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3 October 1997

Mr. Ade Fagorala
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Subject: **Results of Soil and Groundwater Investigations at Property Located at 45-89 Review Way (Formerly 85 West Winton Avenue) in Hayward, California (EKI 970033.00)**

Dear Mr. Fagorala:

On behalf of our client, Narom Development Company, Erler & Kalinowski, Inc. ("EKI") is pleased to present to the Regional Water Quality Control Board ("RWQCB") the results of soil and groundwater sampling at property located at 45-89 Review Way in Hayward, California ("subject property") (see Figure 1). These investigations were proposed in a Work Plan, dated 29 August 1997, which was submitted to the RWQCB for review and approval. In a letter from the RWQCB dated 8 September 1997, the RWQCB approved the 29 August 1997 EKI Work Plan with the following modifications:

1) collect soil samples from the 3-inch to 6-inch depth interval;
2) analyze all six (6) discrete soil samples from the northern vacant lot for pesticides; and
3) analyze the grab groundwater sample for MTBE as well as gasoline, diesel, and BTEX.

The above requests by the RWQCB were incorporated into the investigations performed by EKI.

BACKGROUND AND OBJECTIVES

On behalf of Narom Development Company, EKI submitted a request to the RWQCB, dated 7 May 1997, to issue a "no further action" letter with regard to the presence of chlorinated volatile organic compounds ("VOCs") in groundwater on the subject property. Comments on the 7 May 1997 EKI report were presented to EKI by Mr. Eddy So of the RWQCB during a telephone call on 5 August 1997.

It is our understanding, based on the telephone conversation with Mr. So, that the RWQCB concurs that based on the information in the 7 May 1997 EKI report, that groundwater on the subject property appears to be impacted by chlorinated VOCs originating from an off-site source or sources, and that the subject property does not appear to be contributing to the chlorinated VOCs in groundwater. It is also our understanding that the RWQCB would not require any additional work by the subject property owner with regard to the chlorinated VOCs in groundwater, based on the existing information.

During its review of the 7 May 1997 EKI report, several areas of potential environmental concern not related to chlorinated VOCs in groundwater were identified by the RWQCB. These are discussed briefly below.

1) Potential for elevated concentrations of organochlorine pesticides to exist in shallow soil in the northern portion of the subject property.

In the 1990 Summerhill Phase I report (GTI, 1990) it is indicated that "pesticide testing" was performed in the northern portion of the subject property, which is currently a vacant field. The RWQCB indicated that the soil sampling performed in the vacant field by SCS Engineers in 1988, looked only for "metallic based" pesticides, and not organochlorine pesticides. Thus, the RWQCB is concerned that organochlorine pesticides may be present at elevated concentrations in these soils.

2) Potential for elevated concentrations of petroleum hydrocarbons to exist in soil and groundwater on the former gasoline service station portion of the subject property.

The southeastern portion of the subject property was formerly occupied by a gasoline service station. Underground fuel tanks were reportedly removed from the former gasoline service station site in 1972. There is no indication whether sampling was performed at the time the tanks were removed to identify whether releases from the fuel tanks had occurred. The RWQCB indicated that there is a potential for elevated concentrations of petroleum hydrocarbons to exist in soil and possibly groundwater on the former gasoline service station site.

RWQCB's Request for Further Investigations

Although the RWQCB has indicated that the subject property does not appear to be contributing to the plume of chlorinated VOCs in groundwater and that no further work related to chlorinated solvents would be requested of the subject property owner, the RWQCB is seeking closure of all potential environmental issues on the subject property

concurrently. This report addresses the two remaining potential environmental issues raised by the RWQCB.

RESULTS OF INVESTIGATIONS

In September 1997, EKI collected six shallow soil samples in the northern vacant field for organochlorine pesticide analyses and collected soil and a grab groundwater samples from a single boring placed on the former gasoline service station site for petroleum hydrocarbon analyses. The work was performed in accordance with the RWQCB-approved Work Plan dated 29 August 1997. The soil and groundwater samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California. A discussion of the investigative methods utilized and results of analyses is presented below.

Results of Shallow Soil Sampling in Northern Vacant Field

Sample Locations and Procedures. A total of six (6) shallow soil samples (S-1 through S-6) were collected by EKI on 10 September 1997, from the vacant field in the northern portion of the subject property (see Figure 2). The samples were collected at random from six discrete and somewhat equidistantly spaced locations across the field. The soil samples were collected from approximately the 3-inch to 6-inch depth interval by first removing the top three inches of soil, then driving a pre-cleaned 2-inch diameter brass liner into the soil. The ends of each tube containing the soil sample were covered with Teflon tape and capped with plastic end caps. The sample containers were labeled and placed in a cooler with ice for temporary storage and transport to the analytical laboratory. Chain of custody documentation accompanied the samples to the laboratory.

Analytical Results. Each of the six discrete shallow soil samples was analyzed for organochlorine pesticides using EPA Method 8080. The analytical results for the shallow soil samples are shown on Figure 2 and are discussed below. Copies of the analytical data sheets from the laboratory and chain of custody forms are presented in Appendix A.

According to the analytical results, shallow soil samples S-1, S-2, S-3, and S-6 did not contain organochlorine pesticides above their respective laboratory detection limits.

Soil sample S-4 contained 4,4'-DDE and 4,4'-DDT at concentrations of 0.068 milligrams per kilogram ("mg/kg") and 0.150 mg/kg, respectively. Soil sample S-5 contained 4,4'-DDE and 4,4'-DDT at concentrations of 0.041 mg/kg and 0.068 mg/kg, respectively. Sample S-4 was reported to contain dieldrin at a concentration of 0.036 mg/kg. Sample S-5 did not contain dieldrin above the laboratory detection limit of 0.020 mg/kg.

The U.S. EPA Region IX Preliminary Remediation Goal ("PRG") for DDE and DDT in industrial soil is 5.6 mg/kg (U.S. EPA Region IX, August 1996). The EPA PRG for dieldrin in industrial soil is 0.120 mg/kg. The concentrations of dieldrin, DDE, and DDT detected in shallow soil on the subject property are below their respective EPA PRGs for industrial soil.

Results of Soil and Groundwater Sampling at Former Gasoline Service Station Site

Sample Location and Procedures. On 12 September 1997, one soil boring (N-1) was drilled by West Hazmat Drilling Corporation of Newark, California, on the former gasoline service station site at the approximate location shown on Figure 2. The soil boring was drilled adjacent to and in the downgradient direction from the presumed location of the former underground storage tanks. A drilling permit was acquired from the Alameda County Public Works Agency prior to initiating field work (see Appendix B).

An 8.5-inch outer diameter hollow stem auger drill rig was used to construct the boring. Soil samples for laboratory analyses were collected from the 10-foot and 20-foot depths, in accordance with the approved Work Plan. The soil samples were collected using a California modified split-spoon sampler supplied with 2-inch diameter pre-cleaned brass liners. The liners containing the soil samples were sealed, labeled, and stored in the manner described above.

Soil boring N-1 extended to a total depth of approximately 50 feet below ground surface. The general subsurface conditions encountered in the boring were silty clays from the surface to approximately the 30-foot depth and silty gravels from approximately 30 feet to 50 feet below ground surface. Depth the groundwater in the boring was approximately 44 feet below ground surface.

An organic vapor meter ("OVM") was used to screen the headspace above soil samples for organic vapors. No organic vapors were detected with the OVM in soil samples or drill cuttings from the boring. Also, no petroleum odors were noted. The soil from the boring did not exhibit visible signs of petroleum impact (i.e., no discoloration or staining). A daily field inspection log is presented in Appendix C.

Upon reaching total depth in the boring, a pre-cleaned Teflon bailer was lowered through the augers to the groundwater table. A grab groundwater sample was collected and was transferred to laboratory-supplied sample containers appropriate for the method of analysis. The containers were sealed, labeled, and stored in a cooler with ice for temporary storage and transported to the analytical laboratory under chain-of-custody.

Investigation-Derived Wastes. The soil cuttings from boring N-1 and equipment decontamination water were placed in DOT-approved 17H, 55-gallon drums with lids sealed with a metal ring and bolt. The drums were labeled as to contents and date collected and were left onsite at a location designated by the property owner for subsequent disposal.

Results of Analyses. The analytical results of the soil and grab groundwater samples collected from boring N-1 are shown on Figure 2 and are discussed below. Copies of the analytical data sheets from the laboratory and chain of custody forms are presented in Appendix D.

Results of Soil Samples

The soil samples from depths of 10 feet and 20 feet from boring N-1 (i.e., N-1-10' and N-1-20', respectively) were each analyzed for the following chemical constituents:

- Total purgeable petroleum hydrocarbons as gasoline ("TPPH"); benzene, toluene, ethylbenzene and total xylenes ("BTEX"); and methyl tertiary butyl ether ("MTBE") using EPA Method 8015m/8020; and
- Total extractable petroleum hydrocarbons ("TEPH") as diesel fuel using EPA Method 8015m.

According to the analytical results, soil samples N-1-10' and N-1-20' did not contain TPPH, BTEX, MTBE, or TEPH above their respective laboratory detection limits.

Results of Grab Groundwater Samples

The grab groundwater sample (i.e., N-1) was analyzed for the following chemical constituents:

- TPPH, BTEX, and MTBE using EPA Method 8015m/8020; and
- TEPH as diesel fuel using EPA Method 8015m.

According to the analytical results, groundwater sample N-1 did not contain TPPH, BTEX, or MTBE above their respective laboratory detection limits. Groundwater sample N-1 was reported to contain TEPH at 180 micrograms per liter ("ug/l"). According to the laboratory report, the sample contained "unidentified hydrocarbons". Based on a comparison of the chromatogram for water sample N-1 and the chromatogram for the diesel standard supplied by Sequoia Analytical Laboratory (both included in Appendix E), the sample chromatogram does not appear to reflect the presence of a petroleum

compound in the sample, but rather naturally-occurring organic material which may be present in the turbid grab groundwater sample.

CONCLUSIONS

Based on the above information, the following conclusions are made:

- The results of shallow soil sampling in the northern vacant lot of the subject property revealed the presence of low levels of DDE and DDT in two of the six soil samples collected by EKI. One soil sample contained low concentrations of dieldrin. The concentrations of DDE, DDT, and dieldrin in the soil samples are below their respective U.S. EPA Region IX PRGs for industrial soil.

- TPPH, TEPH, BTEX and MTBE were not detected in the two soil samples collected from boring N-1 placed adjacent to the presumed location of the former underground tanks.

- The grab groundwater sample from boring N-1 was reported by the analytical laboratory not to contain detectable concentrations of TPPH, BTEX, or MTBE.

- The grab groundwater sample from boring N-1 was reported by the laboratory to contain 180 ug/L of TEPH. According to laboratory narrative, the sample contained "unidentified hydrocarbons". Based on a comparison of the chromatogram for water sample N-1 and the chromatogram for the diesel standard (refer to Appendix E), the sample chromatogram appears to reflect not the presence of a petroleum hydrocarbon, but the presence naturally-occurring organic material in the water sample. On this basis, the groundwater at location N-1 does not appear to be impacted by diesel fuel.

REQUEST FOR SITE CLOSURE

Based on the results of the recent soil and groundwater investigations by EKI and based on recent telephone conversations with Mr. So of the RWQCB regarding the presence of chlorinated VOCs in groundwater, on behalf of our client, Narom Development Company, we request that the subject property receive official closure from the RWQCB and that a "no further action" letter be written by the RWQCB with respect to the presence of chlorinated VOCs in groundwater on the subject property.

If you have any questions, please call.

Very truly yours,

ERLER & KALINOWSKI, INC.

Paul B. Hoffey
Project Manager

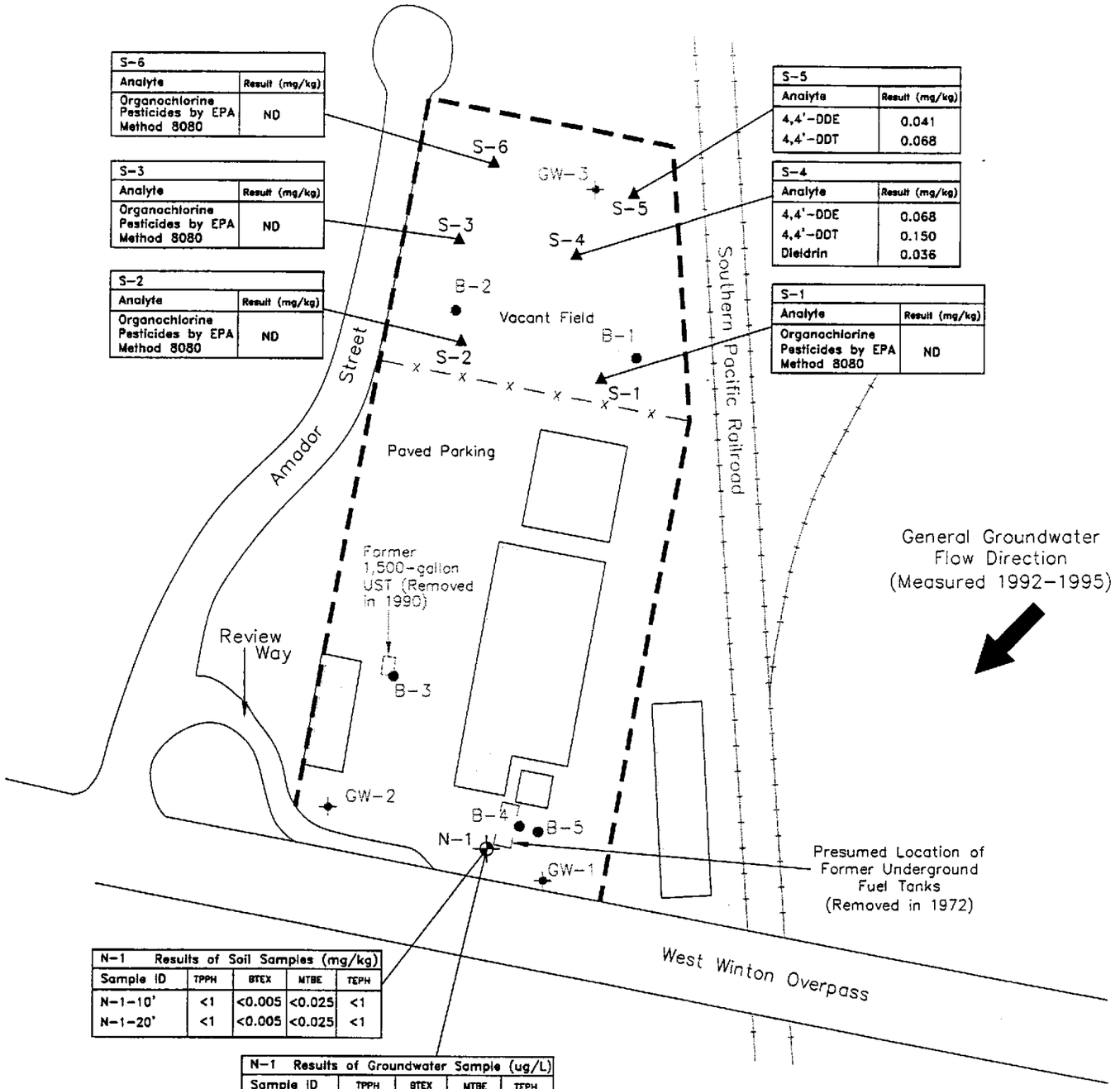
GEP.ED for

Theodore G. Erler, P.E.
President

cc: Mr. Marshall Moran, Narom Development Company

References:

Groundwater Technology, Inc., *Historical Land Use Study and Environmental Survey, Summerhill Development Company Property, 85 West Winton Avenue, Hayward, California*, dated 10 May 1990.



N

0 150 300

(Approximate Scale in Feet)

LEGEND

- Approximate Subject Property Boundary
- x — x — Fence
- Groundwater Monitoring Well Location (SCS Engineers, Sept. 1988)
- Soil Boring Location (SCS Engineers, Sept. 1988)
- Shallow Soil Sample Location (EKI, September 1997)
- Soil Boring and Grab Groundwater Sample Location (EKI, September 1997)

TPPH	Total Pureable Petroleum Hydrocarbons by EPA Method 8015/8020
BTEX	Benzene, Toluene, Ethylbenzene and Total Xylenes by EPA Method 8020
MTBE	Methyl Tertiary Butyl Ether by EPA Method 8015/8020
TEPH	Total Extractable Petroleum Hydrocarbons by EPA Method 8015
ND	Not Detected Above Laboratory Detection Limits

Notes:

1. All locations are approximate.

* Laboratory narrative indicated "unidentified hydrocarbons". Result may reflect the presence of naturally-ocurring organic material in grab groundwater sample.

Erler & Kalinowski, Inc.

Analytical Results of Soil and Grab Groundwater Samples

45-89 Review Way
Hayward, CA
October 1997
EKI 970033.00
Figure 2

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APPENDIX A

COPIES OF SEQUOIA ANALYTICAL LABORATORY DATA SHEETS FOR SOIL SAMPLES FOR ORGANOCHLORINE PESTICIDES

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev.	Sampled: 09/10/97
1730 South Amphlett, Ste 320	Sample Descript: S-1	Received: 09/10/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/16/97
	Analysis Method: EPA 8080,R-1	Analyzed: 09/23/97
Attention: Paul Hoffey	Lab Number: 9709447-01	Reported: 09/25/97

QC Batch Number: GC0916978080EXA
Instrument ID: GCHP10

Organochlorine Pesticides and PCBs by EPA 8080 (Modified)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	10	N.D.
alpha-BHC	10	N.D.
beta-BHC	10	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	10	N.D.
Chlordane	200	N.D.
4,4'-DDD	60	N.D.
4,4'-DDE	20	N.D.
4,4'-DDT	60	N.D.
Dieldrin	20	N.D.
Endosulfan I	20	N.D.
Endosulfan II	20	N.D.
Endosulfan sulfate	60	N.D.
Endrin	20	N.D.
Endrin aldehyde	60	N.D.
Heptachlor	10	N.D.
Heptachlor epoxide	10	N.D.
Methoxychlor	200	N.D.
Toxaphene	800	N.D.

Surrogates	Control Limits %		% Recovery
Dibutylchlorendate	30	150	78
Tetrachloro-m-xylene	30	150	149

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev.	Sampled: 09/10/97
1730 South Amphlett, Ste 320	Sample Descript: S-2	Received: 09/10/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/16/97
	Analysis Method: EPA 8080,R-1	Analyzed: 09/23/97
Attention: Paul Hoffey	Lab Number: 9709447-02	Reported: 09/25/97

QC Batch Number: GC0916978080EXA
Instrument ID: GCHP10

Organochlorine Pesticides and PCBs by EPA 8080 (Modified)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	10	N.D.
alpha-BHC	10	N.D.
beta-BHC	10	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	10	N.D.
Chlordane	200	N.D.
4,4'-DDD	60	N.D.
4,4'-DDE	20	N.D.
4,4'-DDT	60	N.D.
Dieldrin	20	N.D.
Endosulfan I	20	N.D.
Endosulfan II	20	N.D.
Endosulfan sulfate	60	N.D.
Endrin	20	N.D.
Endrin aldehyde	60	N.D.
Heptachlor	10	N.D.
Heptachlor epoxide	10	N.D.
Methoxychlor	200	N.D.
Toxaphene	800	N.D.

Surrogates	Control Limits %		% Recovery
Dibutylchlorendate	30	150	70
Tetrachloro-m-xylene	30	150	143

Analytes reported as N.D. were not present above the stated limit of detection.

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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev.	Sampled: 09/10/97
1730 South Amphlett, Ste 320	Sample Descript: S-3	Received: 09/10/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/16/97
	Analysis Method: EPA 8080,R-1	Analyzed: 09/24/97
Attention: Paul Hoffey	Lab Number: 9709447-03	Reported: 09/25/97

QC Batch Number: GC0916978080EXA
Instrument ID: GCHP10

Organochlorine Pesticides and PCBs by EPA 8080 (Modified)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	10	N.D.
alpha-BHC	10	N.D.
beta-BHC	10	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	10	N.D.
Chlordane	200	N.D.
4,4'-DDD	60	N.D.
4,4'-DDE	20	N.D.
4,4'-DDT	60	N.D.
Dieldrin	20	N.D.
Endosulfan I	20	N.D.
Endosulfan II	20	N.D.
Endosulfan sulfate	60	N.D.
Endrin	20	N.D.
Endrin aldehyde	60	N.D.
Heptachlor	10	N.D.
Heptachlor epoxide	10	N.D.
Methoxychlor	200	N.D.
Toxaphene	800	N.D.

Surrogates	Control Limits %		% Recovery
Dibutylchlorendate	30	150	68
Tetrachloro-m-xylene	30	150	143

Analytes reported as N.D. were not present above the stated limit of detection.

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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev.	Sampled: 09/10/97
1730 South Amphlett, Ste 320	Sample Descript: S-4	Received: 09/10/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/16/97
	Analysis Method: EPA 8080,R-1	Analyzed: 09/24/97
Attention: Paul Hoffey	Lab Number: 9709447-04	Reported: 09/25/97

QC Batch Number: GC0916978080EXA
Instrument ID: GCHP10

Organochlorine Pesticides and PCBs by EPA 8080 (Modified)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	10	N.D.
alpha-BHC	10	N.D.
beta-BHC	10	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	10	N.D.
Chlordane	200	N.D.
4,4'-DDD	60	N.D.
4,4'-DDE	**20**	**68**
4,4'-DDT	**60**	**150**
Dieldrin	**20**	**36**
Endosulfan I	20	N.D.
Endosulfan II	20	N.D.
Endosulfan sulfate	60	N.D.
Endrin	20	N.D.
Endrin aldehyde	60	N.D.
Heptachlor	10	N.D.
Heptachlor epoxide	10	N.D.
Methoxychlor	200	N.D.
Toxaphene	800	N.D.

Surrogates	Control Limits %		% Recovery
Dibutylchlorendate	30	150	69
Tetrachloro-m-xylene	30	150	136

Analytes reported as N.D. were not present above the stated limit of detection.

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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev.	Sampled: 09/10/97
1730 South Amphlett, Ste 320	Sample Descript: S-5	Received: 09/10/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/16/97
	Analysis Method: EPA 8080,R-1	Analyzed: 09/24/97
Attention: Paul Hoffey	Lab Number: 9709447-05	Reported: 09/25/97

QC Batch Number: GC0916978080EXA
Instrument ID: GCHP10

Organochlorine Pesticides and PCBs by EPA 8080 (Modified)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	10	N.D.
alpha-BHC	10	N.D.
beta-BHC	10	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	10	N.D.
Chlordane	200	N.D.
4,4'-DDD	60	N.D.
4,4'-DDE	**20**	**41**
4,4'-DDT	**60**	**68**
Dieldrin	20	N.D.
Endosulfan I	20	N.D.
Endosulfan II	20	N.D.
Endosulfan sulfate	60	N.D.
Endrin	20	N.D.
Endrin aldehyde	60	N.D.
Heptachlor	10	N.D.
Heptachlor epoxide	10	N.D.
Methoxychlor	200	N.D.
Toxaphene	800	N.D.

Surrogates	Control Limits %		% Recovery
Dibutylchlorendate	30	150	75
Tetrachloro-m-xylene	30	150	147

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev.	Sampled: 09/10/97
1730 South Amphlett, Ste 320	Sample Descript: S-6	Received: 09/10/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/16/97
	Analysis Method: EPA 8080,R-1	Analyzed: 09/24/97
Attention: Paul Hoffey	Lab Number: 9709447-06	Reported: 09/25/97

QC Batch Number: GC0916978080EXA
Instrument ID: GCHP10

Organochlorine Pesticides and PCBs by EPA 8080 (Modified)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	10	N.D.
alpha-BHC	10	N.D.
beta-BHC	10	N.D.
delta-BHC	10	N.D.
gamma-BHC (Lindane)	10	N.D.
Chlordane	200	N.D.
4,4'-DDD	60	N.D.
4,4'-DDE	20	N.D.
4,4'-DDT	60	N.D.
Dieldrin	20	N.D.
Endosulfan I	20	N.D.
Endosulfan II	20	N.D.
Endosulfan sulfate	60	N.D.
Endrin	20	N.D.
Endrin aldehyde	60	N.D.
Heptachlor	10	N.D.
Heptachlor epoxide	10	N.D.
Methoxychlor	200	N.D.
Toxaphene	800	N.D.

Surrogates	Control Limits %		% Recovery
Dibutylchlorendate	30	150	80
Tetrachloro-m-xylene	30	150	156 Q

Analytes reported as N.D. were not present above the stated limit of detection.

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev.	Sampled:
1730 South Amphlett, Ste 320	Sample Descript: Method Blank	Received: 09/10/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/16/97
	Analysis Method: EPA 8080,R-1	Analyzed: 09/23/97
Attention: Paul Hoffey	Lab Number: 9709447-07	Reported: 09/25/97

QC Batch Number: GC0916978080EXA
Instrument ID: GCHP10

Organochlorine Pesticides and PCBs by EPA 8080 (Modified)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	1.0	N.D.
alpha-BHC	1.0	N.D.
beta-BHC	1.0	N.D.
delta-BHC	1.0	N.D.
gamma-BHC (Lindane)	1.0	N.D.
Chlordane	20	N.D.
4,4'-DDD	6.0	N.D.
4,4'-DDE	2.0	N.D.
4,4'-DDT	6.0	N.D.
Dieldrin	2.0	N.D.
Endosulfan I	2.0	N.D.
Endosulfan II	2.0	N.D.
Endosulfan sulfate	6.0	N.D.
Endrin	2.0	N.D.
Endrin aldehyde	6.0	N.D.
Heptachlor	1.0	N.D.
Heptachlor epoxide	1.0	N.D.
Methoxychlor	20	N.D.
Toxaphene	80	N.D.

Surrogates	Control Limits %		% Recovery
Dibutylchlorendate	30	150	84
Tetrachloro-m-xylene	30	150	122

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Project ID:	970033.00/Narom Dev.	
1730 So. Amphlett Blvd., Suite 320	Matrix:	SOLID	
San Mateo, CA 94402	Sample Descript.:	S-4	
Attention: Paul Hoffey	Work Order #:	9709447 -01-07	Reported: Sep 29, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Heptachlor	Aldrin	Dieldrin
QC Batch#:	GC0916978080EXA	GC0916978080EXA	GC0916978080EXA
Analy. Method:	EPA 8080	EPA 8080	EPA 8080
Prep. Method:	EPA 3550	EPA 3550	EPA 3550
Analyst:	M. Nemcik	M. Nemcik	M. Nemcik
MS/MSD #:	9709447-04-MSD	9709447-04-MSD	9709447-04-MSD
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	09/16/97	09/16/97	09/16/97
Analyzed Date:	09/23/97	09/23/97	09/23/97
Instrument I.D.#:	GCHP10	GCHP10	GCHP10
Conc. Spiked:	3.3 µg/Kg	3.3 µg/Kg	13 µg/Kg
Result:	2.2	2.3	19
MS % Recovery:	66	69	143
Dup. Result:	2.6	2.7	22
MSD % Recov.:	78	81	165
RPD:	17	16	15
RPD Limit:	0-50	0-50	0-50

LCS #:	LCS091697-LCS	LCS091697-LCS	LCS091697-LCS
Prepared Date:	09/16/97	09/16/97	09/16/97
Analyzed Date:	09/23/97	09/23/97	09/23/97
Instrument I.D.#:	GCHP10	GCHP10	GCHP10
Conc. Spiked:	3.3 µg/Kg	3.3 µg/Kg	13 µg/Kg
LCS Result:	2.2	2.5	9.9
LCS % Recov.:	67	76	76

MS/MSD	40-140	40-140	40-140
LCS	40-140	40-140	40-140
Control Limits			

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402
Attention: Paul Hoffey

Client Proj. ID: 970033.00/Narom Dev.

Lab Proj. ID: 9709447

Received: 09/10/97

Reported: 09/25/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 10 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

Samples were diluted due to matrix effects.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

9709447

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: 970033.00 Page 1 of 1

Project Name: Naroma Dev.

Source of Samples: 5 Review Way

Location: Hayward CA

Analytical Laboratory: SEQ.

Date Sampled: Sept 10, 1997

Sampled By: Paul Hoffay

Report Results To: Paul Hoffay

Phone Number: 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
1	S-1	Soil	1 Brass Liner	AM	Pesticides EPA 8080	5 Day
2	S-2	"	"	"	" "	"
3	S-3	"	"	"	" "	"
4	S-4	"	"	"	" "	"
5	S-5	"	"	"	" "	"
6	S-6	"	"	"	" "	"

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
Paul B. Hoffay EKI	10 Sept 97	10:32A	
			Tom Parsley 1035 9/10/97

APPENDIX B

DRILLING PERMIT APPLICATION FROM ALAMEDA COUNTY PUBLIC WORKS AGENCY

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 89 Review Way, Hayward, CA

California Coordinates Source N.A. ft. Accuracy ± ___ ft.
CCN ___ ft. CCE ___ ft.
APN 431-6064-002-11 | See Map

CLIENT
Name Norom Development Company
Address 600 Miner Rd. Phone (510) 254-5454
City Orinda, CA Zip 94563

APPLICANT
Name Erler & Kalinowski Inc. Fax 415-578-9131
Address 1730 S. Amphlett Phone 415-578-1172
City San Mateo, CA Zip 94402

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☐	Well Destruction	☐

One Soil Boring to Collect Grab Water Sample

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐ N/A	Irrigation	☐
Industrial	☐	Other ___	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	X
Cable	☐	Other	☐		

DRILLER'S LICENSE NO. C57 # 554979

WELL PROJECTS
Drill Hole Diameter ___ in. Maximum
Casing Diameter ___ in. Depth ___ ft.
Surface Seal Depth ___ ft. Number ___

GEOTECHNICAL PROJECTS
Number of Borings 1 Maximum
Hole Diameter 8 in. Depth 50 ft.

Soil boring - No well construction.

ESTIMATED STARTING DATE 12 Sept 1997
ESTIMATED COMPLETION DATE 12 Sept 1997

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Paul B. Hoffey DATE 8 Sept 1997

FOR OFFICE USE

PERMIT NUMBER 97WR106
WELL NUMBER ___
APN ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A) GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(D) GEOTECHNICAL
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED A. Kan DATE 9/11/97

Post-it® Fax Note 7671	Date 9/11/97	# of pages ▶ 1
To PAUL HOFFEY	From ALVIN KAN	
Co./Dept.	Co. ACPWA	
Phone #	Phone # (510) 670-5245	
Fax # (415) 578-9131	Fax #	

APPENDIX C

COPY OF EKI DAILY FIELD INSPECTION LOG DURING DRILLING OF BORING N-1 ON 12 SEPTEMBER 1997

Erler & Kalinowski, Inc.

Daily Inspection Report No. _____

Sheet: 1 of _____
Date: 12 Sept 1997
Project: Narrow 51 Review Way
EKI Job No.: 970033.00

Contractor: West Hazmat Drilling Corp.
EKI Staff On-site: PBH
Weather: Calm, cloudy in A.M
Temperature: 65° F Max 80° F Min
Work Hours: 8Am to 12:30p Memos Issued: _____
Photos: _____
Special Conditions, Delays, Changes: _____

Accidents, Damage: _____

Sampling, Testing: Soil samples @ 10' + 20' bgs. Grab GW samples at 44-50' bgs.

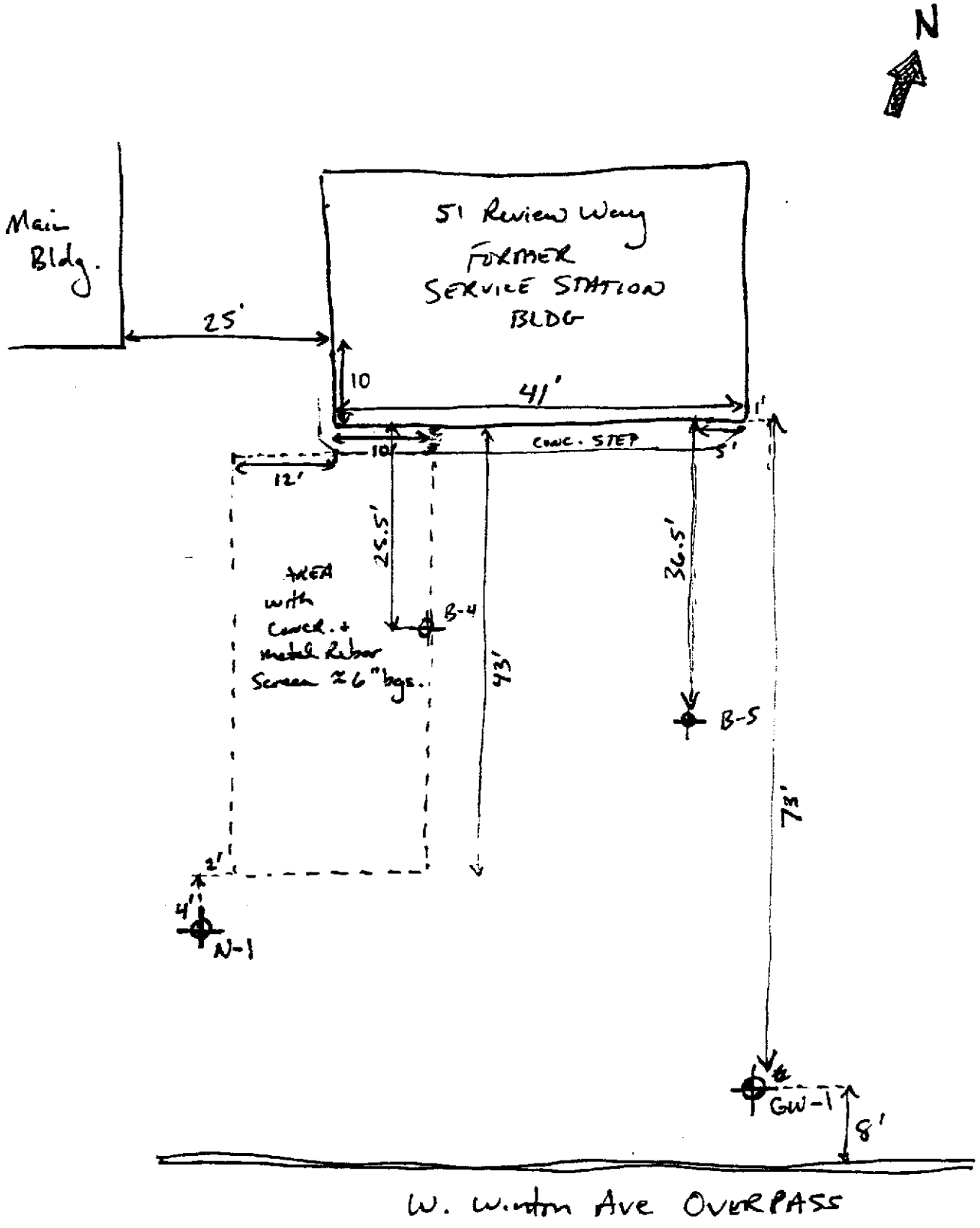
Visitors to Site: _____

Work Report (Work done, Personnel/Equipment working):

EKI on-site @ 8Am - Drillers on-site @ 9:15Am - H+S. Mtg.
8:30A Drill "pilot" hole on top of area where metal picked up by Locator - possible UST complex. Drill thru metal screen/rebar at 6" bgs - soil to Approx 2' bgs - ~~Concrete~~ Fill encountered. No odor in soil to 2' bgs. - Thin concrete/rebar layer - then soil to 2'
9:10Am Drillers move to deep borehole location (N-1) - located at SW. corner of rectangular (metal screen) area.
9:25A Sample N-1-10' collected - Brown silty clay 1'-10' bgs - No ODOR / Dry
9:35A Sample N-1-20' collected - Brown silt 10-20' - DRY - No Petrol. odor.
10:05Am Reach 50' bgs - Soft clayey silt 20-50' bgs No cobbles. water @ 43'± bgs accd. to driller. Gravelly silty clay 40-50' bgs
10:15Am Measured depth to water w/ elect probe 44' bgs to 1st GW.
10:30-10:35 Am GW samples collected 5 VOAs + 2 Amber Liters/ NO ODOR No Sheen
10:40Am Depth to GW @ 44' bgs.
10:45A Drillers begin pull augers./Grouting begins @ 11:30Am
Augers steam cleaned. Drillers complete grouting by 12:30pm.
Drums remaining on-site: 3- Soil Cuttings (Fill) 1- Decon water (Fill)
Drillers + EKI offsite @ 12:35pm

Distribution: Project Inspection File (orig)
Project Manager

By: Paul B. Hoffer, EKI


N
Main Bldg.
51 Review Way
FORMER
SERVICE STATION
BLDG
25'
10
41'
1'
10'
CONC. STEP
5'
12'
25.5'
36.5'
AREA
with
Concr. +
metal Rebar
Screen ≈ 6" bgs.
B-4
43'
B-5
73'
2'
4'
N-1
GW-1
8'
W. Winton Ave OVERPASS

APPENDIX D

COPIES OF SEQUOIA ANALYTICAL LABORATORY DATA SHEETS FOR SOIL AND GROUNDWATER SAMPLES FROM BORING N-1

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

COPY

Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled: 09/12/97
1730 South Amphlett, Ste 320	Sample Descript: N-1-10'	Received: 09/12/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/19/97
	Analysis Method: 8015Mod/8020	Analyzed: 09/19/97
Attention: Paul Hoffey	Lab Number: 9709695-01	Reported: 09/22/97

QC Batch Number: GC091997BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110
4-Bromofluorobenzene	60	140	95

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.
1730 South Amphlett, Ste 320
San Mateo, CA 94402

Attention: Paul Hoffey

Client Proj. ID: 970033.00/Narom Dev. Co.
Sample Descript: N-1-10'
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9709695-01

Sampled: 09/12/97
Received: 09/12/97
Extracted: 09/17/97
Analyzed: 09/18/97
Reported: 09/22/97

QC Batch Number: GC0917970HBPEXA
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	79

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled: 09/12/97
1730 South Amphlett, Ste 320	Sample Descript: N-1-20'	Received: 09/12/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/19/97
	Analysis Method: 8015Mod/8020	Analyzed: 09/20/97
Attention: Paul Hoffey	Lab Number: 9709695-02	Reported: 09/22/97

QC Batch Number: GC091997BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100
4-Bromofluorobenzene	60	140	83

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled: 09/12/97
1730 South Amphlett, Ste 320	Sample Descript: N-1-20'	Received: 09/12/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/17/97
	Analysis Method: EPA 8015 Mod	Analyzed: 09/18/97
Attention: Paul Hoffey	Lab Number: 9709695-02	Reported: 09/22/97

QC Batch Number: GC0917970HBPEXA
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled: 09/12/97
1730 South Amphlett, Ste 320	Sample Descript: N-1	Received: 09/12/97
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 09/16/97
	Analysis Method: EPA 8015 Mod	Analyzed: 09/18/97
Attention: Paul Hoffey	Lab Number: 9709695-03	Reported: 09/22/97

QC Batch Number: GC0916970HBPEXB
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	180
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	96

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled: 09/12/97
1730 South Amphlett, Ste 320	Sample Descript: N-1	Received: 09/12/97
San Mateo, CA 94402	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/18/97
Attention: Paul Hoffey	Lab Number: 9709695-03	Reported: 09/22/97

QC Batch Number: GC091897BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	81

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled:
1730 South Amphlett, Ste 320	Sample Descript: Method Blank	Received: 09/12/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/17/97
	Analysis Method: EPA 8015 Mod	Analyzed: 09/18/97
Attention: Paul Hoffey	Lab Number: 9709695-04	Reported: 09/22/97

QC Batch Number: GC0917970HBPEXA
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	80

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled:
1730 South Amphlett, Ste 320	Sample Descript: Method Blank	Received: 09/12/97
San Mateo, CA 94402	Matrix: SOLID	Extracted: 09/19/97
	Analysis Method: 8015Mod/8020	Analyzed: 09/19/97
Attention: Paul Hoffey	Lab Number: 9709695-04	Reported: 09/22/97

QC Batch Number: GC091997BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	113
4-Bromofluorobenzene	60	140	83

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled:
1730 South Amphlett, Ste 320	Sample Descript: Method Blank	Received: 09/12/97
San Mateo, CA 94402	Matrix: LIQUID	Extracted: 09/16/97
	Analysis Method: EPA 8015 Mod	Analyzed: 09/17/97
Attention: Paul Hoffey	Lab Number: 9709695-05	Reported: 09/22/97

QC Batch Number: GC0916970HBPEXB
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	78

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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Erler & Kalinowski, Inc.	Client Proj. ID: 970033.00/Narom Dev. Co.	Sampled:
1730 South Amphlett, Ste 320	Sample Descript: Method Blank	Received: 09/12/97
San Mateo, CA 94402	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/18/97
Attention: Paul Hoffey	Lab Number: 9709695-05	Reported: 09/22/97

QC Batch Number: GC091897BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	82

Analytes reported as N.D. were not present above the stated limit of detection.

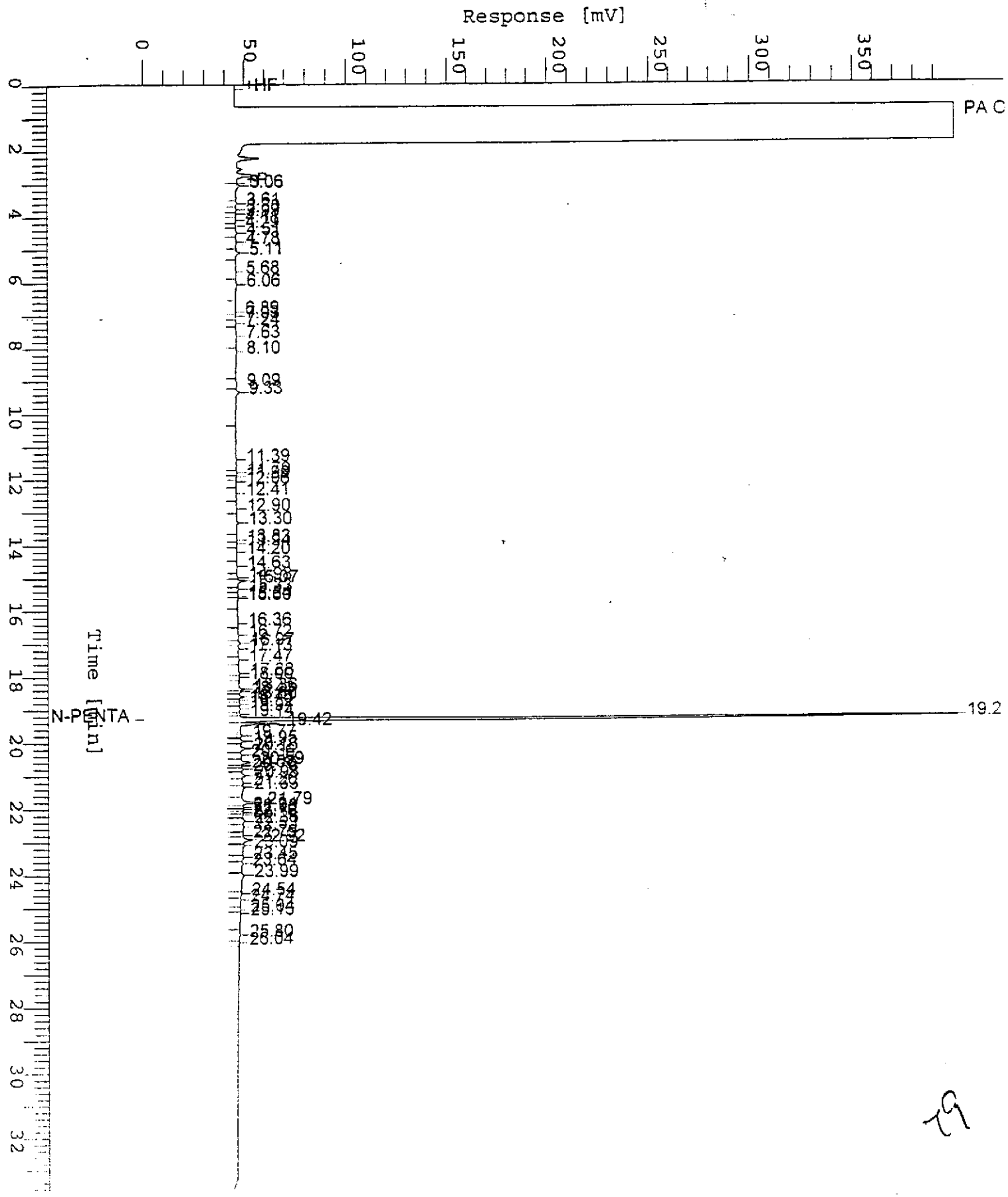
SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Chromatogram

Sample Name : DS9709695-1 (20:1)
FileName : S:\GHP_04\0921\9178027.raw
Method : TPH04A
Start Time : 0.00 min End Time : 33.65 min
Scale Factor: 0.0 Plot Offset: 0 mV

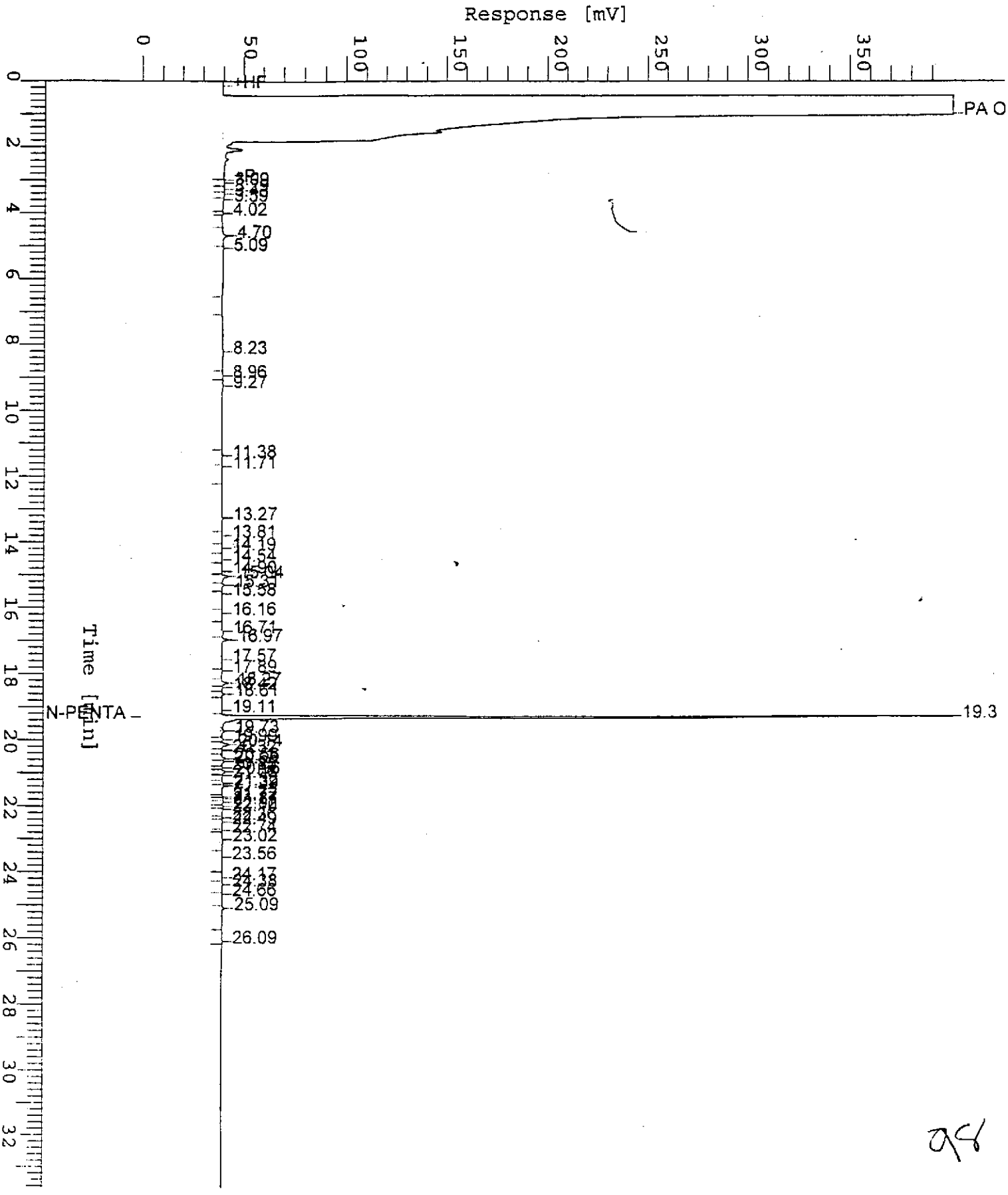
Sample #: N-1-10
Date : 9/18/97 04:35
Time of Injection: 9/18/97 04:01
Low Point : 0.00 mV High Point : 400.00 mV
Plot Scale: 400.0 mV



Chromatogram

Sample Name : DS9709695-2 (20:1)
FileName : S:\GHP_04\0921\917A041.raw
Method : TPH04A
Start Time : 0.00 min
End Time : 33.65 min
Scale Factor: 0.0
Plot Offset: 0 mV

Sample #: N-1-20'
Date : 9/18/97 14:27
Time of Injection: 9/18/97 13:54
Low Point : 0.00 mV
High Point : 400.00 mV
Plot Scale: 400.0 mV



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Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Project ID:	970033.00/Narom Dev. Co.	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript.:	N-1	
Attention: Paul Hoffey	Work Order #:	9709695 -03, 05	Reported: Sep 23, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC091897BTEX21A	GC091897BTEX21A	GC091897BTEX21A	GC091897BTEX21A	GC091897BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	9709695-03-MSD	9709695-03-MSD	9709695-03-MSD	9709695-03-MSD	9709695-03-MSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	09/18/97	09/18/97	09/18/97	09/18/97	09/18/97
Analyzed Date:	09/18/97	09/18/97	09/18/97	09/18/97	09/18/97
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.6	9.6	9.6	28	53
MS % Recovery:	96	96	96	93	88
Dup. Result:	9.6	9.6	9.6	28	53
MSD % Recov.:	96	96	96	93	88
RPD:	0.0	0.0	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	LCS091897-LCS	LCS091897-LCS	LCS091897-LCS	LCS091897-LCS	LCS091897-LCS
Prepared Date:	09/18/97	09/18/97	09/18/97	09/18/97	09/18/97
Analyzed Date:	09/18/97	09/18/97	09/18/97	09/18/97	09/18/97
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.9	8.7	8.8	26	47
LCS % Recov.:	89	87	88	87	78
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Erler & Kalinowski, Inc.	Client Project ID:	970033.00/Narom Dev. Co.	
1730 So. Amphlett Blvd., Suite 320	Matrix:	SOLID	
San Mateo, CA 94402	Sample Descript.:	XSD	
Attention: Paul Hoffey	Work Order #:	9709695-01-02, 04	Reported: Sep 23, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC091997BTEXEXA	GC091997BTEXEXA	GC091997BTEXEXA	GC091997BTEXEXA	GC091997BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9709A41-13-XSD	9709A41-13-XSD	9709A41-13-XSD	9709A41-13-XSD	9709A41-13-XSD
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	09/19/97	09/19/97	09/19/97	09/19/97	09/19/97
Analyzed Date:	09/19/97	09/19/97	09/19/97	09/19/97	09/19/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
Result:	0.15	0.15	0.16	0.46	0.90
MS % Recovery:	75	75	80	77	75
Dup. Result:	0.15	0.15	0.16	0.46	0.90
MSD % Recov.:	75	75	80	77	75
RPD:	0.0	0.0	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	LCS091997-LCS	LCS091997-LCS	LCS091997-LCS	LCS091997-LCS	LCS091997-LCS
Prepared Date:	09/19/97	09/19/97	09/19/97	09/19/97	09/19/97
Analyzed Date:	09/19/97	09/19/97	09/19/97	09/19/97	09/19/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
LCS Result:	0.16	0.16	0.17	0.49	1.0
LCS % Recov.:	80	80	85	82	83
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

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SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Erler & Kalinowski, Inc.	Client Project ID:	970033.00/Narom Dev. Co.	
1730 So. Amphlett Blvd., Suite 320	Matrix:	LIQUID	
San Mateo, CA 94402	Sample Descript.:	XSD	
Attention: Paul Hoffey	Work Order #:	9709695-03, 05	Reported: Sep 23, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC0916970HBPEXB
Analy. Method:	EPA 8015M
Prep. Method:	EPA 3510
Analyst:	B. Sullivan
MS/MSD #:	9709736-01-XSD
Sample Conc.:	780
Prepared Date:	09/16/97
Analyzed Date:	09/18/97
Instrument I.D.#:	GCHP5
Conc. Spiked:	1000 µg/L
Result:	1600
MS % Recovery:	82
Dup. Result:	1700
MSD % Recov.:	92
RPD:	6.1
RPD Limit:	0-50

LCS #:	LCS091697-LCS
Prepared Date:	09/16/97
Analyzed Date:	09/18/97
Instrument I.D.#:	GCHP5
Conc. Spiked:	1000 µg/L
LCS Result:	770
LCS % Recov.:	77

MS/MSD	50-150
LCS	60-140
Control Limits	

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc.	Client Project ID:	970033.00/Narom Dev. Co.	
1730 So. Amphlett Blvd., Suite 320	Matrix:	SOLID	
San Mateo, CA 94402	Sample Descript.:	N-1-10'	
Attention: Paul Hoffey	Work Order #:	9709695-01-02, 04	Reported: Sep 23, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC0917970HBPEXA
Analy. Method:	EPA 8015M
Prep. Method:	EPA 3550
Analyst:	B. Sullivan
MS/MSD #:	9709695-01-MSD
Sample Conc.:	N.D.
Prepared Date:	09/17/97
Analyzed Date:	09/18/97
Instrument I.D.#:	GCHP4
Conc. Spiked:	25 mg/Kg
Result:	23
MS % Recovery:	92
Dup. Result:	21
MSD % Recov.:	84
RPD:	9.1
RPD Limit:	0-50

LCS #:	LCS091797-LCS
Prepared Date:	09/17/97
Analyzed Date:	09/18/97
Instrument I.D.#:	GCHP4
Conc. Spiked:	25 mg/Kg
LCS Result:	22
LCS % Recov.:	88

MS/MSD	50-150
LCS	60-140
Control Limits	

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Erler & Kalinowski, Inc. 1730 South Amphlett, Ste 320 San Mateo, CA 94402 Attention: Paul Hoffey	Client Proj. ID: 970033.00/Narom Dev. Co. Lab Proj. ID: 9709695	Received: 09/12/97 Reported: 09/22/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 19 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

9709695

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: 970033.00 Page of

Project Name: NAROM DEV. Co.

Source of Samples: 51 Review Way

Location: Hayward, CA

Analytical Laboratory: SEQ.

Date Sampled: 12 Sept 1997

Sampled By: PBH

Report Results To: Paul Hoffay

Phone Number: 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
1	N-1-10'	Soil	1 Brass Liner	9:25 Am	TPHg / BTEX / MTBE / TEPH by EPA 8015m / 8020	5-DAY
2	N-1-20'	Soil	1 Brass Liner	9:35 Am	TPHg / BTEX / MTBE / TEPH by EPA 8015m / 8020	5-DAY
3	N-1	Water	5 VOAs	10:30 A	TPHg / BTEX / MTBE 8015/8020	5 Day
3	N-1	Water	2 Amber Liters	10:35 A	TEPH @ Diesel 8015m	5 Day

Special Instructions: * chlorinated solvents (TCE, PCE) Likely in [redacted] water samples. Look for + report Discrete Peaks on TPHg run, if present.

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
Paul B. Hoffay EKI	12 Sept 97		
			Tara Pansley/Sequoia 9/12/97 1300

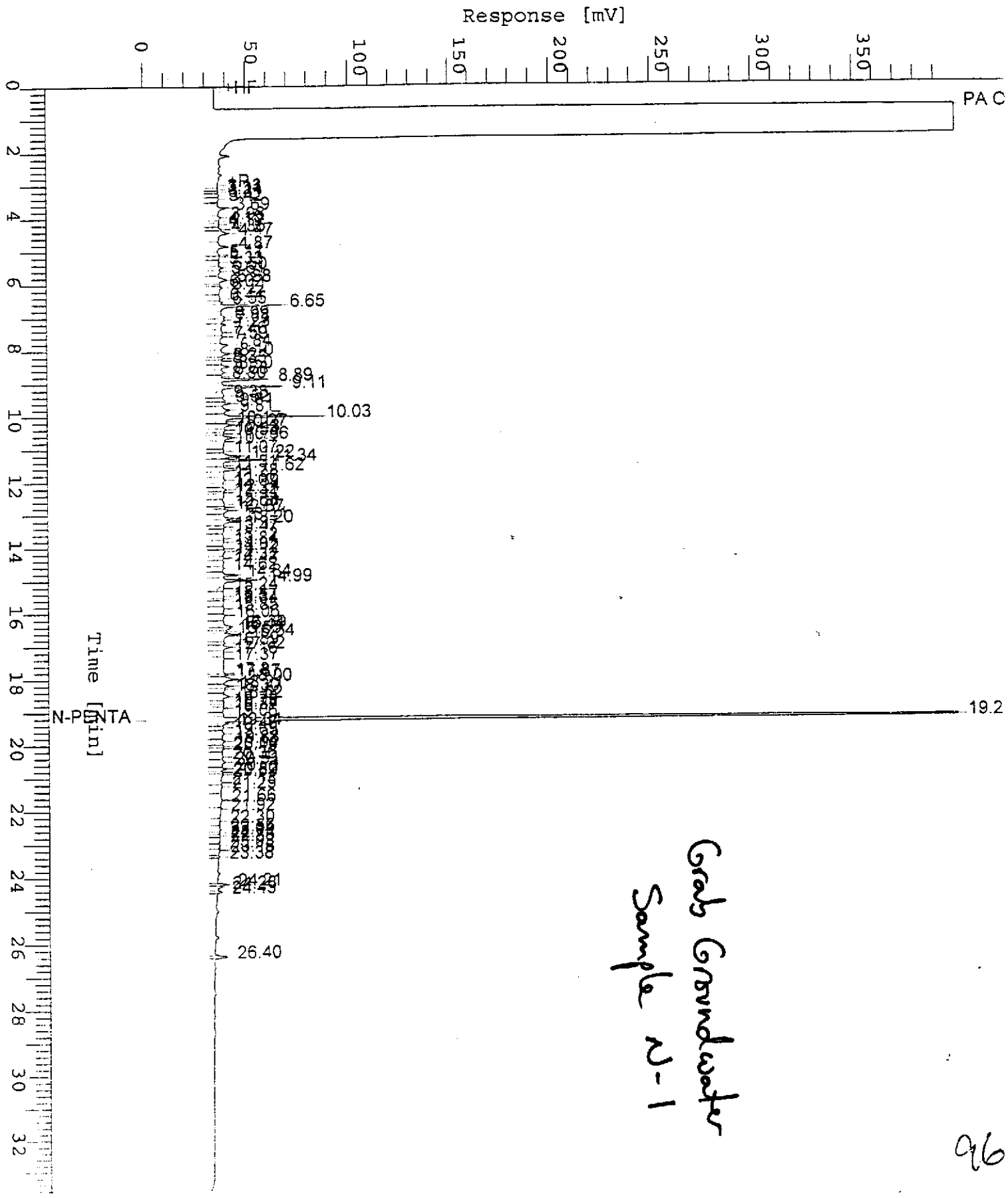
APPENDIX E

COPY OF CHROMATOGRAM FOR GRAB GROUNDWATER SAMPLE N-1 FOR TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS AND COPY OF CHROMATOGRAM FOR DIESEL STANDARD PROVIDED BY SEQUOIA ANALYTICAL LABORATORY

Chromatogram

Sample Name : DW9709695-3 (500:1)
FileName : S:\GHP_05\0921\916B048.raw
Method : TPH05A
Start Time : 0.00 min End Time : 33.65 min
Scale Factor: 0.0 Plot Offset: 0 mV

Sample #: N-1
Date : 9/18/97 04:25
Time of Injection: 9/18/97 03:52
Low Point : 0.00 mV High Point : 400.00 mV
Plot Scale: 400.0 mV



Grady Groundwater
Sample N-1

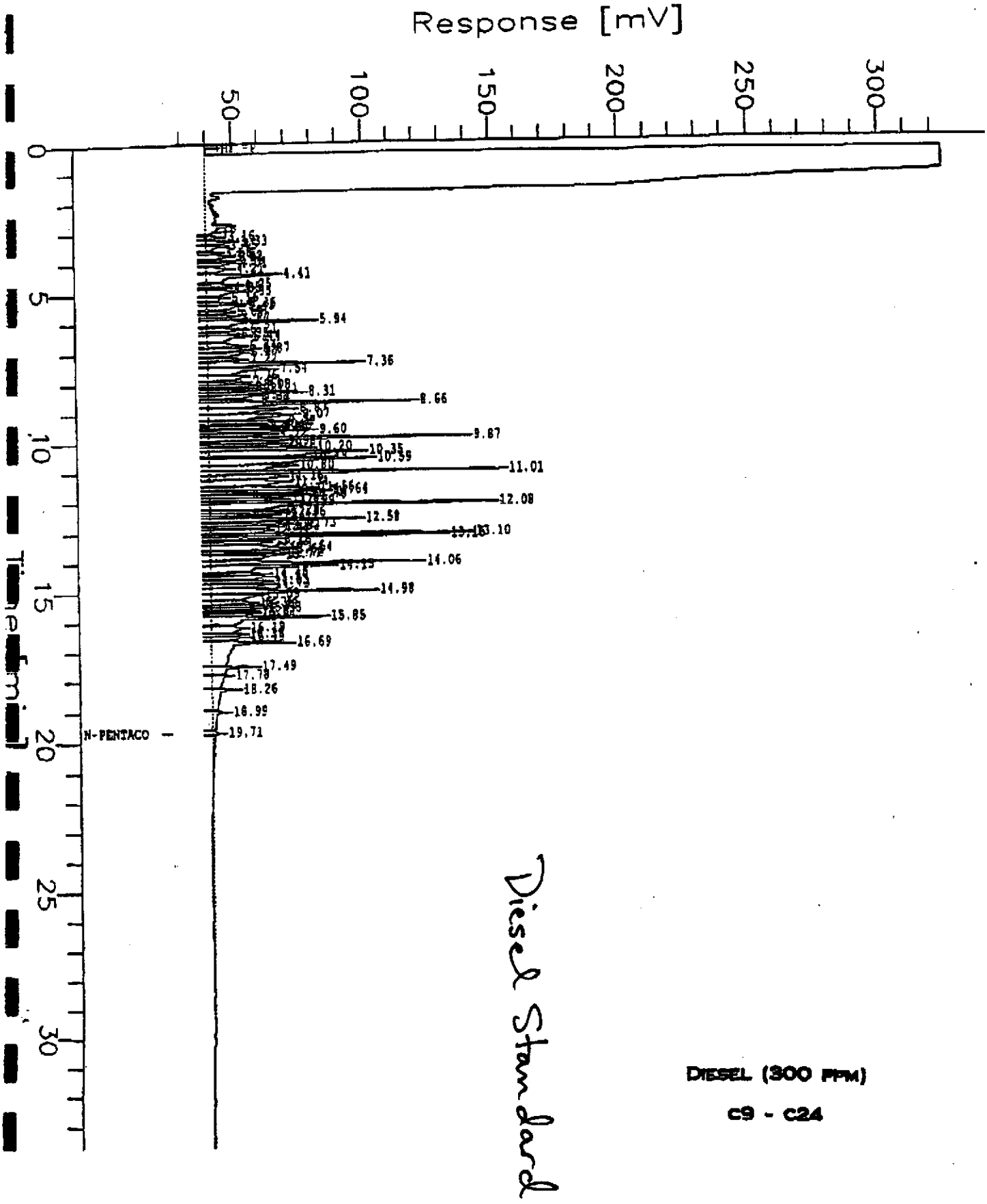
Chromatogram

nple Name : DSTD020995 (300 PPM)
eName : s:\ghp_04\0212\211A002.raw
Mod : ML1A.ins
t Time : 0.00 min
le Factor: -1.0

End Time : 33.67 min
Plot Offset: 24 mV

Sample #: DIESEL
Date : 2/11/95 19:38
Time of Injection: 2/11/95 13:01
Low Point : 24.30 mV
Plot Scale: 300.0 mV

High Point : 324.30 mV



Diesel Standard

DIESEL (300 PPM)

C9 - C24

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: 970033.00

Page 1 of 1

Project Name: Naroma Dev.

Source of Samples: 5 Review Way

Location: Hayward CA

Analytical Laboratory: SEQ.

Date Sampled: Sept 10, 1997

Sampled By: Paul Hoffay

Report Results To: Paul Hoffay

Phone Number: 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	S-1	Soil	1 Brass Liner	AM	Pesticides EPA 8080	5 Day
	S-2	"	"	"	"	"
	S-3	"	"	"	"	"
	S-4	"	"	"	"	"
	S-5	"	"	"	"	"
	S-6	"	"	"	"	"

Special Instructions:

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
Paul B. Hoffay EKI	10 Sept 97	10:32A	
			Tam Parsley 1035 9/10/97

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

Erler & Kalinowski, Inc.

Project Number: 970033.00 Page of

Project Name: NAROM DEV. Co.

Source of Samples: 51 Review Way

Location: Hayward, CA

Analytical Laboratory: SEQ.

Date Sampled: 12 Sept 1997

Sampled By: PBH

Report Results To: Paul Hoffey

Phone Number: 578-1172

Lab Sample I D	Field Sample I D	Sample Type	Number and Type of Containers	Time Collected	Analyses Requested (EPA Method Number)	Results Required By (Date/Time)
	N-1-10'	Soil	1 Brass Liner	9:25 Am	TPHg / BTEX / MTBE / TEPH by EPA 8015m / 8020	5-DAY
	N-1-20'	Soil	1 Brass Liner	9:35 Am	TPHg / BTEX / MTBE / TEPH by EPA 8015m / 8020	5-DAY
	N-1	Water	5 VOAs	10:30 A	TPHg / BTEX / MTBE 8015/8020	5 Day
	N-1	Water	2 Amber Liters	10:35 A	TEPH @ Diesel 8015m	5 Day

Special Instructions: * chlorinated solvents (TCE, PCE) Likely in [redacted] water samples. Look for + report Discrete Peaks on TPHg run, if present.

Relinquished By: Name / Signature / Affiliation	Date	Time	Received By: Name / Signature / Affiliation
Paul B. Hoffey EKI	12 Sept 97		
			Tara Parsley/Sequoia 9/12/97 1300

WEST HAZMAT DRILLING CORP.

DAILY WORK REPORT

1016 East Katella Ave.
Anaheim, CA 92805
(714) 939-6850

3233 Fitzgerald Rd.
Sacramento, CA 95742
(916) 638-7276

8261 Enterprise Drive, #D
San Francisco, CA 94560
(510) 494-8111

3620 Kurtz St.
San Diego, CA 92110
(619) 686-5800

WHD PROJECT NO.: 709609		DATE: 9-12-97	DAY: Fr
JOB LOCATION: 51 Rey[illegible] Hayward		CLIENT: [illegible]	JOB #: [illegible] 00 77 00

HOURS START	HOURS STOP	DESCRIPTION OF WORK Explain Reasons For All Down Time and Stand-by Time	FOOTAGE DRILLED	DRILLING	TRAVEL TO/FROM JOB SITE	GROUT	OTHER CLEANUP DECON	STAND BY	NON CHARGEABLE DOWN TIME	NON CHARGEABLE SHOP TIME
6:30	7:30	A.M. SHOP TIME								
7:30	8:00	TRAVEL TO JOB SITE			.5					
8:00	8:15	H&S MEETING					.25			
8:30	9:00	Concrete core bulldogs [illegible]	5	.5						
9:00	9:15	[illegible] hole					.25			
9:15	10:00	Drill 5' sample 10 2'	5	.75						
10:00	10:30	[illegible] grout while client gets water sample				.5				
10:30	12:30	Grout cleanup cap				2				
12:30	1:00	TRAVEL FROM JOB SITE			.5					
		P.M. SHOP TIME								
		TOTAL CHARGEABLE RIG HOURS 5.5	5.0	1.25	1	2.5	.5			

EQUIPMENT		RIG TYPE & NO. CME 75 [illegible]	
FLATBED TRUCK	✓	CONCRETE TRUCK	
DECON TRAILER	✓	COMPRESSOR/AIR EXC. TOOL	
~~GROUT PUMP~~ WHIRLY	✓	HYDRO PUNCH # OF HOLES	
BOBCAT/FORKLIFT		CONTINUOUS SAMPLER	
CONCRETE SAW # OF HOLES		AUGER RENTAL 12"/15"	
CONCRETE CORE # OF HOLES	1 ✓	SERVICE RUNS	
BIT/REAMER WEAR			

NAME	SIGNATURE	CONCRETE	SHOP HOURS AM	SHOP HOURS PM	DRILL HRS	TOTAL
M. Hernandez						
A. Vidrio						

NO. OF CREW WITH CHARGEABLE PERDIEM		CHARGEABLE EXTRA LABOR HRS.	
DEPTH TO WATER		CHARGEABLE LEVEL B/C HRS.	

MATERIALS /SUPPLIES

ITEM	QTY	PVC-SS - 1" / 2" / 4" / 6"	QTY
SAND		20 Ft. SCREEN	
READY MIX		10 Ft. SCREEN	
QUICK SET	2	5 Ft. SCREEN	
PORTLAND	11	20 Ft. BLANK	
BENTONITE GROUT		10 Ft. BLANK	
BENTONITE CHIPS		5 Ft. BLANK	
BENTONITE POWDER		SLIP CAPS	
BENTONITE PELLETS		THREADED CAPS	
ASPHALT PATCH		LOCKING CAPS	
WELL COVERS 8"/12"		HOLE COVER PLATES	
MONUMENT CASING		CONES/DELINEATORS	
BARRELS	4	TRAFFIC CONTROL	
WOOD PLUGS		PLASTIC SHEETING	1
SAMPLE RINGS	2	SPARGE TIPS	

COMMENTS

[illegible signature]
CLIENT SIGNATURE

[illegible signature]
OPERATOR SIGNATURE

Rev.7/95

(PLEASE COMPLETE EVALUATION FORM ON BACK)