linear feet, respectively, the foundations would need to be supported on a uniform thickness of engineered fill. The amount of engineered fill required to reduce the estimated total and differential settlements to 1 inch ½ inch in 40 linear feet, respectively, will need to be further evaluated once information regarding anticipated structural loads is provided.

It is anticipated that the structures for the proposed retail development may be supported on a uniform thickness of engineered fill using a net allowable soil bearing pressure of 2,000 to 3,000 pounds per square foot for dead-plus-live loads. However, further evaluation of net allowable soil bearing pressure will be necessary when information regarding anticipated structural loads is provided. Preliminary evaluations indicate that footings should have a minimum depth of 18 inches (or 24 inches for two-story buildings) below rough pad grade or adjacent exterior grade, whichever is lower.

6.4 **Interior Slab-On-Grade**: As indicated in Section 6.1, Expansive Soils, the potential for damage to slabs due to expansive soils should be addressed by placing a non-expansive section below slabs-on-grade. Expansive clay soils were only encountered within the upper 4 feet BSG in boring B-3. Additional exploration should be performed to determine whether the near surface expansive clay soils within the upper 4 feet BSG are a localized condition around the area of boring B-3, or whether they exist throughout other portions of the site. For proposed construction in the area of boring B-3, slabs-on-grade should be underlain by at least 30 inches of non-expansive, granular engineered fill soils. For constructability purposes, it is recommended that all slabs-on-grade constructed throughout the entire project site area be underlain by at least 6 inches of Class 2 aggregate base.

6.5 **Ground Rupture, Seismic Coefficients, and Seismic Ground Motion:** The site is not located in an Alquist-Priolo Earthquake Fault Zone or fault zone delineated in response to the Seismic Hazards Mapping Act. The nearest active fault to the site is the Great Valley fault (segment 14), approximately 69½ miles northwest of the site. No known faults are mapped as crossing the site; thus, the potential for ground rupture at the site is considered low.

The 2001 California Building Code (CBC), Figure 16.2 (Seismic Zone Map of the United States) indicates that the site is located in Seismic Zone 3. A probabilistic seismic hazard analysis was conducted to assess potential seismic ground shaking at the site. The results indicate the site area can expect a peak horizontal ground acceleration of about 0.22g as a result of the design basis Earthquake ground motion.

It is expected that the 2001 California Building Code (CBC) will be used for structural design, and that seismic site coefficients are needed for design. Based on the 2001 CBC Table 16-J, the site is located has a Seismic Zone factor, Z, of 0.3 and is classified as a stiff soil S_D site with standard penetration resistance N-values averaging between 15 and 50 blows per foot in the upper 100 feet BSG.

The site coefficients for acceleration and velocity are based on the distance and activity of the local faults. Digitized seismic models published by the CGS indicate that no active faults are located within 15 kilometers of the site. The site does not require near-source corrections (CBC Tables 16-S and 16-T). Therefore, the values of the near-source acceleration factor, Na, and the near-source velocity factor, Nv, may be taken as 1.0. Based on these values, the seismic acceleration coefficient, Ca (CBC Table 16-Q), would be 0.36, and the seismic velocity coefficient, Cv (CBC Table 16-R), would be 0.54.

A table providing the recommended seismic factors and coefficients for the project site is included in the Foundations Recommendations section of this report.

6.6 **Liquefaction and Seismic Settlement:** Potential seismic hazards that may impact the site include liquefaction and seismic settlement. Considering that the groundwater encountered was a perched groundwater level, and that the regional groundwater table in the vicinity of the site in recent years is estimated to be approximately 100 feet deep, liquefaction is not expected to impact the proposed project.

One of the most common phenomena that occurs during seismic shaking is the induced settlement of loose, unconsolidated sediments. This can occur in unsaturated and saturated granular soils. Liquefaction analyses from borings B-1, which contained loose sandy soils from the ground surface to a depth of about 14 feet BSG, indicated that a total dry seismic settlement of about ¼ inch was estimated as a result of shaking caused by the design basis earthquake. This settlement may not occur uniformly over the site due to variations in the thicknesses of different soil layers; therefore, a differential seismic settlement of about ¼ inch across the proposed building pads should be anticipated.

6.7 **Asphaltic Concrete (AC) Pavements:** The anticipated pavement subgrade characteristics are poor. The subgrade support characteristics of the native soils were evaluated by Resistance (R)-value tests. The results of limited laboratory tests conducted on two (2) samples obtained within the upper 3 feet BSG indicated the soils had R-values of 10 and 11. Pavement section recommendations can be provided when additional near surface samples the site have been tested and information regarding anticipated traffic indices are provided.

6.8 **Corrosion Protection:** The risk of corrosion of construction materials relates to the potential for soil-induced chemical reaction. The rate of deterioration depends on soil resistivity, texture, acidity, and chemical concentration. The results of chemistry tests indicated that the soils are "moderately corrosive." Additional laboratory testing should be performed during a design level recommendations in order to provide general recommendations for corrosion protection.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the data collected during the field and laboratory investigations, our geotechnical experience in the vicinity of the project site, and our understanding of the anticipated construction, we present the following general conclusions.

7.1 The site is suitable for the proposed construction with regard to support of shallow spread foundations and concrete slabs-on-grade, provided the preliminary recommendations contained in this report are followed. Additional borings should be performed and data regarding the proposed structural loads should be provided in order to prepare general recommendations for site preparation for the various buildings proposed at the site. Additional design level geotechnical site investigations will be necessary to prepare design level recommendations and to meet individual tenant requirements for geotechnical investigations.

7.2 The soils encountered varied across the site. Possible fill soils were encountered in boring B-3, drilled in the western-central portion of the site. The possible fill soils consisted of silty sands with intermixed sandy lean clays to a depth of about 5½ feet BSG. In general, the native near surface soils consisted of silty sands to depths ranging between about 3½ and 8 feet BSG. In boring B-5, drilled within the borrow pit area (approximately three to four feet lower than the surrounding area), near surface silty sands only extended to about 1 foot BSG. Native, near surface sandy silts were encountered in boring B-2 to a depth of about 4 feet BSG. The near surface silty sands and sandy silts were underlain by interbeds of poorly graded sands, sandy lean clays, silty sands and sandy silts to the maximum depth explored, approximately 50 feet BSG. The sandy silt layer directly below the near surface silty sands was noted to be porous. The native, sandy lean clay layers were encountered at depths of 4 feet BSG or lower.

7.3 The on-site native soils and undocumented fill soils will not provide adequate direct support for the proposed foundations and slabs-on-grade, exterior slabs, pavement walkways, and asphaltic concrete pavements. Accordingly, foundations should be placed on a uniform layer of engineered fill achieved by over-excavation and compaction of the native soils. The engineered fill is anticipated to provide adequate support for the proposed retail buildings and exterior flatwork.

7.4 The floor slabs may be supported on properly moisture conditioned engineered fill which extends to the depth of engineered fill recommended for foundation over-excavation. Internal slabs-on-grade in areas where near surface, expansive clay soils are placed as fill below the building slabs, such as the clay soils encountered in the vicinity of boring B-3, should be underlain by at least 30 inches of non-expansive, granular engineered fill soils. For constructability purposes, it is recommended all slabs-on-grade be underlain by at least 6 inches of Class 2 aggregate base.

7.5 The near surface sandy silts encountered in boring B-2, from the ground surface to 4 feet BSG and in boring B-5 from 1 foot to 8 feet BSG are loose, porous and limited laboratory testing indicated that these soils are also highly compressible and exhibited high collapse potential. It is recommended that additional borings be drilled and additional laboratory testing be performed to determine whether these soils exist as a localized condition or are widespread throughout the site. It is recommended that the collapsible soils be over-excavated and compacted as engineered fill from areas of the planned improvements to reduce the collapse potential of these soils.

7.6 Over-excavation will be required to remove near surface, loose, compressible soils, to remove loose soils as a result of demolition activities to a depth of at least 12 inches below subsurface improvements to be removed, and to remove undocumented fill soils. Over-excavation should be conducted to provide a uniform thickness of engineered fill below the proposed structures. It is anticipated that the borrow pit area and flood control basin will need to be filled in during site preparation. In order to limit differential fill thickness below the proposed structures, engineered fill should not vary by more than 1 foot in height across a horizontal distance of 10 feet.

7.7 It is anticipated that a near uniform thicknesses of engineered fill below the proposed can limit total and differential static settlements to typical limits of static settlement of 1 inch and ½ inch in 40 linear feet, respectively.

7.8 Based on the data obtained as part of this investigation, a total seismic settlement of about ¼ inch was estimated as a result of shaking from the design basis earthquake. A differential seismic settlement of about ¼ inch across the building pads should also be anticipated.

7.9 It is anticipated that the structures for the proposed retail development may be supported on a uniform thickness of engineered fill using a net allowable soil bearing pressure of about 2,000 to 3,000 pounds per square foot for dead-plus-live loads. However, further evaluation of net allowable soil bearing pressure will be necessary when information regarding anticipated structural loads is made available.

7.10 Preliminary evaluations indicate that footings should have a minimum depth of 18 inches (or 24 inches for two-story buildings) below rough pad grade or adjacent exterior grade, whichever is lower.

7.11 The site is not located in an Alquist-Priolo Earthquake Fault Zone or fault zone delineated in response to the Seismic Hazards Mapping Act. The nearest active fault to the site is the Great Valley fault (segment 14), approximately 69½ miles northwest of the site. No known faults are mapped as crossing the site; thus, the potential for ground rupture at the site is considered low and no special setbacks are required for structures for faulting.

7.12 Perched groundwater was encountered at a depth of about 33 feet BSG in borings B-1 and B-2 which were both drilled to about 50 feet BSG. The groundwater encountered was considered to be a perched layer considering that a stiff to very stiff confining clay layer was encountered below the groundwater depth, and soil layers below the confining clay layer were moist but not wet. According to maps published by the California Department of Water Resources entitled, "Lines of Equal Depth to Water in Wells, Spring 1990 to 2001," the depth to first encountered regional groundwater underlying the site is estimated to be 55 to 120 feet BSG.

7.13 The near surface soils exhibit poor support characteristics for pavements. The subgrade support characteristics of the native soils were evaluated by Resistance (R)-value tests. The results of limited laboratory tests conducted on two (2) samples obtained within the upper 3 feet BSG indicated the soils had R-values of 10 and 11. Pavement section recommendations can be provided when additional near surface samples the site have been tested and information regarding anticipated traffic indices are provided.

7.14 The results of chemistry tests indicated that the soils are "moderately corrosive." Additional laboratory testing should be performed during a design level recommendations in order to provide general recommendations for corrosion protection.

8.0 NOTIFICATION AND LIMITATIONS

8.1 The conclusions and recommendations presented in this report are based on the limited information provided regarding the proposed construction, and the results of the field and laboratory investigation, combined with interpolation of the subsurface conditions between boring locations.

8.2 The nature and extent of subsurface variations between borings may not become evident until additional borings are done during a design level investigation or until construction.

8.3 If the proposed construction is relocated or redesigned, or if there is a substantial lapse of time between the submission of our report and the start of work (more than 12 months) at the site, or if conditions have changed due to natural cause or construction operations at or adjacent to the site, the conclusions and recommendations contained in this report should be considered invalid unless the changes are reviewed and our conclusions and recommendations modified or approved in writing.

8.4 Changed site conditions may require additional field and laboratory investigations to determine if our conclusions and recommendations are applicable considering the changed conditions or time lapse.

8.5 The conclusions and recommendations contained in this report are valid only for the project discussed in Section 3.4, Anticipated Construction. The use of the information and recommendations contained in this report for structures on this site not discussed herein or for structures on other sites not discussed in Section 3.3, Site Description is not recommended. The entity or entities that use or cause to use this report or any portion thereof for another structure or site not covered by this report shall hold Twining, its officers and employees harmless from any and all claims and provide Twining's defense in the event of a claim.

8.6 This report is issued with the understanding that it is the responsibility of the client to transmit the information and recommendations of this report to developers, owners, buyers, architects, engineers, designers, contractors, subcontractors, and other parties having interest in the project so that the steps necessary to carry out these recommendations in the design, construction and maintenance of the project are taken by the appropriate party.

8.7 This report presents the results of a geotechnical engineering feasibility investigation only and should not be construed as an environmental audit or study. Additional geotechnical investigations will be necessary to prepare design level recommendations for site preparation and to meet the requirements for geotechnical investigations for individual tenants.

8.8 Our professional services were performed, our findings obtained, and our recommendations prepared in accordance with generally-accepted engineering principles and practices. This warranty is in lieu of all other warranties either expressed or implied.

We appreciate the opportunity to be of service to the YK America International Group, Inc. If you have any questions regarding this report, or if we can be of further assistance, please contact us at your convenience.

Sincerely,
THE TWINING LABORATORIES, INC.

DRAFT

Allen H. Harker
Staff Geologist
Geotechnical Engineering Division

DRAFT

Read L. Andersen, RCE
Manager
Geotechnical Engineering Division

AHH/RLA/amh

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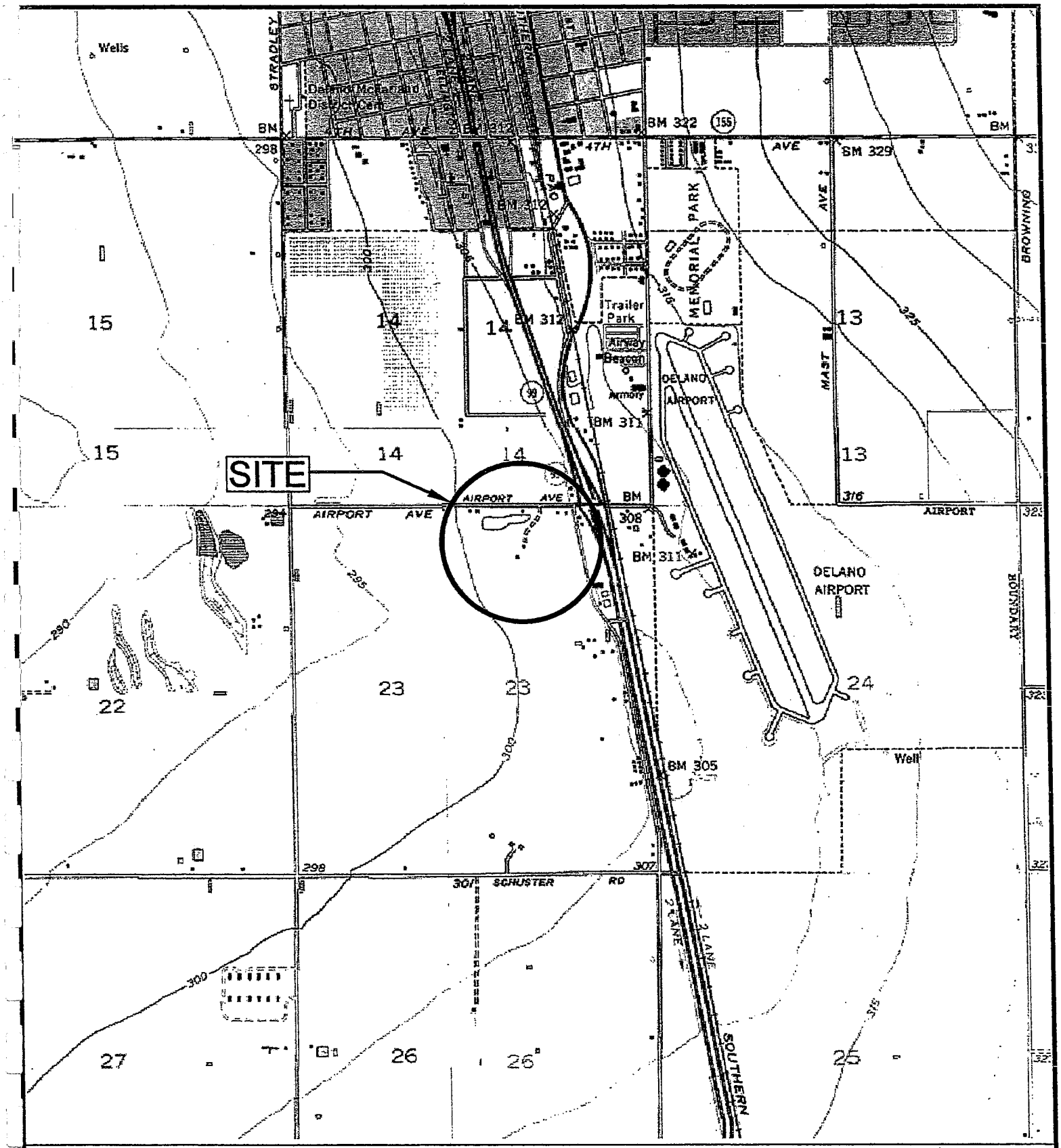
APPENDIX A

DRAWINGS

Drawing No. 1 - Site Location Map

Drawing No. 2 - Test Boring and R-value Location Map



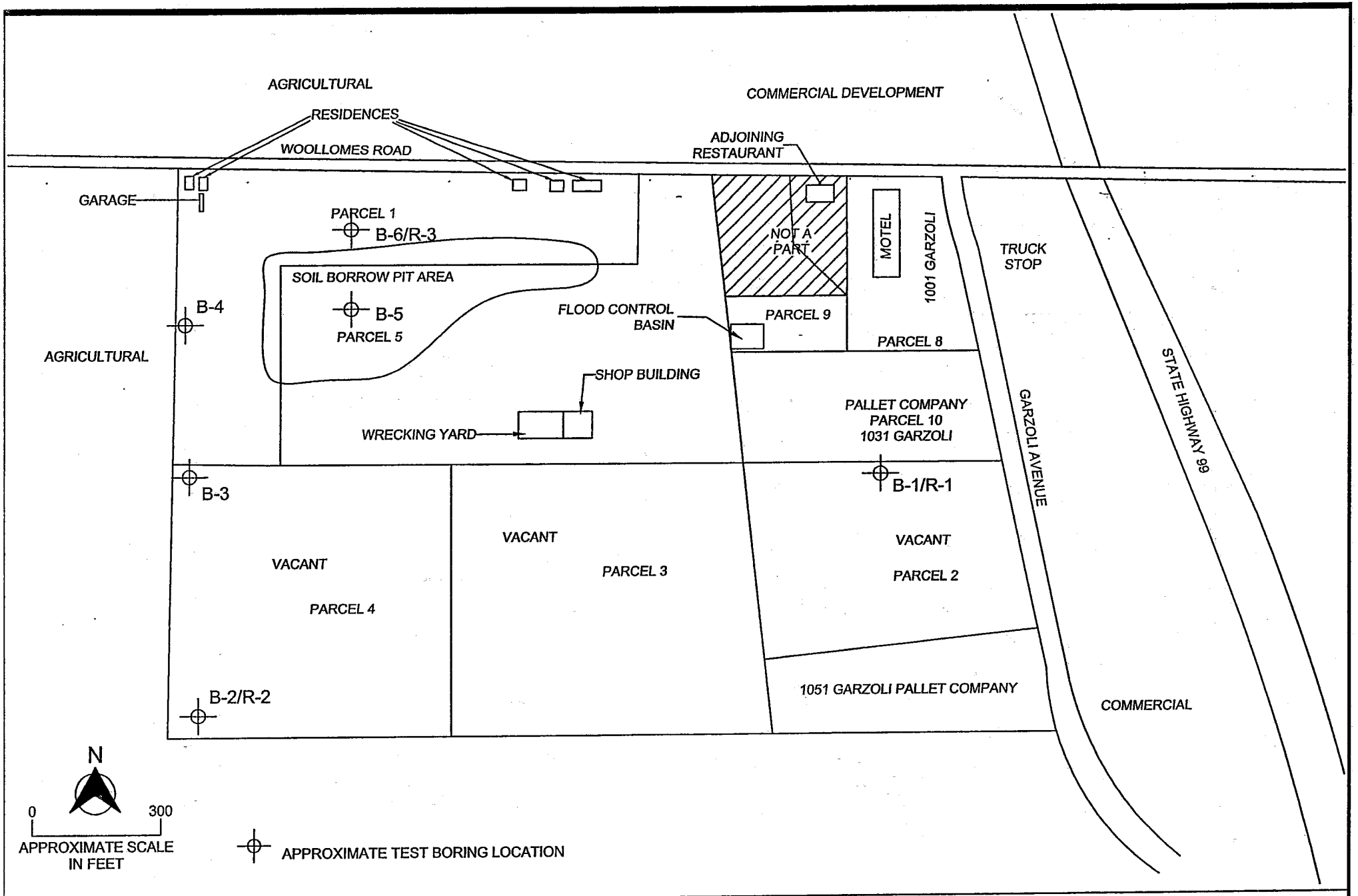
SOURCE: U.S.G.S. TOPOGRAPHIC MAP, 7 ½ MINUTE SERIES
MCFARLAND, CALIFORNIA QUADRANGLE, PHOTOREVISED 1969

0 2000
APPROXIMATE SCALE IN FEET

SITE LOCATION MAP
COMMERCIAL SUBDIVISIONS
DELANO, KERN COUNTY, CALIFORNIA

FILE NO.: 68503-01-01	DATE: 05/09/05
DRAWN BY: RM	APPROVED BY: DRAFT
PROJECT NO. C68503.01	DRAWING NO. 1

THE TWINING LABORATORIES, INC.
EST. 1898
FRESNO/MODESTO/VISALIA/BAKERSFIELD/MONTEREY



TEST BORING AND R-VALUE LOCATION MAP
PROPOSED COMMERCIAL SUBDIVISIONS
DELANO ,KERN COUNTY, CALIFORNIA

FILE NO. 68503-01-02	DATE DRAWN: 05/09/05
DRAWN BY: RM	APPROVED BY: DRAFT
PROJECT NO. C68503.01	DRAWING NO. 2

THE TWINING LABORATORIES, INC.
EST.1898
FRESNO/MODESTO/VISALIA/BAKERSFIELD/MONTEREY

APPENDIX B

LOGS OF BORINGS

This appendix contains the final logs of borings. These logs represent our interpretation of the contents of the field logs and the results of the field and laboratory tests.

The boring logs and related information depict subsurface conditions only at these locations and at the particular time designated on the logs. Soil conditions at other locations may differ from conditions occurring at these test boring locations. Also, the passage of time may result in changes in the soil conditions at these test boring locations.

In addition, an explanation of the abbreviations used in the preparation of the logs and a description of the Unified Soil Classification System are provided at the end of Appendix B.

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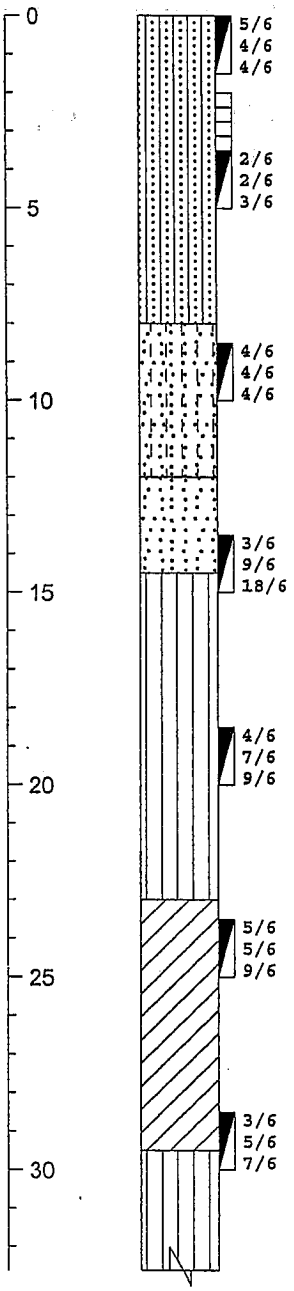
SOIL TEST BORING SYMBOLIC LOG

BORING B-1

Project: YK America, 45 Acre Parcel
Location: Delano, California
Logged By: AH
Drilled By: TC
Drill Type: CME 75
Auger Type: 6 5/8" O.D. Hollow Stem Auger

Project Number: TL C68503.01
Date: 04/28/05
Elevation: N/A
Depth to Groundwater: 33' (perched)
Cased to Depth: N/A
Hammer Type: Trip



ELEVATION/ DEPTH (feet)	USCS	Soil Description	Remarks	N-value	Moisture Content %
	SM	SAND, Silty; loose, damp, fine, some medium to coarse and fine gravel, light brown		8	4
		At 2 Feet - Moist, decrease in medium to coarse sand and no fine gravel	DD = 107 pcf ø = 31.7° c = 0 psf	--	1
				5	7
	SP-SM	SAND, Poorly Graded with Silt; loose, damp, fine with some medium to coarse, light brown		8	1
	SP	SAND, Poorly Graded; loose, damp, fine to coarse, light brown			
	ML	SILT, Sandy; very stiff, moist, slight plasticity, light brown, trace clay		27	3 15
		Stiff, increase in moisture, low plasticity, increase in clay, decrease in sand		16	19
	CL	LEAN CLAY; stiff, moist, low plasticity, brown, with calcium carbonate		14	24
	ML	At 29.3 feet - 2 inch clayey sand lens		12	16
		SILT, Sandy; stiff, moist, slight plasticity, light brown, with a			

Notes: *Soft wet clay slough was noted at the top of sample collected at 33.5 feet; cuttings were noted to consist of soft wet clay while drilling from 33.5 to 38.5 feet; hard confining clay layer encountered below in top of sample from 38.5 to 40 feet.*

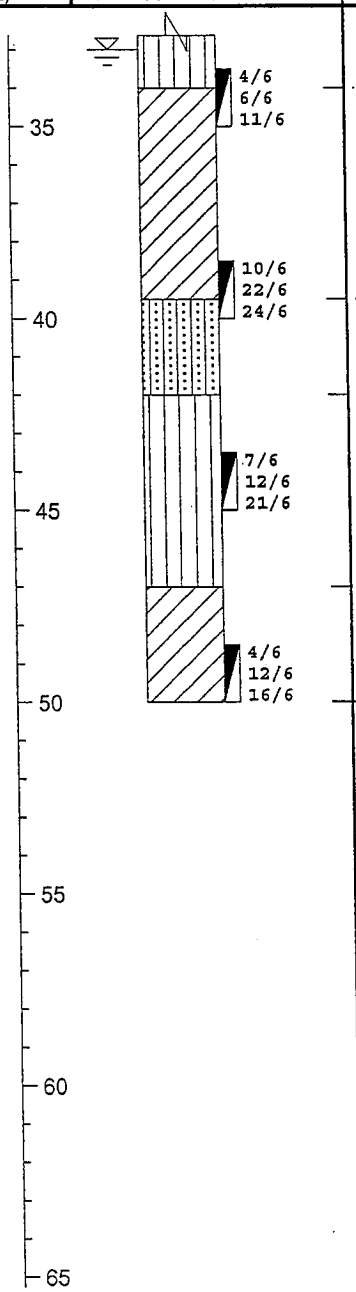
Figure Number B-1

SOIL TEST BORING SYMBOLIC LOG

THE TWINING LABORATORIES, INC. EST. 1898

BORING B-1

Project: YK America, 45 Acre Parcel
Project Number: TL C68503.01
Location: Delano, California
Date: 04/28/05
Logged By: AH
Elevation: N/A
Drilled By: TC
Depth to Groundwater: 33' (perched)
Drill Type: CME 75
Cased to Depth: N/A
Auger Type: 6 5/8" O.D. Hollow Stem Auger
Hammer Type: Trip



ELEVATION/ DEPTH (feet)	USCS	Soil Description	Remarks	N-value	Moisture Content %
		little clay			
	CL	LEAN CLAY, very stiff, becoming hard, moist, low plasticity, brown	Perched groundwater at 33 feet	17	17 18
	SM	SAND, Silty; dense, moist, fine, light brown, laminated		46	12 6
	ML	SILT, Sandy; very stiff to hard, moist, slight plasticity, brown, trace clay		33	11
	CL	LEAN CLAY; very stiff, moist, low plasticity, light brown		28	20
		Bottom of Boring at 50 Feet			

Notes: *Soft wet clay slough was noted at the top of sample collected at 33.5 feet; cuttings were noted to consist of soft wet clay while drilling from 33.5 to 38.5 feet; hard confining clay layer encountered below in top of sample from 38.5 to 40 feet.*

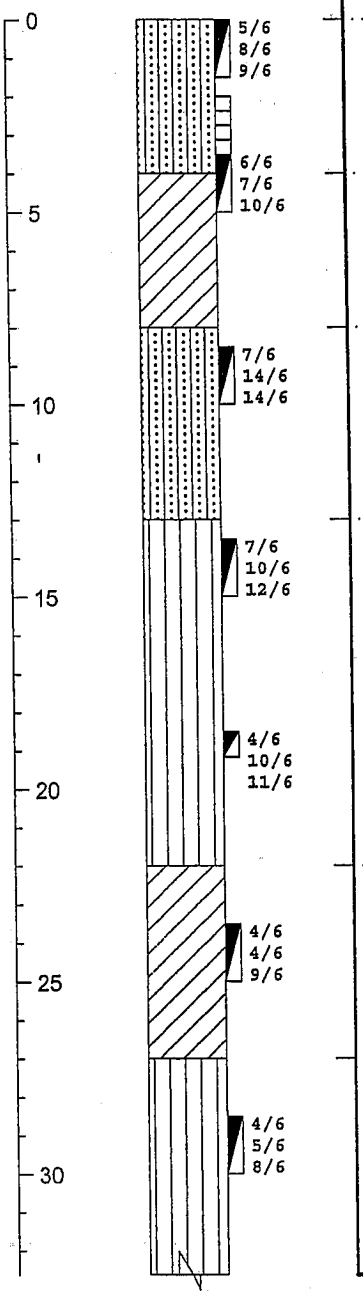
Figure Number B-1

THE TWINING LABORATORIES, INC. EST. 1898

SOIL TEST BORING SYMBOLIC LOG

BORING B-2

Project: YK America, 45 Acre Parcel
Project Number: TL C68503.01
Location: Delano, California
Date: 04/28/05
Logged By: AH
Elevation: N/A
Drilled By: TC
Depth to Groundwater: 33' (perched)
Drill Type: CME 75
Cased to Depth: N/A
Auger Type: 6 5/8" O.D. Hollow Stem Auger
Hammer Type: Trip



ELEVATION/ DEPTH (feet)	USCS	Soil Description	Remarks	N-value	Moisture Content %
	ML	SILT, Sandy; very stiff, damp, slight plasticity, light brown, becomes partially cemented from 1 to 2 feet; with interbedded clays between 2 and 4 feet	-200 = 59% DD = 91 pcf -200 = 55%	17 --	6 11
	CL	LEAN CLAY, Sandy; very stiff, moist, low plasticity, brown partially cemented		17	9
	SM	SAND, Silty; medium dense, damp, fine to coarse, light yellowish-brown		28	5
	ML	SILT, with Clay; very stiff, moist, low plasticity, light brown		22	11
		Becomes sandy silt, less clay Increase in clay, decrease in sand		21	11
	CL	LEAN CLAY, Sandy; stiff, moist, low plasticity, brown, slightly cemented with white calcium carbonate leaching		13	26
	ML	SILT, Sandy; stiff, moist, low plasticity, brown, with clay		13	15

Notes:

Figure Number B-2

THE TWINING LABORATORIES, INC. EST. 1898

SOIL TEST BORING SYMBOLIC LOG

BORING B-2

Project: YK America, 45 Acre Parcel
Project Number: TL C68503.01
Location: Delano, California
Date: 04/28/05
Logged By: AH
Elevation: N/A
Drilled By: TC
Depth to Groundwater: 33' (perched)
Drill Type: CME 75
Cased to Depth: N/A
Auger Type: 6 5/8" O.D. Hollow Stem Auger
Hammer Type: Trip

ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	Remarks	N-value	Moisture Content %
35	3/6, 6/6, 7/6	CL	LEAN CLAY; stiff, becoming very stiff, wet becoming moist, low plasticity, brown	Perched groundwater at 33 feet	13	22
40	10/6, 14/6, 12/6	SM	SAND, Silty; medium dense, damp, fine, light brown, become fine to coarse at 39.5 feet	-200 = 35%	26	15
45	4/6, 10/6, 16/6	CL	LEAN CLAY, Sandy; very stiff, very moist, low plasticity, brown		26	17
50	4/6, 12/6, 24/6	ML	SILT, Sandy; hard, moist, slight plasticity, brown, with trace clay, partially cemented At 49.5 feet - Increase in clay, low plasticity Bottom of Boring at 50 Feet		36	11
55						
60						
65						

Notes:

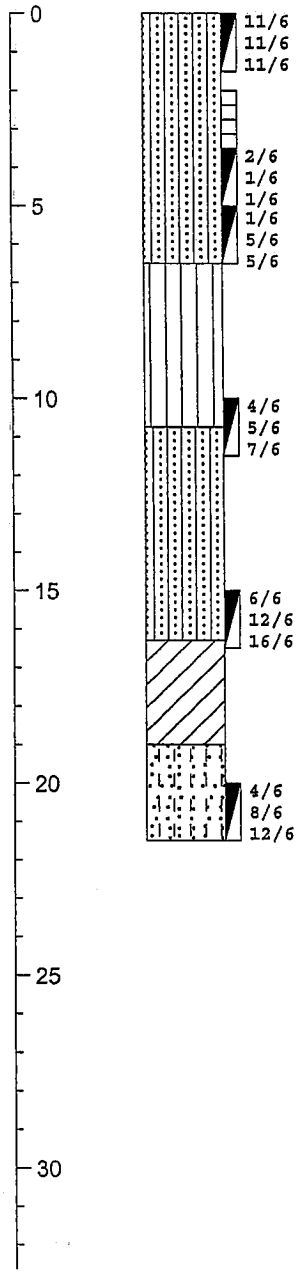
Figure Number B-2

SOIL TEST BORING SYMBOLIC LOG

THE TWINING LABORATORIES, INC. EST. 1898

BORING B-3

Project: YK America, 45 Acre Parcel
Project Number: TL C68503.01
Location: Delano, California
Date: 04/28/05
Logged By: AH
Elevation: N/A
Drilled By: TC
Depth to Groundwater: N/E
Drill Type: CME 75
Cased to Depth: N/A
Auger Type: 6 5/8" O.D. Hollow Stem Auger
Hammer Type: Trip



ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	Remarks	N-value	Moisture Content %
		SM	(FILL?) - SAND, Silty; medium dense, moist, becoming damp, fine, light brown, with some thin intermixed sandy lean clay layers	DD = 100 pcf	22	12
					--	3
			At 3 feet - Very loose		2	2
					10	5
		ML	SILT, Sandy; stiff, moist, slight plasticity, brown			
		SM	SAND, Silty; medium dense, moist, fine, brown		12	11
			6 inch layer of interbedded sandy silt from 15 to 15.5 feet		28	3
		CL	LEAN CLAY, Sandy; very stiff, moist, low plasticity, brown			7 17
		SP-SM	SAND, Poorly Graded with Silt; medium dense, dry, fine to coarse, yellowish-brown		20	2
			Bottom of Boring at 21.5 Feet			

Notes:

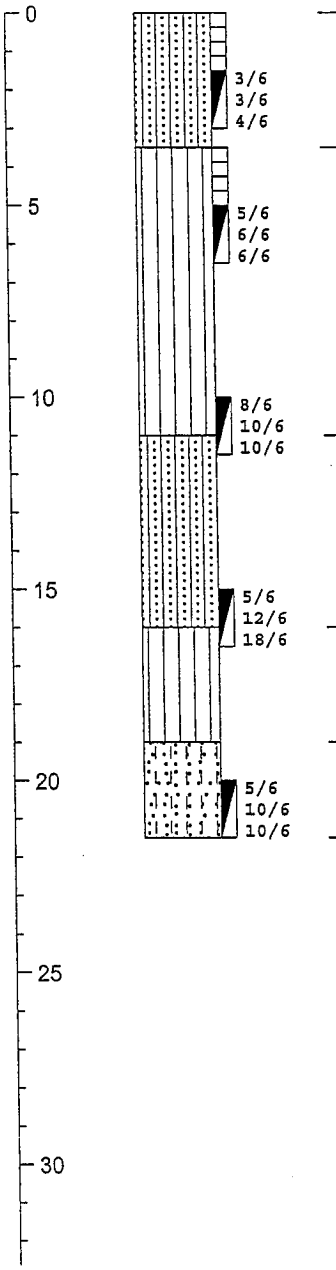
Figure Number B-3

THE TWINING LABORATORIES, INC. EST. 1898

SOIL TEST BORING SYMBOLIC LOG

BORING B-4

Project: YK America, 45 Acre Parcel
Project Number: TL C68503.01
Location: Delano, California
Date: 04/28/05
Logged By: AH
Elevation: N/A
Drilled By: TC
Depth to Groundwater: N/E
Drill Type: CME 75
Cased to Depth: N/A
Auger Type: 6 5/8" O.D. Hollow Stem Auger
Hammer Type: Trip



ELEVATION/ DEPTH (feet)	USCS	Soil Description	Remarks	N-value	Moisture Content %
	SM	SAND, Silty; loose, damp, fine, light brown	DD = 108 pcf -200 = 29%	--	4
				7	4
	ML	SILT, Sandy; stiff, damp, low plasticity, brown, with clay	DD = 100 pcf -200 = 62%	--	6
				12	4
	SM	SAND, Silty; medium dense, damp, fine, light brown		20	4
	ML	SILT, Sandy; hard, damp, non-plastic, light brown		30	4 5
	SP-SM	SAND, Poorly Graded; medium dense, damp, fine to coarse, light yellowish brown		20	3
		Bottom of Boring at 21.5 Feet			

Notes:

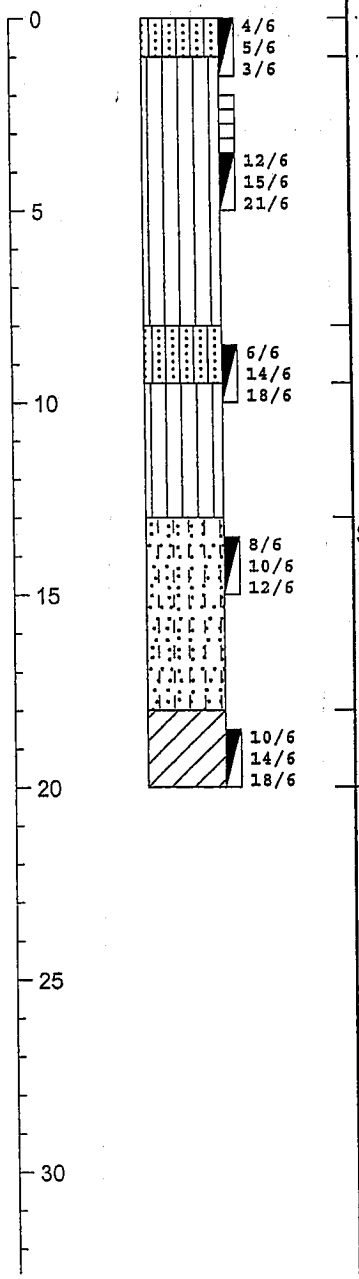
Figure Number B-4

THE TWINING LABORATORIES, INC. EST. 1898

SOIL TEST BORING SYMBOLIC LOG

BORING B-5

Project: YK America, 45 Acre Parcel
Project Number: TL C68503.01
Location: Delano, California
Date: 04/28/05
Logged By: AH
Elevation: N/A
Drilled By: TC
Depth to Groundwater: N/E
Drill Type: CME 75
Cased to Depth: N/A
Auger Type: 6 5/8" O.D. Hollow Stem Auger
Hammer Type: Trip



ELEVATION/ DEPTH (feet)	USCS	Soil Description	Remarks	N-value	Moisture Content %
	SM	SAND, Silty; loose, damp, fine,		8	4
	ML	light brown			12
		At 1 foot - SILT, Sandy; stiff, becoming hard, moist to damp, non-plastic, light brown, porous	DD = 102 pcf	--	4
				36	15
	SM	SAND, Silty; medium dense, moist, fine to medium, trace		32	8
	ML	coarse, light yellowish-brown			7
		At 9.5 feet - SILT, Sandy; hard, moist, non- plastic, brown			
	SP-SM	SAND, Poorly Graded with Silt; medium dense, damp, fine to coarse, light yellowish-brown		22	2
	CL	LEAN CLAY; hard, moist, low plasticity, brown		32	27
		Bottom of Boring at 20 Feet			

Notes:

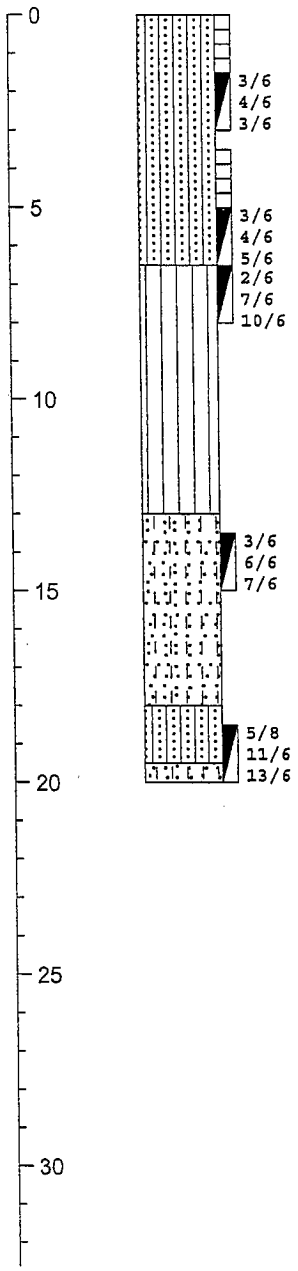
Figure Number B-5

THE TWINING LABORATORIES, INC. EST. 1898

SOIL TEST BORING SYMBOLIC LOG

BORING B-6

Project: YK America, 45 Acre Parcel
Project Number: TL C68503.01
Location: Delano, California
Date: 04/28/05
Logged By: AH
Elevation: N/A
Drilled By: TC
Depth to Groundwater: N/E
Drill Type: CME 75
Cased to Depth: N/A
Auger Type: 6 5/8" O.D. Hollow Stem Auger
Hammer Type: Trip

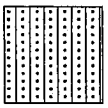
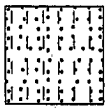
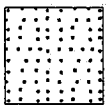
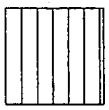
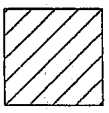


ELEVATION/ DEPTH (feet)	SOIL SYMBOLS SAMPLER SYMBOLS AND FIELD TEST DATA	USCS	Soil Description	Remarks	N-value	Moisture Content %
		SM	SAND, Silty; loose, damp, fine to medium, brown	DD = 115 pcf	--	1
					7	1
			Moist	DD = 101 pcf	--	12
			Fine with some interbedded sandy silt lenses		9	5
		ML	SILT, Sandy; very stiff, damp, slightly plastic, brown, with a little clay		17	4
		SP-SM	SAND, Poorly Graded with Silt; medium dense, damp, fine to medium, light yellowish-brown		13	2
		SM	SAND, Silty; medium dense, damp, fine, becoming fine to medium with trace coarse, light brown		24	3
		SP-SM	SAND, Poorly Graded with Silt; medium dense, damp, fine to coarse, light yellowish-brown			2
			Bottom of Boring at 20 Feet			

Notes:

Figure Number B-6

KEY TO SYMBOLS

Symbol	Description
Strata symbols	
	SAND, Silty (SM)
	SAND, Poorly Graded with Silt (SP-SM)
	SAND, Poorly Graded (SP)
	SILT, Sandy (ML)
	LEAN CLAY (CL)
Misc. Symbols	
	Boring continues

Symbol	Description
	Water table during drilling
Soil Samplers	
	Standard penetration test
	California Modified split barrel ring sampler

Notes:

1. Test borings were drilled on 04/28/05 using a CME 75 equipped with a 6 5/8" O.D. Hollow Stem Augers.

2. Perched groundwater was encountered in test borings B-1 and B-2 at a depth of about 33 feet below site grades on 4/28/05.

3. Test boring locations were located by measuring tape with reference to the existing site features.

4. These logs are subject to the limitations, conclusions, and recommendations in this report.

5. Results of tests conducted on samples recovered are reported on the logs. Abbreviations used are:

DD = Natural dry density (pdf)	LL = Liquid limit (%)
UC = Unconfined compression (psf)	PI = Plasticity index (%)
-4 = Percent passing #4 sieve (%)	pH = Soil pH
-200 = Percent passing #200 sieve (%)	SS = Soluable sulfates (%)
SR = Soil resistivity (ohm-cm)	Cl = Soluable clorides (%)
c = Cohesion (psf)	ø = Angle of internal friction (degrees)
TS = Field Torvane Shear Strength test (tsf)	N/A = Not applicable
pcf = pounds per cubic foot	N/E = Not encountered
psf = pounds per square foot	

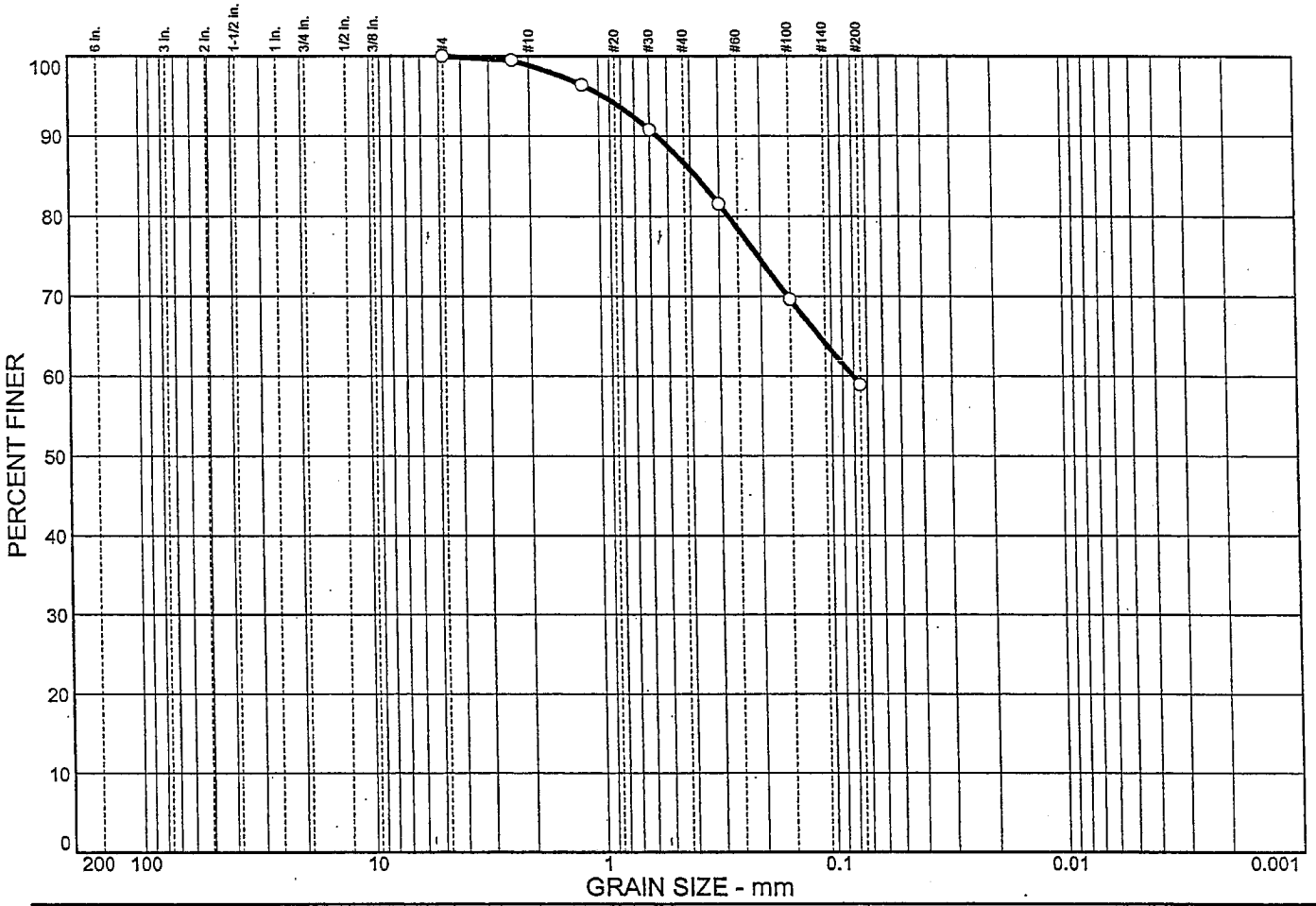
APPENDIX C

RESULTS OF LABORATORY TESTS

This appendix contains the individual results of the following tests from the current investigation and past investigations and related earthwork. The results of the moisture content and dry density tests are included on the test boring logs in Appendix B. These data, along with the field observations, were used to prepare the final test boring logs in Appendix B.

These Included:	Number of Tests:	To Determine:
Natural Moisture (ASTM D2216)	60	Moisture contents representative of field conditions at the time the sample was taken.
Natural Density (ASTM D2216)	8	Dry unit weight of sample representative of in-situ or in-place undisturbed condition.
Grain-Size Distribution (ASTM D422)	5	Size and distribution of soil particles, i.e., clay, silt, sand, and gravel.
Direct Shear (ASTM D3080)	1	Soil shearing strength under varying loads and/or moisture conditions.
Consolidation (ASTM D2435)	1	The amount and rate at which a soil sample compresses when loaded, and the influence of saturation on its behavior.
Atterberg Limits (ASTM D4318)	1	The consistency and "stickiness," as well as the range of moisture contents within which the material is "workable."
Expansion Index (UBC (18-2)	1	Swell potential of soil with increases in moisture content.

These Included:	Number of Tests:	To Determine:
Moisture-Density Relationship (ASTM D1557)	1	The optimum (best) moisture content for compacting soil and the maximum dry unit weight (density) for a given compactive effort.
R-Value (Caltrans Test Method 301)	2	The capacity of a subgrade or subbase to support a pavement section designed to carry a specified traffic load.
Sulfate Content (ASTM D4327)	2	Percentage of water-soluble sulfate as (SO4) in soil samples. Used as an indication of the relative degree of sulfate attack on concrete and for selecting the cement type.
Chloride Content (ASTM D4327)	2	Percentage of soluble chloride in soil. Used to evaluate the potential attack on encased reinforcing steel.
Resistivity (ASTM D1125)	2	The potential of the soil to corrode metal.
pH (ASTM D4972)	2	The acidity or alkalinity of subgrade material.



	% + 3"	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	1.1	12.2	27.8	58.9	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	DESCRIPTION	USCS
○	B-2		0	Sandy SILT	ML

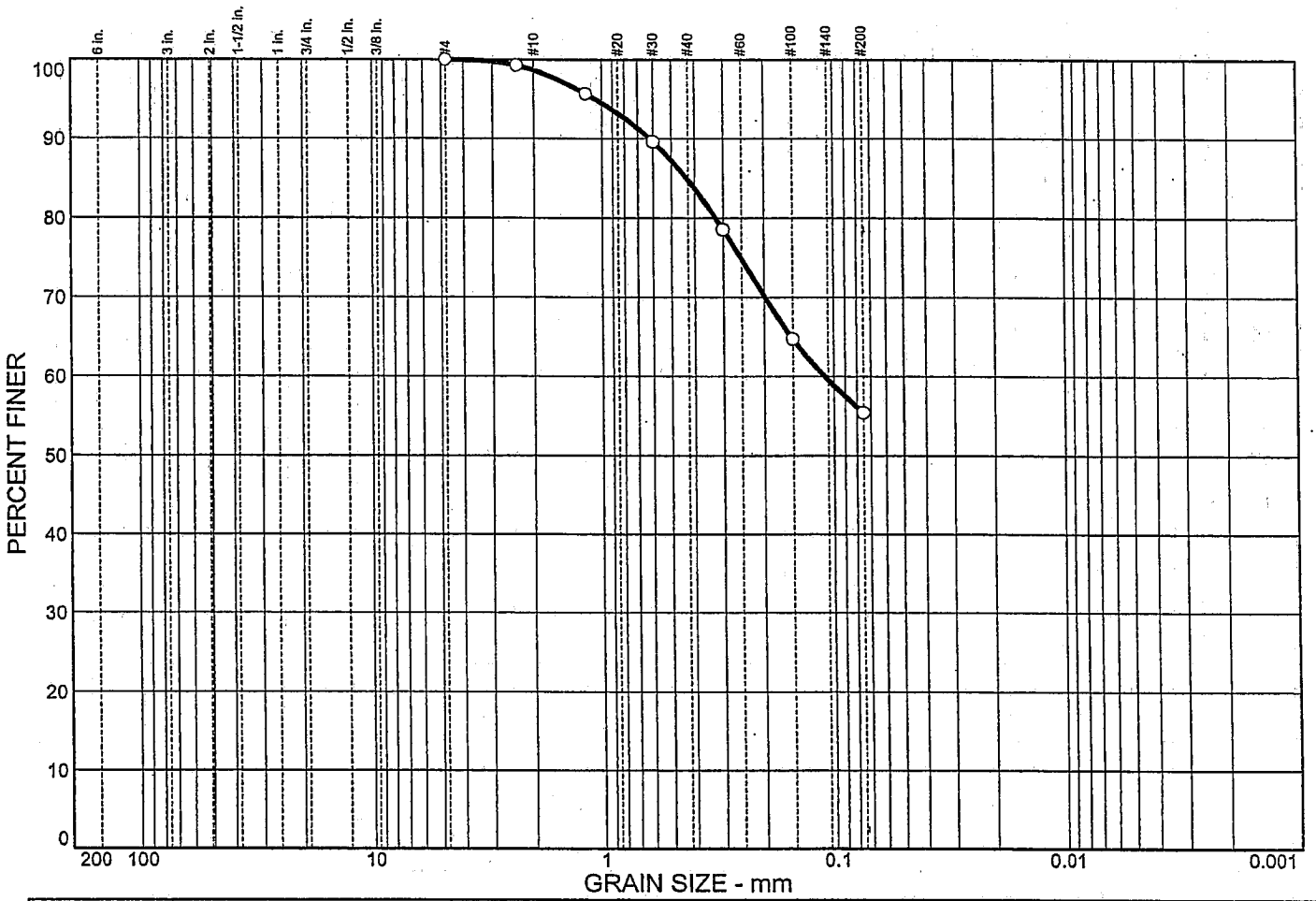
THE TWINING LABORATORIES, INC.

Client: YK America

Project: YK America, 45 Acre Parcel

Project No.: C68503.01

Figure No. 1



	% + 3"	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
O	0.0	0.0	0.0	1.3	14.0	29.3	55.4	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	DESCRIPTION	USCS
O	B-2		2	Sandy SILT with interbedded lean clay	ML

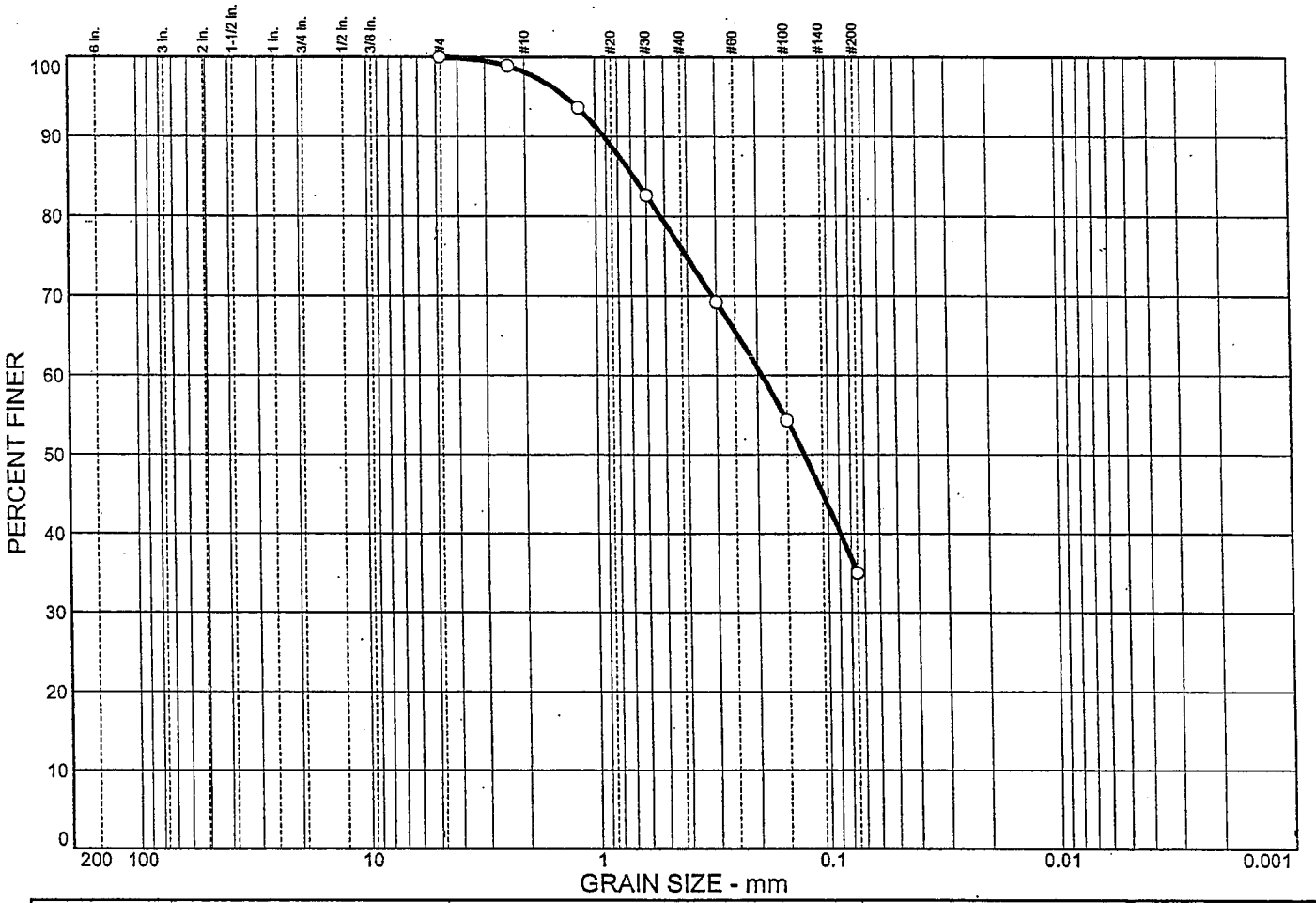
THE TWINING LABORATORIES, INC.

Client: YK America

Project: YK America, 45 Acre Parcel

Project No.: C68503.01

Figure No. 2



	% + 3"	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	1.8	22.1	41.1	35.0	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	DESCRIPTION	USCS
○	B-2		39.25	Silty fine to medium SAND	SM

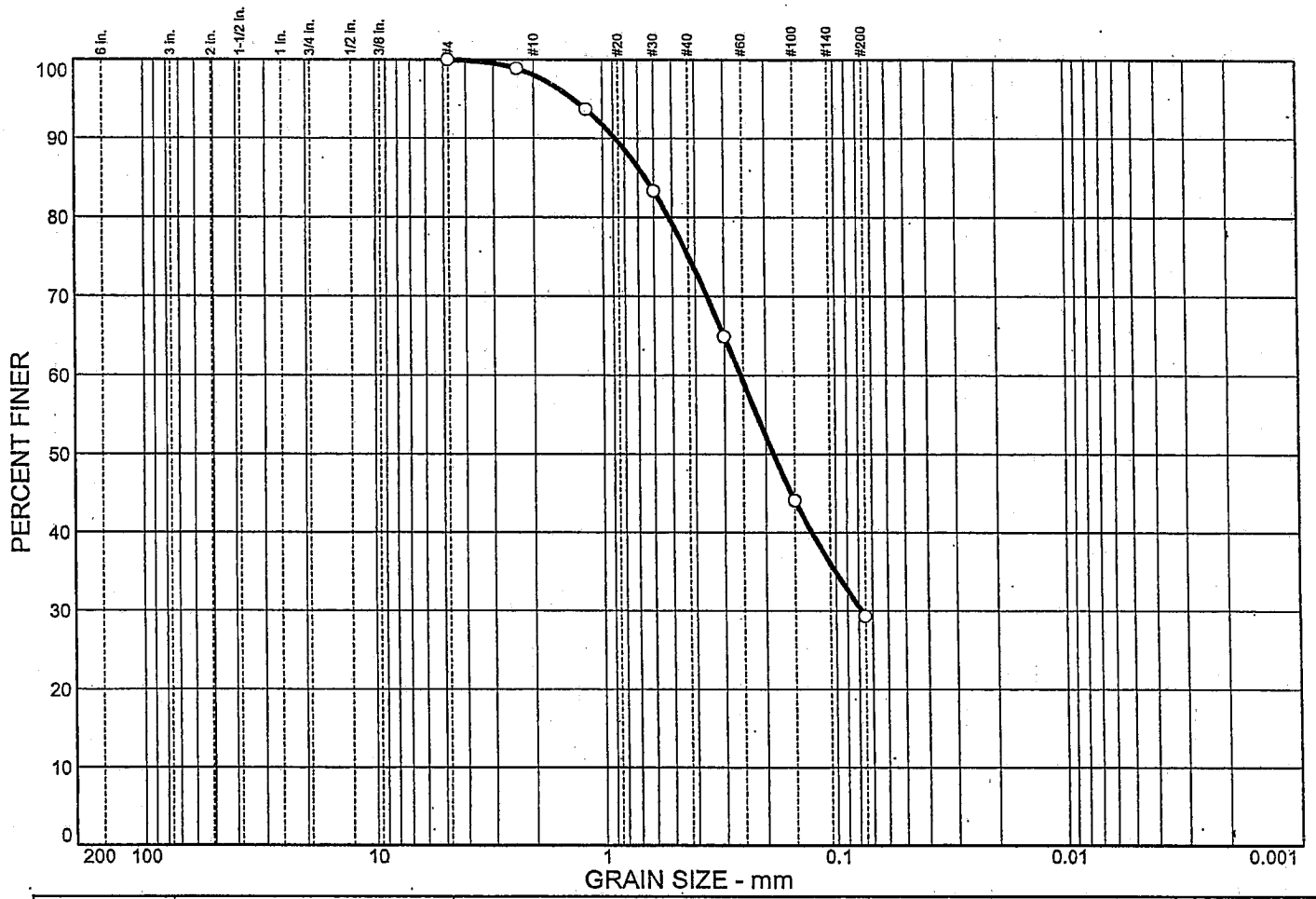
THE TWINING LABORATORIES, INC.

Client: YK America

Project: YK America, 45 Acre Parcel

Project No.: C68503.01

Figure No. 3



	% + 3"	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	1.9	23.1	45.7	29.3	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	DESCRIPTION	USCS
○	B-4		0	Silty fine to medium SAND	SM

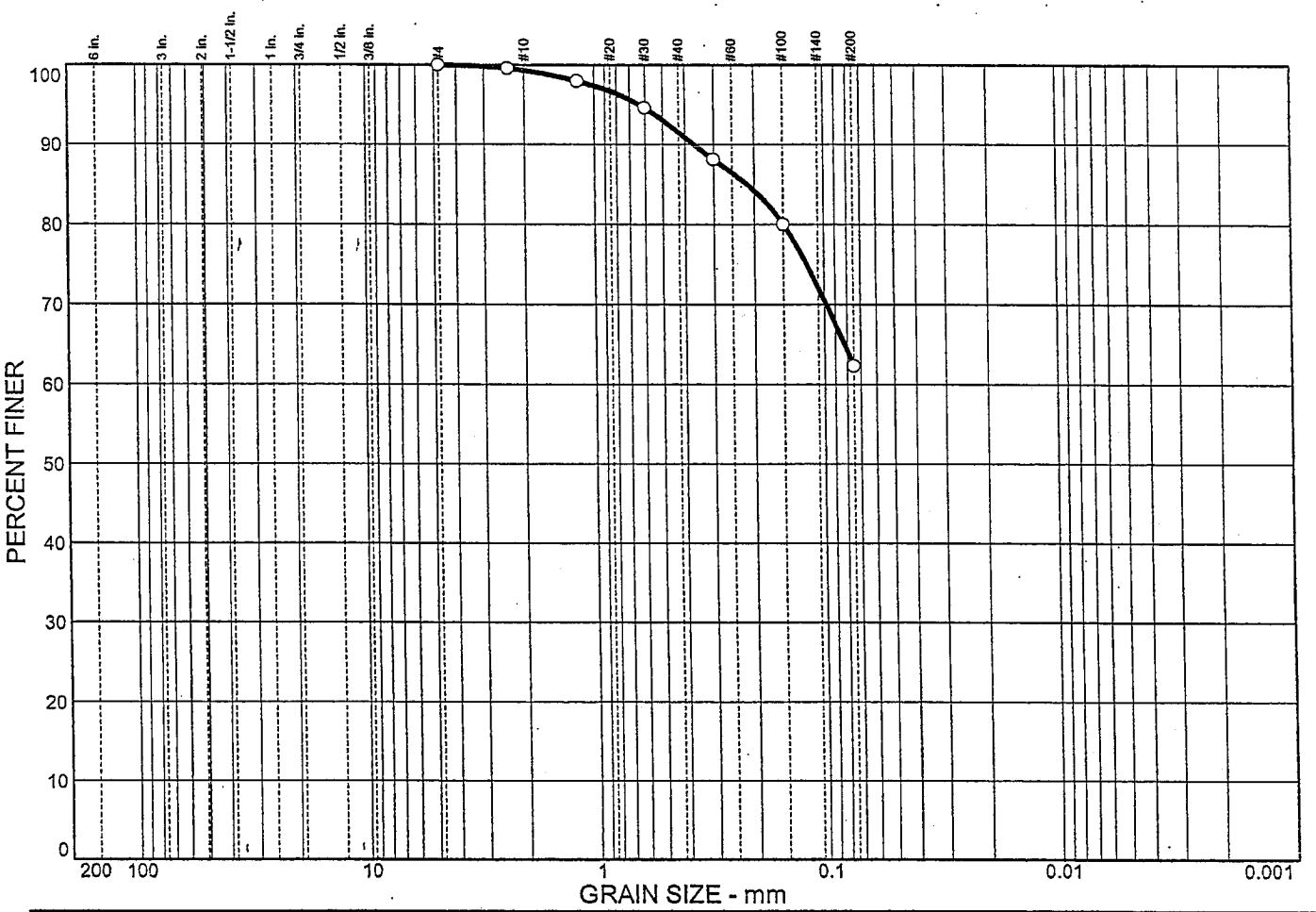
THE TWINING LABORATORIES, INC.

Client: YK America

Project: YK America, 45 Acre Parcel

Project No.: C68503.01

Figure No. 4



	% + 3"	% GRAVEL		% SAND			% FINES	
		CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
○	0.0	0.0	0.0	0.7	7.8	29.2	62.3	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	DESCRIPTION	USCS
○	B-4		3.5	Sandy SILT with clay	ML

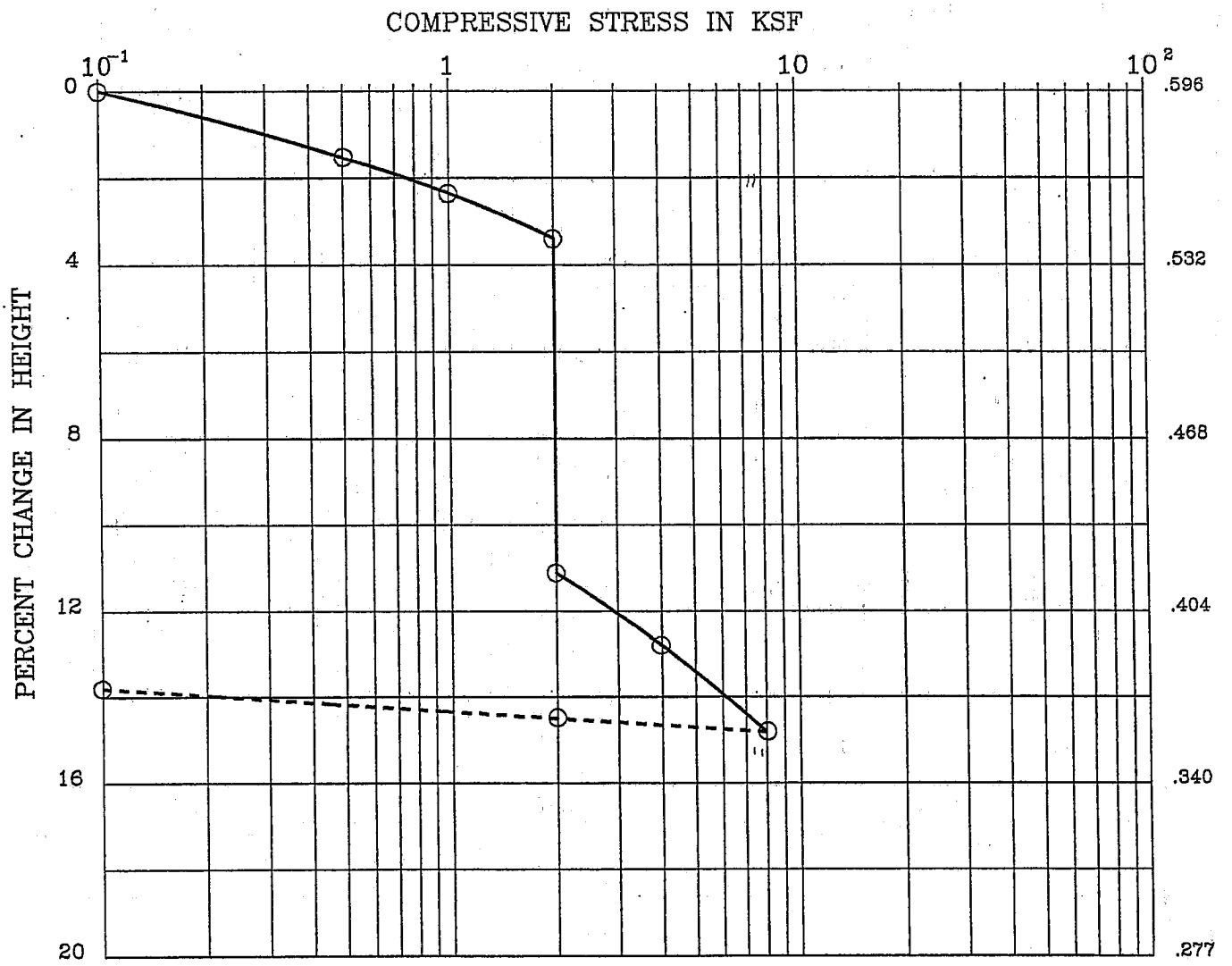
THE TWINING LABORATORIES, INC.

Client: YK America

Project: YK America, 45 Acre Parcel

Project No.: C68503.01

Figure No. 5

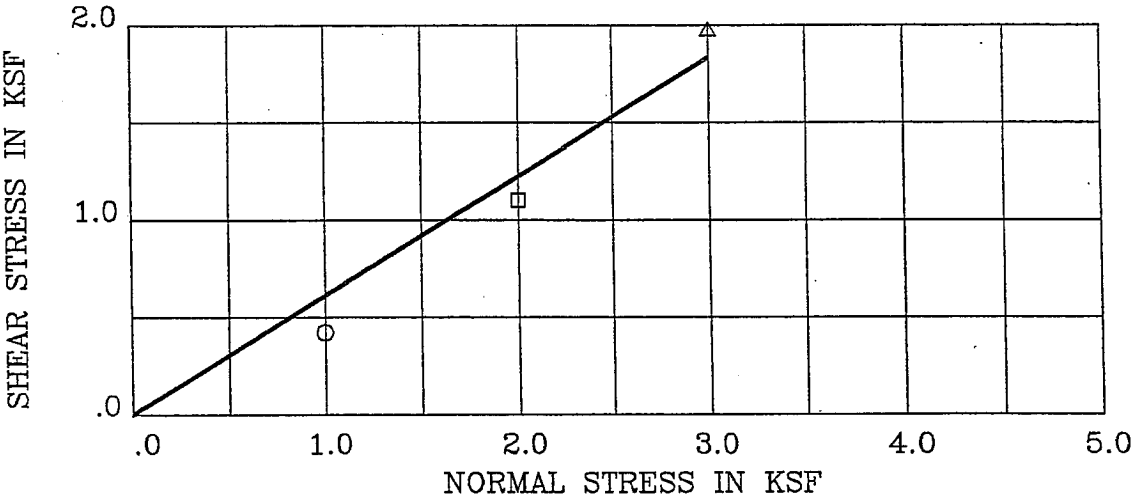


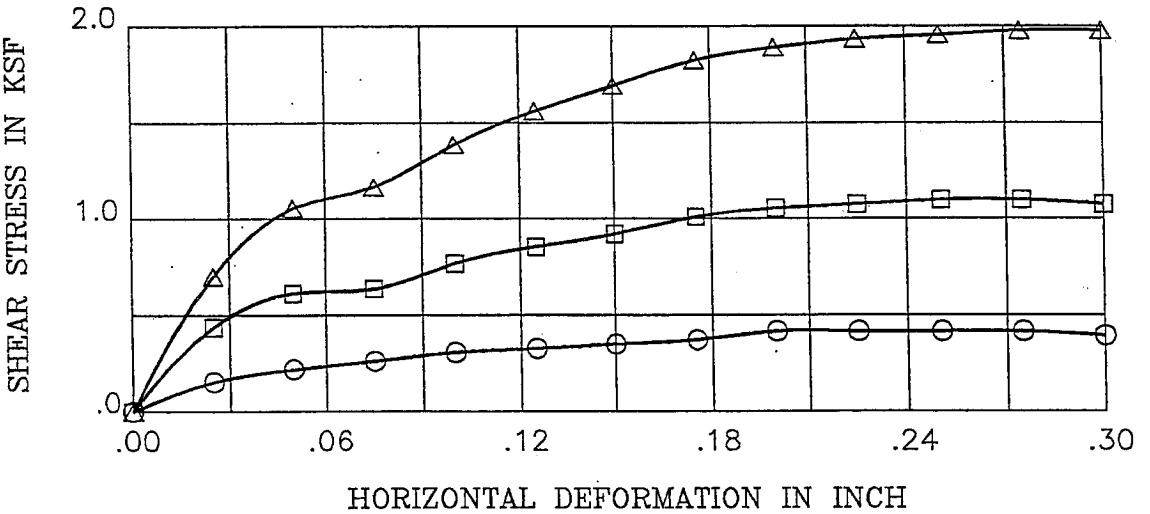
BORING	: B-4	DESCRIPTION	: Sandy SILT with Clay
DEPTH (ft)	: 3.5-5.0'	LIQUID LIMIT	:
SPEC. GRAVITY	: 2.76	PLASTIC LIMIT	:

	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	PERCENT SATURATION	VOID RATIO
INITIAL	5.6	103.8	24	.596
FINAL	15.6	120.4	100	.375

Remark : Saturated at 2 kips

Proj. C68503.01	YK America,Delano,45 Acre Parcel
The Twining Labs Inc. Fresno, CA	CONSOLIDATION TEST Figure No. 6





BORING/SAMPLE : B-1 DEPTH (ft) : 2-3.5

DESCRIPTION : Silty SAND (SM)

STRENGTH INTERCEPT (C) : .000 KSF

FRICTION ANGLE (PHI) : 31.4 DEG

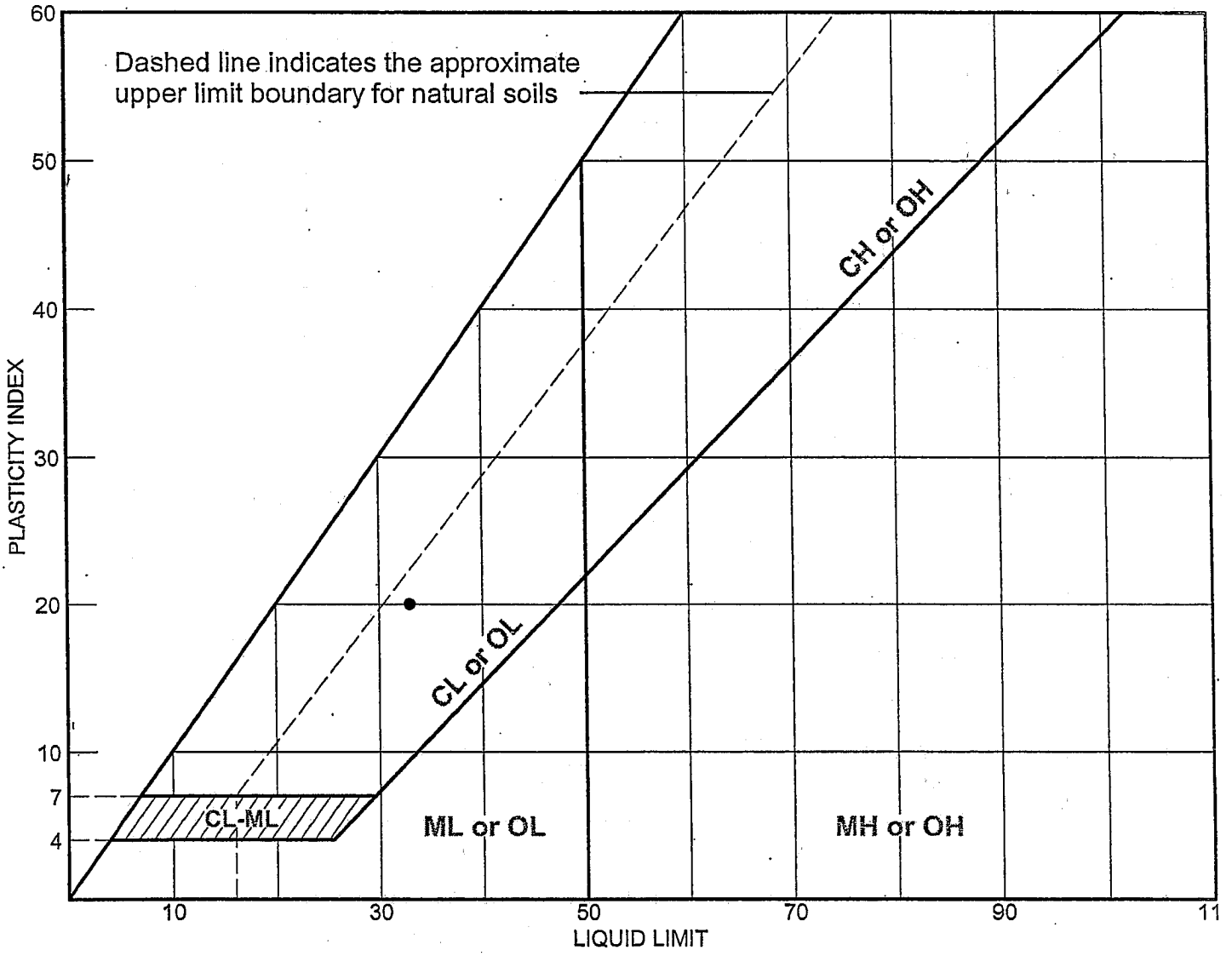
(PEAK STRENGTH)

SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	VOID RATIO	NORMAL STRESS (ksf)	PEAK SHEAR (ksf)	RESIDUAL SHEAR (ksf)
○	8.5	115.2	.435	1.00	.42	.40
□	7.6	112.1	.475	2.00	1.10	1.08
△	6.0	119.4	.385	3.00	1.98	1.98

Remark :

Proj. C68503.01	YK America, Delano, 45 Acre Parcel
The Twining Labs Inc. Fresno, CA	DIRECT SHEAR TEST Figure No. 7

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●		B-2 (R-2)	0.5-3 feet		13	33	20	CL

LIQUID AND PLASTIC LIMITS TEST REPORT

THE TWINING LABORATORIES, INC.

Client: YK America

Project: YK America, 45 Acre Parcel

Project No.: C68503.01

Figure No. 8

EXPANSION INDEX TEST

Uniform Building Code (UBC) 29-2

Project Number: C68503.01

Project: YK America, Delano, 45 Acre Parcel

Sample Location: Boring B-2

Depth: 0.5-3'

Date Sampled: 4-28-05

Sampled by: Allen Harker

Sample Number	Molding Moisture Content	Final Moisture Content	Dry Density (γ d)
	9.0	16.0	113.4

Initial Thickness: 1.0000

Final Thickness: 1.0566

Expansion Index (EI): 56

Expansion Soil Classification: Medium

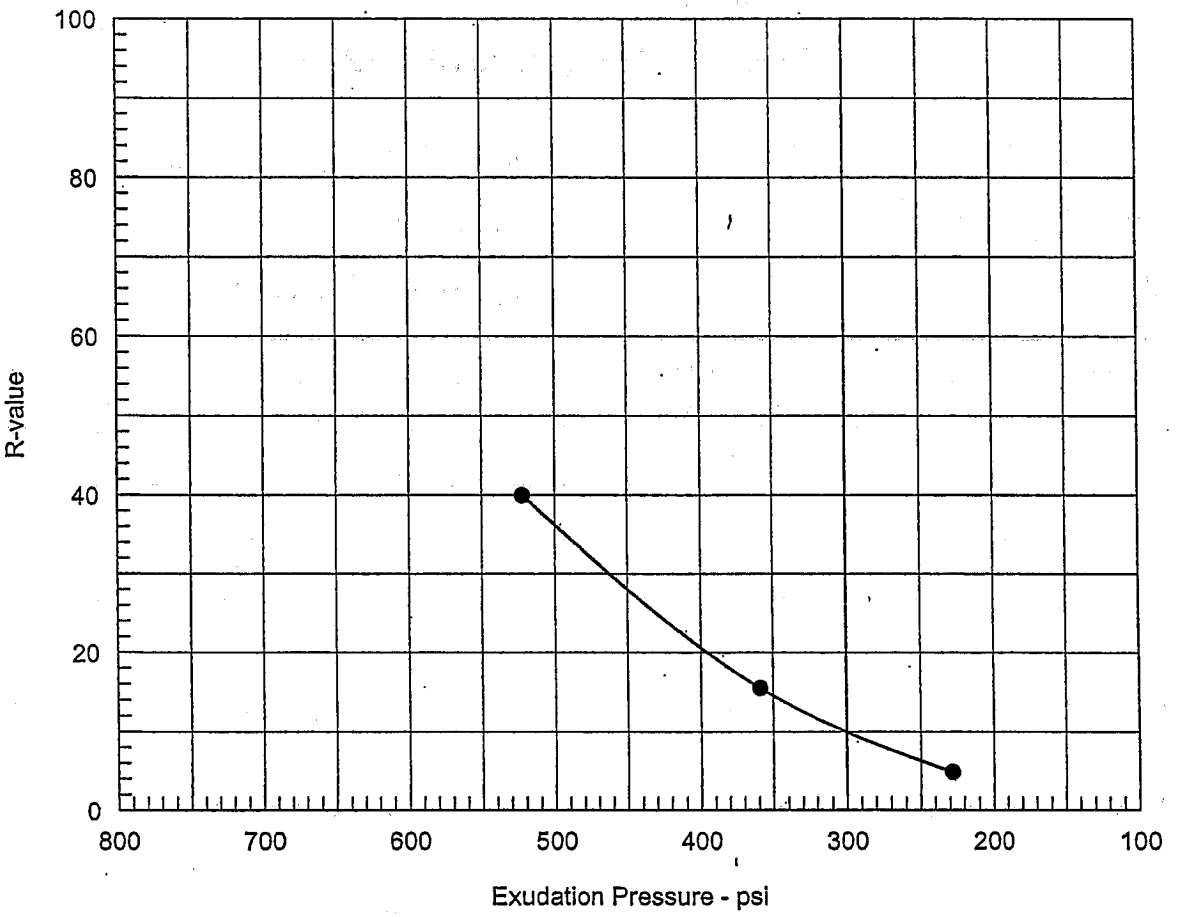
TABLE NUMBER 29-C
EXPANSIVE SOIL CLASSIFICATION

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above 130	Very High

Figure No. 9

SEC.29.206 (a)

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Valu Cor
1	300	123.5	11.5	0.00	111	2.42	359	16	15
2	300	124.6	9.8	0.00	67	2.45	522	40	40
3	300	126.5	5.4	0.00	144	2.47	228	5	5

Test Results	Material Description
R-value at 300 psi exudation pressure = 10	Mixture of Sandy SILT and Sandy LEAN CLAY

Project No.: C68503.01
Project: YK America, 45 Acre Parcel
Location: Southeast portion of the site
Sample Number: B-2 (R-2) **Depth:** 0.5-3 feet
Date: 5/3/2005

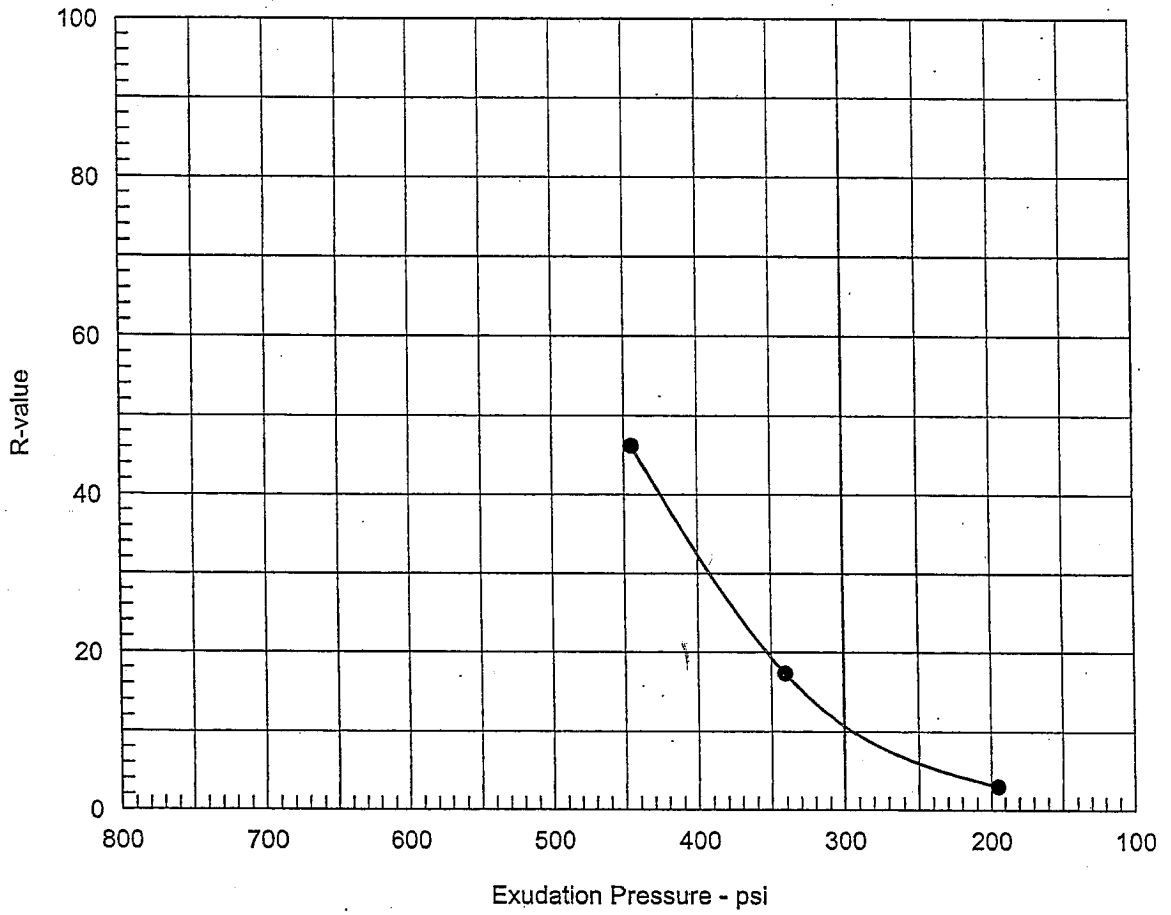
Tested by: Jeremy Frazier
Checked by: Allen Harker
Remarks:

R-VALUE TEST REPORT

THE TWINING LABORATORIES, INC.

Figure No. 10

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Valu Cor
1	300	310.9	11.4	0.00	107	2.42	341	18	17
2	300	125.0	10.1	0.00	54	2.42	445	48	46
3	300	122.0	12.7	0.00	147	2.40	195	3	3

Test Results	Material Description
R-value at 300 psi exudation pressure = 11	Silty fine to medium SAND

Project No.: C68503.01
Project: YK America, 45 Acre Parcel
Location: North-Central portion of the site
Sample Number: B-6 (R-3) **Depth:** 0.5-3'
Date: 5/3/2005

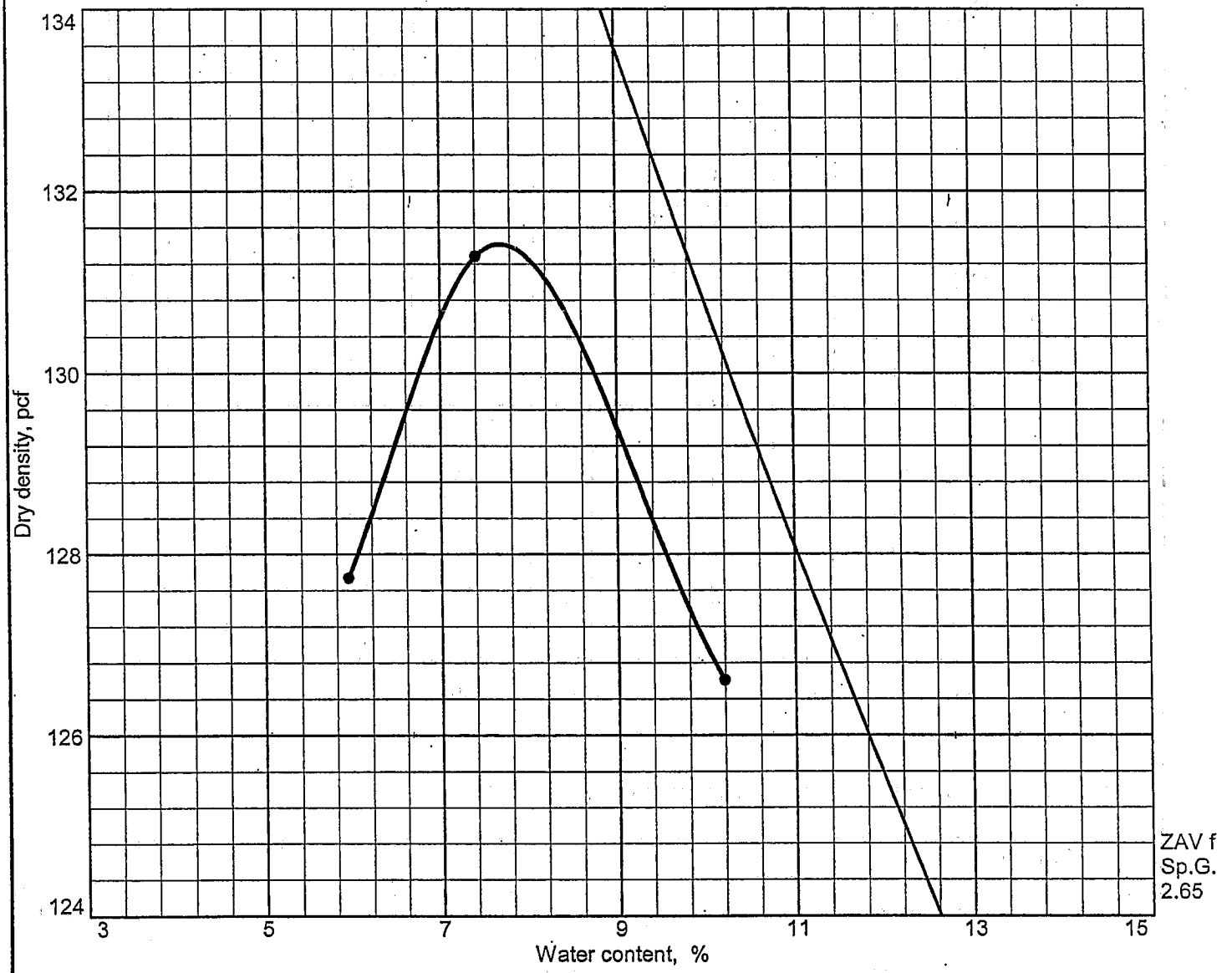
Tested by: Jeremy Frazier
Checked by: Allen Harker
Remarks:

R-VALUE TEST REPORT

THE TWINING LABORATORIES, INC.

Figure No. 11

PROCTOR TEST REPORT



Test specification: ASTM D 1557-00 Method A Modified

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
0.5-3'	SM			2.65				

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 131.4 pcf Optimum moisture = 7.7 %	Silty fine to medium SAND

Project No. C68503.01 **Client:** YK America

Project: YK America, 45 Acre Parcel

Location: North-Central portion of the site

Remarks:

PROCTOR TEST REPORT

THE TWINING LABORATORIES, INC.

Figure No. 12

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

May 05, 2005

Work Order #: 5D29014

Allen Harker
Twining Geotechnical Department
2527 Fresno Street
Fresno, CA 93721

RE: Yk America, Delano

Enclosed are the analytical results for samples received by our laboratory on 04/29/05 . For your reference, these analyses have been assigned laboratory work order number 5D29014.

All analyses have been performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, The Twining Laboratories, Inc. (TL) is not responsible for use of less than complete reports. Results apply only to samples analyzed.

If you have any questions, please feel free to contact us at the number listed above.

Sincerely,

The Twining Laboratories, Inc.

Ronald J. Boquist
Director of Analytical Chemistry

Figure No. 13

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Geotechnical Department 2527 Fresno Street	Project: Yk America, Delano Project Number: C68503.01	**Reported:**
Fresno CA, 93721	Project Manager: Allen Harker	05/05/05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-6@0.5'-3.0'	5D29014-01	Soil	04/29/05 00:00	04/29/05 14:21
B-1@0.5'-3.0'	5D29014-02	Soil	04/29/05 00:00	04/29/05 14:21

The Twining Laboratories Inc.

Ronald J. Boquist, Director of Analytical Chemistry
Joseph A. Ureno, Quality Assurance Manager

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.

THE TWINING LABORATORIES, INC.
EST. 1898 CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Geotechnical Department 2527 Fresno Street	Project: Yk America, Delano Project Number: C68503.01	**Reported:**
Fresno CA, 93721	Project Manager: Allen Harker	05/05/05

B-1@0.5'-3.0'

5D29014-02 (Soil)

Analyte	Result	Reporting Limit	Units	Batch	Prepared	Analyzed	Method
Inorganics							
Chloride	**29**	6.0	mg/kg	T5E0306	05/03/05	05/03/05	ASTM D-4327-84
Chloride	**0.0029**	0.00060	% by Weight	[CALC]	05/03/05	05/03/05	ASTM D4327-84
Sulfate as SO4	**0.0028**	0.00060	% by Weight	[CALC]	05/03/05	05/03/05	ASTM D4327-84
pH	**8.2**		pH Units	T5E0306	05/03/05	05/03/05	ATSM D4972-89 Mod
Resistivity	**7800**		ohms/cm	T5E0306	05/03/05	05/03/05	ASTM D1125-82
Sulfate as SO4	**28**	6.0	mg/kg	T5E0306	05/03/05	05/03/05	ASTM D4327-84

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference

Quality Control Data Available Upon Request

The Twining Laboratories Inc.
Ronald J. Boquist, Director of Analytical Chemistry
Joseph A. Ureno, Quality Assurance Manager

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Geotechnical Department 2527 Fresno Street	Project: Yk America, Delano Project Number: C68503.01	**Reported:**
Fresno CA, 93721	Project Manager: Allen Harker	05/05/05

B-6@0.5'-3.0'

5D29014-01 (Soil)

Analyte	Result	Reporting Limit	Units	Batch	Prepared	Analyzed	Method
Inorganics							
Chloride	**29**	6.0	mg/kg	T5E0306	05/03/05	05/03/05	ASTM D-4327-84
Chloride	**0.0029**	0.00060	% by Weight	[CALC]	05/03/05	05/03/05	ASTM D4327-84
Sulfate as SO4	**0.0011**	0.00060	% by Weight	[CALC]	05/03/05	05/03/05	ASTM D4327-84
pH	**6.9**		pH Units	T5E0306	05/03/05	05/03/05	ATSM D4972-89 Mod
Resistivity	**6400**		ohms/cm	T5E0306	05/03/05	05/03/05	ASTM D1125-82
Sulfate as SO4	**11**	6.0	mg/kg	T5E0306	05/03/05	05/03/05	ASTM D4327-84

The Twining Laboratories Inc.
Ronald J. Boquist, Director of Analytical Chemistry
Joseph A. Ureno, Quality Assurance Manager

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.

TECHNICAL APPENDICES

Appendix F – Hazards and Hazardous Materials

The Twining Laboratories, Inc. *Phase I Environmental Site Assessment, Southwest of Woollomes Avenue and Garzoli Avenue, Delano, Kern County, California*. August 29, 2004.

The Twining Laboratories, Inc. *Limited Phase II Environmental Site Assessment, Southwest of Woollomes Avenue and Garzoli Avenue, Delano, Kern County, California*. May 4, 2005.

The Twining Laboratories, Inc. *Limited Phase II Assessment, Property Southwest of Woollomes Avenue and Garzoli Avenue, Delano, Kern County, California*. September 14, 2006.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

SOUTHWEST OF WOOLLOMES ROAD AND GARZOLI AVENUE

DELANO, KERN COUNTY, CALIFORNIA

Prepared For:

Coats Consulting Company
650 Lighthouse Avenue, Suite 210
Pacific Grove, California 93950

Prepared By:

The Twining Laboratories, Inc.
2527 Fresno Street
Fresno, California 93721

E01406.01

August 29, 2004

TABLE OF CONTENTS

1.0 **INTRODUCTION** 1
1.1 Objective 1
1.2 Scope of Services 1
1.3 Limitations and Limited Conditions 2

2.0 **SITE DESCRIPTION** 3
2.1 Location and Description of the Site 3
2.2 Physical and Environmental Setting of the Site 4

3.0 **INFORMATION FROM THE SITE RECONNAISSANCE** 5
3.1 Site Reconnaissance - Description of Structures, Roads, & Other Site Improvement ... 6
3.2 Current Uses of the Site 8
3.3 Current Uses of the Adjoining Properties 8
3.4 Site Reconnaissance - Specific Indicators of Environmental Concern 8

4.0 **HISTORICAL INFORMATION OF THE SITE AND ADJOINING PROPERTIES** 11
4.1 Aerial Photograph Review 11
4.2 Sanborn Fire Insurance Map Review 12
4.3 Historical City Directory Review 12
4.4 Building Permit Review 13
4.5 Interviews and Discussion of Environmental Questionnaire and Disclosure Statement . 13
4.6 Previous Investigations 16
4.7 Past Uses of the Property 16
4.8 Past Uses of Adjoining Properties 17

5.0 **RECORDS REVIEW** 18
5.1 Facilities Identified in the Regulatory Lists and Record Review 19

6.0 **SUMMARY OF FINDINGS** 21
6.1 On-Site 21
6.2 Off-Site 22

7.0 **CONCLUSIONS AND OPINIONS** 23

8.0 **CLOSING** 24

9.0 **REFERENCES** 25

10.0 **QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS** 26

LIST OF TABLES, FIGURES, APPENDICES AND ACRONYMS

TABLES

Table 1 - Summary of Regulatory Lists Searched and Records Reviewed by Environmental Data Resources, Inc. (EDR)

DRAWINGS

Drawing 1 - Site Location Map
Drawing 2 - Site Plan

APPENDICES

Appendix A - Drawings
Appendix B - Site Photographs
Appendix C - Environmental Questionnaire
Appendix D - EDR-Radius Map with GeoCheck

ACRONYMS

AST(s)	Aboveground Storage Tank(s)
AWP	Annual Workplan
CAL-EPA	State of California, Environmental Protection Agency
CERCLIS	Comprehensive Environmental Responsibility, Compensation, and Liability Information System
CIWMB	California Integrated Waste Management Board
CRWQCB-CVR	California Regional Water Quality Control Board, Central Valley Region
DTSC	Department of Toxic Substances Control
ERNS	Emergency Response and Notification System
KCAO	Kern County Assessor's Office
KCEHD	Kern County Environmental Health Department
KCRO	Kern County Recorder's Office
LUST	Leaking Underground Storage Tank
NPL	National Priority List
RCRA	Resource Conservation and Recovery Act
SWIS	Solid Waste Information System
SWRCB	State Water Resource Control Board
TSD	Hazardous Waste Transport, Storage, or Disposal Facilities
US EPA	United States Environmental Protection Agency
UST(s)	Underground Storage Tanks(s)

1.0 INTRODUCTION

The Twining Laboratories, Inc. (Twining) was retained by Coats Consulting Company to conduct a Phase I Environmental Site Assessment (Phase I) at the property located southwest of Woollomes and Garzoli Avenues, in the city of Delano, Kern County, California . This Phase I was conducted in general conformance with the methods and procedures described in the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (Standard Designation E 1527-00), published July 2000, and in accordance with Twining's proposal to Coats Consulting Company, TLP #3904-0225.

1.1 Objective

The objective of this assessment is to identify recognized environmental conditions located at the Site or adjacent properties which could present material risk of harm to public health or to the environment. Recognized environmental conditions are defined within ASTM Designation E-1527 as the presence or likely presence of any hazardous wastes and/or substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

1.2 Scope of Services

The Phase I Scope of Services included the following tasks:

- A review of the current and past uses of the Site since 1937.
- A Site reconnaissance to assess evidence of current and/or past use or storage of toxic or hazardous material; on-Site ponds, landfills, drywells, waste streams or other disposal units; visible soil discoloration; aboveground or underground storage tanks; electrical transformers containing polychlorinated biphenyls (PCBs); and drums, barrels and other storage containers.
- A visual review of adjacent properties to assess their potential to adversely impact the Site.
- A review of available federal and state Environmental Protection Agency (EPA) lists of known or potential hazardous waste sites or landfills, and sites currently under investigation for environmental violations in the Site area. Using area-profile services, Twining cataloged sites in the vicinity of the Site that have been identified on regulatory agency lists. Search criteria were in conformance with ASTM Standard E 1527-00.
- Contact with relevant municipal, county and state agencies to review readily available records and permits.
- Preparation of this written report to present the findings and conclusions.

The Scope of Services specifically excluded sampling and analysis for the potential presence of asbestos containing building materials, or an assessment for radon gas. In addition, the Scope of Services did not include the collection and/or analysis of air, soil, groundwater, or other environmental samples.

1.3 Limitations

The purpose of an environmental assessment is to reasonably assess the potential for, or actual impact of, past practices on a given site which may pose an environmental impairment to it. No assessment is thorough enough to identify all potential environmental impairments at a given site. If environmental impairments have not been identified during the assessment, such a finding should not, therefore, be construed as a guarantee of the absence of such conditions on the site, but rather the result of the services performed within the scope, limitations, and cost of the work performed.

The conclusions presented in this report are solely professional opinions based on information provided regarding the Site and the findings of the reconnaissance and records search. Information obtained from the aerial photographs is an interpretation of features observed in the photographs. Actual conditions at the Site may have been different from those interpreted. Conclusions presented are based on conditions as they existed at the time the work was performed. Changes in existing conditions of the Site due to time lapse, natural causes, or operations adjacent to the Site may deem conclusions presented invalid, unless the changes are reviewed and the conclusions reevaluated. Such conditions may require additional field and laboratory investigations to assess if the conclusions are applicable considering the changed conditions.

This work was performed for the sole use of our client, Coats Consulting Company. Any reliance on this report by a third party is at such party's sole risk. Others who seek to rely on the findings have a duty to determine the adequacy of this report for their intended use, time, and location. Twining does not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report. No other warranty, either express or implied, is made. The standard of practice is time-dependent. Services provided were performed consistent with generally-accepted professional consulting principles and practices for environmental assessors in Kern County, California at the time the work was performed. The findings and conclusions presented in this report are solely professional opinions derived in accordance with current standards of professional practice. There were no limiting conditions encountered during the completion of this Phase I.

2.0 SITE DESCRIPTION

Information concerning the Site was obtained from a Site reconnaissance conducted by Mr. William Cooper of Twining, on June 18, and July 12, 2004, interviews with the Site owners, and a review of the documents referenced in this report.

2.1 Location and Description of the Site

The Site is located southwest of the intersection of Woollomes and Garzoli Avenues, in the city of Delano, Kern County, California, on eight parcels that together comprise approximately 45 acres. The Kern County Assessor's Office (KCAO) has assigned Assessor's Parcel Numbers (APN#s) and listed the legal owners and their addresses as follows:

- APN# 521-050-01 (Parcel 1)
  Bowen, Leonard C & Sherrel - Living Trust
  456 Woollomes Road
  Delano, CA 93215

- APN#s 521-050-02, 521-050-03, 521-050-04, and 521-050-05 (Parcels 2, 3, 4, 5)
  Kouklis, Andrew A Sr & Betty L - Family Trust
  609 Bogart Dr.
  Indio, CA 92201

- APN#s 521-050-08, and 521-050-09 (Parcels 8, 9)
  Rama Ent. Inc. c/o Mr. Patel
  951 Motel Dr.
  Merced, CA 95340

- APN# 521-050-10 (Parcel 10)
  Swanson, Betty L
  P.O. Box 397
  Delano, CA 93216

For the purpose of this report, the various parcels that comprise the Site will be referred to by their individual parcel numbers. A Site location map is presented as Drawing 1, and a Site plan is presented as Drawing 2 in Appendix A.

Parcel 1 is an irregular L shaped lot comprised of approximately 4.62 acres that are located in the northwestern portion of the Site. Parcel 1 is developed along the northern portion with 5 rural residences. Woollomes Road adjoins the Site to the north. The western portion of Parcel 1 is vacant pastureland.

Parcel 2 is an irregular shaped lot comprised of approximately 6.01 acres that are located in the southeastern portion of the Site. Parcel 2 is undeveloped on the northern portion and developed with a pallet company on the southern portion.

Parcel 3 is an irregular shaped lot comprised of approximately 9.02 acres that are located in the south-central portion of the Site. Parcel 3 is a vacant lot covered with weeds and grasses with no structures or other site improvements.

Parcel 4 is a rectangular shaped lot comprised of approximately 8.33 acres that are located in the southwestern portion of the Site. Parcel 4 is a vacant lot covered with weeds and grasses with no structures or other site improvements.

Parcel 5 is an irregular shaped lot comprised of approximately 11.95 acres that are located in the central portion of the Site. Parcel 5 is predominantly vacant land covered with weeds and grasses. However, within the central portion of this Parcel is a vacant commercial shop that consists of a single building within a fenced area.

Parcel 8 is an irregular shaped lot comprised of approximately 1.91 acres that are located in the northeastern portion of the Site. Parcel 5 is developed with a two story motel building and a paved parking lot.

Parcel 9 is an irregular shaped lot comprised of approximately 0.77 acres that are located in the northeastern portion of the Site. Parcel 9 is undeveloped and vacant with no Site improvements with the exception of a flood control basin located in the southwestern portion of the parcel.

Parcel 10 is an irregular shaped lot comprised of approximately 1.89 acres that are located in the east-central portion of the Site. Parcel 10 is developed with a pallet repair and storage company.

2.2 Physical and Environmental Setting of the Site

Physical and environmental characteristics of the Site including topography, geology, soil, and hydrogeology were evaluated based on Site observations, published literature, and maps.

Topography

Topographic map coverage of the Site is provided by the United States Geological Survey (USGS), McFarland, California, 7.5-minute quadrangle map dated 1954, photorevised 1969. The Site lies within the northeast quarter of Section 23, Township 25 South, Range 25 East, Mount Diablo Baseline and Meridian. According to the map, the Site is located at an elevation of approximately 300 feet above mean sea level, and the land surface is gently sloped to the southwest. Areas to the northeast of the Site appear to be topographically upgradient.

Geology

The Site is located within the southern portion of the San Joaquin Valley in Kern County, California. The San Joaquin Valley is part of the Great Valley Geomorphic Province, a topographic and structural basin bounded on the east by the Sierra Nevada and to the west by the Coast Range. The Sierra Nevada, a fault block dipping gently to the southwest, is composed of igneous and metamorphic rocks of pre-Tertiary age which comprise the basement complex beneath the valley (USGS, 1986).

Hydrogeology

The Site is located within the San Joaquin Valley groundwater basin, which is part of the San Joaquin Basin Hydrologic Study Area (HSA). Twenty-six groundwater basins and areas of potential groundwater storage have been identified in the HSA. The HSA is bounded by the Sacramento-San Joaquin Delta to the north, the Sierra Nevada to the east, the Tehachapi Mountains to the south, and the Coast Range to the west. Groundwater in the vicinity of the Site is found within the Central Valley regional aquifer system, an unconfined aquifer system within the older alluvium and deeper deposits. According to the map "Lines of Equal Elevation of Water in Wells Unconfined Aquifer," Spring 2000, published by the Department of Water Resources, groundwater in the vicinity of the Site occurs at a depth of approximately 110 feet bgs, and flow trends to the southwest.

Soils

According to the Soil Survey of Kern County, California, native soil on the northern portion of the Site is Wasco sandy loam, and soil on the southern portion is Garces silt loam. The Wasco sandy loam is a deep, well drained soil on recent alluvial fans and flood plains. It formed in alluvium derived dominantly from granitic rock. Permeability of the Wasco soil is moderately rapid. Available water holding capacity is moderate. Runoff is slow and the hazard of water erosion is slight. The Garces silt loam is a deep, well drained, saline-alkali soil found on basin rims. It formed on alluvium derived dominantly from granitic rock. Permeability of the Garces soil is very low. Available water capacity is low to high. Runoff is very slow, and the hazard of water erosion is slight.

3.0 INFORMATION FROM THE SITE RECONNAISSANCE

The objective of the Site reconnaissance was to observe the Site for specific indicators of environmental concern. The methodology used during the Site reconnaissance included a systematic search of practically accessible areas of the Site and adjacent properties. A Site location map is presented as Drawing 1 in Appendix A, and a Site plan depicting the Site, adjoining property use, and observed on-Site features is presented as Drawing 2 in Appendix A. Additionally, photographs were taken during the Site walk and selected photographs of the Site are presented in Appendix B. Twining's Site reconnaissance was conducted on March 18, 2004, by Mr. Cooper, Twining's senior environmental assessor. There were no significant limitations encountered at the time of Twining's Site reconnaissance. The findings of the Site reconnaissance are summarized in the following sections.

3.1 Site Reconnaissance - Description of Structures, Roads, & Other Site Improvements

Parcel 1 is an irregular L shaped lot comprised of approximately 4.62 acres that are located in the northwestern portion of the Site. Parcel 1 is developed along the northern portion with 5 rural residences. The addresses of the residences along Woollomes Road include 450, 456, 542, 548, and 554. The five residences are wood framed, pier supported structures of approximately 1,500 square feet. The 456 Woollomes address includes a slab-on-grade, unattached cinder block garage of approximately 500 square feet and a non-operational water well. No obvious septic systems were observed at the residences. However, reportedly septic systems did exist at the residences prior to connection to the municipal sanitary sewer system. The southwestern portion of Parcel 1 is vacant pastureland. Additionally, pastureland separates the residence at 456 from 542 to the east. Farmland adjoins Parcel 1to the west and south. Woollomes Road adjoins the Site to the north and beyond the avenue is a combination of farm land and land in the process of commercial development. The southern and eastern boundaries of Parcel 1 are adjoined by Parcels 4 and 5, respectively.

Parcel 2 is comprised of approximately 6.01 acres located at 1301 Garzoli Avenue in the southeastern portion of the Site. Parcel 2 is undeveloped on the northern portion and contains a pallet construction, repair, storage and sales company on the southern portion of the parcel. The pallet company is developed with the following structures: a wood framed office building on a concrete slab of approximately400 square feet near the center of the facility; a wood framed storage building on a concrete slab of approximately 200 square feet along the south-central border of the facility; a wood framed storage building with a plywood floor of approximately 200 square feet on the south-central portion of the facility; and a wood framed restroom on a concrete slab of approximately 100 square feet on the central portion of the facility. Additionally, the facility contains a work area on a concrete slab of approximately400 square feet along the north-central portion of the facility, and a wood framed pole barn work area that is approximately 10 feet wide and approximately 100 feet long located along the southern boundary of the facility. In addition, there is a hazardous waste oil storage area that contains three 55-gallon drums and a 500-gallon aboveground storage tank (AST) on the northwestern portion of the facility (see Section 3.4). There is no foundation or secondary containment associated with the waste oil storage area. The restroom facility is provided with water from the city of Delano, and the drains are connected to the municipal sanitary sewer system. Because the facility is not serviced by electricity, tools at the Site are powered from three gasoline fueled generators that are stored in the plywood floored storage room. Hazardous waste oil observed at the Site is reportedly generated from vehicle servicing conducted on the concrete pad work area. Garzoli Avenue and commercial properties border the parcel to the east. The adjoining properties to the north and west are Parcels 10 and 3, respectively. The adjoining property to the south is vacant.

Parcel 3 is an irregular shaped lot comprised of approximately 9.02 acres that are located in the south-central portion of the Site. Parcel 3 is a vacant lot covered with weeds and grasses with no structures or other site improvements. Adjoining properties to the east, west, and north are Parcels 2, 4, and 5, respectively. The adjoining property to the south is vacant pasture land.

Parcel 4 is a rectangular shaped lot comprised of approximately 8.33 acres that are located in the southwestern portion of the Site. Parcel 4 is a vacant undeveloped lot covered with weeds and grasses with no structures or other site improvements. The adjoining property to the east is Parcel 3, and adjoining properties to the north are Parcels 1, and 5. The adjoining property to the south is vacant pasture land. The adjoining land to the west is agriculturally developed.

Parcel 5 is an irregular shaped lot comprised of approximately 11.95 acres that are located in the central portion of the Site. Parcel 5 is predominantly vacant land covered with weeds and grasses. However, within the central portion of this parcel is a vacant commercial shop that consists of a single building within a fenced area. The building is constructed of brick and wood on a slab-on-grade concrete foundation. The building has an attached wooden carport and together comprise an area of approximately 40-feet by 40-feet. The fenced area comprises approximately one acre. There is an abandoned pick-up truck within the main brick building and there are numerous used tires under the carport. Within the yard area of the former shop are six 5-gallon open buckets of what appears to be waste oil and other waste fluids. Additionally, there are numerous used tires scattered throughout the yard area. There is a second concrete foundation north of the existing building. This foundation is approximately 10-feet by 12-feet in area. There are no remnants of former building associated with this foundation. A power pole near the vacant foundation contains two pole mounted transformers. Additionally, a subsurface concrete vault is located east of the abandoned repair shop. The surface exposure of the vault is approximately 4-feet by 4-feet. The vault appears to be concrete lined below the surface with a diameter of approximately 8-feet and extend s to a depth of approximately 8-feet. Several used tires and lumber have been dumped into the vault. The adjoining property to the west and north is Parcel 1. A portion of Parcel 5 adjoins Woollomes Road to the north, and a metal pipe extends from the ground vertically approximately 10 feet on this portion of the Site. Adjoining properties to the south are Parcels 3 and 4. The adjoining properties to the east include a restaurant and Parcels 9 and 10. Historical research conducted during this Phase 1 has identified the commercial operation at this location as a former wrecking yard and shop.

Parcel 8 is an irregular shaped lot comprised of approximately 1.91 acres that are located in the northeastern portion of the Site. Parcel 8 is developed with an approximately 12,000 square foot, two story motel building with a paved parking lot. Woollomes and Garzoli Avenues border the parcel to the north and east respectively. The adjoining property to the north and beyond Woollomes Road is a vacant lot (former gasoline station) with foundations and UST vent pipes still in place. The property beyond Garzoli Avenue to the east is the Pioneer Auto and Truck Stop and mini mart. The adjoining property to the south is Parcel 10. The adjoining properties to the west are Parcel 9 and the off-Site Pioneer Restaurant.

Parcel 9 is an irregular shaped lot comprised of approximately 0.77 acres that are located in the northeastern portion of the Site. Parcel 9 is undeveloped and vacant with no Site improvements with the exception of a flood control basin located in the southwestern portion of the parcel. The basin is rectangular and approximately 5,000 square feet in area. Several used tires and two 55-gallon drums were observed within the basin. The former contents of the drums are unknown. The basin did not contain water at the time of the Site reconnaissance and no visible stains or unusual odors were observed within the basin. The adjoining property to the north is the Pioneer Restaurant. Parcels 5, 8, and 10 adjoin the parcel to the west, east, and south, respectively.

Parcel 10 is located at 1051 Garzoli Avenue and is comprised of approximately 1.89 acres that are located in the east-central portion of the Site. Parcel 10 is developed with a wooden pallet repair company. However, no permanent structures and no Site improvements exist on Parcel 10. Parcel 10 is adjoined by Parcels 5 to the west, Parcel 8and 9 to the north, and Parcel 2 to the south. Garzoli Avenue adjoins Parcel 10 to the east and commercial properties including Pioneer Auto and Truck Stop and Redi-Mix are located beyond the Garzoli Avenue.

3.2 Current Uses of the Site

The northern portion on Parcel 1is developed with 5 rural residences. Parcel 2 is undeveloped on the northern part and contains a pallet construction, repair, storage and sales company on the southern part. Parcels 3and 4 are vacant fields covered with weeds and grasses. Parcel 5 is predominantly a vacant field covered with weeds and grasses. However, the central part of this parcel is a vacant wrecking yard and shop that consists of a single building within a fenced area. Parcel 8 is developed with a two story motel building and a paved parking lot. Parcel 9 is undeveloped and vacant with the exception of a flood control basin located in the southwestern part of the parcel. Parcel 10 is developed with a wooden pallet repair company.

3.3 Current Uses of the Adjoining Properties

The adjoining property to the east of the Site is Garzoli Avenue. Beyond Garzoli Avenue, from north to south, the properties are developed with a gasoline station and associated mini-mart, a cement, gravel, and sand materials yard, and a tractor sales and service company. Adjoining properties to the south of the Site, from west to east, are vacant lands covered with weeds and grasses, and a pallet storage and repair company adjoining the southeast boundary of the Site. The adjoining property to the west of the Site is agriculturally developed. The adjoining property to the north of the Site is Woollomes Road. Beyond Woollomes Road is farm land and land in the process of being commercially developed.

3.4 Site Reconnaissance - Specific Indicators of Environmental Concern

Specific indicators of environmental concern were evaluated for the Site and adjacent properties during the Site reconnaissance. The following is a summary of the Site reconnaissance findings:

Hazardous Substances and Wastes

<u>On-Site</u>
Evidence of hazardous substances or wastes was observed at the Site on the day of the Site reconnaissance. Six 5-gallon plastic containers were observed at the vacant wrecking yard located in Parcel 5. The containers were not capped with lids and appeared to contain waste oil. However, no spillage or staining of the soil was observed around these open containers. Additionally, three 55-gallon drums of waste oil and a 500-gallon waste oil AST were observed on the northwestern portion of the pallet company yard on Parcel 2. Additionally, 5-gallon gasoline containers and three gasoline powered generators were observed within the plywood floored storage building on the south-central portion of the pallet facility on Parcel 2.

Off-Site
The adjoining property, beyond Garzoli Avenue at the northeast boundary of the Site, is occupied by an operating automobile and truck stop with gasoline and diesel dispensers and indications of USTs. Additionally, the property adjoining the Site, beyond Woollomes Road at the northeast corner of the Site appears to be a former gasoline station. Several UST vent pipes were observed at this location.

Solid Waste

On-Site
No evidence of solid waste disposal on-Site was observed during the Site reconnaissance. Solid waste generated by the residences and the motel along Woollomes Road in Parcel 1 and 8 is disposed of by the municipality.

Off-Site
The closed McFarland-Delano landfill is located south and west of the Site approximately 700 feet.

Drums

Two 55-gallon steel drums that appeared to be empty, were observed within the perimeter of the flood control basin in Parcel 9. The former contents of the drums are unknown. No spillage or apparent soil staining was observed in association with the steel drums. Additionally, three 55-gallon drums of waste oil were observed on the northwestern portion of the pallet company yard on Parcel 2. A four-foot diameter area of soil staining was observed beneath the drums.

Underground Storage Tanks (USTs) / Aboveground Storage Tanks (ASTs)

On-Site
No evidence of USTs was observed at the Site during the Site reconnaissance. However, a 500-gallon waste oil AST was observed within the yard area of the pallet company located on Parcel 2.

Off-Site
Evidence of USTs off-Site was observed adjoining and east of the Site at the Pioneer Truck Stop gasoline station located on Garzoli Avenue. Additionally, evidence of USTs (vent pipes) was observed adjoining and north of the Site at a former gasoline station on Woollomes Road.

Potential Polychlorinatedbiphenyl (PCB)-Containing Equipment

Two pole mounted transformers were observed north of the vacant shop building in Parcel 5. A third pole mounted transformer was observed along the eastern boundary of Parcel 5. No leakage or staining was observed in association with these transformers. The transformers are owned and operated by Southern California Edison Company. Twining did not observe any other equipment located on-Site which may contain PCBs.

Drains and Sumps

With the exception of domestic sewage drains at the residences (Parcel 1), motel (Parcel 8) and restroom (Parcel 2) which are all connected to the city of Delano sewer system, no drains or sumps were observed at the Site.

Utilities

Reportedly, potable water and sewage disposal are provided to the residences along Woollomes Road in Parcel 1, restroom on Parcel 2, and the motel in Parcel 8, by the municipality. Electricity for Parcels 1, 5, and 8 is provided by Southern California Edison Company. While there were no indications of septic systems at the residences along Woollomes Road, it is likely that prior to connection to the municipal sanitary sewer system, sewage disposal for the residences was by on-Site septic systems. Therefore, septic systems may exist on-Site.

Wastewater

Wastewater is not generated at the Site.

Water Wells

A non-operational water well is located in Parcel 1 at 456 Woollomes Road near the rear of the unattached garage. Additionally, observed to the east of the former wrecking yard shop building in Parcel 5 is a concrete pad with a subsurface concrete vault. The use of this vault is unknown. However, a pipe that appears consistent with water delivery extends, from the bottom of the approximately 8-feet deep concrete lined vault, to the surface. The vault may house an agricultural water well or system. Several tires and other refuse have been discarded into the subsurface vault.

Oil and Gas Wells

No on-Site oil or gas wells were identified during the Site reconnaissance or within California Department of Conservation - Division of Oil & Gas maps reviewed during this assessment.

Pits, Ponds, and Lagoons

Pits, ponds, and lagoons were not identified on the Site. However, an unlined storm water basin is located within Parcel 9, southwest of the motel on Parcel 8. The basin is approximately 50 by 60 feet in plan dimensions. Two steel 55-gallon drums and several used tires were observed within the basin (see **Drums** above). Also, numerous used tires have been disposed of into the basin. Additionally, there is a depressed area located within the northwest portion of Parcel 5. The area appears to be associated with a soil barrowing noted in interviews, aerial photographs and topographic maps. The area is approximately 300 feet by 200 feet and approximately 5 feet deep.

Pipelines and Pipes of unknown use or origin.

No pipelines were observed on the Site. However, within Parcel 5, one pipe of unknown use or origin protrudes from the ground vertically approximately 10 feet. Additionally, pipes extend from a subsurface vault east of the shop building in Parcel 5. The pipe and vault may be related to an agricultural water pipeline. A subsurface canal water pipeline trends west to east on the Site in front of the residences along Woollomes Road.

Other Physical Evidence of Contamination

Indications of possible contamination was observed within the former wrecking yard in Parcel 5 the day of the Site reconnaissance. The yard area appears to have been scraped or raked in the past. Also, vegetation appears stressed and not as prevalent within the yard area as it is outside the yard which may be an indication of surface soil impacts. Additionally, within Parcel 2, the plywood flooring in the generator storage room is stained with what appears to be spillage of gasoline from refueling of the generators.

4.0 HISTORICAL INFORMATION OF THE SITE AND ADJOINING PROPERTIES.

The history of land-use on and near the Site was determined from interviews, review of historic aerial photographs and topographic and Sanborn maps, building permits, and historic city directories.

4.1 Aerial Photograph and Topographic Map Review

Available historical aerial photographs of the Site and vicinity for the years 1937, 1952, 1956, 1974, 1991, and 1999 were reviewed for indications of past use and/or activities which may have involved the manufacture, generation, use, storage, and/or disposal of hazardous materials. The aerial photographs were reviewed at the Kern County Surveying and Engineering Department, on Wednesday, March 18, 2004.

- The 1937 aerial photograph depicts the Site and adjoining properties as undeveloped land. Some grading activities appear to have taken place on the northern portion of the Site and several trails traverse the Site. A road (Woollomes) borders the Site to the north and beyond the road is vacant, undeveloped land.

- The 1952 aerial photograph depicts the Site developed with three residences along the northern portion of the Site (Woollomes Road). The houses appear consistent with three of the houses noted during the Site reconnaissance. Additionally, an unpaved road traverses south from Wollomes Road to the cental portion of the Site where some development activity appears underway.

- The 1956 aerial photograph depicts the Site similar to the 1952 aerial photograph with the exception that several areas on the north-central portion of the Site appear to be graded or excavated. State Highway 99 to the east of the Site is under

construction for improvements including division and addition of on-ramps and off-ramps. Activities at the Site noted above may be consistent with borrow pits associated with Highway 99. Also, Garzoli Avenue has been constructed adjoining the Site to the east.

- The 1974 aerial photograph depicts the Site developed with five houses along Woollomes Road and a building and yard area on the central portion of the Site. The houses appear to be consistent with those noted during the Site reconnaissance, and the building and yard appear to be consistent with the abandoned wrecking yard and shop building noted during the Site reconnaissance. Additionally, at the northeast corner of the Site is an L-shaped building which is consistent with the typical outline of a gasoline station. Historical research conducted during this Phase I has concluded that the Curve-In Truck Stop was located on-Site at the southwest corner of the intersection of Woollomes and Garzoli Avenues. Also noted on the photograph is a building to the west of the truck stop which is consistent with the off-Site Pioneer restaurant that was noted during the Site reconnaissance. Two off-Site gasoline stations are noted in this photograph; one is to the north, adjoining the northeast corner of the Site; and, the second is to the east, adjoining the northeast corner of the Site. All other adjoining properties appear to be agriculturally developed.

- The 1991 and 1999 aerial photographs depict the Site similar to the 1974 aerial photograph with the exception that the truck stop at the northeast corner of the Site has been removed. A building that appears consistent with the Pioneer Motel which was noted during the Site reconnaissance has been constructed in place of the truck stop.

4.2 Sanborn Fire Insurance Map Review

Twining reviewed Sanborn Fire Insurance Maps online at http://sanborn.umi.com, sponsored by Bell & Howell UMI. Sanborn Maps can provide historical information regarding a site. The available Sanborn Fire Insurance Maps drawn for the city of Delano and vicinity do not include the Site.

4.3 Historical City Directory Review

City directories published by R.L. Polk Company (Polk) were reviewed at the Kern County Library in Bakersfield, California. City directories can provide information concerning past and current occupancy of the Site.

The 1960 through 1970 Polk directories for Delano list the Curve-In Chevron station and Café and Bonkosky's Richfield station at State Highway 99 and Woollome Road. No other listings were found for the area of the Site in the city of Delano directories for the 1950s, 60s or 70s. The 1987 Polk directory indicates the New Pioneer Motel at 1001 Garzoli Avenue (Site), the Pioneer Truck Stop at 1000 Garzoli Avenue (adjoining the Site to the east), and Valley Redi Mix at 1100 Garzoli Avenue (adjoining the Site to the east). Subsequent Polk directory listings through the 1980s, 90s, and 2000s also list these businesses at the same addresses.

4.4 Building Permit Review

The city of Delano Building Department (CDBD), in Delano, California was contacted for information regarding the Site. These records were reviewed to assess the presence of features which may present potential environmental concerns. The following is a summary of the building permits review:

- August 18, 1995 - permit for plumbing, issued to Leonard Bowen for 456 Woollomes. Replace 1" water yard piping for two existing units - cap off existing water well piping.
- May 10, 1993- permit for the installation of a 10' by 20' sign at 1001 South Garzoli;
- March 25, 1988 - permit for the construction of a 6' by 12' sign at 1001 South Garzoli;
- March 25,1988 permit for the construction of a 40-unit motel;
- August 31, 1977 permit to demolish existing type 4 building (service station) and remove old tanks and fill tank holes; and
- June 6, 1974 - two permits issued to L.C. Bowen for plumbing (off-site sewer).

Further review of the permit to demolish existing building (service station) and remove old tanks and fill tank holes, dated August 31, 1977, (Permit No. 1741) indicates this permit was issued for APN 48-230-14, and the location was identified as Woollomes Road at Garzoli Avenue. Research at the KCAO indicates that this is an old APN that was later subdivided into APNs 521-050-07, 08, and 09 which are portions of the Site with the exception of Parcel 7. The Permit was issued to Archie Crippen Exc (ACE), and the listed owner is Vincent Cipritino of 10860 Orion Avenue, Granada Hills California. ACE in Fresno, California was contacted by Twining for information regarding the former service station facility. However, Twining was informed by ACE that these early records no longer exist, and they were unable to provide additional information regarding the former service station demolition. Additionally, Twining was unable to contact Vincent Cipritino.

4.5 Interviews and Discussion of Environmental Questionnaire and Disclosure Statement

Environmental questionnaire and disclosure statements (Questionnaires) were mailed to the current listed property owners which included: Mr. Leonard Bowen (Parcel 1); Mr. Andrew Kouklis (Parcels 2, 3, 4, and 5); Rama Ent., c/o Mr. Jack Patel (Parcels 8 and 9); and, Mrs. Betty Swanson (Parcel 10). Additionally, with the exception of Mr. Leonard Bowen, who is deceased, the aforementioned individuals were contacted via telephone for information regarding the Site. Mr. Kevin Bowen, the son of the deceased Mr. Bowen, was contacted for information regarding the Site. The questionnaires were completed and returned to Twining by these individuals. The completed questionnaires are included in Appendix C.

Mr. Kevin Bowen indicated during a telephone interview with Twining that Parcel 1 has been owned by his family for approximately 28 years. He indicated that the main residence was 456 Woollomes Road and that four additional residences at 450, 542, 548, and 554 Woollomes were owned by the Bowens'and rented as single family residences. Mr. Bowen indicated that there is one unused domestic water well located at the main residence. He further indicated that portions of Parcel 1 that are not residentially developed have been used only as pasture and have not been actively farmed for some time. Mr. Bowen had no knowledge of any on-Site hazardous materials or storage, nor information regarding releases, or spills of hazardous materials at the Site as a result of illegal dumping, or traffic accidents along the adjoining roadways. He further had no information regarding possible USTs or ASTs at the Site.

Mr. Andrew Kouklis indicated during a telephone interview with Twining that Parcels 2,3,4 and 5 have been owned by him for approximately 2 years. However, Mr. Kouklis has been familiar with the Site area for over 20 years. According to Mr. Kouklis, the southern portion of Parcel 2 is rented to a wooden pallet construction company, and Parcels 3, 4, and 5 are vacant. He believed an auto repair business occupied the vacant building located near the center of Parcel 5, but did not have any further information regarding the former operation. Mr. Kouklis also indicated that a water well that is not in use is located east of the vacant building in Parcel 5. Mr. Kouklis had no knowledge of any on-Site hazardous materials or storage, nor information regarding releases, or spills of hazardous materials at the Site as a result of illegal dumping, or traffic accidents along the adjoining roadways. He further had no information regarding possible USTs or ASTs at the Site. Mr. Kouklis believes an environmental report has been prepared for his property in the past and indicated he would provide a copy to Twining. Subsequent to the initial interview, several follow-up telephone calls were made to Mr. Kouklis in an attempt to have him forward the previous Phase I referenced during the first interview. On July 30, 2004, Mrs. Kouklis was contacted and was able to provide a copy of a Phase I summary report prepared for Parcels 2, 3, 4, and 5. The Phase I summary report was prepared by Central Sierra Environmental (CSE) and dated November 8, 2002. Twining contacted Mr. Mark Magargee with CSE to acquire a copy of the Phase I. Mr. Magargee indicated that a complete and final Phase I report was not issued for the property due to lack of receipt of payment. The summary Phase I report was reviewed for information regarding the Site. CSE identified the building in Parcel 5 as a former residence and did not reveal any recognized environmental conditions for the property.

Mr. Wellington Kwan, former owner of Parcels 2, 3, 4, and 5 was also contacted by telephone for information regarding the Site. According to Mr. Kwan, who declined to complete a questionnaire, he had owned the property for approximately 15 years prior to the sale two years ago. He further indicated that the southern portion of Parcel 2 had been rented to a pallet company, the northern portion of Parcel 2 was vacant, Parcels 3 and 4 were formerly agriculturally developed with alfafa, and Parcel 5 was primarily vacant with the exception of a possible auto repair shop which had not been in operation during his ownership period. He further had no information regarding possible USTs or ASTs at the Site.

Mr. Jesus Ochoa, operator of Ochoa Pallet Company, was also contacted by telephone for information regarding Parcel 2. The facility is located at 1301 Garzoli Avenue and repairs, constructs, stores, and sells pallets. The sanitary facility drain is reportedly connected to the city

sewer system. Mr. Ochoa indicated that with the exception of waste oil and gasoline powered generators, there are no hazardous materials maintained on Parcel 2. Mr. Ochoa had no knowledge of any other on-Site hazardous materials or storage, nor information regarding releases, or spills of hazardous materials at the Site as a result of illegal dumping, or traffic accidents along the adjoining roadways. Further, he had no information regarding possible USTs at the Site.

Mr. Jack Patel indicated during a telephone interview with Twining that Parcels 8 and 9 have been owned by him for approximately 2 years. Parcel 8 is developed with the Pioneer Motel and is located at 1001 Garzoli Avenue. Mr. Patel had no knowledge of any on-Site hazardous materials or storage, nor information regarding releases, or spills of hazardous materials at the Site as a result of illegal dumping, or traffic accidents along the adjoining roadways. He further had no information regarding possible USTs or ASTs at the Site. Mr. Patel indicated the former owner of the property was Mr. Arcee Malde of Visalia, California. Mr. Patel could not provide further information regarding the former owner, and Twining was unable to located a Mr. Malde through internet and telephone book searches.

Mrs. Betty Swanson indicated during a telephone interview with Twining that Parcel 10 has been owned by her for approximately 35 years. She indicated the property has been primarily open ground during the majority of her ownership. Mrs. Swanson indicated that for the past 4 years, the property has been leased to a pallet repair and storage company, and prior to this, the property was leased to Porterville Cement Company. Reportedly, the cement company only stored cement tailings at the Site. Mrs. Swanson had no knowledge of any on-Site hazardous materials or storage, nor information regarding releases, or spills of hazardous materials at the Site as a result of illegal dumping, or traffic accidents along the adjoining roadways. She further had no information regarding possible USTs or ASTs at the Site.

Additionally, Twining contacted Mr. Nes Quevedo with Quevedo Pallets, Inc. for information regarding Parcel 10. Mr. Quevedo indicated that he does not maintain any hazardous materials at the Site and he had no knowledge of any on-Site hazardous materials or storage, nor information regarding releases, or spills of hazardous materials at the Site as a result of illegal dumping, or traffic accidents along the adjoining roadways. He further had no information regarding possible USTs or ASTs at the Site.

In addition to the individuals interviewed above, Mr. John Beebe, who owned the vacant commercial shop in Parcel 5, was interviewed for information regarding the former operation. According to Mr. Beebe, the shop was not an auto repair shop but rather a wrecking yard. Mr. Beebe indicated that he stripped parts from wrecked and used vehicles and would have the chassis and remaining parts scrapped at wrecking yards in Bakersfield. He indicated that he operated at the Site from approximately the early 1970s until the late 1970s. Mr. Beebe reportedly bought the business from a Mr. Jamison (deceased) who had operated a wrecking yard at the Site prior to Mr. Beebe. He further indicated that soil borrowing had occurred in the vicinity of his yard in the past. Mr. Beebe was asked if he knew the use of the concrete vault that is located east of his former shop building. He speculated that it was associated with irrigation for the property when it was in agricultural

production. He knew of no water wells at the Site with the exception of a domestic well located at the residence along Woollomes Road. Water for the Site was reportedly piped from the domestic well. The water pipe was reportedly capped when Mr. Beebe vacated the property. He further indicated that he did not dispose of any hazardous wastes at the Site. He further had no information regarding possible USTs or ASTs at the Site. Mr. Beebe was also questioned regarding other portions of the subject Site, and indicated that a truck stop occupied the location of the northeast corner of the Site (present location of the Pioneer Motel). Mr. John Beebe's brother, Mr. Fred Beebe who is a long time resident of Delano was also interviewed for information concerning the Site. Mr. Fred Beebe confirmed that the location of the Curve-Inn Truck Stop was at the current location of the Pioneer Motel and he further indicated the truck stop contained diesel fuel tanks and dispensers.

4.6 Previous Investigations

Twining requested information regarding the Site from the Kern County Environmental Health Department (KCEHD), the Kern County Fire Department in Delano, and the City of Delano. However, no information regarding investigations for the Site were found in files with these agencies.

A previous Phase I was reportedly prepared for a portion of the Site according to Mr. Kouklis, owner of Parcels 2, 3, 4, and 5. A copy of a summary report prepared by CSE was transmitted to Twining by Mrs. Kouklis. Twining contacted Mr. Mark Magargee with CSE to acquire a copy of the Phase I. Mr. Magargee indicated that a complete and final Phase I report was not issued for the property due to lack of receipt of payment. The summary Phase I report was reviewed for information regarding the Site. CSE identified the building in Parcel 5 as a former residence and did not reveal any recognized environmental conditions for the property.

4.7 Past Uses of the Site

Based on the historical information acquired during this Phase I, the following summarizes the past uses of the Site: The Site appears to have been undeveloped and vacant land from at least 1937 until some time prior to 1952 when rural residential development occurred along Woollomes Road. Some soil borrowing may have occurred at the Site during the late 1950s during the construction of portions of divided State Highway 99. Since at least the mid-1960s a wrecking yard and shop building was in operation on the central portion of the Site, and a truck-stop and restaurant was in operation on the northeastern portion of the Site. The truck-stop and restaurant were removed in approximately 1977 and a motel was constructed in its place during 1988. Portions of the Site along the eastern boundary have been leased for storage of materials related to the Redi-Mix company located to the east and for companies that store and build pallets. The majority of the southern portion of the Site has remained vacant and undeveloped.

4.8 Past Uses of the Adjoining Properties

Based on the historical information acquired during this Phase I, the following summarizes the past uses of the adjoining properties: Adjoining properties were undeveloped since at least 1937 and were predominantly agriculturally developed by 1956. Since that time, the majority of the adjoining properties to the north, west, and south have remained agriculturally developed with the exception of a gasoline station north of the northeastern corner of the Site. Properties to the east of the Site have been commercially developed since the mid-1970s and have included a gasoline station and a cement and materials facility. A restaurant has operated near the northeast portion of the Site since the mid-1970s as well.

5.0 RECORDS REVIEW

Twining contracted Environmental Data Resources, Inc. (EDR) to perform searches of available federal, state, and local database information systems for the purpose of identifying known recognized environmental conditions present on the Site and nearby properties which have the potential to adversely impact the Site being assessed in this study. Information regarding the list, record, and permit review findings is summarized in Table 1. The complete report furnished by EDR is included in Appendix D of the report.

TABLE 1
SUMMARY OF REGULATORY LISTS SEARCHED BY EDR AND RECORDS REVIEWED

Database	Target Site	Search Distance	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	1	NR	NR	1
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg, Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
STATE ASTM STANDARD								
AWP		1.000	0	0	0	0	NR	0
Cal-Sites (SMBRP)		1.000	0	0	0	0	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	0	2	NR	NR	2
Notify 65		1.000	0	0	0	0	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	2	NR	NR	2
CA Bond Exp. Plan		1.000	0	0	0	0	NR	0
UST		0.250	0	0	NR	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
CA FID UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	0	NR	NR	NR	0

NR=Not Requested

5.1 Facilities Identified in the Regulatory Lists and Record Review

The information regarding the following facilities was obtained from the Kern County Environmental Health Department (KCEHD) in Bakersfield, California and the Regional Water Quality Control Board in Fresno, California (RWQCB):

- **Pioneer Auto & Truck Stop** is located at 1000 Garzoli Avenue at the southeast corner of the intersection of Woollomes and Garzoli Avenues and adjoins the Site to the east. This facility is listed within the State Water Resources Control Board (SWRCB) Leaking Underground Storage Tank (LUST) database, and within the SWRCB Hazardous Waste & Substance (Cortese) database. An investigation was performed by Consolidated Testing Laboratories at the facility in 1990. The investigation consisted of drilling, sampling, and laboratory analysis of soil in the vicinity of one 8,000-gallon diesel and two 6,000-gallon gasoline USTs. Total petroleum hydrocarbons as gasoline (TPH-g) were reported at a concentration of 17,000 mg/kg from a soil boring advanced to 10 feet below surface grade (BSG). Based on these results, a vapor extraction system was installed and operated for three months during 1992. A soil remediation confirmation boring was drilled and sampled in June 1992 to evaluate the effectiveness of the soil vapor extraction and treatment system. Based on the minor concentrations of petroleum product constituents (PPCs) and the decreasing TPH-g concentration at depths greater than 10 feet bsg, Site closure was requested and granted by the KCEHD in a letter dated November 1992.

In April 1998, an additional investigation was conducted by HerSchy Environmental at the facility during the removal of the 8,000-gallon diesel UST. Because the diesel UST was used for both diesel and gasoline, the soil samples collected from beneath the UST were analyzed for total petroleum hydrocarbons as diesel (TPH-d), as well as TPH-g, benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE). At the time of the excavation of the diesel UST, soil samples were also collected from beneath a 10,000-gallon lube oil UST by advancing angle borings to approximately 5-feet below the bottom of each end of the lube oil UST. The soil samples collected from beneath the lube oil UST were analyzed for total recoverable petroleum hydrocarbons (TRPH). Soil samples collected for analysis from beneath the lube oil UST did not indicated the presence of TRPH. However, the results of soil sampling and analysis performed for removal of the diesel UST indicated TPH-d at a concentration of 3,700 mg/kg at a depth of 17 feet bsg at the south end of the former UST. KCEHD requested additional investigation of this area. An additional soil boring was advanced to a total depth of 40-feet bsg. Analytical results indicated minor concentrations of TPH-d at 20-feet bsg and below detectable concentrations (ND) at depths greater than 20-feet bsg. Based on these results, the KCEHD issued a closure letter for the diesel UST and lube oil UST which was abandoned in place.

Additionally, during August 1999, an investigation was conducted at the facility by HerSchy Environmental to evaluate soil conditions in the vicinity of the remaining six 12,000-gallon USTs and associated dispensers. Four diesel USTs and seven associated dispensers are located on the southern portion of the facility, and two gasoline USTs and two associated dispensers are located on the northern portion of the facility. Soil samples collected from borings drilled in the diesel fuel area were analyzed for TPH-d, and soil samples collected from the gasoline fuel area were analyzed for TPH-g, BTEX, and MTBE. The samples analyzed in the diesel fuel area were reported as ND with the exception of one boring which indicated relatively high concentrations of TPH-d at 35-feet bsg. However, these concentrations diminished to ND in samples from 45, 50, and 55-feet bsg. The samples analyzed in the gasoline fuel area were all reported as ND. Based on these results, KCEHD did not require further investigation

Further information regarding the Pioneer Truck Stop indicates the SWRCB issued a letter dated April 25, 2003 which states that the facility is not documented as having Under-Dispenser Containment (UDC) and as such is out of compliance with UST regulations.

- **Bonkosky Gasoline Station** is located north and beyond the intersection of Woollomes Road and Garzoli Avenue and adjoins the Site. According to information in a file reviewed at the KCEHD this former facility has four undocumented USTs. No additional information regarding this abandoned facility is available. According to representatives with KCEHD, they are in the process of acquiring information for court proceedings regarding the responsible party for this facility. Based on groundwater flow in the area trending to the east-southeast, the environmental concern posed to the Site from this potential off-Site source appears low.

- **Central Cal Equipment Inc.,** (Berchtold Equipment) is located at 1300 Garzoli Avenue and is approximately 600 feet southeast of the Site east of Garzoli Avenue. This facility is listed within the SWRCB LUST and Cortese databases. During removal of a gasoline UST in 1989, soil was determined to have been impacted from an unauthorized release. A subsurface investigation was conducted and a vapor extraction system was installed to remediate impacted soil. A subsequent soil investigation revealed minor PPCs concentrations remained in soil and closure was granted by letter issued by the KCEHD dated August 18, 1992. Based on the closed status and down gradient location of this facility, the environmental concern posed to the Site from this off-Site source appears low.

- **Kern County Dump -McFarland-Delano SanitaryLandfill (MDSL)** is located approximately 700 feet southwest of the Site. This facility is listed within the Environmental Protection Agency's (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) and Facility Index System (FINDS) databases. According to Mr. Herman Robbins with the Kern County Waste Management Department (KCWMD) the landfill was closed in 1995. During 1999, a landfill gas system was installed and ongoing monitoring of the system indicates that the landfill is stable and relatively dry. Mr. Robbins indicated that shallow groundwater beneath the landfill is found between 37 and 45 feet bsg and that only landfill gas constituents have been reported in groundwater. Further, based on Mr. Robbins evaluation of data acquired during monitoring, waste degradation created landfill gas has been declining since monitoring started in 1999.

  A review of files with the KCWMD revealed the facility was a class III landfill that operated between 1972 and 1992. Final closure in 1995 included placement of a low permeability cap on the surface. Initial groundwater monitoring at the facility began in 1986 and included the installation of three monitoring wells screened at 40 to 60 feet below ground surface (BGS). Groundwater samples indicated benzene, vinyl chloride, 1,4 dichlorbenzene, tetrachloroethene, and methylene chloride at concentration above laboratory practical quantitative limits. During 1989 five additional wells were installed at the facility, and from

1990 to1991 off-site groundwater monitoring wells were installed as part of the Detection Monitoring Program (DMP) to study groundwater at the facility. These studies revealed volatile organic compounds and inorganic compounds south-southeast of the facility (down gradient of the subject Site of this Phase I). Declining groundwater in 1993 necessitated the installation of deep monitioring wells. Currently an Evaluation monitoring Program (EMP) is being completed for MDSL. As part of the DMP and EMP groundwater is sampled on a quarterly basis and analyzed for VOCs, inorganics, and metals constituents landfill gas monitoring wells are installed around the perimeter of the former landfill and are monitored quarterly. An upgradient monitoring well MD1-26 was installed in July 2001 (north of the landfill approximately 300 feet and approximately 400 feet south of the subject Site. This well is sampled for background water quality and has been reported during all sampling events as none detected (ND) for all constituents of concern.

Investigations regarding other facilities identified in the list and records review were either closed, or based on distance and/or direction are not considered to pose an environmental threat to the Site. Therefore, it is Twining's opinion that the environmental concern presented to the Site from off-Site sources appears low

6.0 SUMMARY OF FINDINGS

The findings of the Phase I are summarized in the following sections:

6.1 On-Site

The Site is located southwest of Woollomes Road and Garzoli Avenue, in the city of Delano, Kern County, California, on eight parcels, and is comprised of approximately 45 acres. The Site appears to have been vacant and undeveloped from at least 1937, until the mid-1950s when the northern portion (Parcel 1) was developed with several rural residences. Soil borrowing reportedly occurred on the northwest portion of Parcel 5 during the late 1950 to early 1960s. During the 1950s and early 1960s the remainder of the Site was in agricultural use. By the early1960s, the northeastern corner of the Site (Parcel 8) was developed with a truck-stop diesel fueling station, and the central portion (Parcel 5) was developed with a wrecking yard. The wrecking yard was abandoned and the truck-stop was removed by the late 1970s. A motel was constructed in place of the truck stop by the late 1980s, along with a storm water basin on Parcel 9. During the 1990s, the eastern portion of the Site (Parcel 10) along Garzoli Avenue and south of the motel was used for storage of concrete tailings. Since the late 1990s to the present, Parcel 10 and a portion of Parcel 2 have been leased for use a pallet storage and repair facilities. Parcels 3 and 4 remain vacant and undeveloped.

The following buildings, features and improvements are currently located on the Site: Five residences are located on Parcel 1along the northern boundary of Woollomes Road. A two story motel is located on Parcel 8 at the northeast corner of the Site and a storm water basin is located on Parcel 9. The residences and motel are supplied with electricity by a utility company, and the city of Delano provides water and domestic sewage disposal by the city sewer system . Possible former septic systems are associated with the residences. Also, a non-operational domestic water well is

located near the northwest corner of the residence at 456 Woollomes Road. A pallet repair and storage yards is located on Parcel 10 along the eastern boundary of the Site at 1051Garzoli Avenue. There are no structures located at this parcel and only electricity is provided as a utility. A second pallet repair and storage yards is located on Parcel 2 along the eastern boundary of the Site at 1031Garzoli Avenue. There are five small structures located at this facility. The city of Delano provides water to Parcel 2, and sewage disposal is by the city sewer system. However, no electricity is provided by a utility company. An abandoned shop building and wrecking yard are located on Parcel 5 within the central portion of the Site. A possible abandoned water well (subsurface concrete vault) is located east of the former wrecking yard and shop building. Also, one pipe of unknown origin is located north of the vault. The remainder of the Site includes Parcels 3 and 4 which are vacant/former agricultural land.

Hazardous materials and wastes identified at the Site include: Two 55-gallon drums (former contents unknown) observed within the basin on Parcel 9. Five 5-gallon containers of waste fluids are located within the wrecking yard. Additionally, soil in the yard area appears scraped and areas lack vegetation which may be an indication of surface soil impacts. Three 55-gallon drums containing waste oil and a 500-gallon AST the reportedly contains waste oil were observed within the workyard of the pallet company located on Parcel 2. Some soil staining was observed in association with the waste oil drums. Also within Parcel 2, the generator storage room plywood flooring was observed to be stained due to gasoline spills.

An additional issue which is not considered an environmental concern but is rather a development concern is the location of the former McFarland-Delano Landfill and the restrictions and/or conditional use permits with respect to any established buffer zones.

6.2 Off-Site

Adjoining properties to the Site have included; a gasoline station north of the northeast corner of the Site; agricultural land along the remainder of the northern boundary of the Site; agricultural land along the western boundary of the Site; agricultural land along the southern boundary of the Site; a gasoline station east of the northeast corner of the Site; commercial properties along the remainder of the eastern boundary of the Site; and, a commercial property adjoining the southeastern corner of the Site. Additionally, a restaurant has been located between the northwest and northeast portions of the Site along Woollomes Road.

Environmental investigations involving leaking underground storage tanks and a closed landfill have been conducted for properties in the vicinity of the Site. The known limits of impacted soils for the LUST facilities did not extend to the subject Site. Additionally, the dump has been capped with soil and post closure monitoring activities are ongoing. There are no indications that the impacts to the soil and groundwater beneath the former dump extend off-site to the subject Site. Therefore, the environmental concern posed to the Site from off-Site sources appears low with the possible exception of the Bonkosky facility which has not been investigated for potential releases of petroleum products to date.

7.0 CONCLUSIONS AND RECOMMENDATIONS

On behalf of Coats Consulting Company, Twining performed a Phase I at the approximately 45 acre property located on Parcels 521-050-01, 02, 03, 04, 05, 08, 09, and 10 in the city of Delano, Kern County, California. This Phase I was performed during June, July and August 2004.

This Phase I has not identified any recognized environmental conditions in connection with the Site with the exception of the following:

- A portion of Parcel 5 was formerly used as a wrecking yard and shop. Wrecking yards typically handled, stored, and disposed of hazardous waste fluids, batteries, and metals. Twining recommends further investigation with respect to soils within the former wrecking yard. A soil investigation should be conducted within the yard area of the former wrecking yard for these potential contaminants.

- Waste oils and fluids were observed in plastic 5-gallon containers (unsealed) within the yard area of the former wrecking yard. These containers represent a material threat of release. Therefore, Twining recommends removal and disposal of the 5-gallon waste oil/fluid containers by a licenced waste transporter;

- A Storm water retention basin is located on the eastern portion of the Site. 55-gallon drums were noted within the basin (former contents unknown). A soil investigation should be conducted to determine potential impacts to the basin soil.

- A plywood floor within a generator storage room on Parcel 2 appears stained from gasoline spills. Additionally, minor soil staining was observed beneath 55-gallon waste oil drums and nearby AST at this facility. A soil investigation should be conducted beneath the plywood flooring and beneath the drums and AST.

- A former truck stop diesel fueling station was located on Parcel 8 in the general location of the current Pioneer Motel at 1001 Garzoli Avenue. Building permits reviewed for the former truck stop indicate that two tanks were removed and the excavations were backfilled with fill soil. No information is available regarding investigations or possible releases associated with the former truck stop. However, because the former use as a fueling station presents a material threat of a release of petroleum products to soil and/or groundwater, Twining recommends further investigation of Parcel 8 including a geophysical survey and soil investigation.

In addition to the above noted recognized environmental conditions, this Phase I has noted the following environmental concerns associated with the Site:

- A non-operational domestic water well exists at the northwest corner of the Site. Twining recommends that water wells that not in operation and are not to be used in the future be properly abandoned;

- Septic systems are believed to have formerly existed at the Site in association with the residences along Woollomes Road. Twining recommends proper abandonment of any septic systems found while demolishing the residences or during development of the Site.

- a subsurface vault was observed east of the wrecking yard shop. Twining recommends further investigation in order to determine the former use of the vault; and

- A pipe of unknown origin extends approximately 10-feet vertically from the ground surface in Parcel 5. Twining recommends further investigation of the pipe.

An additional issue which is not considered an environmental concern but is rather a development concern is the location of the former McFarland-Delano Landfill and the restrictions and/or conditional use permits with respect to any established buffer zones.

8.0 CLOSING

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-00 of the Site. Any exceptions to, or deletions from, this practice are described in the following paragraph.

The material content of this report is intended to be consistent with a standard of practice as defined by ASTM practice E 1527. However, the report format differs in style, arrangement, and presentation of material facts from the format described by ASTM.

We appreciate the opportunity to be of service to you on this project. If you have questions regarding this report, please feel free to contact us at (559) 268-7021.

Sincerely,

THE TWINING LABORATORIES, INC.
Environmental Services Division

William R. Cooper
Senior Environmental Assessor

Jason Paul
Senior Environmental Assessor/Senior Reviewer

9.0 REFERENCES

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UnitedSates Department of Agriculture, 1971, *Soil Survey of Kern County, California,* Soil Conservation Service in cooperation with the California Agricultural Experiment Station, U.S. Government Printing Office, Washington D.C.

United States Geological Survey, 1961 photorevised 1980, McFarland, California Quadrangle, 7.5 Minute Series Topographic Map.

10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

The Twining Laboratories, Inc. Phase I Environmental Site Assessment staff is composed of a group of environmental professionals that perform Environmental Site Assessments on a routine basis. The Phase I staff is managed and supervised by individuals who conduct, prepare, oversee, and/or review Environmental Site Assessments on a daily basis. Qualification profiles for these individuals are provided in the following section.

William R. Cooper
Manager/Environmental Site Assessments

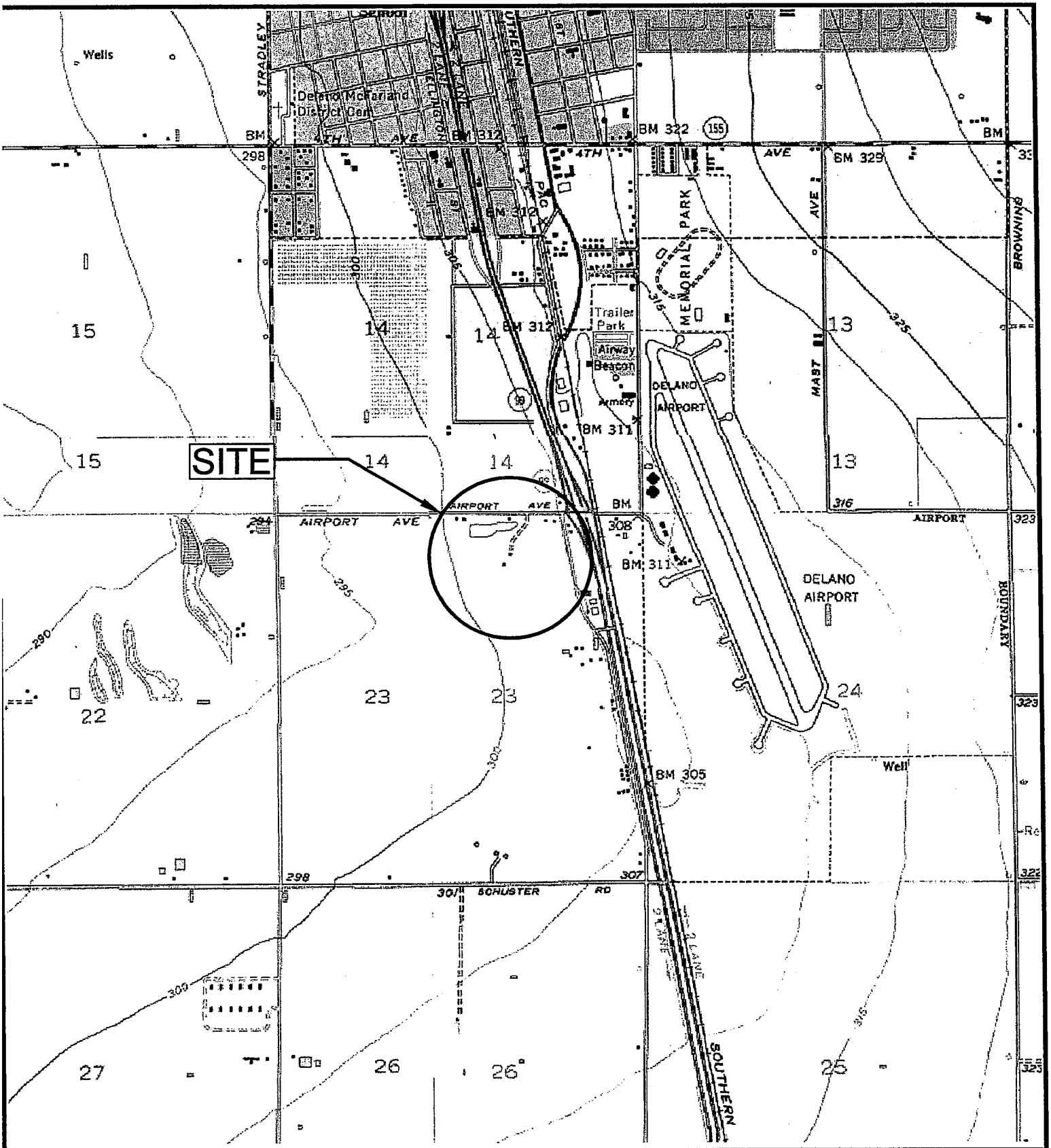
Mr. Cooper received a Bachelor of Arts degree in Geology from California State University Fresno in 1979, and is a State of California Registered Geologist, # 7427. He was professionally engaged in the petroleum industry in various capacities from 1980 through 1994. Mr. Cooper joined the environmental industry in 1994, and has been engaged as a project geologist and environmental assessor for several environmental services companies specializing in Preliminary Site Assessments, UST programs, soil and groundwater assessment, and cleanup programs. Mr. Cooper has performed numerous Phase I Environmental Site Assessments. Since joining Twining in 2001, he has participated in over three-hundred Environmental Site Assessments on diverse properties throughout California and Washington.

Jason Paul
Manager/Environmental Services

Mr. Paul received a Bachelor of Science degree in Geology from California State University Fresno in 1988. He has received certification as a Registered Environmental Assessor, #05760 and is a State of California Registered Geologist, # 7557. Mr. Paul has over fourteen years experience in management and performance of environmental site assessments, subsurface investigations and remediation programs. Scopes of work performed by Mr. Paul and technical professionals under his direction have included preparation of workplans; delineation of soil and groundwater contamination; database management; risk assessments; and groundwater remediation. His experience has included interfacing with various environmental regulatory agencies throughout California.

APPENDIX A

DRAWINGS



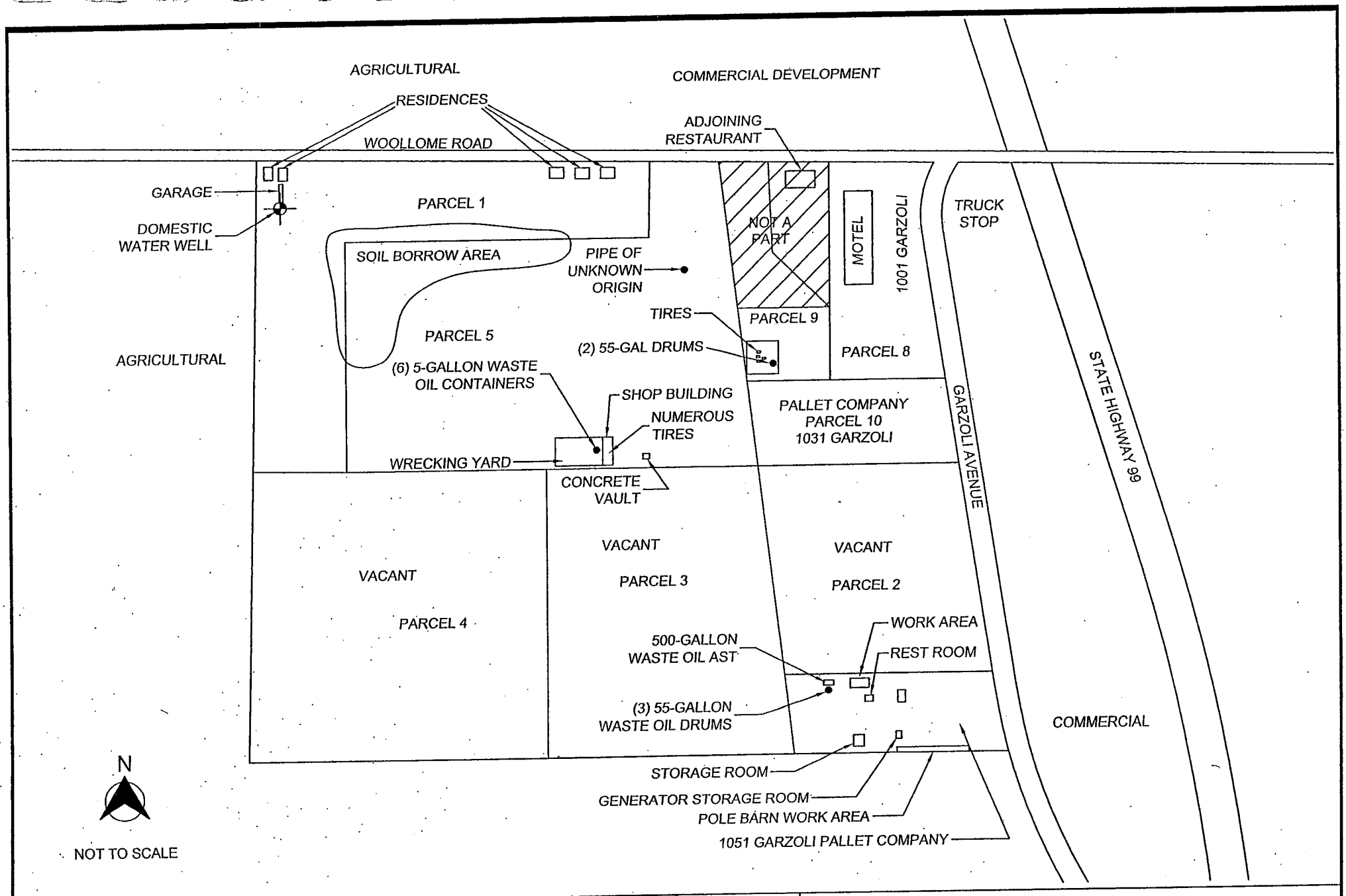
SOURCE: U.S.G.S. TOPOGRAPHIC MAP, 7 ½ MINUTE SERIES
McFARLAND, CALIFORNIA QUADRANGLE, PHOTOREVISED 1969

0 2000
APPROXIMATE SCALE IN FEET

SITE LOCATION MAP
1001 GARZOLI AVENUE
DELANO, CALIFORNIA

FILE NO.: 01406-01-01	DATE: 08/31/04
DRAWN BY: WME	APPROVED BY:
PROJECT NO. E01406.01	DRAWING NO. 1

THE TWINING LABORATORIES, INC.
EST. 1898
FRESNO/MODESTO/VISALIA/BAKERSFIELD/MONTEREY



SITE PLAN
1001 GARZOLI AVENUE
DELANO, CALIFORNIA

FILE NO. 01406-01-01	DATE DRAWN: 08/27/04
DRAWN BY: WME	APPROVED BY:
PROJECT NO. E01406.01	DRAWING NO. 2

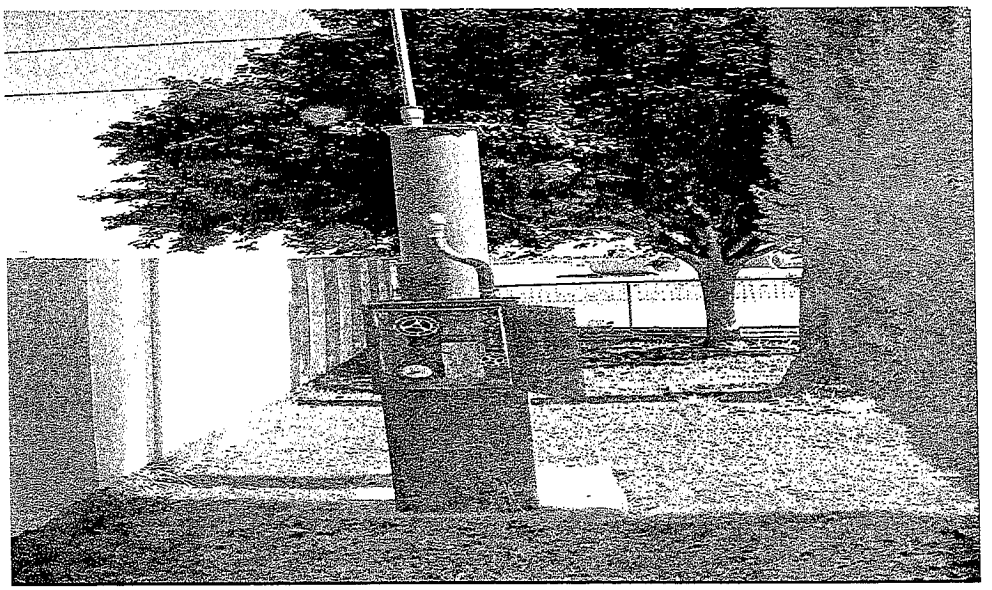
THE TWINING LABORATORIES, INC.
EST.1898
FRESNO/MODESTO/VISALIA/BAKERSFIELD/MONTEREY

APPENDIX B

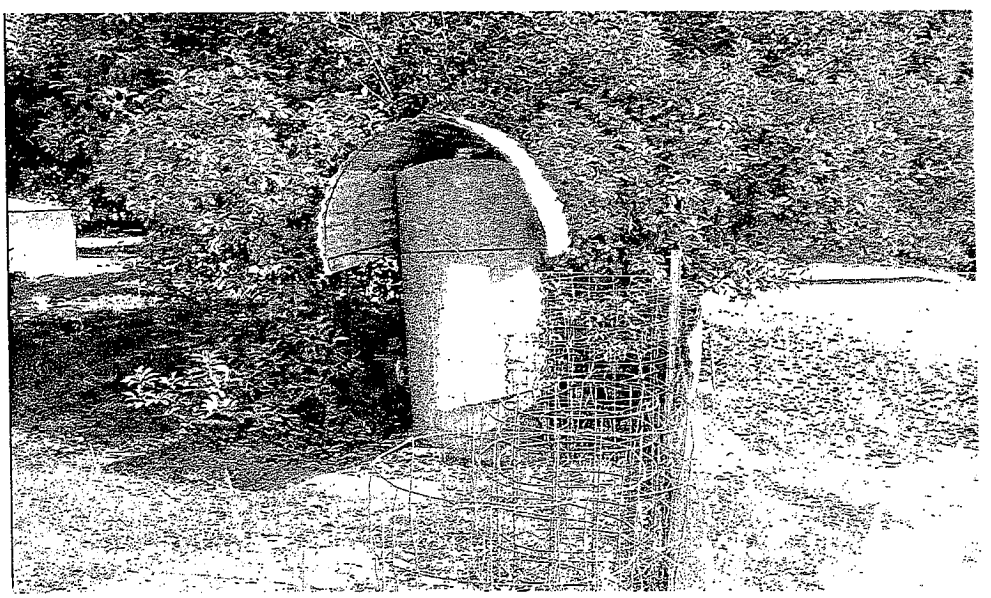
SITE PHOTOGRAPHS

PHOTOGRAPH 1
Typical view of the northern portion of the Site looking west. Residence in the background is 456 Woollomes Road. Woollomes Road is to the right of the photo (north) and a depressed soil borrowing area is to the left of the photo.

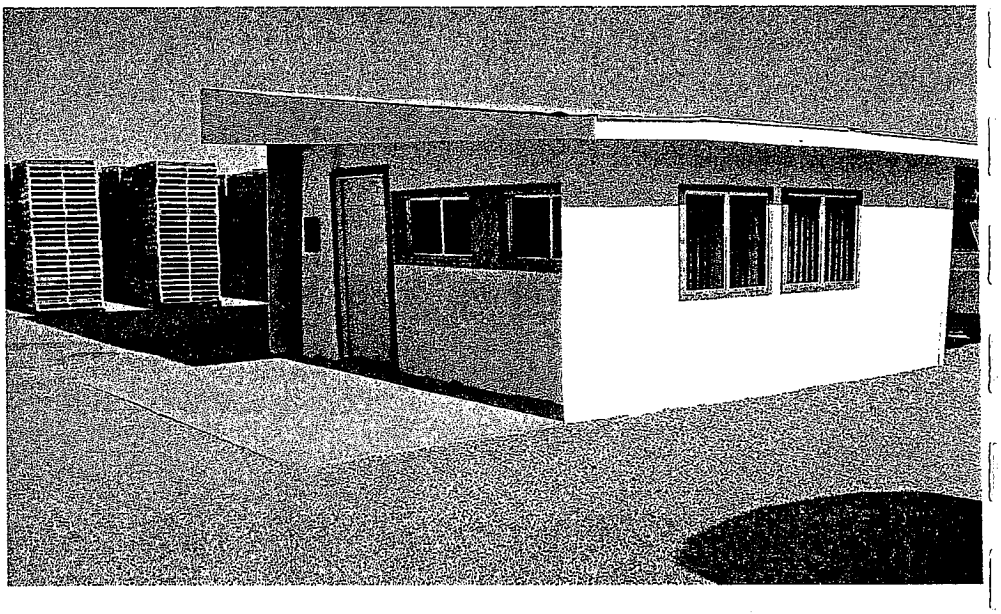
PHOTOGRAPH 2
View of the underground canal control valve located near the front of the residence at 456 Woollomes Road.



PHOTOGRAPH 3
View of the non-operational domestic water well located near the rear (south) of the residence at 456 Woollomes Road.

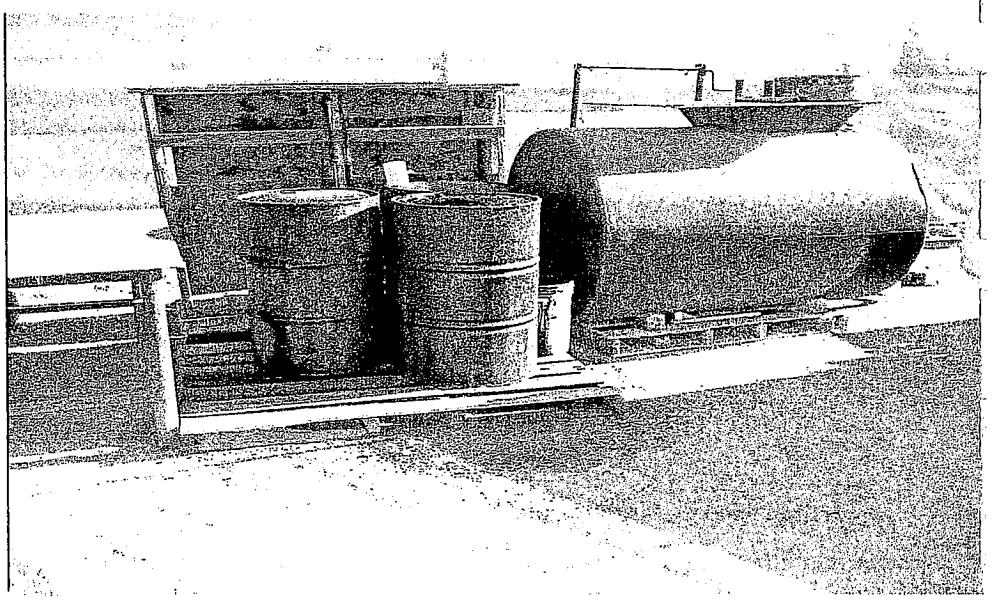


PHOTOGRAPH 4
Typical veiw of the pallet company and office building at 1051 Garzoli Avenue (Parcel 2).



PHOTOGRAPH 5
View inside the generator storage room. Note gasoline spills on plywood flooring.

PHOTOGRAPH 6
View hazardous waste oil storage area at 1051 Garzoli Avenue (Parcel 2). Three 55-gallon drums containing waste oil and a 500-gallon AST containing waste oil are depicted. Note oil stained ground around the drums.



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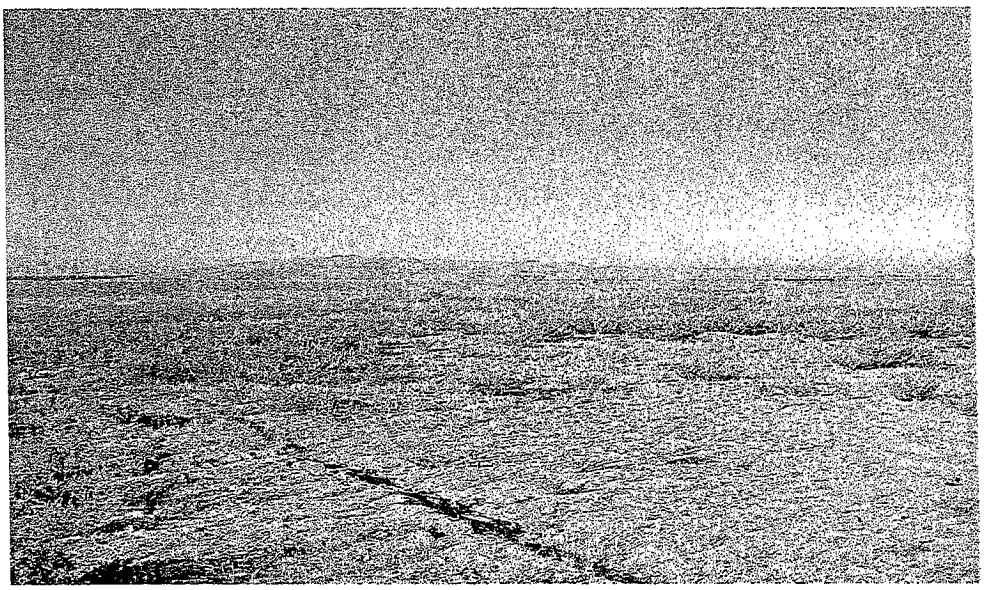
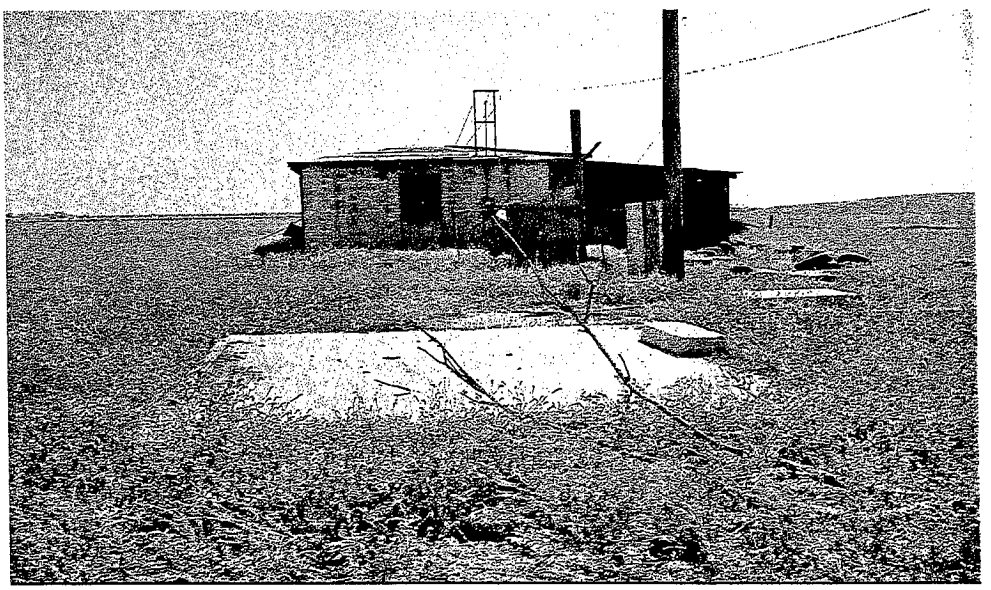
Fresno, California

PHOTOGRAPH 7
Typical veiw of the southern portion of the Site. Parcel 3 is in the background and Parcel 4 is in the foreground.

PHOTOGRAPH 8
View looking southwest of the southwest corner of the Site. The McFarland-Delano Landfill can be seen in the background.



PHOTOGRAPH 9
View of the former wrecking yard building on Parcel 5. Foreground shows concrete foundation of a former structure.



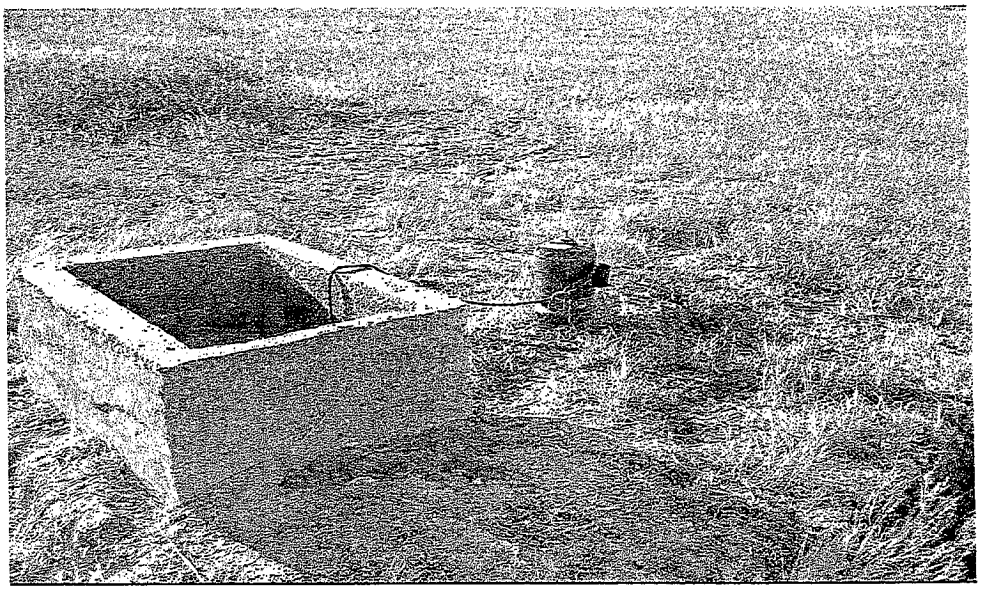
PHOTOGRAPH 10
View of 5-gallon buckets of waste oil and other potentially hazardous liquids within the yard area of the former wrecking yard on Parcel 5. Numberous discarded tires are also depicted within the yard.

PHOTOGRAPH 11
View of the workshop area of the former wrecking yard depicting a multitude of used tires.

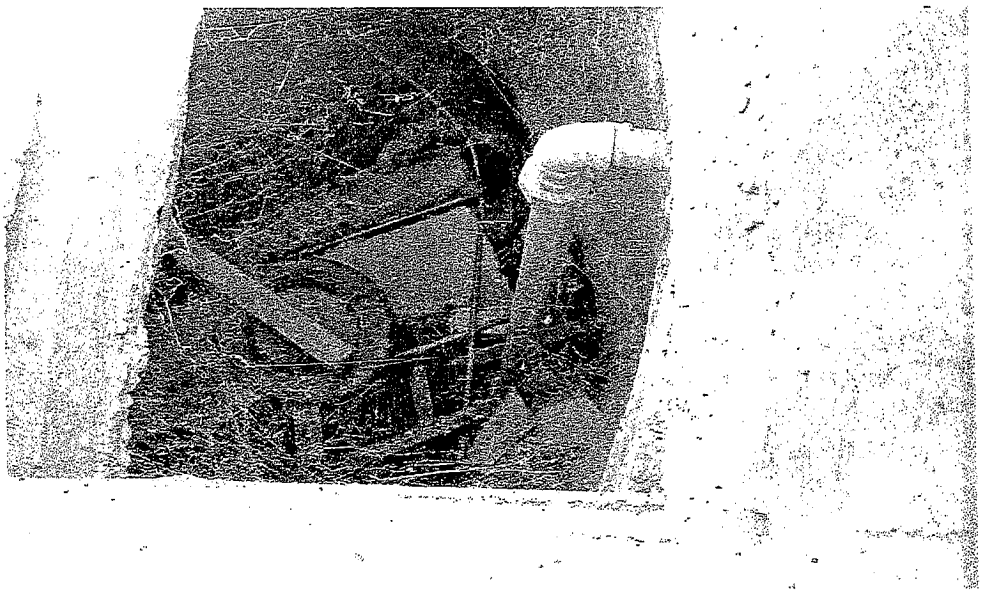
PHOTOGRAPH 12
View of the yard area of the former wrecking yard showing discarded tires in the foreground and destressed vegatation in the background.

The Twining Laboratories, Inc.
Fresno, California

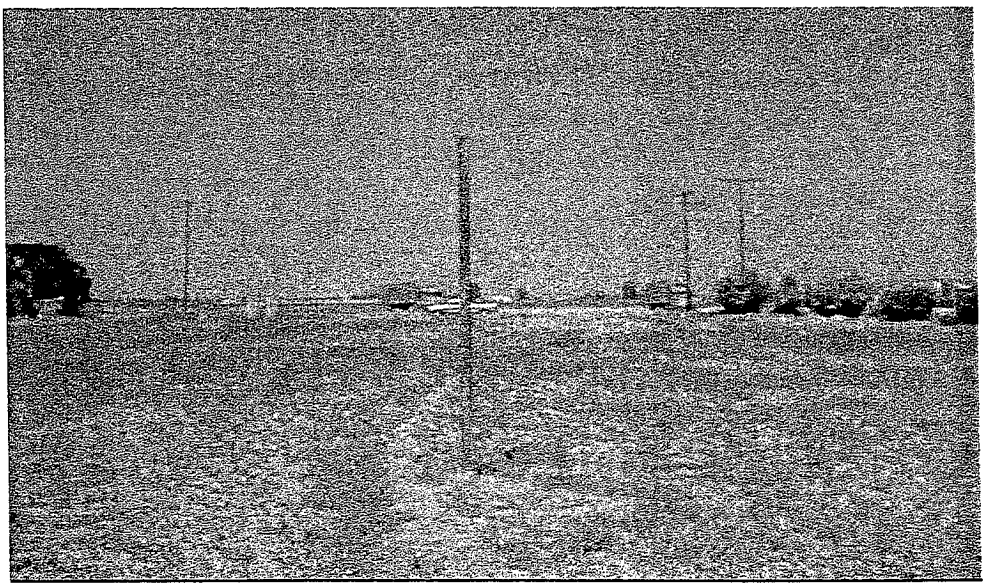
PHOTOGRAPH 13
View of the concrete vault located east of the former wrecking yard on Parcel 5. A water pump motor is located adjacent to the vault.



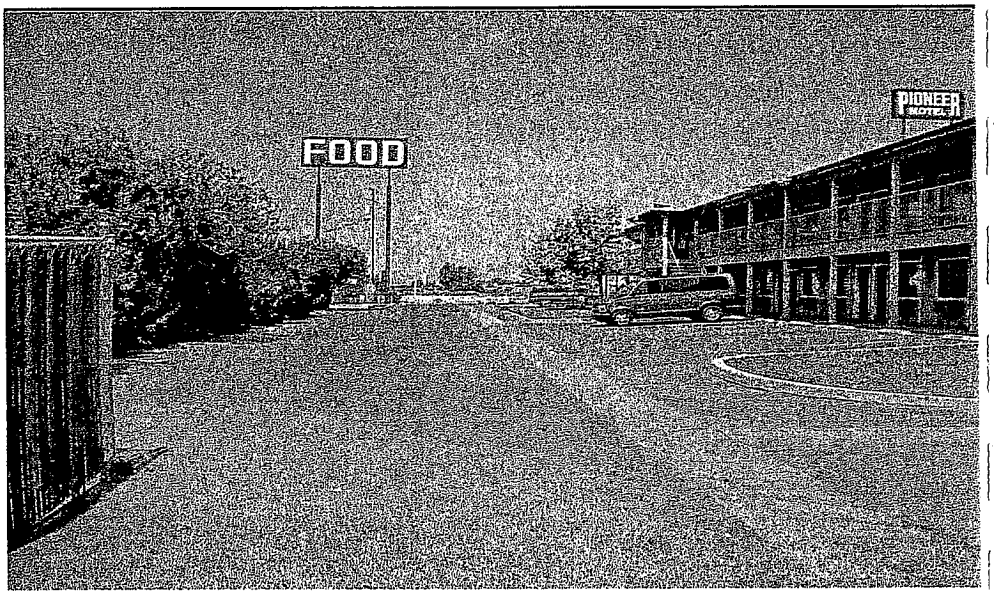
PHOTOGRAPH 14
View looking down into the vault.



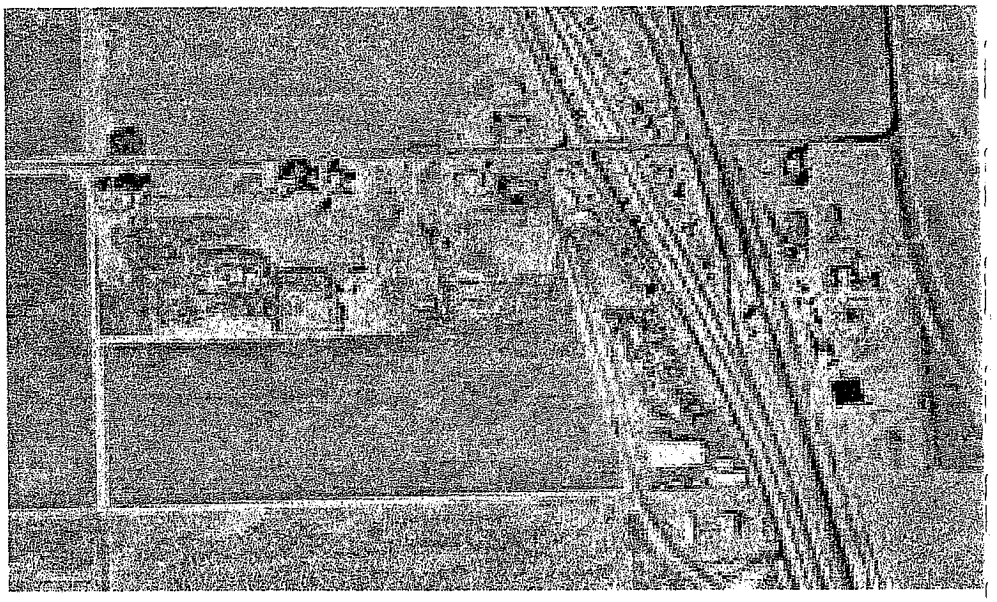
PHOTOGRAPH 15
View looking north at the Pipe of unknown origin located on the northeastern portion of Parcel 5.



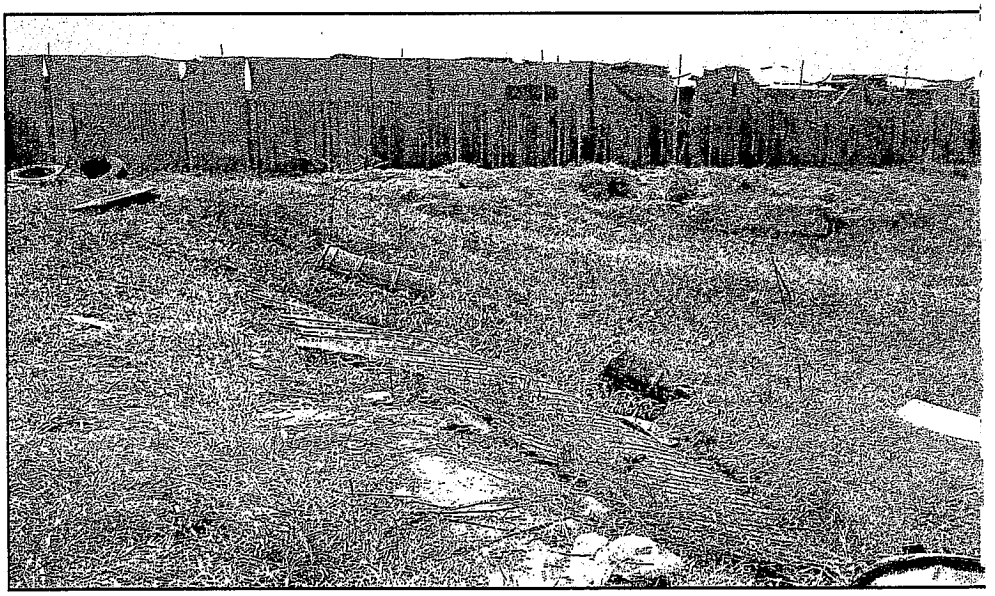
PHOTOGRAPH 16
View of the east side of the motel located at 1001 Garzoli on Parcel 8.



PHOTOGRAPH 17
Aerial photograph from 1974 . Woollomes Road borders the Site to the north (near the top of the photo) and Garzoli Avenue borders the Site to the east (right central portion of the photo). An L shaped building at the southwest corner of the intersection of Woollomes Road and Garzoli Avenue is interpreted to be the Curve-In truck stop which was located on the portion of the Site now occupied by the Pioneer Motel .



PHOTOGRAPH 18
View looking southwest atthe storm water detension basin located on Parcel 9. Note two 55-gallon drums along the eastern berm of the basin.



APPENDIX C

ENVIRONMENTAL QUESTIONNAIRE

AND DISCLOSURE STATEMENT

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

GENERAL INSTRUCTIONS: Please fill-in the blanks to the best of your ability. If you do not know the answer, please check the "DON'T KNOW" box. If you answer "YES" or the answer requires explanation please use additional pages and reference the table. Thank you, for your time and cooperation.

SITE INFORMATION	
Current Site Address	456 WOOLLOMES DELANO, CA 93215
Current Site Use	VACANT
Current Site Zoning	
Current Assessor's Parcel Number	
Addresses Formerly Assigned to Site (if any)	RT 1 BOX 1422 DELANO, CA 93215

SITE OWNERSHIP AND PAST USE		
OWNER NAME, ADDRESS & PHONE #	**PERIOD OF OWNERSHIP/USE**	**TYPE OF USE**
CURRENT BOWEN REVOCABLE LIVING TRUST	28 YEARS	RESIDENCE
FORMER		
FORMER		

ADJACENT PROPERTY USE		
DIRECTION	**TYPE OF USE**	**LENGTH OF USE**
North	COMMERCIAL	
East	COMMERCIAL	
South	AG	
West	AG	

EXISTING SITE STRUCTURES			
STRUCTURE DESCRIPTION	**LOCATION**	**USE**	**DATE OF CONSTRUCTION**
HOUSE	450 WOOLLOMES DELANO, CA 93215	RENTAL	
HOUSE	542 WOOLLOMES DELANO, CA 93215	RENTAL	
HOUSE	548 WOOLLOMES	RENTAL	
HOUSE	554 WOOLLOMES	RENTAL	

FORMER SITE STRUCTURES			
STRUCTURE DESCRIPTION	**FORMER LOCATION**	**USE**	**DATE OF DEMOLITION**

SITE LESSEES		
NAME, ADDRESS & PHONE #	**LENGTH/YEARS OF LEASE**	**TYPE OF USE**
PRESENT:		
FORMER:		
FORMER:		

SITE UTILITIES	
UTILITY	**PROVIDER**
Electricity	SOUTHERN CAL EDISON
Natural Gas	[redacted]
Drinking Water	CITY OF DELANO
Storm water Drainage	
Solid Waste Disposal	CITY OF DELANO
Sanitary Sewer	CITY OF DELANO
Emergency Power Source	

********** *PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS* **********
Additional space is provided on page 7

#	SPECIFIC USES OF SITE OR ADJACENT PROPERTY*	SITE			ADJACENT		
		YES	NO	DON'T KNOW	YES	NO	DON'T KNOW
1A	Agricultural chemical formulation, distribution, or application		X				X
2A	Airport and/or airplane maintenance		X				X
3A	Automotive wrecking yard		X				X
4A	Bulk chemical or fuel storage		X				X
5A	Commercial printing		X				X
6A	Dry cleaning		X				X
7A	Landfill		X				X
8A	Metal plating or finishing		X				X
9A	Mining or minerals processing		X				X
10A	Motor vehicle or equipment repair and/or maintenance		X				X
11A	Photographic laboratory		X				X
12A	Service station		X				X
13A	Skeet shooting or gun club		X				X
14A	Releases, or spills of hazardous materials as a result of illegal dumping, or traffic accidents along the adjoining roadways.		X				X
15A	Waste treatment, storage, disposal, processing or recycling, other than a landfill		X				X

* "Adjacent Property" includes those properties that border the immediate site and properties located across the street from the site.

********** *PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS* **********
Additional space is provided on page 7

#	ON-SITE HAZARDOUS MATERIALS USE, STORAGE AND DISPOSAL	YES	NO	DON'T KNOW
1B	Are asbestos-containing materials present in on-site structures?			X
2B	Has an asbestos survey been conducted for on-site structures?			X
3B	Are any electrical transformers or capacitors on-site?			X
4B	Are any electrical transformers or capacitors on-site **not** owned by an electrical utility?			X
5B	Has an Environmental Audit or Assessment been conducted for the site?			X
6B	Do you know of any current or former aboveground storage tanks?			X
7B	Do you know of any current or former underground storage tanks (not septic)?			X
8B	Do you know of any fill dirt having been imported to the site?			X
9B	Do you know of any current or former wells on site, including, domestic drinking water, irrigation water, disposal, oil and/or abandoned wells?	X		
10B	Do you know of any pesticides/herbicides permits for the site?		X	
11B	Do you know of any pesticides/herbicides stored or used on-site?			X
12B	Are solvents, petroleum products, or paint products stored on-site?			X
13B	Are you aware of any permits having been issued for the site by the local fire, environmental health, or air pollution control agencies?			X

********** *PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS* **********
Additional space is provided on page 7

#	SITE WASTE GENERATION, STORAGE AND DISPOSAL	YES	NO	DON'T KNOW
1C	Is liquid waste disposed of to a septic tank on-site?		X	
2C	Is liquid waste disposed of elsewhere on-site?		X	
3C	Are any ponds, sumps, basins, lagoons, or clarifiers used on-site to collect, treat, or dispose of liquid?		X	
4C	If liquid waste is disposed of on-site, is a waste discharge permit required?		X	
5C	Is liquid waste disposed of to an off-site treatment works?		X	
6C	Is solid waste disposed of on-site (burned or buried)?		X	
7C	Does any solid or liquid off-site waste disposal require a waste manifest or disposal permit?		X	
8C	Is any hazardous waste generated, stored, or treated on-site?		X	
9C	Are any spills or releases of hazardous materials known or suspected to have occurred at the site?		X	
10C	Is there another individual who may have additional or more complete information regarding the former use and activities at the site?			X

Please provide details of any investigations of an environmental or geotechnical nature that have been performed by you or by others related to the subject property. If you are not aware of any investigation(s) that have been performed in the past regarding the subject property, whether or not a report was ever prepared and/or issued to you, please so state in the space below.

DONT KNOW

Please provide details of any conditions known to you that could represent an environmental impairment to the subject property other than those items previously noted in this questionnaire. If you are not aware of any conditions, please so state in the space below.

DONT KNOW

To your knowledge, has the property been subject to any regulatory action related to environmental conditions, whether or not a report was issued to you or filed with a regulatory agency. If you are not aware of any actions, please so state in the space below.

DONT KNOW

PLEASE INDICATE IN THE BOXES BELOW IF THE FOLLOWING ITEMS EXIST
PLEASE PROVIDE DETAILS IF YOU ARE ABLE TO PROVIDE THEM
Additional space is provided on page 7

	DOCUMENTS, REPORTS, LISTS, PLANS AND MAPS	Exists/will provide copy	Exists/will not provide copy	Does not exist	Don't know
1D	Legal property boundaries and site plans and maps				X
2D	Building plans (utilities and structural)				X
3D	Hazardous materials inventory			X	
4D	Hazardous waste inventory			X	
5D	Previously conducted Environmental Site Assessments				X
6D	Reports of subsurface investigations performed on the site including analytical data				X
7D	Reports of subsurface investigations performed on adjacent properties including analytical data				X
8D	Previously conducted geotechnical/ soil investigations at the Site				X
9D	Permits and location of USTs, sumps, pits, and drainage systems			X	
10D	Environmental permits and plans, including hazardous materials management plans, UST closure, etc.			X	
11D	Literature or other sources of information regarding operations at the site			X	
12D	Individual who may have additional or more complete information regarding uses and activities at the site				X

PLEASE PROVIDE DETAILED INFORMATION FOR YES ANSWERS TO QUESTIONS (1A-15A), (1B-13B), (1C-10C)

ADDITIONALLY, PLEASE PROVIDE AN EXPLAINATION WHY YOU ARE UNABLE TO PROVIDE (1D-10D) IF THEY EXIST

9B THERE IS AN UNUSED WATER WELL ON THE PROPERTY

THIS ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT WAS PREPARED BY:

BOWEN REVOCABLE LIVING TRUST

NAME KEVIN BOWEN **TITLE** CO-TRUSTEE OF

FIRM _____ **RELATIONSHIP TO SITE** _____

ADDRESS 1332 W. SEEGER
VISALIA CA 93277

TELEPHONE NUMBER (559) 909 1433 **DATE** 5/3/04

PREPARER REPRESENTS THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE THE ABOVE STATEMENTS AND FACTS ARE TRUE AND CORRECT AND THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE NO MATERIAL FACTS HAVE BEEN SUPPRESSED OR MISSTATED.

Kevin Bowen
Signed

5/3/04
Date

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

GENERAL INSTRUCTIONS: Please fill-in the blanks to the best of your ability. If you do not know the answer, please check the "DON'T KNOW" box. If you answer "YES" or the answer requires explanation please use additional pages and reference the table. Thank you, for your time and cooperation.

SITE INFORMATION	
Current Site Address	NO
Current Site Use	PARCEL 2 PALLET CO 345 VA PLANT
Current Site Zoning	
Current Assessor's Parcel Number	
Addresses Formerly Assigned to Site (if any)	

SITE OWNERSHIP AND PAST USE		
OWNER NAME, ADDRESS & PHONE #	**PERIOD OF OWNERSHIP/USE**	**TYPE OF USE**
CURRENT		RENTING TO PALLET CO
FORMER		
FORMER		

ADJACENT PROPERTY USE		
DIRECTION	**TYPE OF USE**	**LENGTH OF USE**
North		
East		
South		
West		

EXISTING SITE STRUCTURES			
STRUCTURE DESCRIPTION	**LOCATION**	**USE**	**DATE OF CONSTRUCTION**
ENGINE SHOP	P. 5		

FORMER SITE STRUCTURES			
STRUCTURE DESCRIPTION	**FORMER LOCATION**	**USE**	**DATE OF DEMOLITION**

SITE LESSEES		
NAME, ADDRESS & PHONE #	**LENGTH/YEARS OF LEASE**	**TYPE OF USE**
PRESENT:		
FORMER:		
FORMER:		

SITE UTILITIES	
UTILITY	**PROVIDER**
Electricity	SO CAL EDISON
Natural Gas	SO CAL EDISON
Drinking Water	
Storm water Drainage	
Solid Waste Disposal	
Sanitary Sewer	
Emergency Power Source	

********** ***PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS*** **********
Additional space is provided on page 7

#	SPECIFIC USES OF SITE OR ADJACENT PROPERTY*	SITE			ADJACENT		
		YES	NO	DON'T KNOW	YES	NO	DON'T KNOW
1A	Agricultural chemical formulation, distribution, or application			✓			✓
2A	Airport and/or airplane maintenance		✓				
3A	Automotive wrecking yard		✓				
4A	Bulk chemical or fuel storage		✓				
5A	Commercial printing		✓				
6A	Dry cleaning		✓				
7A	Landfill		✓				
8A	Metal plating or finishing		✓				
9A	Mining or minerals processing		✓				
10A	Motor vehicle or equipment repair and/or maintenance	✓					
11A	Photographic laboratory		✓				
12A	Service station		✓				
13A	Skeet shooting or gun club		✓				
14A	Releases, or spills of hazardous materials as a result of illegal dumping, or traffic accidents along the adjoining roadways.			✓			
15A	Waste treatment, storage, disposal, processing or recycling, other than a landfill		✓				

*"Adjacent Property" includes those properties that border the immediate site and properties located across the street from the site.

BUILDING WAS USED FOR EQUIPMENT REPAIR

********** ***PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS*** **********
Additional space is provided on page 7

#	ON-SITE HAZARDOUS MATERIALS USE, STORAGE AND DISPOSAL	YES	NO	DON'T KNOW
1B	Are asbestos-containing materials present in on-site structures?			✓
2B	Has an asbestos survey been conducted for on-site structures?			✓
3B	Are any electrical transformers or capacitors on-site?			✓
4B	Are any electrical transformers or capacitors on-site **not** owned by an electrical utility?			✓
5B	Has an Environmental Audit or Assessment been conducted for the site?	✓		
6B	Do you know of any current or former aboveground storage tanks?		✓	
7B	Do you know of any current or former underground storage tanks (not septic)?		✓	
8B	Do you know of any fill dirt having been imported to the site?		✓	
9B	Do you know of any current or former wells on site, including, domestic drinking water, irrigation water, disposal, oil and/or abandoned wells?	✓		
10B	Do you know of any pesticides/herbicides permits for the site?			✓
11B	Do you know of any pesticides/herbicides stored or used on-site?			✓
12B	Are solvents, petroleum products, or paint products stored on-site?		✓	
13B	Are you aware of any permits having been issued for the site by the local fire, environmental health, or air pollution control agencies?			✓

********** ***PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS*** **********
Additional space is provided on page 7

#	SITE WASTE GENERATION, STORAGE AND DISPOSAL	YES	NO	DON'T KNOW
1C	Is liquid waste disposed of to a septic tank on-site?			✓
2C	Is liquid waste disposed of elsewhere on-site?		✓	
3C	Are any ponds, sumps, basins, lagoons, or clarifiers used on-site to collect, treat, or dispose of liquid?			✓
4C	If liquid waste is disposed of on-site, is a waste discharge permit required?		✓	
5C	Is liquid waste disposed of to an off-site treatment works?		✓	
6C	Is solid waste disposed of on-site (burned or buried)?		✓	
7C	Does any solid or liquid off-site waste disposal require a waste manifest or disposal permit?		✓	
8C	Is any hazardous waste generated, stored, or treated on-site?		✓	
9C	Are any spills or releases of hazardous materials known or suspected to have occurred at the site?			✓
10C	Is there another individual who may have additional or more complete information regarding the former use and activities at the site?			✓

Please provide details of any investigations of an environmental or geotechnical nature that have been performed by you or by others related to the subject property. If you are not aware of any investigation(s) that have been performed in the past regarding the subject property, whether or not a report was ever prepared and/or issued to you, please so state in the space below.

WILL PROVIDE REPORT

Please provide details of any conditions known to you that could represent an environmental impairment to the subject property other than those items previously noted in this questionnaire. If you are not aware of any conditions, please so state in the space below.

NO

To your knowledge, has the property been subject to any regulatory action related to environmental conditions, whether or not a report was issued to you or filed with a regulatory agency. If you are not aware of any actions, please so state in the space below.

NO

PLEASE INDICATE IN THE BOXES BELOW IF THE FOLLOWING ITEMS EXIST
PLEASE PROVIDE DETAILS IF YOU ARE ABLE TO PROVIDE THEM
Additional space is provided on page 7

	DOCUMENTS, REPORTS, LISTS, PLANS AND MAPS	Exists/will provide copy	Exists/will not provide copy	Does not exist	Don't know
1D	Legal property boundaries and site plans and maps		✓		
2D	Building plans (utilities and structural)				✓
3D	Hazardous materials inventory			✓	
4D	Hazardous waste inventory			✓	
5D	Previously conducted Environmental Site Assessments	✓			
6D	Reports of subsurface investigations performed on the site including analytical data				✓
7D	Reports of subsurface investigations performed on adjacent properties including analytical data				✓
8D	Previously conducted geotechnical/ soil investigations at the Site				✓
9D	Permits and location of USTs, sumps, pits, and drainage systems			✓	
10D	Environmental permits and plans, including hazardous materials management plans, UST closure, etc.				✓
11D	Literature or other sources of information regarding operations at the site				✓
12D	Individual who may have additional or more complete information regarding uses and activities at the site				✓

PLEASE PROVIDE DETAILED INFORMATION FOR YES ANSWERS TO QUESTIONS (1A-15A), (1B-13B), (1C-10C)

ADDITIONALLY, PLEASE PROVIDE AN EXPLAINATION WHY YOU ARE UNABLE TO PROVIDE (1D-10D) IF THEY EXIST

THIS ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT WAS PREPARED BY:

NAME _____ **TITLE** _____

FIRM _____ **RELATIONSHIP TO SITE** _____

ADDRESS _____

_____

TELEPHONE NUMBER _____ **DATE** _____

PREPARER REPRESENTS THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE THE ABOVE STATEMENTS AND FACTS ARE TRUE AND CORRECT AND THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE NO MATERIAL FACTS HAVE BEEN SUPPRESSED OR MISSTATED.

_____ _____
Signed Date

PLEASE PROVIDE DETAILED INFORMATION FOR YES ANSWERS TO QUESTIONS (1A-15A), (1B-13B), (1C-10C)

ADDITIONALLY, PLEASE PROVIDE AN EXPLAINATION WHY YOU ARE UNABLE TO PROVIDE (1D-10D) IF THEY EXIST

THIS ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT WAS PREPARED BY:

NAME ANDREW A. KOUKIS TITLE _____

FIRM _____ RELATIONSHIP TO SITE OWNER

ADDRESS 430 GLENWOOD

DELANO CA 93215

TELEPHONE NUMBER 661-725-1270 DATE 5/13/04

PREPARER REPRESENTS THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE THE ABOVE STATEMENTS AND FACTS ARE TRUE AND CORRECT AND THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE NO MATERIAL FACTS HAVE BEEN SUPPRESSED OR MISSTATED.

Signed 5/13/04 Date

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

GENERAL INSTRUCTIONS: Please fill-in the blanks to the best of your ability. If you do not know the answer, please check the "DON'T KNOW" box. If you answer "YES" or the answer requires explanation please use additional pages and reference the table. Thank you, for your time and cooperation.

SITE INFORMATION	
Current Site Address	1057 Gargoli DeLano, Ca93215
Current Site Use	Pallet Co.
Current Site Zoning	No. 1 Industrial
Current Assessor's Parcel Number	521-050-10-00-2
Addresses Formerly Assigned to Site (if any)	Do not Know

SITE OWNERSHIP AND PAST USE		
OWNER NAME, ADDRESS & PHONE #	PERIOD OF OWNERSHIP/USE	TYPE OF USE
CURRENT Betty L. Swanson PO Boy 397 Delano, Ca93216	35 yrs	open ground
FORMER Do not Know		
FORMER Do not Know		

ADJACENT PROPERTY USE		
DIRECTION	TYPE OF USE	LENGTH OF USE
North	Vacant area	Do not Know
East	Cement Co.	Do not Know
South	open ground	Do not Know
West	Open ground	Do not Know

EXISTING SITE STRUCTURES			
STRUCTURE DESCRIPTION	**LOCATION**	**USE**	**DATE OF CONSTRUCTION**
none			

FORMER SITE STRUCTURES			
STRUCTURE DESCRIPTION	**FORMER LOCATION**	**USE**	**DATE OF DEMOLITION**
none			
none			

SITE LESSEES		
NAME, ADDRESS & PHONE #	**LENGTH/YEARS OF LEASE**	**TYPE OF USE**
PRESENT: Aquarios Pallet Co. PO Box 240 Delano, Ca 93216	4Th yr.	Repair Pallets
FORMER: Quevedo Pallets, Inc. PO Box 240 Delano, Ca 93216		& Store
FORMER: Porterville Cement Co. Gillet Cement Co	Approx 5yrs	Stored Cement Tailings

SITE UTILITIES	
UTILITY	**PROVIDER**
Electricity	So Cal Edison
Natural Gas	Dont Know
Drinking Water	City of Delano
Storm water Drainage	Donot Know
Solid Waste Disposal	Do not Know
Sanitary Sewer	Do not Know
Emergency Power Source	Donot Know

************ *PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS* ************
Additional space is provided on page 7

#	SPECIFIC USES OF SITE OR ADJACENT PROPERTY*	SITE			ADJACENT		
		YES	NO	DON'T KNOW	YES	NO	DON'T KNOW
1A	Agricultural chemical formulation, distribution, or application			✓			✓
2A	Airport and/or airplane maintenance			✓			✓
3A	Automotive wrecking yard			✓			✓
4A	Bulk chemical or fuel storage			✓			✓
5A	Commercial printing			✓			✓
6A	Dry cleaning			✓			✓
7A	Landfill			✓			✓
8A	Metal plating or finishing			✓			✓
9A	Mining or minerals processing			✓			✓
10A	Motor vehicle or equipment repair and/or maintenance			✓			✓
11A	Photographic laboratory			✓			✓
12A	Service station			✓			✓
13A	Skeet shooting or gun club			✓			✓
14A	Releases, or spills of hazardous materials as a result of illegal dumping, or traffic accidents along the adjoining roadways.			✓			✓
15A	Waste treatment, storage, disposal, processing or recycling, other than a landfill			✓			✓

* "Adjacent Property" includes those properties that border the immediate site and properties located across the street from the site.

********** ***PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS*** **********
Additional space is provided on page 7

#	ON-SITE HAZARDOUS MATERIALS USE, STORAGE AND DISPOSAL	YES	NO	DON'T KNOW
1B	Are asbestos-containing materials present in on-site structures?			✓
2B	Has an asbestos survey been conducted for on-site structures?			✓
3B	Are any electrical transformers or capacitors on-site?			✓
4B	Are any electrical transformers or capacitors on-site not owned by an electrical utility?			✓
5B	Has an Environmental Audit or Assessment been conducted for the site?			✓
6B	Do you know of any current or former aboveground storage tanks?		✓	
7B	Do you know of any current or former underground storage tanks (not septic)?		✓	
8B	Do you know of any fill dirt having been imported to the site?		✓	
9B	Do you know of any current or former wells on site, including, domestic drinking water, irrigation water, disposal, oil and/or abandoned wells?		✓	
10B	Do you know of any pesticides/herbicides permits for the site?		✓	
11B	Do you know of any pesticides/herbicides stored or used on-site?		✓	
12B	Are solvents, petroleum products, or paint products stored on-site?			✓
13B	Are you aware of any permits having been issued for the site by the local fire, environmental health, or air pollution control agencies?		✓	

************ *PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS* ************
Additional space is provided on page 7

#	SITE WASTE GENERATION, STORAGE AND DISPOSAL	YES	NO	DON'T KNOW
1C	Is liquid waste disposed of to a septic tank on-site?			✓
2C	Is liquid waste disposed of elsewhere on-site?			✓
3C	Are any ponds, sumps, basins, lagoons, or clarifiers used on-site to collect, treat, or dispose of liquid?			✓
4C	If liquid waste is disposed of on-site, is a waste discharge permit required?			✓
5C	Is liquid waste disposed of to an off-site treatment works?			✓
6C	Is solid waste disposed of on-site (burned or buried)?			✓
7C	Does any solid or liquid off-site waste disposal require a waste manifest or disposal permit?			✓
8C	Is any hazardous waste generated, stored, or treated on-site?			✓
9C	Are any spills or releases of hazardous materials known or suspected to have occurred at the site?			✓
10C	Is there another individual who may have additional or more complete information regarding the former use and activities at the site?			✓

Please provide details of any investigations of an environmental or geotechnical nature that have been performed by you or by others related to the subject property. If you are not aware of any investigation(s) that have been performed in the past regarding the subject property, whether or not a report was ever prepared and/or issued to you, please so state in the space below.

Not aware of any

Please provide details of any conditions known to you that could represent an environmental impairment to the subject property other than those items previously noted in this questionnaire. If you are not aware of any conditions, please so state in the space below.

Not aware of any

To your knowledge, has the property been subject to any regulatory action related to environmental conditions, whether or not a report was issued to you or filed with a regulatory agency. If you are not aware of any actions, please so state in the space below.

Not aware of any

PLEASE INDICATE IN THE BOXES BELOW IF THE FOLLOWING ITEMS EXIST
PLEASE PROVIDE DETAILS IF YOU ARE ABLE TO PROVIDE THEM
Additional space is provided on page 7

	DOCUMENTS, REPORTS, LISTS, PLANS AND MAPS	Exists/will provide copy	Exists/will not provide copy	Does not exist	Don't know
1D	Legal property boundaries and site plans and maps	✓			
2D	Building plans (utilities and structural)				✓
3D	Hazardous materials inventory				✓
4D	Hazardous waste inventory				✓
5D	Previously conducted Environmental Site Assessments				✓
6D	Reports of subsurface investigations performed on the site including analytical data				✓
7D	Reports of subsurface investigations performed on adjacent properties including analytical data				✓
8D	Previously conducted geotechnical/ soil investigations at the Site				✓
9D	Permits and location of USTs, sumps, pits, and drainage systems				✓
10D	Environmental permits and plans, including hazardous materials management plans, UST closure, etc.				✓
11D	Literature or other sources of information regarding operations at the site				✓
12D	Individual who may have additional or more complete information regarding uses and activities at the site				✓

PLEASE PROVIDE DETAILED INFORMATION FOR YES ANSWERS TO QUESTIONS (1A-15A), (1B-13B), (1C-10C)

ADDITIONALLY, PLEASE PROVIDE AN EXPLAINATION WHY YOU ARE UNABLE TO PROVIDE (1D-10D) IF THEY EXIST

Page 2 - structure - Mobile unit was on site, has been removed - If questions contact Mrs Quevedo at 661-778-9414

1D Boundaries Map attached - Dont have site or plans map. Dont Know if there are such maps

10D none That I Know of.

THIS ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT WAS PREPARED BY:

NAME Betty L. Swanson TITLE owner

FIRM _____ RELATIONSHIP TO SITE _____

ADDRESS 800 Lexington #11

Mail: PO Box 597 DeLano Ca 93216

TELEPHONE NUMBER 661-720-0641 DATE 5-27-04

PREPARER REPRESENTS THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE THE ABOVE STATEMENTS AND FACTS ARE TRUE AND CORRECT AND THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE NO MATERIAL FACTS HAVE BEEN SUPPRESSED OR MISSTATED.

Betty L Swanson 5-27-04

Signed Date

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT

GENERAL INSTRUCTIONS: Please fill-in the blanks to the best of your ability. If you do not know the answer, please check the "DON'T KNOW" box. If you answer "YES" or the answer requires explanation please use additional pages and reference the table. Thank you, for your time and cooperation.

SITE INFORMATION	
Current Site Address	1001 GARZOLI AVE.
Current Site Use	MOTEL
Current Site Zoning	COMERCIAL ZONE
Current Assessor's Parcel Number	521-050-08-007
Addresses Formerly Assigned to Site (if any)	NONE

SITE OWNERSHIP AND PAST USE		
OWNER NAME, ADDRESS & PHONE #	PERIOD OF OWNERSHIP/USE	TYPE OF USE
CURRENT J.M. PATEL 951 MOTEL DR MERCED 209-722-3926		MOTEL
FORMER MOTEL		
FORMER —	—	—

ADJACENT PROPERTY USE		
DIRECTION	TYPE OF USE	LENGTH OF USE
North	EMTY LOTS.	—
East	GAS STATION.	—
South	PALLED STORAGE	—
West	RESTAURANT	

EXISTING SITE STRUCTURES			
STRUCTURE DESCRIPTION	**LOCATION**	**USE**	**DATE OF CONSTRUCTION**
FRAM & STUCOS	1001 S. GARZOTA	MOTEL	DONT KNOW

FORMER SITE STRUCTURES			
STRUCTURE DESCRIPTION	**FORMER LOCATION**	**USE**	**DATE OF DEMOLITION**
NONE			

SITE LESSEES		
NAME, ADDRESS & PHONE #	**LENGTH/YEARS OF LEASE**	**TYPE OF USE**
PRESENT: NONE		
FORMER:		
FORMER:		

SITE UTILITIES	
UTILITY	**PROVIDER**
Electricity	S.C.E CO.
Natural Gas	GAS CO.
Drinking Water	NONE
Storm water Drainage	CITY
Solid Waste Disposal	NONE
Sanitary Sewer	CITY
Emergency Power Source	NONE

********** ***PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS*** **********
Additional space is provided on page 7

#	SPECIFIC USES OF SITE OR ADJACENT PROPERTY*	SITE			ADJACENT		
		YES	NO	DON'T KNOW	YES	NO	DON'T KNOW
1A	Agricultural chemical formulation, distribution, or application		X			X	
2A	Airport and/or airplane maintenance		X			X	
3A	Automotive wrecking yard		X			X	
4A	Bulk chemical or fuel storage		X			X	
5A	Commercial printing		X			X	
6A	Dry cleaning		X			X	
7A	Landfill		X			X	
8A	Metal plating or finishing		X			X	
9A	Mining or minerals processing		X			X	
10A	Motor vehicle or equipment repair and/or maintenance		X			X	
11A	Photographic laboratory		X			X	
12A	Service station		X		X		
13A	Skeet shooting or gun club		X			X	
14A	Releases, or spills of hazardous materials as a result of illegal dumping, or traffic accidents along the adjoining roadways.		X			X	
15A	Waste treatment, storage, disposal, processing or recycling, other than a landfill		X			X	

* "Adjacent Property" includes those properties that border the immediate site and properties located across the street from the site.

********** ***PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS*** **********
Additional space is provided on page 7

#	ON-SITE HAZARDOUS MATERIALS USE, STORAGE AND DISPOSAL	YES	NO	DON'T KNOW
1B	Are asbestos-containing materials present in on-site structures?		X	
2B	Has an asbestos survey been conducted for on-site structures?		X	
3B	Are any electrical transformers or capacitors on-site?		X	
4B	Are any electrical transformers or capacitors on-site **not** owned by an electrical utility?		X	
5B	Has an Environmental Audit or Assessment been conducted for the site?		X	
6B	Do you know of any current or former aboveground storage tanks?		X	
7B	Do you know of any current or former underground storage tanks (not septic)?			X
8B	Do you know of any fill dirt having been imported to the site?		X	
9B	Do you know of any current or former wells on site, including, domestic drinking water, irrigation water, disposal, oil and/or abandoned wells?			X
10B	Do you know of any pesticides/herbicides permits for the site?		X	
11B	Do you know of any pesticides/herbicides stored or used on-site?		X	
12B	Are solvents, petroleum products, or paint products stored on-site?		X	
13B	Are you aware of any permits having been issued for the site by the local fire, environmental health, or air pollution control agencies?		X	

********** ***PLEASE PROVIDE DETAILS FOR ALL YES ANSWERS*** **********
Additional space is provided on page 7

#	SITE WASTE GENERATION, STORAGE AND DISPOSAL	YES	NO	DON'T KNOW
1C	Is liquid waste disposed of to a septic tank on-site?		X	
2C	Is liquid waste disposed of elsewhere on-site?		X	
3C	Are any ponds, sumps, basins, lagoons, or clarifiers used on-site to collect, treat, or dispose of liquid?		X	
4C	If liquid waste is disposed of on-site, is a waste discharge permit required?		X	
5C	Is liquid waste disposed of to an off-site treatment works?		X	
6C	Is solid waste disposed of on-site (burned or buried)?		X	
7C	Does any solid or liquid off-site waste disposal require a waste manifest or disposal permit?		X	
8C	Is any hazardous waste generated, stored, or treated on-site?		X	
9C	Are any spills or releases of hazardous materials known or suspected to have occurred at the site?		X	
10C	Is there another individual who may have additional or more complete information regarding the former use and activities at the site?		X	

Please provide details of any investigations of an environmental or geotechnical nature that have been performed by you or by others related to the subject property. If you are not aware of any investigation(s) that have been performed in the past regarding the subject property, whether or not a report was ever prepared and/or issued to you, please so state in the space below.

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To your knowledge, has the property been subject to any regulatory action related to environmental conditions, whether or not a report was issued to you or filed with a regulatory agency. If you are not aware of any actions, please so state in the space below.

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PLEASE PROVIDE DETAILS IF YOU ARE ABLE TO PROVIDE THEM
Additional space is provided on page 7

	DOCUMENTS, REPORTS, LISTS, PLANS AND MAPS	Exists/will provide copy	Exists/will not provide copy	Does not exist	Don't know
1D	Legal property boundaries and site plans and maps				X
2D	Building plans (utilities and structural)				X
3D	Hazardous materials inventory			X	
4D	Hazardous waste inventory			X	
5D	Previously conducted Environmental Site Assessments			X	
6D	Reports of subsurface investigations performed on the site including analytical data			X	
7D	Reports of subsurface investigations performed on adjacent properties including analytical data			X	
8D	Previously conducted geotechnical/ soil investigations at the Site			X	
9D	Permits and location of USTs, sumps, pits, and drainage systems				X
10D	Environmental permits and plans, including hazardous materials management plans, UST closure, etc.			X	
11D	Literature or other sources of information regarding operations at the site			X	
12D	Individual who may have additional or more complete information regarding uses and activities at the site				X

PLEASE PROVIDE DETAILED INFORMATION FOR YES ANSWERS TO QUESTIONS (1A-15A), (1B-13B), (1C-10C)

ADDITIONALLY, PLEASE PROVIDE AN EXPLAINATION WHY YOU ARE UNABLE TO PROVIDE (1D-10D) IF THEY EXIST

(1) PAGE 4 12-A SERVICE STATION ACROSS THE STREET.

THIS ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT WAS PREPARED BY:

NAME _____ **TITLE** _____

FIRM _____ **RELATIONSHIP TO SITE** _____

ADDRESS _____

_____

TELEPHONE NUMBER _____ **DATE** _____

PREPARER REPRESENTS THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE THE ABOVE STATEMENTS AND FACTS ARE TRUE AND CORRECT AND THAT TO THE BEST OF THE PREPARER'S KNOWLEDGE NO MATERIAL FACTS HAVE BEEN SUPPRESSED OR MISSTATED.

_____ _____
Signed Date

APPENDIX D

EDR REPORT

The EDR Radius Map
with GeoCheck®

Woollomes and Garzoli
450 Wollomes Ave
Delano, CA 93215

Inquiry Number: 01165873.1r

April 06, 2004

EDR™ Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

FORM-MOR

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	6
Orphan Summary	10
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-8
Physical Setting Source Map Findings	A-9
Physical Setting Source Records Searched	A-28

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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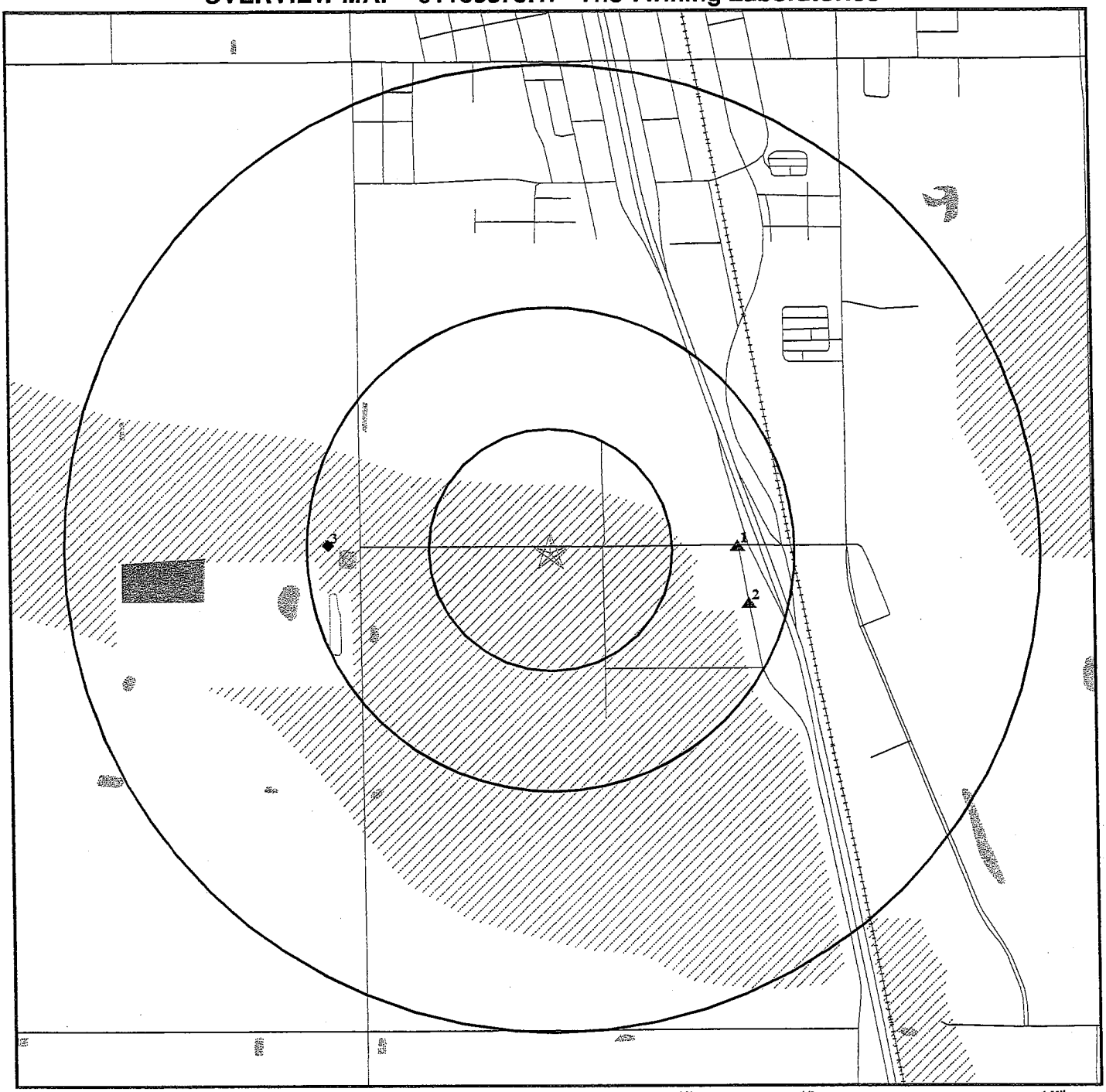
EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR).
The results of this search follow:

TARGET PROPERTY ADDRESS	FEDERAL ASTM STANDARD									STATE ASTM STANDARD											FEDERAL ASTM SUPPLEMENTAL																				STATE ASTM SUPPLEMENTAL												*	B	
WOOLLOMES AND GARZOLI 450 WOLLOMES AVE DELANO, CA 93215 EDR Inquiry Number: 01165873.1r	NPL	Proposed NPL	CERCLIS	CERC-NFRAP	CORRACTS	RCRIS-TSD	RCRIS Lg. Quan. Gen.	RCRIS Sm. Quan. Gen.	ERNS	AWP	Cal-Sites	CHMIRS	Cortese	Notify 65	Toxic Pits	State Landfill	WMUDS/SWAT	LUST	CA Bond Exp. Plan	UST	VCP	INDIAN LUST	INDIAN UST	CA FID UST	HIST UST	CONSENT	ROD	Delisted NPL	FINDS	HMIRS	MLTS	MINES	NPL Liens	PADS	DOD	US BROWNFIELDS	INDIAN RESERV	RAATS	TRIS	TSCA	SSTS	FTTS	AST	CLEANERS	CA WDS	DEED	NFA	EMI	REF	SCH	NFE	CA SLIC	HAZNET	Coal Gas	US BROWNFIELDS	VCP
TARGET PROPERTY SEARCH RESULTS Site — Map ID / Direction / Distance / Distance ft. / Elevation ft.																																																					
No target property sites were found.																																																					
SURROUNDING SITES SEARCH RESULTS																																																				
PIONEER AUTO & TRUCK STOP 1000 GARZOLI DELANO, CA 93215 S102435254 — 1 / East / 1/4-1/2 / 2033 ft. / 308 ft. / Higher													X					X																																				
CENTRAL CAL EQUIPMENT INC 1300 GARZOLI DELANO, CA 93215 S102426484 — 2 / ESE / 1/4-1/2 / 2222 ft. / 308 ft. / Higher													X					X																																				
KERN COUNTY DUMP WOOLOMES RD DELANO, CA 93215 1000304685 — 3 / West / 1/4-1/2 / 2411 ft. / 295 ft. / Lower			X																										X																								

* = EDR PROPRIETARY
B = BROWNFIELDS

OVERVIEW MAP - 01165873.1r - The Twining Laboratories



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands
- Areas of Concern

TARGET PROPERTY:	Woollomes and Garzoli	CUSTOMER:	The Twining Laboratories
ADDRESS:	450 Wollomes Ave	CONTACT:	Timothy Thomas
CITY/STATE/ZIP:	Delano CA 93215	INQUIRY #:	01165873.1r
LAT/LONG:	35.7467 / 119.2515	DATE:	April 06, 2004 12:41 pm

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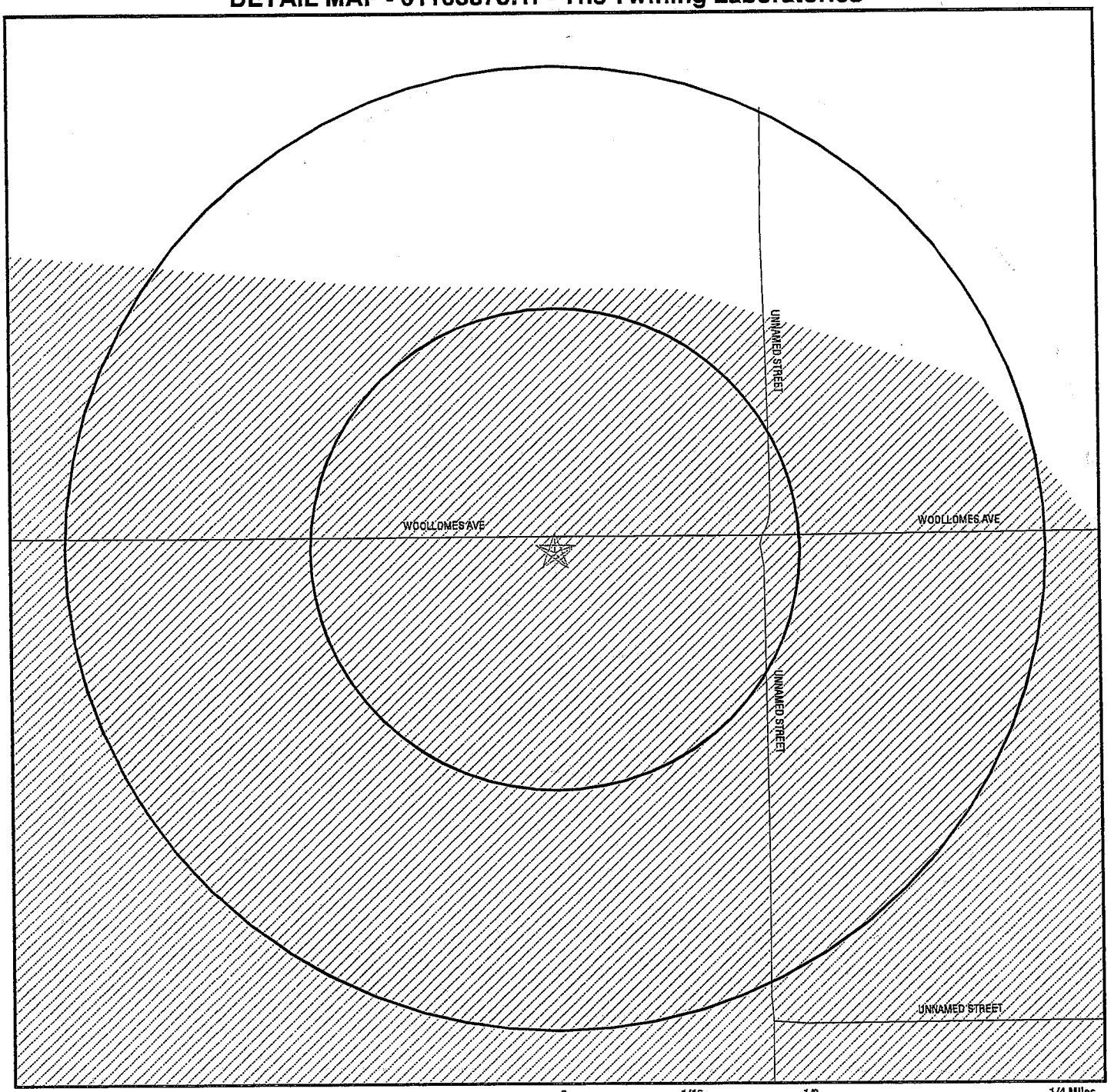
DETAIL MAP - 01165873.1r - The Twining Laboratories



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

TARGET PROPERTY:	Woollomes and Garzoli	CUSTOMER:	The Twining Laboratories
ADDRESS:	450 Wollomes Ave	CONTACT:	Timothy Thomas
CITY/STATE/ZIP:	Delano CA 93215	INQUIRY #:	01165873.1r
LAT/LONG:	35.7467 / 119.2515	DATE:	April 06, 2004 12:41 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	1	NR	NR	1
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
STATE ASTM STANDARD								
AWP		1.000	0	0	0	0	NR	0
Cal-Sites		1.000	0	0	0	0	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	0	2	NR	NR	2
Notify 65		1.000	0	0	0	0	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	2	NR	NR	2
CA Bond Exp. Plan		1.000	0	0	0	0	NR	0
UST		0.250	0	0	NR	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
CA FID UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	0	0	NR	NR	NR	0
FEDERAL ASTM SUPPLEMENTAL								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FTTS		TP	NR	NR	NR	NR	NR	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
AST		TP	NR	NR	NR	NR	NR	0
CLEANERS		0.250	0	0	NR	NR	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
DEED		TP	NR	NR	NR	NR	NR	0
NFA		0.250	0	0	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
REF		0.250	0	0	NR	NR	NR	0
SCH		0.250	0	0	NR	NR	NR	0
NFE		0.250	0	0	NR	NR	NR	0
CA SLIC		0.500	0	0	0	NR	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY HISTORICAL DATABASES								
Coal Gas		1.000	0	0	0	0	NR	0
BROWNFIELDS DATABASES								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0

NOTES:

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

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1 **PIONEER AUTO & TRUCK STOP** **LUST** **S102435254**
East **1000 GARZOLI** **Cortese** **N/A**
1/4-1/2 **DELANO, CA 93215**
2033 ft.

Relative:
Higher

Actual:
308 ft.

State LUST:

Cross Street:	WOOLOMES AVE		
Qty Leaked:	Not reported		
Case Number	5T15000208		
Reg Board:	0		
Chemical:	Gasoline		
Lead Agency:	Local Agency		
Local Agency :	15000L		
Case Type:	Soil only		
Status:	Case Closed		
Review Date:	6/22/89 0:00	Confirm Leak:	6/22/89 0:00
Workplan:	8/17/89 0:00	Prelim Assess:	8/17/89 0:00
Pollution Char:	Not reported	Remed Plan:	Not reported
Remed Action:	12/12/90 0:00		
Monitoring:	Not reported		
Close Date:	1/20/93 0:00		
Release Date:	07/03/1989		
Cleanup Fund Id :	Not reported		
Discover Date :	06/07/1989		
Enforcement Dt :	1/1/65 0:00		
Enf Type:	None Taken		
Enter Date :	6/28/89 0:00		
Funding:	Responsible Party		
Staff Initials:	DOL		
How Discovered:	Tank Closure		
How Stopped:	Not reported		
Interim :	No		
Leak Cause:	UNK		
Leak Source:	UNK		
MTBE Date :	Not reported		
Max MTBE GW :	Not reported		
MTBE Tested:	Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.		
Priority:	4		
Local Case # :	Not reported		
Beneficial:	Not reported		
Staff :	JDW		
GW Qualifier :	Not reported		
Max MTBE Soil :	Not reported		
Soil Qualifier :	Not reported		
Hydr Basin #:	SAN JOAQUIN (5-22)		
Operator :	Not reported		
Oversight Prgm:	LUST		
Review Date :	1/20/93 0:00		
Stop Date :	/ /		
Work Suspended :	No		
Responsible Party	W.P. DAVIES OIL COMPANY		
RP Address:	PO BOX 80067, BAKERSFIELD, CA 93308		
Global Id:	T0602900207		
Org Name:	Not reported		
Contact Person:	Not reported		

PIONEER AUTO & TRUCK STOP (Continued) **S102435254**

MTBE Conc: Not reported
Mtbe Fuel: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: Not reported
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 5:
Substance: GASOLINE
Case Type: Soil only
Program: LUST
Staff Initials: JDW
Case Number: 5T15000208
Status: Case Closed
MTBE Code: N/A
Lead Agency: Local

CORTESE:
Region: CORTESE
Fac Address 2: 1000 GARZOLI

2
ESE
1/4-1/2
2222 ft.

Relative:
Higher

Actual:
308 ft.

CENTRAL CAL EQUIPMENT INC **LUST** **S102426484**
1300 GARZOLI **Cortese** **N/A**
DELANO, CA 93215

State LUST:
Cross Street: Not reported
Qty Leaked: Not reported
Case Number 5T15000363
Reg Board: 0
Chemical: Gasoline
Lead Agency: Local Agency
Local Agency : 15000L
Case Type: Soil only
Status: Case Closed
Review Date: 6/27/89 0:00
Confirm Leak: 6/27/89 0:00
Workplan: 7/29/89 0:00
Prelim Assess: 7/29/89 0:00
Pollution Char: Not reported
Remed Plan: Not reported
Remed Action: 5/2/90 0:00
Monitoring: Not reported
Close Date: 8/18/92 0:00
Release Date: 06/27/1989
Cleanup Fund Id : Not reported
Discover Date : 06/27/1989
Enforcement Dt : 1/1/65 0:00
Enf Type: None Taken
Enter Date : 8/3/90 0:00
Funding: Responsible Party
Staff Initials: KER
How Discovered: Not reported
How Stopped: Not reported
Interim : Not reported
Leak Cause: Not reported
Leak Source: Not reported
MTBE Date : Not reported
Max MTBE GW : Not reported
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Priority: 4
Local Case # : Not reported

CENTRAL CAL EQUIPMENT INC (Continued) **S102426484**

Beneficial: Not reported
Staff : JDW
GW Qualifier : Not reported
Max MTBE Soil : Not reported
Soil Qualifier : Not reported
Hydr Basin #: SAN JOAQUIN (5-22)
Operator : Not reported
Oversight Prgm: LUST
Review Date : 8/18/92 0:00
Stop Date : / /
Work Suspended : No
Responsible Party: EARL JORGENSEN
RP Address: 1133 E. GLENWOOD, TURLOCK, CA 95380
Global Id: T0602900356
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: Not reported
Mtbe Fuel: Not reported
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: Not reported
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 5:
Substance: GASOLINE
Case Type: Soil only
Program: LUST
Staff Initials: JDW
Case Number: 5T15000363
Status: Case Closed
MTBE Code: N/A
Lead Agency: Local

CORTESE:
Region: CORTESE
Fac Address 2: 1300 GARZOLI

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3 West 1/4-1/2 2411 ft.

KERN COUNTY DUMP
WOOLOMES RD
DELANO, CA 93215

CERCLIS 1000304685
FINDS CAD980817886

Relative: Lower

Actual: 295 ft.

CERCLIS Classification Data:
Site Incident Category: Not reported
Non NPL Status: RN
Ownership Status: Unknown
Contact: Betsy Curnow
Contact Title: Not reported
Contact: Jere Johnson
Contact Title: Not reported

Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Contact Tel: (415) 972-3093
Contact Tel: (415) 972-3094

CERCLIS Assessment History:
Assessment: DISCOVERY — Completed: 11/01/1979
Assessment: PRELIMINARY ASSESSMENT — Completed: 04/01/1980
Assessment: PRELIMINARY ASSESSMENT — Completed: 06/30/1989
Assessment: SITE INSPECTION — Completed: 07/02/1991

CERCLIS Site Status:
High

CERCLIS Alias Name(s):
MCFARLAND-DELANO LANDFILL

KERN COUNTY DUMP (Continued) **1000304685**

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Comperhensive Environmental Response, Compensation and Liability Information System (CERCLIS)

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
DELANO	S104404282	DELANO GRAPE GROWERS	ROUTE 1- BOX 283	93215	LUST
DELANO	S102360388	SABO CO P TH IFTY BEST PUMPING SE VICE	HY 43/GARCES HY NR POND RD / PALM&ROWLEE		SWF/LF
DELANO	S105023498	BEACON STATION #647	HWY 99 @ AVE 16	93215	LUST, Cortese
DELANO	U003937460	AKAL TRAVEL PLAZA	HWY 99 AVE 16	93215	UST
DELANO	S105247926	SUNSET-DELANO T ANSFE STATION LVTS	SW- CORNER WOOLLOMES AVE / STRADLEY R		SWF/LF
DELANO	S106079124	BASQUEZ AUTO W ECKING	LEW ELLIOTT AVE.		SWF/LF
DELANO	S106079123	ACOSTA AUTO W ECKING	NEAR CECIL / CHRISTINA		SWF/LF
DELANO	S102360412	DELANO #2 BD	~WEST OF DELANO		SWF/LF
DELANO	S105964528	LOS ANGELES WASTE INDUST IES, INC.	POND ROAD SITE		SWF/LF
DELANO	U001581106	& B FARMS SHOP	1/4 MI SOUTH OF GARCES HWY. ON	93215	HIST UST
DELANO	U003433855	BONKOSKY'S SERVICE	22100 WOLLOMES	93215	UST
DELANO	U003938494	BONKOSKY S SERVICE	22100 WOLLOMES	93215	UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/29/04
Date Made Active at EDR: 02/27/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/06/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 02/06/04

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites
Source: EPA
Telephone: N/A

Date of Government Version: 01/07/04
Date Made Active at EDR: 02/27/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/06/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 02/06/04

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/26/04
Date Made Active at EDR: 04/02/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/22/04
Elapsed ASTM days: 11
Date of Last EDR Contact: 03/22/04

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 02/26/04
Date Made Active at EDR: 04/02/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/22/04
Elapsed ASTM days: 11
Date of Last EDR Contact: 03/22/04

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/18/03
Date Made Active at EDR: 02/02/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 12/26/03
Elapsed ASTM days: 38
Date of Last EDR Contact: 03/08/04

RCRIS: Resource Conservation and Recovery Information System
Source: EPA
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/09/04
Date Made Active at EDR: 04/02/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 03/18/04
Elapsed ASTM days: 15
Date of Last EDR Contact: 01/19/04

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/03
Date Made Active at EDR: 03/12/04
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/26/04
Elapsed ASTM days: 46
Date of Last EDR Contact: 01/26/04

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01
Database Release Frequency: Biennially

Date of Last EDR Contact: 03/16/04
Date of Next Scheduled EDR Contact: 06/14/04

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision
Source: EPA
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/09/04
Database Release Frequency: Annually

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

DELISTED NPL: National Priority List Deletions
Source: EPA
Telephone: N/A
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/29/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/06/04
Date of Next Scheduled EDR Contact: 05/01/04

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/09/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/18/03
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/15/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 11/25/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 202-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/12/04
Date of Next Scheduled EDR Contact: 05/24/04

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-564-3887
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/30/03
Database Release Frequency: Annually

Date of Last EDR Contact: 02/09/04
Date of Next Scheduled EDR Contact: 05/10/04

DOD: Department of Defense Sites
Source: USGS
Telephone: 703-648-5423
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/10/04

STORMWATER: Storm Water General Permits
Source: Environmental Protection Agency
Telephone: 202 564-0746
A listing of all facilities with Storm Water General Permits.

Date of Government Version: N/A
Database Release Frequency: Quarterly

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

INDIAN RESERV: Indian Reservations
Source: USGS
Telephone: 703-648-5423
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 10/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/10/04

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/15/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 03/15/04
Date of Next Scheduled EDR Contact: 06/14/04

RMP: Risk Management Plans
Source: Environmental Protection Agency
Telephone: 202-564-8600
When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: N/A
Database Release Frequency: N/A

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-566-0250
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/01
Database Release Frequency: Annually

Date of Last EDR Contact: 03/23/04
Date of Next Scheduled EDR Contact: 06/21/04

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-5521
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/02
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 03/05/04
Date of Next Scheduled EDR Contact: 06/07/04

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA
Telephone: 202-564-2501

Date of Government Version: 01/21/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/22/04
Date of Next Scheduled EDR Contact: 06/21/04

SSTS: Section 7 Tracking Systems
Source: EPA
Telephone: 202-564-5008
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/01
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-564-2501
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/30/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/22/04
Date of Next Scheduled EDR Contact: 06/21/04

STATE OF CALIFORNIA ASTM STANDARD RECORDS

AWP: Annual Workplan Sites
Source: California Environmental Protection Agency
Telephone: 916-323-3400
Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 03/02/04
Date Made Active at EDR: 03/24/04
Database Release Frequency: Annually

Date of Data Arrival at EDR: 03/03/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 03/03/04

CAL-SITES: Calsites Database
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 03/02/04
Date Made Active at EDR: 03/24/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/03/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 03/03/04

CHMIRS: California Hazardous Material Incident Report System
Source: Office of Emergency Services
Telephone: 916-845-8400
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/02
Date Made Active at EDR: 08/07/03
Database Release Frequency: Varies

Date of Data Arrival at EDR: 07/11/03
Elapsed ASTM days: 27
Date of Last EDR Contact: 02/23/04

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-9100
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/01
Date Made Active at EDR: 07/26/01
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 05/29/01
Elapsed ASTM days: 58
Date of Last EDR Contact: 01/29/04

NOTIFY 65: Proposition 65 Records
Source: State Water Resources Control Board
Telephone: 916-445-3846
Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/93
Date Made Active at EDR: 11/19/93
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 11/01/93
Elapsed ASTM days: 18
Date of Last EDR Contact: 01/19/04

TOXIC PITS: Toxic Pits Cleanup Act Sites
Source: State Water Resources Control Board
Telephone: 916-227-4364
Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/95
Date Made Active at EDR: 09/26/95
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 08/30/95
Elapsed ASTM days: 27
Date of Last EDR Contact: 02/02/04

SWF/LF (SWIS): Solid Waste Information System
Source: Integrated Waste Management Board
Telephone: 916-341-6320
Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/14/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/16/03
Elapsed ASTM days: 23
Date of Last EDR Contact: 03/16/04

WMUDS/SWAT: Waste Management Unit Database
Source: State Water Resources Control Board
Telephone: 916-227-4448
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/00
Date Made Active at EDR: 05/10/00
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/10/00
Elapsed ASTM days: 30
Date of Last EDR Contact: 03/11/04

LUST: Leaking Underground Storage Tank Information System
Source: State Water Resources Control Board
Telephone: 916-341-5740
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 03/04/04
Date Made Active at EDR: 03/31/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/04/04
Elapsed ASTM days: 27
Date of Last EDR Contact: 01/12/04

CA BOND EXP. PLAN: Bond Expenditure Plan
Source: Department of Health Services
Telephone: 916-255-2118
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/89
Date Made Active at EDR: 08/02/94
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 07/27/94
Elapsed ASTM days: 6
Date of Last EDR Contact: 05/31/94

CA UST:

UST: Active UST Facilities
Source: SWRCB
Telephone: 916-341-5700
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/04/04
Date Made Active at EDR: 04/06/04
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 03/04/04
Elapsed ASTM days: 33
Date of Last EDR Contact: 01/12/04

VCP: Voluntary Cleanup Program Properties
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 03/02/04
Date Made Active at EDR: 03/24/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 03/03/04
Elapsed ASTM days: 21
Date of Last EDR Contact: 03/03/04

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
Source: Environmental Protection Agency
Telephone: 415-972-3372
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/09/04
Date Made Active at EDR: 03/01/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/10/04
Elapsed ASTM days: 20
Date of Last EDR Contact: 01/27/04

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
Source: EPA Region 10
Telephone: 206-553-2857
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 03/11/04
Date Made Active at EDR: 03/31/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 03/12/04
Elapsed ASTM days: 19
Date of Last EDR Contact: 01/27/04

INDIAN UST: Underground Storage Tanks on Indian Land
Source: EPA Region 9
Telephone: 415-972-3368

Date of Government Version: 02/25/04
Date Made Active at EDR: 03/24/04
Database Release Frequency: Varies

Date of Data Arrival at EDR: 03/01/04
Elapsed ASTM days: 23
Date of Last EDR Contact: 02/23/04

CA FID UST: Facility Inventory Database
Source: California Environmental Protection Agency
Telephone: 916-445-6532
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/94
Date Made Active at EDR: 09/29/95
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 09/05/95
Elapsed ASTM days: 24
Date of Last EDR Contact: 12/28/98

HIST UST: Hazardous Substance Storage Container Database
Source: State Water Resources Control Board
Telephone: 916-341-5700
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/90
Date Made Active at EDR: 02/12/91
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 01/25/91
Elapsed ASTM days: 18
Date of Last EDR Contact: 07/26/01

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF CALIFORNIA ASTM SUPPLEMENTAL RECORDS

AST: Aboveground Petroleum Storage Tank Facilities
Source: State Water Resources Control Board
Telephone: 916-341-5712
Registered Aboveground Storage Tanks.

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/01/04

CLEANERS: Cleaner Facilities
Source: Department of Toxic Substance Control
Telephone: 916-225-0873
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 03/09/04
Database Release Frequency: Annually

Date of Last EDR Contact: 01/07/04
Date of Next Scheduled EDR Contact: 04/05/04

CA WDS: Waste Discharge System
Source: State Water Resources Control Board
Telephone: 916-657-1571
Sites which have been issued waste discharge requirements.

Date of Government Version: 12/15/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/22/04
Date of Next Scheduled EDR Contact: 06/21/04

DEED: List of Deed Restrictions
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes.

Date of Government Version: 01/05/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

NFA: No Further Action Determination
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 03/02/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/03/04
Date of Next Scheduled EDR Contact: 05/31/04

EMI: Emissions Inventory Data
Source: California Air Resources Board
Telephone: 916-322-2990
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/01
Database Release Frequency: Varies

Date of Last EDR Contact: 01/23/04
Date of Next Scheduled EDR Contact: 04/19/04

REF: Unconfirmed Properties Referred to Another Agency
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 03/02/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/03/04
Date of Next Scheduled EDR Contact: 05/31/04

SCH: School Property Evaluation Program
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 03/02/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/03/04
Date of Next Scheduled EDR Contact: 05/31/04

NFE: Properties Needing Further Evaluation
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

Date of Government Version: 03/02/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/03/04
Date of Next Scheduled EDR Contact: 05/31/04

HAZNET: Hazardous Waste Information System
Source: California Environmental Protection Agency
Telephone: 916-255-1136
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/02
Database Release Frequency: Annually

Date of Last EDR Contact: 02/09/04
Date of Next Scheduled EDR Contact: 05/10/04

LOCAL RECORDS

ALAMEDA COUNTY:

Local Oversight Program Listing of UGT Cleanup Sites
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 12/09/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/09/03
Date of Next Scheduled EDR Contact: 04/26/04

Underground Tanks
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 12/09/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/09/03
Date of Next Scheduled EDR Contact: 04/26/04

CONTRA COSTA COUNTY:

Site List
Source: Contra Costa Health Services Department
Telephone: 925-646-2286
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 03/05/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 03/01/04
Date of Next Scheduled EDR Contact: 05/31/04

FRESNO COUNTY:

CUPA Resources List
Source: Dept. of Community Health
Telephone: 559-445-3271
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/14/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/15/04
Date of Next Scheduled EDR Contact: 05/10/04

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Kern County Sites and Tanks Listing.

Date of Government Version: 01/27/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

LOS ANGELES COUNTY:

List of Solid Waste Facilities
Source: La County Department of Public Works
Telephone: 818-458-5185

Date of Government Version: 06/03/03
Database Release Frequency: Varies

Date of Last EDR Contact: 02/20/04
Date of Next Scheduled EDR Contact: 05/17/04

City of El Segundo Underground Storage Tank
Source: City of El Segundo Fire Department
Telephone: 310-524-2236

Date of Government Version: 03/01/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

City of Long Beach Underground Storage Tank
Source: City of Long Beach Fire Department
Telephone: 562-570-2543

Date of Government Version: 03/28/03
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

City of Torrance Underground Storage Tank
Source: City of Torrance Fire Department
Telephone: 310-618-2973

Date of Government Version: 02/17/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

City of Los Angeles Landfills
Source: Engineering & Construction Division
Telephone: 213-473-7869

Date of Government Version: 03/01/02
Database Release Frequency: Varies

Date of Last EDR Contact: 03/16/04
Date of Next Scheduled EDR Contact: 06/14/04

HMS: Street Number List
Source: Department of Public Works
Telephone: 626-458-3517
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/30/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 11/17/03
Date of Next Scheduled EDR Contact: 02/16/04

Site Mitigation List
Source: Community Health Services
Telephone: 323-890-7806
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/07/03
Database Release Frequency: Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

San Gabriel Valley Areas of Concern
Source: EPA Region 9
Telephone: 415-972-3178
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/98
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 07/06/99
Date of Next Scheduled EDR Contact: N/A

MARIN COUNTY:

Underground Storage Tank Sites
Source: Public Works Department Waste Management
Telephone: 415-499-6647
Currently permitted USTs in Marin County.

Date of Government Version: 02/10/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/01/04

NAPA COUNTY:

Sites With Reported Contamination
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 10/02/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

Closed and Operating Underground Storage Tank Sites
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 10/02/03
Database Release Frequency: Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

ORANGE COUNTY:

List of Underground Storage Tank Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 03/01/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

List of Underground Storage Tank Facilities
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 03/01/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

List of Industrial Site Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Petroleum and non-petroleum spills.

Date of Government Version: 03/01/04
Database Release Frequency: Annually

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

PLACER COUNTY:

Master List of Facilities
Source: Placer County Health and Human Services
Telephone: 530-889-7312
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 02/17/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/17/04
Date of Next Scheduled EDR Contact: 06/21/04

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Source: Department of Public Health
Telephone: 909-358-5055
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 12/23/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

Underground Storage Tank Tank List
Source: Health Services Agency
Telephone: 909-358-5055

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

SACRAMENTO COUNTY:

CS - Contaminated Sites
Source: Sacramento County Environmental Management
Telephone: 916-875-8406

Date of Government Version: 07/17/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/01/04

ML - Regulatory Compliance Master List
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/03/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/02/04
Date of Next Scheduled EDR Contact: 05/01/04

SAN BERNARDINO COUNTY:

Hazardous Material Permits
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 01/08/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

SAN DIEGO COUNTY:

Solid Waste Facilities
Source: Department of Health Services
Telephone: 619-338-2209
San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/00
Database Release Frequency: Varies

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

Hazardous Materials Management Division Database
Source: Hazardous Materials Management Division
Telephone: 619-338-2268
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 10/31/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/09/04
Date of Next Scheduled EDR Contact: 04/05/04

SAN FRANCISCO COUNTY:

Local Oversite Facilities
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920

Date of Government Version: 03/08/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

Underground Storage Tank Information
Source: Department of Public Health
Telephone: 415-252-3920

Date of Government Version: 03/08/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SAN MATEO COUNTY:

Fuel Leak List
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921

Date of Government Version: 01/29/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/26/04
Date of Next Scheduled EDR Contact: 04/12/04

Business Inventory
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 11/13/03
Database Release Frequency: Annually

Date of Last EDR Contact: 01/12/04
Date of Next Scheduled EDR Contact: 04/12/04

SANTA CLARA COUNTY:

Fuel Leak Site Activity Report
Source: Santa Clara Valley Water District
Telephone: 408-265-2600

Date of Government Version: 12/31/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

Hazardous Material Facilities
Source: City of San Jose Fire Department
Telephone: 408-277-4659

Date of Government Version: 10/01/03
Database Release Frequency: Annually

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

SOLANO COUNTY:

Leaking Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 12/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/15/04
Date of Next Scheduled EDR Contact: 06/14/04

Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 12/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/15/04
Date of Next Scheduled EDR Contact: 06/14/04

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
Source: Department of Health Services
Telephone: 707-565-6565

Date of Government Version: 01/26/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/26/04
Date of Next Scheduled EDR Contact: 04/26/04

SUTTER COUNTY:

Underground Storage Tanks
Source: Sutter County Department of Agriculture
Telephone: 530-822-7500

Date of Government Version: 01/29/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/09/04
Date of Next Scheduled EDR Contact: 04/05/04

VENTURA COUNTY:

Inventory of Illegal Abandoned and Inactive Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 09/01/02
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

Listing of Underground Tank Cleanup Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/16/04
Date of Next Scheduled EDR Contact: 06/14/04

Underground Tank Closed Sites List
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/12/04
Date of Next Scheduled EDR Contact: 04/12/04

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/01/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/16/04
Date of Next Scheduled EDR Contact: 06/14/04

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Source: Yolo County Department of Health
Telephone: 530-666-8646

Date of Government Version: 01/27/04
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

California Regional Water Quality Control Board (RWQCB) LUST Records

LUST REG 1: Active Toxic Site Investigation
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-576-2220
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/01
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

LUST REG 2: Fuel Leak List
Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457

Date of Government Version: 01/21/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/14/04
Date of Next Scheduled EDR Contact: 04/12/04

LUST REG 3: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147

Date of Government Version: 05/19/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

LUST REG 4: Underground Storage Tank Leak List
Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/10/04
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

LUST REG 5: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-255-3125

Date of Government Version: 01/01/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

LUST REG 6L: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 916-542-5424
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/03
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-346-7491

Date of Government Version: 01/21/04
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

LUST REG 7: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-346-7491

Date of Government Version: 02/26/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

LUST REG 8: Leaking Underground Storage Tanks
Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4498
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 01/12/04
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 01/08/04
Date of Next Scheduled EDR Contact: 05/10/04

LUST REG 9: Leaking Underground Storage Tank Report
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/01
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 01/19/04
Date of Next Scheduled EDR Contact: 04/19/04

California Regional Water Quality Control Board (RWQCB) SLIC Records

SLIC REG 1: Active Toxic Site Investigations
Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220

Date of Government Version: 04/03/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 03/28/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/14/04
Date of Next Scheduled EDR Contact: 04/12/04

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/16/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/16/04
Date of Next Scheduled EDR Contact: 05/17/04

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 01/28/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/26/04
Date of Next Scheduled EDR Contact: 04/26/04

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-855-3075
Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 01/08/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/06/04
Date of Next Scheduled EDR Contact: 04/05/04

SLIC REG 6L: SLIC Sites
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574

Date of Government Version: 03/09/04
Database Release Frequency: Varies

Date of Last EDR Contact: 03/08/04
Date of Next Scheduled EDR Contact: 06/07/04

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583

Date of Government Version: 01/01/04
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/09/04
Date of Next Scheduled EDR Contact: 04/05/04

SLIC REG 7: SLIC List
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491

Date of Government Version: 02/27/04
Database Release Frequency: Varies

Date of Last EDR Contact: 02/23/04
Date of Next Scheduled EDR Contact: 05/24/04

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-3298

Date of Government Version: 04/01/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/07/04
Date of Next Scheduled EDR Contact: 04/05/04

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980

Date of Government Version: 12/01/03
Database Release Frequency: Annually

Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/04/04

EDR PROPRIETARY HISTORICAL DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

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The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

BROWNFIELDS DATABASES

VCP: Voluntary Cleanup Program Properties
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 03/02/04
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/03/04
Date of Next Scheduled EDR Contact: 05/31/04

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: N/A
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WOOLLOMES AND GARZOLI
450 WOLLOMES AVE
DELANO, CA 93215

TARGET PROPERTY COORDINATES

Latitude (North):	35.746700 - 35° 44' 48.1"
Longitude (West):	119.251503 - 119° 15' 5.4"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	296409.2
UTM Y (Meters):	3957992.2
Elevation:	301 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

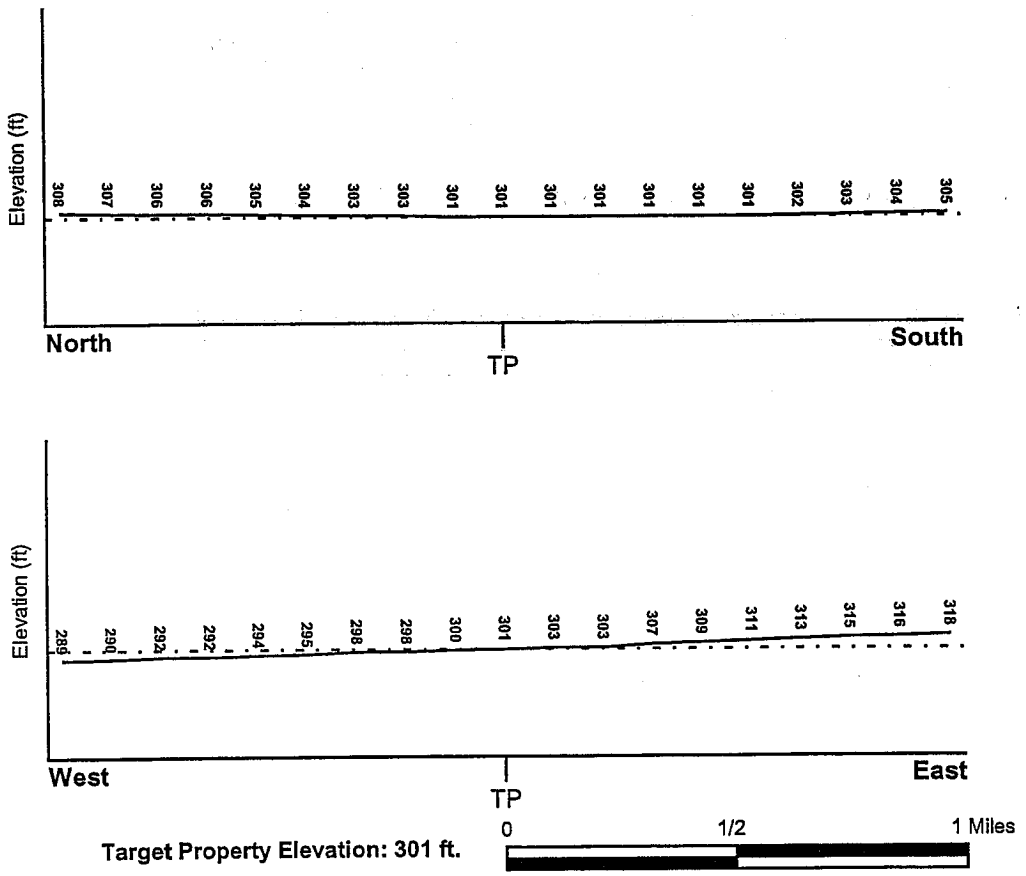
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map:	35119-F3 POND, CA
General Topographic Gradient:	General WSW
Source:	USGS 7.5 min quad index

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
KERN, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 0600750125B

Additional Panels in search area: 0600780000A
0600780125B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
POND	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	GARCES
Soil Surface Texture:	silt loam
Hydrologic Group:	Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	HIGH
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	2 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 0.60 Min: 0.20	Max: 9.00 Min: 7.40
2	2 inches	9 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.06 Min: 0.00	Max: 9.60 Min: 8.40
3	9 inches	23 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 0.06 Min: 0.00	Max: 9.60 Min: 8.40
4	23 inches	37 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 0.06 Min: 0.00	Max: 9.60 Min: 8.40
5	37 inches	60 inches	stratified	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.60 Min: 0.20	Max: 9.60 Min: 8.40

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: clay loam
fine sandy loam
loam
sandy loam

Surficial Soil Types: clay loam

	fine sandy loam loam sandy loam
Shallow Soil Types:	sandy clay loam loam
Deeper Soil Types:	sandy loam loam

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	USGS0135359	1/4 - 1/2 Mile ENE
4	USGS0135264	1/4 - 1/2 Mile WSW
5	USGS0135442	1/4 - 1/2 Mile NNE
6	USGS0135338	1/4 - 1/2 Mile East
7	USGS0135455	1/2 - 1 Mile North
8	USGS0135441	1/2 - 1 Mile NE
9	USGS0135295	1/2 - 1 Mile East
10	USGS0135249	1/2 - 1 Mile SE
11	USGS0135316	1/2 - 1 Mile ESE
A12	USGS0135216	1/2 - 1 Mile South
13	USGS0135238	1/2 - 1 Mile SE
14	USGS0135465	1/2 - 1 Mile North
A15	USGS0135217	1/2 - 1 Mile South
B17	USGS0135400	1/2 - 1 Mile North
19	USGS0135300	1/2 - 1 Mile SE
20	USGS0135404	1/2 - 1 Mile NNE
21	USGS0135218	1/2 - 1 Mile SSW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
22	USGS0135321	1/2 - 1 Mile WSW
23	USGS0135476	1/2 - 1 Mile North
24	USGS0135467	1/2 - 1 Mile NW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

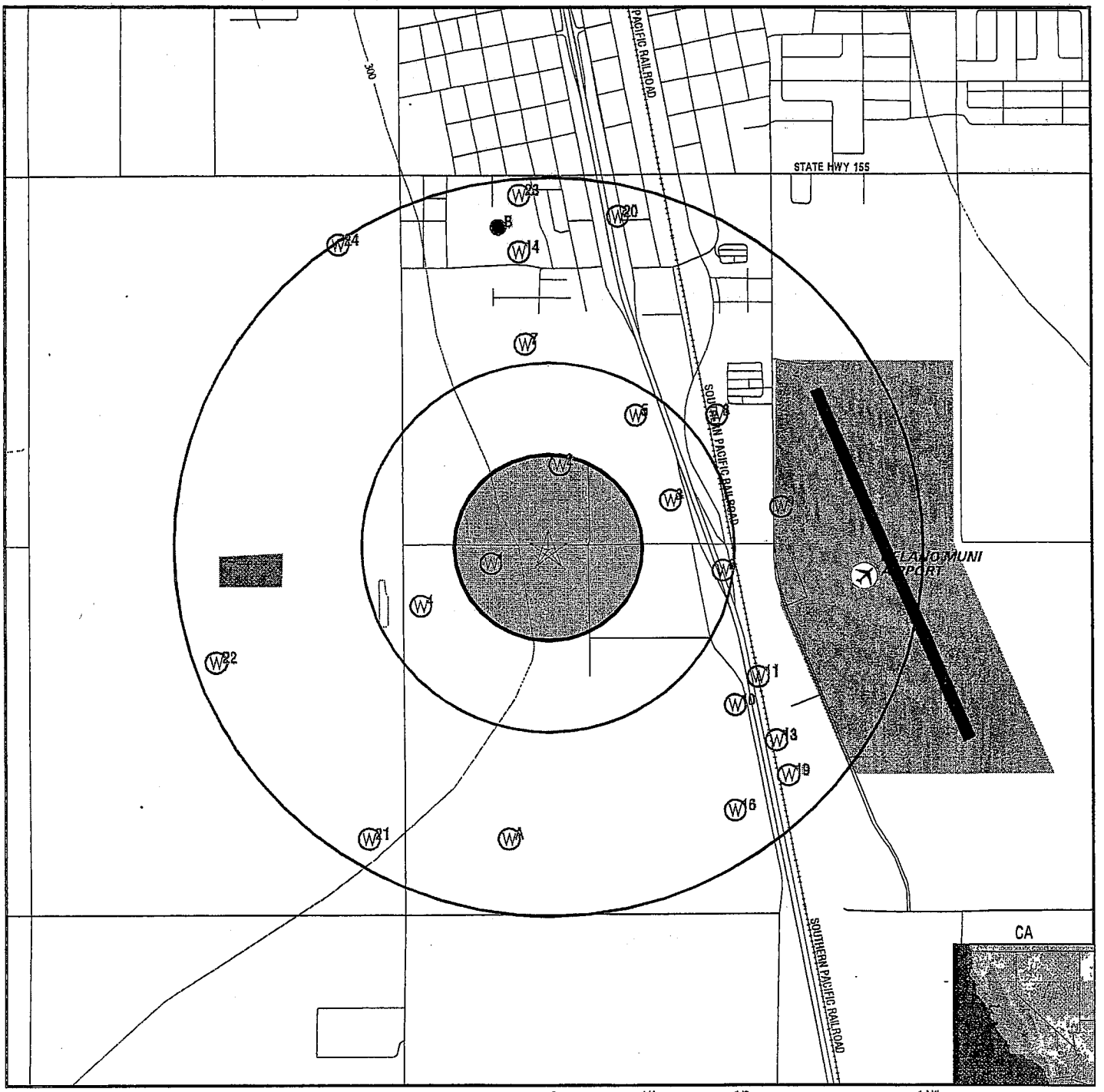
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	15886	1/8 - 1/4 Mile WSW
2	15887	1/8 - 1/4 Mile North
16	15888	1/2 - 1 Mile SE
B18	15885	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 01165873.1r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

TARGET PROPERTY:	Woollomes and Garzoli	CUSTOMER:	The Twining Laboratories
ADDRESS:	450 Wollomes Ave	CONTACT:	Timothy Thomas
CITY/STATE/ZIP:	Delano CA 93215	INQUIRY #:	01165873.1r
LAT/LONG:	35.7467 / 119.2515	DATE:	April 06, 2004 12:43 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **WSW** **1/8 - 1/4 Mile** **Lower**	**CA WELLS**	**15886**

Water System Information:

Prime Station Code:	25S/25E-23D01 M	User ID:	15C
FRDS Number:	1502455001	County:	Kern
District Number:	45	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	354446.0 1191512.0	Precision:	0.5 Mile (30 Seconds)
Source Name:	WELL 01		
System Number:	1502455		
System Name:	BOWEN WATER SYSTEM		
Organization That Operates System:	Not Reported		
Pop Served:	Unknown, Small System	Connections:	Unknown, Small System
Area Served:	Not Reported		

	Database	EDR ID Number
2 **North** **1/8 - 1/4 Mile** **Higher**	**CA WELLS**	**15887**

Water System Information:

Prime Station Code:	25S/25E-23H02 M	User ID:	CYA
FRDS Number:	1510005013	County:	Kern
District Number:	12	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Treated
Source Lat/Long:	354500.0 1191500.0	Precision:	Undefined
Source Name:	WELL 14 - TREATED		
System Number:	1510005		
System Name:	DELANO, CITY OF		
Organization That Operates System:	725 S LEXINGTON DELANO, CA 93215		
Pop Served:	29944	Connections:	6098
Area Served:	DELANO		

Sample Information: * Only Findings Above Detection Level Are Listed

Sample Collected:	08/06/1980	Findings:	2.800 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	08/06/1980	Findings:	3.700 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	10/08/1980	Findings:	3.700 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/14/1981	Findings:	2.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04/02/1981	Findings:	2.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/28/1988	Findings:	14.200 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/31/1989	Findings:	11.500 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/29/1990	Findings:	1.200 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	04/24/1990	Findings:	1.000 UNITS
Chemical:	COLOR		
Sample Collected:	04/24/1990	Findings:	650.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04/24/1990	Findings:	8.900
Chemical:	PH (LABORATORY)		
Sample Collected:	04/24/1990	Findings:	36.500 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	04/24/1990	Findings:	32.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04/24/1990	Findings:	6.000 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	04/24/1990	Findings:	38.400 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		
Sample Collected:	04/24/1990	Findings:	15.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	04/24/1990	Findings:	.220 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04/24/1990	Findings:	125.000 MG/L
Chemical:	SODIUM		
Sample Collected:	04/24/1990	Findings:	.800 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04/24/1990	Findings:	124.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	04/24/1990	Findings:	.240 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	04/24/1990	Findings:	.020 UG/L
Chemical:	FOAMING AGENTS (MBAS)		
Sample Collected:	04/24/1990	Findings:	440.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04/24/1990	Findings:	23.500 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/24/1990	Findings:	.690 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	05/21/1993	Findings:	23.900 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/27/1993	Findings:	1.000 UNITS
Chemical:	COLOR		
Sample Collected:	05/27/1993	Findings:	730.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	05/27/1993	Findings:	8.700
Chemical:	PH (LABORATORY)		
Sample Collected:	05/27/1993	Findings:	32.800 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	05/27/1993	Findings:	31.300 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	05/27/1993	Findings:	4.300 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	05/27/1993	Findings:	35.500 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	05/27/1993	Findings:	13.900 MG/L
Chemical:	CALCIUM		
Sample Collected:	05/27/1993	Findings:	.210 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	05/27/1993	Findings:	130.000 MG/L
Chemical:	SODIUM		
Sample Collected:	05/27/1993	Findings:	.800 MG/L
Chemical:	POTASSIUM		
Sample Collected:	05/27/1993	Findings:	94.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	05/27/1993	Findings:	.200 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	05/27/1993	Findings:	.040 UG/L
Chemical:	FOAMING AGENTS (MBAS)		
Sample Collected:	05/27/1993	Findings:	435.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	05/27/1993	Findings:	23.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/27/1993	Findings:	.210 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	06/22/1994	Findings:	750.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	06/22/1994	Findings:	8.500
Chemical:	PH (LABORATORY)		
Sample Collected:	06/22/1994	Findings:	34.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	06/22/1994	Findings:	36.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	06/22/1994	Findings:	2.000 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	06/22/1994	Findings:	41.000 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		
Sample Collected:	06/22/1994	Findings:	16.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	06/22/1994	Findings:	.200 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	06/22/1994	Findings:	150.000 MG/L
Chemical:	SODIUM		
Sample Collected:	06/22/1994	Findings:	96.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	06/22/1994	Findings:	.300 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	06/22/1994	Findings:	5.000 UG/L
Chemical:	ARSENIC		
Sample Collected:	06/22/1994	Findings:	400.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	06/22/1994	Findings:	- .200
Chemical:	LANGELIER INDEX @ SOURCE TEMP.		
Sample Collected:	06/22/1994	Findings:	22.000 MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	09/14/1994	Findings:	1.480 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	09/14/1994	Findings:	5.030 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	07/11/1995	Findings:	1.270 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	07/11/1995	Findings:	1.330 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		

3
ENE
1/4 - 1/2 Mile
Higher

FED USGS **USGS0135359**

Agency:	USGS	Site ID:	354455119144101
Site Name:	025S025E23B001M		
Dec. Latitude:	35.74856		
Dec. Longitude:	-119.24566		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	308.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19580201	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	400		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-02-01	123.00	

4
WSW
1/4 - 1/2 Mile
Lower

FED USGS **USGS0135264**

Agency:	USGS	Site ID:	354440119152401
Site Name:	025S025E22H001M		
Dec. Latitude:	35.7444		
Dec. Longitude:	-119.25761		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	293.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		

Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

5
NNE
1/4 - 1/2 Mile
Higher

FED USGS **USGS0135442**

Agency:	USGS	Site ID:	354507119144701
Site Name:	025S025E14R001M		
Dec. Latitude:	35.7519		
Dec. Longitude:	-119.24733		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	311.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19521021	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	300		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1952-10-21	151.20	

6
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS0135338**

Agency:	USGS	Site ID:	354445119143201
Site Name:	025S025E23H001M		
Dec. Latitude:	35.74579		
Dec. Longitude:	-119.24316		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	304.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19580201	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-02-01	121.30	

7
North
1/2 - 1 Mile
Higher

FED USGS **USGS0135455**

Agency:	USGS	Site ID:	354517119150601
Site Name:	025S025E14P001M		
Dec. Latitude:	35.75468		
Dec. Longitude:	-119.25261		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	302.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

8
NE
1/2 - 1 Mile
Higher

FED USGS **USGS0135441**

Agency:	USGS	Site ID:	354507119143301
Site Name:	025S025E13N001M		
Dec. Latitude:	35.7519		
Dec. Longitude:	-119.24344		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	308.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
9 **East** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0135295**

Agency:	USGS	Site ID:	354454119142201
Site Name:	025S025E23A001M		
Dec. Latitude:	35.74829		
Dec. Longitude:	-119.24039		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	312.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19340101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

	Database	EDR ID Number
10 **SE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0135249**

Agency:	USGS	Site ID:	354426119143001
Site Name:	025S025E23J003M		
Dec. Latitude:	35.74051		
Dec. Longitude:	-119.24261		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	304.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

	Database	EDR ID Number
11 **ESE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS0135316**

Agency:	USGS	Site ID:	354430119142601
Site Name:	025S025E23J002M		
Dec. Latitude:	35.74162		
Dec. Longitude:	-119.2415		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	305.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	228		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

A12
South
1/2 - 1 Mile
Higher

FED USGS **USGS0135216**

Agency:	USGS	Site ID:	354407119150701
Site Name:	025S025E23P001M		
Dec. Latitude:	35.73523		
Dec. Longitude:	-119.25289		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	301.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19370101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	400		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

13
SE
1/2 - 1 Mile
Higher

FED USGS **USGS0135238**

Agency:	USGS	Site ID:	354421119142301
Site Name:	025S025E23J001M		
Dec. Latitude:	35.73912		
Dec. Longitude:	-119.24066		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	307.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19460101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

14
North
1/2 - 1 Mile
Higher

FED USGS **USGS0135465**

Agency:	USGS	Site ID:	354530119150701
Site Name:	025S025E14L001M		
Dec. Latitude:	35.75829		
Dec. Longitude:	-119.25289		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	303.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

A15
South
1/2 - 1 Mile
Higher

FED USGS **USGS0135217**

Agency:	USGS	Site ID:	354407119151101
Site Name:	025S025E23N001M		
Dec. Latitude:	35.73523		
Dec. Longitude:	-119.254		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	300.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19510101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	500		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

16
SE
1/2 - 1 Mile
Higher

CA WELLS **15888**

Water System Information:

Prime Station Code:	25S/25E-23J04 M	User ID:	CYA
FRDS Number:	1502534001	County:	Kern
District Number:	12	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Untreated
Source Lat/Long:	354411.0 1191430.0	Precision:	0.5 Mile (30 Seconds)
Source Name:	WELL 01		
System Number:	1502534		
System Name:	FLORES WATER SYSTEM		
Organization That Operates System:			
	1013 NILES ST.		
	BAKERSFIELD, CA 93305		
Pop Served:	25	Connections:	13
Area Served:	Not Reported		

B17
North
1/2 - 1 Mile
Higher

FED USGS **USGS0135400**

Agency:	USGS	Site ID:	354533119151201
Site Name:	025S025E14D001M		
Dec. Latitude:	35.75912		
Dec. Longitude:	-119.25428		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	302		
Hydrologic code:	18030012		
Topographic:	Valley flat		
Site Type:	Ground-water other than Spring		
Const Date:	19811009	Inven Date:	19860626
Well Type:	Single well, other than collector or Ranney type		

Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	1420		
Hole depth:	1440	Source:	driller
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

B18
North
1/2 - 1 Mile
Higher

CA WELLS **15885**

Water System Information:

Prime Station Code:	25S/25E-14D01 M	User ID:	CYA
FRDS Number:	1510005016	County:	Kern
District Number:	12	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Treated
Source Lat/Long:	354534.0 1191509.0	Precision:	100 Feet (one Second)
Source Name:	WELL 19 - TREATED		
System Number:	1510005		
System Name:	DELANO, CITY OF		
Organization That Operates System:	725 S LEXINGTON DELANO, CA 93215		
Pop Served:	29944	Connections:	6098
Area Served:	DELANO		

Sample Information: * Only Findings Above Detection Level Are Listed

Sample Collected:	04/27/1987	Findings:	2.000 UNITS
Chemical:	COLOR		
Sample Collected:	04/27/1987	Findings:	490.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04/27/1987	Findings:	8.800
Chemical:	PH (LABORATORY)		
Sample Collected:	04/27/1987	Findings:	75.100 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	04/27/1987	Findings:	64.100 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04/27/1987	Findings:	13.600 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	04/27/1987	Findings:	18.600 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		
Sample Collected:	04/27/1987	Findings:	7.400 MG/L
Chemical:	CALCIUM		
Sample Collected:	04/27/1987	Findings:	.020 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04/27/1987	Findings:	95.000 MG/L
Chemical:	SODIUM		
Sample Collected:	04/27/1987	Findings:	.600 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04/27/1987	Findings:	60.900 MG/L
Chemical:	CHLORIDE		
Sample Collected:	04/27/1987	Findings:	.420 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		

Sample Collected:	04/27/1987	Findings:	17.000 UG/L
Chemical:	ARSENIC		
Sample Collected:	04/27/1987	Findings:	305.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04/27/1987	Findings:	11.100 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/27/1987	Findings:	.110 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	10/27/1987	Findings:	12.400 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/28/1988	Findings:	30.600 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10/31/1988	Findings:	18.200 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/25/1989	Findings:	27.900 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	01/29/1990	Findings:	1.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04/24/1990	Findings:	5.000 UNITS
Chemical:	COLOR		
Sample Collected:	04/24/1990	Findings:	430.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04/24/1990	Findings:	9.200
Chemical:	PH (LABORATORY)		
Sample Collected:	04/24/1990	Findings:	86.100 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	04/24/1990	Findings:	75.400 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04/24/1990	Findings:	14.500 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	04/24/1990	Findings:	11.100 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		
Sample Collected:	04/24/1990	Findings:	4.400 MG/L
Chemical:	CALCIUM		
Sample Collected:	04/24/1990	Findings:	.030 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04/24/1990	Findings:	84.000 MG/L
Chemical:	SODIUM		
Sample Collected:	04/24/1990	Findings:	3.100 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04/24/1990	Findings:	48.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	04/24/1990	Findings:	.550 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	04/24/1990	Findings:	275.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04/24/1990	Findings:	.560 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	05/10/1993	Findings:	7.000 UNITS
Chemical:	COLOR		

Sample Collected:	05/10/1993	Findings:	480.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	05/10/1993	Findings:	9.000
Chemical:	PH (LABORATORY)		
Sample Collected:	05/10/1993	Findings:	62.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	05/10/1993	Findings:	51.300 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	05/10/1993	Findings:	12.000 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	05/10/1993	Findings:	15.600 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		
Sample Collected:	05/10/1993	Findings:	6.200 MG/L
Chemical:	CALCIUM		
Sample Collected:	05/10/1993	Findings:	.030 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	05/10/1993	Findings:	89.000 MG/L
Chemical:	SODIUM		
Sample Collected:	05/10/1993	Findings:	.400 MG/L
Chemical:	POTASSIUM		
Sample Collected:	05/10/1993	Findings:	55.400 MG/L
Chemical:	CHLORIDE		
Sample Collected:	05/10/1993	Findings:	.480 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	05/10/1993	Findings:	280.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	05/10/1993	Findings:	11.500 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/10/1993	Findings:	.270 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	01/05/1994	Findings:	2.110 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	01/05/1994	Findings:	2.920 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/05/1994	Findings:	10.600 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/12/1994	Findings:	3.400 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	05/25/1994	Findings:	.500 UNITS
Chemical:	COLOR		
Sample Collected:	05/25/1994	Findings:	460.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	05/25/1994	Findings:	8.800
Chemical:	PH (LABORATORY)		
Sample Collected:	05/25/1994	Findings:	71.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	05/25/1994	Findings:	77.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	05/25/1994	Findings:	5.000 MG/L
Chemical:	CARBONATE ALKALINITY		

Sample Collected:	05/25/1994	Findings:	15.000 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		
Sample Collected:	05/25/1994	Findings:	5.900 MG/L
Chemical:	CALCIUM		
Sample Collected:	05/25/1994	Findings:	85.000 MG/L
Chemical:	SODIUM		
Sample Collected:	05/25/1994	Findings:	50.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	05/25/1994	Findings:	.500 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	05/25/1994	Findings:	7.000 UG/L
Chemical:	ARSENIC		
Sample Collected:	05/25/1994	Findings:	280.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	05/25/1994	Findings:	.100
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	05/25/1994	Findings:	3.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/25/1994	Findings:	.400 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	07/25/1994	Findings:	3.190 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	07/25/1994	Findings:	4.850 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	09/13/1994	Findings:	3.830 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	09/13/1994	Findings:	5.010 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04/16/1996	Findings:	3.000 UNITS
Chemical:	COLOR		
Sample Collected:	04/16/1996	Findings:	580.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04/16/1996	Findings:	9.100
Chemical:	PH (LABORATORY)		
Sample Collected:	04/16/1996	Findings:	51.300 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	04/16/1996	Findings:	43.500 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04/16/1996	Findings:	9.400 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	04/16/1996	Findings:	420.000 UG/L
Chemical:	NITRITE (AS N)		
Sample Collected:	04/16/1996	Findings:	23.800 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		
Sample Collected:	04/16/1996	Findings:	9.500 MG/L
Chemical:	CALCIUM		
Sample Collected:	04/16/1996	Findings:	.020 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04/16/1996	Findings:	114.000 MG/L
Chemical:	SODIUM		

Sample Collected:	04/16/1996	Findings:	.600 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04/16/1996	Findings:	74.800 MG/L
Chemical:	CHLORIDE		
Sample Collected:	04/16/1996	Findings:	.370 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	04/16/1996	Findings:	530.000 UG/L
Chemical:	IRON		
Sample Collected:	04/16/1996	Findings:	340.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04/16/1996	Findings:	17.700 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	04/16/1996	Findings:	1.300 NTU
Chemical:	TURBIDITY (LAB)		

19
SE
1/2 - 1 Mile
Higher

FED USGS **USGS0135300**

Agency:	USGS	Site ID:	354416119142101
Site Name:	025S025E23R002M		
Dec. Latitude:	35.73773		
Dec. Longitude:	-119.24011		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	305.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19580218	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1958-02-18	120.20	

20
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS0135404**

Agency:	USGS	Site ID:	354535119145001
Site Name:	025S025E14H001M		
Dec. Latitude:	35.75968		
Dec. Longitude:	-119.24816		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	310.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19561119	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1956-11-19	139.50	

21
SSW
1/2 - 1 Mile
Lower

FED USGS **USGS0135218**

Agency:	USGS	Site ID:	354407119153301
Site Name:	025S025E22R001M		
Dec. Latitude:	35.73523		
Dec. Longitude:	-119.26011		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	297.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19510101	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 0

22
WSW
1/2 - 1 Mile
Lower

FED USGS **USGS0135321**

Agency:	USGS	Site ID:	354432119155501
Site Name:	025S025E22F001M		
Dec. Latitude:	35.74218		
Dec. Longitude:	-119.26733		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	292.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19380601	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	112ALAEC		
Aquifer type:	Not Reported		
Well depth:	197		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1938-06-01	75.00	

23
North
1/2 - 1 Mile
Higher

FED USGS **USGS0135476**

Agency:	USGS	Site ID:	354538119150701
Site Name:	025S025E14F001M		
Dec. Latitude:	35.76051		
Dec. Longitude:	-119.25289		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	304.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19590302	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	Not Reported		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1959-03-02	129.20	

24
NW
1/2 - 1 Mile
Lower

FED USGS **USGS0135467**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency:	USGS	Site ID:	354531119153801
Site Name:	025S025E15J001M		
Dec. Latitude:	35.75856		
Dec. Longitude:	-119.2615		
Coord Sys:	NAD83		
State:	CA		
County:	Kern County		
Altitude:	295.00		
Hydrologic code:	18030012		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	19521017	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	Not Reported		
Aquifer type:	Not Reported		
Well depth:	509		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1952-10-17	125.60	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zip	Total Sites	> 4 Pci/L	Pct. > 4 Pci/L
93215	2	0	0.00

Federal EPA Radon Zone for KERN County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for KERN COUNTY, CA

Number of sites tested: 94

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.422 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

California Drinking Water Quality Database
Source: Department of Health Services
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations for District 2, 3, 5 and 6
Source: Department of Conservation
Telephone: 916-323-1779

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

THE TWINING LABORATORIES, INC.
EST. 1898
ANALYTICAL CHEMISTRY • ENVIRONMENTAL SERVICES
GEOTECHNICAL ENGINEERING • SAMPLING SERVICES
CONSTRUCTION INSPECTION & MATERIALS TESTING

May 4, 2005

E01406.02

Mr. Geary Coats
Coats Consulting Company
650 Lighthouse Avenue, Suite 210
Pacific Grove, California 93950

RE: Limited Phase II Assessment, Property Southwest of Woollomes Road and Garzoli Avenue, Delano, Kern County, California (Site)

Dear Mr. Coats:
The Twining Laboratories, Inc. (Twining) appreciates the opportunity to submit this report for a limited Phase II investigation and to document waste disposal services at the above referenced site (Site). This report was prepared at your request and presents the project history and the purpose and scope of the investigation. The limitations of our work and the client's responsibilities are also discussed. A Site location showing the location of the Site is included as Drawing 1.

PROJECT HISTORY

On behalf of Coats Consulting Company, Twining performed a Phase I at the approximate 45 acre property located on Parcels 521-050-01, 02, 03, 04, 05, 08, 09, and 10 in the city of Delano, Kern County, California. This Phase I was performed during June, July and August 2004.

The Phase I identified the following environmental conditions related to the Site:

1. A portion of Parcel 5 was formerly used as a wrecking yard and shop. Wrecking yards typically handle, store, and dispose of hazardous waste fluids, batteries, and metals.

2. Waste oils and fluids were observed in 5-gallon plastic containers (unsealed) within the yard area of the former wrecking yard.

3. A Storm water retention basin is located on the eastern portion of the site. 55-gallon drums were noted within the basin (former contents unknown).

4. A plywood floor within a generator storage room on Parcel 2 appears stained from gasoline spills. Additionally, minor soil staining was observed beneath the 55-gallon waste oil drums and a nearby aboveground storage tank (AST) at this facility.

5. A former truck stop diesel fueling station was located on Parcel 8 in the general location of the current Pioneer Motel at 1001 Garzoli Avenue. Building permits reviewed for the former truck stop indicate that two tanks were removed and the excavations were backfilled with fill soil. No information is available regarding investigations or possible releases associated with the former truck stop. The former use as a fueling station presents a material threat of a release of petroleum products to soil and/or groundwater below the Site.

In addition to the above noted recognized environmental conditions, the Phase I noted the following environmental concerns associated with the Site:

6. A non-operational domestic water well exists at the northwest corner of the Site. Twining recommends that the water wells not in operation or intended to be used in the future should be properly abandoned.

7. Septic systems are believed to have formerly existed at the Site in association with the residences along Woollomes Road. Twining recommended proper abandonment of any septic systems found during demolition of the residences or during development of the Site.

8. A subsurface vault was observed east of the wrecking yard shop. Twining recommended further investigation in order to determine the former use of the vault; and

9. A pipe of unknown origin extends approximately 10-feet vertically from the ground surface in Parcel 5.

An additional issue which is not considered an environmental concern but is rather a development concern is the location of the former McFarland-Delano Landfill and the restrictions and/or conditional use permits with respect to any established buffer zones.

WORK SCOPE OF THE LIMITED PHASE II ASSESSMENT

The investigation included a geophysical survey to locate the reported UST area in the vicinity of the structure located at 1001 Garzoli Avenue in Parcel 8. Additionally, the investigation consisted of collecting near surface and subsurface soil samples at various locations identified in the Phase 1 investigation. The soil samples were analyzed to determine if petroleum product constituents (PPCs), volatile organic constituents, and/or hazardous concentrations of metals exist at these areas of concern. Additionally, Twining coordinated the appropriate disposal of the various waste oil drums/containers and tires located on the subject Site. The work was performed under the direction of a licensed professional California-registered geologist. Twining performed field and laboratory activities according to our Standard Operating Procedures (SOPs). A copy of Twining's SOPs are included as Appendix A.

Geophysical Survey: On March 10 and 11, 2005 Spectrum Geophysics (Spectrum) conducted a geophysical survey at 1001 Garzoli Avenue (Parcel 8) to locate evidence of the reported fuel USTs and/or remaining product piping. A geophysical survey was also conducted in Parcel 5 to determine the extent and origin of the pipe of unknown use which extends approximately 10-feet vertically from the ground surface. Based on the results of the geophysical survey, Spectrum identified three anomalies in the parking lot to the structure in Parcel 8. Location of Parcel 5 and 8 and the anomalies are depicted on Drawing 2. Twining recommends drilling and soil sampling utilizing hollow-stem drilling technologies at these locations to determine the evidence of a leaking UST or leaking product line(s) (if any). The geophysical survey in Parcel 5 by Spectrum could not detect the presence of a underground metallic line extending from the pipe of unknown use. Technologies used by Spectrum could not determine if the pipe was connected to a concrete or clay pipe, as used in an irrigation system. This pipe could be a vent pipe for an irrigation system, but further investigation must be undertaken to make this determination. Location of the pipe is depicted on Drawing 2. A copy of Spectrum's geophysical report is included as Appendix B.

Soil Sampling: Four areas of concern exist at the site. For all soil sampling, soil borings were drilled using standard hand auger sampling equipment. The soil samples were obtained by hand augering to the required depth below Site grade (bsg) and driving a stainless steal tube into the soil at the bottom of the boring with a slide-hammer. The ends of sample sleeves were sealed with Teflon ® tape and plastic caps. Each soil sample was labeled with the sampler's name, designation identification, and time and date the sample was collected. Soil samples were placed in an ice chest and cooled with Blue Ice ®. Soil samples were transported under proper chain of custody (COC) protocols to a California State certified laboratory for analyses for COCs. Copies of chain-of-custody documentation and certified analytical reports are included in Appendix C. The four areas of concern are listed below.

Parcel 9 (Storm Water Retention Basin): Twining drilled four soil borings to a planned depth of 5 feet bsg in the vicinity of the storm retention basin. Location of the storm retention basin is depicted on Drawing 2. Two borings (S1 and S2) were drilled at the location of the 55-gallon drums and two borings (S3 and S4) were drilled at the bottom of the retention pond. Soil samples were collected at 1, 3, and 5 feet BSG from each soil boring. The samples collected at a depth of 1 foot were analyzed for total recoverable petroleum hydrocarbons (TRPH), volatile organic constituents, and for selected metals including cadmium, chromium, lead, nickel, and zinc. Analytical results for cadmium, chromium, lead, nickel, and zinc were not detected at or above laboratory reporting limits or below 10 times the applicable soluble threshold limit concentrations (STLC). The laboratory analytical results for TRPH of the soil sample collected at 1 foot bsg in borings S1, S2, S3, and S4 are14 milligrams per kilogram (mg/kg), 12 mg/kg, none detected, and none detected, respectively. Toluene and xylene were detected in boring S1@1FT at concentrations of 0.0032 mg/kg and 0.0061 mg/kg, respectively. Toluene was detected in boring S4@1FT at a concentration of 0.0012 mg/kg. TRPH was detected in boring S2@5FT at a concentration of 0.0012 mg/kg. Analytical results of TRPH and benzene, toluene, ethylbenzene, and xylene (BTEX) for borings S1 through S4 have been tabulated and are presented in Table 1.

Parcel 2: The plywood floor within a generator storage room on Parcel 2 appears stained from gasoline spills. Additionally, minor soil staining was observed beneath 55-gallon waste oil drums and nearby 500-gallon AST at this facility. Twining drilled one soil boring beneath the plywood floor (S7) and two soil borings in the area of the waste oil drums and AST location (S5 and S6). Soil samples were collected at 1, 3, and 5 feet BSG from each soil boring. The sample collected at a depth of 1 foot from beneath the plywood floor was analyzed for total petroleum hydrocarbons - gasoline range constituents (TPH-G), BTEX, methyl tert-butyl ether (MTBE), and selected metals. Analytical results for cadmium, chromium, lead, nickel, and zinc in boring S7 at 1-feet were not detected at or above laboratory reporting limits or below 10 times the applicable STLC. The laboratory analytical results for TPH-G, BTEX, and MTBE were none detected for this sample.

The sample collected at a depth of 1 foot in the vicinity of the waste oil drums (S6) and the AST (S5) were analyzed for TRPH and for selected metals including cadmium, chromium, lead, nickel, and zinc. Analytical results for cadmium, chromium, lead, nickel, and zinc in borings S5 and S6 at 1-foot were not detected at or above laboratory reporting limits or below 10 times the applicable STLC. The laboratory analytical results for TRPH were none detected for these samples. Analytical results of TRPH, TPH-G, BTEX and MTBE for borings S5 through S7 have been tabulated and are presented in Table 2.

Parcel 5 (Wrecking Yard): A portion of Parcel 5 was formerly used as a wrecking yard and shop. Wrecking yards typically handled, stored, and disposed of hazardous waste fluids, batteries, and metals. Waste oils and fluids were also observed in 5-gallon plastic containers (unsealed) within the wrecking yard area. Twining drilled three soil borings (S8, S9, and S10) to five feet bgs in the areas of the waste oil containers and areas of stressed vegetation identified in the Phase I investigation. Soil samples were collected at 1, 3, and 5 feet BSG from three soil boring locations. The samples collected at a depth of 1 foot from each boring were analyzed for TRPH and selected metals including cadmium, chromium, lead, nickel, and zinc. Analytical results for cadmium, chromium, lead, nickel, and zinc were not detected at or above laboratory reporting limits or below 10 times the applicable STLC. The laboratory analytical results for TRPH are none detected, 12 mg/kg, 24mg/kg, respectively. The deeper samples (3 and 5-feet bsg) for borings S9 and S10 were analyzed for TRPH and the results are none detected. Analytical results for TRPH for borings S8 through S10 have been tabulated and are presented in Table 3.

Removal of Subsurface Concrete Vault: Twining coordinated the removal of the subsurface concrete vault located east of the wrecking yard (Parcel 5) with Statewide Excavation. Location of the vault is depicted on Drawing 2. The round concrete vault was approximately 12 foot in diameter and extended approximately 12 feet below the ground surface. Statewide Excavation uncovered, removed and disposed of the concrete vault. There were no obvious hydrocarbon or pungent odors or discoloration on the concrete vault or in the soils surrounding the vault. A Twining geologist collected one soil sample (S-Vault) approximately 3-feet below the vault for laboratory analysis. The soil sample was analyzed for TRPH, metals, and volatile organic constituents. The laboratory analytical results for TRPH were none detected. Analytical results for cadmium, chromium, lead, nickel, and zinc were not detected at or above laboratory reporting limits or below 10 times the

applicable STLC in the soil sample obtained at this location. Toluene and xylene were detected in the soil sample obtained at this location at concentrations of 0.0016 mg/kg and 0.0036 mg/kg, respectively. The excavation was backfilled with Site soils and compacted by Statewide Excavation.

WASTE DISPOSAL SERVICES

Twining coordinated the appropriate disposal of the on Site waste oil, associated oil containers, and tires located at the subject Site. It is estimated that approximately 165 gallons of waste oil and up to 200 tires was removed from the Site. Statewide Excavation was retained for the work. At the time of the field exploration, the tires and waste oil at the wreaking yard area had been already removed by others. The 55-gallon drums and debris at the storm retention basin were collected by Statewide Excavation. Several tires were also found throughout the Site and were also collected by Statewide Excavation. These waste material were removed from the Site and was disposed at an appropriate disposal facility under appropriate waste manifest documentation.

DISCUSSION

The laboratory analytical results of the confirmation samples indicate TRPH concentrations in soil samples obtained during this investigation ranged from none detected to 30 mg/kg. Preliminary Remediation Goals (PRGs) established by Region 9 of the U.S. Environmental Protection Agency (U.S.EPA) are not inclusive of TRPH. The California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region prepared an Interim Final report in December 2001 titled "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater." Volume 2, Background Documentation for the Development of Tier 1 Soil and Groundwater Screening Levels, establishes a risk-based screening level for TRPH (residual fuels) of 1,000 mg/kg. TRPH concentrations identified in the samples obtained during this investigation are below the listed screening levels.

Analytical results for soil samples obtained during this investigation for cadmium, chromium, lead, nickel, and zinc were not detected at or above laboratory reporting limits or were below 10 times the STLC as identified in the California Code of Regulations (CCR) Title 22, section 66261.

On Site waste oil, associated oil containers, and tires located at the subject Site identified in the Phase I report were removed from the Site by others or by Statewide Excavation.

LIMITATIONS AND NOTIFICATIONS

The purpose of a geologic/hydrogeologic study is to reasonably characterize existing site conditions based on the geology/hydrogeology of the area. In performing such a study, it is understood that a balance must be struck between a reasonable inquiry into the site conditions and an exhaustive analysis of each conceivable environmental characteristic. No investigation is thorough enough to describe all geologic/hydrogeologic conditions of interest at a given site. The estimated costs presented herein were derived from Twining's experience on previous similar projects. In the event portions of the investigation reveal conditions which deviate from the assumptions outlined herein, additional work may be required. Additional work and/or unforeseeable conditions, not summarized in the cost estimate, will be charged on a "time and materials" basis; your prior approval will be requested should this occur.

Conditions of interest may exist at the site that cannot be identified by visual observation alone. Where subsurface exploratory work is performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions or unsampled locations. If conditions of interest are not identified during performance of the work, such a finding should not be construed as a guarantee that such conditions do not exist at the site. No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the property. Performance of this investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions with a property.

The proposed work scope assumes the site will be accessible at the time work is performed. Twining shall not be responsible for damage to underground utilities or installations which are not accurately shown on site plans provided to Twining before work begins. Security of the site is the responsibility of the client.

The findings of the site investigation may necessitate remedial action. In addition, the owner, operator or person in responsible charge of the site may have a statutory or regulatory reporting requirement. Finally, our firm may have an obligation to report our findings, if the owner, operator or person in responsible charge fails to report, and our firm recognizes that public health, safety or welfare may be threatened by a hazardous condition identified on the site.

Our professional services were performed, our findings obtained, and our conclusions prepared consistent with generally-accepted environmental assessment practices in Kern County California at the time the work is performed. Our findings and the resulting report are for the sole use of our client and appropriate government regulatory agencies. Any use of our report by a third party would be at that third party's sole risk.

CLOSING

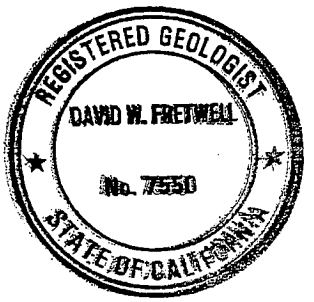
Twining appreciates the opportunity to present this cost estimate/proposal to you. If you should have any questions regarding the information contained herein, please do not hesitate to contact our Fresno office at (800) 268-7021.

Respectfully submitted,

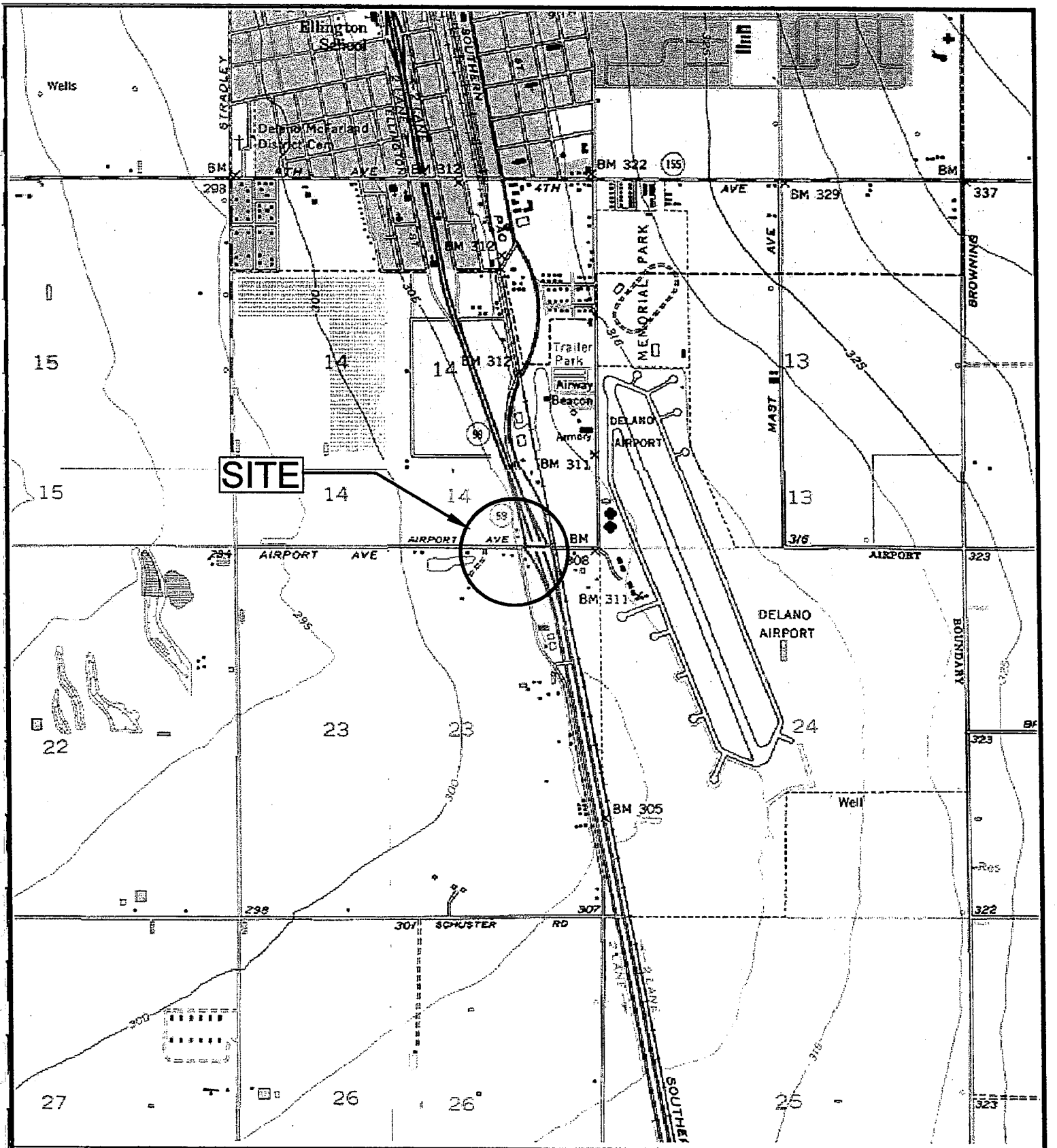
THE TWINING LABORATORIES, INC.
Environmental and Geological Services Division

D. W. Fretwell

David W. Fretwell, RG No. 7550
Project Geologist



DRAWINGS



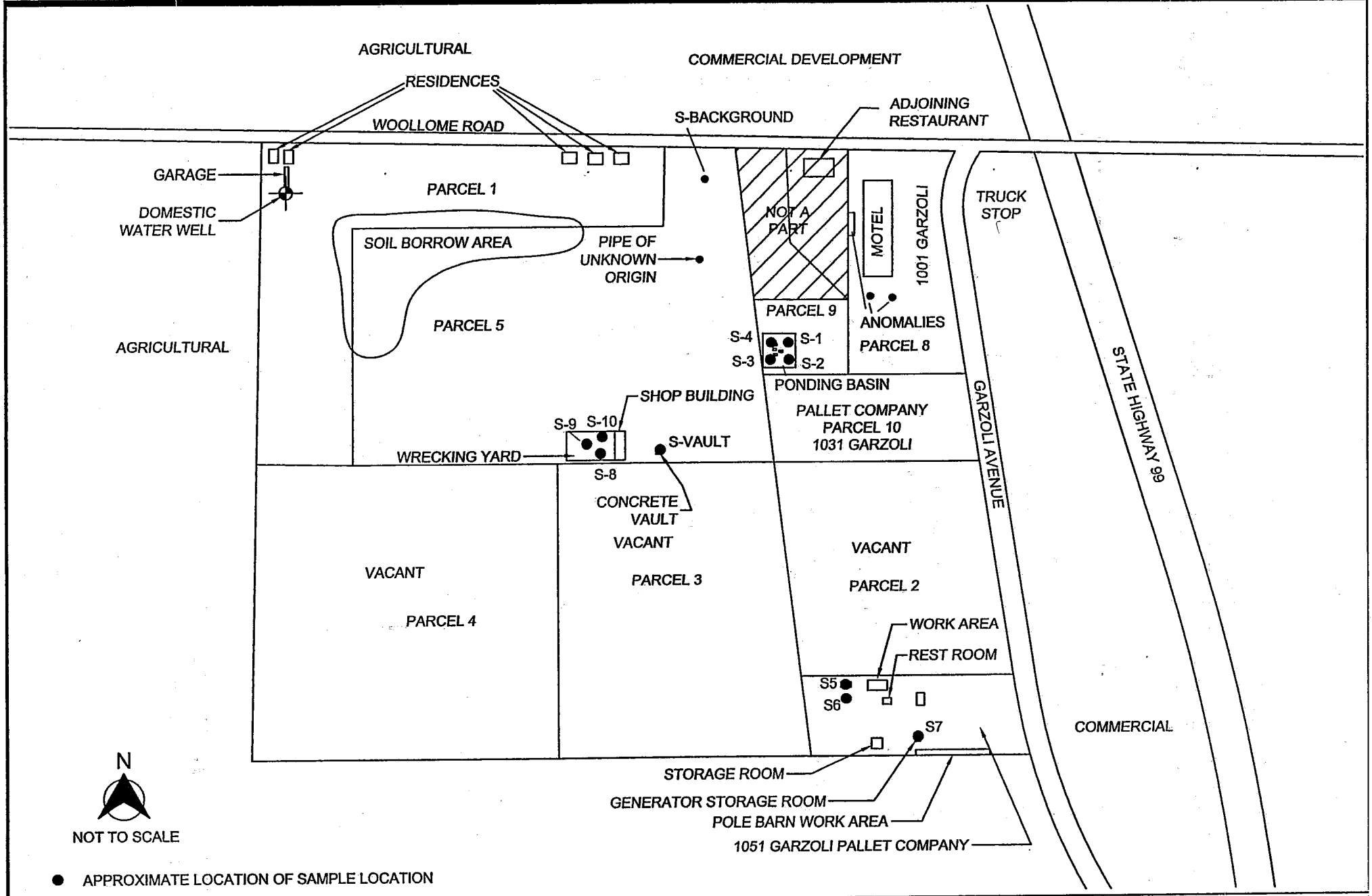
SOURCE: U.S.G.S. TOPOGRAPHIC MAP, 7 ½ MINUTE SERIES
DELANO WEST, CALIFORNIA QUADRANGLE, PHOTOREVISED 1969

0 2000
APPROXIMATE SCALE IN FEET

SITE LOCATION MAP
1001 GARZOLI AVENUE
DELANO, CALIFORNIA

FILE NO.: 01406-01-01	DATE: 05/02/05
DRAWN BY: RM	APPROVED BY:
PROJECT NO. E01406.01	DRAWING NO. 1

THE TWINING LABORATORIES, INC.
EST.1898
FRESNO/MODESTO/VISALIA/BAKERSFIELD/MONTEREY



SITE PLAN
1001 GARZOLI AVENUE
DELANO, CALIFORNIA

FILE NO. 01406-01-01	DATE DRAWN: 05/02/05
DRAWN BY: RM	APPROVED BY:
PROJECT NO. E01406.01	DRAWING NO. 2

THE TWINING LABORATORIES, INC.
EST.1898
FRESNO/MODESTO/VISALIA/BAKERSFIELD/MONTEREY

TABLES

Table 1
Woollome Road and Garzoli Avenue
Summary of Analytical Results
Ponding Basin
Borings 1 through 4
Results in milligrams per kilograms (mg/kg)

Sample Identification	Sample Date	TRPH	Benzene	Toluene	Ethyl-benzene	Xylene
S1@1FT	03/10/05	14	ND	0.0032	ND	0.0061
S1@3FT	03/10/05	ND	ND	ND	ND	ND
S1@5FT	03/10/05	ND	ND	ND	ND	ND
S2@1FT	03/10/05	12	NA	NA	NA	NA
S2@3FT	03/10/05	ND	NA	NA	NA	NA
S2@5FT	03/10/05	30	NA	NA	NA	NA
S3@1FT	03/10/05	ND	ND	ND	ND	ND
S3@3FT	03/10/05	NA	NA	NA	NA	NA
S3@5FT	03/10/05	NA	NA	NA	NA	NA
S4@1FT	03/10/05	ND	ND	0.0012	ND	ND
S4@3FT	03/10/05	NA	ND	ND	ND	ND
S4@5FT	03/10/05	NA	ND	ND	ND	ND

Notes: TRPH = Total Recoverable Petroleum Hydrocarbons
ND = None detected
NA = Not Analyzed

Table 2
Woollome Road and Garzoli Avenue
Pallet Area
Borings 5 through 7
Results in milligrams per kilogram (mg/kg)

Sample Identification	Sample Date	TRPH	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylene	MTBE
S5@1FT	03/11/05	ND	NA	NA	NA	NA	NA	NA
S5@3FT	03/11/05	NA	NA	NA	NA	NA	NA	NA
S5@5FT	03/11/05	NA	NA	NA	NA	NA	NA	NA
S6@1FT	03/11/05	ND	NA	NA	NA	NA	NA	NA
S6@3FT	03/11/05	NA	NA	NA	NA	NA	NA	NA
S6@5FT	03/11/05	NA	NA	NA	NA	NA	NA	NA
S7@1FT	03/10/05	NA	ND	ND	ND	ND	0.0063	ND
S7@3FT	03/10/05	NA	NA	NA	NA	NA	NA	NA
S7@5FT	03/10/05	NA	NA	NA	NA	NA	NA	NA

Notes:
TRPH = Total Recoverable Petroleum Hydrocarbons
TPH-G = Total Petroleum Hydrocarbons as Referenced as Gasoline
MTBE = Total Petroleum Hydrocarbons as Referenced as Gasoline
ND = None detected
NA = Not Analyzed

Table 3
Woollome Road and Garzoli
Summary of analytical Results
Wreaking Yard Area
Borings 8 through 10
Results in milligrams per kilograms (mg/kg)

Sample Identification	Sample Date	TRPH
S8@1FT	03/11/05	ND
S8@3FT	03/14/05	NA
S8@5FT	03/14/05	NA
S9@1FT	03/14/05	12
S9@3FT	03/14/05	ND
S9@5FT	03/14/05	ND
S10@1FT	03/14/05	24
S10@3FT	03/14/05	ND
S10@5FT	03/14/05	ND

Notes: TRPH = Total Recoverable Petroleum Hydrocarbons
ND = None detected
NA = Not Analyzed

APPENDIX A

THE TWINING LABORATORIES, INC

STANDARD OPERATING PROCEDURES

This appendix contains the standard operating procedures used by Twining in performing the investigation. Twining observes these procedures in order to obtain consistent, reliable data.

1. Standard Operating Procedures for Surface Soil Sampling:

Soil samples are collected by removing any surface debris at the proposed sampling location such that the soil surface is exposed. A brass or stainless steel ring sampling container is driven into the soil using a wooden mallet so that the sampling container is completely filled. The sampling container is then removed from the surrounding soil by extraction with a tool such as a shovel, taking care not to disturb the soil in the sample container. Samples intended for chemical analyses are sealed with Teflon® tape and plastic end caps, labeled, placed on ice, and delivered to a laboratory, along with chain-of-custody documentation. Field activities are performed under the direction of a California registered geologist or certified professional engineer.

Drilling and sampling equipment are thoroughly cleaned before, during and after each use. Cleaning procedures are described in a subsequent paragraph.

The soil samples are field screened for evidence of volatile organic chemicals (VOCs) and/or other contaminants. The field screening consists of visual observation for staining or free fluids and unusual odor.

2. Standard Operating Procedures for Hand Auger Soil Sampling:

Subsurface assessment permits are filed with the appropriate government agency before conducting field operations. Underground Service Alert is notified at least 48 hours prior to initiation of field activities. Field activities are performed under the direction of a California registered geologist or certified professional engineer.

Soil borings are drilled using hand held auger equipment consisting of an auger attached to an extendable rod and handle. The auger is advanced into the soil to a point at which a soil sample is desired. At this point, the auger is removed from the boring and replaced with a six-inch sampler lined with either a brass or stainless steel liner and the handle replaced with a slide hammer. The sampler is then driven into the soil a minimum of six inches and retrieved from the boring. Samples intended for chemical analyses are sealed with Teflon® tape and plastic end caps, labeled, placed on ice, and delivered to a laboratory, along with chain-of-custody documentation.

Drilling and sampling equipment are thoroughly cleaned before, during and after each use. Cleaning procedures are described in a subsequent paragraph.

The soil samples are field screened for evidence of volatile organic chemicals (VOCs) and/or other contaminants. The field screening consists of visual observation for staining or free fluids and unusual odor. The soil boring will be abandoned by grouting with either bentonite or a sand-cement slurry.

Soil cuttings generated during drilling are containerized in United States Department of Transportation (DOT)-approved drums, or placed on and covered with plastic sheeting, and stored on site in an area inaccessible to the general public. Twining can recommend an appropriate method for disposition of the cuttings based on the soil sample analytical results. Disposal will be the responsibility of the client.

3. Standard Operating Procedures for Equipment Decontamination:

Proper decontamination procedures reduce the potential for: cross-contamination among sample locations; and introduction of contamination from outside sources.

Sampling equipment and any tools, measuring devices, or other equipment which will contact soil, groundwater, or any media being assessed will be washed in a low-phosphate soap and water solution, and rinsed in clean water before each use. The type of soap used will depend upon project requirements. Decontamination rinseate will be containerized for later disposal. Generally, disposal will be the client's responsibility.

4. Standard Operating Procedures for Sample Handling and Chain-of-Custody:

Records are developed for samples which include: sampling date, sample type, location, job number, name of sampling personnel, and method of preservation. Each sample container is labeled immediately following collection. Chain-of-custody protocol, as described in United States Environmental Protection Agency, 1986, Test Methods for Evaluating Solid Waste, SW-846, Third Edition, is followed. Samples will be maintained at approximately 4°C. Upon arrival at the laboratory, the samples will be preserved for analysis as appropriate.

Samples may be delivered to Twining's chemistry laboratory in Fresno, California. The Twining representative in charge of the field work transport or direct the transportation of the samples and custody forms to the laboratory, where the samples are transferred to the sample control department. A receiving clerk, or an authorized analyst, signs the custody forms, present a duplicate copy to the Twining representative, and transfers the samples to a laboratory analyst. The laboratory manager retains possession of the custody forms during analyses of the samples.

The laboratory manager's responsibilities include monitoring the sample integrity within the laboratory. This involves assigning each sample a laboratory number and maintaining cross-reference between the sample's field and laboratory identifications. The analysts' responsibilities include maintaining accurate records of the samples analyzed along with the analytical data produced. This involves labeling chromatograms and maintaining the laboratory numbers on sub-samples taken from the submitted samples, labeling glassware used in the analyses, and properly labeling sample extract containers with each sample's laboratory number.

Following analyses, the samples are transferred to a limited-access storage room. Chain-of-custody forms, chromatograms, and other pertinent information are filed for future reference. Splits of samples analyzed are kept for 30 days. Samples containing hazardous concentrations will be returned to the client for disposal.

5. Standard Operating Procedures for Laboratory Quality Assurance/Quality Control:

These laboratory QA/QC procedures were developed to reduce outside interferences during analyses of

samples. The laboratory director is responsible for creating and maintaining the program. General QA/QC procedures follow:

- Analytical instruments are serviced on a regular basis to assure accurate calibration;
- Organic-free water is monitored daily for quality;
- Gas chromatographs are calibrated daily;
- Method blanks are run to check whether the glassware and reagents are free of interference from chemicals that would invalidate the analyses;
- Standards are prepared using the applicable reference materials;
- Matrix spikes are analyzed in duplicate to validate the accuracy and precision of the method; and
- During groundwater sampling, a travel blank sample consisting of organic-free water is prepared and containerized in the laboratory, transported to the site, and handled and transported in the same manner as the groundwater samples.

6. **Standard Operating Procedures for Excavations:**

Tarpaulins will be used to cover the stockpiled material until the material is backfilled or transported off-site.

Upon completion of excavation activities, the depth to the base of the excavation below ground surface (bgs) will be measured and recorded. Soil within the excavation will be observed for descriptive purposes. The dimensions of the excavation will be measured and recorded, and the excavation may be photo-documented.

As required, soil samples will be collected from the excavation per the lead regulatory agency approved sampling plan requirements.

7. **Standard Operating Procedures for Air Monitoring During Excavations:**

Air monitoring will be conducted at a minimum frequency of one reading per every fifteen minutes. Air monitoring will be conducted on soils at a distance of no more than three inches above the soil and at breathing zones for personnel in working areas. A reading will be taken no later than three minutes after each load of soil is excavated. Frequency of readings may be increased or decreased dependent on air monitoring results.

8. **Standard Operating Procedures for Decontamination Rinseate, Monitoring Well Purge Water, and Soil Cuttings Disposal:**

The soil cuttings generated by drilling operations are retained on site, and either covered by plastic sheeting or containerized in United States Department of Transportation (DOT)-approved drums. The drilling equipment decontamination rinseate is also stored in drums. Water purged from monitoring wells is containerized in drums if contamination is known or suspected. Drums containing soil, rinseate, and purged water are sealed and temporarily stored on site at a location remote to the public. Each drum is labeled to identify its contents. Disposal of these wastes will be the responsibility of the client. The client will be informed that the wastes must be disposed in accordance with applicable Federal, State, and local regulations.

APPENDIX B

Geophysical Report

SPECTRUM
GEOPHYSICS
2907 W. Empire Avenue
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Results of Geophysical Investigation

Pioneer Motel
1001 Garzoli Road
Delano, California

Prepared for: **Twining Laboratories, Inc**
Fresno, California

Dates of Investigation: March 9, 10, and11, 2005

Prepared by:

RJ Weed, Senior Project Manager
Spectrum Geophysics
2907 West Empire Ave.
Burbank, CA 91504

Contents

Introduction
Methods
Results

Figure 1 Area of Geophysical Investigation, Pioneer Motel, 1001 Garzoli Road, Delano, California.

Figure 2 Contour Map of EM-61 Differential Data, Pioneer Motel, 1001 Garzoli Road, Delano, California.

Figure 3 Contour Map of EM-61 Top-Coil Data, Pioneer Motel, 1001 Garzoli Road, Delano, California.

Figure 4 Contour Map of EM-31 Quadrature Data, Pioneer Motel, 1001 Garzoli Road, Delano, California.

Figure 5 Contour Map of EM-31 In-Phase Data, Pioneer Motel, 1001 Garzoli Road, Delano, California.

Warranty:

Spectrum Geophysics was retained to conduct a geophysical investigation of the above facility to characterize the shallow subsurface. Our findings are subject to certain limitations due to site conditions and the instruments employed. We conducted this investigation in a manner consistent with our profession using similar methods. No other warranty as to the performance or deliverables is expressed or implied.

Results of Geophysical Investigation
Pioneer Motel
1001 Garzoli Road
Delano, California

Introduction

On March 9, 10, and 11, 2005, Spectrum Geophysics conducted a geophysical investigation at the Pioneer Motel located at 1001 Garzoli Road in Delano, California. The purpose of the investigation was to delineate the surface trace of detectable underground storage tanks (USTs) and/or tank cavities as well as identifying detectable utilities.

The area of investigation, as designated by David Fretwell of Twining Laboratories, Inc., was asphalt covered and measured approximately 270 by 205 feet (Figure 1).

Site interferences included a chain link fence and trash enclosure located at the southern end of the property, a sign and guardrail on the northwest corner, a sign and parking bollards on the northeast corner, and several parked cars as well as some other surface debris.

Methods

The equipment used in this investigation consisted of a Geonics EM-61 high-sensitivity metal detector, EM-31 terrain conductivity meter, a shallow-focus metal detector (M-scope), a Sensors and Software Noggin Smart Cart System ground penetrating radar (GPR) unit coupled to a 500-MHz antenna, and electromagnetic (EM) utility-locating equipment.

EM-61 High Sensitivity Metal Detector

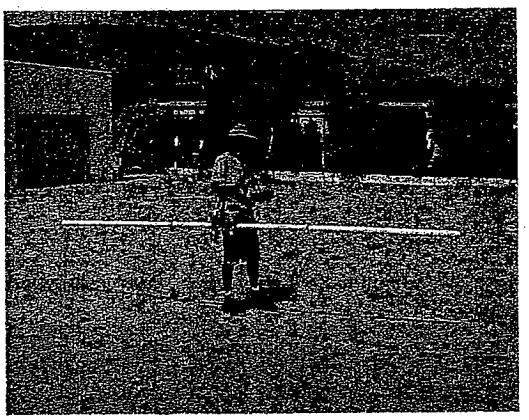
The EM-61 high-sensitivity metal detector was used in an effort to delineate areas where metallic objects (such as steel USTs and associated piping) may be buried. The EM-61 transmitter generates short pulses of electromagnetic energy that travel downward and outward and have a primary field associated with them. This energy becomes "trapped" in conductive materials and causes a secondary magnetic field to be generated in these materials. Between pulses, the receiver measures the voltage of the decay of this secondary magnetic field that is proportional to the conductivity of the subsurface materials.

EM-61 voltage readings were taken, recorded and stored in a digital polycorder at 2.5-foot intervals along north-south lines

spaced 5 feet apart within an established grid. These data were processed in the field and used to generate contour maps to assist in identifying anomalous areas that may be caused by buried metallic features of interest.

EM-31 Terrain Conductivity (TC) Meter

The EM-31 (an electromagnetic induction instrument) consists of two coils (transmitter and receiver) mounted on either end of a 12-foot-long plastic boom. An alternating current is applied to the transmitter coil, which sends a primary electromagnetic (EM) field into the ground. This primary field induces eddy currents in buried conductive material that is encountered, and these eddy currents generate a secondary magnetic field. This secondary magnetic field is measured at the receiver and compared to the primary field in terms of the component in phase with the primary field (in-phase) and the component out of phase with the primary magnetic field (the quadrature component). The out-of-phase component is converted to read conductivity in millimhos per meter.



Em-31 data acquisition (photo archives)

EM-31 data were taken, recorded and stored in a digital polycorder at 5-foot intervals along north-south lines spaced 5 feet apart within an established grid. These data were processed in the field and used to generate contour maps to assist in identifying anomalous areas that may represent features of interest.

Electromagnetic (EM) Utility Location

Passive and active EM utility-locating methods were used in an effort to identify possible sources of EM-61 and EM-31 anomalies and to delineate the surface trace of detectable underground utilities and abandoned piping.

Passive locating is possible when electrically conductive conduits are energized by ambient radio frequencies (RF) that are often produced by 50/60 cycle electrical, radio, audio, television,

communication, and other sources of RF transmissions. A receiver tuned to these frequencies can be used to locate the re-radiated signal emitted by the conductor (e.g., conduit). Several types of utilities may act as conductors of RF transmissions including metallic pipes, direct burial wire, and non-metallic piping that contains a metallic conductor such as wire.

Active locating is initiated by conducting an EM signal at a known frequency (between 8 and 200 kHz or 512 Hz for this site) on a conduit exposed at the surface. A receiver, tuned to these frequencies, is then used to locate the signal maxima (or surface trace) of the applied signal. These maxima are marked on the ground with spray paint or lumber crayon and the trend of the utility can then be observed on the ground surface.

The surface trace of a detected utility is marked on the ground with spray paint in a color code established by the American Public Works Association (APWA) (see Table 1).

Table 1: APWA Color Code

Utility	***Color***
Electric	Red
Telephone/Communication	Orange
Storm Drain/Sanitary Sewer	Green
Natural Gas	Yellow
Water	Blue
Unknown Conduit	Pink

Ground Penetrating Radar

EM-61 and EM-31 anomalies that could not be attributed to aboveground cultural features or detected underground conduits were further investigated using GPR methods. GPR data were collected over suspect areas and interpreted in the field for anomalies whose signatures might indicate the presence of features of interest.

Data collection using the Noggin GPR
(Archive photo)

A high frequency radio signal is transmitted into the ground via the antenna. As radio waves propagate into the ground, these signals are reflected off structures with differing electrical properties.

These reflected signals are then captured by the receiver and are presented as vertical profiles on the GPR unit.

The areal extents and/or surface traces of detected features were marked on the ground with spray paint.

Limitations

EM-61

The EM-61 is capable of detecting a 55-gallon drum up to a depth of 3 meters under favorable conditions. We recommend a minimum 10-foot buffer between the survey area and any metallic or metal bearing surface cultural features such as cars, metal signs, or aboveground piping which could severely compromise the quality of the data. Reliable EM-61 data cannot be collected over areas covered with reinforced concrete.

EM-31

The EM31 has a maximum depth of penetration of approximately 6 m with the bulk of the subsurface information being derived from depths of 4-7 feet. The depth at which it can detect a metal object will depend on the conductivity of the soil, local electromagnetic interference, and the amount of metal that the structure contains. For example, the diameter and wall thickness of a metallic pipe each influence the data. Additionally, the electromagnetic fields generated by the instrument produce secondary fields, not only in buried features, but also in aboveground objects, which then radiate a field that is also detected by the instrument.

GPR

The performance capability of GPR is dependent on the soil electrical conductivity at the site. If the soil conductivity is high, attenuation of the radar signal in the soil can severely restrict the maximum penetration depth of the radar signal. Under favorable conditions depth of penetration can be greater than 10 feet, however, average depths of GPR penetration in the Southwest tend to range between 3-5 feet. Soils high in clay content and moisture will have higher signal attenuation. GPR surveys should be performed in the dry season if at all possible, especially at sites located in California. Soil moisture, especially in high-clay soils, only increases the radar attenuation rates, further limiting the radar performance.

General

It should be understood that the location of subsurface objects and utilities is dependent upon the recognition of physical phenomena at the ground surface. These phenomena can be magnetic fields or electro-magnetic waves that give rise to a surface expression which in turn is interpreted as representative of subsurface objects. These waves, however, may be attenuated and/or distorted by a number of factors including soil moisture, corrosion, and proximity to other surface and subsurface facilities.

Results

One significant anomaly was identified on the EM-61 differential data and Top-Coil contour maps that could not be attributed to above ground cultural features or detected utilities. This anomaly is herein referred to as *Anomaly A.*

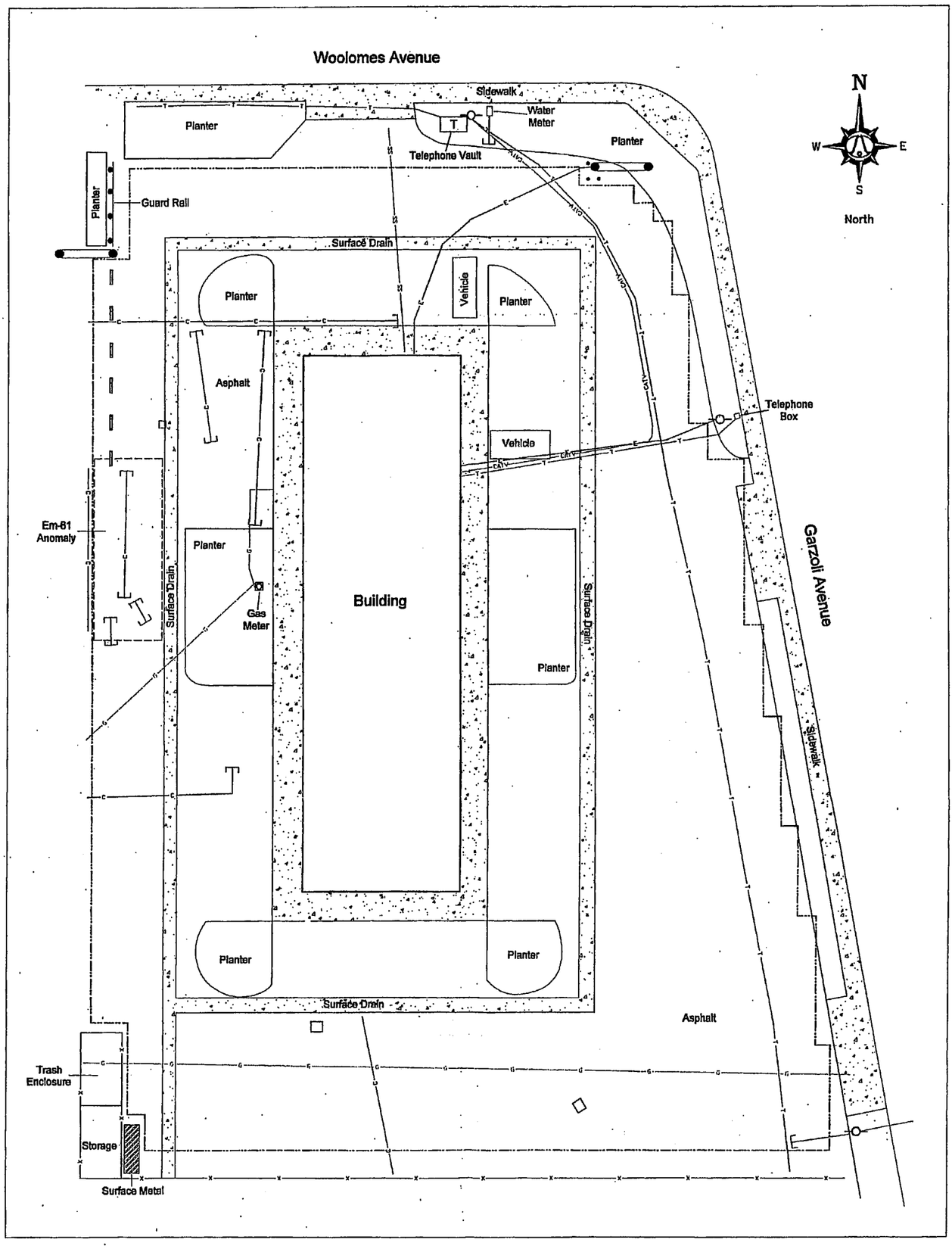
Anomaly A is located along Lines 0 to 20, and between Stations 140 to 190. Further investigation using GPR provided no further information as to a source of the anomaly. Several conduits were delineated using EM utility-locating methods. However they may not be the sole source of this anomaly.

No UST-like signatures were identified on the EM-61 data contour maps (Figures 2 and 3).

Table of EM-61/31 Anomalies with known or contributory sources:

Line	Station	Source
0-10	190-245	parking bumpers/sign
0-20	0-40	fenced storage/trash enclosure
0-40	95-100	conduit
40-45	130-170	stairs
75-80	0-35	conduit
80-140	230-270	utilities
120-125	130-170	stairs
130-170	180-205	utilities

No former UST excavation signatures were identified on the EM-31 conductivity contour maps (Figures 4 and 5).



LEGEND

E	ELECTRIC LINE
T	TELEPHONE
G	GAS
W	WATER
CATV	CABLE TELEVISION
SS	SANITARY SEWER
C	CONDUIT
X	FENCE
	TREND NOT DETERMINED
	AREA OF GEOPHYSICAL INVESTIGATION
	EM-61 ANOMALY
	M-SCOPE ANOMALY
	SIGN
	PARKING BLOCK
	BOLLARD
	UTILITY POLE

** NOT ALL BELOW GROUND FEATURES ARE REPRESENTED ON THIS MAP

Scale: (Feet)
0 10 20 40

SPECTRUM GEOPHYSICS
Revealing The Subsurface
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BURBANK, CA. 91504
Phone: (818) 566-3080 Fax: (818) 566-3585
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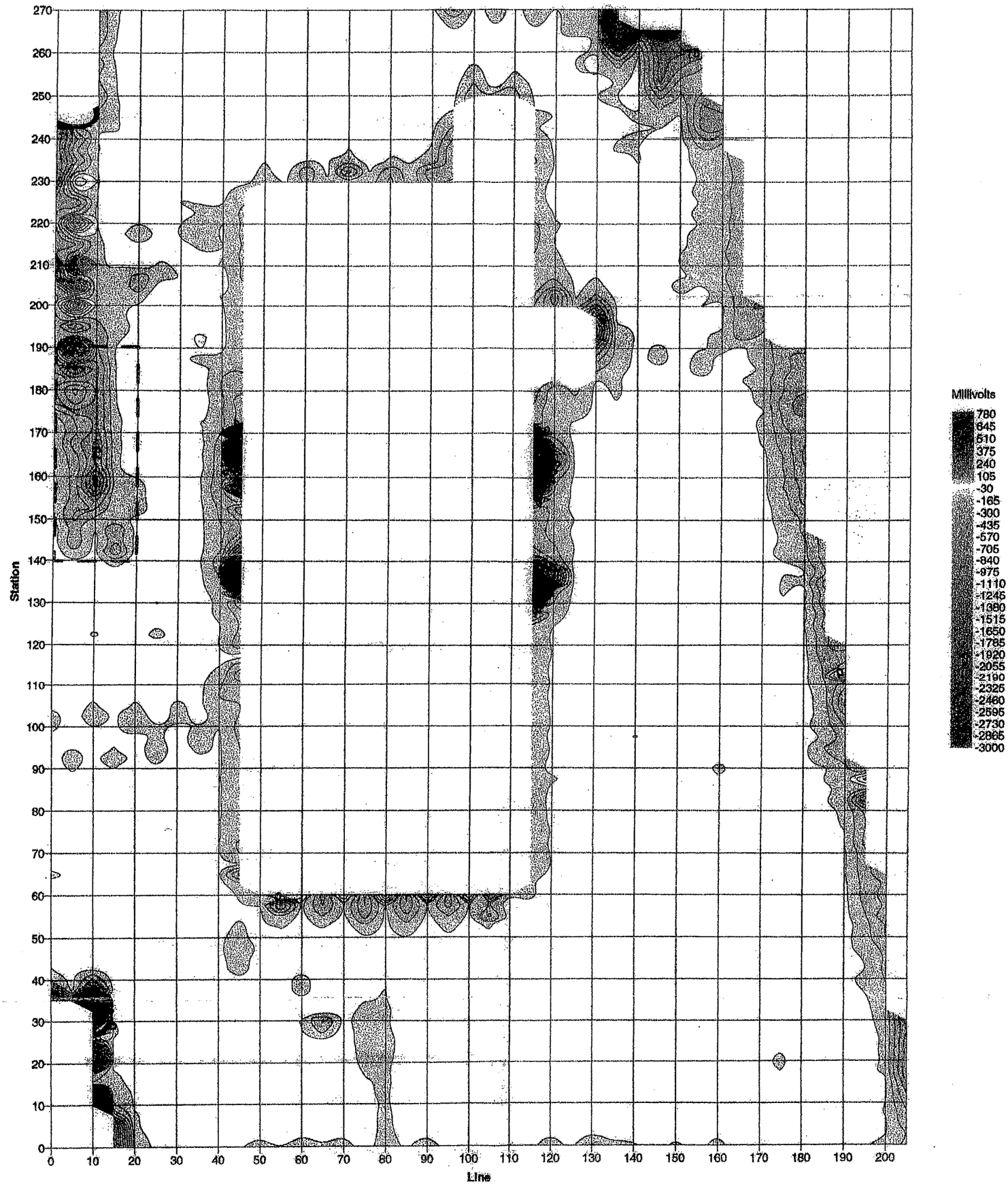
MAP	Area of Geophysical Investigation
PROJECT	Pioneer Metal 1001 Carzoli Road Delano, California
PREPARED FOR	Twining Laboratories, Inc Fresno, California
SCALE	1 inch = 20 feet
DRC BY	RJ Weed
REVIEWED BY	B. Baker
FIGURE NO.	1
PROJECT NO.	05030091R
DATE	3/16/2005

DATE PLOTTED: 3/17/2005



EM-61 Anomaly

0 10 20

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Contour Map of EM-61 Differential Data

Project: Pioneer Motel
1001 Garzoli Road
Delano, California

Fig. no. 2

Prepared for: Twining Laboratories, Inc, Fresno, California

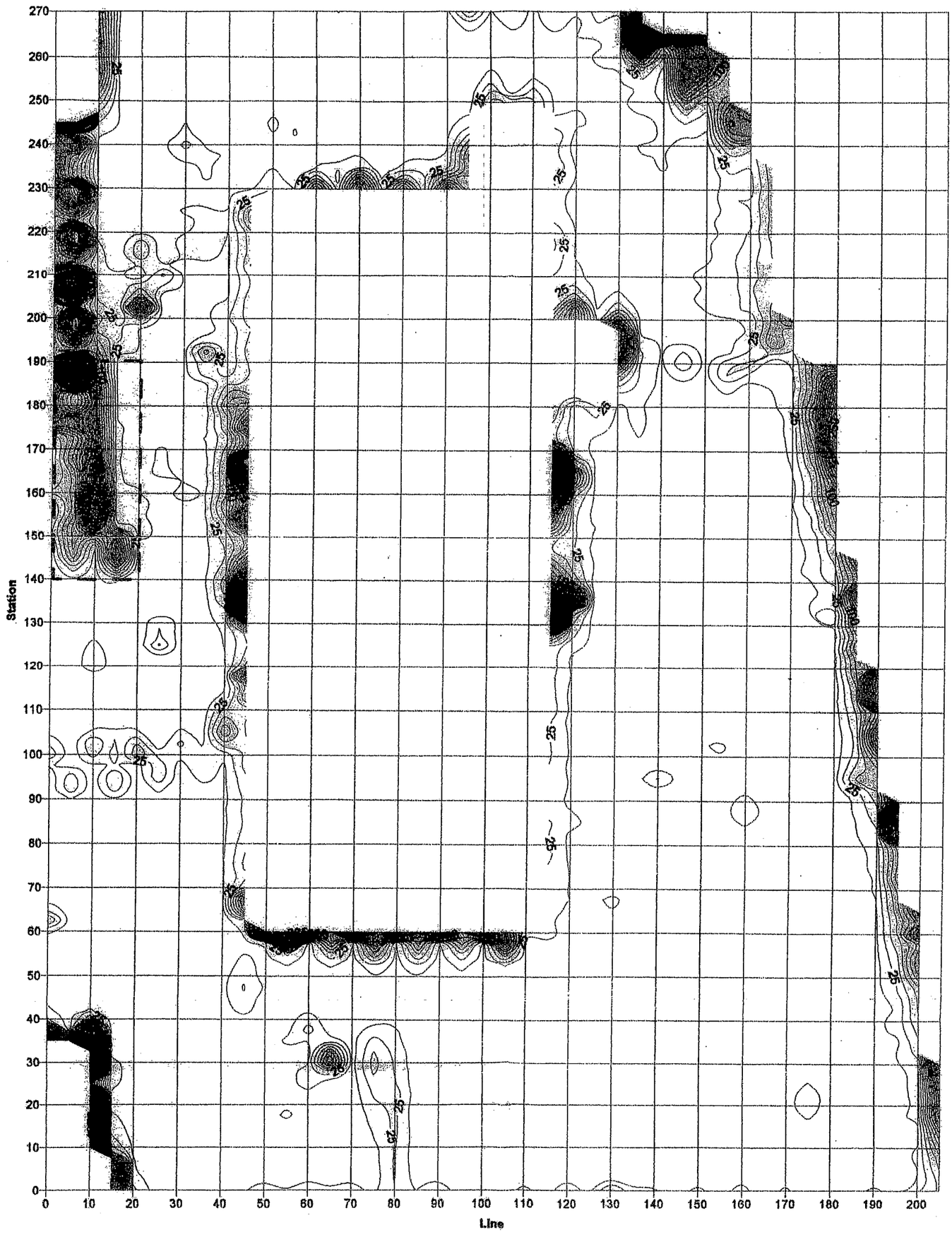
Project no. 0503091R

Scale: 1 inch = 20 feet

Drawn by: RJ Waed

Reviewed by: B Baker

Date: 3-16-2005



EM-61 Anomaly

0 10 20

N W E S

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Map: Contour Map of EM-61 Top-Coil Data

Project: Pioneer Motel
1001 Garzoli Road
Delano, California

Figure: 3

Prepared for: Twining Laboratories, Inc, Fresno, California

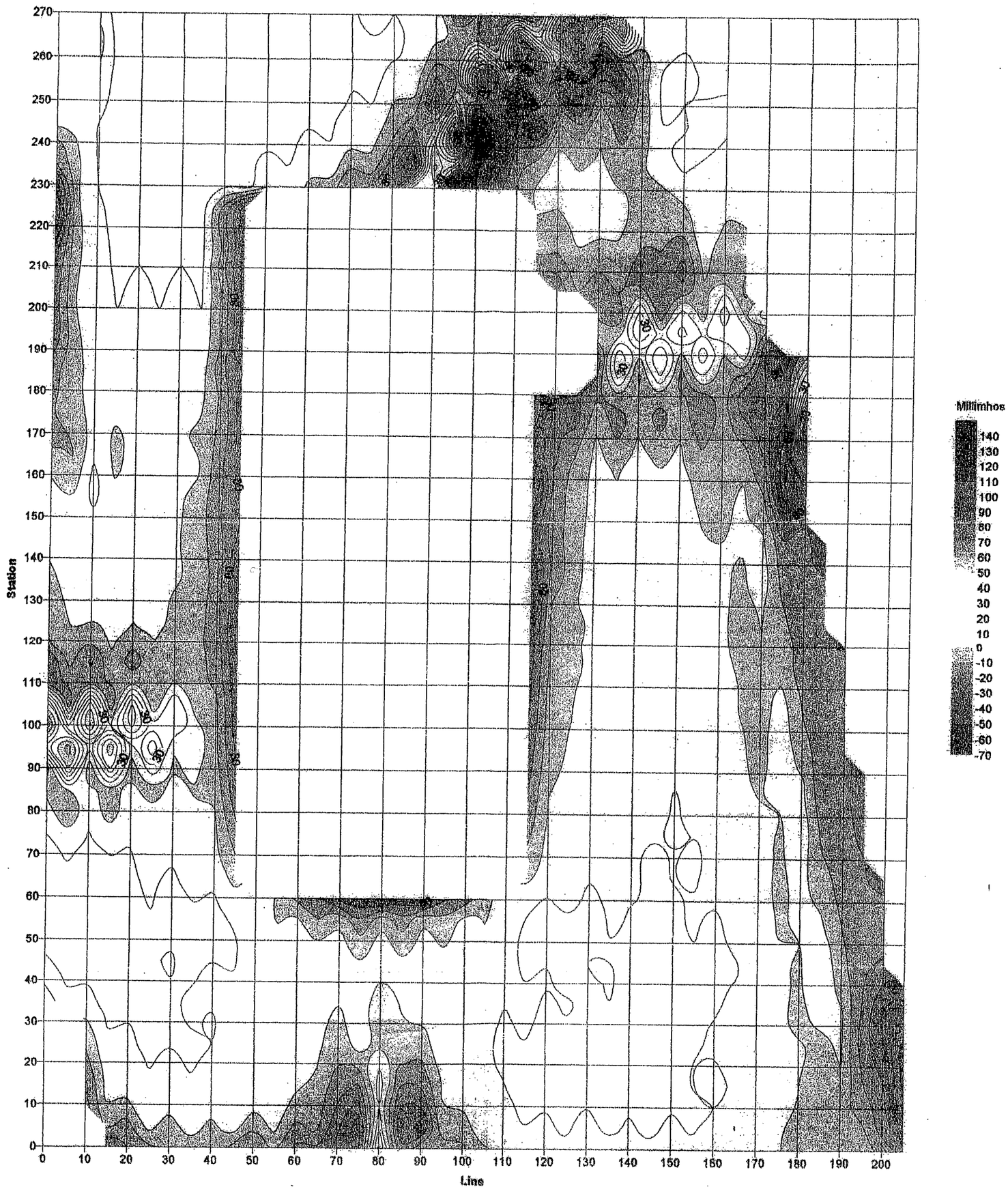
Project No.: 0503091R

Scale: 1 inch = 20 feet

Dwn by: RJ Weed

Reviewed by: B Baker

Date: 3-16-2005



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MAP: Contour Map of EM-31 Quadrature Data

Figure: 4

PROJECT: Pioneer Motel
1001 Garzoli Road
Delano, California

PREPARED FOR: Twining Laboratories, Inc, Fresno, California

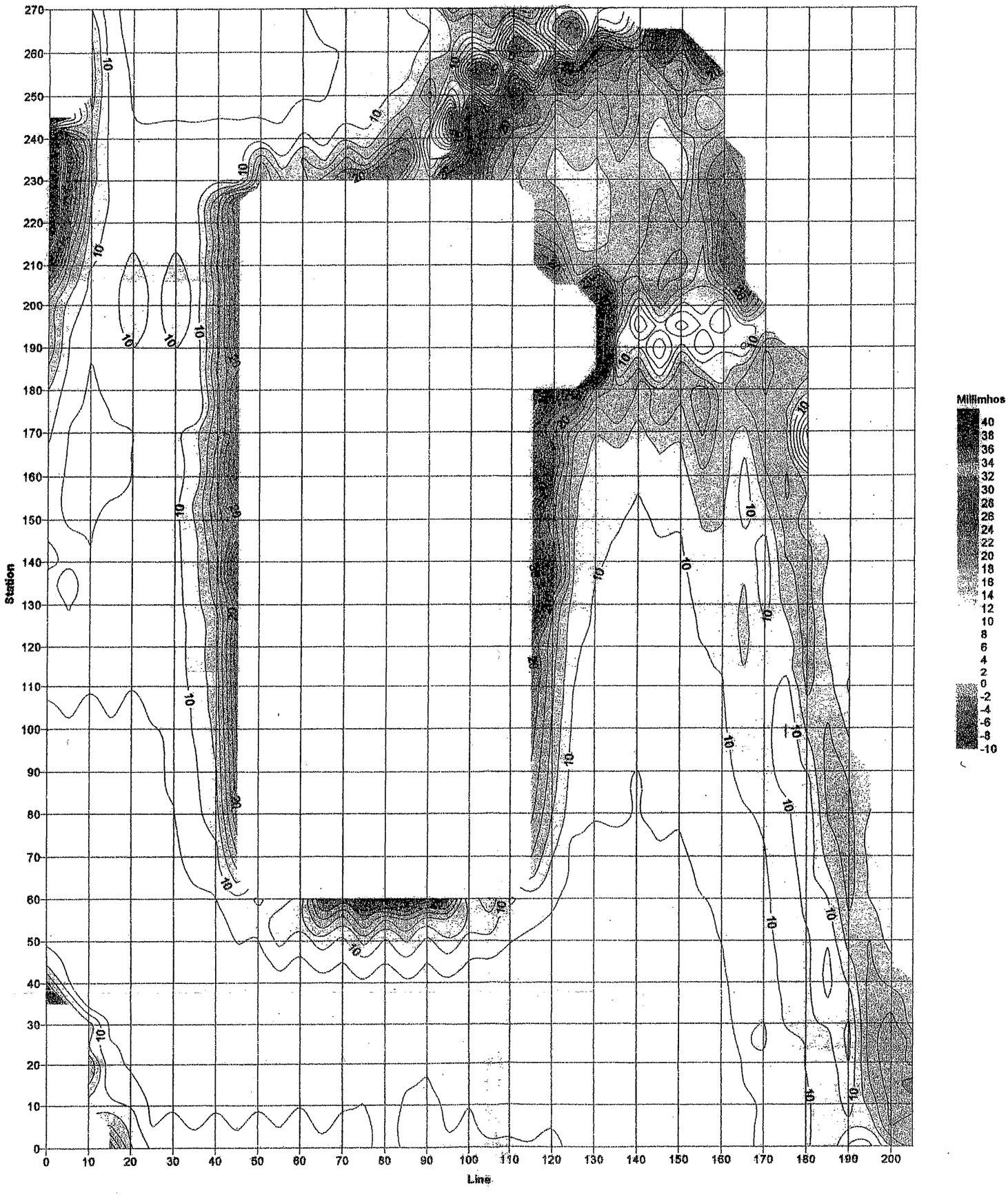
PROJECT NO.: 0503091R

SCALE: 1 inch = 20 feet

DRAWN BY: RJ Weed

REVIEWED BY: B Baker

DATE: 3-16-2005



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SPECTRUM GEOPHYSICS
Revealing The Subsurface

2807 W. Empire Avenue
Burbank, California 91504
(818) 565-3560 www.spectrum-geophysics.com

Map: Contour Map of EM-31 In-Phase Data

Project: Pioneer Motel
1001 Garzoli Road
Delano, California

Figure: 5

Prepared for: Twining Laboratories, Inc, Fresno, California

Project No.: 0503091R

Scale: 1 inch = 20 feet

Drawn by: RJ Weed

Reviewed by: B Baker

Date: 3-16-2005

APPENDIX C

Analytical Reports

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

April 07, 2005

Work Order #: 5C10040

David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

RE: Woolomes and Garzoli, Delano Ca

Enclosed are the analytical results for samples received by our laboratory on 03/10/05 . For your reference, these analyses have been assigned laboratory work order number 5C10040.

All analyses have been performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, The Twining Laboratories, Inc. (TL) is not responsible for use of less than complete reports. Results apply only to samples analyzed.

If you have any questions, please feel free to contact us at the number listed above.

Sincerely,

The Twining Laboratories, Inc.

Ronald J. Boquist
Director of Analytical Chemistry

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S1@1ft	5C10040-01	Soil	03/10/05 08:45	03/10/05 16:24
S1@3ft	5C10040-02	Soil	03/10/05 09:21	03/10/05 16:24
S1@5ft	5C10040-03	Soil	03/10/05 09:35	03/10/05 16:24
S2@1ft	5C10040-04	Soil	03/10/05 10:00	03/10/05 16:24
S2@3ft	5C10040-05	Soil	03/10/05 10:10	03/10/05 16:24
S2@5ft	5C10040-06	Soil	03/10/05 10:20	03/10/05 16:24
S3@1ft	5C10040-07	Soil	03/10/05 10:45	03/10/05 16:24
S4@1ft	5C10040-10	Soil	03/10/05 11:30	03/10/05 16:24
S4@3ft	5C10040-11	Soil	03/10/05 11:45	03/10/05 16:24
S4@5ft	5C10040-12	Soil	03/10/05 12:30	03/10/05 16:24
S7@1ft	5C10040-13	Soil	03/10/05 13:45	03/10/05 16:24

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@1ft

5C10040-01 (Soil) Sampled:03/10/05 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals								
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**19**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**11**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**45**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Semi-Volatile Organics								
TRPH	**14**	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@1ft

5C10040-01 (Soil) Sampled:03/10/05 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	**0.0032**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	**0.0044**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	**0.0016**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

THE TWINING LABORATORIES, INC.
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CALIFORNIA ELAP CERTIFICATE #1371

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@1ft

5C10040-01 (Soil) Sampled:03/10/05 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,3,5-Trimethylbenzene	**0.0021**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	**0.0088**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	**0.0061**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	**0.0051**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: Dibromofluoromethane		*116 %*	*76-114*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8		*98.4 %*	*88-110*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*98.0 %*	*86-115*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@3ft

5C10040-02 (Soil) Sampled:03/10/05 09:21

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5D0109	04/01/05	04/01/05	418.1 M
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@3ft

5C10040-02 (Soil) Sampled:03/10/05 09:21

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@3ft

5C10040-02 (Soil) Sampled:03/10/05 09:21

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: Dibromofluoromethane		*97.6 %*	*76-114*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8		*101 %*	*88-110*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*102 %*	*86-115*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*

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CALIFORNIA ELAP CERTIFICATE #1371

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@5ft

5C10040-03 (Soil) Sampled:03/10/05 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5D0109	04/01/05	04/01/05	418.1 M
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

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Fresno, CA 93721
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@5ft

5C10040-03 (Soil) Sampled:03/10/05 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S1@5ft

5C10040-03 (Soil) Sampled:03/10/05 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: Dibromofluoromethane		*101 %*	*76-114*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8		*99.6 %*	*88-110*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*100 %*	*86-115*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*

THE TWINING LABORATORIES, INC.
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S2@1ft

5C10040-04 (Soil) Sampled:03/10/05 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals								
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**14**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**7.5**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**30**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Semi-Volatile Organics								
TRPH	**12**	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S2@1ft

5C10040-04 (Soil) Sampled:03/10/05 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

THE TWINING LABORATORIES, INC.
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CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S2@1ft

5C10040-04 (Soil) Sampled:03/10/05 10:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: Dibromofluoromethane		*106 %*		*76-114*	*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*104 %*		*86-115*	*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8		*99.2 %*		*88-110*	*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S2@3ft

5C10040-05 (Soil) Sampled:03/10/05 10:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5D0109	04/01/05	04/01/05	418.1 M

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S2@5ft

5C10040-06 (Soil) Sampled:03/10/05 10:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
TRPH	**30**	10	mg/kg	1	T5D0109	04/01/05	04/01/05	418.1 M

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S3@1ft

5C10040-07 (Soil) Sampled:03/10/05 10:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals								
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**18**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**9.0**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**32**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S3@1ft

5C10040-07 (Soil) Sampled:03/10/05 10:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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CALIFORNIA ELAP CERTIFICATE #1371

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S3@1ft

5C10040-07 (Soil) Sampled:03/10/05 10:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: Dibromofluoromethane		*103 %*	*76-114*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8		*100 %*	*88-110*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*105 %*	*86-115*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@1ft

5C10040-10 (Soil) Sampled:03/10/05 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals								
Cadmium	ND	5.0	mg/kg	5	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	ND	25	mg/kg	5	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	25	mg/kg	5	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	ND	25	mg/kg	5	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**31**	25	mg/kg	5	T5C2218	03/22/05	03/24/05	EPA 6010B
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@1ft

5C10040-10 (Soil) Sampled:03/10/05 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	**0.0012**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@1ft

5C10040-10 (Soil) Sampled:03/10/05 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: Dibromofluoromethane		*99.2 %*	*76-114*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8		*102 %*	*88-110*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*100 %*	*86-115*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@3ft

5C10040-11 (Soil) Sampled:03/10/05 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@3ft

5C10040-11 (Soil) Sampled:03/10/05 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@3ft

5C10040-11 (Soil) Sampled:03/10/05 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Surrogate: Dibromofluoromethane		*102 %*	*76-114*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*
Surrogate: Toluene-d8		*103 %*	*88-110*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*105 %*	*86-115*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@5ft

5C10040-12 (Soil) Sampled:03/10/05 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B

THE TWINING LABORATORIES, INC.
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Fresno, CA 93721
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(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@5ft

5C10040-12 (Soil) Sampled:03/10/05 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B

THE TWINING LABORATORIES, INC.
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CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S4@5ft

5C10040-12 (Soil) Sampled:03/10/05 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Surrogate: Dibromofluoromethane		*106 %*	*76-114*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*
Surrogate: Toluene-d8		*104 %*	*88-110*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*114 %*	*86-115*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S7@1ft

5C10040-13 (Soil) Sampled:03/10/05 13:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals								
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**15**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**11**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**43**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Volatile Organics								
Benzene	ND	0.0050	mg/kg	1	T5C2323	03/23/05	03/24/05	EPA 8021B
Toluene	ND	0.0050	mg/kg	1	T5C2323	03/23/05	03/24/05	EPA 8021B
Ethylbenzene	ND	0.0050	mg/kg	1	T5C2323	03/23/05	03/24/05	EPA 8021B
Xylenes, total	**0.0063**	0.0050	mg/kg	1	T5C2323	03/23/05	03/24/05	EPA 8021B
Gasoline	ND	1.0	mg/kg	1	T5C2323	03/23/05	03/24/05	EPA 8021B
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/kg	1	T5C2323	03/23/05	03/24/05	EPA 8021B
Surrogate: 4-Bromofluorobenzene (PID)		*94.7 %*	*75-125*		*T5C2323*	*03/23/05*	*03/24/05*	*EPA 8021B*
Surrogate: 4-Bromofluorobenzene (FID)		*86.9 %*	*75-125*		*T5C2323*	*03/23/05*	*03/24/05*	*EPA 8021B*

Notes and Definitions

MS-01	Tap water used for batch QC MS/MSD analyses.
ug/L	micrograms per liter (parts per billion concentration units)
mg/L	milligrams per kilogram (parts per million concentration units)
mg/kg	milligrams per liter (parts per million concentration units)
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference

Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C2218 - EPA 3050B										
Blank (T5C2218-BLK1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	ND	1.0	mg/kg							
Chromium	ND	5.0	mg/kg							
Lead	ND	5.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Zinc	ND	5.0	mg/kg							
LCS (T5C2218-BS1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	3.83	1.0	mg/kg	4.00		95.8	75-125			
Chromium	19.8	5.0	mg/kg	20.0		99.0	75-125			
Lead	19.6	5.0	mg/kg	20.0		98.0	75-125			
Nickel	19.6	5.0	mg/kg	20.0		98.0	75-125			
Zinc	19.6	5.0	mg/kg	20.0		98.0	75-125			
LCS Dup (T5C2218-BSD1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Zinc	19.8	5.0	mg/kg	20.0		99.0	75-125	1.02	20	
Cadmium	3.88	1.0	mg/kg	4.00		97.0	75-125	1.30	20	
Chromium	20.0	5.0	mg/kg	20.0		100	75-125	1.01	20	
Nickel	19.8	5.0	mg/kg	20.0		99.0	75-125	1.02	20	
Lead	19.8	5.0	mg/kg	20.0		99.0	75-125	1.02	20	
Matrix Spike (T5C2218-MS1)		Source: 5C10008-01		Prepared: 03/22/05 Analyzed: 03/24/05						
Zinc	30.3	5.0	mg/kg	20.0	5.3	125	75-125			
Cadmium	3.81	1.0	mg/kg	4.00	ND	95.2	75-125			
Chromium	23.2	5.0	mg/kg	20.0	1.1	110	75-125			
Nickel	21.4	5.0	mg/kg	20.0	0.45	105	75-125			
Lead	19.9	5.0	mg/kg	20.0	1.0	94.5	75-125			
Matrix Spike (T5C2218-MS2)		Source: 5C10041-03		Prepared: 03/22/05 Analyzed: 03/24/05						
Zinc	52.2	5.0	mg/kg	20.0	32	101	75-125			
Nickel	27.1	5.0	mg/kg	20.0	7.5	98.0	75-125			
Lead	26.6	5.0	mg/kg	20.0	8.3	91.5	75-125			
Chromium	30.1	5.0	mg/kg	20.0	11	95.5	75-125			
Cadmium	3.83	1.0	mg/kg	4.00	0.031	95.0	75-125			
Matrix Spike Dup (T5C2218-MSD1)		Source: 5C10008-01		Prepared: 03/22/05 Analyzed: 03/24/05						
Lead	20.0	5.0	mg/kg	20.0	1.0	95.0	75-125	0.501	20	
Zinc	23.5	5.0	mg/kg	20.0	5.3	91.0	75-125	25.3	20	
Nickel	20.6	5.0	mg/kg	20.0	0.45	101	75-125	3.81	20	
Cadmium	3.80	1.0	mg/kg	4.00	ND	95.0	75-125	0.263	20	
Chromium	21.8	5.0	mg/kg	20.0	1.1	104	75-125	6.22	20	
Matrix Spike Dup (T5C2218-MSD2)		Source: 5C10041-03		Prepared: 03/22/05 Analyzed: 03/24/05						
Chromium	30.6	5.0	mg/kg	20.0	11	98.0	75-125	1.65	20	
Lead	27.2	5.0	mg/kg	20.0	8.3	94.5	75-125	2.23	20	
Nickel	28.6	5.0	mg/kg	20.0	7.5	106	75-125	5.39	20	
Zinc	52.7	5.0	mg/kg	20.0	32	104	75-125	0.953	20	
Cadmium	3.89	1.0	mg/kg	4.00	0.031	96.5	75-125	1.55	20	

Semi-Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1512 - Default Prep GC-Semi										
Blank (T5C1512-BLK1)				Prepared & Analyzed: 03/15/05						
TRPH	ND	10	mg/kg							
LCS (T5C1512-BS1)				Prepared & Analyzed: 03/15/05						
TRPH	529	10	mg/kg	500		106	70-130			
LCS Dup (T5C1512-BSD1)				Prepared & Analyzed: 03/15/05						
TRPH	529	10	mg/kg	500		106	70-130	0.00	20	
Matrix Spike (T5C1512-MS1)	Source: 5C10040-01			Prepared & Analyzed: 03/15/05						
TRPH	534	10	mg/kg	500	14	104	70-130			
Matrix Spike Dup (T5C1512-MSD1)	Source: 5C10040-01			Prepared & Analyzed: 03/15/05						
TRPH	536	10	mg/kg	500	14	104	70-130	0.374	20	
Batch T5D0109 - Default Prep GC-Semi										
Blank (T5D0109-BLK1)				Prepared & Analyzed: 04/01/05						
TRPH	ND	10	mg/kg							
LCS (T5D0109-BS1)				Prepared & Analyzed: 04/01/05						
TRPH	548	10	mg/kg	500		110	70-130			
LCS Dup (T5D0109-BSD1)				Prepared & Analyzed: 04/01/05						
TRPH	548	10	mg/kg	500		110	70-130	0.00	20	
Matrix Spike (T5D0109-MS1)	Source: 5C14032-07			Prepared & Analyzed: 04/01/05						
TRPH	550	10	mg/kg	500	ND	110	70-130			
Matrix Spike Dup (T5D0109-MSD1)	Source: 5C14032-07			Prepared & Analyzed: 04/01/05						
TRPH	555	10	mg/kg	500	ND	111	70-130	0.905	20	

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch T5C1610 - EPA 5035

Blank (T5C1610-BLK1) Prepared: 03/16/05 Analyzed: 03/17/05

Surrogate: Dibromofluoromethane	*0.0252*		*mg/kg*	*0.0250*		*101*	*76-114*			
Surrogate: Toluene-d8	*0.0246*		*mg/kg*	*0.0250*		*98.4*	*88-110*			
Surrogate: 4-Bromofluorobenzene	*0.0249*		*mg/kg*	*0.0250*		*99.6*	*86-115*			
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg							
Chloromethane	ND	0.0010	mg/kg							
Vinyl chloride	ND	0.0010	mg/kg							
Bromomethane	ND	0.0010	mg/kg							
Chloroethane	ND	0.0010	mg/kg							
Ethanol	ND	0.020	mg/kg							
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg							
Acetone	ND	0.020	mg/kg							
1,1-Dichloroethene	ND	0.0010	mg/kg							
Iodomethane	ND	0.0010	mg/kg							
Methylene chloride	ND	0.0020	mg/kg							
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg							
Carbon disulfide	ND	0.0010	mg/kg							
trans-1,2-Dichloroethene	ND	0.0010	mg/kg							
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg							
1,1-Dichloroethane	ND	0.0010	mg/kg							
Vinyl acetate	ND	0.0010	mg/kg							
2-Butanone (MEK)	ND	0.0010	mg/kg							
Chloroprene	ND	0.0010	mg/kg							
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg							
cis-1,2-Dichloroethene	ND	0.0010	mg/kg							
Bromochloromethane	ND	0.0010	mg/kg							
Chloroform	ND	0.0010	mg/kg							
2,2-Dichloropropane	ND	0.0010	mg/kg							
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg							
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg							
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg							
1,1-Dichloropropene	ND	0.0010	mg/kg							
Carbon tetrachloride	ND	0.0010	mg/kg							
Benzene	ND	0.0010	mg/kg							
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg							
Dibromomethane	ND	0.0010	mg/kg							
1,2-Dichloropropane	ND	0.0010	mg/kg							
Trichloroethene (TCE)	ND	0.0010	mg/kg							
Bromodichloromethane	ND	0.0010	mg/kg							
Ethyl methacrylate	ND	0.0010	mg/kg							
2-Chloroethylvinyl ether	ND	0.020	mg/kg							
cis-1,3-Dichloropropene	ND	0.0010	mg/kg							
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg							
trans-1,3-Dichloropropene	ND	0.0010	mg/kg							
1,1,2-Trichloroethane	ND	0.0010	mg/kg							
Toluene	ND	0.0010	mg/kg							
1,3-Dichloropropane	ND	0.0010	mg/kg							
Methyl Methacrylate	ND	0.0010	mg/kg							
Dibromochloromethane	ND	0.0010	mg/kg							
2-Hexanone	ND	0.0010	mg/kg							

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1610 - EPA 5035										
Blank (T5C1610-BLK1)				Prepared: 03/16/05 Analyzed: 03/17/05						
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg							
Tetrachloroethene (PCE)	ND	0.0010	mg/kg							
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg							
Chlorobenzene	ND	0.0010	mg/kg							
Ethylbenzene	ND	0.0010	mg/kg							
m,p-Xylene	ND	0.0010	mg/kg							
Bromoform	ND	0.0010	mg/kg							
Styrene	ND	0.0010	mg/kg							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg							
o-Xylene	ND	0.0010	mg/kg							
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg							
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg							
Isopropylbenzene	ND	0.0010	mg/kg							
Bromobenzene	ND	0.0010	mg/kg							
n-Propylbenzene	ND	0.0010	mg/kg							
2-Chlorotoluene	ND	0.0010	mg/kg							
4-Chlorotoluene	ND	0.0010	mg/kg							
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg							
tert-Butylbenzene	ND	0.0010	mg/kg							
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg							
sec-Butylbenzene	ND	0.0010	mg/kg							
1,3-Dichlorobenzene	ND	0.0010	mg/kg							
1,4-Dichlorobenzene	ND	0.0010	mg/kg							
p-Isopropyltoluene	ND	0.0010	mg/kg							
1,2-Dichlorobenzene	ND	0.0010	mg/kg							
n-Butylbenzene	ND	0.0010	mg/kg							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg							
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg							
Xylenes	ND	0.0010	mg/kg							
Acrolein	ND	0.050	mg/kg							
Naphthalene	ND	0.0010	mg/kg							
Acrylonitrile	ND	0.010	mg/kg							
Hexachlorobutadiene	ND	0.0010	mg/kg							
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg							
LCS (T5C1610-BS1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: 4-Bromofluorobenzene	*0.0251*		*mg/kg*	*0.0250*		*100*	*86-115*			
Surrogate: Toluene-d8	*0.0249*		*mg/kg*	*0.0250*		*99.6*	*88-110*			
Surrogate: Dibromofluoromethane	*0.0252*		*mg/kg*	*0.0250*		*101*	*76-114*			
1,1-Dichloroethene	0.0161	0.0010	mg/kg	0.0200		80.5	70-130			
Benzene	0.0182	0.0010	mg/kg	0.0200		91.0	70-130			
Trichloroethene (TCE)	0.0177	0.0010	mg/kg	0.0200		88.5	70-130			
Toluene	0.0173	0.0010	mg/kg	0.0200		86.5	70-130			
Chlorobenzene	0.0172	0.0010	mg/kg	0.0200		86.0	70-130			
LCS Dup (T5C1610-BSD1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: Toluene-d8	*0.0246*		*mg/kg*	*0.0250*		*98.4*	*88-110*			
Surrogate: 4-Bromofluorobenzene	*0.0263*		*mg/kg*	*0.0250*		*105*	*86-115*			
Surrogate: Dibromofluoromethane	*0.0256*		*mg/kg*	*0.0250*		*102*	*76-114*			

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1610 - EPA 5035										
LCS Dup (T5C1610-BSD1)				Prepared: 03/16/05 Analyzed: 03/17/05						
1,1-Dichloroethene	0.0163	0.0010	mg/kg	0.0200		81.5	70-130	1.23	20	
Benzene	0.0173	0.0010	mg/kg	0.0200		86.5	70-130	5.07	20	
Trichloroethene (TCE)	0.0176	0.0010	mg/kg	0.0200		88.0	70-130	0.567	20	
Toluene	0.0170	0.0010	mg/kg	0.0200		85.0	70-130	1.75	20	
Chlorobenzene	0.0169	0.0010	mg/kg	0.0200		84.5	70-130	1.76	20	
Matrix Spike (T5C1610-MS1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: Toluene-d8	*0.0248*		*mg/kg*	*0.0250*		*99.2*	*88-110*			*MS-01*
Surrogate: 4-Bromofluorobenzene	*0.0256*		*mg/kg*	*0.0250*		*102*	*86-115*			*MS-01*
Surrogate: Dibromofluoromethane	*0.0254*		*mg/kg*	*0.0250*		*102*	*76-114*			*MS-01*
1,1-Dichloroethene	0.0157	0.0010	mg/kg	0.0200		78.5	70-130			MS-01
Benzene	0.0174	0.0010	mg/kg	0.0200		87.0	70-130			MS-01
Trichloroethene (TCE)	0.0171	0.0010	mg/kg	0.0200		85.5	70-130			MS-01
Toluene	0.0171	0.0010	mg/kg	0.0200		85.5	70-130			MS-01
Chlorobenzene	0.0175	0.0010	mg/kg	0.0200		87.5	70-130			MS-01
Matrix Spike Dup (T5C1610-MSD1)				Prepared: 03/16/05 Analyzed: 03/18/05						
Surrogate: Toluene-d8	*0.0241*		*mg/kg*	*0.0250*		*96.4*	*88-110*			*MS-01*
Surrogate: 4-Bromofluorobenzene	*0.0255*		*mg/kg*	*0.0250*		*102*	*86-115*			*MS-01*
Surrogate: Dibromofluoromethane	*0.0247*		*mg/kg*	*0.0250*		*98.8*	*76-114*			*MS-01*
1,1-Dichloroethene	0.0180	0.0010	mg/kg	0.0200		90.0	70-130	13.6	20	MS-01
Benzene	0.0195	0.0010	mg/kg	0.0200		97.5	70-130	11.4	20	MS-01
Trichloroethene (TCE)	0.0195	0.0010	mg/kg	0.0200		97.5	70-130	13.1	20	MS-01
Toluene	0.0190	0.0010	mg/kg	0.0200		95.0	70-130	10.5	20	MS-01
Chlorobenzene	0.0187	0.0010	mg/kg	0.0200		93.5	70-130	6.63	20	MS-01
Batch T5C2323 - EPA 5035										
Blank (T5C2323-BLK1)				Prepared: 03/23/05 Analyzed: 03/24/05						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0284*		*mg/kg*	*0.0250*		*114*	*75-125*			
Surrogate: 4-Bromofluorobenzene (FID)	*0.0261*		*mg/kg*	*0.0250*		*104*	*75-125*			
Benzene	ND	0.0050	mg/kg							
Toluene	ND	0.0050	mg/kg							
Ethylbenzene	ND	0.0050	mg/kg							
Xylenes, total	ND	0.0050	mg/kg							
Gasoline	ND	1.0	mg/kg							
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/kg							

CASTLE ANALYTICAL LABORATORY

Environmental Testing Services
Certificate # 2480
2333 Shuttle Drive, Atwater, CA 95301
Phone: (209) 384-2930
Fax: (209) 384-1507

Twining Laboratories
2527 Fresno St.
Fresno, CA. 93721
Attn: Jim Brownfield

Client Project ID: 5C10040
Reference Number: 7943
Sample Description: Soil
Sample Prep/Analysis Method: EPA 5030/8015M, 8020
Lab Numbers: 7943-1S

Sampled: 03-11-05
Received: 03-24-05
Extracted: 03-25-05
Analyzed: 03-25-05
Reported: 03-30-05

TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT (mg/kg)	SAMPLE ID 5C10040-13 (mg/kg)
MTBE	0.010	ND
BENZENE	0.0050	ND
TOLUENE	0.0050	ND
ETHYLBENZENE	0.0050	ND
TOTAL XYLENES	0.0050	ND
GASOLINE RANGE HYDROCARBONS	1.0	ND
Report Limit Multiplication Factor:		1

Surrogate % Recovery: FID: 77.7% / PID: 78.8%

Instrument ID: VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

APPROVED BY: _____
Clari J. Cone
Laboratory Manager

APPROVED BY: _____
James C. Phillips
Laboratory Director

TWINING LABORATORIES, INC.

EST. 1898

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SERVICES
GEOTECHNICAL ENGINEERING • SAMPLING SERVICES
CONSTRUCTION INSPECTION & MATERIALS TESTING

CHAIN OF CUSTODY/ANALYSIS REQUEST

2527 FRESNO STREET • FRESNO, CA 93721 • PHONE (559) 268-7021 • FAX: (559) 268-0740

WORK ORDER #: SC10040

PAGE 1 OF 2

REPORT TO:	INVOICE and/or COPY TO:	REPORTING:
ATTENTION: David Fretwell	ATTENTION: SAME	☒ STANDARD FORMAT
NAME: ENV	NAME:	☐ WRITE-ON (STATE FORM)
ADDRESS: TL	ADDRESS:	☐ GEOTRACKER/COELT (LUFT)
		☐ PDF ☐ SPREADSHEET
PHONE:	PHONE:	☐ COUNTY DHS : ☐FRESNO ☐KINGS ☐MADERA ☐MERCED ☐TULARE
FAX:	FAX:	☐ OTHER:

SAMPLE INFORMATION

SAMPLED BY (PRINT): Kirk Jacobsen

SIGNATURE: [signature]

☐ PUBLIC SYSTEM ☒ ROUTINE
☐ PRIVATE WELL ☐ REPEAT
☐ OTHER ☐ REPLACEMENT

TURN AROUND TIME: ☐ RUSH, DUE ON:
☐ STANDARD

SAMPLE TYPES:

SOLID:
☐ BS – BIOSOLID
☐ CR – CERAMIC
☒ SL – SOIL/SOLID

LIQUID:
☐ DW - DRINKING WATER
☐ GW - GROUND WATER
☐ OL - OIL
☐ SF - SURFACE WATER
☐ ST - STORM WATER
☐ WW – WASTE WATER

PROJECT INFORMATION

CONTRACT/P.O. NO.:

SITE: Woolomes and Garzoli, Delano CA

PROJECT NUMBER: E0140601

PROJECT MANAGER: David Fretwell

NOTES ON RECEIVED CONDITION:

☐ CUSTODY SEAL(S) BROKEN ☐ SAMPLE(S) DAMAGED
☐ ON ICE ☐ AMBIENT TEMP. ☐ INCORRECT PRESERVATION

ANALYSIS REQUESTED

LAB USE	CLIENT SAMPLE ID	DATE	TIME	TYPE	TRPH/Volatile Organic constituents	cadmium/chromium	lead/nickel/zinc	On Hold	Selected Metals						LAB USE
1	S1@1FT	3/10/05	8:45	SL	X	X	X		X						
2	S1@3FT		9:21					X							
3	S1@5FT		9:35					X							
4	S2@1FT		10:00		X	X	X		X						
5	S2@3FT		10:10					X							
6	S2@5FT		10:20					X							
7	S3@1FT		10:45		X	X	X		X						
8	S3@3FT		11:45					X							
9	S3@5FT		11:05					X							

MC Ø10

Km

COMMENTS/ADDITIONAL INSTRUCTIONS:

If any detections at 1FT, run the samples from 3Ft and 5ft, for all samples

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY
[signature]	TL	3/10/05	1624	[signature]	TL

TWINING LABORATORIES, INC.

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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SERVICES
GEOTECHNICAL ENGINEERING • SAMPLING SERVICES
CONSTRUCTION INSPECTION & MATERIALS TESTING

2527 FRESNO STREET • FRESNO, CA 93721 • PHONE (559) 268-7021 • FAX: (559) 268-0740

CHAIN OF CUSTODY/ANALYSIS REQUEST

WORK ORDER #: C40640

PAGE 2 **OF** 2

REPORT TO:

ATTENTION: David Fretwell
NAME: ENV
ADDRESS: TL
PHONE:
FAX:

INVOICE and/or COPY TO:

ATTENTION:
NAME: SAME
ADDRESS:
PHONE:
FAX:

REPORTING:

- [X] STANDARD FORMAT
- [ ] WRITE-ON (STATE FORM)
- [ ] GEOTRACKER/COELT (LUFT)
- [ ] PDF [ ] SPREADSHEET
- [ ] COUNTY DHS : [ ]FRESNO [ ]KINGS [ ]MADERA [ ]MERCED [ ]TULARE
- [ ] OTHER:

SAMPLE INFORMATION

SAMPLED BY (PRINT): Kirk Jacobsen
SIGNATURE:

- [ ] PUBLIC SYSTEM
- [ ] PRIVATE WELL
- [ ] OTHER
- [X] ROUTINE
- [ ] REPEAT
- [ ] REPLACEMENT

TURN AROUND TIME: [ ] RUSH, DUE ON:
[ ] STANDARD

SAMPLE TYPES:

SOLID:
- [ ] BS – BIOSOLID
- [ ] CR – CERAMIC
- [X] SL – SOIL/SOLID

LIQUID:
- [ ] DW - DRINKING WATER
- [ ] GW - GROUND WATER
- [ ] OL - OIL
- [ ] SF - SURFACE WATER
- [ ] ST - STORM WATER
- [ ] WW – WASTE WATER

PROJECT INFORMATION

CONTRACT/P.O. NO.:
SITE: Wadlomes and Gazzoli, Delano CA
PROJECT NUMBER: E01406.01
PROJECT MANAGER: David Fretwell

LAB USE

NOTES ON RECEIVED CONDITION:
[ ] CUSTODY SEAL(S) BROKEN [ ] SAMPLE(S) DAMAGED
[ ] ON ICE [ ] AMBIENT TEMP. [ ] INCORRECT PRESERVATION

ANALYSIS REQUESTED

	CLIENT SAMPLE ID	DATE	TIME	TYPE	TRPH/Volatile Organic Constituents	Cadmium/Chromium/Lead/Nickel/Zinc	Oil & G	TPHG/BTEX	MTBE	Selected Metals				LAB USE
10	S4 @ 1FT	3/10/05	11:30	SL	X	X	X			X				
11	S4 @ 3FT		11:45					X						
12	S4 @ 5FT		12:30					X						
13	S7 @ 1FT		13:45			X	X		X	X	X			
14	S7 @ 3FT		13:50					X						
15	S7 @ 5FT	↓	14:10	↓				X						

COMMENTS/ADDITIONAL INSTRUCTIONS:
If any detections at 1FT, run the samples from 3FT and 5FT for all samples

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY
	TL	3/10/05	1624		TL

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

March 23, 2005

Work Order #: 5C18023

David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

RE: Woolomes and Garzoli, Delano Ca

Enclosed are the analytical results for samples received by our laboratory on 03/18/05 . For your reference, these analyses have been assigned laboratory work order number 5C18023.

All analyses have been performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, The Twining Laboratories, Inc. (TL) is not responsible for use of less than complete reports. Results apply only to samples analyzed.

If you have any questions, please feel free to contact us at the number listed above.

Sincerely,

The Twining Laboratories, Inc.

Ronald J. Boquist
Director of Analytical Chemistry

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S1@3ft	5C18023-01	Soil	03/10/05 09:21	03/18/05 16:45
S1@5ft	5C18023-02	Soil	03/10/05 09:35	03/18/05 16:45
S4@3ft	5C18023-03	Soil	03/10/05 11:45	03/18/05 16:45
S4@5ft	5C18023-04	Soil	03/10/05 12:30	03/18/05 16:45

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S1@3ft

5C18023-01 (Soil) Sampled:03/10/05 09:21

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S1@3ft

5C18023-01 (Soil) Sampled:03/10/05 09:21

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S1@3ft

5C18023-01 (Soil) Sampled:03/10/05 09:21

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: Dibromofluoromethane		*97.6 %*	*76-114*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8		*101 %*	*88-110*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*102 %*	*86-115*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S1@5ft

5C18023-02 (Soil) Sampled:03/10/05 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S1@5ft

5C18023-02 (Soil) Sampled:03/10/05 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S1@5ft

5C18023-02 (Soil) Sampled:03/10/05 09:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: Dibromofluoromethane		*101 %*	*76-114*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8		*99.6 %*	*88-110*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*100 %*	*86-115*		*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S4@3ft

5C18023-03 (Soil) Sampled:03/10/05 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B

THE TWINING LABORATORIES, INC.
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CALIFORNIA ELAP CERTIFICATE #1371

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Fresno, CA 93721
(559) 268-7021 Phone
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S4@3ft

5C18023-03 (Soil) Sampled:03/10/05 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S4@3ft

5C18023-03 (Soil) Sampled:03/10/05 11:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Surrogate: Dibromofluoromethane		*102 %*	*76-114*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*
Surrogate: Toluene-d8		*103 %*	*88-110*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*105 %*	*86-115*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*

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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S4@5ft

5C18023-04 (Soil) Sampled:03/10/05 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898 CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
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Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S4@5ft

5C18023-04 (Soil) Sampled:03/10/05 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Toluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
m,p-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
o-Xylene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,4-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Woolomes and Garzoli, Delano Ca	
2527 Fresno Street	Project Number: E01406.01	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/23/05

S4@5ft

5C18023-04 (Soil) Sampled:03/10/05 12:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Volatile Organics								
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Xylenes	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/18/05	EPA 8260B
Surrogate: Dibromofluoromethane		*106 %*	*76-114*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*
Surrogate: Toluene-d8		*104 %*	*88-110*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*
Surrogate: 4-Bromofluorobenzene		*114 %*	*86-115*		*T5C1610*	*03/16/05*	*03/18/05*	*EPA 8260B*

Notes and Definitions

MS-01	Tap water used for batch QC MS/MSD analyses.
ug/L	micrograms per liter (parts per billion concentration units)
mg/L	milligrams per kilogram (parts per million concentration units)
mg/kg	milligrams per liter (parts per million concentration units)
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference

Volatile Organics - Quality Control

Batch T5C1610 - EPA 5035

Blank (T5C1610-BLK1) Prepared: 03/16/05 Analyzed: 03/17/05

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*0.0252*		*mg/kg*	*0.0250*		*101*	*76-114*			
Surrogate: 4-Bromofluorobenzene	*0.0249*		*mg/kg*	*0.0250*		*99.6*	*86-115*			
Surrogate: Toluene-d8	*0.0246*		*mg/kg*	*0.0250*		*98.4*	*88-110*			
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg							
Chloromethane	ND	0.0010	mg/kg							
Vinyl chloride	ND	0.0010	mg/kg							
Bromomethane	ND	0.0010	mg/kg							
Chloroethane	ND	0.0010	mg/kg							
Ethanol	ND	0.020	mg/kg							
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg							
Acetone	ND	0.020	mg/kg							
1,1-Dichloroethene	ND	0.0010	mg/kg							
Iodomethane	ND	0.0010	mg/kg							
Methylene chloride	ND	0.0020	mg/kg							
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg							
Carbon disulfide	ND	0.0010	mg/kg							
trans-1,2-Dichloroethene	ND	0.0010	mg/kg							
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg							
1,1-Dichloroethane	ND	0.0010	mg/kg							
Vinyl acetate	ND	0.0010	mg/kg							
2-Butanone (MEK)	ND	0.0010	mg/kg							
Chloroprene	ND	0.0010	mg/kg							
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg							
cis-1,2-Dichloroethene	ND	0.0010	mg/kg							
Bromochloromethane	ND	0.0010	mg/kg							
Chloroform	ND	0.0010	mg/kg							
2,2-Dichloropropane	ND	0.0010	mg/kg							
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg							
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg							
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg							
1,1-Dichloropropene	ND	0.0010	mg/kg							
Carbon tetrachloride	ND	0.0010	mg/kg							
Benzene	ND	0.0010	mg/kg							
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg							
Dibromomethane	ND	0.0010	mg/kg							
1,2-Dichloropropane	ND	0.0010	mg/kg							
Trichloroethene (TCE)	ND	0.0010	mg/kg							
Bromodichloromethane	ND	0.0010	mg/kg							
Ethyl methacrylate	ND	0.0010	mg/kg							
2-Chloroethylvinyl ether	ND	0.020	mg/kg							
cis-1,3-Dichloropropene	ND	0.0010	mg/kg							
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg							
trans-1,3-Dichloropropene	ND	0.0010	mg/kg							
1,1,2-Trichloroethane	ND	0.0010	mg/kg							
Toluene	ND	0.0010	mg/kg							
1,3-Dichloropropane	ND	0.0010	mg/kg							
Methyl Methacrylate	ND	0.0010	mg/kg							
Dibromochloromethane	ND	0.0010	mg/kg							
2-Hexanone	ND	0.0010	mg/kg							

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1610 - EPA 5035										
Blank (T5C1610-BLK1)				Prepared: 03/16/05 Analyzed: 03/17/05						
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg							
Tetrachloroethene (PCE)	ND	0.0010	mg/kg							
,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg							
Chlorobenzene	ND	0.0010	mg/kg							
Ethylbenzene	ND	0.0010	mg/kg							
n,p-Xylene	ND	0.0010	mg/kg							
Bromoform	ND	0.0010	mg/kg							
Styrene	ND	0.0010	mg/kg							
,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg							
-Xylene	ND	0.0010	mg/kg							
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg							
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg							
sopropylbenzene	ND	0.0010	mg/kg							
Bromobenzene	ND	0.0010	mg/kg							
n-Propylbenzene	ND	0.0010	mg/kg							
-Chlorotoluene	ND	0.0010	mg/kg							
-Chlorotoluene	ND	0.0010	mg/kg							
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg							
ert-Butylbenzene	ND	0.0010	mg/kg							
,2,4-Trimethylbenzene	ND	0.0010	mg/kg							
sec-Butylbenzene	ND	0.0010	mg/kg							
,3-Dichlorobenzene	ND	0.0010	mg/kg							
,4-Dichlorobenzene	ND	0.0010	mg/kg							
p-Isopropyltoluene	ND	0.0010	mg/kg							
1,2-Dichlorobenzene	ND	0.0010	mg/kg							
-Butylbenzene	ND	0.0010	mg/kg							
,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg							
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg							
Acrolein	ND	0.050	mg/kg							
Xylenes	ND	0.0010	mg/kg							
Naphthalene	ND	0.0010	mg/kg							
Acrylonitrile	ND	0.010	mg/kg							
Hexachlorobutadiene	ND	0.0010	mg/kg							
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg							
LCS (T5C1610-BS1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: Toluene-d8	*0.0249*		*mg/kg*	*0.0250*		*99.6*	*88-110*			
Surrogate: 4-Bromofluorobenzene	*0.0251*		*mg/kg*	*0.0250*		*100*	*86-115*			
Surrogate: Dibromofluoromethane	*0.0252*		*mg/kg*	*0.0250*		*101*	*76-114*			
1,1-Dichloroethene	0.0161	0.0010	mg/kg	0.0200		80.5	70-130			
Benzene	0.0182	0.0010	mg/kg	0.0200		91.0	70-130			
Trichloroethene (TCE)	0.0177	0.0010	mg/kg	0.0200		88.5	70-130			
Toluene	0.0173	0.0010	mg/kg	0.0200		86.5	70-130			
Chlorobenzene	0.0172	0.0010	mg/kg	0.0200		86.0	70-130			
LCS Dup (T5C1610-BSD1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: 4-Bromofluorobenzene	*0.0263*		*mg/kg*	*0.0250*		*105*	*86-115*			
Surrogate: Dibromofluoromethane	*0.0256*		*mg/kg*	*0.0250*		*102*	*76-114*			
Surrogate: Toluene-d8	*0.0246*		*mg/kg*	*0.0250*		*98.4*	*88-110*			

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1610 - EPA 5035										
LCS Dup (T5C1610-BSD1)				Prepared: 03/16/05 Analyzed: 03/17/05						
1,1-Dichloroethene	0.0163	0.0010	mg/kg	0.0200		81.5	70-130	1.23	20	
Benzene	0.0173	0.0010	mg/kg	0.0200		86.5	70-130	5.07	20	
Trichloroethene (TCE)	0.0176	0.0010	mg/kg	0.0200		88.0	70-130	0.567	20	
Toluene	0.0170	0.0010	mg/kg	0.0200		85.0	70-130	1.75	20	
Chlorobenzene	0.0169	0.0010	mg/kg	0.0200		84.5	70-130	1.76	20	
Matrix Spike (T5C1610-MS1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: Toluene-d8	*0.0248*		*mg/kg*	*0.0250*		*99.2*	*88-110*			*MS-01*
Surrogate: 4-Bromofluorobenzene	*0.0256*		*mg/kg*	*0.0250*		*102*	*86-115*			*MS-01*
Surrogate: Dibromofluoromethane	*0.0254*		*mg/kg*	*0.0250*		*102*	*76-114*			*MS-01*
1,1-Dichloroethene	0.0157	0.0010	mg/kg	0.0200		78.5	70-130			MS-01
Benzene	0.0174	0.0010	mg/kg	0.0200		87.0	70-130			MS-01
Trichloroethene (TCE)	0.0171	0.0010	mg/kg	0.0200		85.5	70-130			MS-01
Toluene	0.0171	0.0010	mg/kg	0.0200		85.5	70-130			MS-01
Chlorobenzene	0.0175	0.0010	mg/kg	0.0200		87.5	70-130			MS-01
Matrix Spike Dup (T5C1610-MSD1)				Prepared: 03/16/05 Analyzed: 03/18/05						
Surrogate: 4-Bromofluorobenzene	*0.0255*		*mg/kg*	*0.0250*		*102*	*86-115*			*MS-01*
Surrogate: Dibromofluoromethane	*0.0247*		*mg/kg*	*0.0250*		*98.8*	*76-114*			*MS-01*
Surrogate: Toluene-d8	*0.0241*		*mg/kg*	*0.0250*		*96.4*	*88-110*			*MS-01*
1,1-Dichloroethene	0.0180	0.0010	mg/kg	0.0200		90.0	70-130	13.6	20	MS-01
Benzene	0.0195	0.0010	mg/kg	0.0200		97.5	70-130	11.4	20	MS-01
Trichloroethene (TCE)	0.0195	0.0010	mg/kg	0.0200		97.5	70-130	13.1	20	MS-01
Toluene	0.0190	0.0010	mg/kg	0.0200		95.0	70-130	10.5	20	MS-01
Chlorobenzene	0.0187	0.0010	mg/kg	0.0200		93.5	70-130	6.63	20	MS-01

CHAIN OF CUSTODY/ANALYSIS REQUEST

TWINING LABORATORIES, INC.
EST. 1898
2527 FRESNO STREET • FRESNO, CA 93721 • PHONE (559) 268-7021 • FAX: (559) 268-0740
ANALYTICAL CHEMISTRY • ENVIRONMENTAL SERVICES
GEOTECHNICAL ENGINEERING • SAMPLING SERVICES
CONSTRUCTION INSPECTION & MATERIALS TESTING

WORK ORDER #: 5C18023 **PAGE** ____ **OF** ____

REPORT TO:	INVOICE and/or COPY TO:	REPORTING:
ATTENTION:	ATTENTION:	☐ STANDARD FORMAT
NAME: ENV	NAME:	☐ WRITE-ON (STATE FORM)
ADDRESS:	ADDRESS:	☐ GEOTRACKER/COELT (LUFT)
		☐ PDF ☐ SPREADSHEET
PHONE:	PHONE:	☐ COUNTY DHS : ☐FRESNO ☐KINGS ☐MADERA ☐MERCED ☐TULARE
FAX:	FAX:	☐ OTHER:

SAMPLE INFORMATION

SAMPLED BY (PRINT):

SIGNATURE:

☐ PUBLIC SYSTEM ☐ ROUTINE
☐ PRIVATE WELL ☐ REPEAT
☐ OTHER ☒ REPLACEMENT

TURN AROUND TIME: ☒ RUSH, DUE ON: 5 day
☐ STANDARD

SAMPLE TYPES:

SOLID:
☐ BS – BIOSOLID
☐ CR – CERAMIC
☐ SL – SOIL/SOLID

LIQUID:
☐ DW - DRINKING WATER
☐ GW - GROUND WATER
☐ OL - OIL
☐ SF - SURFACE WATER
☐ ST - STORM WATER
☐ WW – WASTE WATER

PROJECT INFORMATION

CONTRACT/P.O. NO.:

SITE: Woolomes + Garzoli, Delano

PROJECT NUMBER: G01406.01

PROJECT MANAGER: Dane Fretwell

LAB USE

NOTES ON RECEIVED CONDITION:

☐ CUSTODY SEAL(S) BROKEN ☐ SAMPLE(S) DAMAGED
☐ ON ICE ☐ AMBIENT TEMP. ☐ INCORRECT PRESERVATION

ANALYSIS REQUESTED

	CLIENT SAMPLE ID	DATE	TIME	TYPE												LAB USE
2	S1@3ft	3/10	921	SL	X											
3	S1@5ft	"	935	"	X											
11	S4@3ft	"	1145	"	X											
12	S4@5ft	"	1230	"	X											

COMMENTS/ADDITIONAL INSTRUCTIONS: Reference Chem 5C10040

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY
		3/18	1645		

INVOICE

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
Office: (559) 268-7021
Fax: (559) 268-0740

Invoice To:
David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

Invoice Number
5032416-

Invoiced On:
03/24/05

Remit To:
Accounts Receivable
The Twining Laboratories Inc.
2527 Fresno Street
Fresno, CA 93721

PO Number

Received
03/18/05

Project
Woolomes and Garzoli, Delano Ca

Client
David Fretwell
Twining Environmental Department

Terms
NET 30

Project Number
E01406.01

Project Manager
Jim Brownfield

Work Order(s)
5C18023

Quantity	Analysis/Description	Matrix	Unit Cost	Extended Cost
The Twining Laboratories Inc.				
4	8260B Twining [5 day]	Soil	$186.00	$744.00
			Invoice Total:	**$744.00**

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

March 25, 2005

Work Order #: 5C11020

David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

RE: COATS CONSULTING - DELANO

Enclosed are the analytical results for samples received by our laboratory on 03/11/05 . For your reference, these analyses have been assigned laboratory work order number 5C11020.

All analyses have been performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, The Twining Laboratories, Inc. (TL) is not responsible for use of less than complete reports. Results apply only to samples analyzed.

If you have any questions, please feel free to contact us at the number listed above.

Sincerely,

The Twining Laboratories, Inc.

Ronald J. Boquist
Director of Analytical Chemistry

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Analytical Report for the Following Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-5@1ft	5C11020-01	Soil	03/11/05 09:08	03/11/05 15:06
S-6@1ft	5C11020-04	Soil	03/11/05 09:53	03/11/05 15:06
S-Vault @15ft	5C11020-07	Soil	03/11/05 11:42	03/11/05 15:06
S-8@1ft	5C11020-08	Soil	03/11/05 12:10	03/11/05 15:06

The Twining Laboratories Inc.
Ronald J. Boquist, Director of Analytical Chemistry
Joseph A. Ureno, Quality Assurance Manager

The results in this report apply to the samples analyzed in accordance with the chain custody document. This analytical report must be reproduced in its entirety.

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Analytical Report for Work Order 5C11020

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
S-5@1ft			Sampled: 03/11/05 09:08					**5C11020-01 (Soil)**
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**11**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**8.4**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**27**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
TRPH	ND	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M
S-6@1ft			Sampled: 03/11/05 09:53					**5C11020-04 (Soil)**
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**13**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**9.6**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**28**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
TRPH	ND	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M
S-Vault @15ft			Sampled: 03/11/05 11:42					**5C11020-07 (Soil)**
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**19**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**6.1**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**36**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
TRPH	ND	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M

The Twining Laboratories Inc.

Ronald J. Boquist, Director of Analytical Chemistry
Joseph A. Ureno, Quality Assurance Manager

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CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
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Twining Environmental Department	Project: COATS CONSULTING - DELANO	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/25/05

Analytical Report for Work Order 5C11020

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
S-Vault @15ft			Sampled: 03/11/05 11:42					**5C11020-07 (Soil)**
Dichlorodifluoromethane (CFC-12)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl chloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethanol	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichlorofluoromethane (CFC-11)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acetone	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Iodomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methylene chloride	ND	0.0020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butyl alcohol (TBA)	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon disulfide	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Vinyl acetate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Butanone (MEK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroprene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Di-isopropyl ether (DIPE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,2-Dichloroethene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chloroform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1-Trichloroethane (TCA)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Carbon tetrachloride	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Benzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromomethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Trichloroethene (TCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Joseph A. Ureno, Quality Assurance Manager

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Fresno, CA 93721
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(559) 268-0740 Fax

Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Analytical Report for Work Order 5C11020

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
S-Vault @15ft			Sampled: 03/11/05 11:42					**5C11020-07 (Soil)**
Bromodichloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethyl methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chloroethylvinyl ether	ND	0.020	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
cis-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Methyl-2-pentanone (MIBK)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,3-Dichloropropene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Toluene	**0.0016**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichloropropane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Methyl Methacrylate	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Dibromochloromethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Hexanone	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromoethane (EDB)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Tetrachloroethene (PCE)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Chlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Ethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
m,p-Xylene	**0.0025**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromoform	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Styrene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
o-Xylene	**0.0011**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichloropropane (123TCP)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Isopropylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Bromobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Propylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
2-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
4-Chlorotoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3,5-Trimethylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
tert-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trimethylbenzene	**0.0015**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
sec-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,3-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,4-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B

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Joseph A. Ureno, Quality Assurance Manager

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Twining Environmental Department	Project: COATS CONSULTING - DELANO	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	03/25/05

Analytical Report for Work Order 5C11020

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
S-Vault @15ft			Sampled: 03/11/05 11:42					**5C11020-07 (Soil)**
p-Isopropyltoluene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
n-Butylbenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,4-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrolein	ND	0.050	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Xylenes	**0.0036**	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Acrylonitrile	ND	0.010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Naphthalene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Hexachlorobutadiene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,2,3-Trichlorobenzene	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	mg/kg	1	T5C1610	03/16/05	03/17/05	EPA 8260B
Surrogate: 4-Bromofluorobenzene	*104 %*	*86-115*			*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Dibromofluoromethane	*104 %*	*76-114*			*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
Surrogate: Toluene-d8	*97.6 %*	*88-110*			*T5C1610*	*03/16/05*	*03/17/05*	*EPA 8260B*
S-8@1ft			Sampled: 03/11/05 12:10					**5C11020-08 (Soil)**
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**14**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**9.9**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**33**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
TRPH	ND	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M

Notes and Definitions

MS-01	Tap water used for batch QC MS/MSD analyses.
ug/L	micrograms per liter (parts per billion concentration units)
mg/L	milligrams per liter (parts per million concentration units)
mg/kg	milligrams per kilogram (parts per million concentration units)
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference

The Twining Laboratories Inc.

Ronald J. Boquist, Director of Analytical Chemistry
Joseph A. Ureno, Quality Assurance Manager

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Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C2218 - EPA 3050B										
Blank (T5C2218-BLK1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	ND	1.0	mg/kg							
Chromium	ND	5.0	"							
Lead	ND	5.0	"							
Nickel	ND	5.0	"							
Zinc	ND	5.0	"							
LCS (T5C2218-BS1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	3.83	1.0	mg/kg	4.00		95.8	75-125			
Lead	19.6	5.0	"	20.0		98.0	75-125			
Chromium	19.8	5.0	"	20.0		99.0	75-125			
Nickel	19.6	5.0	"	20.0		98.0	75-125			
Zinc	19.6	5.0	"	20.0		98.0	75-125			
LCS Dup (T5C2218-BSD1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	3.88	1.0	mg/kg	4.00		97.0	75-125	1.30	20	
Lead	19.8	5.0	"	20.0		99.0	75-125	1.02	20	
Nickel	19.8	5.0	"	20.0		99.0	75-125	1.02	20	
Chromium	20.0	5.0	"	20.0		100	75-125	1.01	20	
Zinc	19.8	5.0	"	20.0		99.0	75-125	1.02	20	
Matrix Spike (T5C2218-MS1)	**Source: 5C10008-01**			Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	3.81	1.0	mg/kg	4.00	ND	95.2	75-125			
Chromium	23.2	5.0	"	20.0	1.1	110	75-125			
Nickel	21.4	5.0	"	20.0	0.45	105	75-125			
Lead	19.9	5.0	"	20.0	1.0	94.5	75-125			
Zinc	30.3	5.0	"	20.0	5.3	125	75-125			
Matrix Spike (T5C2218-MS2)	**Source: 5C10041-03**			Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	3.83	1.0	mg/kg	4.00	0.031	95.0	75-125			
Chromium	30.1	5.0	"	20.0	11	95.5	75-125			
Lead	26.6	5.0	"	20.0	8.3	91.5	75-125			
Nickel	27.1	5.0	"	20.0	7.5	98.0	75-125			
Zinc	52.2	5.0	"	20.0	32	101	75-125			

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Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C2218 - EPA 3050B										
Matrix Spike Dup (T5C2218-MSD1)	**Source: 5C10008-01**			Prepared: 03/22/05 Analyzed: 03/24/05						
Zinc	23.5	5.0	mg/kg	20.0	5.3	91.0	75-125	25.3	20	
Nickel	20.6	5.0	"	20.0	0.45	101	75-125	3.81	20	
Cadmium	3.80	1.0	"	4.00	ND	95.0	75-125	0.263	20	
Chromium	21.8	5.0	"	20.0	1.1	104	75-125	6.22	20	
Lead	20.0	5.0	"	20.0	1.0	95.0	75-125	0.501	20	
Matrix Spike Dup (T5C2218-MSD2)	**Source: 5C10041-03**			Prepared: 03/22/05 Analyzed: 03/24/05						
Chromium	30.6	5.0	mg/kg	20.0	11	98.0	75-125	1.65	20	
Zinc	52.7	5.0	"	20.0	32	104	75-125	0.953	20	
Lead	27.2	5.0	"	20.0	8.3	94.5	75-125	2.23	20	
Nickel	28.6	5.0	"	20.0	7.5	106	75-125	5.39	20	
Cadmium	3.89	1.0	"	4.00	0.031	96.5	75-125	1.55	20	

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Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Semi-Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1512 - Default Prep GC-Semi										
Blank (T5C1512-BLK1)				Prepared & Analyzed: 03/15/05						
TRPH	ND	10	mg/kg							
LCS (T5C1512-BS1)				Prepared & Analyzed: 03/15/05						
TRPH	529	10	mg/kg	500		106	70-130			
LCS Dup (T5C1512-BSD1)				Prepared & Analyzed: 03/15/05						
TRPH	529	10	mg/kg	500		106	70-130	0.00	20	
Matrix Spike (T5C1512-MS1)		Source: 5C10040-01		Prepared & Analyzed: 03/15/05						
TRPH	534	10	mg/kg	500	14	104	70-130			
Matrix Spike Dup (T5C1512-MSD1)		Source: 5C10040-01		Prepared & Analyzed: 03/15/05						
TRPH	536	10	mg/kg	500	14	104	70-130	0.374	20	

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Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1610 - EPA 5035										
Blank (T5C1610-BLK1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: Toluene-d8	*0.0246*		*mg/kg*	*0.0250*		*98.4*	*88-110*			
Surrogate: Dibromofluoromethane	*0.0252*		*"*	*0.0250*		*101*	*76-114*			
Surrogate: 4-Bromofluorobenzene	*0.0249*		*"*	*0.0250*		*99.6*	*86-115*			
Dichlorodifluoromethane (CFC-12)	ND	0.0010	"							
Chloromethane	ND	0.0010	"							
Vinyl chloride	ND	0.0010	"							
Bromomethane	ND	0.0010	"							
Chloroethane	ND	0.0010	"							
Ethanol	ND	0.020	"							
Trichlorofluoromethane (CFC-11)	ND	0.0010	"							
Acetone	ND	0.020	"							
1,1-Dichloroethene	ND	0.0010	"							
Iodomethane	ND	0.0010	"							
Methylene chloride	ND	0.0020	"							
tert-Butyl alcohol (TBA)	ND	0.020	"							
Carbon disulfide	ND	0.0010	"							
trans-1,2-Dichloroethene	ND	0.0010	"							
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	"							
1,1-Dichloroethane	ND	0.0010	"							
Vinyl acetate	ND	0.0010	"							
2-Butanone (MEK)	ND	0.0010	"							
Chloroprene	ND	0.0010	"							
Di-isopropyl ether (DIPE)	ND	0.0010	"							
cis-1,2-Dichloroethene	ND	0.0010	"							
Bromochloromethane	ND	0.0010	"							
Chloroform	ND	0.0010	"							
2,2-Dichloropropane	ND	0.0010	"							
Ethyl tert-Butyl Ether (ETBE)	ND	0.0010	"							
1,2-Dichloroethane (1,2-DCA)	ND	0.0010	"							
1,1,1-Trichloroethane (TCA)	ND	0.0010	"							
1,1-Dichloropropene	ND	0.0010	"							
Carbon tetrachloride	ND	0.0010	"							
Benzene	ND	0.0010	"							
Tert-Amyl Methyl Ether (TAME)	ND	0.0010	"							
Dibromomethane	ND	0.0010	"							
1,2-Dichloropropane	ND	0.0010	"							

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

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Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1610 - EPA 5035										
Blank (T5C1610-BLK1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Trichloroethene (TCE)	ND	0.0010	mg/kg							
Bromodichloromethane	ND	0.0010	"							
Ethyl methacrylate	ND	0.0010	"							
2-Chloroethylvinyl ether	ND	0.020	"							
cis-1,3-Dichloropropene	ND	0.0010	"							
4-Methyl-2-pentanone (MIBK)	ND	0.0010	"							
trans-1,3-Dichloropropene	ND	0.0010	"							
1,1,2-Trichloroethane	ND	0.0010	"							
Toluene	ND	0.0010	"							
1,3-Dichloropropane	ND	0.0010	"							
Methyl Methacrylate	ND	0.0010	"							
Dibromochloromethane	ND	0.0010	"							
2-Hexanone	ND	0.0010	"							
1,2-Dibromoethane (EDB)	ND	0.0010	"							
Tetrachloroethene (PCE)	ND	0.0010	"							
1,1,1,2-Tetrachloroethane	ND	0.0010	"							
Chlorobenzene	ND	0.0010	"							
Ethylbenzene	ND	0.0010	"							
m,p-Xylene	ND	0.0010	"							
Bromoform	ND	0.0010	"							
Styrene	ND	0.0010	"							
1,1,2,2-Tetrachloroethane	ND	0.0010	"							
o-Xylene	ND	0.0010	"							
1,2,3-Trichloropropane (123TCP)	ND	0.0010	"							
trans-1,4-Dichloro-2-butene	ND	0.0010	"							
Isopropylbenzene	ND	0.0010	"							
Bromobenzene	ND	0.0010	"							
n-Propylbenzene	ND	0.0010	"							
2-Chlorotoluene	ND	0.0010	"							
4-Chlorotoluene	ND	0.0010	"							
1,3,5-Trimethylbenzene	ND	0.0010	"							
tert-Butylbenzene	ND	0.0010	"							
1,2,4-Trimethylbenzene	ND	0.0010	"							
sec-Butylbenzene	ND	0.0010	"							
1,3-Dichlorobenzene	ND	0.0010	"							
1,4-Dichlorobenzene	ND	0.0010	"							
p-Isopropyltoluene	ND	0.0010	"							

The Twining Laboratories Inc.

Ronald J. Boquist, Director of Analytical Chemistry
Joseph A. Ureno, Quality Assurance Manager

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Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1610 - EPA 5035										
Blank (T5C1610-BLK1)				Prepared: 03/16/05 Analyzed: 03/17/05						
1,2-Dichlorobenzene	ND	0.0010	mg/kg							
n-Butylbenzene	ND	0.0010	"							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0050	"							
Xylenes	ND	0.0010	"							
1,2,4-Trichlorobenzene	ND	0.0010	"							
Acrolein	ND	0.050	"							
Acrylonitrile	ND	0.010	"							
Naphthalene	ND	0.0010	"							
Hexachlorobutadiene	ND	0.0010	"							
1,2,3-Trichlorobenzene	ND	0.0010	"							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0010	"							
LCS (T5C1610-BS1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: Toluene-d8	*0.0249*		*mg/kg*	*0.0250*		*99.6*	*88-110*			
Surrogate: Dibromofluoromethane	*0.0252*		*"*	*0.0250*		*101*	*76-114*			
Surrogate: 4-Bromofluorobenzene	*0.0251*		*"*	*0.0250*		*100*	*86-115*			
1,1-Dichloroethene	0.0161	0.0010	"	0.0200		80.5	70-130			
Benzene	0.0182	0.0010	"	0.0200		91.0	70-130			
Trichloroethene (TCE)	0.0177	0.0010	"	0.0200		88.5	70-130			
Toluene	0.0173	0.0010	"	0.0200		86.5	70-130			
Chlorobenzene	0.0172	0.0010	"	0.0200		86.0	70-130			
LCS Dup (T5C1610-BSD1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: 4-Bromofluorobenzene	*0.0263*		*mg/kg*	*0.0250*		*105*	*86-115*			
Surrogate: Dibromofluoromethane	*0.0256*		*"*	*0.0250*		*102*	*76-114*			
Surrogate: Toluene-d8	*0.0246*		*"*	*0.0250*		*98.4*	*88-110*			
1,1-Dichloroethene	0.0163	0.0010	"	0.0200		81.5	70-130	1.23	20	
Benzene	0.0173	0.0010	"	0.0200		86.5	70-130	5.07	20	
Trichloroethene (TCE)	0.0176	0.0010	"	0.0200		88.0	70-130	0.567	20	
Toluene	0.0170	0.0010	"	0.0200		85.0	70-130	1.75	20	
Chlorobenzene	0.0169	0.0010	"	0.0200		84.5	70-130	1.76	20	

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Twining Environmental Department 2527 Fresno Street Fresno CA, 93721	Project: COATS CONSULTING - DELANO Project Number: E01406.02 Project Manager: David Fretwell	**Reported:** 03/25/05

Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1610 - EPA 5035										
Matrix Spike (T5C1610-MS1)				Prepared: 03/16/05 Analyzed: 03/17/05						
Surrogate: 4-Bromofluorobenzene	*0.0256*		*mg/kg*	*0.0250*		*102*	*86-115*			*MS*
Surrogate: Toluene-d8	*0.0248*		*"*	*0.0250*		*99.2*	*88-110*			*MS*
Surrogate: Dibromofluoromethane	*0.0254*		*"*	*0.0250*		*102*	*76-114*			*MS*
1,1-Dichloroethene	0.0157	0.0010	"	0.0200		78.5	70-130			MS
Benzene	0.0174	0.0010	"	0.0200		87.0	70-130			MS
Trichloroethene (TCE)	0.0171	0.0010	"	0.0200		85.5	70-130			MS
Toluene	0.0171	0.0010	"	0.0200		85.5	70-130			MS
Chlorobenzene	0.0175	0.0010	"	0.0200		87.5	70-130			MS
Matrix Spike Dup (T5C1610-MSD1)				Prepared: 03/16/05 Analyzed: 03/18/05						
Surrogate: Toluene-d8	*0.0241*		*mg/kg*	*0.0250*		*96.4*	*88-110*			*MS*
Surrogate: Dibromofluoromethane	*0.0247*		*"*	*0.0250*		*98.8*	*76-114*			*MS*
Surrogate: 4-Bromofluorobenzene	*0.0255*		*"*	*0.0250*		*102*	*86-115*			*MS*
1,1-Dichloroethene	0.0180	0.0010	"	0.0200		90.0	70-130	13.6	20	MS
Benzene	0.0195	0.0010	"	0.0200		97.5	70-130	11.4	20	MS
Trichloroethene (TCE)	0.0195	0.0010	"	0.0200		97.5	70-130	13.1	20	MS
Toluene	0.0190	0.0010	"	0.0200		95.0	70-130	10.5	20	MS
Chlorobenzene	0.0187	0.0010	"	0.0200		93.5	70-130	6.63	20	MS

The Twining Laboratories Inc.
Ronald J. Boquist, Director of Analytical Chemistry
Joseph A. Ureno, Quality Assurance Manager

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EST. 1898

ANALYTICAL CHEMISTRY • ENVIRONMENTAL SERVICES
GEOTECHNICAL ENGINEERING • SAMPLING SERVICES
CONSTRUCTION INSPECTION & MATERIALS TESTING

2527 FRESNO STREET • FRESNO, CA 93721 • PHONE (559) 268-7021 • FAX: (559) 268-0740

CHAIN OF CUSTODY / ANALYSIS REQUEST

WORK ORDER #: 5C11020
PAGE OF

REPORT TO:

ATTENTION: DAVID FRETWELL
NAME: TWINING LABS
ADDRESS: 2527 FRESNO ST
PHONE: 559-268-7021
FAX: 559-268-7126

INVOICE and/or COPY TO:

ATTENTION: SAME
NAME:
ADDRESS:
PHONE:
FAX:

REPORTING:

- ☐ STANDARD FORMAT
- ☐ WRITE-ON (STATE FORM)
- ☐ GEOTRACKER/COELT (LUFT)
- ☐ PDF ☐ SPREADSHEET
- ☐ COUNTY DHS : ☐FRESNO ☒KINGS ☐MADERA ☐MERCED ☐TULARE
- ☐ OTHER:

SAMPLE INFORMATION

SAMPLED BY (PRINT): D. FRETWELL
SIGNATURE: D. Fretwell

- ☐ PUBLIC SYSTEM ☐ ROUTINE
- ☐ PRIVATE WELL ☐ REPEAT
- ☐ OTHER ☐ REPLACEMENT

TURN AROUND TIME: ☒ STANDARD ☐ RUSH, DUE ON: _____

SAMPLE TYPES:

SOLID:
- ☐ BS – BIOSOLID
- ☐ CR – CERAMIC
- ☐ SL – SOIL/SOLID

LIQUID:
- ☐ DW – DRINKING WATER
- ☐ GW – GROUND WATER
- ☐ OL – OIL
- ☐ SF – SURFACE WATER
- ☐ ST – STORM WATER
- ☐ WW – WASTE WATER

PROJECT INFORMATION

CONTRACT/P.O. NO.: COATS CONSULTING
SITE: COATS CONSULTING - DELANO
PROJECT NUMBER: E01406.02
PROJECT MANAGER: DAVID FRETWELL

LAB USE

NOTES ON RECEIVED CONDITION:
☐ CUSTODY SEAL(S) BROKEN ☐ SAMPLE(S) DAMAGED
☐ ON ICE ☐ AMBIENT TEMP. ☐ INCORRECT PRESERVATION

ANALYSIS REQUESTED

	CLIENT SAMPLE ID	DATE	TIME	TYPE	TRPH	CADMIUM/CHROMIUM	PB/NI/ZN	ON HOLD	VOCS	LAB USE
1	S-5 @ 1FT	3/10/05	9:08	SL	X	X	X			
2	S-5 @ 3FT		9:19					X		
3	S-5 @ 5FT		9:40					X		
4	S-6 @ 1FT		9:53		X	X	X			
5	S-6 @ 3FT		10:03					X		
6	S-6 @ 5FT		10:15					X		
7	S-VAULT @ 1FT		11:42		X	X	X		X	
8	S-8 @ 1FT	↓	12:10	↓	X	X	X			

COMMENTS/ADDITIONAL INSTRUCTIONS:
FOR TRPH: RUN DEEPER SAMPLES (3FT & 5FT ON HOLD) IF ANY HITS ON CORRESPONDING 1FT SAMPLE(S).

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY
D. Fretwell		3/11	1506		

INVOICE

THE TWINING LABORATORIES, INC.
EST. 1918 CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
Office: (559) 268-7021
Fax: (559) 268-0740

Invoice To:
David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

Invoice Number
5033033-

Remit To:
Accounts Receivable
The Twining Laboratories Inc.
2527 Fresno Street
Fresno, CA 93721

PO Number

Invoiced On:
03/30/05

Received
03/11/05

Project
COATS CONSULTING - DELANO

Client
David Fretwell
Twining Environmental Department

Terms
NET 30

Project Number
E01406.02

Project Manager
Eric Scott

Work Order(s)
5C11020

Quantity	Analysis/Description	Matrix	Unit Cost	Extended Cost
The Twining Laboratories Inc.				
4	Zinc Total EPA 6010B [10 day]	Soil	$15.00	$60.00
4	TRPH - Soil [10 day]	Soil	$43.00	$172.00
4	Nickel Total EPA 6010B [10 day]	Soil	$15.00	$60.00
4	Lead Total EPA 6010B [10 day]	Soil	$15.00	$60.00
4	Hold Only Fee [10 day]	Soil	$5.00	$20.00
4	Chromium Total EPA 6010B [10 day]	Soil	$15.00	$60.00
4	Cadmium Total EPA 6010B [10 day]	Soil	$15.00	$60.00
1	8260B Twining [10 day]	Soil	$189.00	$189.00

Invoice Total: $681.00

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2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

April 07, 2005

Work Order #: 5C14032

David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

RE: Coats Consulting - Delano

Enclosed are the analytical results for samples received by our laboratory on 03/14/05 . For your reference, these analyses have been assigned laboratory work order number 5C14032.

All analyses have been performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, The Twining Laboratories, Inc. (TL) is not responsible for use of less than complete reports. Results apply only to samples analyzed.

If you have any questions, please feel free to contact us at the number listed above.

Sincerely,

The Twining Laboratories, Inc.

QA Manager

Ronald J. Boquist
Director of Analytical Chemistry

THE TWINING LABORATORIES, INC.
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2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
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Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-9@1ft	5C14032-03	Soil	03/14/05 11:12	03/14/05 15:13
S-9@3ft	5C14032-04	Soil	03/14/05 11:19	03/14/05 15:13
S-9@5ft	5C14032-05	Soil	03/14/05 11:25	03/14/05 15:13
S-10@1ft	5C14032-06	Soil	03/14/05 11:32	03/14/05 15:13
S-10@3ft	5C14032-07	Soil	03/14/05 11:41	03/14/05 15:13
S-10@5ft	5C14032-08	Soil	03/14/05 11:49	03/14/05 15:13

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Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S-9@1ft

5C14032-03 (Soil) Sampled:03/14/05 11:12

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals								
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**14**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	**18**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**8.6**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**49**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Semi-Volatile Organics								
TRPH	**12**	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M

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Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S-9@3ft

5C14032-04 (Soil) Sampled:03/14/05 11:19

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5D0109	04/01/05	04/01/05	418.1 M

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Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S-9@5ft

5C14032-05 (Soil) Sampled:03/14/05 11:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5D0109	04/01/05	04/01/05	418.1 M

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Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S-10@1ft

5C14032-06 (Soil) Sampled:03/14/05 11:32

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals								
Cadmium	ND	1.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Chromium	**17**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Lead	ND	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Nickel	**13**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Zinc	**36**	5.0	mg/kg	1	T5C2218	03/22/05	03/24/05	EPA 6010B
Semi-Volatile Organics								
TRPH	**24**	10	mg/kg	1	T5C1512	03/15/05	03/15/05	418.1 M

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Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S-10@3ft

5C14032-07 (Soil) Sampled:03/14/05 11:41

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5D0109	04/01/05	04/01/05	418.1 M

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Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/07/05

S-10@5ft

5C14032-08 (Soil) Sampled:03/14/05 11:49

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Semi-Volatile Organics								
TRPH	ND	10	mg/kg	1	T5D0109	04/01/05	04/01/05	418.1 M

Notes and Definitions

ug/L	micrograms per liter (parts per billion concentration units)
mg/L	milligrams per kilogram (parts per million concentration units)
mg/kg	milligrams per liter (parts per million concentration units)
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference

Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C2218 - EPA 3050B										
Blank (T5C2218-BLK1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	ND	1.0	mg/kg							
Chromium	ND	5.0	mg/kg							
Lead	ND	5.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Zinc	ND	5.0	mg/kg							
LCS (T5C2218-BS1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Lead	19.6	5.0	mg/kg	20.0		98.0	75-125			
Nickel	19.6	5.0	mg/kg	20.0		98.0	75-125			
Chromium	19.8	5.0	mg/kg	20.0		99.0	75-125			
Cadmium	3.83	1.0	mg/kg	4.00		95.8	75-125			
Zinc	19.6	5.0	mg/kg	20.0		98.0	75-125			
LCS Dup (T5C2218-BSD1)				Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	3.88	1.0	mg/kg	4.00		97.0	75-125	1.30	20	
Chromium	20.0	5.0	mg/kg	20.0		100	75-125	1.01	20	
Lead	19.8	5.0	mg/kg	20.0		99.0	75-125	1.02	20	
Nickel	19.8	5.0	mg/kg	20.0		99.0	75-125	1.02	20	
Zinc	19.8	5.0	mg/kg	20.0		99.0	75-125	1.02	20	
Matrix Spike (T5C2218-MS1)		Source: 5C10008-01		Prepared: 03/22/05 Analyzed: 03/24/05						
Nickel	21.4	5.0	mg/kg	20.0	0.45	105	75-125			
Zinc	30.3	5.0	mg/kg	20.0	5.3	125	75-125			
Cadmium	3.81	1.0	mg/kg	4.00	ND	95.2	75-125			
Lead	19.9	5.0	mg/kg	20.0	1.0	94.5	75-125			
Chromium	23.2	5.0	mg/kg	20.0	1.1	110	75-125			
Matrix Spike (T5C2218-MS2)		Source: 5C10041-03		Prepared: 03/22/05 Analyzed: 03/24/05						
Chromium	30.1	5.0	mg/kg	20.0	11	95.5	75-125			
Lead	26.6	5.0	mg/kg	20.0	8.3	91.5	75-125			
Nickel	27.1	5.0	mg/kg	20.0	7.5	98.0	75-125			
Zinc	52.2	5.0	mg/kg	20.0	32	101	75-125			
Cadmium	3.83	1.0	mg/kg	4.00	0.031	95.0	75-125			
Matrix Spike Dup (T5C2218-MSD1)		Source: 5C10008-01		Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	3.80	1.0	mg/kg	4.00	ND	95.0	75-125	0.263	20	
Chromium	21.8	5.0	mg/kg	20.0	1.1	104	75-125	6.22	20	
Lead	20.0	5.0	mg/kg	20.0	1.0	95.0	75-125	0.501	20	
Nickel	20.6	5.0	mg/kg	20.0	0.45	101	75-125	3.81	20	
Zinc	23.5	5.0	mg/kg	20.0	5.3	91.0	75-125	25.3	20	
Matrix Spike Dup (T5C2218-MSD2)		Source: 5C10041-03		Prepared: 03/22/05 Analyzed: 03/24/05						
Cadmium	3.89	1.0	mg/kg	4.00	0.031	96.5	75-125	1.55	20	
Zinc	52.7	5.0	mg/kg	20.0	32	104	75-125	0.953	20	
Nickel	28.6	5.0	mg/kg	20.0	7.5	106	75-125	5.39	20	
Chromium	30.6	5.0	mg/kg	20.0	11	98.0	75-125	1.65	20	
Lead	27.2	5.0	mg/kg	20.0	8.3	94.5	75-125	2.23	20	

Semi-Volatile Organics - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C1512 - Default Prep GC-Semi										
Blank (T5C1512-BLK1)				Prepared & Analyzed: 03/15/05						
TRPH	ND	10	mg/kg							
LCS (T5C1512-BS1)				Prepared & Analyzed: 03/15/05						
TRPH	529	10	mg/kg	500		106	70-130			
LCS Dup (T5C1512-BSD1)				Prepared & Analyzed: 03/15/05						
TRPH	529	10	mg/kg	500		106	70-130	0.00	20	
Matrix Spike (T5C1512-MS1)	Source: 5C10040-01			Prepared & Analyzed: 03/15/05						
TRPH	534	10	mg/kg	500	14	104	70-130			
Matrix Spike Dup (T5C1512-MSD1)	Source: 5C10040-01			Prepared & Analyzed: 03/15/05						
TRPH	536	10	mg/kg	500	14	104	70-130	0.374	20	
Batch T5D0109 - Default Prep GC-Semi										
Blank (T5D0109-BLK1)				Prepared & Analyzed: 04/01/05						
TRPH	ND	10	mg/kg							
LCS (T5D0109-BS1)				Prepared & Analyzed: 04/01/05						
TRPH	548	10	mg/kg	500		110	70-130			
LCS Dup (T5D0109-BSD1)				Prepared & Analyzed: 04/01/05						
TRPH	548	10	mg/kg	500		110	70-130	0.00	20	
Matrix Spike (T5D0109-MS1)	Source: 5C14032-07			Prepared & Analyzed: 04/01/05						
TRPH	550	10	mg/kg	500	ND	110	70-130			
Matrix Spike Dup (T5D0109-MSD1)	Source: 5C14032-07			Prepared & Analyzed: 04/01/05						
TRPH	555	10	mg/kg	500	ND	111	70-130	0.905	20	

TWINING LABORATORIES, INC.

EST. 1898

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CONSTRUCTION INSPECTION & MATERIALS TESTING

CHAIN OF CUSTODY/ANALYSIS REQUEST

2527 FRESNO STREET • FRESNO, CA 93721 • PHONE (559) 268-7021 • FAX: (559) 268-0740

WORK ORDER #: 501403 2
PAGE ____ **OF** ____

REPORT TO:

ATTENTION: DAVID FRETWELL
NAME: TWINING LABS
ADDRESS: 2527 FRESNO ST
PHONE: 559-268-7021
FAX: 559-268-7126

INVOICE and/or COPY TO:

ATTENTION: SAME
NAME:
ADDRESS:
PHONE:
FAX:

REPORTING:

- ☐ STANDARD FORMAT
- ☐ WRITE-ON (STATE FORM)
- ☐ GEOTRACKER/COELT (LUFT)
- ☐ PDF ☐ SPREADSHEET
- ☐ COUNTY DHS : ☐FRESNO ☒KINGS ☐MADERA ☐MERCED ☐TULARE
- ☐ OTHER:

SAMPLE INFORMATION

SAMPLED BY (PRINT): D. FRETWELL
SIGNATURE:

- ☐ PUBLIC SYSTEM ☐ ROUTINE
- ☐ PRIVATE WELL ☐ REPEAT
- ☐ OTHER ☐ REPLACEMENT

TURN AROUND TIME: ☒ STANDARD ☐ RUSH, DUE ON: ____

SAMPLE TYPES:

SOLID:
- ☐ BS – BIOSOLID
- ☐ CR – CERAMIC
- ☐ SL – SOIL/SOLID

LIQUID:
- ☐ DW - DRINKING WATER
- ☐ GW - GROUND WATER
- ☐ OL - OIL
- ☐ SF - SURFACE WATER
- ☐ ST - STORM WATER
- ☐ WW – WASTE WATER

PROJECT INFORMATION

CONTRACT/P.O. NO.:
SITE: COATS CONSULTING - DELANO
PROJECT NUMBER: E01406.02
PROJECT MANAGER: DAVID FRETWELL

LAB USE

NOTES ON RECEIVED CONDITION:
☐ CUSTODY SEAL(S) BROKEN ☐ SAMPLE(S) DAMAGED
☐ ON ICE ☐ AMBIENT TEMP. ☐ INCORRECT PRESERVATION

ANALYSIS REQUESTED

CLIENT SAMPLE ID	DATE	TIME	TYPE	TRPH	8260 BTEX/OXYGENATES	PB (1 ea)	OA / HOLD	LAB USE
S-8 @ 3FT	3/14/13	10:55	SL				X	
S-8 @ 15FT		11:04					X	
S-9 @ 1FT		11:12		X	X	X		
S-9 @ 3FT		11:19					X	
S-9 @ 5FT		11:25					X	
S-10 @ 1FT		11:32		X	X	X		
S-10 @ 3FT		11:41					X	
S-10 @ 5FT	↓	11:49					X	

NO MTBE

COMMENTS/ADDITIONAL INSTRUCTIONS:
AR TRPH: RUN DEEPER SAMPLES (3FT & 5FT - ON HOLD)
IF ANY HITS ON CORRESPONDING 1FT SAMPLE(S)

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY
D. Fretwell		3/14	1513	K Tuck	TL

INVOICE

THE TWINING LABORATORIES, INC.
EST. 1878 CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
Office: (559) 268-7021
Fax: (559) 268-0740

Invoice To:
David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

Invoice Number
5040827-

Invoiced On:
04/08/05

Remit To:
Accounts Receivable
The Twining Laboratories Inc.
2527 Fresno Street
Fresno, CA 93721

PO Number
NA

Received
03/14/05

Project
Coats Consulting - Delano

Client
David Fretwell
Twining Environmental Department

Terms
NET 30

Project Number
E01406.02

Project Manager
Eric Scott

Work Order(s)
5C14032

Quantity	Analysis/Description	Matrix	Unit Cost	Extended Cost
The Twining Laboratories Inc.				
2	Zinc Total EPA 6010B [10 day]	Soil	$15.00	$30.00
6	TRPH - Soil [10 day]	Soil	$43.00	$258.00
2	Nickel Total EPA 6010B [10 day]	Soil	$15.00	$30.00
2	Lead Total EPA 6010B [10 day]	Soil	$15.00	$30.00
2	Hold Only Fee [10 day]	Soil	$5.00	$10.00
2	Chromium Total EPA 6010B [10 day]	Soil	$15.00	$30.00
2	Cadmium Total EPA 6010B [10 day]	Soil	$15.00	$30.00

Invoice Total: **$418.00**

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

April 01, 2005

Work Order #: 5C22010

David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

RE: Coats Consulting - Delano

Enclosed are the analytical results for samples received by our laboratory on 03/22/05 . For your reference, these analyses have been assigned laboratory work order number 5C22010.

All analyses have been performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, The Twining Laboratories, Inc. (TL) is not responsible for use of less than complete reports. Results apply only to samples analyzed.

If you have any questions, please feel free to contact us at the number listed above.

Sincerely,

The Twining Laboratories, Inc.

Ronald J. Boquist
Director of Analytical Chemistry

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/01/05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S- Background	5C22010-01	Soil	03/22/05 08:00	03/22/05 10:15

THE TWINING LABORATORIES, INC.
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2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: Coats Consulting - Delano	
2527 Fresno Street	Project Number: E01406.02	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	04/01/05

S- Background

5C22010-01 (Soil) Sampled:03/22/05 08:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Metals								
Cadmium	ND	1.0	mg/kg	1	T5C3024	03/30/05	03/31/05	EPA 6010B
Chromium	**12**	5.0	mg/kg	1	T5C3024	03/30/05	03/31/05	EPA 6010B
Lead	**15**	5.0	mg/kg	1	T5C3024	03/30/05	03/31/05	EPA 6010B
Nickel	**7.8**	5.0	mg/kg	1	T5C3024	03/30/05	03/31/05	EPA 6010B
Zinc	**55**	5.0	mg/kg	1	T5C3024	03/30/05	03/31/05	EPA 6010B

Notes and Definitions

QM-06	MS/MSD out of range due to matrix interference.
ug/L	micrograms per liter (parts per billion concentration units)
mg/L	milligrams per kilogram (parts per million concentration units)
mg/kg	milligrams per liter (parts per million concentration units)
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference

Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch T5C3024 - EPA 3050B										
Blank (T5C3024-BLK1)				Prepared: 03/30/05 Analyzed: 03/31/05						
Zinc	ND	5.0	mg/kg							
Chromium	ND	5.0	mg/kg							
Nickel	ND	5.0	mg/kg							
Lead	ND	5.0	mg/kg							
Cadmium	ND	1.0	mg/kg							
LCS (T5C3024-BS1)				Prepared: 03/30/05 Analyzed: 03/31/05						
Lead	19.1	5.0	mg/kg	20.0		95.5	75-125			
Cadmium	3.76	1.0	mg/kg	4.00		94.0	75-125			
Zinc	19.2	5.0	mg/kg	20.0		96.0	75-125			
Chromium	19.6	5.0	mg/kg	20.0		98.0	75-125			
Nickel	19.2	5.0	mg/kg	20.0		96.0	75-125			
LCS Dup (T5C3024-BSD1)				Prepared: 03/30/05 Analyzed: 03/31/05						
Cadmium	3.77	1.0	mg/kg	4.00		94.2	75-125	0.266	20	
Chromium	19.7	5.0	mg/kg	20.0		98.5	75-125	0.509	20	
Lead	19.2	5.0	mg/kg	20.0		96.0	75-125	0.522	20	
Nickel	19.3	5.0	mg/kg	20.0		96.5	75-125	0.519	20	
Zinc	19.2	5.0	mg/kg	20.0		96.0	75-125	0.00	20	
Matrix Spike (T5C3024-MS1)		Source: 5C22010-01		Prepared: 03/30/05 Analyzed: 03/31/05						
Chromium	29.9	5.0	mg/kg	20.0	12	89.5	75-125			
Nickel	25.0	5.0	mg/kg	20.0	7.8	86.0	75-125			
Cadmium	3.83	1.0	mg/kg	4.00	0.18	91.2	75-125			
Zinc	60.1	5.0	mg/kg	20.0	55	25.5	75-125			QM-06
Lead	31.3	5.0	mg/kg	20.0	15	81.5	75-125			
Matrix Spike Dup (T5C3024-MSD1)		Source: 5C22010-01		Prepared: 03/30/05 Analyzed: 03/31/05						
Zinc	59.7	5.0	mg/kg	20.0	55	23.5	75-125	0.668	20	QM-06
Lead	28.5	5.0	mg/kg	20.0	15	67.5	75-125	9.36	20	QM-06
Chromium	29.5	5.0	mg/kg	20.0	12	87.5	75-125	1.35	20	
Nickel	24.8	5.0	mg/kg	20.0	7.8	85.0	75-125	0.803	20	
Cadmium	3.78	1.0	mg/kg	4.00	0.18	90.0	75-125	1.31	20	

TWINING LABORATORIES, INC.

EST. 1898

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CONSTRUCTION INSPECTION & MATERIALS TESTING

CHAIN OF CUSTODY/ANALYSIS REQUEST

2527 FRESNO STREET • FRESNO, CA 93721 • PHONE (559) 268-7021 • FAX: (559) 268-0740

WORK ORDER #: 5C22010
PAGE ____ OF ____

REPORT TO:

ATTENTION: DAVID FRETWELL
NAME: TWINING LABS
ADDRESS: 2527 FRESNO ST
FRESNO, CA
PHONE: 559-268-7021
FAX: 559-268-7126

INVOICE and/or COPY TO:

ATTENTION: SAME
NAME:
ADDRESS:
PHONE:
FAX:

REPORTING:

- ☐ STANDARD FORMAT
- ☐ WRITE-ON (STATE FORM)
- ☐ GEOTRACKER/COELT (LUFT)
- ☐ PDF ☐ SPREADSHEET
- ☐ COUNTY DHS : ☐FRESNO ☐KINGS ☐MADERA ☐MERCED ☒TULARE
- ☐ OTHER:

SAMPLE INFORMATION

SAMPLED BY (PRINT): D. FRETWELL
SIGNATURE: D W Fretwell

- ☐ PUBLIC SYSTEM ☐ ROUTINE
- ☐ PRIVATE WELL ☐ REPEAT
- ☐ OTHER ☐ REPLACEMENT

TURN AROUND TIME: ☐ RUSH, DUE ON:
☒ STANDARD

SAMPLE TYPES:

SOLID:
- ☐ BS – BIOSOLID
- ☐ CR – CERAMIC
- ☐ SL – SOIL/SOLID

LIQUID:
- ☐ DW - DRINKING WATER
- ☐ GW - GROUND WATER
- ☐ OL - OIL
- ☐ SF - SURFACE WATER
- ☐ ST - STORM WATER
- ☐ WW – WASTE WATER

PROJECT INFORMATION

CONTRACT/P.O. NO.:
SITE: COATS CONSULTING - DELANO
PROJECT NUMBER: E01406.02
PROJECT MANAGER: DAVID FRETWELL

LAB USE

NOTES ON RECEIVED CONDITION:
☐ CUSTODY SEAL(S) BROKEN ☐ SAMPLE(S) DAMAGED
☐ ON ICE ☐ AMBIENT TEMP. ☐ INCORRECT PRESERVATION

ANALYSIS REQUESTED

CLIENT SAMPLE ID	DATE	TIME	TYPE	CADMIUM/CHROMIUM	Pb/Ni/Zn									LAB USE
S-BACKGROUND	3/22/05	8:00	SL	X	X			7me Ø18						

COMMENTS/ADDITIONAL INSTRUCTIONS:

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY
D W Fretwell	Twining	3/22/05	1015	[signature]	

INVOICE

THE TWINING LABORATORIES, INC.
EST. 1978
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
Office: (559) 268-7021
Fax: (559) 268-0740

Invoice To:
David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

Invoice Number
5040737-

Invoiced On:
04/07/05

Remit To:
Accounts Receivable
The Twining Laboratories Inc.
2527 Fresno Street
Fresno, CA 93721

PO Number

Received
03/22/05

Project
Coats Consulting - Delano

Client
David Fretwell
Twining Environmental Department

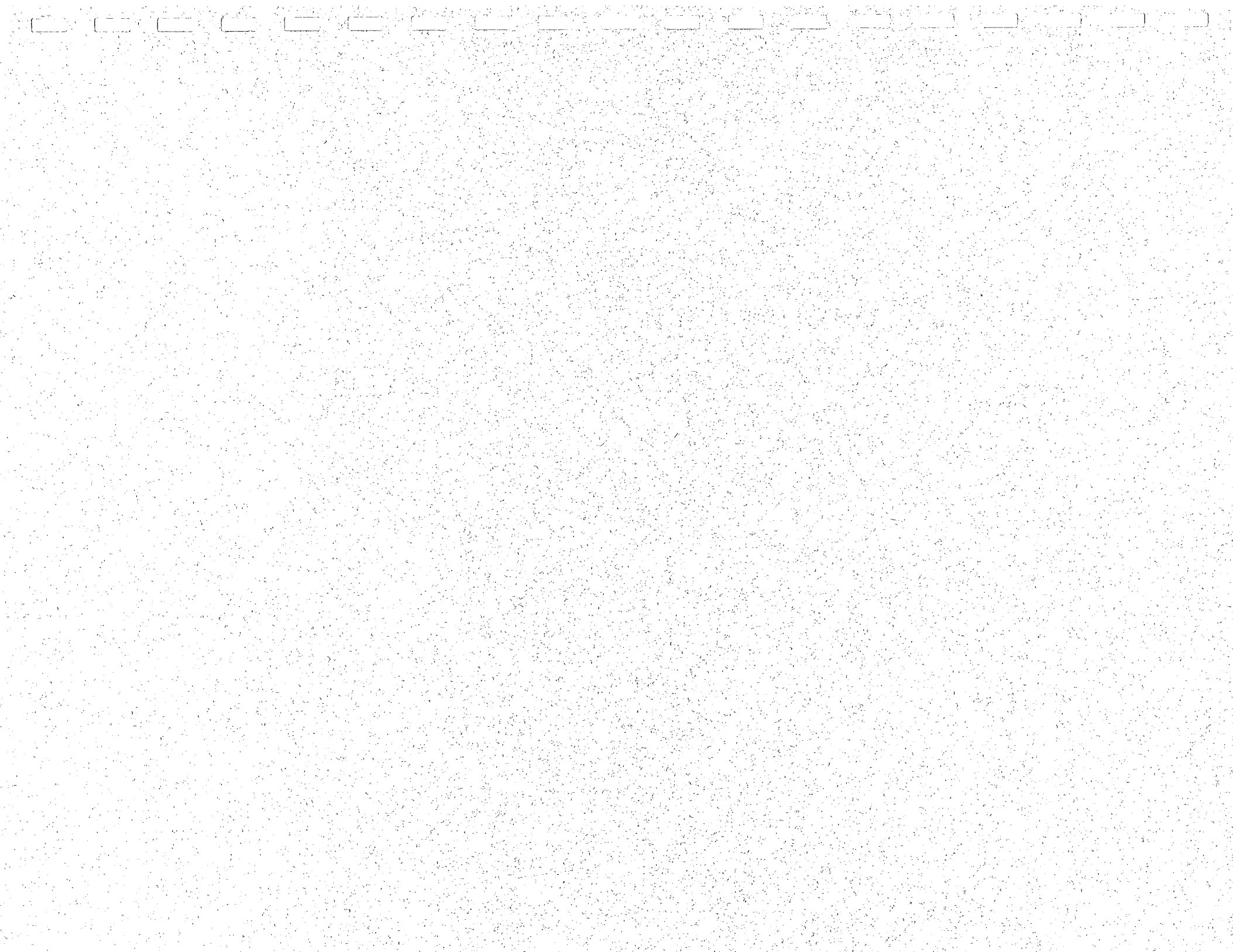
Terms
NET 30

Project Number
E01406.02

Project Manager
Eric Scott

Work Order(s)
5C22010

Quantity	Analysis/Description	Matrix	Unit Cost	Extended Cost
The Twining Laboratories Inc.				
1	Zinc Total EPA 6010B [10 day]	Soil	$12.00	$12.00
1	Nickel Total EPA 6010B [10 day]	Soil	$12.00	$12.00
1	Lead Total EPA 6010B [10 day]	Soil	$12.00	$12.00
1	Chromium Total EPA 6010B [10 day]	Soil	$12.00	$12.00
1	Cadmium Total EPA 6010B [10 day]	Soil	$12.00	$12.00
			Invoice Total:	**$60.00**



THE TWINING LABORATORIES, INC.
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ANALYTICAL CHEMISTRY • ENVIRONMENTAL SERVICES
GEOTECHNICAL ENGINEERING • SAMPLING SERVICES
CONSTRUCTION INSPECTION & MATERIALS TESTING

September 14, 2006

E01406.02

Mr. Paul Lu
YK America
10508 Lower Azusa Road, Suite 200
El Monte, California 91731

Subject: **Limited Phase II Assessment**
Property Southwest of Woollomes Road and Garzoli Avenue
Delano, Kern County, California

Dear Mr. Lu:

This report was perpared to document the results of a limited soil assessment conducted by The Twining Laboratories, Inc. (Twining) at the property located southwest of the intersection of Woollomes Road and Garzoli Avenue in Delano, California (Site). Location of the Site is depicted on Drawing 1. This report includes a brief description of the purpose and scope, project background, observations and sampling procedures, analytical testing program, analytical results, and discussion.

PURPOSE AND SCOPE

The purpose of this limited soil assessment was to investigate and collect subsurface soil samples at possible locations of former underground storage tanks (USTs) and possible remaining piping based on an anomaly and fragmented conduits located during a geophysical survey. The soil samples were chemically analyzed to determine if there was threat of a release of petroleum products to soil and/or groundwater below the Site in relation to a former truck stop, previously located at the Site.

PROJECT BACKGROUND

Phase I: During June, July and August 2004, Twining performed a Phase I at the approximate 45 acre property located on Parcels 521-050-01, 02, 03, 04, 05, 08, 09, and 10 in the city of Delano, Kern County, California.

The Phase I identified that a former truck stop diesel fueling station was located on Parcel 8 in the general location of the former Pioneer Motel at 1001 Garzoli Avenue. Building permits reviewed for the former truck stop indicate that two USTs were removed and the excavations were backfilled with fill soil. No information is available regarding investigations or possible releases associated with the former truck stop.

Geophysical Survey: On March 10 and 11, 2005 Spectrum Geophysics (Spectrum) conducted a geophysical survey in the parking lot of the former Pioneer Motel (Parcel 8) to locate evidence of the reported fuel USTs and/or remaining product piping. The geophysical survey was presented in a Limited Phase II Assessment report dated May 5, 2006 by Twining. Based on the results of the geophysical survey, Spectrum identified an anomaly that possibly could have been the former USTs location and possible product lines in the parking lot in Parcel 8. The Twining report recommended drilling and soil sampling at these locations to determine the evidence of a leaking UST or leaking product line(s) (if any).

OBSERVATIONS AND SAMPLING PROCEDURES

The limited phase II assessment included soil sampling and analyses in the Em 61anomaly area and possible product line(s) area located directly northeast of anomaly Em 61 determined by the geophysical survey. In the area where the former USTs may have been located (Em 61anomaly area), three (3) soil samples (B7 @ 15FT through B9 @ 15FT) were obtained by drilling down to 15-feet below site grade (bsg) with a truck mounted drill rig and driving a steel sample tube into the soil with a trip hammer. In the areas where the former product lines may have been located, seven (7) soil samples (B1 @ 5FT through B6 @ 5FT and B10 @ 2FT) were obtained by drilling down to the target depth of 5-feet bsg (one soil sample for every 15-feet of possible product line) and driving a steel sample tube into the soil with a trip hammer. The exception at this location was boring B10 which was drilled utilizing hand auger methods because the boring location was near a natural gas line. At boring B10 location, the target depth of 5-feet bsg was not achieved due to cobbles encountered causing a drilling obstruction. Sample B10 @ 2FT was obtained at 2-feet bsg at this location, the deepest the hand auger could be advanced. The soil borings and soil sampling locations are depicted on Drawing 2.

Soil samples were field screened using a photoionization detector (PID) for evidence of petroleum hydrocarbon constituents. The soil samples did not contain obvious soil discoloration or hydrocarbon odor. After the soil samples were collected, the ends of the sleeves were covered with Teflon ® tape and plastic end caps. Each soil sample was labeled with the sampler's name, designation identification, and time and date the sample was collected. Soil samples were placed in an ice chest and cooled with Blue Ice ®. The soil samples were transported and submitted to a California certified laboratory for analyses under proper chain-of-custody (COC) protocols. Soil cuttings generated during drilling were stored on and covered with plastic sheets per later disposal, if found impacted. Borings were backfilled with a 6-sack sand cement mix to grade. Twining is a licensed drilling contractor under C-57 classification (Contractor's License No. 506159). The work was performed under the direction of a licensed California-professional geologist. Twining performed field and laboratory activities according to our Standard Operating Procedures (SOPs). A copy of Twining's SOPs are included in Appendix A.

LABORATORY TESTING PROGRAM

Soil samples collected from the field investigation were tested in the laboratory for Total Petroleum Hydrocarbons as referenced to gasoline (TPH-g) using the United States Environmental Protection Agency's (U. S. EPA) Method 8015/8021B, Total Petroleum Hydrocarbons as reference to diesel (TPH-D) by U.S. EPA Method 8015M, Benzene, Toluene, Ethyl-benzene, and Xylenes (BTEX), and Methyl Tertiary-Butyl Ether (MTBE) using the U.S. EPA Method 8015/8021B, and total lead using U.S. EPA 6010B.

ANALYTICAL RESULTS

A summary of the analytical results of the soil samples are depicted on Table 1. Analytical Reports, including COC documentation for the soil samples are included in Appendix B.

Analytical results for TPH-g, BTEX, and MTBE were none detected for soil samples obtained from borings B1 through B10. Soil samples were none detected for TPH-d with the exception of soil samples B6 @ 5 FT and B10 @ 2 FT that contained TPH-d at 17 milligrams per kilograms (mg/kg) and 60 mg/kg, respectively. Soil samples were none detected for lead with the exception of soil samples B6 @ 5 FT, B8 @ 15FT, and B10 @ 2 FT contained lead at 8.7 mg/kg, 12 mg/kg, and 7.5 mg/kg, respectively. Lead concentrations in these soil samples were below 10 times the Soluble Threshold Limit Concentrations (STLC) as identified in the California Code of Regulations (CCR) Title 22, section 66261.

DISCUSSION

The laboratory analytical results of the soil samples obtained from the Site indicate TPH-d concentrations in soil ranging from none detected to 60 mg/kg. Preliminary Remediation Goals (PRGs) established by Region 9 of the U.S. Environmental Protection Agency (U.S.EPA) are not inclusive of TPH-d. The California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region prepared an Interim Final report in February 2005 titled "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater." Volume 2, Background Documentation for the Development of Tier 1 Soil and Groundwater Screening Levels, establishes a risk-based screening level for TPH-d (middle distillates) of 100 mg/kg. TPH-d concentrations identified in the soil samples are below the listed screening levels.

Due to the absence of gasoline in soil samples obtained from the Site, the detection of lead is assumed to be from an inorganic source and most likely representative of background levels in the Site soil. Analytical results for lead ranged from none detected to 8.7 mg/kg or below 10 times the applicable STLC in the soil samples obtained from borings B1 through B10. Analytical results for TPH-g, BTEX, and MTBE were none detected for soil samples obtained from borings B1 through B10.

LIMITATIONS

The purpose of a geologic/hydrogeologic study is to reasonably characterize existing site conditions based on the geology/hydrogeology of the area. In performing such a study, it is understood that a balance must be struck between a reasonable inquiry into the site conditions and an exhaustive analysis of each conceivable environmental characteristic. No investigation is thorough enough to describe all geologic/hydrogeologic conditions of interest at a given site. The estimated costs presented herein were derived from Twining's experience on previous similar projects. In the event portions of the investigation reveal conditions which deviate from the assumptions outlined herein, additional work may be required. Additional work and/or unforeseeable conditions, not summarized in the cost estimate, will be charged on a "time and materials" basis; your prior approval will be requested should this occur.

Conditions of interest may exist at the site that cannot be identified by visual observation alone. Where subsurface exploratory work is performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions or unsampled locations. If conditions of interest are not identified during performance of the work, such a finding should not be construed as a guarantee that such conditions do not exist at the site. No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the property. Performance of this investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions with a property.

The findings of the site investigation may necessitate remedial action. In addition, the owner, operator or person in responsible charge of the site may have a statutory or regulatory reporting requirement. Finally, our firm may have an obligation to report our findings, if the owner, operator or person in responsible charge fails to report, and our firm recognizes that public health, safety or welfare may be threatened by a hazardous condition identified on the site.

Our professional services were performed, our findings obtained, and our conclusions prepared consistent with generally-accepted environmental assessment practices in Kern County California at the time the work is performed. Our findings and the resulting report are for the sole use of our client and appropriate government regulatory agencies. Any use of our report by a third party would be at that third party's sole risk.

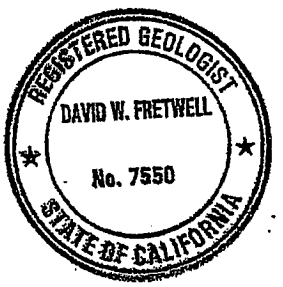
CLOSING

Twining appreciates the opportunity to provide these services to the you. If you have any questions regarding this letter or the project please call Twining at (800) 268-7021.

Respectfully submitted,

THE TWINING LABORATORIES, INC.
Environmental Services Division

David W. Fretwell, R.G. #7550
Project Geologist



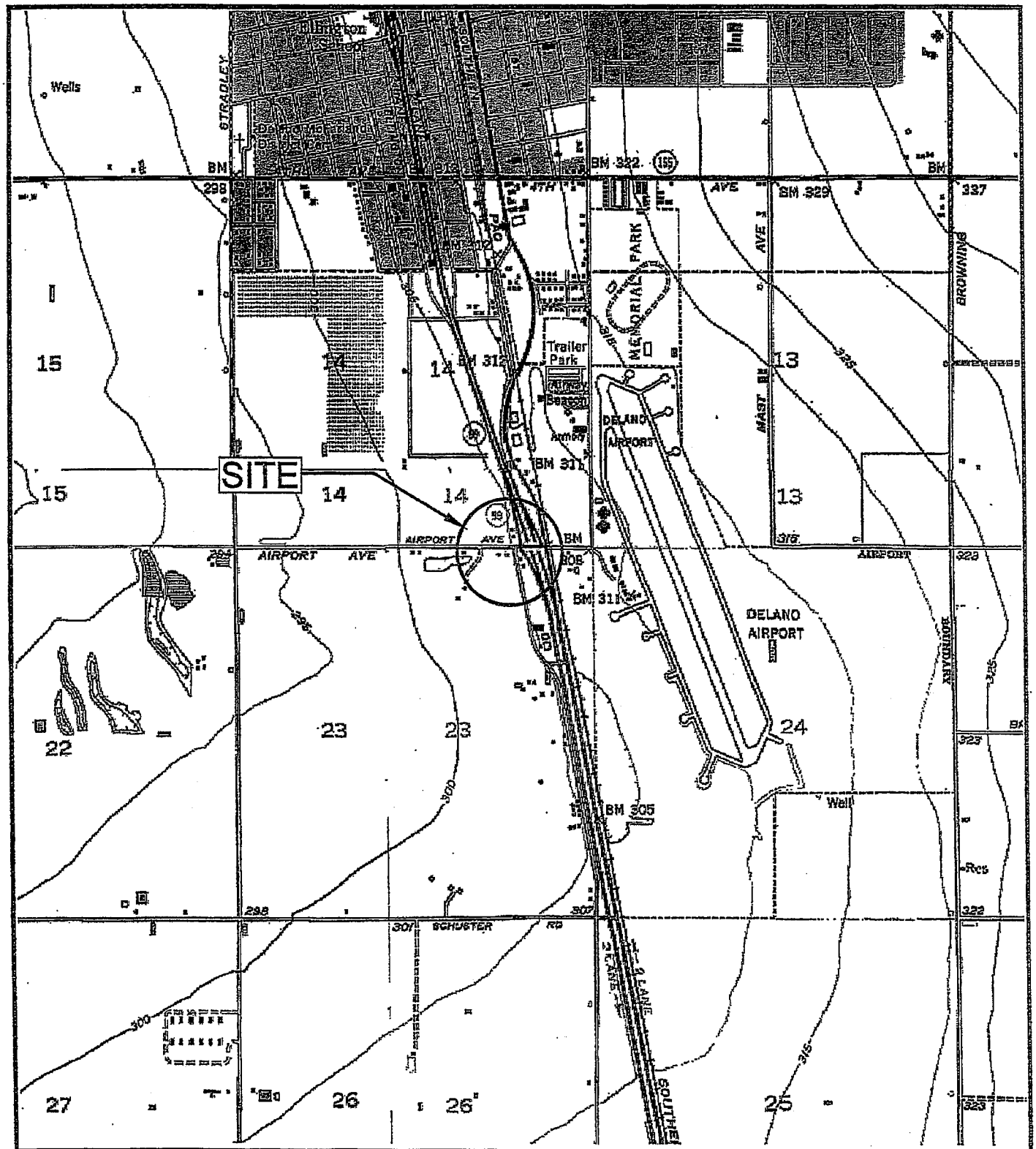
DWF/dwf

Enclosures: Drawing 1 - Site Location Map
Drawing 2 - Boring Location Map

Appendix A - Twining's Standard Operating Procedures
Appendix B - Laboratory Analytical Reports and COC Documentation

Distribution: YK America. - Mr. Paul Lu - (3 originals)
Twining File-(1 Copy)

DRAWINGS



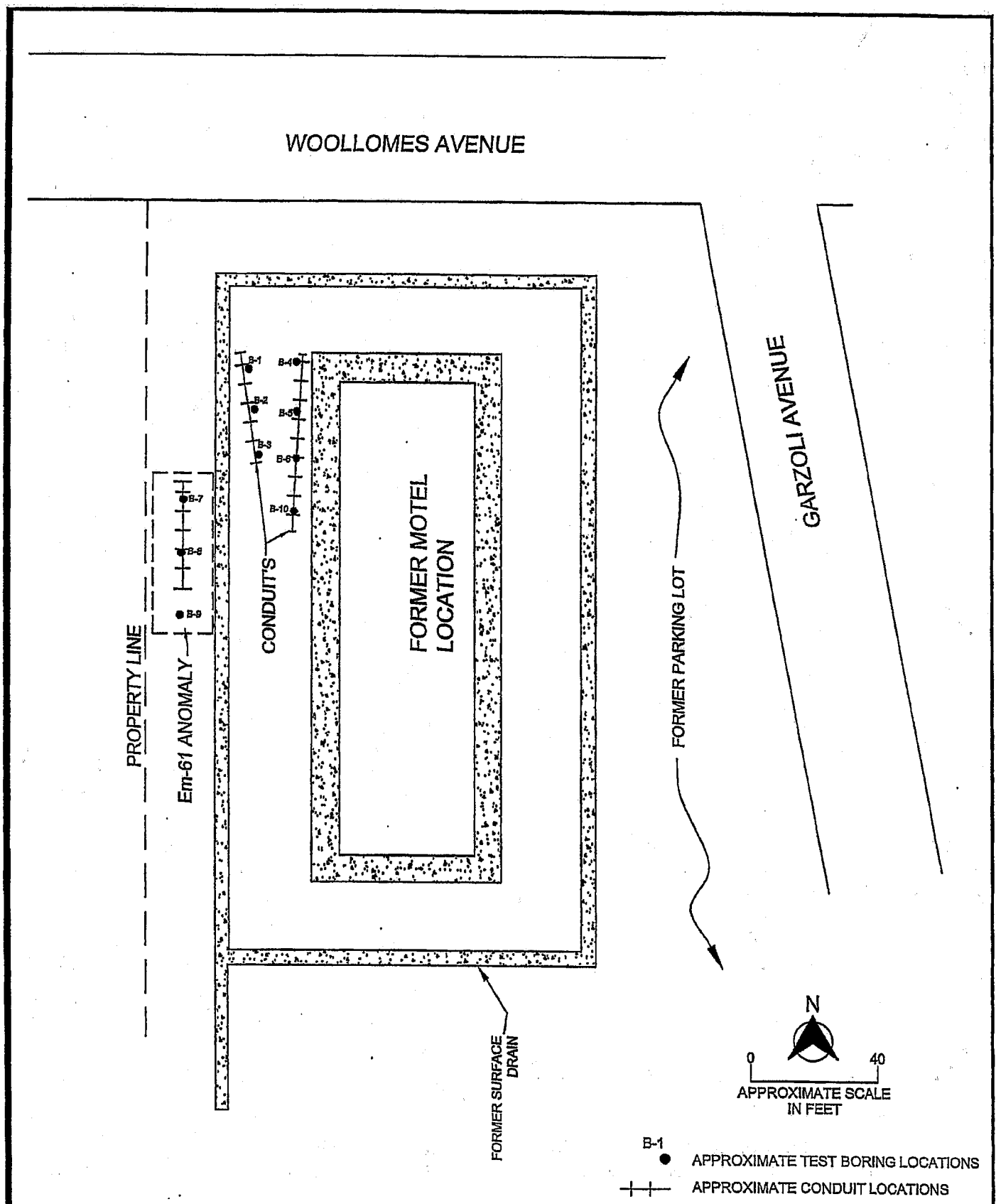
SOURCE: U.S.G.S. TOPOGRAPHIC MAP, 7 ½ MINUTE SERIES
DELANO WEST, CALIFORNIA QUADRANGLE, PHOTOREVISED 1969

0 2000
APPROXIMATE SCALE IN FEET

SITE LOCATION MAP
1001 GARZOLI AVENUE
DELANO, CALIFORNIA

FILE NO.: 01406-01-01	DATE: 05/02/05
DRAWN BY: RM	APPROVED BY:
PROJECT NO. E01406.01	DRAWING NO. 1

THE TWINING LABORATORIES, INC.
EST. 1898
FRESNO/MODESTO/VISALIA/BAKERSFIELD/MONTEREY



BORING LOCATION MAP
1001 GARZOLI AVENUE
DELANO, CALIFORNIA

FILE NO. 01406-01-02	DATE DRAWN: 09/14/06
DRAWN BY: RM	APPROVED BY:
PROJECT NO. E01406.01	DRAWING NO. 2

THE TWINING LABORATORIES, INC.
EST. 1895
FRESNO/MODESTO/SACRAMENTO/CORONA/BAKERSFIELD/MONTEREY

TABLE

Table 1
Woollome Road and Garzoli Avenue
Limited Phase II Assessment
Former Pioneer Motel
Results in milligrams per kilogram (mg/kg)

Sample Identification	Sample Date	TPH-D	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylene	MTBE	Lead
B1@5FT	08/02/06	ND	ND	ND	ND	ND	ND	ND	ND
B2@5FT	08/02/06	ND	ND	ND	ND	ND	ND	ND	ND
B3@5FT	08/02/06	ND	ND	ND	ND	ND	ND	ND	ND
B4@5FT	08/02/06	ND	ND	ND	ND	ND	ND	ND	ND
B5@5FT	08/02/06	ND	ND	ND	ND	ND	ND	ND	ND
B6@5FT	08/02/06	**17**	ND	ND	ND	ND	ND	ND	**8.7**
B7@15FT	08/02/06	ND	ND	ND	ND	ND	ND	ND	ND
B8@15FT	08/02/06	ND	ND	ND	ND	ND	ND	ND	**12**
B9@15FT	08/02/06	ND	ND	ND	ND	ND	ND	ND	ND
B10@2FT	08/02/06	**60**	ND	ND	ND	ND	ND	ND	**7.5**

Notes: TPH-D = Total Petroleum Hydrocarbons as Referenced as Diesel
TPH-G = Total Petroleum Hydrocarbons as Referenced as Gasoline
MTBE = Methyl Tertiary Butyl-Ether
ND = None detected

APPENDIX A

The Twining Laboratories, Inc. - Standard Operating Procedures

THE TWINING LABORATORIES, INC

STANDARD OPERATING PROCEDURES

This appendix contains the standard operating procedures used by The Twining Laboratories, Inc. (Twining) in performing investigations. Twining observes these procedures in order to obtain consistent, reliable data. The procedures used for this investigation included the following.

Drilling and Soil Sampling: Subsurface assessment and/or well construction permits are filed with the appropriate government agency before conducting field operations. Underground Service Alert is notified at least 48 hours prior to initiation of field activities. Field activities are performed under the direction of a California registered geologist or certified professional engineer.

Soil borings are drilled using an appropriate method. The method selected will depend upon project objectives and subsurface conditions. Typically soil borings are drilled using a Central Mine Equipment Company model 75 (CME-75) truck-mounted drill rig equipped with 6-5/8-inch outside diameter, continuous-flight, hollow-stem augers. Twining is a licensed drilling contractor under C-57 classification (Contractor's License No. 506159). The soil borings are drilled under the direction of a Twining geologist.

Drilling and sampling equipment are thoroughly cleaned before, during and after each use. Cleaning procedures are described in a subsequent paragraph.

Soil samples are collected using a continuous-coring device, by driving a split-spoon sampler, or by grabbing samples from the drilling cutting returns. The sampler or coring device is lined with brass, stainless steel, or acrylic tubes, in which samples may be retained for subsequent chemical analyses. To collect samples using the split-spoon sampler, the sampler is initially lowered to the bottom of the soil boring and driven 6 inches into undisturbed soil. It is then driven 12 inches deeper by repeatedly dropping a 140-pound weight from a height of 30 inches. The number of blows required to advance the sampler 12 inches is recorded on the boring logs as "blows per foot". This information is used in estimating soil density.

Soil samples are examined for the purpose of preparing lithologic logs. Soils are logged consistent with the American Society for Testing and Materials (ASTM). The soil boring logs note soil types encountered at depth including consistency, soil moisture, particle size, color, and other distinguishing features.

The soil samples are field screened for evidence of volatile organic chemicals (VOCs) and/or other contaminates. The field screening consist of; visual observation for straining or free fluids, unusual odor, and head space analysis using a photo ionization detector (PID) or drager tube. The procedure for performing head space analysis are describe in a subsequent paragraph (if pertinent to this investigation).

Generally, soil samples selected for analyses typically represent those which the field screening indicated will be most likely to contain the contaminate of concern. In most instances the deepest two samples and/or and sample collected from just above groundwater are selected for analyses. Samples intended for chemical analyses are sealed with Teflon tape and plastic end caps, labeled, placed on ice, and delivered to a laboratory, along with chain-of-custody documentation.

The soil borings may be completed as groundwater monitoring wells, or abandoned by grouting with a 6-sack cement slurry. Abandonment procedures depend upon the boring depth, depth to groundwater, project objectives, and regulatory requirements. For borings greater than 15 feet deep, grout is emplaced through the hollow augers or a tremie pipe which will extend to within 15 feet of the bottom of the boring. The slurry is pumped through the annulus in the hollow-stem augers or the tremie pipe. Backfill is placed in one continuous operation from the bottom to the top of the borehole. When the annulus/borehole fills with the slurry, auger flights or tremie pipe sections are removed (no more than 10 feet at a time) from the borehole, allowing the slurry to uniformly fill the borehole to the surface. SOPs for groundwater monitoring well installation are described in a subsequent paragraph (if pertinent to this investigation).

Soil cuttings generated during drilling are containerized in properly labeled, United States Department of Transportation (DOT)-approved drums, or placed on and covered with plastic sheeting, and stored on site in an area inaccessible to the general public. Typically, the stockpiled soil is characterized by collecting and analyzing composite samples from the stockpile. Twining can recommend an appropriate method for disposition of the cuttings based on the analytical results. Disposal will be the responsibility of the client.

Equipment Decontamination: Proper decontamination procedures reduce the potential for: cross-contamination among sample locations; and introduction of contamination from outside sources.

Before, during, and following drilling operations, drilling equipment is thoroughly cleaned using a high pressure hot water (steam) washer. Well casing, screen, end caps, and centralizers will also be cleaned using the steam washer. Steam cleaning condensate will be containerized for later disposal. Generally, disposal will be the client's responsibility.

Sampling equipment and any tools, measuring devices, or other equipment which will contact soil, groundwater, or any media being assessed will be washed in a low-phosphate soap and water solution, and rinsed in clean water before each use. The type of soap used will depend upon project requirements.

Sample Handling and Chain-of-Custody: Records are developed for samples which include: sampling date, sample type, location, job number, name of sampling personnel, and method of preservation. Each sample container is labeled immediately following collection. Sample containers are transported under custody seal. Chain-of-custody protocol, as described in United States Environmental Protection Agency, 1986, Test Methods for Evaluating Solid Waste, SW-846, Third Edition, is followed. Samples will be maintained at approximately 4°C. Upon arrival at the laboratory, the samples will be preserved for analysis as appropriate. Sample containers will be sealed with a custody seal during transport.

Samples may be delivered to Twining's chemistry laboratory in Fresno, California. The Twining representative in charge of the field work transport or direct the transportation of the samples and custody forms to the laboratory, where the samples are transferred to the sample control department. A receiving clerk, or an authorized analyst, signs the custody forms, present a duplicate copy to the Twining representative, and transfers the samples to a laboratory analyst. The condition of the custody seal will be annotated on the custody form in the "remarks" section. The laboratory manager retains possession of the custody forms during analyses of the samples.

The laboratory manager's responsibilities include monitoring the sample integrity within the laboratory. This involves assigning each sample a laboratory number and maintaining cross-reference between the sample's field and laboratory identifications. The analysts' responsibilities include maintaining accurate records of the samples analyzed along with the analytical data produced. This involves labeling chromatograms and maintaining the laboratory numbers on subsamples taken from the submitted samples, labeling glassware used in the analyses, and properly labeling sample extract containers with each sample's laboratory number.

Following analyses, the samples are transferred to a limited-access storage room. Chain-of-custody forms, chromatograms, and other pertinent information are filed for future reference. Splits of samples analyzed are kept for 30 days. Samples containing hazardous concentrations will be returned to the client for disposal.

Laboratory Quality Assurance/Quality Control (QA/QC): These laboratory QA/QC procedures were developed to reduce outside interferences during analyses of samples. The laboratory director is responsible for creating and maintaining the program. General QA/QC procedures follow:

- Analytical instruments are serviced on a regular basis to assure accurate calibration;
- Organic-free water is monitored daily for quality;
- Gas chromatographs are calibrated daily;
- Method blanks are run to check whether the glassware and reagents are free of interference from chemicals that would invalidate the analyses;
- Standards are prepared using the applicable reference materials;
- Matrix spikes are analyzed in duplicate to validate the accuracy and precision of the method; and
- During groundwater sampling, a travel blank sample consisting of organic-free water is prepared and containerized in the laboratory, transported to the site, and handled and transported in the same manner as the groundwater samples.

Photo ionization Detector (PID) : The PID is calibrated in accordance with the manufacture's recommendations prior to use in the field. Upon arrival at the project site, the PID is used to monitor background concentrations of organic vapors in the atmosphere at the site. The background concentrations are measured in a location upwind and removed as possible from sources of organic vapors on the site. When background concentrations of organic vapors register as "0.0" on the PID, subsequent readings of "0.0" registered from samples tested in the field are recorded as "0"(not detected). When background concentrations of organic vapors register at some quantity above "0.0", subsequent readings registered from samples tested in the field at or below this value are recorded as "B/G" (background).

Decontamination Rinsate, Monitoring Well Purge Water, and Soil Cuttings Disposal: The soil cuttings generated by drilling operations are retained on site, and either covered by plastic sheeting or containerized in United States Department of Transportation (DOT)-approved drums or lined, roll-on/roll-off dumpsters. The drilling equipment decontamination Rinseate is also stored in drums. Water purged from monitoring wells is containerized in drums if contamination is known or suspected. Drums containing soil, rinsate, and purged water are sealed and temporarily stored on site at a location remote to the public. Each drum is labeled to identify its contents. Disposal of these wastes will be the responsibility of the client. The client will be informed that the wastes must be disposed in accordance with applicable Federal, State, and local regulations.

Performing Head Space Analyses: Head space analysis is performed using a photo ionization detector (PID) or a drager tube. A soil sample is placed in a sealed glass container or plastic bag, agitated, and placed in a warm atmosphere. After approximately 15 minutes, which is generally sufficient for some of the volatiles to escape from the soil, the PID probe or tip of the drager tube is inserted into the container and the gas is sampled. The highest concentration of organic vapors displayed by the PID or the drager tube reading will be recorded.

ATTACHMENT B

Analytical Reports

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

August 17, 2006

Work Order #: 6H02024

David Fretwell
Twining Environmental Department
2527 Fresno Street
Fresno, CA 93721

RE: YK America - Delano

Enclosed are the analytical results for samples received by our laboratory on 08/02/06 . For your reference, these analyses have been assigned laboratory work order number 6H02024.

All analyses have been performed according to our laboratory's quality assurance program. All results are intended to be considered in their entirety, The Twining Laboratories, Inc. (TL) is not responsible for use of less than complete reports. Results apply only to samples analyzed.

If you have any questions, please feel free to contact us at the number listed above.

Sincerely,

The Twining Laboratories, Inc.

Ronald J. Boquist
Director of Analytical Chemistry

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: YK America - Delano	
2527 Fresno Street	Project Number: -	Reported:
Fresno CA, 93721	Project Manager: David Fretwell	08/17/06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B1@5FT	6H02024-01	Soil	08/02/06 10:51	08/02/06 15:15
B2@5FT	6H02024-02	Soil	08/02/06 10:59	08/02/06 15:15
B3@5FT	6H02024-03	Soil	08/02/06 11:05	08/02/06 15:15
B4@5FT	6H02024-04	Soil	08/02/06 11:13	08/02/06 15:15
B5@5FT	6H02024-05	Soil	08/02/06 11:22	08/02/06 15:15
B6@5FT	6H02024-06	Soil	08/02/06 11:40	08/02/06 15:15
B7@15FT	6H02024-07	Soil	08/02/06 12:00	08/02/06 15:15
B8@15FT	6H02024-08	Soil	08/02/06 12:13	08/02/06 15:15
B9@15FT	6H02024-09	Soil	08/02/06 12:26	08/02/06 15:15
B10@2FT	6H02024-10	Soil	08/02/06 12:55	08/02/06 15:15

THE TWINING LABORATORIES, INC.
EST. 1893
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: YK America - Delano	
2527 Fresno Street	Project Number: -	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	08/17/06

B1@5FT

6H02024-01 (Soil) Sampled:08/02/06 10:51

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes.
Metals									
Lead	ND	5.0	mg/kg	1	T6H1014	08/10/06	08/15/06	EPA 6010B	
Semi-Volatile Organics									
Diesel	ND	10	mg/kg	1	T6H0411	08/04/06	08/05/06	EPA 8015Mod	
Surrogate: o-Terpheryl	SI	*24.8 %*	*40-150*		*T6H0411*	*08/04/06*	*08/05/06*	*EPA 8015Mod*	
Volatile Organics									
Benzene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Toluene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Ethylbenzene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Xylenes, total	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Gasoline	ND	1.0	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*94.9 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	
Surrogate: 4-Bromofluorobenzene (FID)		*90.1 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	

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2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: YK America - Delano	
2527 Fresno Street	Project Number: -	**Reported:**
Fresno CA, 93721	Project Manager: David Fretwell	08/17/06

B2@5FT

6H02024-02 (Soil) Sampled:08/02/06 10:59

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes.
Metals									
Lead	ND	5.0	mg/kg	1	T6H1014	08/10/06	08/16/06	EPA 6010B	
Semi-Volatile Organics									
Diesel	ND	10	mg/kg	1	T6H0411	08/04/06	08/05/06	EPA 8015Mod	
Surrogate: o-Terphenyl		*42.0 %*	*40-150*		*T6H0411*	*08/04/06*	*08/05/06*	*EPA 8015Mod*	
Volatile Organics									
Benzene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Toluene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Ethylbenzene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Xylenes, total	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Gasoline	ND	1.0	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*92.6 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	
Surrogate: 4-Bromofluorobenzene (FID)		*87.7 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: YK America - Delano	
2527 Fresno Street	Project Number: -	Reported:
Fresno CA, 93721	Project Manager: David Fretwell	08/17/06

B3@5FT

6H02024-03 (Soil) Sampled:08/02/06 11:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes.
Metals									
Lead	ND	5.0	mg/kg	1	T6H1014	08/10/06	08/16/06	EPA 6010B	
Semi-Volatile Organics									
Diesel	ND	10	mg/kg	1	T6H0411	08/04/06	08/05/06	EPA 8015Mod	
Surrogate: o-Terphenyl	SI	*30.2 %*	*40-150*		*T6H0411*	*08/04/06*	*08/05/06*	*EPA 8015Mod*	
Volatile Organics									
Benzene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Toluene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Ethylbenzene	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Xylenes, total	ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Gasoline	ND	1.0	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*93.9 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	
Surrogate: 4-Bromofluorobenzene (FID)		*87.7 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	

THE TWINING LABORATORIES, INC.
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CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
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Twining Environmental Department	Project: YK America - Delano	
2527 Fresno Street	Project Number: -	Reported:
Fresno CA, 93721	Project Manager: David Fretwell	08/17/06

B4@5FT

6H02024-04 (Soil) Sampled:08/02/06 11:13

Analyte		Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes.
Metals										
Lead		ND	5.0	mg/kg	1	T6H1014	08/10/06	08/16/06	EPA 6010B	
Semi-Volatile Organics										
Diesel		ND	10	mg/kg	1	T6H0411	08/04/06	08/05/06	EPA 8015Mod	
Surrogate: o-Terphenyl	SI		*37.2 %*	*40-150*		*T6H0411*	*08/04/06*	*08/05/06*	*EPA 8015Mod*	
Volatile Organics										
Benzene		ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Toluene		ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Ethylbenzene		ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Xylenes, total		ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Gasoline		ND	1.0	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Methyl tert-Butyl Ether (MTBE)		ND	0.050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Surrogate: 4-Bromofluorobenzene (FID)			*84.6 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	
Surrogate: 4-Bromofluorobenzene (PID)			*88.2 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	

THE TWINING LABORATORIES, INC.
EST. 1898
CALIFORNIA ELAP CERTIFICATE #1371

2527 Fresno Street
Fresno, CA 93721
(559) 268-7021 Phone
(559) 268-0740 Fax

Twining Environmental Department	Project: YK America - Delano	
2527 Fresno Street	Project Number: -	Reported:
Fresno CA, 93721	Project Manager: David Fretwell	08/17/06

B5@5FT

6H02024-05 (Soil) Sampled:08/02/06 11:22

Analyte		Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes.
Metals										
Lead		ND	5.0	mg/kg	1	T6H1014	08/10/06	08/16/06	EPA 6010B	
Semi-Volatile Organics										
Diesel		ND	10	mg/kg	1	T6H0411	08/04/06	08/05/06	EPA 8015Mod	
Surrogate: o-Terphenyl	SI		*19.2 %*	*40-150*		*T6H0411*	*08/04/06*	*08/05/06*	*EPA 8015Mod*	
Volatile Organics										
Benzene		ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Toluene		ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Ethylbenzene		ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Xylenes, total		ND	0.0050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Gasoline		ND	1.0	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Methyl tert-Butyl Ether (MTBE)		ND	0.050	mg/kg	1	T6H0711	08/07/06	08/07/06	EPA 8015B/8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	
Surrogate: 4-Bromofluorobenzene (FID)			*98.9 %*	*75-125*		*T6H0711*	*08/07/06*	*08/07/06*	*EPA 8015B/8021B*	

TECHNICAL APPENDICES

Appendix G – Surface Water Hydrology and Water Quality

The Lusich Company, Inc. *Flood Evaluation Study*. December 15, 2006. (The technical appendices are available for the Flood Evaluation Study is available for review at the City of Delano under separate cover.)

Landmark Surveying & Engineering. *Preliminary Drainage Study, Delano Marketplace No.1*. September 2, 2005.

THE LUSICH COMPANY

INCORPORATED

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DELANO MARKET PLACE
FLOOD STUDY

Prepared For:

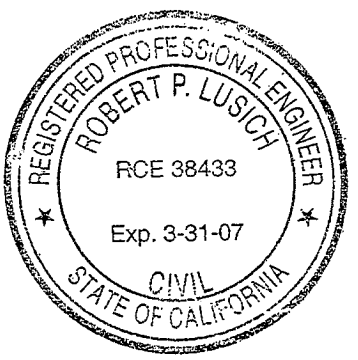
Landmark Surveying & Engineering
3101 Sillect Avenue
Bakersfield, CA 93308

December 15, 2006

Job # 106529.728

By: Robert P. Lusich

Robert P. Lusich
RCE 38433 Exp. 3-31-07



DELANO MARKET PLACE
FLOOD STUDY

TABLE OF CONTENTS

Delano Market Place Flood Study – Report

Introduction 1

Part I: Summary of the Watershed Area 1

Part II: Methodology 7

Part III: Watershed Analysis and Results 11

Part IV: Conclusions and Recommendations 16

Appendix A – Kern County Hydrology Manual Modeling Parameters

Appendix B – Rag Gulch Stream gage Data

Appendix C – Rag Gulch Gage "CN" Calibration

Appendix D – Watershed Area, "CN" Value Lag and Point Rainfall Data

Appendix E – Split Flow HEC – 2 Rating Curves for HEC – 1 Modeling

Appendix F – Reservoir Volume, Weir and Top of Dam

Appendix G – Reserv.out HEC – 1 Output

Appendix H – Jasimiho.out HEC – 1 Output

Appendix I – Norzen.out HEC – 1 Output

Appendix J – Eastzen.out HEC – 1 Output

Appendix K – Eastzeho.out HEC – 1 Output

Appendix L – Friant Kern Canal – HEC – 1 Output Rag Gulch.out for 3 Weirs Split Flow, Table 1 HEC – 1 Output Summary, HEC – 2 File Frntkern.out

Appendix M – Posobkot.out HEC – 1 Output

Appendix N – Project Site Delano.out and Delanops.out HEC – 2

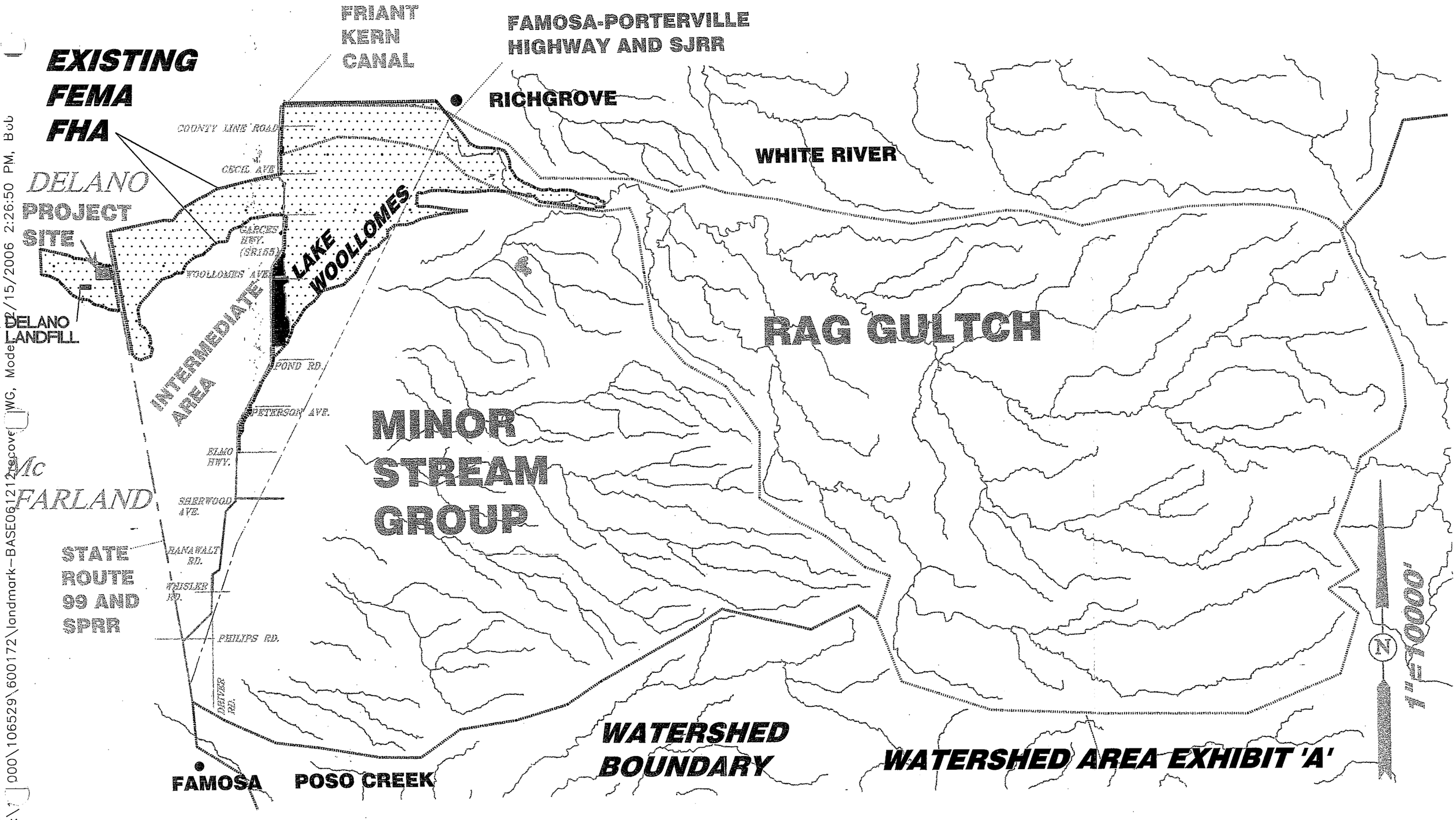
DELANO MARKET PLACE
FLOOD STUDY

INTRODUCTION

The Lusich Company, Inc. has prepared a Flood Evaluation of the flooding sources and their effects on the Base Flood Elevation (BFE) in Southwest Delano at the proposed Delano Market Place Site. The BFE is determined for Flood Insurance purposes as an exceedance probability of 1% or more commonly called the 100 Year 24 Hour Flood. Local and minor flows or runoff refer to those generated by nuisance flow, irrigation, waters or events less than 100 Year magnitude. This 100 Year 24 Hour flood event is also referred to as a Regional Flood Flow in this report. The focus of this evaluation is the Delano Market Place project, but the effects of this evaluation are anticipated to affect all of the Federal Emergency Management Agency (FEMA) identified Flood Insurance Rate Map Flood Hazard Areas (FHA), in Southwest and Southeast Delano. This report includes necessary hydrologic calculations to determine rainfall runoff flow rates and volumes and hydraulic calculations to determine the BFE.

PART I: SUMMARY OF THE WATERSHED AREA

The watershed area contributing to flooding at the Project Site is shown on Exhibit A. Exhibit A shows the watershed areas consisting of Poso Creek, the Minor Stream Group, Rag Gulch, White River and the Intermediate Area. The FEMA FHA is shown in Red on Exhibit A. Any infrastructure development activity in the watershed area interrupts and modifies the



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natural path of stormwater surface flows as they progress West to Delano. The existing infrastructures included on Exhibit A are:

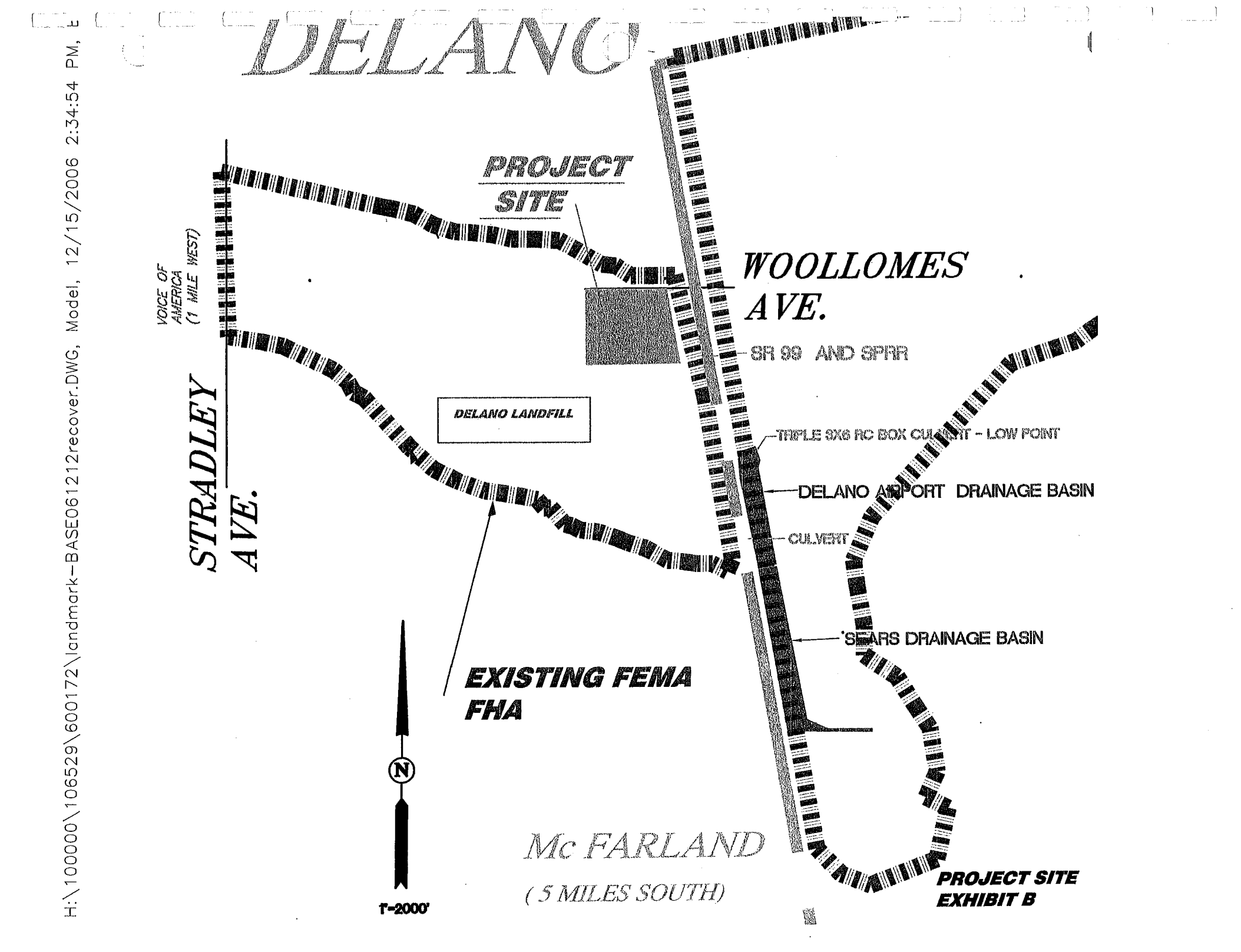
1. Southern Pacific Railroad (SPRR) and San Joaquin Railroad Spur (SJRR).
2. Friant-Kern Canal (FKC).
3. State Route 99 (SR 99).
4. Lake Woollomes.
5. Delano Landfill.
6. Famoso Porterville Highway (FMPRH).
7. Important County roads.
8. McFarland.
9. Delano.

The Southerly source of flooding at the Project Site is a breakout of flow from Poso Creek at the Southern Pacific Railroad bridge crossing over Poso Creek. The Poso Creek Breakout Flow (PCBF) is trapped along the East right of way of the Southern Pacific Railroad where it turns and flows North. As the PCBF proceeds North it is interrupted and ponded at the Southern Pacific Railroad connection to the San Joaquin Railroad Spur. The PCBF is split and over tops the tracks flowing West to SR 99 and North along the Southern Pacific Railroad. Both SR 99 and the Southern Pacific Railroad are on a constant gradient falling South to North towards Delano; reference Exhibit A. The PCBF is increased by a portion of the Minor Stream group runoff that exceeds the ponding capacity East of the East Levee of the Friant-Kern Canal. The Friant-Kern Canal East Levee excess volume is conveyed South along the East Levee through the Minor Stream Group Area and are concentrated near Phillips Road; reference Exhibit A. The Intermediate Area, between SR 99 and the Friant-

Kern Canal, contributes and increases PCBF the flood flows along SR 99 and Southern Pacific Railroad.

The combined PCBF continues North along SR 99 and Southern Pacific Railroad through the City of McFarland and the City's East Side Drainage Basin, the Sears Distribution Center Drainage Basin and the Delano Airport Basin to a low point along SR 99 and Southern Pacific Railroad East of the Project Site, as shown on Exhibit B. At the low point along SR 99 culverts under the highway permit local runoff, which exceeds the drainage basin storage volumes of the East Side Drainage Sump, Sears Distribution Center Drainage Sump and Delano Airport Sump, to cross under the highway toward the Project Site. Regional Flood Events that exceed the capacity of the SR 99 culverts will overtop both the Southern Pacific Railroad and SR 99; and flow West to the project site. As Regional Flood Events flow past the project site, the flood flow path is partially blocked and constrained by the above grade Delano Landfill embankment, a County of Kern Sanitary Landfill that is closed and in Post Closure status. Regional Flood Flows proceeding West of the Project Site flow to the Voice of America radio transmission facility. Exhibit B shows the location of the Sears Distribution Center Drainage Basin, the City of Delano Drainage Basin the Southern Pacific Railroad, SR 99, the Project Site, the Delano Landfill, the FEMA Flood Zone, Voice of America and local streets.

The Minor Stream Group consists of natural channels that drain watershed areas East of Friant-Kern Canal. In their lower reaches, about one mile East of Famoso Porterville Highway, farming operations modify the natural water coarses. These natural water coarses are unnamed and for the purposes of this report are named after the old San Joaquin Railroad Spur depots. These depots are from South to North Famoso, Calico, Hollis, Zentener,



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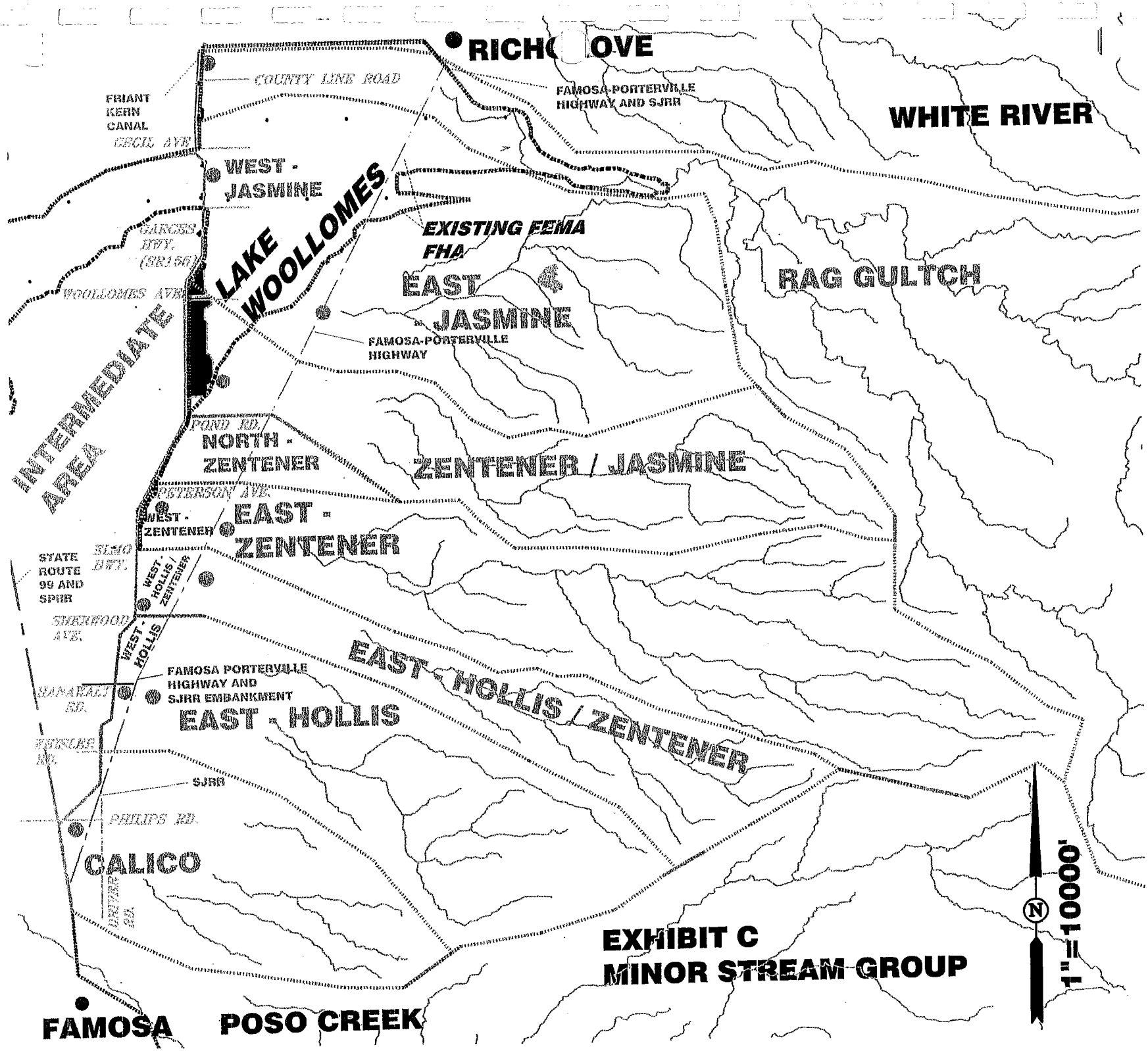
Jasmine and Richgrove. These depot names are further described with directional North, East and West to label watershed sub areas. The Minor Stream Group watersheds sub areas are, from the South to North, named Calico, Hollis, East Hollis/Zentener, West- Hollis/Zentener, East-Zentener, West-Zentener, North-Zentener, Zentener/Jasmine, East-Jasmine and West-Jasmine, as shown on Exhibit C. Flows originating from the Minor Stream Groups are, as previously mentioned, modified by land leveling operations conducted for farming. The land leveling has removed the natural channels and caused local runoff to be constrained to the adjacent roadside ditches.

The Famoso Porterville Highway is a two-lane North/South rural highway parallel to the San Joaquin Railroad Spur. Both the Famoso Porterville Highway and San Joaquin Railroad Spur fall at a constant gradient from North to South with the exception of the Calico, East Hollis/Zentener, East Zentener/Jasmine and Rag Gulch watershed areas where sags, an interruption in the profile gradient causing a local reversal of grade to the North and a subsequent low point in the East road side ditch, occur. The crown of the Famoso Porterville Highway and adjacent East and West side roadside ditches are maintained to control local runoff from the roadway. The crown and roadside ditches have a "$\vee^{\wedge}\vee$" shape with "$\vee$" portions being the East and West roadside ditches and the central "$\wedge$" portion being the crown of the road. Runoff is conveyed in the Easterly roadside ditch, until it either overtops the crown of the road and flows across the shallow West roadside ditch toward the Friant-Kern Canal further to the West or is ponded at the aforementioned sag locations to the South.

Adjacent to and West of the Famoso Porterville Highway the San Joaquin Railroad Spur has been abandoned from East Hollis North to Richgrove, reference Exhibit C. In this area



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abandonment of the San Joaquin Railroad Spur included: removal of Railroad track, ties and ballast. The Railroad embankment has been removed from the East and West Hollis/Zentener sub-areas North through the East and West Jasmine watershed sub areas. The unabandoned portion of the San Joaquin Railroad Spur, railroad track, ties, ballast and embankment, is adjacent to the Calico watershed area. The remaining San Joaquin Railroad Spur embankment is adjacent East Hollis watershed. Both of these portions of the San Joaquin Railroad Spur are above natural grade and cause Regional Flood Flows trapped by the Famoso Porterville Highway to either overtop the embankment and flow west to the Friant-Kern Canal or be conveyed to the low point in the Famoso Porterville Highway at Calico. After being interrupted by the Famoso Porterville Highway and where applicable the San Joaquin Railroad Spur, Regional Flood Flows are conveyed through the watershed sub areas.

The Friant-Kern Canal East and West Levees are above natural grade and cause Regional Flood Flows from the Minor Stream Group to be trapped and ponded in the low areas East of the Friant-Kern Canal East Levee. Roadways traversing East-West across the North-South oriented Friant-Kern Canal from South to North are Phillips Road, Whisler Road, Hanawalt Road, Sherwood Avenue, Elmo Highway, Peterson Road, Pond Road, Woollomes Avenue, Garces Highway (State Route 155), Cecil Avenue and County Line Road. The roads cross over the elevated East and West Friant-Kern Canal Levees with earth abutments leading up to the Levees and bridges crossing over the canal. The roadway embankments subdivide the ponding areas East of the Friant-Kern Canal East Levee.

North of the Minor Stream Group, Rag Gulch is an incised channel on an Ancient Alluvial Fan. The Topographic Apex is East of the Famoso Porterville Highway. The County of Kern maintains stream gage records for Rag Gulch. Rag Gulch flows over Famoso Porterville

Highway at a half mile long depressed area. Rag Gulch then passes under the San Joaquin Railroad Spur trestle that traverses Rag Gulch in a well-defined channel. West of the San Joaquin Railroad Spur trestle, farming operations have modified the natural channel causing it to flow onto County Line Road, the road along the boundary of Kern and Tulare Counties. Rag Gulch enters the hydrographic apex about one mile West of San Joaquin Railroad Spur Bridge, where shallow swales exist. The Regional Flood Flow in Rag Gulch splits and is conveyed north to the White River watershed area and west to the Friant-Kern Canal East Levee where the flow is divided and then conveyed through one of the three East Levee openings, see Exhibit D. The East Levee openings are improved with rock slope protection and concrete chutes that convey flood flows into the Friant-Kern Canal.

The FEMA FHA, reference Exhibit A, indicates a significant reduction of Regional Flood Flow path West of the Friant-Kern Canal between Cecil Avenue and Garces Highway (SR 155). No over flow structure in the Friant-Kern Canal has ever been constructed in the West Levee at this or any other location. The low point in the Friant-Kern Canal West Levee is between Philips and Whisler Roads 6 miles to the South. A profile of the Friant-Kern Canal West Levee is provided on Exhibit E.

Since 1946, the Friant-Kern Canal has been operated and maintained by the United States Department of the Interior, for both irrigation and flood control purposes. The Friant-Kern Canal is 150 miles long, and runs North/South from Millerton Lake to the Kern River. The Friant-Kern Canal between White River and Poso Creek is 15 miles long, 75 feet wide, concrete lined and constructed below adjacent grade. The Friant-Kern Canal is protected by two Levees, one on its East side, and one on its West side. The East Levee of the Friant-Kern Canal both intercepts and ponds flood waters from the East. Since beginning operation, the

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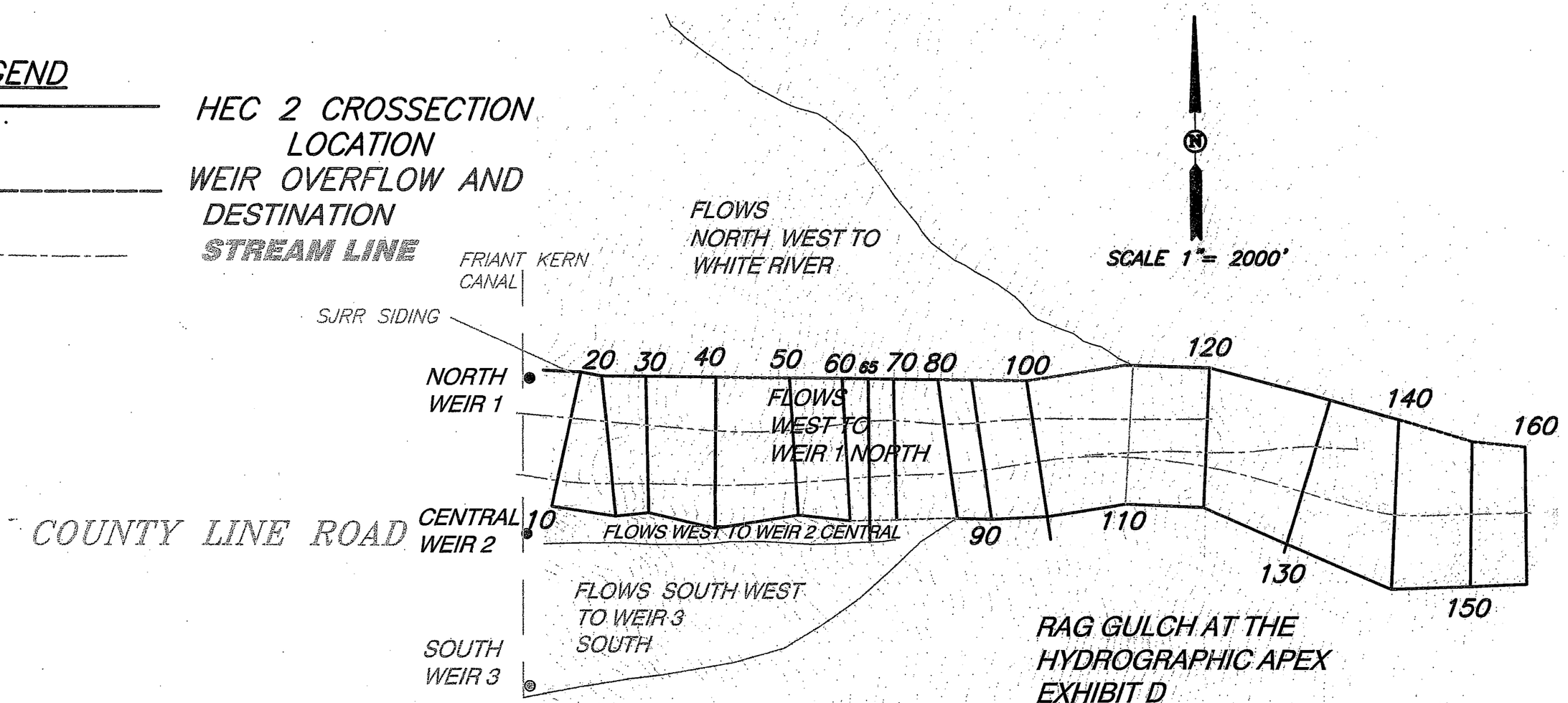
LEGEND

80 —— HEC 2 CROSSECTION LOCATION

———— WEIR OVERFLOW AND DESTINATION

- - - - - - STREAM LINE



RAG GULCH AT THE HYDROGRAPHIC APEX

EXHIBIT D

PHILLIPS

WHISLER

124.18 HANAWALT

125.28 SHERWOOD

126.28 ELMO

127.32 PETERSON

128.50 POND

130.50 WOOLOMES

131.58 GARCES HWY (SR 155)

132.60 CECIL

133.61 COUNTY LINE ROAD

WHITE RIVER

TOP OF FRIANT KERN CANAL WEST LEVEE

WATER SURFACE

5.8'

5.1'

4.4'

3.9'

4.1'

3.8'

3.3'

3.2'

3.5'

DATUM ELEV 394.60

EXHIBIT "E"

FRIANT KERN WEST LEVEE PROFILE- LOOKING WEST

SCALE: 1" = 5000' (HORIZ.)
1" = 2.5' (VERT.)

Friant-Kern Canal West Levee in this reach has never been reported to have floodwaters breech the Levee bank.

The normal operating volume of the Friant-Kern Canal is between 1,000 and 2,000 cubic feet of water per second (CFS). The United States Army Corps of Engineers (COE) reports the operating capacity of the Friant-Kern Canal is 5,000 CFS tapering down to 2,000 CFS at its terminus at the Kern River in Bakersfield. The City of Bakersfield Water Department has reported changes in the flow rate of the Kern River, measured upstream and downstream of the Friant-Kern Canal connection to the Kern River, to be increased by approximately 7,000 CFS during Regional Flood events at Millerton Lake, the Friant-Kern Canal headwaters.

The watershed North of Rag Gulch is White River. White River does not contribute to flooding in Delano. White River and Poso Creek cross over the Friant-Kern Canal in their natural channels because the Friant-Kern Canal is piped below the creek bottom through an inverted siphon.

PART II: METHODOLOGY

Synthetic storm events were modeled using the Soils Conservation Service Technical Paper 40 Hydrologic Model (TP40). The model uses watershed area, hydrologic soil cover "CN" value, lag (80% of the time of concentration), and rainfall to generate a 100 Year 24 Hour event as follows:

A. Rainfall amounts and runoff volumes were computed for the watershed areas using the United States Army Corps of Engineers, Hydrologic Engineering Center Flood Hydrograph Computer Model (HEC-1).

B. Lag was computed for each watershed area based on measured watershed length, slope, length to centroid and "N" value using the COE regional equations and Kern County Hydrology Manual (KCHM) guidelines. The "N" value is the visually estimated basin factor of all collection streams and watershed channels. Based on observations the watershed areas were found to have comparatively uniform slopes, no upstream drainage improvements, ground cover consisting of substantial growths of grass with a two to four inch root zone or cultivated crops, the stream beds have sharp bends and are moderately impeded by boulders and debris in the upper watershed area, reference KCHM figure E-2 Appendix A. A basin "N" value of 0.1 was adopted for use.

C. A composite National Resource Conservation Service (a.k.a. Soils Conservation Service), "CN" value was developed from KCHM figure C-2. The hydrologic soils groups in the watershed area are Soil Types B, C and D soils, see map titled Hydrologic Soil Groups Kern County in Appendix A. The vegetation covers were found to be dense grass, orchards and small grain row crops all in good to very good condition. "CN" values were completed based on percentage of each soil group and each hydrologic soil cover "CN" value, see figure C-2 Appendix A.

D. The National Oceanographic Atmospheric Administration (NOAA) precipitation depths for the 2 Year 6 Hour, 2 Year 24 Hour, 100 Year 6 Hour and 100 Year 24

Hour point rainfall amounts, were computed at each watershed centroid. 100 Year 1 Hour rainfall amounts were computed using the NOAA Atlas equations for both the Sierra Nevada Mountains and Valley Areas. The 100 Year 1 Hour rainfall amounts were then combined based on the percentage the watersheds were in each hydrologic area to develop a composite 100 Year 1 Hour point precipitation. The 100 Year 5 Minute and 15 Minute rainfall amounts were computed using the area weighted Valley log/log slope of 0.65 and Sierra Mountains log/log slope of 0.45. The rainfall isohyets are included in Appendix A.

E. The Rag Gulch stream gage has been read twice a year since 1976 and 65% of the gage readings recorded zero flow years. The recorded discharges from County of Kern for Rag Gulch stream gage KC #151 are presented in Table 1 Appendix B. A manual Weibul hand plot was used, see Table 2 and Figure 1 Appendix B, to determine a gage 100 Year discharge of 8,200 cfs.

The "CN" value for the Rag Gulch gage was calibrated using the synthetic storm TP 40, NOAA rainfall and lag. The calibrated "CN" value at the gage is 68.4. The calculated "CN" value from Soil type and Hydrologic Soil at the gage is 67.2. An adjustment of 1.78% was used to increase computed "CN" values to adjust to stream gage data. The HEC-1 model generated to calibrate the "CN" value at the gage is presented in Appendix C.

The watershed areas and adjusted composite CN values are presented on Table 1 in Appendix D. The computed watershed lag times are presented on Table 2 Appendix D. The point rainfall for each centroid of the watershed area are computed and presented in Appendix D as follows:

2 Year 6 Hour – Table 3
2 Year 24 Hour- Table 4
100 Year 6 Hour – Table 5
100 Year 24 Hour – Table 6

The NOAA Atlas provides an equation to compute the 1Hour rainfall amounts. These computations are based on point precipitation; reference Tables 3 through 6, Appendix D, and the latitude of the centroid of the watershed. The latitude, in decimal degrees is presented on Table 7 Appendix D. The interpolated point rainfall summary from Table 3 through 6, computed Valley and Mountain composite 1 Hour point rainfall, and composite log/log slope for precipitation depths of less than 1 Hour durations are presented on Table 7 in Appendix D.

The COE Hydrologic Engineering Center Water Surface Profile Computer model (HEC-2) was used to evaluate split flows that occur at Rag Gulch at the hydrographic apex and at Famoso Porterville Highway East-Jasmine, East Zentener and East Hollis. HEC-2 modeling parameters include weir coefficient of 3.0, expansion coefficient 0.3, contraction coefficient 0.1 and Manning "N" values of 0.015 for asphalt, 0.023 for graded roadside ditch and 0.03 for overland flow. Topographic data was obtained from field surveys. Profile runs were prepared and rating curves developed with HEC-2 and used for HEC-1 input, see Appendix E. This allows the volumes associated with the split flows East of the Friant-Kern Canal at Famoso Porterville Highway to be determined. HEC-2 split flow routines are included in Appendix E as follows:

Rag Gulch Hydrographic Apex – HEC-2P.OUT

Rag Gulch Hydrographic Apex Summary Table 1 through 8

Famoso Porterville Highway at Jasmine – FMPRJA.OUT

Famoso Porterville Highway at Jasmine Summary – FMPRJA.SMP

Famoso Porterville Highway at East Zentener – FMPREZ.OUT

Famoso Porterville Highway at East Zentener Summary – FMPREZ.SMP

Famoso Porterville Highway at East Hollis – FMPRHO.OUT

Famoso Porterville Highway at East Hollis Summary – FMPRHO.SMP

The HEC-1 model permits storage volumes be computed so that Stage Discharge relationships may be computed. Storage volumes East of the Friant-Kern Canal were determined by field topographic survey data for each area. The tabulated data is presented on Table 1 and 2 of Appendix F. The Contour surface area, and the spillway elevation (the lowest elevation of either road crown or top of canal bank), and top of dam (the highest elevation of either road crown or top of canal bank) are presented on Table 3 of Appendix F. Weir lengths were estimated from topography. A weir coefficient of 3.2 was used when the East Levee (top of the dam), and/or spillway was submerged to estimate depth, rate and duration of overflow.

PART III: WATERSHED ANALYSIS AND RESULTS

A. RAG GULCH:

The primary contributor to flooding in the Delano area identified by FEMA FHA is Rag Gulch. The FHA indicates that Rag Gulch, a watershed area East of Friant-Kern Canal, overtops the Friant-Kern Canal West Levee and, along with the Poso Creek Breakout and the Intermediate Area, flood East and West Delano. The FEMA FHA is shown in Red on the referenced Exhibit A. East and above the Friant-Kern Canal to the East of Delano, Rag Gulch

is identified as a flood source. Rag Gulch has a stream gage East of Famoso Porterville Highway that is read twice a year to measure peak flow rates. The stream gage record was used to calibrate the parameters used in HEC-1 model. Topographic surveys and Hydrographic analysis were used to evaluate and assess the flood flow path as it proceeds to the Friant-Kern Canal. The Hydrologic Analysis was prepared using the HEC-2 model, reference Appendix E. The HEC-1 and HEC-2 modeling results in the determination that the Rag Gulch 100 Year flows are split over an siding of the San Joaquin Railroad Spur, reference Exhibit D. The Rag Gulch runoff is conveyed north to the White River watershed area and west into the Friant-Kern Canal through the three existing weirs in the Friant-Kern Canal East Levee into the Canal. An analysis of the Friant-Kern Canal weir capacity determined that the Friant-Kern Canal East Levee weirs provide inflow capacity for the Rag Gulch Regional Flood Flows does not contribute to flooding West of the Friant-Kern Canal, reference Table 1 below.

WEIR LOCATION	WEIR TOP ELEV.	WEIR BOTTOM ELEV.	VELOCITY HEAD OF APPROACH, FT	WEIR HEIGHT, FT	WEIR LENGTH, FT	WEIR COEFFICENT	WEIR CAPACITY, CFS	WEIR INFLOW, CFS	EXCESS INFLOW, CFS	WEIR HEAD, FT	WEIR FREEBOARD, FT
3 (SOUTH)	403.72	401.152	0.18	2.75	62	3	**932**	886	0	2.65	0.10
2 (CENTRAL)	412.02	409.42	0.15	2.75	58.5	3	**867**	609	0	2.14	0.61
1 (NORTH)	410.92	404.71	0	6.21	30	3	**1393**	82	0	0.94	5.27

Table 1- Friant-Kern Canal Weir Capacity

B. MINOR STREAM GROUP:

East Jasmine and West Jasmine watersheds and Jasmine Reservoir HEC-1 analysis are presented in Appendix G. East Jasmine (flow split by the Famoso Porterville Highway) and

Zentener/Jasmine watersheds and Pond Road to Woolums Avenue Reservoir HEC-1 analysis are presented in Appendix H. North Zentener watershed and Peterson Road to Pond Road Reservoir HEC-1 Analysis are presented in Appendix I. East Zentener and West Zentener watersheds and the Elmo Highway to Peterson Reservoir HEC-1 analysis are presented in Appendix J. East Zentener (flow split by the Famoso Porterville Highway), East Hollis/Zentener and West Hollis Zentener watersheds and the Sherwood Avenue to Elmo Highway Reservoir HEC-1 analysis are presented in Appendix K.

Prior to construction of the Friant-Kern Canal, the San Joaquin Railroad Spur and Southern Pacific Railroad the stormwater runoff from the watershed area flowed West. The construction of the San Joaquin Railroad Spur and Southern Pacific Railroad diverted the Regional Flood Flows south to Calico. The watershed area has changed significantly with the abandonment of the San Joaquin Railroad Spur. The abandoned San Joaquin Railroad Spur facilities have been removed; the land has been leveled and used for farming. The Regional Flood Flows are indirectly conveyed West to the Friant-Kern Canal. These recent changes to the watershed area modify the historical operational and maintenance experience of the Friant-Kern Canal, in that the West Levee never being breeched. Existing flow data, topographic survey data and infrastructure capacities were used to determine the stormwater runoff patterns.

Analysis of the volumes of flood water produced and stored East of the Friant-Kern Canal and South of Lake Woollomes results in the determination that runoff from these watersheds stored is behind the Friant-Kern Canal East Levee and overtops the East Levee Bank at the Minor Stream Group watershed, reference Appendix G through K. There are no openings in this portion of the Friant-Kern Canal East Levee. The Minor Stream Group's Regional Flood

Flow that do not over top the Friant-Kern Canal East Levee continue to flow south along the Friant-Kern Canal to a point North of Poso Creek at Calico, see Table 1, Appendix L.

C. FRIANT-KERN CANAL

Three separate drainage runoff patterns have been identified; runoff that flows into the Friant-Kern Canal through three existing weirs, runoff that is stored behind the Friant-Kern Canal and does not enter canal and, runoff that is stored behind Friant-Kern Canal and over tops East Levee to enter canal. The runoff from the Rag Gulch watershed area enters the Friant-Kern Canal through existing weirs without over topping the East Levee. The runoff from the Minor Stream Group watershed area over tops the Friant-Kern Canal East Levee Bank however; it does not cause the Friant-Kern Canal to breech the West Levee. The Friant-Kern Canal West Levee top of bank profile was included in Exhibit E.

A HEC-2 model was completed to determine the water surface elevation of the Friant-Kern Canal during a Regional Flooding Event, reference Appendix L. The HEC-2 model was based on the field located high water elevation for the canal. It is assumed the irrigation waters are not added to the Regional Flood Flow. The inflow input at the individual watershed sub-areas are shown in Table 1, Appendix L.

A table of the West Levee Bank freeboard provided is shown below:

FRIANT KERN CANAL
FREEBOARD SUMMARY

SECTIION (MI)	COMPUTED WATER SURFACE (FT)	TOP WEST Friant-Kern Canal LEVEE (FT)	FREE BOARD (FT)
124.18	394.85	401.22	6.37
125.28	396.31	401.58	5.27
126.28	397.26	401.64	4.38
127.32	397.78	403.72	5.94
128.50	398.36	404.37	6.01
130.50	398.96	403.34	4.38
131.58	399.31	405.02	5.71
132.60	399.39	405.59	6.20
133.61	399.48	413.22	13.74

Table 2 - Friant-Kern Canal Freeboard Summary

Additional Critical West Levee Bank freeboard locations are shown on Exhibit E. A minimum freeboard of three (3) feet is required by FEMA.

D. POSO CREEK BREAKOUT:

A significant contributing source of flooding in Delano at the project site would be from a breakout flow of Poso Creek at the Southern Pacific Railroad Bridge crossing at Poso Creek. The Poso Creek breakout flow (PCBF), 1,888 CFS, travels North along the Southern Pacific Railroad main line parallel to State Route 99 through McFarland to the Project Site. The Intermediate Area, reference Exhibit A, West of the Friant-Kern Canal and East of State Route 99 along with the excess unimpeded and uncaptured flow from the Minor Stream Group is contributory to this PCBF flood path and adds to the PCBF. This combined PCBF is 3,421 CFS, see Appendix M.

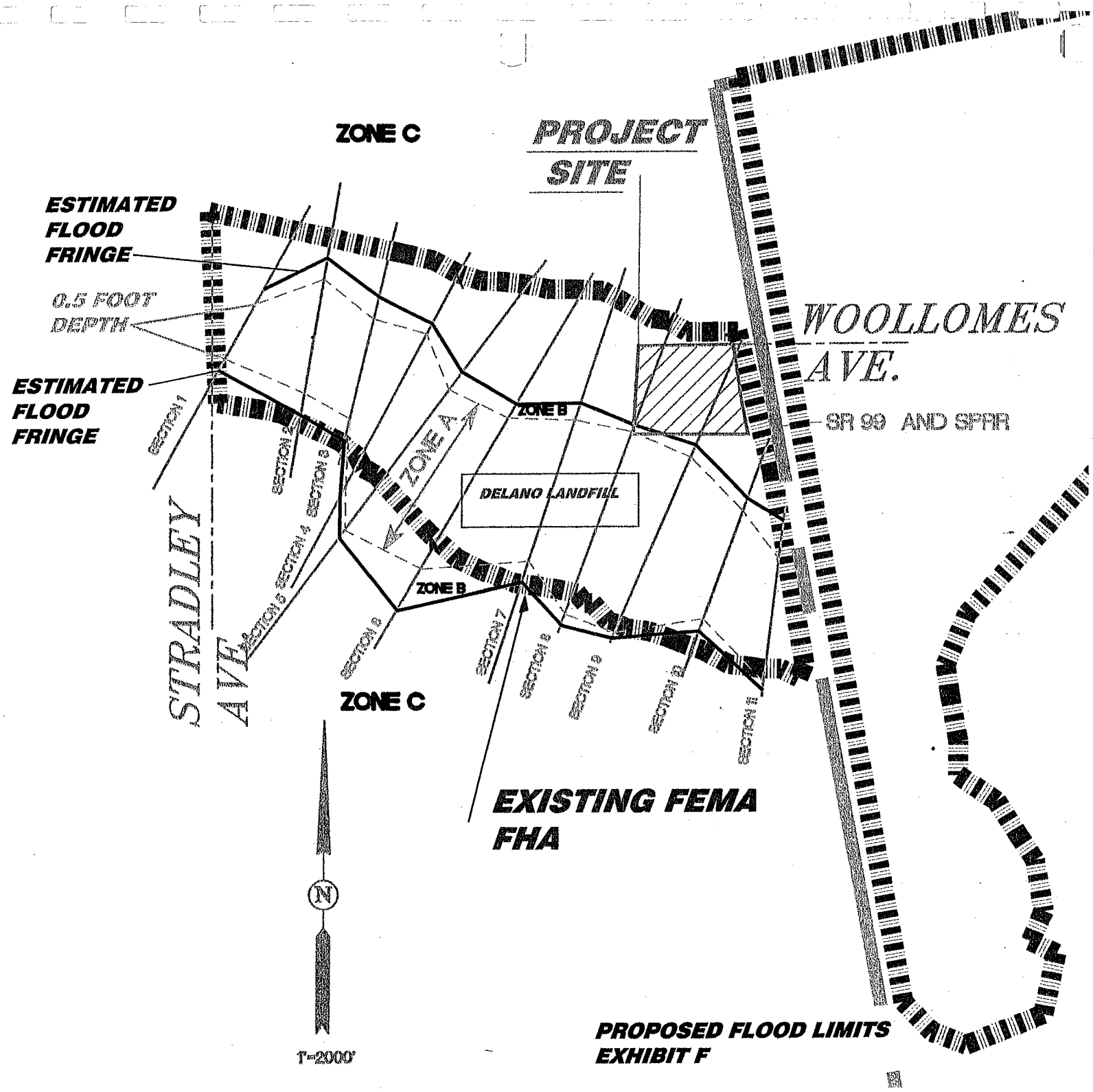
E. BASE FLOOD EVALUATION:

A HEC-2 model was created to simulate the Regional Flood Event Water Surface Elevation at the Project Site, see Appendix N. Topographic survey data and flow data from HEC-1 models for the watershed areas affecting the project site was input in to the HEC-2 model. The closed Delano Landfill redirects the flood flows towards the project site. The HEC-2 model was noted to have a divided flow around the Delano Landfill during the initial evaluation. Increases to the "n" value used for the HEC-2 model of 0.035 were made in the area South of the Landfill to achieve a uniform rate of flow South of the Delano Landfill. The modified HEC-2 model resulted in higher flows near the project site and a more realistic BFE determination. The HEC-2 cross-sections are shown on Exhibit F.

PART IV: CONCLUSIONS AND RECOMMENDATIONS:

A. BASE FLOOD ELEVATION DETERMINATION:

Based upon analysis, the BFE for the Delano Market Place was found to be 299.28 Any first floor finished elevation will need to be elevated at least one foot above the BFE adopted by FEMA. The cross-section locations for the BFE's in relation to the project site are shown on Exhibit F. Exhibit F also shows the existing FEMA FHA in Red and the Estimated Flood Fringe in Dark Blue. The flood fringe is where the base flood contacts un-flooded ground. The FEMA defined flood zone is where depth is greater than 1 foot (0.5 ft. rounds up); therefore, the actual FEMA Special Flood Hazard Zone would be narrower in width then the Estimate Flood Fringe shown on Exhibit B. The area outside the estimated 100 Year Flood Fringe, shown in Dark Blue, is Zone C and subject to 500 Year flooding. The area between



H:\100000\106529\600172\landmark-BASE061212recover.DWG, Model, 12/15/2006 3:12:36 PM, B

the estimated 100 Year Flood Fringe, shown in Dark Blue, and the 100 Year depth greater than 0.5 feet as, shown with a Light Blue dash, is Zone B and subject to 100 Year flooding at a depth of less than 0.5 feet. The area within the 100-Year depth greater than 0.5 feet, between the Light Blue dashed line, is Zone A and subject to 100 Year flooding at a depth greater than or equal to 0.5 feet. A Letter of Map Revision (LOMR) is required to be approved by FEMA to adopt the BFE provided in the report.

B. PROJECT SITE DEVELOPMENT CONSIDERATIONS:

As the Project Site is developed any existing runoff that flows across the site must be received and discharged such that the existing flow patterns are maintained. To mitigate the affects of developing the Project Site stormwater facilities must be designed to receive and discharge the stormwater from the Project site and provide for flood routing to compensate for the Project site development. Local Project Site runoff shall be conveyed to the City of Delano Regional Sump.

DELANO MARKET PLACE No. 1
ST0RM DRAIN PIPE SIZE (PRELIMINARY)

Preliminary report determining the required storm drain pipe size from commercial development at the southwest corner of Woolomes Ave and Garzoli Ave. Delano, California.

PURPOSE:

The commercial site, Delano Market Place No. 1, at the southwest corner of Woolomes and Garzoli will be completed prior to the development of the adjacent area. The storm drain from this site will be required to accommodate the storm runoff from the adjacent development (Market Place No's. 2 & 3) once they are constructed.. This is a preliminary determination of the pipe size need to accomplish this.

METHOD:

The amount of anticipated storm water runoff from the sites was made using the rational method as found in the Kern County Hydrology Manual. This calculation determined the amount of runoff anticipated from the commercial development of Market Place No. 1, contained between Garzoli Ave and Dover Parkway for Woolomes south the future Marketplace drive. A slope of 1% was used for the paved areas of the development. The runoff was conveyed to catch basins located on the south side of Woolomes Ave. and directed by means of buried pipe to the west. As Market Place No's 2 & 3, the area between Dover Parkway and Albany St, has not been developed, an amount of additional storm water runoff was added at various points along Woolomes Ave (660 Ft spacing) in the amount of water anticipated from the center area of Market Place No. 1 (flow into CB#2). There is an existing 72" diameter storm drain located in Albany St that conveys the water to and existing drain retention basin. The size of the basin will need to be increased to accommodate the water from this development.

RESULTS:

The calculations show that at buried storm drain on the south side of Woolomes Ave. would require that the pipe range in diameter from 24" to 60". (See attached map) The existing drain sump should be increased by 8.7 Acre Feet.

DRAINAGE STUDY (PRELIMINARY)

DELANO MARKET PLACE No. 1

A preliminary determination of the storm water runoff from Market Place No. 1 development in Delano, California

Submitted by: _____ 9-2-05
John H. Hulson, Sr. RCE 68625 Date

RAINFALL

1 hr INTENSITY

$Y_2 = 0.107+0.315X1$

$Y_{100} = -0.391+1.224Y2(X3/X1)+0.043X5$

$Y_{100} = -.391+0.131(X3/X1)+0.386X3+.043X5$

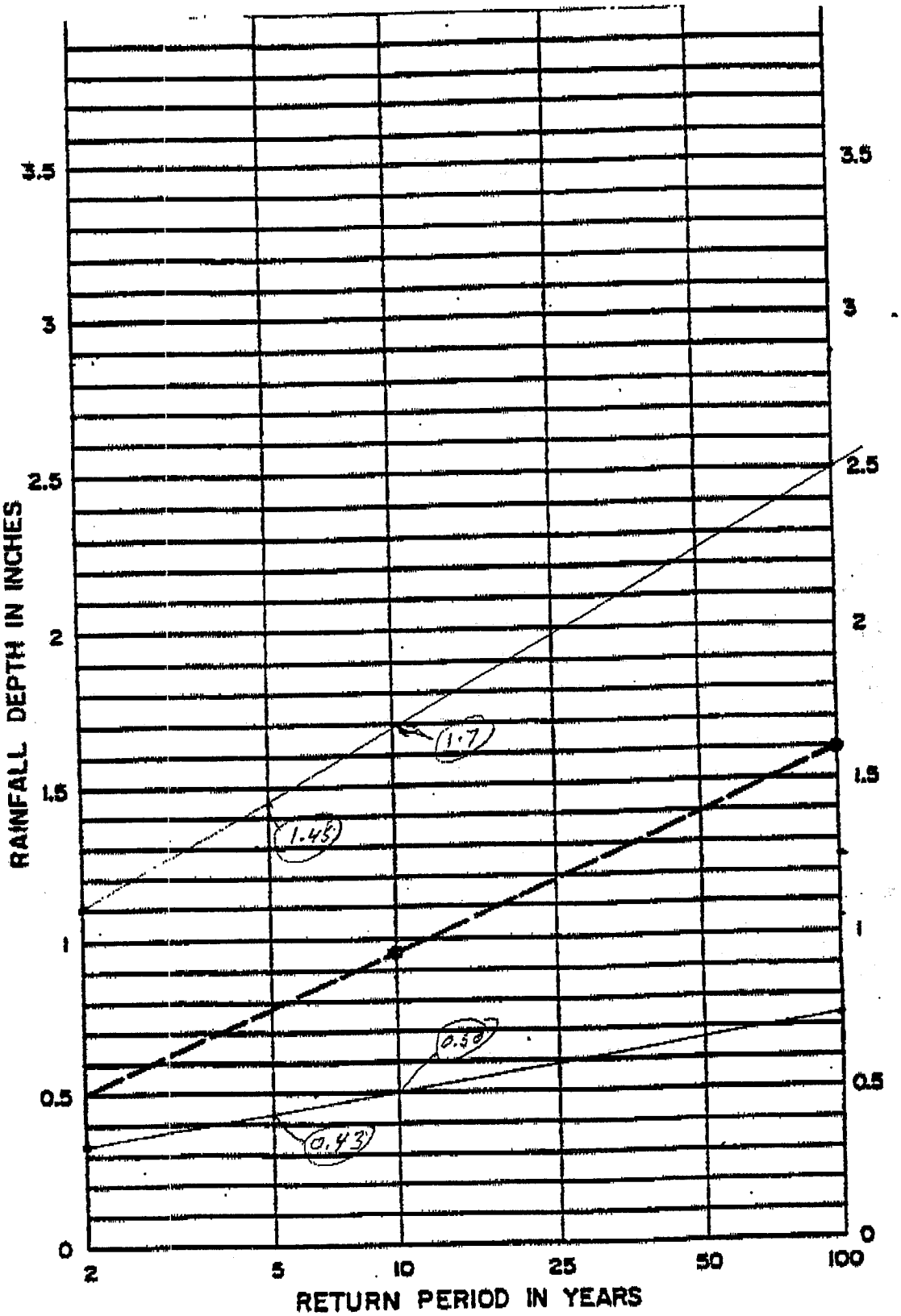
$Y_2 =$		2 YEAR 1 HOUR ESTIMATED VALUE
$Y_{100} =$		100 YEAR 1 HOUR ESTIMATED VALUE
$X_1 =$	0.75	2 YEAR 6 HOUR VALUE FROM PERCIPITATION FREQUENCY M
$X_2 =$	1.1	2 YEAR 24 HOUR VALUE FROM PERCIPITATION FREQUENCY M
$X_3 =$	1.7	100 YEAR 6 HOUR VALUE FROM PERCIPITATION FREQUENCY M
$X_4 =$	2.5	100 YEAR 24 HOUR VALUE FROM PERCIPITATION FREQUENCY M
$X_5 =$	35.75	LATITUDE (in decimals) - 32

$Y_2 =$ 0.34 IN/HR

$Y_{100} =$ 0.72 IN/HR

$Y_{100} =$ 0.72 IN/HR

RE: Kern County Hydrology Manual, Section B9



NOTE:
1. FOR INTERMEDIATE RETURN PERIODS PLOT 10-YEAR AND 100-YEAR ONE HOUR VALUES FROM MAPS, THEN CONNECT POINTS AND READ VALUE FOR DESIRED RETURN PERIOD. FOR EXAMPLE GIVEN 10-YEAR ONE HOUR = 0.95" AND 100-YEAR ONE HOUR = 1.60", 25-YEAR ONE HOUR = 1.18".

REFERENCE: NOAA ATLAS 2, VOLUME III - CAL., 1973

KERN COUNTY
HYDROLOGY MANUAL

RAINFALL DEPTH VERSUS RETURN PERIOD FOR PARTIAL DURATION SERIES

FIGURE D-3

DELANO SHOPPING CENTER
FROM THE SOUTHEAST CORNER

RAIN RUNOFF LOSSES

$Y = (P_{24}-Ia)^2/(P_{24}-Ia+S)P_{24}$

$S(imp) = (1000/Cn)-10$

$Ia(imp) = 0.2S$

SOIL TYPE: B

SOIL COVER : COMMERCIAL

Cn (perv) = 61 Fp = 0.68 Cn (imp) = 90

S(imp) = 6.39

Ia(imp) = 1.28

5 YEAR

P_{24} = 1.45
Y_5 (perv)= 0.00

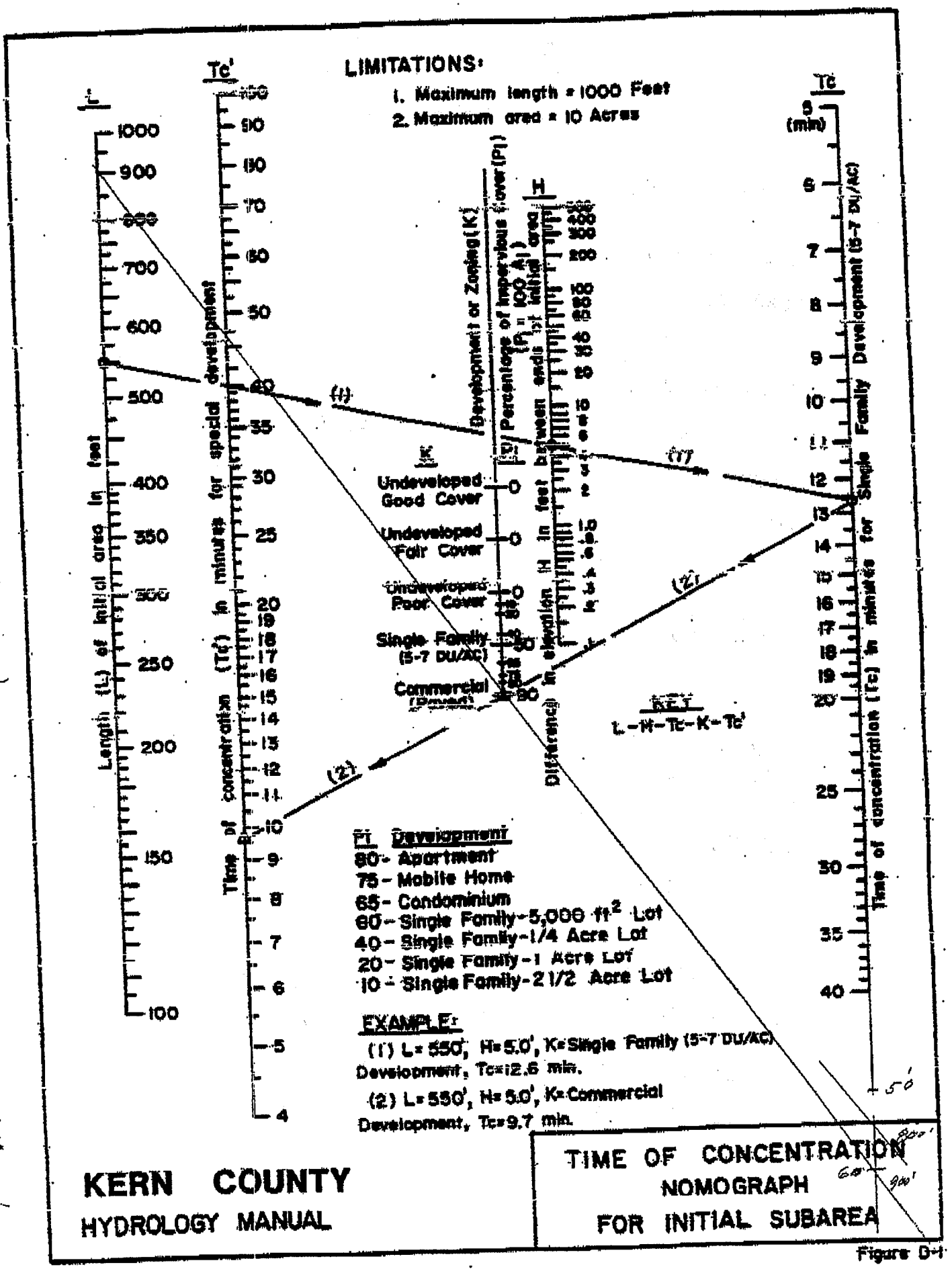
10 YEAR

P_{24} = 1.7
Y_{10} (perv)= 0.02

100 YEAR

P_{24} = 2.5
Y_{100} (perv)= 0.08

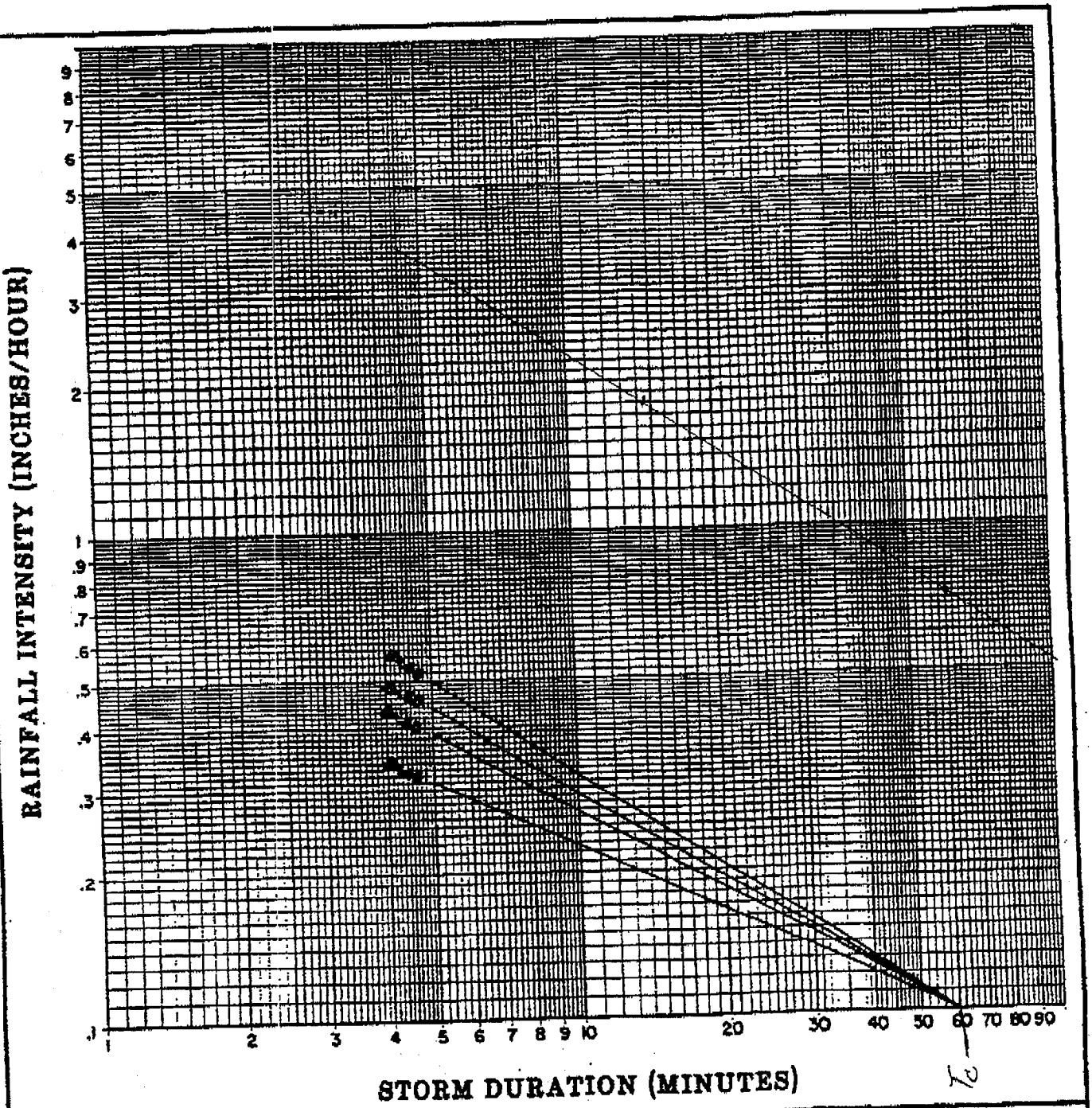
	Pt of Conc.	% Imp Ia	Pervious Cn	Pervious S	Pervious Ia	Pervious Y	Net Y
5 YEAR	All	0.9	90	6.39	1.28	0.00	0.00
10 YEAR	All	0.9	90	6.39	1.28	0.02	0.02
100 YEAR	All	0.9	90	6.39	1.28	0.08	0.08



KERN COUNTY
HYDROLOGY MANUAL

TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA

Figure D-1



DESIGN STORM FREQUENCY = 100 YEARS

ONE HOUR POINT RAINFALL= 0.72 INCHES

LOG-LOG SLOPE= .65

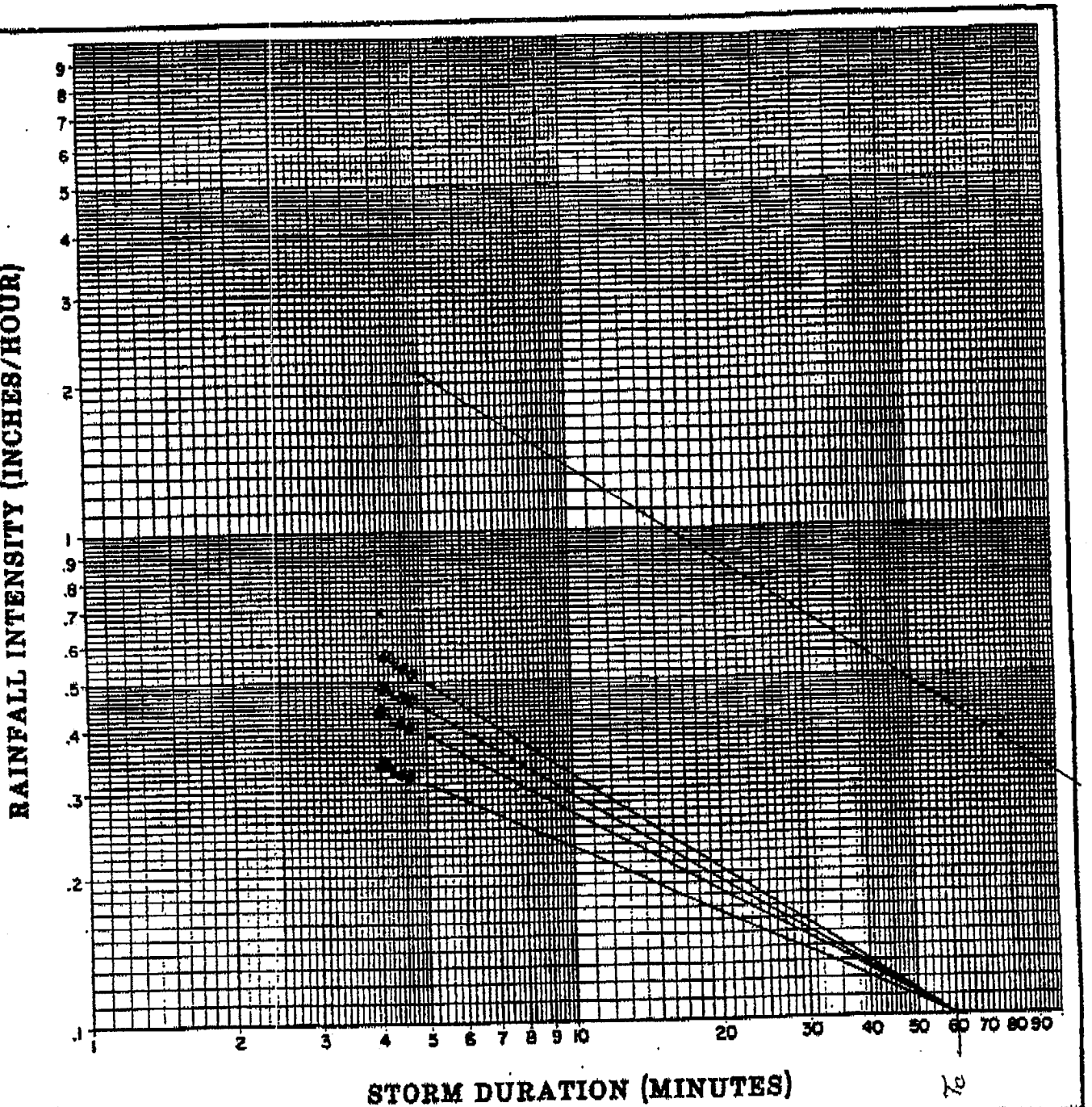
PROJECT LOCATION=_____

KERN COUNTY
Hydrology Manual

INTENSITY-DURATION CURVES

CALCULATION SHEET

FIGURE D-4



DESIGN STORM FREQUENCY = 5YR YEARS

ONE HOUR POINT RAINFALL = 0.43 INCHES

LOG-LOG SLOPE = .65

PROJECT LOCATION = _____

KERN COUNTY
Hydrology Manual

INTENSITY-DURATION CURVES

CALCULATION SHEET

FIGURE D-4

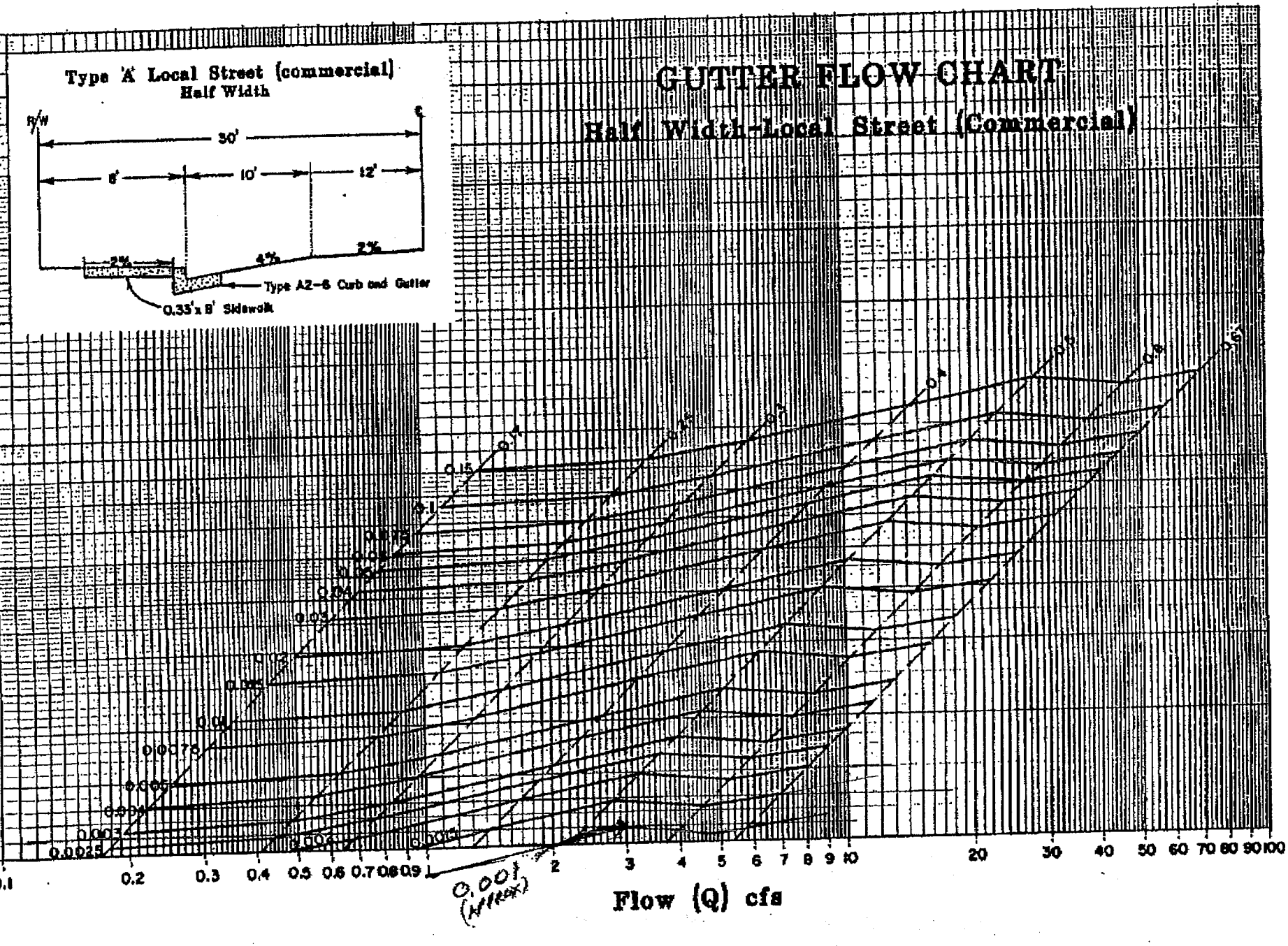


Figure D-2c

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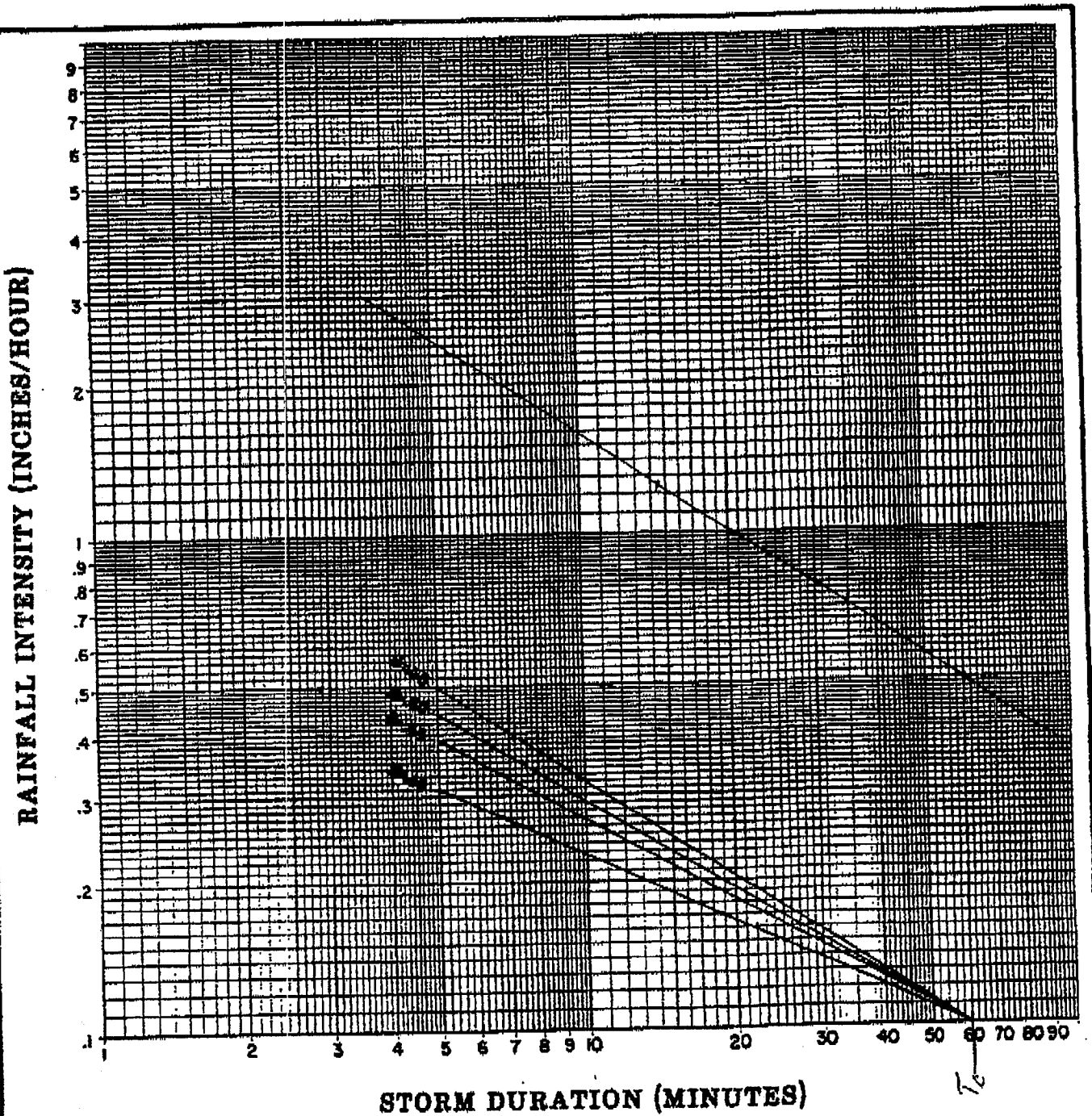

DESIGN STORM FREQUENCY = 10 YEARS

ONE HOUR POINT RAINFALL= 0.50 INCHES

LOG-LOG SLOPE= .65

PROJECT LOCATION-_____

KERN COUNTY
Hydrology Manual

INTENSITY-DURATION CURVES

CALCULATION SHEET

FIGURE D-4

PAGE 12 LANDMARK 5618591376 09/08/2005 09:57

KERN COUNTY HYDROLOGY MANUAL:

Rational Method Study Form

Study Name: Job No. 237.05 EK: DELANO SHOPPING CENTER
PRELIMINARY STORM DRAIN SIZING

Storm Return Interval: 100 Yrs

1-Hour Rainfall (inches) = 0.72 In/Hr Slope = 0.65

24-Hour Rainfall (inches) = 2.5 In/Hr K(T) = 1

Calculated by: _____ Date:

Checked by: _____ Date:

Page _____ of _____

Concentration point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Development Type	Percent Impervious Ai	Percent Impervious Ai avg.	Pervious CN	Pervious Ep	T(t) Minutes	Tc Minutes	I in/hr (From Chart)	Fm in/hr ($a_p F_p$)	Fm average	Y in/hr	Y average	Qmax (.9YIA)	Q calc'd .9(I-Fm)A	Q Total	Flow Path Length ft	Elevation Difference ft.	Slope ft./ft.	Velocity V ft./sec.	Hydraulics and Notes
		Assumed Parking Lot Slope = 0.0010																					
1	9.1	9.1	B	SF	0.90	0.9	61	0.68	3.4	60	0.72	0.07	0.07	0.08		0.47	5.32	5.32	220		0.0010	1.07	
2	2.63	11.73	B	SF	0.90	0.9	61	0.68	3.3	63.4	0.70	0.07	0.07	0.08	0.08	0.59	6.65	6.65	220		0.0010	1.1	
3	2.63	14.36	B	SF	0.90	0.9	61	0.68	3.2	66.7	0.67	0.07	0.07	0.08	0.08	0.69	7.75	7.75	220		0.0010	1.13	
CB #1	2.63	16.99	B	SF	0.90	0.9	61	0.68		69.9	0.66	0.07	0.07	0.08	0.08	0.81	9.02	9.02					
4	10	10	B	SF	0.90	0.9	61	0.68	3.4	60	0.72	0.07	0.07	0.08		0.52	5.85	5.85	220		0.0010	1.09	
5	3.33	13.33	B	SF	0.90	0.9	61	0.68	3.3	63.4	0.70	0.07	0.07	0.08	0.08	0.67	7.56	7.56	220		0.0010	1.12	
6	3.33	16.66	B	SF	0.90	0.9	61	0.68	3.1	66.7	0.67	0.07	0.07	0.08	0.08	0.80	9.00	9.00	220		0.0010	1.17	
CB #2	3.33	19.99	B	SF	0.90	0.9	61	0.68		69.8	0.66	0.07	0.07	0.08	0.08	0.95	10.61	10.61					
7	5.6	5.6	B	SF	0.90	0.9	61	0.68	3.4	60	0.72	0.07	0.07	0.08		0.29	3.28	3.28	220		0.0010	1.1	
8	1.87	7.47	B	SF	0.90	0.9	61	0.68	3.5	63.4	0.70	0.07	0.07	0.08	0.08	0.38	4.24	4.24	220		0.0010	1.05	
9	1.87	9.34	B	SF	0.90	0.9	61	0.68	2.4	66.9	0.67	0.07	0.07	0.08	0.08	0.45	5.04	5.04	220		0.0010	1.5	
CB #3	1.87	11.21	B	SF	0.90	0.9	61	0.68		69.3	0.66	0.07	0.07	0.08	0.08	0.53	5.95	5.95					

PAGE 13 LANDMARK 6618591376 09/08/2005 09:57

KERN COUNTY HYDROLOGY MANUAL:

Rational Method Study Form

Study Name: Job No. 217.05 EX: DELANO SHOPPING CENTER
PRELIMINARY STORM DRAIN SIZING

Storm Return Interval: 10 Yrs

1-Hour Rainfall (inches) = 0.5 In/Hr Slope = 0.65

24-Hour Rainfall (inches) = 1.7 In/Hr K(T) = 1.14

Calculated by: _____ Date:

Checked by: _____ Date:

Page _____ of _____

Concentration point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Development Type	Percent Impervious ai	Percent Impervious ai avg.	Pervious CN	Pervious Fp	T(t) Minutes t	Tc Minutes	I in/hr (From Chart)	Fm in/hr ($a_p F_p$)	Fm average	Y in/hr	Y average	Qmin (.9YIA)	Q calc'd .9(I-Fm)A	Q Total	Flow Path Length ft	Elevation Difference ft	Slope ft/ft	Velocity V ft/sec.	Hydraulics and Notes
		Assumed Parking Lot Slope = 0.0010																					
1	9.1	9.1	B	SF	0.90	0.9	61	0.68		60	0.50	0.07	0.07	0.02		0.08	3.52	3.52	220		0.0010	1.08	
									3.6														
2	2.63	11.73	B	SF	0.90	0.9	61	0.68		63.6	0.48	0.07	0.07	0.02	0.02	0.10	4.33	4.33	220		0.0010	1.05	
									3.5														
3	2.63	14.36	B	SF	0.90	0.9	61	0.68		66.9	0.46	0.07	0.07	0.02	0.02	0.12	5.04	5.04	220		0.0010	1.05	
									3.5														
CB #1	2.63	16.99	B	SF	0.90	0.9	61	0.68		70.4	0.44	0.07	0.07	0.02	0.02	0.13	5.66	5.66					
4	10	10	B	SF	0.90	0.9	61	0.68		60	0.50	0.07	0.07	0.02		0.09	3.87	3.87	220		0.0010	1.08	
									3.6														
5	3.33	13.33	B	SF	0.90	0.9	61	0.68		63.6	0.48	0.07	0.07	0.02	0.02	0.12	4.92	4.92	220		0.0010	1.05	
									3.5														
6	3.33	16.66	B	SF	0.90	0.9	61	0.68		66.9	0.46	0.07	0.07	0.02	0.02	0.14	5.85	5.85	220		0.0010	1.08	
									3.4														
CB #2	3.33	19.99	B	SF	0.90	0.9	61	0.68		70.3	0.44	0.07	0.07	0.02	0.02	0.16	6.66	6.66					
7	5.6	5.6	B	SF	0.90	0.9	61	0.68		60	0.50	0.07	0.07	0.02		0.05	2.17	2.17	220		0.0010	1.0	
									3.6														
8	1.87	7.47	B	SF	0.90	0.9	61	0.68		63.6	0.48	0.07	0.07	0.02	0.02	0.06	2.76	2.76	220		0.0010	1.08	
									3.4														
9	1.87	9.34	B	SF	0.90	0.9	61	0.68		67	0.46	0.07	0.07	0.02	0.02	0.08	3.28	3.28	220		0.0010	1.08	
									3.4														
CB #3	1.87	11.21	B	SF	0.90	0.9	61	0.68		70.4	0.44	0.07	0.07	0.02	0.02	0.09	3.73	3.73					

PAGE 14
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KERN COUNTY HYDROLOGY MANUAL:

Rational Method Study Form

Study Name: Job No. 237.05 RX: DELANO SHOPPING CENTER
PRELIMINARY STORM DRAIN SIZING
Storm Return Interval: 3 Yrs

1-Hour Rainfall (inches) = 0.43 In/Hr
24-Hour Rainfall (inches) = 1.45 In/Hr
Slope = 0.65
K(T) = 1.2

Calculated by: _____ Date:
Checked by: _____ Date:
Page of

Concentration point	Area (Acres) Subarea	Area (Acres) Total	Soil Type	Development Type	Percent Impervious ai	Percent Impervious ai avg	Pervious CN	Pervious Fp	T(t) Minutes	Tc Minutes	I in/hr (From Chart)	Fm in/hr (a_1F_2)	Fm average	Y in/hr	Y average	Qmin (.9 YIA)	Q calc'd (I)-Fm)A	Q Total	Flow Path Length ft	Elevation Difference ft	Slope ft/ft	Velocity V ft/sec	Hydraulics and Notes
		Assumed Parking Lot Slope = 0.0018																					
1	9.1	9.1	B	SF	0.90	0.9	61	0.68	3.3	60	0.43	0.07	0.07	0.00	0.00	0.00	2.95	2.95	220		0.0010	1.1	
2	2.63	11.73	B	SF	0.90	0.9	61	0.68	3.4	63.3	0.42	0.07	0.07	0.00	0.00	0.00	3.69	3.69	220		0.0010	1.08	
3	2.63	14.36	B	SF	0.90	0.9	61	0.68	3.5	66.7	0.40	0.07	0.07	0.00	0.00	0.00	4.26	4.26	220		0.0010	1.06	
CB #1	2.63	16.99	B	SF	0.90	0.9	61	0.68		70.2	0.39	0.07	0.07	0.00	0.00	0.00	4.89	4.89					
4	10	10	B	SF	0.90	0.9	61	0.68	3.4	60	0.43	0.07	0.07	0.00		0.00	3.24	3.24	220		0.0010	1.08	
5	3.33	13.33	B	SF	0.90	0.9	61	0.68	3.5	63.4	0.42	0.07	0.07	0.00	0.00	0.00	4.20	4.20	220		0.0010	1.06	
6	3.33	16.66	B	SF	0.90	0.9	61	0.68	3.5	66.9	0.40	0.07	0.07	0.00	0.00	0.00	4.95	4.95	220		0.0010	1.05	
CB #2	3.33	19.99	B	SF	0.90	0.9	61	0.68		70.41	0.39	0.07	0.07	0.00	0.00	0.00	5.76	5.76					
7	5.6	5.6	B	SF	0.90	0.9	61	0.68	3.7	60	0.43	0.07	0.07	0.00		0.00	1.81	1.81	220		0.0010	1.0	
8	1.87	7.47	B	SF	0.90	0.9	61	0.68	3.5	63.7	0.42	0.07	0.07	0.00	0.00	0.00	2.35	2.35	220		0.0010	1.05	
9	1.87	9.34	B	SF	0.90	0.9	61	0.68	3.4	67.2	0.40	0.07	0.07	0.00	0.00	0.00	2.77	2.77	220		0.0010	1.08	
CB #3	1.87	11.21	B	SF	0.90	0.9	61	0.68		70.6	0.38	0.07	0.07	0.00	0.00	0.00	3.33	3.13					

FLOW FROM COMMERCIAL DEVELOPMENT ONTO WOOLOMES AVE FROM GARZOLI TO ALBANY AVE

CB No.	5 Yr		10 Yr		100 Yr		
	Inflow	total	Inflow	total	Inflow	total	
1	4.89		5.66		9.02		
		4.89		5.66		9.02	
2	5.76		6.66		10.61		
		10.65		12.32		19.63	
3	3.13		3.73		5.95		
		13.78		16.05		25.58	
4	11.52		13.32		21.22		Flow from north & south
		25.3		29.37		46.8	development add 2X inflow @
5	11.52		13.32		21.22		CB No. 3
		36.82		42.69		68.02	
6	11.52		13.32		21.22		
		48.34		56.01		89.24	
7							ALBANY ST

LANDMARK SURVEYING & ENGINEERING
3101 N Select Ave
Ste 105
Bakersfield CA 93308
Phone: (661)859-1923
Fax: (661)859-1376
Printed By: DELANO SHOPPING CENTER; 100 YEAR STORM
Printed: 9/2/2005 11:35:10 AM

****
OPEN CHANNEL SOLUTION - PIPE SHAPE
****
PIPE Y/D=0.848 Q=9.020 S=0.0015 'n'=0.013 Dia=24.000 Vel=3.174 Y Crit=1.073 Depth=1.697

****
OPEN CHANNEL SOLUTION - PIPE SHAPE
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****
OPEN CHANNEL SOLUTION - PIPE SHAPE
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****
OPEN CHANNEL SOLUTION - PIPE SHAPE
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OPEN CHANNEL SOLUTION - PIPE SHAPE
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09/08/2005 09:57 6618591376 LANDMARK PAGE 16

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Bakersfield CA 93308
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Printed: 9/2/2005 11:31:08 AM

****
OPEN CHANNEL SOLUTION - PIPE SHAPE
****
PIPE Y/D=0.585 Q=5.660 S=0.0015 'n'=0.013 Dia=24.000 Vel=2.966 Y Crit=0.840 Depth=1.170

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OPEN CHANNEL SOLUTION - PIPE SHAPE
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OPEN CHANNEL SOLUTION - PIPE SHAPE
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OPEN CHANNEL SOLUTION - PIPE SHAPE
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OPEN CHANNEL SOLUTION - PIPE SHAPE
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****
OPEN CHANNEL SOLUTION - PIPE SHAPE
****
PIPE Y/D=0.532 Q=56.010 S=0.0015 'n'=0.013 Dia=60.000 Vel=5.272 Y Crit=2.105 Depth=2.662

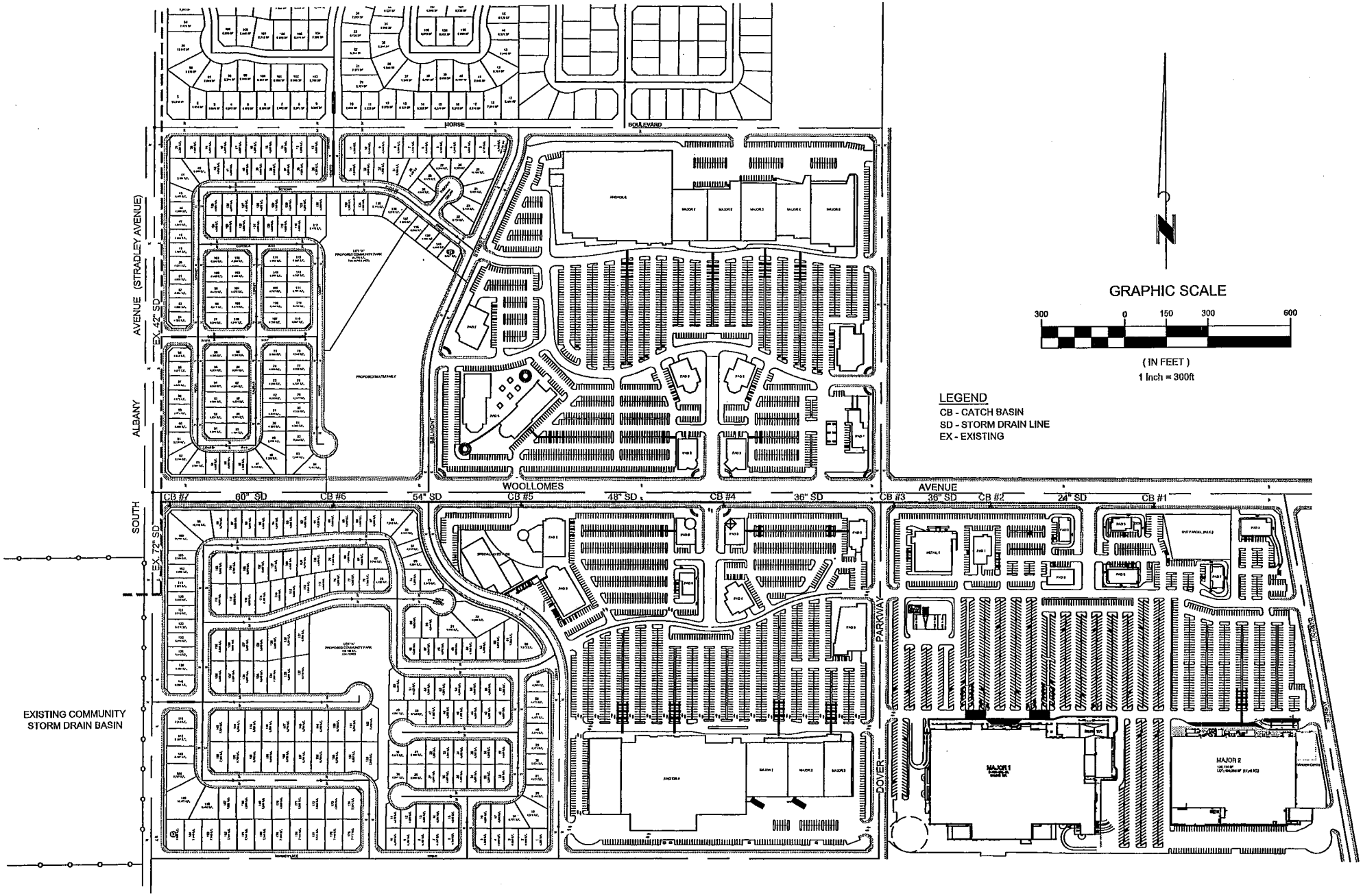
DRAIN AGE SUMP SIZE

DELANO MARKETPLACE No 1

$V = 0.12 D_{10} a_i A$

D_{10} =	1.7
a_i =	0.9
A =	47.5

V = 8.721 Acre Feet


MORSE
BOULEVARD
AVENUE (STRADLEY AVENUE)
EX. 42" SD
ALBANY
BELMONT
WOOLLOMES
AVENUE
SOUTH
EX. 72" SD
CB #7
60" SD
CB #6
54" SD
CB #5
48" SD
CB #4
36" SD
CB #3
36" SD
CB #2
24" SD
CB #1
PARKWAY
DOVER
EXISTING COMMUNITY
STORM DRAIN BASIN
GRAPHIC SCALE
300 0 150 300 600
(IN FEET)
1 Inch = 300ft
LEGEND
CB - CATCH BASIN
SD - STORM DRAIN LINE
EX - EXISTING

TECHNICAL APPENDICES

Appendix H – Land Use Planning

Applied Development Economics (ADE). *Delano Marketplace Economic Impact Study.* April 23, 2007.

Delano Marketplace
Economic Impact Study

April 23, 2007

Prepared for

Pacific Municipal Consultants

Prepared by

Applied Development Economics
100 Pringle Avenue, Suite 560 • Walnut Creek, California 94596
(925) 934-8712
www.adeusa.com

CONTENTS

1. Market Area Demographic And Employment Characteristics 1
2. Description Of Proposed Project 13
3. Economic Impact Analysis 14
4. Urban Decay Analysis 41

1. MARKET AREA DEMOGRAPHIC AND EMPLOYMENT CHARACTERISTICS

This section provides background data on the economic and commercial base in Delano. Much of the information in this section was originally developed as part of the *Business Improvement District Feasibility Study* that was completed in March 2005. The information has been updated and expanded upon where applicable.

1.1 POPULATION TRENDS

Delano is a rapidly growing community whose recent increases in population have significantly outpaced the growth throughout the region. As shown in Table 1, the City of Delano's household population expanded to over 39,000 residents by 2005, which makes Delano the second largest city in Kern County.[1] Since 1990, Delano's population has grown by over 72 percent, with an average annual growth of 3.7 percent during this period. This indicates that Delano has grown substantially faster than Kern County, which has grown at an average annual growth rate of 2.1 percent, and neighboring Tulare County, which has averaged 1.7 percent annual growth.

Kern County as a whole had a 2005 household population base of 720,333 residents, while 403,906 residents live in Tulare County. With Delano right on the county line, the community is in the middle of a region with more than one million household residents.

Population growth rates in the surrounding communities were significant, but considerably lower than in Delano. Bakersfield is the largest city in the region, and with an annual population growth rate of 3.3 percent, its growth also significantly outpaces the regional growth as a whole. Wasco and McFarland each have a smaller population bases and significantly lower growth rates than Delano. Population within the entire region has expanded faster than California's annual growth rate of 1.4 percent during this same period.

[1] Household population does not include persons living in group quarters or institutionalized arrangements, such as cooperative housing, prisons, state hospitals, college dormitories, and fraternal living quarters.

TABLE 1
Household Population Growth Trends In Delano And Region, 1990 To 2005

Household Population	1990	2005	Percent Growth	Annual Growth
Delano	22,672	39,050	72.2%	3.7%
Kern County	529,967	720,333	35.9%	2.1%
McFarland	6,960	11,081	59.2%	3.1%
Wasco	12,294	17,267	40.5%	2.3%
Bakersfield	171,957	292,525	70.1%	3.6%
Tulare County	306,327	403,906	31.9%	1.9%
California	29,007,329	35,951,598	23.9%	1.4%

Source: ADE, data from U.S. Census of Population and California Department of Finance
Note: Data counts only household population and excludes prison population

1.2 HOUSEHOLD GROWTH CHARATERISTICS

Household growth trends between 1990 and 2005 shows that Delano did not form households as rapidly as it added population. (Table 2) The number of households during this period increased from 6,215 to 9,396, which works out to an average annual growth rate of 2.8 percent. This is lower than the 3.7 percent population growth rate for Delano. Compared to the region as a whole, this is still more than double the 1.6 percent annual growth rate for Kern County and the 1.3 percent growth rate in Tulare County.

Compared to the surrounding communities, Delano's household growth rate was similarly higher than the smaller communities of Wasco and McFarland. However, Bakersfield household growth rate during this period was higher at 3.0 percent. This indicates that the population and household growth in Kern County has been highly concentrated into its largest existing population centers.

TABLE 2
Household Growth Trends In Delano And Region, 1990 To 2005

Households	1990	2005	Percent Growth	Annual Growth
Delano	6,215	9,396	51.2%	2.8%
Kern County	182,116	229,741	26.2%	1.6%
McFarland	1,771	2,492	40.7%	2.3%
Wasco	3,536	4,405	24.6%	1.5%
Bakersfield	62,500	96,986	55.2%	3.0%
Tulare County	97,726	119,065	21.8%	1.3%

Source: ADE, data from U.S. Census of Population and California Department of Finance

1.3 HOUSEHOLD SIZE CHARACTERISTICS

As expected, Delano's average household size increased between 1990 and 2005. During this period, Delano averaged 4.16 persons per household, which represents a nearly 14 percent increase over the 3.65 persons per household average in 1990, as shown in Table 3. By comparison, the averages for Kern and Tulare counties are 3.14 and 3.39 persons per household, respectively. This is also considerably higher than the statewide average of 2.95 persons per household.

Compared to the surrounding communities, Delano's average persons per household is comparable to McFarland and Wasco, which average 4.45 and 3.92 persons per household, respectively. However, while Bakersfield has shown similar population and household growth rates as Delano, the population there lives in considerably smaller households that average about 3.02 persons each.

TABLE 3
Household Size Trends In Delano And Region
1990 To 2005

Persons Per Household	1990	2005	Percent Growth
Delano	3.65	4.16	13.9%
Kern County	2.91	3.14	7.7%
McFarland	3.93	4.45	13.1%
Wasco	3.48	3.92	12.7%
Bakersfield	2.75	3.02	9.6%
Tulare County	3.13	3.39	8.2%
California	2.79	2.95	5.6%

Source: ADE, data from U.S. Census of Population and California Department of Finance

1.4 INCOME GROWTH CHARACTERISTICS

In general, Delano's income levels lag behind the regional averages. In 2000, Delano's estimated median household income averaged $28,143 while Kern County as a whole averaged about $34,446. (Table 4)

In addition, the incomes in Delano have not shown much recent growth. In 2000, the median household income in Delano was $28,143, which barely grew from the 1990 inflation-adjusted average

of $27,716.[2] (Table 4) This median income was less than 60 percent of the California median income of $47,493. Kern County's median income was considerably higher than Delano at $35,446, as was Tulare County's median income of $33,983. Kern County's median income actually represents 6.0 percent decline from the 1990 median income, while in Tulare County the median income grew by about the same percentage. Delano's median income was also higher than McFarland, but lower than Bakersfield and Wasco. In addition, McFarland and Bakersfield each had a real dollar decrease in the median income, while Wasco grew by 10 percent.

TABLE 4
Median Household Income Growth In Delano And Region, 1990 To 2000 (CPI Adjusted)

Median Household Income	1990	2000	Percent Growth	Annual Growth	Percent of 2000 California Income
Delano	$27,716	$28,143	1.5%	0.2%	59.3%
Kern County	$37,694	$35,446	-6.0%	-0.6%	74.6%
McFarland	$26,293	$24,821	-5.6%	-0.6%	52.3%
Wasco	$26,297	$28,997	10.3%	1.0%	61.1%
Bakersfield	$42,328	$39,982	-5.5%	-0.6%	84.2%
Tulare County	$32,186	$33,983	5.6%	0.5%	71.6%

Source: ADE, data from U.S. Census of Population
Note: Figures inflation adjusted to 1999 dollars using state CPI.

1.5 INCOME DISTRIBUTION CHARACTERISTICS

The distribution of income displayed in Table 5 shows that there is a considerable concentration of households in the lower income ranges and less concentration of higher income households. For 2003, ADE estimates that about 29 percent of households in Delano earn less than $20,000 annually, compared to 23 percent in Kern County. In addition, about 13 percent of households earn more than $70,000 annually, while Kern County as a whole has a more balanced distribution of income with about 20 percent of households in this higher income range.

[2] Median income differs from the mean average in that it represents the midpoint income for all households in Delano and Kern County. Half of the households earn more, while the other half earns less. The mean average income is higher than the median because higher income households, especially those that earn over $70,000, pull the overall average higher.

TABLE 5
Household Income Distribution In Delano, 2003

	CITY OF DELANO			KERN COUNTY		
Income Range	Households	Percent of Total	Average Income	Households	Percent of Total	Average Income
Under $20,000	2,558	28.7%	$11,887	49,629	22.7%	$11,550
$20,000 to $39,999	2,921	32.7%	$30,476	60,095	27.5%	$30,745
$40,000 to $69,999	2,299	25.8%	$54,605	64,202	29.4%	$55,889
$70,000 and Over	1,149	12.9%	$115,955	44,434	20.3%	$113,648
TOTAL	**8,926**	**100.0%**	**$42,365**	**218,361**	**100.0%**	**$50,645**

Source: ADE, data from U.S. Census of Population and California Department of Finance

1.6 TAXABLE SALES TRENDS

In 2003, Delano's retail businesses generated about $263 million in taxable retail sales as displayed in Table 6.[3] Compared to 1997, this represents a 65 percent increase in constant dollar retail sales. With an average annual growth rate of 6.4 percent, this exceeds the population and household growth rates. This indicates that Delano's retail stores successfully attracted retail spending from the surrounding areas and/or the new residents in Delano have a markedly higher income than the average for existing residents. Regionally, retail sales growth in Kern and Tulare counties generated about $7.1 billion and $3.2 billion, respectively in 2005. These retail growth rates in Kern and Tulare counties were also higher than the population trends.

Compared to retail sales trends in surrounding communities, Delano generally kept up with the trends across Kern County, and exceeded the countywide growth in Tulare County.

TABLE 6
Taxable Retail Sales Growth In Delano And Region, 1997 To 2003 (CPI Adjusted)

Taxable Retail Sales	1997 (thousands)	2003 (thousands)	Percent Growth	Annual Growth
Delano	$159,409	$262,604	64.7%	6.4%
Kern County	$4,480,065	$7,146,289	59.5%	6.0%
McFarland	$10,481	$19,892	89.8%	8.3%
Wasco	$55,679	$57,632	3.5%	0.4%
Bakersfield	$2,717,514	$4,485,156	65.0%	6.5%
Tulare County	$2,265,760	$3,168,485	39.8%	4.3%

Source: ADE, data from U.S. Census of Population
Note: Figures inflation adjusted to 2005 dollars using state CPI.

[3] Taxable retail sales do not include nontaxable items such as groceries and prescription medications.

1.7 ECONOMIC PROFILE OF THE DELANO RETAIL SECTOR

CITYWIDE RETAIL TRENDS

As shown on Table 8, Delano annually generates approximately $315 million of retail sales.[4] The largest concentrations of retail sales occur in general merchandise stores, food stores, restaurants/eating places, home improvement, and motor vehicle dealerships. Together, these major categories account for over half of Delano's total retail sales.

Delano motor vehicle dealerships (new and used cars, and other vehicles) earn about $62 million of sales, and are the largest earner of sales tax revenues for the City. Grocery stores and supermarkets earn another $57 million of total sales.[5] The most prominent grocery stores in Delano are Ranch Market and Save-Mart.

Restaurants and fast food establishments generate $37 million in retail sales, while discount/department stores and other general merchandise stores generate about $34 million in sales. The general merchandise category in Delano is largely dominated by the downtown JC Penney store and Kmart location at County Line Road.

In addition, gasoline service stations contribute about $27 million of annual sales, taking advantage of the community's Highway 99 location.

DOWNTOWN DELANO (CENTRAL BUSINESS DISTRICT)

The Delano Central Business District (CBD) has approximately 206 business establishments, of which about 96 establishments are retail stores, restaurants, or personal services establishments. Even though the majority of these businesses are small-scale, Delano's J.C. Penney store, and the Ranch Market grocery store are located along Main Street and attract shoppers from outside of Delano.

---

[4] Retail sales are estimated from the Board of Equalization sales tax receipts data, and other sources. An adjustment was made to include estimated sales for the Home Depot store that opened for business in 2004.
[5] Sales totals for grocery stores include an adjustment to account for nontaxable sales. Nontaxable items include food and prescription drugs.

TABLE 7
Types Of Business Establishments Located In Downtown Delano

Business Category	Number of Businesses	Percent Total
Retail	61	30%
Finance, Insurance, Real Estate (FIRE)	24	12%
Personal Services	20	10%
Business & Professional Services	18	9%
Restaurants/fast food	15	7%
Health Services	14	7%
Manufacturing	9	5%
Auto Repair	8	4%
Recreation	7	4%
Membership Organizations	7	3%
Transportation, Communication, & Utilities	6	3%
Agriculture	5	2%
Construction	5	2%
Education Services	4	2%
Social Services	2	1%
Public Agencies	2	1%
Total Businesses	**206**	

Source: Applied Development Economics, based on Data Provided by Dun & Bradstreet

In recent years, the mix of CBD retail establishments has been changing as long-time business establishments have left and been replaced by smaller "99 cent" variety stores and other bargain stores. This has made it difficult for established businesses that attract a mix of incomes to remain in the CBD, as many CBD businesses focus on serving the low-income shopper. The economic health of the CBD retail establishments are summarized below.

- **Apparel stores.** Approximately 64 percent of all apparel store sales are in the CBD.
- **Specialty Retail Stores.** Specialty retail stores in the CBD account for about 75 percent of the total sales in this category citywide. Sales among CBD gift, sporting goods, photo, music, books, office supplies, and jewelry stores range between 70 and 100 percent of all Delano's specialty retail store sales.
- **Food Stores and General Merchandise.** Delano's downtown food and general merchandise stores, which include department stores, variety stores, grocery stores, and eating places, account for 22 percent of all store sales in the City. This category includes JC Penney and Ranch Market.

- **Building Materials and Home Furnishings Stores.** Downtown Delano establishments only account for 10 percent of the citywide sales in this category. The balance has shifted due to the dominance of Home Depot in this category.
- **Automotive retailers.** Lastly, automobile oriented retailers also have a presence in the Central Business District. This category includes gas stations, auto parts stores, and auto dealerships. Establishments located in the CBD account for about 25 percent of the citywide sales total in this category.

TABLE 8
Delano Central Business District Retail Sales

Retail Group	Total Retail Sales	Downtown % of Total
Total	$315,156,794	23%
Apparel Store Group	$2,237,713	64%
Specialty Retail Group	$9,300,050	75%
General Merchandise/Food Stores*	$146,227,332	22%
Building Materials And Home Furnishings	$57,323,248	10%
Automotive Group	$100,068,450	25%

Source: ADE, data from State Board of Equalization sales tax records

Note: Column (2) data includes non-taxable retail sales. Categories marked with asterisks (*) are aggregated due to confidentiality requirements.

As part of the 2004 *Business Improvement District Feasibility Study*, a series of interviews was conducted with downtown businesses. When asked about their business location intentions, the businesses overwhelmingly planned to stay in their current location, as shown in Table 9. However, about 18 percent of businesses interviewed indicated that they wanted to expand, but could not at their current location.

TABLE 9
Business Location Intentions
During The Next Three Years

Business Location Intentions	Responses	Percent of Total
Intend to continue operating at current location	38	86.4%
Would like to expand business but cannot expand at this site	8	18.2%
Intend to move elsewhere in Delano	5	11.4%
Might move out of Delano	4	9.1%
Looking to buy building	3	6.8%
Looking to sell	3	6.8%
Expect a rent increase that will make it difficult to continue operating at present location	1	2.3%
Total Respondents	**44**	**100.0%**

Source: Applied Development Economics; data collected from the Central Business District Survey

In the downtown business interviews, the number one issue was the proliferation of "99 cent" stores in the downtown area. (see Table 10) Given that several at-risk general merchandise businesses exist, other members of the downtown business community do not regard the presence of these stores as a positive benefit to the downtown business climate.

TABLE 10
Most Important Issues to
Downtown Delano Businesses

Important Downtown Delano Issues	Responses	Percent of Total
Too Many 99 Cent Stores	13	29.5%
Safety/Security	6	13.6%
Cleaning	5	11.4%
Parking	4	9.1%
Not Enough Anchor Stores	2	4.5%
Better Shopping Environment	1	2.3%
Lack of Public Transportation	1	2.3%
Lighting	1	2.3%
Loitering	1	2.3%
Main Street Becoming Like Tijuana	1	2.3%
Need Building Improvements	1	2.3%
Need Community Gathering Place	1	2.3%
Need Merchant Association	1	2.3%
Need Street Improvements	1	2.3%
Sewers	1	2.3%
Traffic Control	1	2.3%
Total Respondents	**44**	**100.0%**

Source: Applied Development Economics; data collected from the Central Business District Survey

DELANO SHOPPING CENTERS

Data from the National Research Board identifies three major shopping centers in Delano. These centers are the Cecil Plaza, Delano Village Center, and Randolph Village. All three centers are located around Cecil Avenue, and comprise a total of 184,000 square feet. The Delano Village Center is anchored by a 30,000 square foot Save-Mart supermarket, while the Randolph Village is anchored by a 26,000 square foot supermarket space that was recently reestablished as a supermarket.

While newer than most of the buildings in downtown Delano, these retail centers were all built before 1986, and had not had any renovation activity over the past decade until Vallarta Supermarket recently opened at Randolph Village. The rest of that shopping center is currently under renovation.

1.8 DELANO'S EMPLOYMENT BASE

According to business databases from Dun & Bradstreet, Delano businesses account for approximately 8,500 jobs, as shown in Table 11.[6] This total represents about 5.4 percent of the nearly 157,000 jobs in Kern County. By comparison, Delano accounts for about 6.0 percent of the total household population in Kern County. This means that Delano's likely serves as a net provider of housing, but on the whole has a good balance between jobs and housing.

The distribution of employment shows that Delano has a comparable employment base to Kern County, with some notable exceptions. The three largest industry groups in Kern County are retail trade (13 percent of total employment), agriculture (13 percent), and services (40 percent). By comparison, Delano has 14 percent of its jobs in retail, 13 percent in agriculture, and 35 percent in services—all very comparable percentages to the countywide job distribution.

Where Delano differs from the rest of Kern County is with its significantly higher concentration of jobs in utilities and transportation with 20 percent of the total jobs in Delano, compared to only 5.0 percent of the jobs in Kern County. In addition, Delano has 8.1 percent of its jobs in manufacturing, while this industry group only accounts for less than half of that proportion in Kern County.

---

[6] Dun & Bradstreet business records are updated at least once every three years. Because the database does not represent an annual total, growth trends cannot be generated using this data source.

In other industry groups, such as public administration, construction, mining, and finance/real estate, the rest of Kern County has a much larger base of jobs than Delano.

TABLE 11
Employment By Industry Group, Delano And Kern/Tulare Counties

Industry Group	Delano			Kern County		
	Establishments	Employment	Percent of Total	Establishments	Employment	Percent of Total
Agriculture and Mining	76	1,123	13.2%	1,431	24,498	15.6%
Construction	30	318	3.7%	1,717	10,728	6.8%
Manufacturing	32	687	8.1%	878	6,273	4.0%
Transportation and Public Utilities	56	1,650	19.5%	1,168	7,889	5.0%
Wholesale Trade	32	196	2.3%	1,125	5,820	3.7%
Retail Trade	194	1,183	13.9%	4,678	20,525	13.1%
Finance, Insurance, and Real Estate	56	190	2.2%	1,702	6,762	4.3%
Services	327	3,003	35.4%	9,293	61,981	39.5%
Public Administration	22	132	1.6%	497	11,531	7.3%
Nonclassified	7	n/a	n/a	392	67	0.0%
Total	**832**	**8,482**	**100.0%**	**22,881**	**156,964**	**100.0%**

Source: ADE, data from Dun & Bradstreet
Note: Employment and establishment data is the current data in D&B's database. This data is updated at least once every three years.

1.9 DELANO'S COMMUTE PATTERNS

According to 2000 Census data, about 43 percent of workers (aged 16 and over) living in Delano also worked in Delano. (Table 12) This means that just over half of the 8,857 workers who live in Delano outcommute to their jobs. However, considering that Delano currently generates about 8,500 jobs, this indicates that Delano attracts nearly as many commuters from other communities as local workers who leave Delano for jobs elsewhere. The implications on retail spending are that local residents who work elsewhere are likely to spend at least part of their disposable income in the communities where they work. Concurrently, the commuters that Delano attracts will likely shop in Delano. The degree to which this balances out depends on how attractive the retail opportunities in Delano are to daytime commuters, and how much better surrounding communities can meet shopping needs for Delano workers who outcommute.

Compared to other communities, about the same percentage of workers in Wasco work locally. McFarland has a much higher percentage of workers that commute out of Bakersfield has the largest employment base in the region, and over 66 percent of local residents work in Bakersfield.

TABLE 12
Commuting Patterns In Delano And Region
2000

Commute Patterns	Total Labor Force	Work In Place of Residence	Percent Working In Place of Residence
Delano	8,857	3,803	42.9%
McFarland	2,297	546	23.8%
Wasco	4,487	1,883	42.0%
Bakersfield	99,769	65,935	66.1%

Source: ADE, data from U.S. Census of Population

2. DESCRIPTION OF PROPOSED PROJECT

2.1 PROJECT DESCRIPTION

The project sponsor proposes to construct a 456,022 square foot shopping center anchored by a 228,751 square foot Wal-Mart Supercenter on a 45 acre site located along the Woollomes Road corridor, across the street from a Home Depot home center that opened for business in 2004.

The proposed Wal-Mart Supercenter will include 113,613 square feet of floor space for general merchandise sales, 36,736 square feet devoted to grocery sales, and 11,186 square feet for a garden center. The remaining space will go towards storage, support, and loading spaces; tenant spaces; and a lube and tire installation center.

In addition to the Wal-Mart Supercenter, the Delano Marketplace will include a 172,463 square foot Lowes home improvement center, along with 22,600 square feet of restaurant space and 35,000 square feet of other retail space.

The types of retail proposed for the other retail spaces in the proposed project development will likely include a mix of different retail stores. The tenant mix for those spaces have not yet been firmed up, but the types of stores making inquiries into those spaces include apparel stores, and specialty retail establishments.

3. ECONOMIC IMPACT ANALYSIS

An analysis of the proposed project's impacts depends significantly on the market demand for its uses. Whether the market has enough excess consumer spending that a project can absorb, or if its market viability depends on taking sales away from existing local stores, are vital issues to consider

It is important to note that the analysis measures the proposed project's impacts based on estimated market conditions in 2008. The impact analysis does not take into account future population growth, which adds market area spending, and reduces the sales that will be taken away from existing stores. Accordingly, the information below estimates the amount of new sales that the proposed project will attract to Delano, and the sales that will be taken from existing stores.

3.1 ESTIMATE OF RETAIL SALES EARNED BY PROPOSED DELANO MARKETPLACE SHOPPING CENTER

The Delano Marketplace project will encompass a broad range of retail store types that will sell significant quantities in nearly all product categories. Altogether, the Delano Marketplace will generate approximately $126 million of total retail sales, as shown in Table 13.[7] The majority of these sales is generated by the proposed Wal-Mart Supercenter. Because discount stores such as Wal-Mart cover so many different product types under one roof, the impact analysis needs to look at not only look at the sales by store type, but by product grouping as well. This is because Wal-Mart's broad product offerings create the potential to impact on several different store types, if the excess consumer spending is insufficient. Other retailers generally concentrate most of their sales in a specific range of retail merchandise lines.

Taken as a whole, the three largest product categories that the Delano Marketplace will account for are groceries; drugs, health, and

[7] The analysis assumes that approximately 5,000 square feet of sales will derive from service establishments such as personal services, financial institutions, or professional services.

beauty aids; and hardware.[8] Each of these categories will potentially generate over $10 million in retail sales. In addition, all of the clothing categories combine for nearly $19 million in annual sales, while lawn and garden products will account for nearly $10 million of annual sales.

The merchandise sales by store type are estimated below.

WAL-MART SUPERCENTER

It is projected that the proposed Wal-Mart Supercenter will earn a total of $87 million in annual sales. Approximately $20 million will be earned through the sale of grocery products. Another $57 million will be earned from the expanded sale of general merchandise items. The remaining sales comprise garden center sales, the tire/lube center, gasoline sales, and miscellaneous tenant operations. The general merchandise section sales are based on a benchmark sales average of $387 per square foot. The grocery store sales are based on a national grocery store benchmark of $402 per square foot.

Sales Distribution by Product Type

Because the Wal-Mart Supercenter will encompass discount store and grocery store uses, the sales are distributed into just about every major merchandise category. The largest single product sales category is groceries with nearly $19 million in projected sales. Combined clothing sales comprising footwear, and men's, women's, and children's clothing will total nearly $17 million. The other major product category is drugs, health, and beauty aids with nearly $9 million in sales. Gasoline sales will account for approximately $4.5 million in sales. The other large sales categories with more than $2 million in product sales include the following product types:

- soaps and household cleaners;
- curtains and dry goods;
- television and video equipment;
- kitchenwares and home furnishings;
- toys and hobbies;

[8] Product/merchandise line sales for each store type are estimated from the 1997 Census of Retail Trade Merchandise Line Distribution report. At the time of the analysis, the complete dataset from the 2002 Economic Census had not yet been released.

- sporting goods;
- lawn and garden sales.

LOWES HOME IMPROVEMENT STORE

Lowes' floor area will encompass a combination of home improvement and garden center uses, with projected annual sales of about $27 million. The sales generated by the Lowes store are conservatively based on a national home improvement store benchmark of approximately $155 per square foot.

Sales Distribution by Product Type

Lowe's merchandise sales will likely occur primarily in building materials, hardware, and lawn and garden products. In each of these categories, the Lowes store will generate over $6 million in annual sales. Paint products account for another $2 million in sales. These four categories alone account for over 90 percent of the projected merchandise sales at the proposed Lowes store.

OTHER RETAIL STORES

The remaining 57,600 square feet will go to restaurants and other undetermined retail businesses. The analysis assumed that about 30,600 square feet would be used for restaurants and eating places. The estimated sales for these businesses totals about $7 million.

The final tenant mix for the remaining retail uses has not yet been determined, so the analysis used a merchandise line distribution typical of specialty retail stores for the these undetermined retail uses. Thus far, the inquiries into tenant spaces at Delano Marketplace have primarily been clothing stores, drug stores, and various specialty retail store types. For determining the sales distribution by product type, the analysis used a combination of those store types. Estimated sales for the other retail stores will total about $6 million annually.

TABLE 13
Estimated Sales Distribution by Merchandise Line for Proposed Delano Marketplace Stores

MLNO Code	Merchandise Line Item	Wal-Mart Supercenter	Lowe's Home Center	Eating Places	Other Retail	Total Delano Marketplace Sales
100	Groceries & other food	$18,833,995	$26,645	$36,021	$51,327	$18,947,988
120	Meals and snacks	$543,838	$24	$5,991,920	$13,380	$6,549,163
130	Alcoholic drinks	$1,299	$0	$770,373	$108	$771,780
140	Packaged alcoholic beverages	$768,440	$0	$18,374	$4,409	$791,223
150	Cigars, cigarettes, and tobacco	$511,183	$247	$6,081	$96,603	$614,113
160	Drugs, health aids & beauty aids	$8,758,083	$2,420	$0	$376,755	$9,137,258
180	Soaps, detergents, & household cleaners	$2,754,747	$573	$0	$1,869	$2,757,188
190	Paper and related products	$850,813	$192	$0	$12,278	$863,282
200	Men's wear	$4,189,086	$49,553	$0	$79,559	$4,318,199
220	Women's, juniors' and misses' wear	$6,827,704	$978	$0	$45,763	$6,874,445
240	Children's wear	$4,638,372	$22	$0	$16,756	$4,655,149
260	Footwear (including accessories)	$943,298	$12,514	$0	$73,707	$1,029,519
270	Sewing, knitting & needlework goods	$482,718	$325	$0	$91,154	$574,198
280	Curtains, draperies & dry goods	$3,010,104	$76,604	$0	$6,508	$3,093,215
300	Major household appliances	$138,478	$372,766	$0	$2,403	$513,646
310	Small electrical appliances	$1,428,708	$76,257	$0	$3,273	$1,508,237
320	Televisions, video recorders, and tapes	$2,191,163	$52,319	$0	$51,671	$2,295,152
330	Audio equipment, musical supplies	$835,953	$48,845	$0	$332,287	$1,217,086
340	Furniture and sleep equipment	$939,570	$208,911	$0	$79,148	$1,227,628
360	Floor coverings	$150,568	$296,064	$0	$310	$446,943
370	Computer hardware, software & supplies	$45,128	$175	$0	$843,772	$889,075
380	Kitchenware & home furnishings	$2,619,112	$191,856	$0	$113,948	$2,924,916
400	Jewelry	$1,167,922	$239	$0	$593,399	$1,761,561
420	Books	$249,231	$346	$0	$343,078	$592,656
440	Photographic equipment & supplies	$701,016	$0	$0	$55,574	$756,590
460	Toys, hobby goods & games	$3,643,418	$29,190	$0	$345,160	$4,017,768
490	Optical goods	$81,366	$0	$0	$204,744	$286,110
500	Sporting goods	$2,393,705	$75,510	$0	$488,112	$2,957,328
580	Recreational vehicles	$2,679	$7,888	$0	$782	$11,349

TABLE 13 (cont.)
Estimated Sales Distribution by Merchandise Line for Proposed Delano Marketplace Stores

MLNO Code	Merchandise Line Item	Wal-Mart Supercenter	Lowe's Home Center	Eating Places	Other Retail	Total Delano Marketplace Sales
600	Hardware, tools, plumbing & elect supplies	$1,730,916	$8,380,178	$0	$2,381	$10,113,475
620	Lawn, garden equipment & supplies	$3,519,443	$7,212,652	$0	$180,579	$10,912,674
640	Dimensional lumber & other building matls	$16,369	$6,570,993	$0	$11,345	$6,598,707
670	Paint & sundries	$79,650	$2,079,450	$0	$546	$2,159,646
680	Manufactured (mobile) homes	$0	$1,144	$0	$0	$1,144
700	Cars, trucks & powered vehicles	$2,238	$6,589	$0	$1,325	$10,152
720	Automotive fuels	$4,818,534	$59,651	$0	$2,052	$4,880,238
730	Automotive lubricants	$236,129	$48,550	$0	$72	$284,750
740	Auto tires, batteries & accessories	$702,621	$81,488	$0	$359	$784,468
780	Household fuels	$18,718	$71,145	$0	$187	$90,050
800	Pets, pet foods, & supplies	$815,183	$83,578	$0	$174,513	$1,073,275
850	All other merchandise	$3,405,847	$97,386	$26,717	$1,219,658	$4,749,609
890	Unclassified merchandise	$739,277	$336,033	$51,713	$57,146	$1,184,169
900	Nonmerchandise Receipts	$1,174,701	$0	$0	$0	$1,174,701
	Totals	$86,961,323	$26,559,302	$6,901,200	$5,978,000	$126,399,825

Source: ADE, benchmark data from Urban Land Institute, U.S. Economic Census, and corporate annual reports.
Notes: Product distribution estimated based on the floor area for different store departments and/or store types.

3.2 REGIONAL TRADE AREA DESCRIPTION

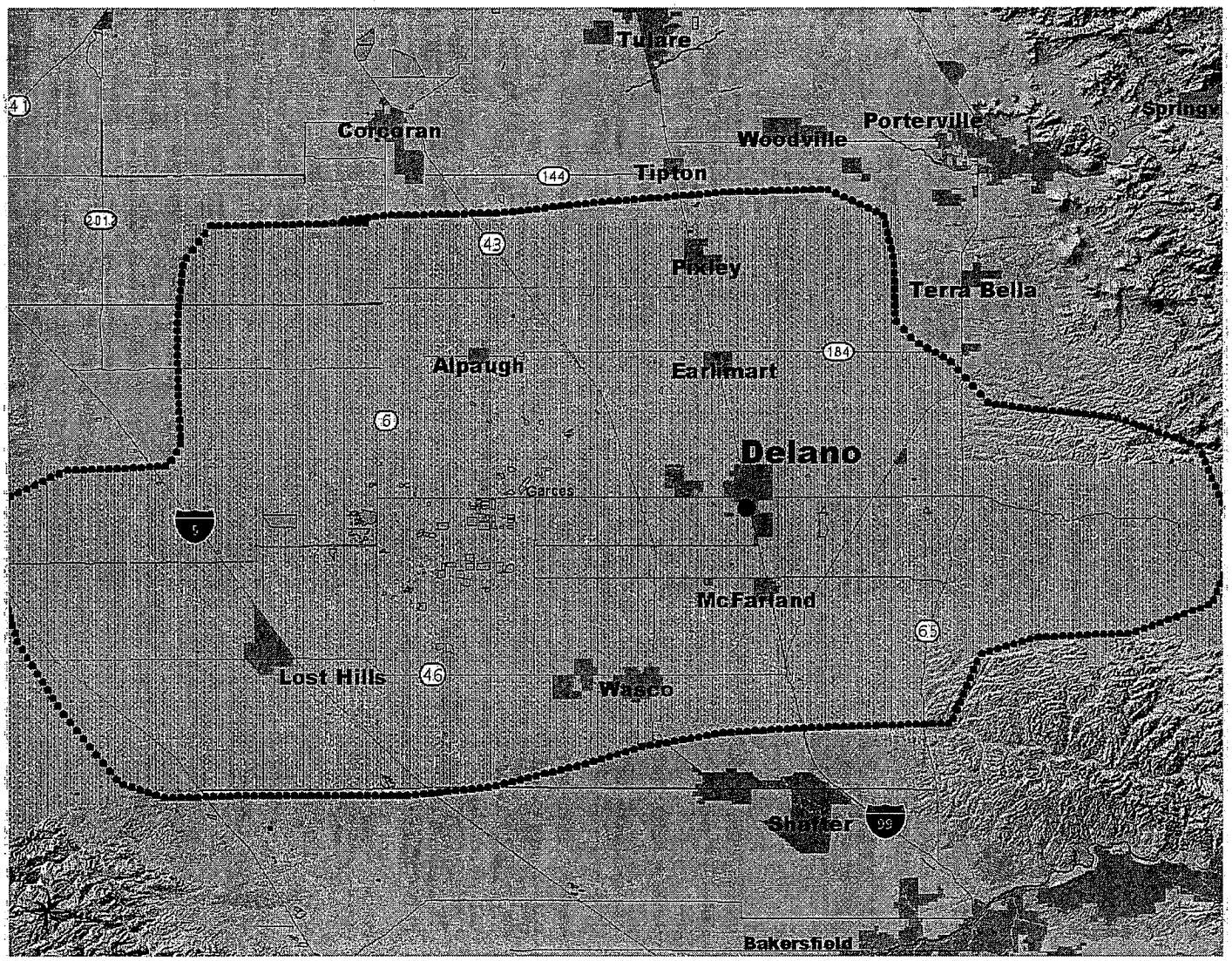
Figure 1 shows the regional market trade area in which the proposed shopping center is located. The primary market area within the regional market trade area is the City of Delano. The secondary market comprises the census tracts outside of the City of Delano and within the indicated boundary.

The northern and southern boundaries of the regional market trade area were delineated with the cities of Visalia, to the north, and Bakersfield, to the south, in mind. These boundaries represent approximately half the distance between either Delano and Visalia or Delano and Bakersfield.

In calculating household demand in the secondary market, the report does not assume that 100 hundred percent of household spending will occur in Delano. The rate at which secondary market households shop in Delano is based on a ratio of store sales in Delano versus overall store sales in the regional market trade area. In

this area, sales by retailers in Delano amounts to approximately 73 percent of all sales by all retailers in the regional market trade area.

Figure 1
Delano Regional Trade Area



3.3 HOUSEHOLD SPENDING

The 2008 household spending (the first year of operation for the proposed project) assumes a total of 12,098 household for the City of Delano, and 9,255 households for the secondary market area.[9] The data on Table 14 estimates household spending by Delano (Column 1), secondary market area households (Column 2), and all households in the regional market trade area (Column 3). Total regional household spending on retail goods is estimated at $413.5 million (Column 3), of which, $241.2 million (Column 1) comes from households in the City of Delano (primary market) and $172.3 million comes from households in the secondary market area. While new and used cars and other vehicles represents $87 million of the total annual household spending, or 21 percent, the reality is that households purchase automobiles on an infrequent basis. The relatively high price of new, used and other vehicles explains why this retail category represents a significant percentage of overall retail spending.

With regards to more frequented retail categories, households in the region spend slightly over 22 percent of their total retail spending at grocery stores, or $90 million annually. Households in the region will spend approximately $75 million at department and general merchandise stores as well, or 18 percent of their total household retail spending.

[9] The growth rate for Delano estimates the projected phasing for approved residential developments.

TABLE 14
Regional Market Demand by Retail Store Type, 2008

Retail Group	(1) Delano Household Spending	(2) Region Outside of Delano Household Spending	(3) Total Regional Household Spending
Total (excluding non-merchandise receipts)	$241,168,914	$172,379,938	$413,548,852
Apparel Store Group	$10,979,053	$7,680,115	$18,659,168
General Merchandise Group	$55,797,246	$40,065,453	$95,862,699
Department and General Merchandise Stores	$43,592,286	$30,971,224	$74,563,510
Drug & Proprietary Stores	$12,204,961	$9,094,229	$21,299,190
Specialty Retail Group	$12,510,123	$8,760,868	$21,270,991
Food, Eating and Drinking Group	$72,545,376	$53,067,807	$125,613,183
Grocery Stores	$52,015,952	$38,361,733	$90,377,686
Specialty Food Stores	$1,586,289	$1,169,099	$2,755,388
Liquor Stores	$1,699,602	$1,217,040	$2,916,642
Eating Places	$17,243,533	$12,319,935	$29,563,467
Building Materials And Homefurnishings Group	$17,731,212	$11,910,481	$29,641,693
Furniture & Home Furnishings	$6,631,777	$4,423,895	$11,055,672
Household Appliances & Electronics	$3,381,808	$2,339,660	$5,721,468
Home Centers	$476,386	$330,021	$806,407
Automotive Group	$71,605,903	$50,895,214	$122,501,117
New Cars & RVs/Motor Homes/Boats and Motorcycles	$51,023,421	$35,894,680	$86,918,101
Gasoline Service Stations	$19,229,264	$14,018,592	$33,247,857
Auto Parts & Accessories	$1,353,218	$981,941	$2,335,159

Source: ADE

3.4 RETAIL SALES TRENDS

Table 15 includes data on estimated sales by stores in Delano (Column 1), the secondary market area (Column 2), and the regional market trade area as a whole (Column 3). Retail transactions in Delano stores amounts to approximately $315.1 million, versus $93.5 million worth of retail transactions in stores in the secondary market. Altogether, retail transactions amount to $408.6 million in the regional market trade area.

New and used vehicles, grocery stores, home centers-nurseries-hardware stores, eating places, and general merchandise stores represent the largest portion of Delano's $315.2 million in total sales, with over three-fourths of the total citywide sales. In dollar terms, this amounts to $62 million (new and used vehicles), $57.8 million (grocery stores), $53.3 million (home centers), $37.2 million (eating places), and $45.6 million (general merchandise stores). In the secondary market, grocery stores and general merchandise are the leading sales categories. As a portion of the overall $93.5 million in sales, these categories represent 40.1 percent and 18.9 percent of overall sales, respectively.

TABLE 15
Regional Retail Sales by Store Type

Retail Group	(1) Delano Retail Sales	(2) Outside Delano Retail Sales	(3) Total Regional Market Area Retail Sales
Total (excluding non-merchandise receipts)	$315,156,794	$93,473,617	$408,630,411
Apparel Store Group	$2,237,713	$3,235,160	$5,472,873
General Merchandise Group	$45,578,021	$25,053,342	$70,631,363
Department and General Merchandise Stores	**	$18,827,262	**
Drug & Proprietary Stores	**	$6,226,080	**
Specialty Retail Group	$9,300,050	$4,130,876	$13,430,927
Food, Eating and Drinking Group	$100,649,311	$45,709,552	$146,358,863
Grocery Stores	$56,838,667	$31,455,690	$88,294,358
Specialty Food Stores	$1,195,618	$997,183	$2,192,801
Liquor Stores	$5,377,235	$1,056,838	$6,434,073
Eating Places	$37,237,791	$12,199,841	$49,437,632
Building Materials And Homefurnishings Group	$57,323,248	$4,504,041	$61,827,289
Furniture & Home Furnishings	$2,641,217	$1,379,268	$4,020,486
Household Appliances & Electronics	$1,225,719	$918,405	$2,144,124
	$127,790	$150,781	$278,571
Home Centers	$53,328,522	$2,055,587	$55,384,108
Automotive Group	$100,068,450	$10,840,646	$110,909,096
New Cars & RVs/Motor Homes/Boats and Motorcycles	$62,085,682	$3,757,621	$65,843,304
Gasoline Service Stations	$27,227,706	$4,763,444	$31,991,149
Auto Parts & Accessories	$10,755,062	$2,319,581	$13,074,643

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

Note: Categories marked with asterisks (*) are aggregated due to confidentiality restrictions.

3.5 EXISTING RETAIL LEAKAGE

Table 16 compares regional household spending against actual sales at the regional level. The data estimates the amount of household spending that is leaving or leaking out of Delano and the secondary market area, perhaps to stores in Tulare County to the north or Bakersfield to the south. Retail sales leakage occurs when total spending within a specific store types exceeds actual sales in the same store type, meaning that households are spending their dollars outside of the region market trade area.

Local officials and the private sector can use information regarding retail and services sales leakage to either assist existing stores in capturing lost dollars, or to attract new stores into their respective areas. Thus, sales leakage analysis is an important step in understanding market opportunities for businesses, customers, and local governments seeking to increase sales taxes and employment. As Table 14 shows, $101 million is leaking out of the regional trade market area. With proper marketing and planning, Delano stores could compete for this amount, or a share of this amount of money, and, as a result, the $80.6 million represents an opportunity for local stores.

Of the $101 million in overall leakage, $25 million occurs in general merchandise stores. Existing apparel stores in Delano and the region at large are also losing out on approximately $13 million. There is nearly $37 million in leakage in the new, used and other vehicles category. In addition, grocery stores in Delano and the secondary market are losing out on $2.1 million in sales.

TABLE 16
Regional Retail Leakage

Retail Group	Regional Market Demand: (1) Total Regional Household Spending	Regional Market Supply: (2) Total Regional Market Area Retail Sales	Regional Market Leakage Analysis: (3) Regional Capture	Regional Market Leakage Analysis: (4) Regional Leakage: Potential New Opportunities
Total (excluding non-merchandise receipts)	$413,548,852	$408,630,411	$95,680,721	$100,599,162
Apparel Store Group	$18,659,168	$5,472,873	$0	$13,186,295
General Merchandise Group	$95,862,699	$70,631,363	$0	$25,231,337
Department and General Merchandise Stores	$74,563,510	$53,083,332	$0	$21,480,178
Drug & Proprietary Stores	$21,299,190	$17,548,030	$0	$3,751,159
Specialty Retail Group	$21,270,991	$13,430,927	$579,955	$8,420,019
Food, Eating and Drinking Group	$125,613,183	$146,358,863	$23,391,595	$2,645,914
Grocery Stores	$90,377,686	$88,294,358	$0	$2,083,328
Specialty Food Stores	$2,755,388	$2,192,801	$0	$562,586
Liquor Stores	$2,916,642	$6,434,073	$3,517,430	$0
Eating Places	$29,563,467	$49,437,632	$19,874,164	$0
Building Materials And Homefurnishings Group	$29,641,693	$61,827,289	$45,099,746	$12,914,150
Furniture & Home Furnishings	$11,055,672	$4,020,486	$0	$7,035,186
Household Appliances & Electronics	$5,721,468	$2,144,124	$0	$3,577,344
Used Merchandise	$806,407	$278,571	$0	$527,835
Home Improvement	$12,058,147	$55,384,108	$45,099,746	$1,773,784
Automotive Group	$122,501,117	$110,909,096	$26,609,426	$38,201,447
New Cars & RVs/Motor Homes/Boats and Motorcycles	$86,918,101	$65,843,304	$15,869,942	$36,944,740
Gasoline Service Stations	$33,247,857	$31,991,149	$0	$1,256,707
Auto Parts & Accessories	$2,335,159	$13,074,643	$10,739,484	$0

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

Note: Categories marked with asterisks (*) are aggregated due to confidentiality restrictions

Table 17 takes the household spending information (presented in Table 14) and reallocates the spending into transactions by merchandise line/product groups, as opposed to by retail store types. Similarly, Table 18 takes sales data from Table 15, and translates the totals by store type into sales transactions by merchandise line. These reallocations occur because a particular store type, such as a discount store in the department and general merchandise store category, will sell a variety of merchandise. The overall amount of

household spending ($413.5 million) (Table 17, Column 3) and sales by merchandise line item ($408.6 million) (Table 18, column 3) will remain the same as the overall amount of household spending (Table 14, Column 3) and store sales (Table 15, Column 3) by retail store types.

TABLE 17
Regional Market Demand by Merchandise Line, 2008

MLNO	Merchandise Line Item	(1) Delano Household Spending	(2) Regional (w\o Delano) Household Spending	(3) Total Household Spending
100	Groceries & other food	$49,534,499	$36,406,112	$85,940,611
120	Meals and snacks	$16,114,377	$11,530,877	$27,645,254
130	Alcoholic drinks	$1,939,803	$1,386,066	$3,325,869
140	Packaged alcoholic beverages	$4,383,596	$3,193,122	$7,576,718
150	Cigars, cigarettes, and tobacco	$4,326,759	$3,162,691	$7,489,450
160	Drugs, health aids & beauty aids	$18,965,067	$13,927,084	$32,892,151
180	Soaps, detergents, & household cleaners	$2,654,580	$1,937,867	$4,592,447
190	Paper and related products	$2,333,192	$1,708,272	$4,041,464
200	Men's wear	$6,124,521	$4,266,136	$10,390,657
220	Women's, juniors' and misses' wear	$10,293,203	$7,185,885	$17,479,089
240	Children's wear	$3,182,114	$2,242,437	$5,424,551
260	Footwear (including accessories)	$4,254,481	$2,998,029	$7,252,511
270	Sewing, knitting & needlework goods	$459,665	$330,316	$789,982
280	Curtains, draperies & dry goods	$2,048,349	$1,432,878	$3,481,227
300	Major household appliances	$1,513,363	$1,042,039	$2,555,402
310	Small electrical appliances	$840,549	$600,061	$1,440,609
320	Televisions, video recorders, and tapes	$1,732,230	$1,215,437	$2,947,667
330	Audio equipment, musical instruments & supplies	$1,882,241	$1,313,715	$3,195,957
340	Furniture and sleep equipment	$4,415,832	$2,977,484	$7,393,316
360	Floor coverings	$1,627,544	$1,088,895	$2,716,438
370	Computer hardware, software & supplies	$1,774,540	$1,229,703	$3,004,243
380	Kitchenware & home furnishings	$3,265,711	$2,286,639	$5,552,350
400	Jewelry	$2,266,519	$1,569,370	$3,835,890
420	Books	$1,215,995	$857,227	$2,073,221
440	Photographic equipment & supplies	$671,253	$476,282	$1,147,535
460	Toys, hobby goods & games	$2,533,061	$1,819,851	$4,352,912
490	Optical goods	$638,650	$459,150	$1,097,800
500	Sporting goods	$2,860,884	$1,968,405	$4,829,289
580	Recreational vehicles	$968,638	$681,836	$1,650,474

TABLE 17 (cont.)
Regional Market Demand by Merchandise Line, 2008

MLNO	Merchandise Line Item	(1) Delano Household Spending	(2) Regional (w\o Delano) Household Spending	(3) Total Household Spending
600	Hardware, tools & plumbing & electrical supplies	$3,222,189	$2,187,197	$5,409,387
620	Lawn, garden & farm equipment & supplies	$3,489,857	$2,461,125	$5,950,981
640	Dimensional lumber & other building materials	$2,701,341	$1,754,910	$4,456,251
670	Paint & sundries	$435,083	$294,670	$729,753
680	Manufactured (mobile) homes	$14,309	$9,690	$23,999
700	Cars, trucks & powered vehicles	$47,288,418	$33,289,685	$80,578,104
720	Automotive fuels	$13,994,479	$10,201,588	$24,196,068
730	Automotive lubricants	$673,740	$485,274	$1,159,014
740	Auto tires, batteries & accessories	$3,891,599	$2,777,057	$6,668,656
780	Household fuels	$133,489	$96,484	$229,973
800	Pets, pet foods, & supplies	$1,483,894	$1,077,186	$2,561,080
850	All other merchandise	$6,174,584	$4,403,164	$10,577,748
890	Unclassified merchandise	$2,844,716	$2,048,041	$4,892,757
900	Nonmerchandise Receipts	$0	$0	$0
	Totals	$241,168,914	$172,379,938	$413,548,852

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

TABLE 18
Regional Retail Sales by Merchandise Line

MLNO	Merchandise Line Item	(1) Delano Retail Sales	(2) Regional Market Outside Delano: Sales	(3) Total Regional Retail Sales
100	Groceries & other food	$50,136,924	$31,420,173	$81,557,097
120	Meals and snacks	$33,625,519	$11,432,650	$45,058,168
130	Alcoholic drinks	$4,191,707	$1,411,226	$5,602,933
140	Packaged alcoholic beverages	$7,880,288	$2,766,592	$10,646,880
150	Cigars, cigarettes, and tobacco	$4,754,049	$1,738,840	$6,492,889
160	Drugs, health aids & beauty aids	$18,201,997	$9,996,367	$28,198,364
180	Soaps, detergents, & household cleaners	$3,029,635	$1,866,314	$4,895,949
190	Paper and related products	$2,414,799	$1,384,207	$3,799,005
200	Men's wear	$2,729,256	$1,541,955	$4,271,211
220	Women's, juniors' and misses' wear	$3,940,265	$3,112,627	$7,052,892
240	Children's wear	$2,281,783	$1,370,059	$3,651,842
260	Footwear (including accessories)	$1,439,893	$975,898	$2,415,791
270	Sewing, knitting & needlework goods	$420,121	$144,632	$564,753
280	Curtains, draperies & dry goods	$1,750,040	$870,564	$2,620,604
300	Major household appliances	$1,170,475	$239,460	$1,409,935
310	Small electrical appliances	$967,321	$449,307	$1,416,629
320	Televisions, video recorders, and tapes	$1,483,136	$745,445	$2,228,581
330	Audio equipment, musical instruments & supplies	$1,212,949	$588,684	$1,801,634
340	Furniture and sleep equipment	$2,470,489	$714,875	$3,185,364
360	Floor coverings	$1,334,828	$199,193	$1,534,021
370	Computer hardware, software & supplies	$1,867,131	$125,161	$1,992,292
380	Kitchenware & home furnishings	$2,901,487	$1,118,076	$4,019,563
400	Jewelry	$2,721,121	$822,765	$3,543,886
420	Books	$240,162	$250,661	$490,822
440	Photographic equipment & supplies	$719,607	$282,544	$1,002,151
460	Toys, hobby goods & games	$2,627,638	$1,099,476	$3,727,114
490	Optical goods	$440,628	$49,877	$490,505
500	Sporting goods	$11,254,292	$1,008,884	$12,263,176
580	Recreational vehicles	$922,351	$1,107	$923,457

TABLE 18 (cont.)
Regional Retail Sales by Merchandise Line

MLNO	Merchandise Line Item	(1) Delano Retail Sales	(2) Regional Market Outside Delano: Sales	(3) Total Regional Retail Sales
600	Hardware, tools & plumbing & electrical supplies	$20,153,718	$1,134,992	$21,288,711
620	Lawn, garden & farm equipment & supplies	$7,655,768	$1,032,852	$8,688,620
640	Dimensional lumber & other building materials	$19,395,787	$521,761	$19,917,548
670	Paint & sundries	$5,723,806	$163,827	$5,887,634
680	Manufactured (mobile) homes	$581,821	$77	$581,898
700	Cars, trucks & powered vehicles	$47,709,881	$16,779	$47,726,660
720	Automotive fuels	$19,771,524	$1,464,916	$21,236,439
730	Automotive lubricants	$732,321	$273,308	$1,005,629
740	Auto tires, batteries & accessories	$12,884,659	$7,172,821	$20,057,480
780	Household fuels	$200,328	$13,789	$214,116
800	Pets, pet foods, & supplies	$1,358,457	$636,184	$1,994,642
850	All other merchandise	$6,621,860	$2,184,221	$8,806,081
890	Unclassified merchandise	$3,236,977	$1,124,891	$4,361,869
900	Nonmerchandise Receipts	$0	$0	$0
	Totals	$315,156,794	$93,468,036	$408,624,830

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

Table 19 shows retail sales leakage by merchandise line items. For example, regional household spending by groceries and other foods merchandise line of $85.9 million exceeds actual sales of $81.6 million, resulting in a leakage of $4.3 million.

Table 20 compares leakage by merchandise line items by expected merchandise line item sales by the proposed project. Altogether, the project will generate an estimated $126.4 million in sales (Column 1), and, of this amount, $19.0 million will occur in the groceries and other foods merchandise line. Because there is an existing leakage in this line item to the tune of $4.4 million, the project will absorb this outstanding leakage amount, and, in all likelihood, fulfill its target of $19.0 million in sales in the groceries and other foods merchandise line by "capturing" the remaining $14.6 million from existing stores operating in Delano and elsewhere.

TABLE 19
Regional Retail Leakage by Merchandise Line

		Regional Market Demand By Merchandise Line	Regional Market Supply By Merchandise Line	Regional Market Leakage Analysis By Merchandise Line	
MLNO	Merchandise Line Item	(1) Total Household Spending	(2) Total Regional Retail Sales	(3) Regional Capture by Merchandise Line	(4) Leakage: Potential New Opportunities by Merchandise Line
100	Groceries & other food	$85,940,611	$81,557,097	$4,383,514	$0
120	Meals and snacks	$27,645,254	$45,058,168	$0	$17,412,915
130	Alcoholic drinks	$3,325,869	$5,602,933	$0	$2,277,064
140	Packaged alcoholic beverages	$7,576,718	$10,646,880	$0	$3,070,162
150	Cigars, cigarettes, and tobacco	$7,489,450	$6,492,889	$996,561	$0
160	Drugs, health aids & beauty aids	$32,892,151	$28,198,364	$4,693,787	$0
180	Soaps, detergents, & household cleaners	$4,592,447	$4,895,949	$0	$303,501
190	Paper and related products	$4,041,464	$3,799,005	$242,459	$0
200	Men's wear	$10,390,657	$4,271,211	$6,119,446	$0
220	Women's, juniors' and misses' wear	$17,479,089	$7,052,892	$10,426,197	$0
240	Children's wear	$5,424,551	$3,651,842	$1,772,709	$0
260	Footwear (including accessories)	$7,252,511	$2,415,791	$4,836,720	$0
270	Sewing, knitting & needlework goods	$789,982	$564,753	$225,229	$0
280	Curtains, draperies & dry goods	$3,481,227	$2,620,604	$860,624	$0
300	Major household appliances	$2,555,402	$1,409,935	$1,145,467	$0
310	Small electrical appliances	$1,440,609	$1,416,629	$23,981	$0
320	Televisions, video recorders, and tapes	$2,947,667	$2,228,581	$719,086	$0
330	Audio equipment, musical instruments & supplies	$3,195,957	$1,801,634	$1,394,323	$0
340	Furniture and sleep equipment	$7,393,316	$3,185,364	$4,207,952	$0
360	Floor coverings	$2,716,438	$1,534,021	$1,182,418	$0
370	Computer hardware, software & supplies	$3,004,243	$1,992,292	$1,011,951	$0
380	Kitchenware & home furnishings	$5,552,350	$4,019,563	$1,532,787	$0
400	Jewelry	$3,835,890	$3,543,886	$292,004	$0
420	Books	$2,073,221	$490,822	$1,582,399	$0
440	Photographic equipment & supplies	$1,147,535	$1,002,151	$145,385	$0
460	Toys, hobby goods & games	$4,352,912	$3,727,114	$625,798	$0
490	Optical goods	$1,097,800	$490,505	$607,295	$0
500	Sporting goods	$4,829,289	$12,263,176	$0	$7,433,887
580	Recreational vehicles	$1,650,474	$923,457	$727,017	$0

TABLE 19 (cont.)
Regional Retail Leakage by Merchandise Line

MLNO	Merchandise Line Item	Regional Market Demand By Merchandise Line (1) Total Household Spending	Regional Market Supply By Merchandise Line (2) Total Regional Retail Sales	Regional Market Leakage Analysis By Merchandise Line (3) Regional Capture by Merchandise Line	(4) Leakage: Potential New Opportunities by Merchandise Line
600	Hardware, tools & plumbing & electrical supplies	$5,409,387	$21,288,711	$15,879,324	$0
620	Lawn, garden & farm equipment, cut flowers, etc	$5,950,981	$8,688,620	$2,737,638	$0
640	Dimensional lumber & other building materials	$4,456,251	$19,917,548	$15,461,298	$0
670	Paint & sundries	$729,753	$5,887,634	$5,157,880	$0
680	Manufactured (mobile) homes	$23,999	$581,898	$557,899	$0
700	Cars, trucks & powered vehicles	$80,578,104	$47,726,660	$0	$32,851,443
720	Automotive fuels	$24,196,068	$21,236,439	$0	$2,959,628
730	Automotive lubricants	$1,159,014	$1,005,629	$0	$153,385
740	Auto tires, batteries & accessories	$6,668,656	$20,057,480	$13,388,824	$0
780	Household fuels	$229,973	$214,116	$0	$15,856
800	Pets, pet foods, & supplies	$2,561,080	$1,994,642	$0	$566,438
850	All other merchandise	$10,577,748	$8,806,081	$0	$1,771,667
890	Unclassified merchandise	$4,892,757	$4,361,869	$0	$530,889
900	Nonmerchandise Receipts	$0	$0	$0	$0
	Totals	$413,548,852	$408,624,830	$83,680,393	$88,604,415

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

TABLE 20
Potential Sales Impacts on Existing Stores by Merchandise Line

MLNO	Merchandise Line Item	Estimated Project Sales	Existing Regional Leakage	Total Project Residual Sales: Capture From Existing Stores
100	Groceries & other food	$18,947,988	$4,383,514	$14,564,474
120	Meals and snacks	$6,549,163	$0	$6,549,163
130	Alcoholic drinks	$771,780	$0	$771,780
140	Packaged alcoholic beverages	$791,223	$0	$791,223
150	Cigars, cigarettes, and tobacco	$614,113	$996,561	$0
160	Drugs, health aids & beauty aids	$9,137,258	$4,693,787	$4,443,471
180	Soaps, detergents, & household cleaners	$2,757,188	$0	$2,757,188
190	Paper and related products	$863,282	$242,459	$620,823
200	Men's wear	$4,318,199	$6,119,446	$0
220	Women's, juniors' and misses' wear	$6,874,445	$10,426,197	$0
240	Children's wear	$4,655,149	$1,772,709	$2,882,440
260	Footwear (including accessories)	$1,029,519	$4,836,720	$0
270	Sewing, knitting & needlework goods	$574,198	$225,229	$348,969
280	Curtains, draperies & dry goods	$3,093,215	$860,624	$2,232,592
300	Major household appliances	$513,646	$1,145,467	$0
310	Small electrical appliances	$1,508,237	$23,981	$1,484,257
320	Televisions, video recorders, and tapes	$2,295,152	$719,086	$1,576,067
330	Audio equipment, musical instruments	$1,217,086	$1,394,323	$0
340	Furniture and sleep equipment	$1,227,628	$4,207,952	$0
360	Floor coverings	$446,943	$1,182,418	$0
370	Computer hardware, software & supplies	$889,075	$1,011,951	$0
380	Kitchenware & home furnishings	$2,924,916	$1,532,787	$1,392,129
400	Jewelry	$1,761,561	$292,004	$1,469,557
420	Books	$592,656	$1,582,399	$0
440	Photographic equipment & supplies	$756,590	$145,385	$611,205
460	Toys, hobby goods & games	$4,017,768	$625,798	$3,391,970
490	Optical goods	$286,110	$607,295	$0
500	Sporting goods	$2,957,328	$0	$2,957,328
580	Recreational vehicles	$11,349	$727,017	$0

TABLE 20 (cont.)
Potential Sales Impacts on Existing Stores by Merchandise Line

MLNO	Merchandise Line Item	Estimated Project Sales	Existing Regional Leakage	Total Project Residual Sales: Capture From Existing Stores
600	Hardware, tools & plumbing & electrical	$10,113,475	$0	$10,113,475
620	Lawn, garden & farm equipment	$10,912,674	$0	$10,912,674
640	Dimensional lumber & other building matls	$6,598,707	$0	$6,598,707
670	Paint & sundries	$2,159,646	$0	$2,159,646
680	Manufactured (mobile) homes	$1,144	$0	$1,144
700	Cars, trucks & powered vehicles	$10,152	$32,851,443	$0
720	Automotive fuels	$4,880,238	$2,959,628	$1,920,610
730	Automotive lubricants	$284,750	$153,385	$131,365
740	Auto tires, batteries & accessories	$784,468	$0	$784,468
780	Household fuels	$90,050	$15,856	$74,194
800	Pets, pet foods, & supplies	$1,073,275	$566,438	$506,837
850	All other merchandise	$4,749,609	$1,771,667	$2,977,941
890	Unclassified merchandise	$1,184,169	$530,889	$653,281
900	Nonmerchandise Receipts	$1,174,701	$0	$1,174,701
	Totals	$126,399,825		$86,853,679

With regard to Delano and area stores that carry groceries and other food items, the bulk of which are grocery stores, the $14.6 million represents the impacts of the project on existing stores. The extent to which Delano stores are impacted is calculated on a pro rata basis that compares Delano retail sales against total retail sales by all stores in the regional market trade area. Overall, the proposed shopping center project will impact existing stores to the tune of $86.9 million, as Table 20 indicates.

Table 21 translates impacts by merchandise line items into impacts by retail store types. The overall merchandise line impact is reduced slightly due to the exclusion of non-merchandise sales, from $86.9 million to $85.4 million. The impacts of the project on grocery stores could amount to about a $16.6 million reduction in sales, of which $9.8 million would affect stores in Delano. The largest impact could occur in the home improvement category, which could potentially lose an estimated $20 million in sales.

While the impacts at first glance appear significant, the impacts also need to be translated into sales per square feet, for contextual purposes. Of the small number of existing supermarkets within the groceries category, one can generate sales well in excess of industry standards. Another supermarket is expected to continue to operate, although it is worth watching closely with the opening of the proposed project. Given the small number of supermarkets, precise figures cannot be shared for reasons of confidentiality.

TABLE 21
Potential Impacts of Delano Marketplace on Existing Stores

Retail Group	Total Impact	Impact On Existing Delano Stores
Total (excluding non-merchandise receipts)	$85,434,388	$59,729,757
Apparel Store Group	$1,236,662	$452,247
General Merchandise Group	$26,909,479	$16,967,969
Specialty Retail Group	$6,396,614	$4,218,764
Food, Eating and Drinking Group	$24,336,250	$15,539,420
Grocery Stores	$16,582,219	$9,778,187
Specialty Food Stores	$502,642	$274,065
Liquor Stores	$305,472	$255,312
Eating Places	$6,945,917	$5,231,856
Building Materials And Homefurnishings Group	$21,952,268	$18,366,739
Furniture & Home Furnishings	$963,702	$633,085
Appliances & Electronics	$918,260	$522,247
Used Merchandise	$162,276	$74,401
Home Improvement	$19,908,030	$17,137,006
Automotive Group	$4,603,114	$4,184,618
New Cars & RVs/Motor Homes/Boats and Motorcycles	$1,194,032	$1,164,487
Gasoline Service Stations	$3,102,766	$2,799,017
Auto Parts & Accessories	$306,316	$221,114

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

3.6 CUMULATIVE PROJECTS

In addition to the Delano Marketplace project, several other large-scale commercial projects have been discussed and/or proposed for

Delano. These projects are generally in a much earlier stage in the approval process, with the potential tenants in a somewhat tentative stage. The cumulative projects also include 4,800 units of new housing in process, and over 145 acres of industrial development in varying stages of the approval process.

As defined at this early stage, these cumulative projects would add approximately 1.9 million square feet of new commercial space to the Delano market. Because the phasing for these projects is unknown, the analysis evaluated up to the year 2030.

Based on some preliminary information and assumptions about potential commercial project tenanting, the analysis assumes that approximately 36 percent of the square footage would go towards general merchandise stores (such as department stores, warehouse clubs, and other general merchandise retailers), while eating places would occupy another 17 percent of the floor space. The remaining 47 percent would go to other types of retail such as specialty retail, clothing stores, office supplies, and home improvement. The sales potential for the cumulative projects totals approximately $488 million. This will potentially create new market pressures for existing businesses, as well as businesses locating in the Delano Marketplace. Table 22 shows the merchandise line sales for the combined cumulative projects. It should be noted that the actual distribution of merchandise line sales will greatly depend on the types of tenants attracted to the site.

TABLE 22
Estimated Sales by Merchandise Line for Cumulative Projects

MLNO	Merchandise Line Item	Estimated Cumulative Project Sales
100	Groceries & other food	$61,719,922
120	Meals and snacks	$64,563,144
130	Alcoholic drinks	$8,160,271
140	Packaged alcoholic beverages	$13,084,941
150	Cigars, cigarettes, and tobacco	$9,043,445
160	Drugs, health aids & beauty aids	$31,445,695
180	Soaps, detergents, & household cleaners	$3,261,186
190	Paper and related products	$4,741,856
200	Men's wear	$20,528,042
220	Women's, juniors' and misses' wear	$32,674,502
240	Children's wear	$8,526,075
260	Footwear (including accessories)	$17,031,748
270	Sewing, knitting & needlework goods	$2,270,289
280	Curtains, draperies & dry goods	$4,599,671
300	Major household appliances	$2,548,732
310	Small electrical appliances	$2,428,260
320	Televisions, video recorders, and tapes	$2,448,529
330	Audio equipment, musical instruments & supplies	$7,036,481
340	Furniture and sleep equipment	$14,736,021
360	Floor coverings	$485,302
370	Computer hardware, software & supplies	$17,747,704
380	Kitchenware & home furnishings	$8,892,898
400	Jewelry	$15,539,850
420	Books	$9,376,324
440	Photographic equipment & supplies	$2,723,296
460	Toys, hobby goods & games	$10,333,453
490	Optical goods	$4,079,216
500	Sporting goods	$12,791,663
580	Recreational vehicles	$15,228

TABLE 22 (cont.)
Estimated Sales by Merchandise Line for Cumulative Projects

MLNO	Merchandise Line Item	Estimated Cumulative Project Sales
600	Hardware, tools & plumbing & electrical supplies	$4,635,404
620	Lawn, garden & farm equipment & supplies, cut flowers, etc	$6,217,436
640	Dimensional lumber & other building/structural materials	$227,627
670	Paint & sundries	$148,648
680	Manufactured (mobile) homes	$0
700	Cars, trucks & powered vehicles	$25,753
720	Automotive fuels	$538,776
730	Automotive lubricants	$3,934,661
740	Auto tires, batteries & accessories	$729,388
780	Household fuels	$6,766
800	Pets, pet foods, & supplies	$21,827,469
850	All other merchandise	$46,044,602
890	Unclassified merchandise	$11,180,454
	Totals	$488,350,725

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

Table 23 shows the 2030 regional retail leakage analysis after accounting for sales from Delano Marketplace and anticipated population growth. This scenario illustrates the stabilized retail sales in the regional market area after the Marketplace project is in full operation, and the population base averaging a 3.7 percent annual growth. With the shopping center in operation, the annual retail sales in the regional market area will total approximately $535 million (Column 2). This compares with $784 million of total household spending in the market area (Column 1). This results in a regional capture (Column 3) of $78 million, compared to a total spending leakage (Column 4) of $327 million. Much of the regional capture will be accounted for by the home centers. Spending leakage, even with Delano Marketplace accounted for, will occur in most other retail categories.

TABLE 23
Regional Retail Leakage (With Delano Marketplace Sales), 2030

Retail Group	(1) 2030 Household Spending	(2) 2030 Existing Retail Sales (Without Cumulative Projects)	(3) 2030 Regional Capture	(4) 2030 Retail Leakage
Total (excluding non-merchandise receipts)	$784,412,595	$535,030,236	$77,558,372	$326,940,731
Apparel Store Group	$35,351,127	$10,872,873	$0	$24,478,253
General Merchandise Group	$181,133,417	$125,639,397	$0	$55,494,020
Specialty Retail Group	$40,294,841	$19,430,926	$0	$20,863,915
Food, Eating and Drinking Group	$236,893,901	$172,051,793	$2,169,968	$67,012,076
Grocery Stores	$170,299,791	$106,287,287	$0	$64,012,504
Specialty Food Stores	$5,192,373	$2,192,801	$0	$2,999,571
Liquor Stores	$5,512,584	$6,434,073	$921,489	$0
Eating Places	$55,889,152	$57,137,632	$1,248,479	$0
Building Materials And Homefurnishings Group	$56,389,677	$96,126,150	$66,721,302	$26,984,829
Furniture & Home Furnishings	$21,046,770	$4,020,485	$0	$17,026,285
Household Appliances & Electronics	$10,851,932	$2,144,124	$0	$8,707,808
Other	$1,529,308	$278,571	$0	$1,250,737
Home Centers	$22,961,668	$89,682,970	$66,721,302	$0
Automotive Group	$234,349,632	$110,909,096	$8,667,102	$132,107,638
New Cars & RVs/Other Vehicles	$167,217,920	$65,843,303	$0	$101,374,616
Gasoline Service Stations	$62,724,172	$31,991,150	$0	$30,733,022
Auto Parts & Accessories	$4,407,541	$13,074,643	$8,667,102	$0

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

By 2030, the cumulative projects will together recapture approximately $212 million of the $327 million in retail leakage (Row 1 and Row 3, Table 24). The remaining $277 million of the $488 million in retail sales potentially generated by the cumulative projects would capture sales from existing retail stores (Row 2 and Row 4, Table 24). Of the sales captured from existing retail stores, about $189 million will impact stores in Delano. These impacts would include stores located in the Delano Marketplace

TABLE 24
Cumulative Project Impacts, 2030

2030 Impact Summary	
(1) Household Spending Leakage	$326,940,731
(2) Estimated Cumulative Project Sales	$488,352,490
(3) Estimated Leakage Recaptured by Cumulative Projects	$211,367,008
(4) Gross Cumulative Project Impacts: Capture from Existing Stores	$276,985,481
(5) Cumulative Project Impacts on Delano Retailers	$188,766,337

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

Table 25 present impacts associated with the cumulative projects on Delano retailers. It should be noted that if these projects move forward, they will phase in over time with the total impact on Delano retailers totaling approximately $189 million by 2030. The impacts in Table 25 account for the way in which the project impacted existing household demand, existing retailers and their respective sales, and availability of retail sales leakage (i.e. unmet household demand) by 2030. Thus, impacts below are "incremental" impacts, i.e. those impacts in addition to Delano Marketplace impacts identified in Table 21.

TABLE 25
Cumulative Project Impacts On Delano Retailers

Retail Category	2030 Impacts
Total	$188,766,337
Apparel Store Group	$404,938
General Merchandise Group	$68,025,294
Department and General Merchandise	$67,011,395
Drug & Proprietary Stores	$1,013,898
Specialty Retail Group	$20,814,747
Food, Eating and Drinking Group	$81,966,642
Grocery Stores	$20,366,601
Specialty Food Stores	$0
Liquor Stores	$7,051,598
Eating Places	$54,548,444
Building Materials And Homefurnishings Group	$14,716,427
Furniture & Home Furnishings	$0
Household Appliances & Electronics	$0
Used Merchandise	$0
Home Improvement Centers	$14,716,427
Automotive Group	$2,838,289
Gasoline Service Stations	$0
Auto Parts & Accessories	$2,838,289

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

Of the impacts associated with the cumulative projects, one of the largest categories is Department and General Merchandise, which includes discount stores and traditional department stores. This retail category will exert an impact of about $67 million. Despite a growing population, there is still insufficient enough unmet demand from consumer households. Thus, general merchandise stores that would potentially anchor the cumulative project developments will potentially achieve store sales by cutting into local retailers. This would potentially include the existing K-Mart and JC Penney stores, as well as the Wal-Mart Supercenter developed as part of Delano Marketplace. The impacts will vary with the tenant mix. For example, a traditional department store would potentially affect the proposed Wal-Mart Supercenter less than a competing discount store with grocery sales or a warehouse club (which also sells groceries).

Grocery stores is another category in which subsequent cumulative projects will continue to negatively affect local supermarkets, in addition to the sales reductions associated with the Delano Marketplace project. By 2030, the project would exert an incremental impact of $20 million on local grocery stores. This cumulative projects would further undercut the sales for existing supermarkets, and potentially result in at least one additional store closure. As mentioned earlier, if the store closure is Save Mart, then it potentially impacts other stores in the Delano Village shopping center.

Specialty retail stores will absorb a cumulative impact of $21 million in 2030. Given that the existing retail sales in this category total less than $10 million after the development of Delano Marketplace, much of this impact will also affect any new specialty retailers that are part of the Marketplace shopping center. The impacts in this category will vary with the final tenant mix.

Eating places is another category with a significant impact potential. The projected impact for 2030 totals $55 million, which would contribute to significant displacement of existing eating places, including those establishments locating in the Delano Marketplace.

With all of these cumulative projects, this magnitude of additional retail space would potentially generate significant new impacts on existing businesses throughout the regional market area, especially if the subsequent retail projects include new local-serving retail spaces such as supermarkets and additional discount department stores. In addition, if the retail tenant mix for these other shopping centers includes several stores that duplicate or compete in the same market with stores proposed for Delano Marketplace, the impact would disproportionally affect stores in the Marketplace.

4. URBAN DECAY ANALYSIS

This section of the report examines the way in which the proposed project impacts various store groups and their respective retail establishments that are operating in the City of Delano. The analysis examines the proposed project impacts on specific store types in 2008 (the first year the proposed project will be occupied). In addition, the analysis will look at the cumulative future impacts through the year 2030.

The analysis below does not review how the proposed project impacts liquor stores, eating establishments, apparels and auto retailers, since impacts to these store groups are relatively low. In particular, the analysis below seeks to understand how many stores are at-risk of closure, which can contribute to conditions of urban decay. For reasons of confidentiality, the public version of the report does not disclose specific information on stores, such as sales, percent change in sales, and whether that particular store is at risk of closure. Information such as this are aggregated.

In the present context, issues of building vacancies, loss of necessary commercial facilities, and high turnover rates are all potential results of the kind of commercial transitions and changes in retail mix that the proposed project could create. Urban decay generally results when these types of economic conditions contribute to the physical deterioration of buildings and districts, and create a causal chain effect that lead to a general decline in an area. The following discussion evaluates the potential for the proposed project to create urban decay based on the market analysis in the previous sections of the report.

4.1 GENERAL MERCHANDISE STORE IMPACTS

The General Merchandise retail store group consists of discount stores, department stores, miscellaneous general merchandise stores, and pharmacies. This broad group of retailers includes existing stores in Delano such as K-Mart, Rite-Aid, JC Penney, Smart and Final, Dollar Tree and Factory 2U, to name some of the national chain retailers. Other retailers in this category include a large concentration of "99 cent" variety stores in the Central Business District.

TABLE 26
General Merchandise Store Impacts

Impact Detail	2008
1. Categorical Retail Sales	$45,578,021
2. Project Impact	$16,967,969
3. Post Project Impact Sales (Existing Retailers)	$28,610,051
4. At-Risk Stores	7
5. Potential Store Closure Losses (Reallocated to Remaining Businesses)	$3,347,330
6. Residual Sales	$31,007,997
7. Percent Change (Combined)	-32%

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

As a group, stores in the General Merchandise category annually generate an estimated $45.6 million in sales, as shown in Table 26. In 2008, the proposed project could reduce sales to existing Delano general merchandise stores by approximately $16.9 million (Row 2), reducing the retail sales by about 32 percent, from $45.5 million (Row 1) to $31.0 million (Row 3). This reduction in sales alone does not constitute urban decay because businesses can potentially continue operating at lower revenue levels.

As the City of Delano and the surrounding region grows in terms of number of households, aggregate demand for types of retail stores and specific merchandise correspondingly increases. Thus, the impacts of the proposed project on existing Delano retailers are lessened over time as more and more people move to the area.

The most prominent stores in the General Merchandise category include K-Mart, Rite-Aid, J.C. Penney, and Smart and Final. The existing K-Mart store would most directly compete with the proposed Wal-Mart Supercenter. The potential for closure and creating a large vacancy that requires retenanting depends on whether the store can feasibly continue to operate at a lower level of revenue. If the K-Mart store does close, it would create a 40,000 square foot building vacancy. The other stores would compete more tangentially with the Delano Marketplace anchor tenants. It is worth noting that K-Mart has made substantial upgrades to its Delano facility, modernizing this site by improving the interior and exterior of the building, as well modifying the parking area. However, the JC Penney store in downtown Delano has not made similar investments to upgrade its building, and could be more vulnerable to closure if its operations are already marginal. Closure of the JC Penney would

create a large vacancy in downtown Delano that would also undercut the customer base for surrounding businesses.

It is also important to note that some General Merchandise retailers at risk of closure as a result of the project are already exhibiting marginal sales, as their respective sales are significantly below average sales for similar stores in the county as a whole. These at-risk stores generally generate less than $100,000 in annual revenues, and comprise seven existing stores for 2008. In the worst-case scenario, all of the at-risk stores in the General Merchandise-Drug Store retail group close as a result of the proposed project, freeing up $3.3 million in 2008 and an estimated $428,000 in 2018 (Row 5). Remaining stores will competed for these sales.

The closure of at-risk stores and the subsequent re-allocation of their sales result in what is referred to as the residual sales amount, or $31.0 million in 2008 (Row 6). Whether or not these business closures would result in a pattern of urban decay depends on the potential for retenanting the spaces, and whether the existing businesses serve as local anchors from which the foot traffic that they generate benefits other surrounding businesses. With their relatively low revenue levels, it is unlikely that other businesses benefit significantly from the presence of these at-risk businesses. It should be noted that these at-risk businesses would still be at risk of closure whether or not the Delano Marketplace project is built.

In short, the emergence of a project that includes a Wal-Mart Supercenter and a Lowes Home Improvement Center is part of the ebb and flow of a market in which stores compete over a limited amount of household spending on a variety of goods, in this case goods sold by retailers in the General Merchandise retail store group. Market equilibrium is established when the less efficient stores close, thus freeing up sales that are then captured by the remaining retailers.

4.2 SPECIALTY RETAIL STORE IMPACTS

The Specialty Retail store group consists of arts-gifts-novelties, stationery-books, jewelry, sporting goods, florists, camera, music and miscellaneous other specialty retail stores. Specialty retail stores operating in Delano include Blockbuster Video, Emmanuel's, Delano Sporting Goods, Don Roberto Jewelry, Crescent Jewelers, CM Enterprises, La Nueva, and the Little Flower Shop.

TABLE 27
Specialty Retail Store Impacts

Impact Detail	2008
1. Categorical Retail Sales	$9,300,050
2. Project Impact	$4,218,764
3. Post Project Impact Sales (Existing Retailers)	$3,882,743
4. At-Risk Stores	7
5. Potential Store Closure Losses (Reallocated to Remaining Businesses)	$238,439
6. Residual Sales	$3,882,743
7. Percent Change (Combined)	-58%

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

As a group, specialty retailers annually generate an estimated $9.3 million in sales, as shown on Table 27.[10] In 2008, the proposed Delano Marketplace project will potentially reallocate approximately $4.2 million (Row 2) away from existing Delano specialty retailers. The majority of specialty retailers in Delano are concentrated in the Central Business District.

Approximately seven specialty retailers are at risk of closure as a result of the project, given their respective poor sales and the way in which the proposed project will impact these stores. The names of these at-risk stores cannot be revealed for reasons of confidentiality.

In the worst-case scenario for this category, all at-risk stores close, freeing up $238,439 (Row 5). However, the remaining stores in the Specialty Retail store group will not necessarily compete for this amount of sales because specialty retail stores are so highly differentiated. For example, the closure of a pet store would not necessarily free up revenue that could be reallocated to other types of specialty retail stores such as florists and jewelry stores. Thus, none of the $238,439 is re-allocated to the remaining Specialty Retail stores, meaning that the residual sales as a result of the project amounts to $3.9 million, or 58 percent below the original $9.3 million in Specialty Retail sales.

4.3 GROCERY STORE IMPACTS

The Grocery Store retail store group consists of supermarkets, convenience stores, and specialty food stores. Included in this group of retailers are stores such as Delano Ranch Market, Save Mart, Zee

[10] The sales amount does not include any estimates of non-retail revenue such as service and rental fees.

Minimart, State, Lucky 7, GL Mini Mart, Mercado Real and Vallerta Supermarket other small stores.

TABLE 28
Grocery Store Impacts

Impact Detail	2008
1. Categorical Retail Sales	$58,034,285
2. Project Impact on Delano	$10,052,252
3. Post Project Impact Sales (Existing Retailers)	$47,982,033
4. At-Risk Stores	1
5. Potential Store Closure Losses (Reallocated to Remaining Businesses)	$4,228,265
6. Residual Sales	$52,210,298
7. Percent Change (Combined)	-10.0%

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

As shown in Table 28 (Row 1), grocery stores in Delano annually generate an estimated $58.0 million in retail sales. The project will impact sales by diverting approximately $10.0 million away from existing grocery stores. This results in a post-project sales total of about $47.9 million for existing grocery stores (Row 3).

Ranch Market and Save Mart are the two largest supermarkets in Delano, along with State Market and the newly opened Vallerta Supermarket. All of these supermarkets would also compete most directly with the proposed Wal-Mart Supercenter. The Ranch Market and Vallarta stores cater more to a Latino clientele, with specialty prepared food sections that are not typically found in Wal-Mart Supercenters, while Save Mart stores typically have a larger amount of product crossover with the Wal-Mart Supercenter. The Vallerta Supermarket is located in a renovated facility in a part of town where new retail development is underway, and it offers a full-service meat counter and produce. This supermarket occupies the site once held by the Monterrey Supermarket. State Market is a general grocery store that is probably the most underutilized space among the four supermarkets in Delano.

The data does not provide conclusive evidence whether or not any of these supermarkets will close as a result of direct competition with the Wal-Mart Supercenter, because it is not possible to anticipate owner decisions, among other factors. However, the grocery store business depends on high sales volumes with low profit margins. In addition, the potential loss of sales may be uneven, and one store in particular might have a greater than average proportion of sales taken

away by the proposed Wal-Mart Supercenter, making this store more potentially vulnerable once the Delano Marketplace is operational. It is also important to note that Save Mart is the anchor tenant to Delano Village Center, and the loss of this supermarket could potentially affect the rest of this shopping center, which includes Taco Bell, Dollar Mart, Cingular, Lucky Money, A&J Seafood, and Cigarette Depot.

In the worst-case scenario for the proposed project, one supermarket in Delano will fail, and the loss of one of the four existing supermarkets would free up at least $4.2 million (Row 5) in sales that the remaining stores will compete for. Taking into account both the initial project impacts and the redistribution of $4.2 million, sales for remaining supermarkets are estimated to go from the initial $58.2 million to $52.3 million, for a net change of –10 percent. As the City of Delano and the immediate surroundings grow in terms of number of households, aggregate demand for food stores correspondingly increases. Thus, the impacts of the proposed project on existing Delano retailers including food stores are reduced over time.

4.4 FURNITURE STORE IMPACTS

The Furniture-Home Furnishings store group consists of retailers such as Serrano's Furniture, Lupe's and JJ Furniture store, to name a few. As a group, furniture and home furnishing retailers annually generate an estimated $2.8 million in sales, as shown in Table 29. In 2008, the proposed project will impact sales by these Delano-based stores to the tune of about $0.6 million (Row 2), meaning that as a result of the project, overall sales will decline from $2.8 million (Row 1) to $2.2 million (Row 3). It should be noted that the analysis assumes that second hand stores will not be impacted by the proposed project.

TABLE 29
Furniture/Home Furnishings Store Impacts

Impact Detail	2008
1. Categorical Retail Sales	$2,769,007
2. Project Impact	$633,085
3. Post Project Impact Sales (Existing Retailers)	$2,135,923
4. At-Risk Stores	2
5. Potential Store Closure Losses (Reallocated to Remaining Businesses)	$62,360
6. Residual Sales	$2,198,283
7. Percent Change (Combined)	-21%

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

If these at-risk furniture and home furnishings stores close, it would free up approximately $62,360 in retail sales (Row 5). The closure of the at-risk store(s) and the subsequent re-allocation of the store sales of $62,360 results in a residual sales amount of $2.2 million (Row 6).

4.5 APPLIANCE AND ELECTRONICS STORE IMPACTS

The Appliance and Electronic store group consists of Radio Shack, Ultimate Systems, Hometown Appliances, and Patrick Gonzales. This store group should face considerable competition, given the presence of the Wal-Mart Supercenter and Lowes in the proposed project.

TABLE 30
Appliance/Electronics Store Impacts

Impact Detail	2008
1. Categorical Retail Sales	$1,225,719
2. Project Impact	$522,247
3. Post Project Impact Sales (Existing Retailers)	$703,472
4. At-Risk Stores	3
5. Potential Store Closure Losses (Reallocated to Remaining Businesses)	$190,995
6. Residual Sales	$894,467
7. Percent Change (Combined)	-27%

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

As a group, the appliance and electronic retailers annually generate an estimated $1.2 million in sales, as seen in Table 30. The project will impact sales by these Delano-based stores by approximately $522,247 (Row 2), meaning that as a result of the project, retail sales for existing merchants in this category will decline from $1.2 million (Row 1) to $703,472 (Row 3).

Closure of at-risk store(s) would free up approximately $191,000 for other stores (Row 5). The names of these at-risk stores cannot be revealed for reasons of confidentiality. The closure of the at-risk store(s) and the subsequent re-allocation of their sales to the remaining stores would result in a residual sales total of $894,467, which at –27 percent is significantly below original aggregate sales of $1.2 million (Column 9).

4.6 HOME IMPROVEMENT IMPACTS

The Home Improvement store group consists of nurseries-and-garden supply stores, lumber and building material stores, home centers and hardware stores, and paint and wallpaper stores, as the table below indicates. Included in the list of stores is Home Depot, which recently opened in the City of Delano.

TABLE 31
Home Improvement Store Impacts

Impact Detail	2008
1. Categorical Retail Sales	$53,328,522
2. Project Impact	$17,137,006
3. Post Project Impact Sales (Existing Retailers)	$36,191,515
4. At-Risk Stores	6
5. Potential Store Closure Losses (Reallocated to Remaining Businesses)	$578,407
6. Residual Sales	$53,328,522
7. Percent Change (Combined)	0%

Source: ADE, data estimated from Board of Equalization, Dun & Bradstreet, and U.S. Economic Census

As a group, Home Improvement annually generates an estimated $53.3 million in sales as seen in Table 31. The project will divert approximately $17.1million from existing home improvement stores (Row 2), resulting in an overall sales decline from $53.3 million (Row 1) to $36.2 million (Row 3).

The Home Improvement impact analysis is slightly different from previous analyses, in that the previous analyses assumed a "zero-

sum" relationship between the proposed project and existing store group. That is, the amount of impacts by the proposed project results in a commensurate loss to impacted store groups. In this Home Center analysis, the relationship between the proposed project and the impacted store group, particularly the existing Home Depot, is non-zero sum, meaning that the potential sales for Lowes are also reduced.

Sales estimates for Home Depot and Lowes total $38 million and $31 million, respectively.[11]

The analysis does not take the zero sum approach because it assumes that the introduction of Lowes into a market where a Home Depot already exists would result in Lowe's achieving its sales expectation to the fullest (i.e. $31.0 million) at the expense of Home Depot. Given the relative newness of each store, as well as the fact that both are competing against each other in markets throughout the country, we assume that Home Depot and Lowes will compete on a head-to-head basis, meaning that there will be an ebb and flow in store sales such that eventually both will cut into each others' sales. Instead of hitting their respective sales averages of $38 million and $31 million, the Home Depot and Lowes store sales will achieve an estimated $23.2 and $18.9 million in sales.

Other home improvement stores are impacted negatively as well in 2008, not just Home Depot. These stores will bear a share of the $17.1 million Lowes impact that is proportional to their existing share of the market, or $4.0 million.

Even though Home Depot and Lowes will cut into one another's sales, they will likely continue to operate, albeit at lower levels of performance. A review of confidential information on store sales by other stores in the Home Improvement retail group suggests that, as a result of the presence of both Home Depot and Lowes, approximately six stores are significantly underperforming, and could potentially close in a worst case scenario, resulting in a loss of $578,407 in sales. Home Depot and Lowes will capture the bulk of this amount. It should be noted however that many businesses in the home improvement category also typically offer contractor and construction services, and do not necessarily depend on product sales to stay in business. Therefore, the worst case scenario is not likely in this case. As the City of Delano and the surrounding region grows in

[11] Estimates are based on annual reports.

terms of number of households, aggregate demand for home improvement stores will also increase.

4.7 OTHER POTENTIAL FACTORS

In addition to the possibility of business closures resulting from retail sales shifting away from existing retail businesses, another factor that could result in retail vacancies in the existing retail centers in Delano is businesses relocating to the Delano Marketplace. Aside from the anchor spaces for Wal-Mart and Lowes, the project provides for nearly 54,600 square feet of space for restaurants and general retail use. Together, these uses are expected to attract approximately $12.9 million of annual retail sales. If these retail spaces are filled by relocating existing Delano retailers, then it could have the same local effect as a business closure because it creates a vacancy that requires retenanting.

4.8 URBAN DECAY

BACKGROUND

Under CEQA, only direct and indirect physical effects of projects are to be considered in the preparation of an EIR. Section 15064(d) of the CEQA Guidelines provides: "In evaluating the significance of the environmental effect of a project, the lead agency shall consider direct physical changes in the environment which is caused by and immediately related to the project." Section 15064(d)(3) further states: "An indirect physical impact is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable." In addition, CEQA requires that a determination that a project may have a significant environmental effect must be based on substantial evidence (CEQA Guidelines §15064(f)).

With respect to secondary socioeconomic effects of projects, Section 15131(a) of the CEQA Guidelines states: "Economic and social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of

the analysis shall be on the physical changes." In other words, economic and social changes are not, in themselves, considered under CEQA to be significant effects on the environment.

Since only physical effects are to be considered under CEQA, economic and social changes resulting from a project may be considered if they in turn produce changes in the physical environment. To fully satisfy the requirements of an EIR, an economic analysis must start with the economic impacts, but also follow the causal chain to assess the likelihood of new retail space causing long-term vacancies in existing retail space and ultimately leading to urban decay and physical deterioration of existing retail centers and nodes. In the words of *Bakersfield Citizens for Local Control v. City of Bakersfield, Panama 99 Properties LLC, and Castle & Cooke Commercial-CA, Inc.,* the analysis is required to assess whether a new retail development "could cause a ripple of store closures and consequent long-term vacancies that would eventually result in general deterioration and decay within and outside the market area" of the proposed development. Further, "[t]hese effects include, but are not limited to, physical decay and deterioration resulting from store closures in the same market area or in established areas of the community (i.e., the 'traditional downtown area') due to competitive pressures, followed by an inability to easily re-lease the vacated premises." One concern is that large retailers that dominate sales in their merchandise lines "will displace older, smaller retail stores and shopping centers, leaving long-term vacancies that deteriorate and encourage graffiti and other unsightly conditions." An EIR "must analyze the cumulative impacts resulting from construction and operation of the proposed shopping center in conjunction with all other past, present or reasonably foreseeable retail projects that are or will be located within the proposed project's market area" and determine the likelihood that a project "individually and/or cumulatively, indirectly could trigger the downward spiral of retail closures and consequent long-term vacancies that ultimately result in decay." In light of the above, even if it could be shown that the proposed project would potentially result in the failure of an existing competing business or businesses, the resulting building vacancy alone would not meet the above definition of urban decay. As such, a building vacancy alone would not meet the CEQA threshold of significance for a physical change to the environment. To cause a significant physical impact, other contributing factors would need to occur such as lack of effort on the part of property owners to maintain or improve their properties to a condition suitable for

leasing, combined with the failure of surrounding businesses and physical deterioration of those properties. To reach a condition recognized as a physical impact under CEQA would require total neglect or abandonment of these properties by their owners for an extended period such that substantial physical deterioration, or urban decay, would ensue. As stated above, such an indirect physical impact must be a reasonably foreseeable result of the project, requiring a showing of cause and effect, with the finding of such an impact supported by substantial evidence. To mitigate negative impacts from development projects and other market events, cities can take actions that help maintain the physical environment, provide incentives for re-tenanting, and assist individual businesses to stay competitive.

Existing Conditions

Delano has several existing shopping centers and retail districts that would be potentially impacted by the Delano Marketplace project, including the central business district, Delano Village Center, Randolph Village Center, and Cecil Plaza Shopping Center. These shopping centers have been maintained as ongoing retail spaces, and while some of the buildings have been minimally maintained, they do not exhibit signs of urban decay. The downtown area in particular has had a lot of reinvestment in recent years with the construction of streetscape improvements and some storefronts undergoing recent renovations.

With respect to existing vacancies, a walking survey of commercial areas in the City of Delano in late Fall 2006 found indications of a strong retail market. In the downtown area, surveyors observed 165 store fronts along Main Street and Jefferson Street, as well as on cross streets of 6th, 7th, 8th, 9th, 10th and 11th Avenue. Of the 165 storefronts, nine were vacant, for a somewhat low vacancy rate of five percent, suggesting a healthy demand for space in the city's core, particularly by entrepreneurs seeking to serve the area's ethnic communities.

In addition, the majority of the storefronts at the Randolph Village shopping center are vacant due to ongoing renovation work in conjunction with the recent opening of Vallerta Supermarket. The only large vacancies that currently exist in Delano include the bowling alley and the former K-Mart location, which became vacant after K-Mart moved its store to a different location within Delano. Neither of these buildings show significant signs of physical

deterioration or abandonment, and according to the City, both sites have attracted interest from potential tenants and developers.

To help mitigate the onset of urban decay, the City of Delano has several business retention and expansion programs already in place. These programs include an Enterprise Zone that provides tax credits, accelerated depreciation and other fiscal incentives; a Redevelopment Agency-sponsored façade improvement program that provides up to $10,000 for exterior renovations; and a small business loan program. In addition, the City has invested in its downtown by funding streetscape improvements.

In addition to these existing programs, the City of Delano's municipal code devotes an entire section (Section 7.32) to property maintenance standards. These standards define conditions under which a building or property would be considered a public nuisance, indicate how violations would be enforced, and prescribes the procedures for abatement and removal. One relevant aspect of a public nuisance can be defined as follows:

Any building exterior, wall, fence, driveway, sidewalk, or walkway which is maintained in such condition of deterioration or disrepair as to be unsafe or is so defected as to substantially detract from the appearance of the immediate neighborhood. (Section 7.32.010.D)

The City or a designated representative can enforce the ordinance by abating the nuisance after posting notice, and charging the occupant or owner for any costs incurred.

Analysis of Urban Decay

The analysis considered the potential for urban decay and physical deterioration for each of the competing Delano retail nodes and businesses. The greatest potential for urban decay to result from implementation of the proposed project is described in the scenarios below.

K-Mart Store

The K-Mart store has recently made substantial improvements to its interior and exterior of its Delano store, perhaps in an effort to shore up its position relative to the impending Wal-Mart Supercenter and in doing so maintain if not expand its customer base. It remains to be seen whether or not these efforts will pay dividends for the K-Mart

store, as customers for merchandise from stores such as Kmart and Wal-Mart are driven by value. In the event that the K-Mart store closes due to direct competition with the proposed Wal-Mart Supercenter, the site would be amendable to redevelopment for highway commercial uses such as a travel center or truck stop due to its proximity to State Route 99 and the existing concentration of lodging and highway commercial uses nearby. In addition, the K-Mart site does not include ancillary uses so the potential closure of the K-Mart store would not affect other businesses, which could be affected by the closure of a large anchor store.

Central Business District

The potential for store closures in the Central Business District would be primarily due to competition of the at-risk general merchandise stores (primarily 99-cent variety stores), specialty retail stores, and the J.C. Penney store with the proposed project. The J.C. Penney store would compete less directly with the Wal-Mart Supercenter; however the current store also operates in an undersized space that has not been recently renovated. This factor in addition to the reduction in market support also puts the J.C. Penney location at risk of closure and/or potential relocation.

The other at-risk stores in the Central Business District are already marginal operations and their contribution to the downtown area is minimal because these types of businesses operate at very low subsistence levels and do not generate significant foot traffic, which would benefit surrounding stores. The other businesses in the Central Business District view the at-risk stores as a negative business climate factor and do not believe they benefit from the continued operation of these at-risk stores. The closure of at-risk specialty merchandise stores would most likely not result in additional store closures as the remaining specialty stores in the Central Business District are highly differentiated. Any potential closures would create vacancies; however, the existing downtown businesses could be filled by other types of businesses (including office space) that would have a greater potential to have more successful operations than the current at-risk stores. In addition, the historical role of the Central Business District as a commercial center in Delano and the investment value of the existing buildings are mitigating factors that would address any at-risk store closures. In addition, the existing vacancy rate in downtown Delano is very low.

The property owners in the Central Business District have favorable business conditions, which ensure that buildings are amenable to a variety of different uses, should a vacancy of a retail space or spaces occur as a result of direct competition with the proposed project. In recent years, the majority of vacated retail spaces in the Central Business District have had new retail tenants fill those spaces, while others have been reused as spaces for service establishments. The City of Delano also administers ongoing including a façade improvement program provided through the Redevelopment Agency that provides up to $10,000 for exterior renovations; the City's Enterprise Zone that provides business incentives such as tax credits and accelerated depreciation; and a small business loan program that provides low interest loans. Even though oversaturated retail market conditions could potentially result in vacancies, the programs already in place and existing reuse patterns create incentives for business owners to move into the Central Business District, and for property owners to maintain their properties in conditions suitable for re-tenanting, which would ensure that substantial physical deterioration or urban decay would not occur in the Central Business District.

Delano Village Shopping Center

The Save Mart grocery store would be at-risk of closure due to direct competition with the proposed Wal-Mart Supercenter. Such a closure would also impact the neighboring stores in the shopping center in which the Save Mart is located, the Delano Village Center, as the Save Mart generates significant traffic that benefits these complementary businesses.

The impact analysis projects that one existing supermarket would potentially close as a result of the proposed project, and this would strengthen the competitiveness of the remaining supermarkets. Although the remaining grocery stores are projected to experience about a 10 percent reduction in sales upon implementation of the proposed project, several mitigating factors would potentially allow this store to continue operating and thus not contribute to conditions leading to urban decay. These factors include the following: 1) Central Valley real estate costs are typically lower than the national average; 2) labor costs for identical occupations are typically lower in the Central Valley than in the rest of California; and 3) many of the other existing grocery stores in the City of Delano are convenience stores that lack the range of goods and services provided by the Save Mart store.

Currently, the Delano Village Center does not have any vacancies, which indicates strong existing market conditions. However, if the Save Mart store had to vacate its store due to competition from the proposed project, it is unlikely that it would result in significant additional closures in the Delano Village Center that would lead to substantial physical deterioration or urban decay. This conclusion is supported by the successful track record of the City with re-tenanting of anchor spaces and long-term vacancies within the City that have thus far not resulted in urban decay. The recent renovation of the Monterey Supermarket site is an example of a large retail vacancy that was filled quickly. In addition, the former bowling alley and K-Mart sites remain vacant, but the sites have attracted inquiries from prospective buyers and the vacant buildings themselves thus far have not created a pattern of urban decay. In addition, the Delano Village Center is located within the City's Redevelopment Area and the City's Enterprise Zone, which creates considerable flexibility for building reuse and incentives for many types of businesses to locate to the site.

Randolph Village Shopping Center

The Randolph Village shopping center is currently under renovation with the recent opening of the Vallerta Supermarket. The former Monterrey Market site was renovated as part of Vallerta locating to Randolph Village. Currently, the majority of the center is vacant due to the renovation of the ancillary retail spaces. The impact on those spaces will depend on the retail tenants that will locate at Delano Marketplace. However, because the center has attracted new investment and had renovation work done, the buildings in Randolph Village are unlikely to physically deteriorate and establish a pattern of urban decay.

Cecil Plaza Shopping Center

The Cecil Plaza Shopping Center is anchored by the Factory 2-U discount store and is located adjacent to the State Market supermarket. Factory 2-U will be affected by the reduction in sales that the proposed project will create, but the store primarily carries off-price merchandise and therefore is less of a direct competitor than some of the other large general merchandise stores such as K-Mart and J.C. Penney. However, the nearby State Market attracts shoppers to the area around Cecil Plaza and it is the most vulnerable

among the four supermarkets in the City of Delano. If the State Market closes, it would potentially affect Cecil Plaza Shopping Center by reducing the number of customers to the shopping center. However, if the State Market had to vacate its store due to competition from the proposed project, it is unlikely that it would result in significant additional closures in the Cecil Plaza Shopping Center that would lead to urban decay. The low vacancy rates throughout the City and the existing reuse patterns for turning some vacant retail spaces into office spaces reduces the potential for urban decay at the Cecil Plaza Shopping Center. The location of the Cecil Plaza Shopping Center benefits from its proximity to existing service uses. In addition, the shopping center is located within the City's Redevelopment Area and Enterprise Zone, which creates considerable flexibility for building reuse and incentives for many types of businesses to locate to the project site.

Potential Urban Decay from Cumulative Projects

The 1.9 million square feet of new commercial space from the cumulative projects will generate higher retail sales than the population growth through 2030 will be able to support. This puts additional market pressures on vulnerable retail centers and shopping districts, resulting in approximately $189 million of economic impact on existing stores (including those in the Delano Marketplace). This impact would potentially result in additional store closures and retail vacancies.

Because of the presence of strong anchor tenants that will continue to attract shoppers, the Delano Marketplace will likely remain a viable retail center for the foreseeable future. Even if the economic impacts from cumulative projects inordinately reduce sales for Marketplace tenants and create retail vacancies among the secondary tenants, the anchor tenants will likely ensure that the buildings and facilities continue to be maintained.

Even though the central business district could also potentially lose businesses once all of the cumulative projects come online, the role of downtown Delano will likely continue to evolve, and continued investment and maintenance in the downtown area will likely mitigate any potential urban decay. The continued growth in the Delano market will create other business opportunities, particularly with service establishments, even if the cumulative projects erode market support for downtown retail stores. Service businesses have already

moved into vacant retail spaces in the central business district, so the market already exists for this type of space reuse.

Depending on the composition of the commercial tenants that would locate in the cumulative projects, the new shopping centers would potentially result in store closures in the Delano Village, Cecil Plaza, and Randolph Village shopping centers. The magnitude of the additional impacts from the cumulative projects threatens the viability of Delano Village and/or Cecil Plaza as retail centers.

Potential for re-tenanting on those properties would depend on the prospects for market growth to create other tenanting or reuse options for those retail centers. As with the Central Business District, service establishments can potentially move into vacant retail spaces in Cecil Plaza due to its proximity to existing service businesses located downtown.

Delano Village has a high visibility location, but the market support for retail tenants in that shopping center would potentially decline as the cumulative projects are built up. With the larger store spaces, other options will need to be identified if new retail tenants cannot be found. These options include building demolition and using the site for other types of land uses if the market conditions force the retail uses at the center to vacate.

Preventing urban decay at the Delano Village and Cecil Plaza sites will depend on whether the projected population growth for Delano can be channeled towards other uses that would fill these types of smaller infill sites. The City of Delano has several business retention and expansion programs already in place, including an Enterprise Zone that provides tax credits, accelerated depreciation and other fiscal incentives; a Redevelopment Agency-sponsored façade improvement program that provides up to $10,000 for exterior renovations; and a small business loan program limits. These programs assist businesses to ensure that they are not subject to prolonged vacancy resulting in potential urban decay. In addition to market solutions such as reuse and re-tenanting, Chapter 7.32, Property Maintenance of the City's Municipal Code would give the City an option to enforce the property maintenance ordinance to address any buildings should they fall into disrepair to ensure that urban decay does not occur.