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By Alameda County Environmental Health at 2:24 pm, Jul 07, 2014



ENVIRONMENTAL ENGINEERING, INC.
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TEL (925)734-6400 • FAX (925)734-6401
www.somaenv.com

July 3, 2014

Mr. Martin Musonge
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Subject: **File No. 01-0098 (MYM)**
Site Located at 2844 Mountain Boulevard, Oakland, California

Dear Mr. Musonge:

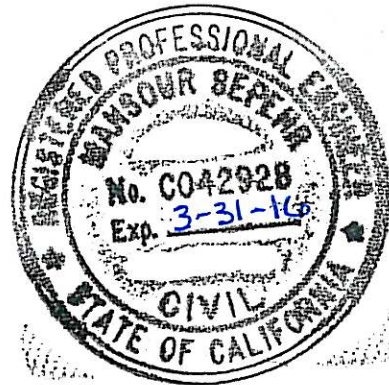
Enclosed for your review is SOMA's "Workplan to Conduct Multi-Phase Extraction" for the subject property. It has been uploaded to the State's GeoTracker database.

Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 734-6400, if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mansour Sepehr".

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist



cc: Mr. Tejindar Singh w/enclosure

**Workplan to Conduct
Multi-Phase Extraction**

**2844 Mountain Boulevard
Oakland, California**

July 3, 2014

**Project 5080
RB File No. 01-0098**

Prepared for:

**Mr. Tejindar P. Singh
6400 Dublin Blvd.
Dublin, California**



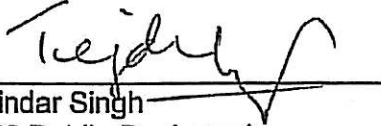
ENVIRONMENTAL ENGINEERING, INC.

6620 Owens Drive Suite A Pleasanton CA 94588 Ph: 925.734.6400 F: 925.734-6401 www.somaenv.com

PERJURY STATEMENT

Site Location: 2844 Mountain Boulevard, Oakland, California

"I declare under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge".

A handwritten signature in black ink, appearing to read "Tejinder Singh", written over a horizontal line.

Tejinder Singh
6400 Dublin Boulevard
Dublin, California 94568
Responsible Party

CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mr. Tejindar P. Singh for the site located at 2844 Mountain Blvd., Oakland, California. The report was prepared in accordance with San Francisco Bay Regional Water Quality Control Board correspondence dated June 27, 2014.



Mansour Sepehr, PhD, PE
Principal Hydrogeologist



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1. INTRODUCTION

SOMA Environmental Engineering, Inc. has prepared this workplan on behalf of Mr. Tejindar P. Singh for the site located at 2844 Mountain Blvd., Oakland, California. This workplan was prepared in accordance with San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) correspondence dated June 27, 201 for implementation of multi-phase extraction (MPE) at the site.

The subject property is located in Alameda County, California. Figure 1 shows the location of the site and vicinity. The site is located on the eastern corner of the intersection of Mountain Boulevard and Werner Court in a commercial/residential area (Figure 2). The Warren Freeway (freeway) is adjacent to Mountain Boulevard, and lies approximately 50 feet southwest of the site. Site history is summarized in Appendix A.

2. PROPOSED MPE EVENT

From December 2 to 16, 2013, an MPE pilot test was conducted at the site under SOMA's oversight utilizing the site's groundwater monitoring wells as extraction wells. Approximately 497 pounds of volatile PHCs were removed during the MPE pilot test at an average VOC mass removal rate of approximately 36 lbs/day. Details and results of this pilot test are documented in SOMA's 'Multi-Phase Extraction Pilot Testing Report' dated January 21, 2014

Based on the effectiveness of MPE pilot test, SOMA recommended conducting further MPE events utilizing MW-1, MW-2, and a combination of the two wells as extraction wells. SOMA's recommendation was approved by RWQCB in their directive dated June 27, 2014, pending submittal of this workplan.

3. SCOPE OF WORK

SOMA proposes to perform the following as part of proposed MPE event:

- Task 1: Test Preparation, Notifications, and Health and Safety Plan Preparation
- Task 2: Conduct MPE Event
- Task 3: Report Preparation

3.1 Test Preparation, Notifications, and Health and Safety Plan Preparation

SOMA will prepare a site-specific Health and Safety Plan (HASP). The HASP will be prepared according to the Occupational Safety and Health Administration (OSHA), “Hazardous Waste Operation and Emergency Response” guidelines (29 CFR 1910.120) and the California Occupational Safety and Health Administration (Cal/OSHA) “Hazardous Waste Operation and Emergency Response” guidelines (CCR Title 8, section 5192). The HASP is designed to address safety provisions during field activities and protect the field crew from physical and chemical hazards resulting from drilling and sampling. The HASP establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans. The HASP will be reviewed and signed by field staff and contractors prior to beginning field operations.

This event will be conducted in accordance with conditions of the air discharge permit modified for presence of a school within 1,000 feet of the site (Appendix B). As required, SOMA will notify the BAAQMD of the location, date, and duration of the pilot test, and the vapor treatment to be utilized three days prior to start of the event.

Provisions will be made for on-site pretreatment of extracted groundwater utilizing granulated activated carbon (GAC) vessels and discharge. Wastewater will be discharged to the sanitary sewer under the wastewater discharge permit issued by East Bay Municipal Utility District (EBMUD). The wastewater discharge permit No. 05928020 was originally issued on July 24, 2013 prior to the pilot testing and has recently been renewed on May 15, 2014 (Appendix B). EBMUD will be notified three days prior to start of the MPE event.

3.2 MPE Duration and Pertinent Equipment

SOMA proposes conducting MPE event for a duration of six weeks. A self-contained mobile treatment system (MTS) will be utilized for the proposed MPE event. A schematic diagram of the MTS is illustrated in Figure 2.

Employment of compact equipment and an MTS unit is effective because it can be easily conducted with limited access and limited available space. Below are details of the proposed MPE equipment:

1. The MTS is equipped with electrical generator, air compressor, liquid ring vacuum pump rated at 25-horsepower and 428 standard cubic feet per minute, electrical submersible pumps, air/water separator vessel, discharge hoses and traffic-rated hose ramps, drop tubes (stingers), and a thermal oxidizer for vapor treatment. The oxidizer operates under a valid various locations BAAQMD permit. As mentioned above, this permit was modified for

presence of a school in the site vicinity prior to the pilot test in December 2013.

2. The MTS has adequate flow/vacuum range for site-specific soil type and the system is equipped with vacuum pressure relief dilution valves and temperature gauges.
3. MTS is self sufficient with capability to generate its own power utilizing diesel powered generator
4. A flow measurement device will allow for measurement of total flow; a sampling port to sample influent and effluent is also available. Samples will be collected within first 24 hours of the MPE operation and periodically thereafter in order to evaluate system efficiency.
5. All piping materials utilized will be appropriate for site contamination; aboveground lines connecting the individual extraction wells and the treatment system unit will be protected by rubberized traffic-rated ramps to allow for uninterrupted station operation.
6. The oxidizer for treatment of extracted vapor will operate under valid various-locations BAAQMD permit.
7. Extracted soil vapor concentrations will be measured with an appropriately calibrated FID or PID.
8. Extracted groundwater will be treated using GAC units. Treated groundwater will be discharged into the sanitary sewer under discharge permit issued by EBMUD.

3.3 Well Sampling

All site wells utilized during the event will be sampled prior to initiating the event and at least one week after the end of event in order to evaluate the effectiveness of the MPE operation. To minimize costs, MPE event ideally will be coordinated with the scheduled groundwater monitoring event for either the pre- or post-test sampling.

3.4 MPE Operation

The MPE system will be set up according to diagram illustrated on Figure 2 and procedures described in sections above. The proposed wells MW-1 and MW-2 and a combination of these wells will be used during this event.

During initial startup, SOMA will check for blockages, piping leaks, equipment functioning, and safety of the overall setup and operation.

The MTS system will be operating continuously throughout event; however no overnight data collection is proposed at this time. Following initial startup, MTS operational data will include:

1. Oxidizer temperature and pump/air temperature as displayed on the MTS control panel.
2. Pump/air temperature as displayed on the MTS control panel.
3. Total flow will be calculated using the pump vacuum observation.
4. Dilution flow will be read directly at the gas flow gauge at the air dilution flow control valve before the liquid ring pump. Flow will be reported in scfm units.
5. Total liquids removed will be read by the flow meter after the transfer pump attached to the bottom of the knockout pot.
6. Vapor samples and concentration readings will be taken on the discharge side of the liquid ring pump. Vapor samples will be collected in Tedlar bags and submitted to a California state-certified environmental laboratory for analyses. Samples will be collected at achievement of steady-state drawdown, in the beginning and at the end of the test. A sample will also be obtained from the oxidizer stack within 24 hours of the start of pilot test to demonstrate compliance with BAAQMD various-locations modified permit conditions.
7. Extracted soil vapor concentrations will be measured with an appropriately calibrated FID or PID calibrated to hexane.

Appropriate groundwater samples will be collected from the effluent line to demonstrate compliance with the temporary waste discharge permit, which will be utilized for groundwater disposal.

Appendix C includes MTS Operational Data Sheets. MTS operational data will include oxidizer temperature, pump/air temperature, total flow, dilution flow, well flow, and total liquids removed by vacuum.

3.5 Effluent Treatment Provisions

SOMA proposes on-site treatment of extracted groundwater utilizing a GAC, and treated groundwater will be discharged to the public sewer system under appropriate wastewater discharge permit issued by EBMUD. Groundwater samples will be collected and analyzed as required by the discharge permit.

Extracted vapor will be treated using an on-board thermal/catalytic oxidizer and discharged to the atmosphere under modified air discharge permit issued by BAAQMD. Based on the permit requirements, prior to discharge treated vapor will be sampled within first 24 hours of system operation and analyzed by a certified analytical laboratory.

3.6 Laboratory Sample Analysis

Collected groundwater samples will be analyzed for the following:

- TPH-g (EPA Method 8260), TPH-d (EPA Method 8015)
- VOCs (benzene, toluene, ethylbenzene, total xylenes- collectively termed as BTEX, MtBE, and fuel gasoline oxygenates) (EPA Method 8260)

Collected vapor samples will be used to evaluate contaminant mass removal rates and comply with the permit requirements. Vapor samples collected during the pilot test will be analyzed for the following:

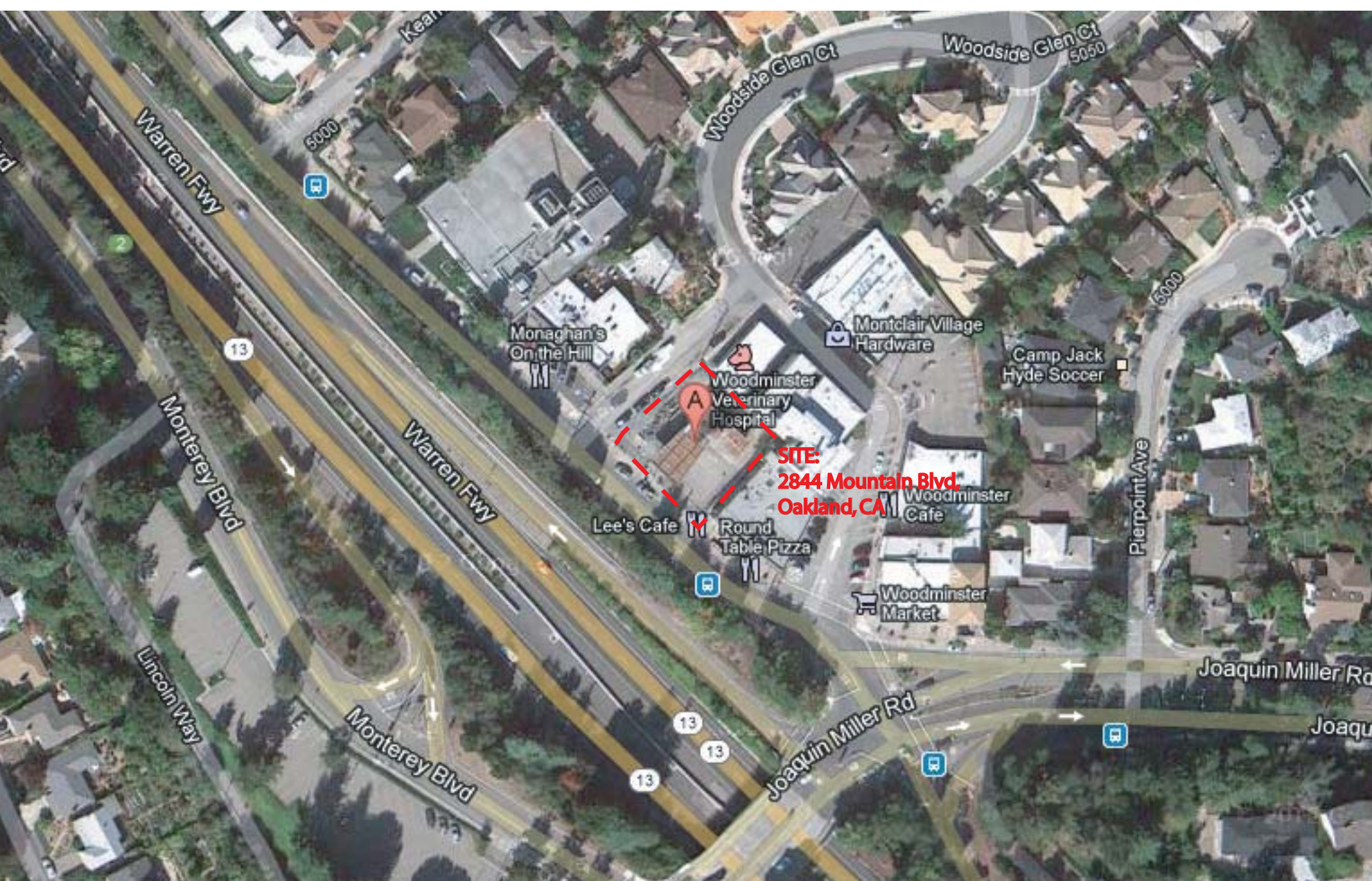
- TPH-g and BTEX using USEPA Test Methods TO-3 and TO-15 (full list).

4. PROJECTED SCHEDULE AND REPORT PREPARATION

The workplan will be implemented upon receipt of authorization from SFBRWQCB. We anticipate that the proposed work, can be completed in approximately ten weeks following receipt of authorization.

Upon completion of all field activities, SOMA will prepare and submit a report documenting description of MPE implementation, results, conclusions and recommendations.

FIGURES



Source: Google (R) 2012

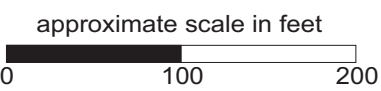
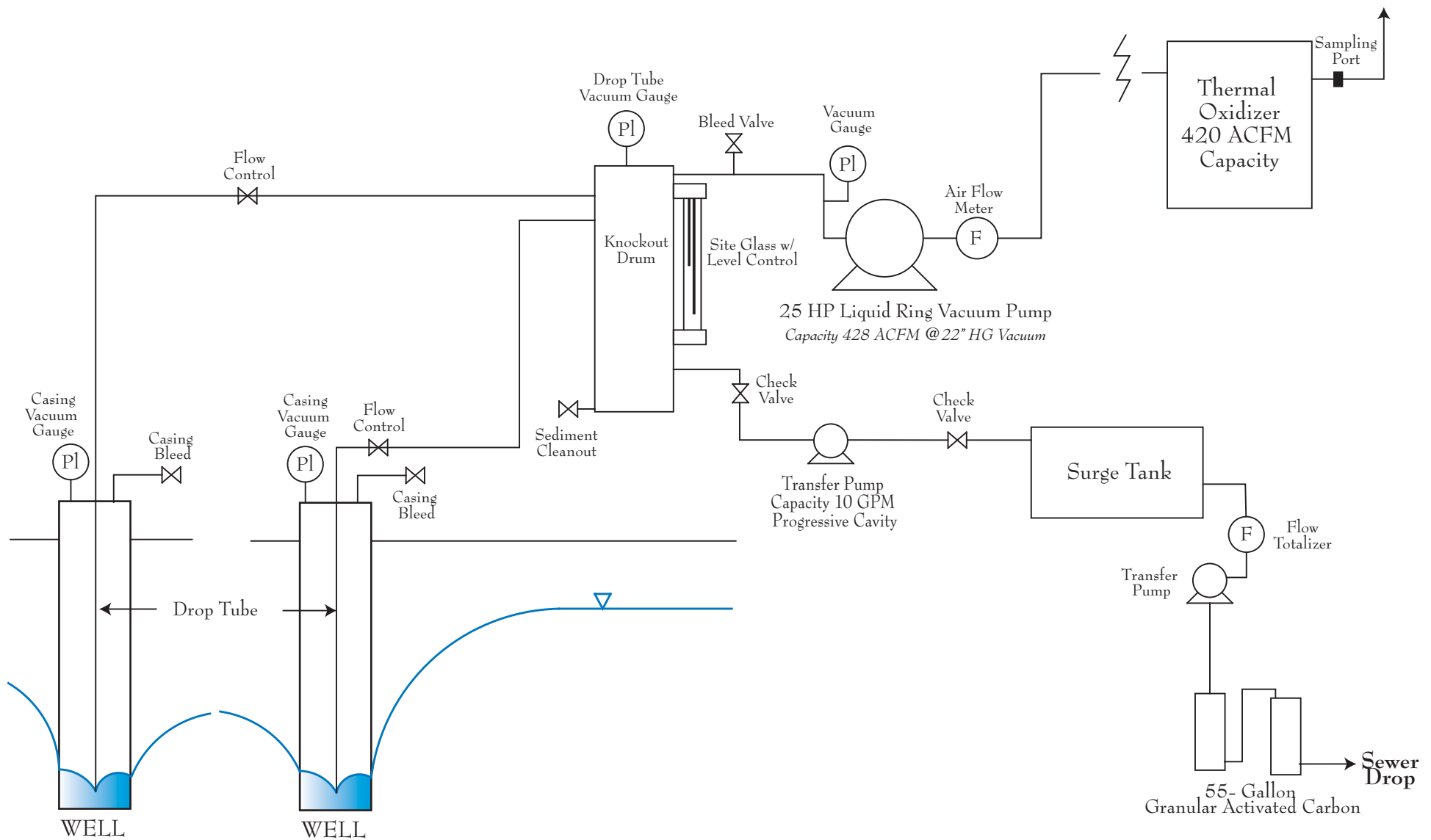


Figure 1: Site Vicinity Map





Not to Scale

Figure 2: MTS Process Schematic

APPENDIX A

SITE HISTORY

Site History and Use

Soil contamination was initially identified at the site in March 1989, during the replacement of the product lines by Diablo Tank and Equipment. Up to 8,400 mg/kg of total PHCs as gasoline (TPH-g) were identified in soil samples collected from the southern edge of the USTs.

In July 1989, On-Site Technologies excavated and disposed of between 90 and 150 cubic yards of contaminated soil from the southern end of the UST that then contained premium unleaded fuel. Up to 3,300 mg/kg of total PHCs as gasoline (TPH-g) were detected in samples collected from excavation sidewalls.

In May 1990, Remediation Service International (RSI) conducted a soil and groundwater assessment at the site including installation of four groundwater monitoring wells (RS-1 through RS-4). Hydrocarbons were detected in both soil and groundwater during this assessment.

In June 1991, soil remediation began at the site using soil vapor extraction (SVE). In October 1991, groundwater remediation began at the site using RSI's remedial system. Remediation was suspended in 1992, apparently due to Desert Petroleum's financial problems.

In 1994 a 280-gallon waste oil UST was removed along with approximately 40 cubic yards of contaminated soil and in 1998 the 4,000-gallon gasoline UST was removed along with approximately 40 cubic yards of contaminated soil.

Reportedly the site has been monitored on a quarterly basis since May 1990, monitoring was discontinued in 1999. A Corrective Action Plan for the site was prepared in February 1995.

Beginning in 1995, hydrocarbon concentrations started to rise and free hydrocarbons appeared in monitoring well RS-1. During interim free-product removal, between October and December 1996, 30.4 gallons of gasoline and 1,077 gallons of contaminated groundwater were removed from monitoring well RS-1.

In March 1999, Western Geo-Engineers of Woodland, California prepared a quarterly groundwater monitoring report and subsurface conduit study for the site. This subsurface conduit study identified a sewer line that was partially submerged below the typical depth to groundwater at the site. This sewer line could potentially act as a conduit for migration of groundwater contamination.

A Report for Soil and Groundwater Assessment was prepared by Agua Science Engineers, Inc in May 24, 2000 which documented further delineation of the soil and groundwater contamination extent in the off-site area.

“Out-of-compliance” correspondence dated June 18, 2009, was issued by Alameda County Environmental Health Services (ACEHS) for the site; this letter was related to a workplan dated December 7, 2000 for installation of five monitoring wells in both on- and off-site areas where elevated concentrations of fuel hydrocarbons had been detected.

Between July 29 and August 18, 2011 two underground storage tanks (USTs), one 10,000-gallon and one 3,000-gallon capacity, were excavated and disposed of off-site. During this event, associated fuel piping was also excavated and disposed of off-site. Depth to the bottom of excavation pit was recorded at 11.5 feet bgs. The UST pit and trenches were not backfilled to grade with clean (imported) fill material or resurfaced because the owner indicated he intends to install new USTs and piping in the near future. The UST pit was lined and backfilled with existing material and concrete rubble. The site is currently fenced in, which limits public access to the property. Confirmation soil samples were collected from beneath removed USTs and associated piping. Two groundwater samples were collected from the UST pit. It appeared that soil and groundwater contamination still exists in the area of removed USTs, as illustrated by levels of chemicals of concern (COCs) in excess of Environmental Screening Levels (ESLs). Lesser soil contamination exists in the area beneath the removed fuel piping.

On March 15 and 16, 2012, under SOMA’s oversight, Fisch Drilling (Fisch) advanced on-site borings CPT/MIP-1 and CPT/MIP-2, and borings DPT-1 through DPT-4. Borings DPT-1 and DPT-2 were advanced adjacent to CPT/MIP-1 and CPT/MIP-2. Boring DPT-1 was renamed CPT/DPT-1 and was continuously logged to verify the CPT obtained data. Based on results of this sampling it appeared that soil and groundwater contamination still exists in the area of removed USTs and in the explored downgradient (off-site) areas. In order to address residual soil contamination, SOMA proposed conducting a shallow soil excavation in the vicinity of former USTs.

In October 2012, based on chemical concentrations in soil, an interim remedial excavation to address the residual contamination in the area of the former USTs was implemented. As part of this remedial excavation an area of approximately 1,200 square feet was excavated to approximately 12 feet bgs and then deepened to approximately 15 feet bgs based on soil discoloration and field PID readings. Approximately 788.65 tons of excavated soils were disposed of at an approved disposal facility and excavation pit was backfilled with clean fill material. Prior to backfill placement confirmation soil samples were collected from the bottom and sidewalls of excavation (where feasible); once backfilled the area was resurfaced with asphalt and concrete, as appropriate. Two groundwater monitoring wells RS-1 and RS-2 were located near or inside the footprint of the excavation, and as required were decommissioned prior to the initiation of excavation activities at the site

In December 2012, SOMA submitted a workplan for additional investigation, well replacement and (multi-phase extraction) MPE pilot testing. This workplan was approved by the San Francisco Bay regional water quality Control board (SF RWQCB) on April 3, 2013. In May 2013, two replacement wells (MW-1 and MW-2) and two soil borings next to each other (DPT-5 and DPT-5W) for collection of soil and groundwater samples were installed. Results were documented in SOMA's report 'Additional investigation and Monitoring Wells Replacement Report' dated September 13, 2013.

In December 2013, MPE pilot test was conducted at the site and results and recommendation were documented in 'Multi-Phase Extraction Pilot Testing Report' dated January 21, 2014. SOMA's recommendation to conduct further MPE events at the site was approved in RWQCB's directive dated June 27, 2014.

APPENDIX B

BAAQMD AND EBMUD PERMITS



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

October 16, 2013

SOMA Environmental Engineering, Inc
6620 Owens Dr, Suite A
Pleasanton, CA 94588

ALAMEDA COUNTY
Tom Bates
Scott Haggerty
Nate Miley
(Vice-Chairperson)
Tim Sbranti

Attention: Erica Fisker

Application Number: 25513
Plant Number: 19396
Equipment Location:
335 So Norfolk Street
San Mateo, CA 94403

CONTRA COSTA COUNTY
John Gioia
David Hudson
Mary Piepho
Mark Ross

MARIN COUNTY
Susan Adams

Dear Applicant:

NAPA COUNTY
Brad Wagenknecht

SUBJECT: CHANGE OF PERMIT CONDITIONS

SAN FRANCISCO COUNTY
John Avalos
Edwin M. Lee
Eric Mar

This letter is to advise you that your application for changes in permit conditions for the following equipment has been approved:

SAN MATEO COUNTY
Carole Groom
(Secretary)
Carol Klatt

S-1 Portable Soil Vapor Extraction System

Operation of this equipment will be subject to permit condition no. 23387 which is attached. If you have any questions regarding this matter, please call **Flora W Chan, Air Quality Engineer II at (415) 749-4630**.

SANTA CLARA COUNTY
Ash Kalra
(Chairperson)
Liz Kniss
Jan Pepper
Ken Yeager

Very truly yours

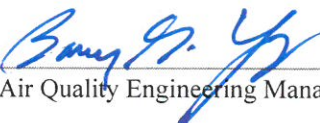
SOLANO COUNTY
James Sperring

Jim Karas, P.E.
Director of Engineering

SONOMA COUNTY
Teresa Barrett
Shirlee Zane

Jack P. Broadbent
EXECUTIVE OFFICER/APCO

by


Air Quality Engineering Manager

BGY:FWC
Attachment: Permit Condition no. 23387



Plant No. 19396, SOMA Environmental Engineering, Inc

Source No. 1, Portable Soil Vapor Extraction System

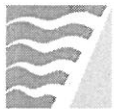
Condition No. 23387

Application No. 25513

1. The operator of this source shall notify the District at least 3 days prior to start-up of operation at any new location. The notification shall include:
 - a. Application Number (25513, 23258, 19214, 15435) and Plant Number (19396, 18119)
 - b. Street address, including zip code, for the location where the equipment will be operated.
 - c. The name and telephone number of a contact person where the equipment will be operated.
 - d. The date of initial start-up and estimated duration of operations at that location.
 - e. The distance from the source to the outer boundary of the nearest K-12 school, or indication that the distance is greater than 1500 feet.

In the event that the start-up is delayed less than 5 days, the operator may provide telephone notice of said change to the assigned Plant Engineer in the Permit Services Division. If the start-up is delayed more than 5 days, written notification must be resubmitted.

2. This equipment shall not remain at any single location for a period in excess of 12 consecutive months, following the date of initial operation except as allowed under Section 2-1-220.10. If this portable equipment remains at any fixed location for more than 12 months, the portable permit will automatically revert to a conventional permanent location permit and will lose its portability. [Basis: Regulation 2-1-220.2]
3. This portable equipment, S-1, shall operate at all times in conformance with the eligibility requirements set forth in Regulation 2-1-220 for portable equipment.
4. This equipment is not to be operated within 1000 feet of the outer boundary of any K-12 school. Such operation will require the submittal of an application for a revised permit to operate so that the applicable requirements of the California Health and Safety Code Section 42301.6 may be met. These notification requirements have been satisfied for operation at the 2001 Sir Francis Drake Boulevard in Fairfax and 2844 Mountain Boulevard, Oakland, CA 94602 [basis:reg 2-1-220.4]
5. This equipment shall be used exclusively for the removal of non-chlorinated volatile organic compounds associated with petroleum products from extracted soil vapor. This shall be demonstrated by onsite sampling required in condition 10 below.
6. Precursor Organic Compound (POC) emissions from Source S-1 shall be abated by Abatement device A-1, Thermal Oxidizer, Catalytic Oxidizer or Carbon adsorption,



Plant No. 19396, SOMA Environmental Engineering, Inc

Source No. 1, Portable Soil Vapor Extraction System

Condition No. 23387

Application No. 25513

during all periods of operation. Soil vapor flow rate shall not exceed 250 scfm. [Basis: Regulation 8-47-301.1,2]

7. The POC abatement efficiency of abatement device A-1 shall be maintained at a minimum of 98.5% by weight for inlet POC concentrations greater than or equal to 2000 ppmv (measured as hexane). For inlet concentrations below 2000 ppmv and greater than or equal to 200 ppmv, a minimum abatement efficiency of 97% shall be maintained. For inlet concentrations below 200 ppmv, a minimum abatement efficiency of 90% shall be maintained. The minimum abatement efficiency shall be waived if outlet POC concentrations are shown to be less than 10 ppmv (measured as hexane). In no event shall benzene emissions to the atmosphere exceed 0.250 pounds per day. Annual emissions of benzene shall not exceed 3.8 pounds per year.
8. While operating as a thermal oxidizer, the minimum operating temperature of A-1 shall not be less than 1400 degrees Fahrenheit. While operating as a catalytic oxidizer, the minimum operating temperature of A-1 shall not be less than 600 degrees Fahrenheit.
9. To determine compliance with Condition Number 8, the dual-mode oxidizer shall be equipped with continuous measuring and temperature recording instrumentation. The temperature data collected from the temperature recorder shall be maintained in a file which shall be available for District inspection for a period of at least 2 years following the date on which such data are recorded.
10. To determine compliance with Condition 7, within 24 hours after start-up of the thermal/catalytic oxidizer at any new location, and within 24 hours of conversion from thermal to catalytic mode at an existing location, the operator of this source shall:
 - a. Analyze the inlet gas to determine the vapor flow rate and concentration of POC present.
 - b. Analyze exhaust gas to determine the flow rate, and the concentration of benzene and POC present.
 - c. Calculate the benzene emission rate in pounds per day based on the exhaust gas analysis and the operating exhaust flow rate. The soil vapor flow rate shall be decreased, if necessary, to demonstrate compliance with Condition 7.
 - d. Calculate the POC abatement efficiency based on the inlet and outlet gas sampling analysis. For the purpose of determining compliance with condition 7, the POC concentration shall be reported as hexane.



Plant No. 19396, SOMA Environmental Engineering, Inc

Source No. 1, Portable Soil Vapor Extraction System

Condition No. 23387

Application No. 25513

- e. Submit to the District's Permit Services Division the test results and emission calculations within one month from the testing date. Samples shall be analyzed according to modified EPA test methods 8015 and 8021 or their equivalent to determine the concentrations of POC and benzene.
11. Within 30 days from the completion of each treatment operation at a given location, the operator of this source shall provide the assigned Plant Engineer in the Permit Services Division with a summary showing the following information:
 - a. The dates and total number of days that the equipment was at that location and the dates, and total number of days that the equipment was operated at that location.
 - b. A summary of the abatement efficiency and benzene emission rate as determined and reported in the start-up sampling report required by condition 10e above.
 - c. The results of any additionally performed emission test, analysis, or monitoring result logged in for the day of operation they were taken.
 - d. The total throughput of contaminated soil vapor processed by S-1 at that location (indicated in cubic feet).
 - e. The total emissions of benzene at that location based on the sampling results required by conditions 10 above (indicated in pounds).
 12. During operation of the Activated Carbon Vessels, the operator of this source shall monitor with a photo-ionization detector (PID), flame-ionization detector (FID), or other method approved in writing by the District's Source Test Manager at the following locations:
 - a. At the inlet to the second to last Carbon vessel in series.
 - b. At the inlet to the last Carbon vessel in series.
 - c. At the outlet of the Carbon vessel that is last in series prior to venting to the atmosphere.When using an FID to monitor breakthrough, readings may be taken with and without a Carbon filter tip fitted on the FID probe. Concentrations measured with the Carbon filter tip in place shall be considered methane for the purposes of these permit conditions.
 13. These monitor readings shall be recorded in a monitoring log at the time they are taken. The monitoring results shall be used to estimate the frequency of Carbon change



Plant No. 19396, SOMA Environmental Engineering, Inc

Source No. 1, Portable Soil Vapor Extraction System

Condition No. 23387

Application No. 25513

- out necessary to maintain compliance with conditions number 14 and 15, and shall be conducted on a daily basis. The operator of this source may propose for District review, based on actual measurements taken at the site during operation of the source, that the monitoring schedule be changed based on the decline in organic emissions and/or the demonstrated breakthrough rates of the carbon vessels. Written approval by the District's Engineering Division must be received by the operator prior to a change to the monitoring schedule.
14. The second to last Carbon vessel shall be immediately changed out with unspent carbon upon breakthrough, defined as the detection at its outlet in excess of the higher of the following limits:
 - a. 10 % of the inlet stream concentration to the carbon bed.
 - b. 10 ppmv (measured as hexane).
 15. The last Carbon vessel shall be immediately changed out with unspent Carbon upon detection at its outlet of 10 ppmv or greater (measured as hexane).
 16. The operator of this source shall maintain the following information for each month of operation of the Activated Carbon Vessels:
 - a. Hours and time of operation.
 - b. Each emission test, analysis or monitoring results logged in for the day of operation they were taken.
 - c. The number of Carbon vessels removed from service.Such records shall be retained and made available for inspection by the District for two years following the date the data is recorded. [basis: Reg.523]
 17. Within 30 days after the end of every calendar year, the operator of this source shall provide the assigned Plant Engineer in the Permit Services Division a year end summary showing the following information:
 - a. The location(s) at which the equipment was operated including the dates operated at each location.
 - b. The total throughput of contaminated soil vapor for the previous four quarters (indicated in cubic feet).
 - c. The total benzene emissions for the previous four quarters (indicated in pounds).[Basis: Regulation 1-523]
 18. The operator shall maintain a file containing all measurements, records and other data that are required to be collected pursuant to the various provisions of this conditional Permit to Operate. All measurements, records and data required to be maintained by the



Plant No. 19396, SOMA Environmental Engineering, Inc

Source No. 1, Portable Soil Vapor Extraction System

Condition No. 23387

Application No. 25513

operator shall be retained for at least two years following the date the data is recorded. [Basis: Regulation 1-523]

19. Any non-compliance with these conditions shall be reported to the Compliance and Enforcement Division at the time that it is first discovered. The submittal shall detail the corrective action taken and shall include the data showing the exceedance as well as the time of occurrence.

End of Conditions

May 15, 2014

**CERTIFIED MAIL
(Return Receipt Requested)
Certified Mail No. 7005 2570 0000 6630 4038**

Mr. Mansour Sepehr
President
SOMA Environmental Engineering, Inc.
6620 Owens Dr., Suite A
Pleasanton, CA 94588

Re: Wastewater Discharge Permit No. 05928020 – 2844 Mountain Blvd., Oakland

Dear Mr. Sepehr:

Enclosed is the revised Special Discharge Permit for SOMA Environmental Engineering, Inc. (SOMA). The permit was revised to extend the expiration date for two years to accommodate additional multi-phase extraction (MPE) events planned for this site in order to remediate contaminated soil and groundwater. No changes to the current terms and conditions are required. Therefore, all terms of the existing permit remain in effect. The new permit expiration date is July 31, 2016.

As a Permit Holder, you are legally responsible for complying with all permit conditions and requirements. SOMA shall report to the Wastewater Environmental Services Division any changes to the operations that significantly affect the quality or volume of wastewater discharge or that deviate from the Permit Terms and Conditions.

If you have any questions regarding this Permit revision, please contact Laurice Brown of the Wastewater Environmental Services Division at (510) 287-1613.

Sincerely,



JACQUELINE T. KEPKE
Manager of Wastewater Environmental Services

JTK:KH:llb

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**SPECIAL DISCHARGE PERMIT
Terms and Conditions**

Permit Number 05928020 SOMA Environmental Engineering, Inc.

REVISION EFFECTIVE 5/17/14

GENERAL CONDITIONS

- I. SOMA Environmental Engineering, Inc. shall comply with all items of the attached Special Discharge Permit Standard Terms and Conditions.
- II. SOMA Environmental Engineering, Inc. shall discharge Special Discharge wastewater only from the specific source described in the *Special Discharge Permit Standard Terms & Conditions* as **other sources**. This permit is for the discharge of wastewater generated from excavation and remediation activities located at 2844 Mountain Blvd., Oakland, CA.
- III. SOMA Environmental Engineering, Inc. shall immediately cease discharge of treated Special Discharge wastewater if not in compliance with any of the terms and conditions of this Special Discharge Permit.
- IV. This Special Discharge Permit is considered a **waiver** of the EBMUD Wastewater Control Ordinance prohibiting:
 - o Discharge of wastewater directly into a manhole or other opening into the community sewer system.
 - o Discharge of stormwater, drainage water, and groundwater to the community sewer.
- V. SOMA Environmental Engineering, Inc. shall not discharge Special Discharge wastewater after this Permit expiration date.

COMPLIANCE REQUIREMENTS

- I. SOMA Environmental Engineering, Inc. shall pretreat or manage all Special Discharge wastewater sufficient to achieve compliance with the limits established in this Special Discharge Permit. Pretreatment shall be according to Figure 2: MTS Process Schematic diagram submitted by SOMA Environmental Engineering, Inc.
- II. SOMA Environmental Engineering, Inc. shall post a sign in the discharge area stating, "All Wastewater Discharge must comply with the Special Discharge Permit."
- III. SOMA Environmental Engineering, Inc. shall not discharge to the sanitary sewer during a rain event or within 24-hours after a rain event, which is defined as any precipitation greater than a drizzle.
- IV. SOMA Environmental Engineering, Inc. shall not discharge wastewater at a flow rate greater than 100 gallons per minute.
- V. All discharge shall be through a totalizing flow meter and logged with date, time, and volume of each discharge and signed by Site Manager.
- VI. SOMA Environmental Engineering, Inc. is responsible for obtaining local permits or approval from the City of Oakland for the use of manholes, cleanouts, and/or side sewers for the discharge of Special Discharge wastewater.

WASTEWATER DISCHARGE LIMITS

SOMA Environmental Engineering, Inc. shall not discharge Special Discharge wastewater into the community sewer if the strength of the wastewater exceeds EBMUD Wastewater Control Ordinance Discharge Limits.



SPECIAL DISCHARGE PERMIT

Terms and Conditions

Permit Number **05928020**

REVISION EFFECTIVE

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MONITORING AND REPORTING REQUIREMENTS

- I. Permit Holder shall monitor wastewater discharge operations to ensure compliance with the terms and conditions of this Special Discharge Permit. Sampling of discharge has been submitted and meets EBMUD limits. Data submitted includes analyses for Purgeable Organics (BTEX), Volatile Organics (VOCs), and Oil and Grease Hydrocarbon (HC). EBMUD reserves the right to require additional testing if the site work warrants.
- II. SOMA Environmental Engineering, Inc. shall submit discharge logs including dates, times, volumes and signature of Site Manager including the authorized signature and certification statement to EBMUD. **The logs are due quarterly based on a calendar year.**

INSPECTIONS

The District may conduct random, unannounced inspections to verify compliance with the terms and conditions of this Special Discharge Permit. SOMA Environmental Engineering, Inc. shall grant District personnel access to the facility and discharge logs to conduct inspections and collect Special Discharge Wastewater samples.

ENFORCEMENT AND PENALTIES

Failure to comply with the terms and conditions of this Special Discharge Permit and *Special Discharge Permit Standard Terms and Conditions* may result in enforcement actions, including violation follow-up fees, civil enforcement penalties, and administrative fines of up to \$5,000 per day.

RATES AND CHARGES

This Special Discharge Permit may be amended to include changes to rates and charges that may be established by the District during the term of this Special Discharge Permit. The discharge shall be charged \$0.02 per gallon for the entire volume of discharge and the permit fee is \$995 per year.

AUTHORIZATION

Special Discharger SOMA Environmental Engineering, Inc. is hereby authorized to discharge Special Discharge Wastewater to the community sewer subject to compliance with EBMUD Wastewater Control Ordinance, Special Discharge Permit Terms and Conditions, and billing conditions.

Effective: August 4, 2013

Expires: July 31, 2016

Director, Wastewater Department

5/17/14

Date

APPENDIX C

MTS OPERATIONAL DATA SHEET



SITE: _____
ADDRESS: _____
PROJECT #: _____

MTS OPERATIONAL DATA

DATE	TIME	OXIDIZER TEMPERATURE (F)	PUMP/AIR TEMPERATURE (F)	STINGER VACUUM (IN-Hg)	PUMP VACUUM (IN-Hg)	TOTAL FLOW (SCFM)	DILUTION FLOW (SCFM)	WELL FLOW (SCFM)	INFLUENT CONCENTRATION (PPMV)	WATER TOTALIZER