



**CITY OF LODI
COUNCIL COMMUNICATION**

AGENDA TITLE: Adopt Resolution Authorizing Additional Task Orders with Treadwell & Rollo Regarding **PCE/TCE** Cleanup and Appropriating Funds (**\$175,000**)
 MEETING DATE: August **6,2008**
 PREPARED BY: Public Works Director

RECOMMENDED ACTION: Adopt a resolution authorizing additional task orders with Treadwell & Rollo regarding PCE/TCE cleanup and appropriating funds as shown below.

BACKGROUND INFORMATION: Staff and our consultants are moving forward on the implementation of the initial phase of the PCE/TCE cleanup program. The first permanent facilities to be constructed include soil vapor extraction and treatment (SVET) and groundwater extraction and treatment (GWET) systems located in the Central Plume Source Area.

The proposed Task Orders 13 and 14, attached as Exhibits A and B, respectively, are for detailed design, specifications, and bid documents for the initial phase facilities, including up to nine vapor extraction wells, two groundwater extraction wells, and the associated treatment facilities for both. The SVET facilities will be vapor granular activated carbon (GAC) filters and the GWET facilities will include air stripping and liquid GAC treatment. The estimated construction cost for these facilities is \$648,000.

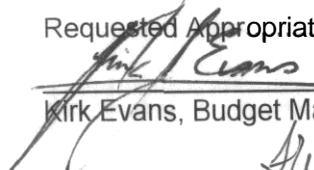
Installation and operation of these facilities are requirements of the Cleanup and Abatement Order for the City of Lodi City-wide Area Groundwater Plume (CAO) and the Source Area Removal Action Engineering Evaluation/Cost Analysis (EE/CA). State Central Valley Regional Water Quality Control Board (Board) is processing the CAO for approval by fall 2008. The Draft EE/CA is in review by the Board and approval is also anticipated by fall 2008. The proposed initial facilities conform to the CAO and EEICA.

The locations for the SVET and GWET facilities are presented in Exhibits C and D, respectively. Groundwater flow modeling results previously presented to the City Council form the basis for the well sizing, screening intervals, and location. These facilities are a part of the planned City-wide remediation program facilities. The operation and performance of these initial facilities and their impact upon monitored soil and groundwater PCE concentrations will be used to guide the placement and design of the future facilities.

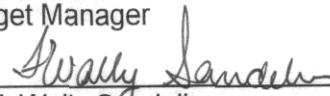
Construction should begin on the SVET and GWET facilities in late 2008, with operations beginning in early 2009. The SVET system is forecast to operate for approximately six years. The GWET system is permanent. A separate proposal for operation and maintenance of these facilities will be presented to the City Council at a future meeting.

FISCAL IMPACT: There will be increased costs for operation and maintenance that will be borne by the Central Plume Fund.

FUNDING AVAILABLE: Requested Appropriation: Central Plume Fund (190) \$175,000

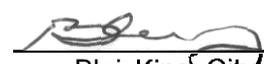


 Kirk Evans, Budget Manager



 F. Wally Sandelin
 Public Works Director

FWS/pmf
 Attachments

APPROVED: 

 Blair King, City Manager



7 July 2008

Project: 3923.25 – Lodi Task No. 13 SVE Design

F. Wally Sandelin
Public Works Director
Department of Public Works
City of Lodi
221 West Pine Street
Lodi, California 95240

Subject: Lodi Task No. 13 - Preparation of SVE Detailed Design, Specifications, and Bid Documents
Central Plume, Lodi, California

Dear Mr. Sandelin:

Under Lodi Task No. 13, Treadwell & Rollo, Inc. (Treadwell & Rollo) will prepare detailed designs, specifications, and bid documents for the first phase (Phase I) of the soil vapor extraction (SVE) system for the Central Plume Source Area in Lodi, California. The objective of the work is to prepare the plans for construction of facilities to remove primarily tetrachloroethene (PCE) impacted soil gas from soil pores. Phase I will address the area of highest PCE soil gas concentrations in the city block bounded by Pine, Church, Oak, and Pleasant streets.

The Central Plume is regulated by the Central Valley Regional Water Quality Control Board (Water Board) under Cleanup and Abatement Order (CAO) No. R5-2004-0043. The Water Board has prepared a draft revised CAO for the Central Plume area dated 7 May 2008. As part of the draft CAO, an Engineering Evaluation and Cost Analysis (EE/CA) is required for the Central Plume Source Area. Treadwell & Rollo prepared the draft EE/CA, which was approved by the City of Lodi with revisions on 27 June 2008, and the revised draft EE/CA was submitted to the Water Board on 7 July 2008.

SVE has been used as a remedy to remove PCE from the soil gas since 2000 at the Central Plume Source Area. Testing has included SVE and dual-phase extraction (DPE). The results of this testing have demonstrated that SVE is highly effective, and to-date, approximately 6 tons of PCE have been removed.

Over the past several months, Treadwell & Rollo prepared a conceptual-level cost estimate for the SVE system, including engineering design. This plan was reviewed by the City and finalized on 8 June 2008, including revisions requested by the City. Since then, the City has evaluated the needed level of detail for the SVE design documents. In a teleconference on 27 June 2008, the City indicated its preference for detailed design and provided a facsimile list of needed items as part of that design. The description below presents our scope of work to prepare the documentation and provide the City's needed level of detail.

F. Wally Sandelin
Public Works Director
Department of Public Works
City of Lodi
7 July 2008
Page 2

SCOPE OF WORK

Treadwell & Rollo will perform the scope of work in the following activities:

SVE Design Engineering

Treadwell & Rollo will design the SVE system, which is expected to include nine vapor extraction wells and vapor-phase granular activated carbon treatment. Using results from SVE and DPE testing, we will identify the location, size, screen interval, flow rate, instrumentation, and piping for extraction wells, the location, size, backfill, and vaults for piping, and the location, size, piping, equipment, treatment system influent flow rates and anticipated PCE concentrations. The design will include details specified by the City on 27 June 2008.

SVE Design Drawings

Treadwell & Rollo will prepare engineering drawings to construct the SVE system. The drawings will include details specified by the City in a facsimile dated 27 June 2008. The drawings will include the following:

- Title sheet, including project location and map
- Notes and general specifications
- Site plan, including utility locations
- Piping and instrumentation diagrams
- Well, well head, vault, and trench details
- Treatment system layout
- Enclosure details, including instrumentation panel, slab, masonry, and roof details
- Electrical details

SVE Specifications and Bid Documents

Treadwell & Rollo will prepare engineering specifications and bid documents to select contractors to construct the SVE system. The specifications will include details needed by the contractors to evaluate the remedial system construction and prepare bids for comparison with other bidding contractors.

SCHEDULE

Treadwell & Rollo will provide the results of our work according to the following durations and due dates:

- Engineering – July 2008
- Drawings – July –August, due date of 17 July for 50% of the design drawings
- Specifications and bid documents – September- October, due date of 18 October for specifications and bids

Our ability to complete our work according to this schedule is dependent on a number of factors. These factors include available data, decisions by the City such as location of the SVE treatment system, reviews by the City and the Water Board, permitting by regulatory agencies, and others. We will keep the City apprised of our schedule and make adjustments with the City's prior consent as needed.

F. Wally Sandelin
Public Works Director
Department of Public Works
City of Lodi
7 July 2008
Page 3

FEE ESTIMATE

To accomplish this scope of work, we estimate our fees to be approximately \$70,000, which is subdivided according to the following:

- Engineering – \$25,000
- Drawings – \$30,000
- Specifications and Bid Documents – \$15,000

This level of effort is needed to provide the necessary detail for project control. For reference, our conceptual cost estimate included design costs for a lower level of detail based on our DPE testing design drawings. This lower level of detail required approximately half the scope and fees compared to this scope in Task No. 13.

If you agree with the scope of Task No. 13, please provide a copy of your authorization. Treadwell & Rollo appreciates the opportunity to provide you continuing services. If you have any questions, please contact Patrick Hubbard at (415) 955-9040.

Sincerely yours,
Treadwell & Rollo, Inc.



Patrick Hubbard, PG, CEG
Principal Geologist



Philip Smith, REA II
Vice President

7 July 2008

Project: 3923.25 –Lodi Task No. 14 Groundwater Design – Central Plume Source Area

F. Wally Sandelin
Public Works Director
Department of Public Works
City of Lodi
221 West Pine Street
Lodi, California 95240

Subject: Lodi Task No. 14 - Preparation of Groundwater Detailed Design, Specifications, and Bid Documents
Central Plume Source Area, Lodi, California

Dear Mr. Sandelin:

Under Lodi Task No. 14, Treadwell & Rollo, Inc. (Treadwell & Rollo) will prepare detailed designs, specifications, and bid documents for a groundwater extraction and treatment system for the Central Plume Source Area in Lodi, California. The objective of the work is to prepare the plans for construction of facilities to mitigate the down-gradient migration of tetrachloroethene (PCE) dissolved in groundwater. The Central Plume Source Area includes the general area of highest PCE groundwater concentrations in the city block bounded by Pine, Church, Oak, and Pleasant streets.

The Central Plume is regulated by the Central Valley Regional Water Quality Control Board (Water Board) under Cleanup and Abatement Order (CAO) No. R5-2004-0043. The Water Board has prepared a draft revised CAO for the Central Plume area dated 7 May 2008. As part of the draft CAO, an Engineering Evaluation and Cost Analysis (EE/CA) is required for the Central Plume Source Area. Treadwell & Rollo prepared the draft EE/CA, which was approved by the City of Lodi with revisions on 27 June 2008, and the revised draft EE/CA was submitted to the Water Board on 7 July 2008.

Based on groundwater flow modeling for the City, Treadwell & Rollo evaluated the potential for groundwater extraction and treatment to mitigate the down-gradient migration of PCE. The results of this modeling indicate that the extraction and treatment will likely be effective under the conditions assumed for the model. The modeling results were accepted by the Water Board in a meeting on 25 October 2007.

Over the past several months, Treadwell & Rollo prepared a conceptual-level cost estimate for the groundwater extraction and treatment system, including engineering design. This plan was reviewed by the City and finalized on 8 June 2008 including revisions requested by the City. Since then, the City has evaluated the needed level of detail for the groundwater extraction and treatment design documents. In a teleconference on 27 June 2008, the City indicated its preference for detailed design and provided a facsimile list of needed items as part of that design. The description below presents our scope of work to prepare the documentation and provide the City's needed level of detail.

F. Wally Sandelin
Public Works Director
Department of Public Works
City of Lodi
7 July 2008
Page 2

SCOPE OF WORK

Treadwell & Rollo will perform the scope of work in the following activities:

Groundwater Extraction and Treatment Design Engineering

Treadwell & Rollo will design the Central Plume Source Area groundwater extraction and treatment system, which is expected to include two groundwater extraction wells and air stripping and/or water-phase granular activated carbon treatment. We expect that additional groundwater flow simulations may be needed to refine our design. Using results from groundwater flow modeling, we will plan for the location, size, screen interval, flow rate, instrumentation, and piping for extraction wells. We will recommend the location, size, backfill, and vaults for piping, and the location, size, piping, equipment, influent flow rates and PCE concentrations for the treatment system. The design will include details specified by the City on 27 June 2008.

Groundwater Extraction and Treatment Design Drawings

Treadwell & Rollo will prepare engineering drawings to construct the groundwater extraction and treatment system. The drawings will include details specified by the City in a facsimile dated 27 June 2008. The drawings will include the following:

- Title sheet, including project location and map
- Notes and general specifications
- Site plan, including utility locations
- Piping and instrumentation diagrams
- Well, well head, vault, and trench details
- Treatment system layout
- Enclosure details, including instrumentation panel, slab, masonry, and roof details
- Electrical details

Groundwater Extraction and Treatment Specifications and Bid Documents

Treadwell & Rollo will prepare engineering specifications and bid documents to select contractors to construct the groundwater extraction and treatment system. The specifications will include details needed by the contractors to evaluate the remedial system construction and prepare bids for comparison with other bidding contractors.

SCHEDULE

Treadwell & Rollo will provide the results of our work according to the following durations and due dates:

- Engineering – July 2008
- Drawings – July – August, due date of 17 July for 50% of the design drawings
- Specifications and Bid Documents – September- October, due date of 18 October for specifications and bids

Our ability to complete our work according to this schedule is dependent on a number of factors. These factors include available data, decisions by the City such as location of the groundwater extraction and

F. Wally Sandelin
Public Works Director
Department of Public Works
City of Lodi
7 July 2008
Page 3

treatment system, reviews by the City and the Water Board, permitting by regulatory agencies, and others. We will keep the City apprised of our schedule and make adjustments with the City's prior consent as needed.

FEE ESTIMATE

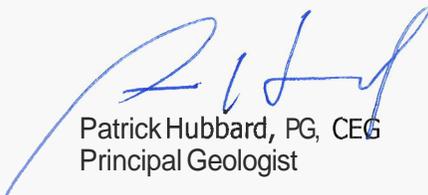
To accomplish this scope of work, we estimate our fees to be approximately \$75,000, which is subdivided according to the following:

- Engineering – \$25,000
- Drawings – \$35,000
- Specifications and Bid Documents – \$15,000

This level of effort is needed to provide the necessary detail for project control. For reference, our conceptual cost estimate included design costs for a lower level of detail based on our DPE testing design drawings. This lower level of detail required approximately half the scope and fees compared to this scope in Task No. 14.

If you agree with the scope of Task No. 14, please provide a copy of your authorization. Treadwell & Rollo appreciates the opportunity to provide you continuing services. If you have any questions, please contact Patrick Hubbard at (415) 955-9040.

Sincerely yours,
Treadwell & Rollo, Inc.



Patrick Hubbard, PG, CEG
Principal Geologist

39232503.PBH



Philip Smith, REA II
Vice President

INITIAL PHASE

Exhibit C

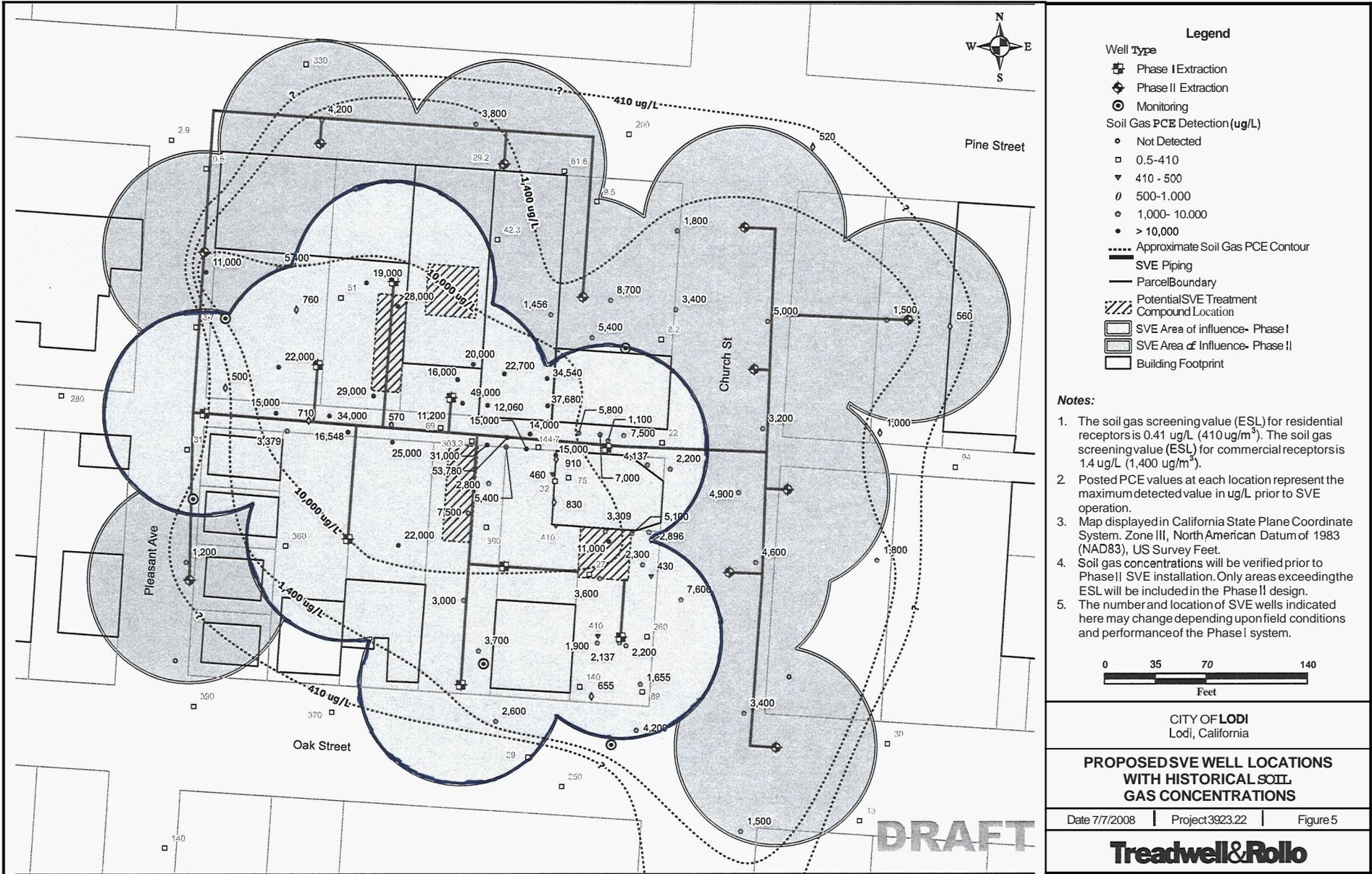
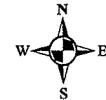


Exhibit D



- Legend**
- Monitoring Well
 - ◆ Town Well
 - Extraction Well
 - Piping
 - - - Tetrachloroethylene groundwater Isoconcentration Contour
 - ▭ Central Plume Source Area
 - ▭ Parcel Boundary
 - ▭ Building Footprint

Notes:

1. The soil gas screening value (**ESL**) for residential receptors is 0.41 ug/L (410 ug/m³). The soil gas screening value (**ESL**) for commercial receptors is 1.4 ug/L (1,400 ug/m³).
2. Groundwater isoconcentration contours for tetrachloroethylene (PCE) represent interpreted conditions for the shallow zone during the third quarter of 2007 (Treadwell & Rollo, 2008a).
3. Map displayed in California State Plane Coordinate System, Zone 11, North American Datum of 1983 (NAD83), US Survey Feet.
4. The number and location of extraction wells may change depending upon field conditions and well performance.

Date 7/4/2008	Project 3923.22	Figure 6
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DRAFT

RESOLUTION NO. 2008-152

A RESOLUTION OF THE LODI CITY COUNCIL
AUTHORIZING ADDITIONAL TASK ORDERS WITH
TREADWELL & ROLLO REGARDING PCE/TCE CLEAN
UP AND FURTHER APPROPRIATING FUNDS

WHEREAS, staff and consultant, Treadwell & Rollo of San Francisco, California, are moving forward on the implementation of the initial phase of the PCE/TCE cleanup program. The first permanent facilities to be constructed include soil vapor extraction and treatment (SVET) and groundwater extraction and treatment (GWET) systems located in the Central Plume Source Area; and

WHEREAS, the proposed Task Orders 13 and 14 are for detailed design, specifications, and bid documents for the initial phase facilities, including up to nine vapor extractor wells, two groundwater extraction wells, and the associated treatment facilities for both. The SVET facilities will be vapor granular activated carbon (GAC) filters and the GWET facilities will include air stripping and liquid GAC treatment; and

WHEREAS, the estimated cost of Task Orders 13 and 14 is \$175,000.

NOW, THEREFORE, BE IT RESOLVED that the Lodi City Council does hereby authorize additional task orders with Treadwell & Rollo, of San Francisco, California, regarding PCE/TCE cleanup; and

BE IT FURTHER RESOLVED that funds in the amount of \$175,000 be appropriated from the Central Plume Fund for this project.

Dated: August 6, 2008

I hereby certify that Resolution No. 2008-152 was passed and adopted by the City Council of the City of Lodi in a regular meeting held August 6, 2008, by the following vote:

AYES: COUNCIL MEMBERS – Hansen, Hitchcock, Johnson, Katzakian,
and Mayor Mounce

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – None

ABSTAIN: COUNCIL MEMBERS – None


RANDI JOHL
City Clerk