Technical Memorandum

Date:	March 2007
From:	NASA/City of Pasadena
To:	Mr. Alan Sorsher (Department of Health Services)
	Mr. Mark Ripperda (U.S. Environmental Protection Agency)
	Mr. Michel Iskarous (Department of Toxic Substances Control)
	Mr. Mohammad Zaidi (Regional Water Quality Control Board)
Subject:	Demolition of City of Pasadena's Air Stripper System

1.0 Introduction

This technical memorandum provides a record of the demolition activities associated with the removal of the air stripper unit and its accessory units. The air stripper system was used to remove the volatile organic compounds (VOCs) from groundwater extracted from four City of Pasadena wells (Arroyo Well, Well 52, Windsor Well, and Ventura Well). These VOCs were associated with past waste disposal practices at the Jet Propulsion Laboratory (JPL). The system was operated by the City of Pasadena and funded by the National Aeronautics and Space Administration (NASA) under the Devil's Gate Agreement. System operation began in 1990 and was discontinued in January 2002 when perchlorate was detected above the California Department of Health Services (DHS) action level in the groundwater from the extraction wells. (The action level was changed from 18 µg/L to 4 µg/L in January 2002 and has since been revised again. The current action level, now referred to as a notification level, is 6 µg/L).[1] In January 2006, a new agreement was signed between NASA and the City of Pasadena for construction of the Monk Hill Treatment System for VOC and perchlorate removal from the four City of Pasadena production wells.[2] The design of the new Monk Hill Treatment System includes granular activated carbon (GAC) units for VOC removal. Thus, the air stripper system was no longer needed.

[1] California DHS. 2006. Drinking Water Notification Levels. Available at: http://www.dhs.ca.gov/ps/ddwem/chemicals/AL/default.htm. May.
[2] NASA. 2006. Monk Hill Treatment System Agreement. Parties to the agreement are the City of Pasadena and the California Institute of Technology (Caltech). The agreement is available on the JPL CERCLA Program Web site: http://jplwater.nasa.gov/NMOWeb/AdminRecord/docs/NAS710386.PDF. January.

A technical memorandum was prepared in April 2006 to justify the removal of the air stripper system.[3] In response, DHS issued a letter of acceptance on April 19, 2006 (Attachment 1). The Pasadena Water and Power (PWP) department issued a letter request to Calgon Carbon Corporation (Calgon) on August 16, 2006, which directed Calgon to remove the system per the original contract (Attachment 2).

2.0 System Description

The air stripper system was located within the Hahamangna Watershed Park at 21 Karl Johnson Parkway, Pasadena, California 91001.

The air stripping treatment system consisted of two towers of identical design, each capable of treating a maximum flowrate of 3750 gallons per minute (gpm). Each tower was 14 feet in diameter with a 40-foot bed depth of polypropylene packing. The overall height of each tower with the off-gas duct was approximately 50 feet. Each tower had a single centrifugal air blower capable of delivering air at a rate of 25,000 cubic feet per minute (cfm). The off-gas from the air stripper system was treated by passing through two 12-foot diameter GAC beds, each containing 18,000 pounds of carbon.

The effluent from the air stripping towers flowed by gravity into subsurface concrete sumps, which are 8 feet deep and have a capacity of 35,000 gallons. The sumps were not removed.

3.0 Preparatory Work

Prior to physical demolition of the air stripper system, preparatory work included a nesting bird survey, permitting, subcontracting, and waste profiling.

3.1 Nesting Bird Survey

On October 2, 2006, a biologist from Bon Terra Consulting conducted a survey at the site. The purpose of the survey was to evaluate the presence or absence of active bird nests within and immediately surrounding (500 feet) the air stripping system. Only one bird nest, which had been previously identified by PWP, was observed between the two stripping towers. Based on the un-kept structure of the nest, the lack of any visible fresh material, and the lack of any nesting

[3] NASA. 2006. "Technical Memorandum: Redundancy of the Air Stripper Unit for the City of Pasadena's Monk Hill Treatment System." http://jplwater.nasa.gov/NMOWeb/AdminRecord/docs/NAS710396.PDF . April.

activities over several hours, the nest was determined to be inactive. A report was issued to PWP on October 26, 2006 (Attachment 3).

3.2 Permitting

A Construction Strategy and Traffic Management Plan was submitted to the City of Pasadena Department of Public Works and Transportation on November 20, 2006. The plan was approved by the department on November 28, 2006 (Attachment 4).

A California Environmental Quality Action (CEQA) Notice of Exemption was prepared by PWP and approved by the City's Planning Department. The notice was filed with Los Angeles County on November 22, 2006 (Attachment 5).

A demolition permit was completed and filed with the City's Planning and Development department (Building Section) on December 4, 2006 (Attachment 6).

3.3 Subcontracting

Calgon was retained to complete the demolition of the air stripping system based on the agreed cost in the original contract with PWP. Calgon subcontracted Pacific Hydrotech for the air stripper demolition task (Attachment 7). Pacific Hydrotech subcontracted Graham Crackers Demo, Inc., of Menifee, California, to perform the demolition.

3.4 Waste Profiling

Calgon sampled the carbon from the two vapor phase GAC units on December 1, 2006 and samples were sent to Severn Trent Laboratories, Inc. for analysis (Attachment 8). Sample analyses were conducted on December 8 and 15, 2006.

Activated carbon was removed from the GAC units and placed in 23 SuperSaks for storage on December 14 and 15, 2006. The SuperSaks were placed at the fenced area near Well 52 pending analytical results for the carbon. Black plastic packing material was also collected from the GAC vessels and stored in bags.

The SuperSaks were received at Calgon's Big Sandy Reactivation Facility in Catlettsburg, Kentucky on January 2, 2007. A letter of acceptance for thermal recycling of carbon was issued on January 11, 2007 (Attachment 9).

4.0 Demolition

Demolition work started on December 18, 2006. Appropriate signage was placed on the truck route to the air stripper system. The stripper tower outlet pipes that connected the stripper towers with the GAC units were removed first. The GAC units also contained black plastic packing material. Both GAC vessels were demolished and loaded on dump trucks. The first dump truck left the site for a recycling facility at 10:00 am and the second at 1:40 pm. The vent pipe for the GAC units was accidentally dropped, damaging the eastern portion of the fence surrounding the site.

The first stripper tower was demolished on December 19, 2006, and the second stripper tower was demolished on December 20, 2006. The pieces were loaded on dump trucks and shipped to a recycling facility.

On December 21, 2006, a portion of the plastic packing material from inside the air stripping units was loaded to dump trucks and shipped to a recycling facility (Attachment 10). A water pipeline at the site was breached when the contractors were trying to dismantle the aboveground piping. The spilled water made the site conditions inappropriate for further removal of debris. The remainder of debris was then collected on December 26, 2006.

Sections of the underground pipelines that were terminated aboveground were closed using blind-flanges (0.5-inch thick steel) on January 19, 2007. The damaged section of the fence was also repaired on the same day. The last part of the demolition was to cover the exposed opening of the underground sumps with steel plates (the smaller openings on the sumps were covered with diamond plates). That work was completed on February 15, 2007. Photos were taken from different stages of demolition activities (Attachment 11).

ATTACHMENT 1
DHS Acceptance Letter for Demolition of Air Stripper

State of California—Health and Human Services Agency
Department of Health Services

California Department of Health Services
SANDRA SHEWRY
Director

ARNOLD SCHWARZENEGGER
Governor

April 19, 2006

RECEIVED 04/24/06

Mr. Gary Takara, P.E.
Senior Engineer
City of Pasadena
Department of Water and Power
150 South Los Robles Ave
Suite 200
Pasadena, CA 91101

Dear Mr. Takara:

SYSTEM 1910124 –APRIL 2006 TECHNICAL MEMORANDUM ON REDUNDANCY OF AIR STRIPPER UNIT FOR MONK HILL TREATMENT SYSTEM

This letter is to confirm the issues discussed during our teleconference of Tuesday, April 18, 2006 regarding the above-referenced treatment system

Based upon the information currently available, we concur with the conclusions listed in the Technical Memorandum. The Technical Memorandum indicates that air stripping treatment will not be needed and that modeling calculations for the usage of granular activated carbon demonstrate the theoretical feasibility of that treatment technique.

We also emphasized the importance of the design and layout of the treatment plant equipment so that carbon changeouts can be carried out in a smooth and efficient manner.

In addition, we pointed out that the plant design must include proper treatment and disposal of carbon backwash water, along with any other waste flows that may be incidental to plant operations.

If you have any further questions, please contact Alan Sorsher, Associate Sanitary Engineer of the Metropolitan District, at 1449 W. Temple St., Room 202, Los Angeles, CA 90026 or telephone (213) 580-5777.

Sincerely,

Jeff O'Keefe, P.E., District Engineer
Metropolitan District

Enclosure

cc: Mr. Tony Zampiello
Executive Officer
Raymond Basin Management Board
725 North Azusa Ave.
Azusa, CA 91702

Mr. Bob Hayward
General Manager
Lincoln Avenue Water Company
564 West Harriet Street
Altadena, CA 91001-4537

Mr. Steven W. Slaten
Remedial Project Manager
NASA Management Office
Jet Propulsion Laboratory
M/S 180-801
4800 Oak Grove Drive
Pasadena, CA 91109

Mr. Keith Fields, P.E.
Battelle Environmental Restoration Department
505 King Ave.
Columbus, OH 43201

Mohammad Zaidi
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street
Suite 200
Los Angeles, CA 90013

Mark Ripperda
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
M/S SFD-8-3
San Francisco, CA 94105

Michel Iskarous
California Environmental Protection Agency
Department of Toxic Substances Control
1011 North Grandview Avenue
Glendale, CA 91201

ATTACHMENT 2
PWP Letter to Calgon for Demolition of Air Stripper

PASADENA WATER AND POWER

August 16, 2006

Mr. Daniel Brooks
Integrated Systems Manager
Calgon Carbon Corporation
8508 Hunt Canyon Road
Corona, California 92883

Subject: Contract Number 14,059 Personal Services

Dear Mr. Brooks:

As agreed upon at the meeting on August 1, 2006, Pasadena Water Power (PWP) hereby submits a request effective September 2, 2006 to end the monthly service payments for the temporary air stripping for removal of VOC; the VOC Treatment Plant is no longer needed and has been out of service since January 2002. PWP assumes this is your understanding, if not, please advise us immediately. Therefore, the last monthly payment for leasing Calgon's equipment will include the month of August, but will end as of September 2, 2006.

PWP is also awaiting Calgon's proposed work plan for staff's review. The proposed plan will include the type of equipment needed to tear down and remove the treatment plant, general information describing the work, estimated cost and a schedule for the construction work. At the August 1, 2006 meeting you were informed as to the extent of Calgon's scope of work and what existing infrastructure would remain at the site for PWP's ownership. Also, you were informed that the proposed plan would be shared with the City's Planning Department for the purpose of determining the level of environmental compliance that will be required.

The proposed work plan will be in accordance with the terms of Contract Number 14,059 Exhibit B (Calgon Carbon Corporation Price Proposal dated January 11, 1990) item 4, which is related to tear down activities.

If you have any questions, please contact Mr. Gary Takara, Principal Engineer, at (626) 744-3729 or by e-mail at gtakara@cityofpasadena.net.

Sincerely,

Phyllis E. Currie
General Manager

RK/hs

Attachment

c: Fitzroy Hamilton – Calgon Carbon Corporation
Steve Slaten - National Aeronautics and Space Administration

ATTACHMENT 3
Bon Terra Report on Nesting Bird Survey

BonTerra
CONSULTING
An Environmental Planning/Resource Management Corporation

October 26, 2006

Roumiana Karakanova
City of Pasadena
Department of Water and Power
100 N. Garfield Ave., Room 328
Pasadena, CA 91109

VIA E-MAIL
rkarakanova@cityofpasadena.net

Subject: Results of a Nesting Bird Survey at a Water Extraction Facility within Hahamongna Park in the City of Pasadena, California

Dear Miss Karakanova:

This letter report presents the methods and results of a focused surveys to evaluate the presence or absence of active bird nests within and immediately surrounding a water extraction facility (herein referred to as the project site) within Hahamongna Park in the City of Pasadena, California in the City of Pasadena, California. A survey of the facility and immediate adjacent vegetation (within 500 feet) was conducted and one nest was monitored. In conclusion, no active nests or evidence of nesting activity were detected.

Project Location and Description

The project site is located in the northwestern portion of the City of Pasadena, California (see Exhibit 1). The site is situated in the Arroyo Seco floodplain, on the eastern edge of Hahamongna Park just north of Highway 210 (see Exhibit 2). The intersection of Ventura and Windsor is located approximately 200 feet northeast of the site. The site is located in the southeastern quarter the Pasadena, California, U.S. Geological Service (USGS) 7.5 Minute quadrangle map.

The site consist of a water extraction facility which includes large tanks and pipes which rise up to roughly 35 feet in height (see Exhibit 4). The roughly quarter-acre area, as well as an access road adjacent to its western edge, are paved and contain no vegetation. Immediately adjacent areas are mostly undeveloped but include several large re-charge basins to the west of the site. Native vegetation occurs along the edges of the basins and on the slopes east of the site which reperesent the edge of the flood plain. Vegetation consists of coast live oak (*Quercus agrifolia*)/western sycamore (*Platanus racemosa*) woodland with scattered patches of scrub vegetation types.

Survey Methods

A survey of the facility was conducted on October 2, 2006. BonTerra biologist Marc Blain conducted the survey by walking throughout the facility and monitoring the areas for two hours. The survey included a visual search of all suitable nesting areas visible from the ground with the use of binoculars and a spotting scope.

3452 E. Foothill Blvd.
Suite 420
Pasadena
California 91107
(626) 351-2000
(626) 351-2030 fax
www.bonterraconsulting.com

Special consideration was paid to the nest site identified by the Department of Water and Power staff. The survey included a search of the adjacent areas within 500 feet of the facility. The survey was conducted under optimal weather conditions. All bird species, observed were recorded in field notes and are listed in Appendix A.

Results and Conclusion

One bird nest was observed at the site (see Exhibit 3). The large nest, which had been previously identified by Department of Water and Power staff, was located between the two large water tanks (see Exhibit 4). Based on the un-kept structure of the nest, the lack of any visible fresh materials, and the lack of any nesting activity over several hours, the nest was determined to be in-active. Due to the time of year of the survey, the lack of nesting activity was typical and expected. The nest appears to have been used by either red-tailed hawks (*Buteo jamaicensis*) or ravens (*Corvus corax*) as recently as spring/summer of 2006. In addition, based on the volume of nesting material on the ground under the nest, it has likely been rebuilt and used over multiple years. No nesting is expected to occur at the site or adjacent area until spring 2007.

Based on these results, dismantling of the facility would not impact any active bird nests and would not violate the Migratory Bird Treaty Act if conducted prior to the start of the nesting season in Spring 2007.

If you have any comments or questions, please call Marc Blain at (626) 351-2000.

Sincerely,

BONTERRA CONSULTING

for

Ann M. Johnston
Principal, Biological Services

for

Marc Blain
Biological Resources Manager

Enclosures: Exhibits 1, 2, 3, and 4
Appendix A: Bird Compendium

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APPENDIX A

BIRD COMPENDIUM

BIRDS

ODONTOPHORIDAE - QUAILS

Callipepla californica
California quail

COLUMBIDAE - PIGEONS & DOVES

Zenaida macroura
mourning dove

TROCHILIDAE - HUMMINGBIRDS

Calypte anna
Anna's hummingbird

PICIDAE - WOODPECKERS

Melanerpes formicivorus
acorn woodpecker

TYRANNIDAE - TYRANT FLYCATCHERS

Sayornis nigricans
black phoebe

CORVIDAE - JAYS & CROWS

Aphelocoma californica
western scrub-jay

Corvus brachyrhynchos
American crow

TIMALIIDAE - WRENTITS

Chamaea fasciata
wrentit

MIMIDAE - THRASHERS

Mimus polyglottos
northern mockingbird

EMBERIZIDAE - SPARROWS & JUNCOS

Pipilo crissalis
California towhee

FRINGILLIDAE - FINCHES

Carduelis psaltria
lesser goldfinch

Regional Location

Exhibit 1

Nesting Bird Survey

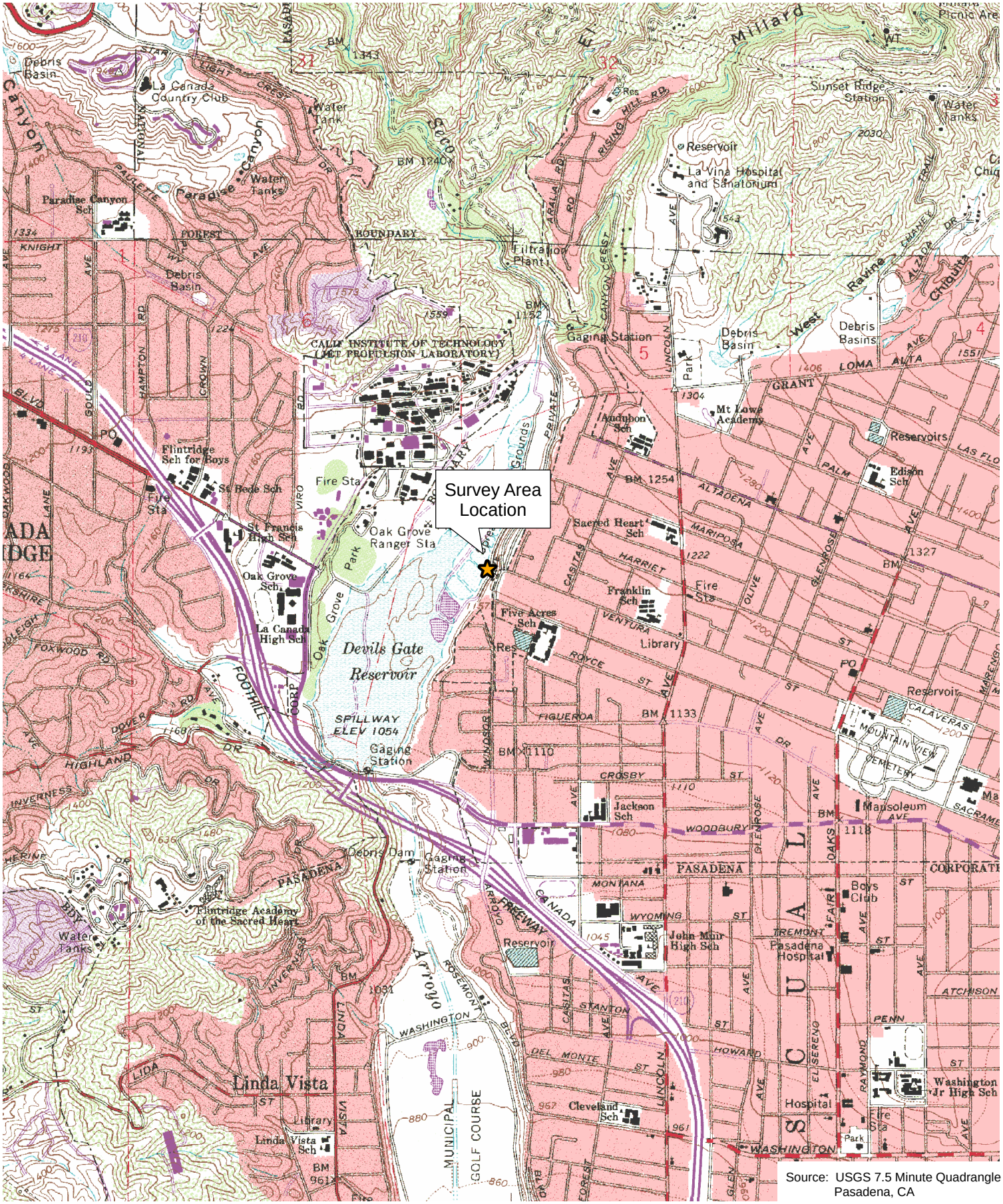
N W E S

10 5 0 10 Miles

BonTerra CONSULTING

R:\PAS\Projects\Pasaden\J013\Graphics\Ex1_RL_102506.pdf

D:\Projects\Pasadena\J013\Ex_RL_102506.mxd



D:/Projects/Pasadena/J013/Ex_LV_quad_072406.mxd

Local Vicinity

Exhibit 2

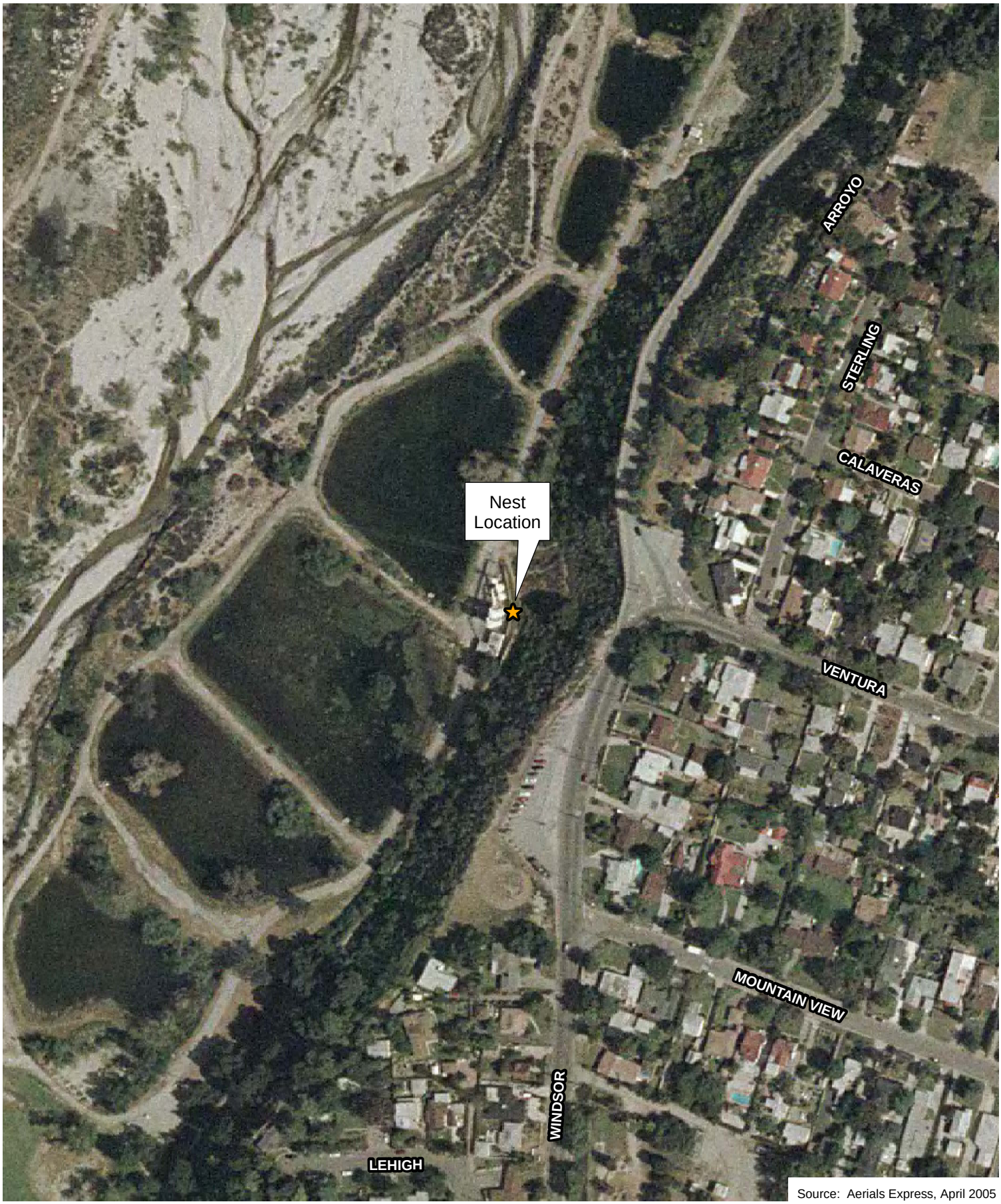
Nesting Bird Survey

N W E S

2,000 1,000 0 2,000 Feet

Bonterra CONSULTING

PAS R:/Projects/Pasaden/J013/Graphics/Ex2_LV_quad_102606.pdf



Source: Aerials Express, April 2005

D:/Projects/Pasadena/J013/Ex_aerial_102506.mxd

Aerial View

Exhibit 3

Nesting Bird Survey

N
W E
S

200 100 0 200
Feet

Bonterra CONSULTING

PAS R:/Projects/Pasaden/J013/Graphics/Ex3_aerial_102606.pdf

Photo 1

Photo 2

PAS D:/Projects/Pasaden/J013/Ex_photos_102606.ai

Site Photographs

Exhibit 4

Nesting Bird Survey

BonTerra CONSULTING

PAS R:/Projects/Pasaden/J013/Graphics/Ex4_photos_102606.pdf.pdf

ATTACHMENT 4
Department of Public Works Approval of
Construction Strategy and Traffic Management Plan

APPROVED
11/28/06

ALL WORK ON PUBLIC PROPERTY
REQUIRES SEPARATE PERMITS
ISSUED BY PUBLIC WORKS AND
TRANSPORTATION DEPT.
Public property includes sidewalk, grass park-
way, curb, gutter and roadway. Contact Public
Works Rm. 212 - City Hall (626) 744-4195

CONSTRUCTION STAGING
AND
TRAFFIC MANAGEMENT PLAN
FOR

Demolition of the Temporary Treatment Facility for Removal of VolatileOrganic Chemicals from Groundwater.
21 Karl Johnson Parkway
Pasadena, CA 91101

November 20, 2006

- USE OF FLAGMEN ONLY FOR TRAFFIC CONTROL IS NOT SUFFICIENT. SIGNS AND CONES ARE REQUIRED PER MUTCD.

- ANY PUBLIC RIGHT OF WAY OCCUPATION WILL REQUIRE PERMITS ISSUED FROM PUBLIC WORKS.

- CITY HOLIDAY MORATORIUM APPLIES.

I. PROJECT

Demo and removal of vessels, slabs under small vessels and support footings.

II. Demolition Work

Pacific Hydrotech
314 E 3rd St.
Lake Elsinore,CA 92530
951-943-8803 Ph
951-943-1093 Fax

Estimated Start Date:December 5, 2006
Estimated Completion Date:December 18, 2006
Working Hours:7 am to 3:30 pm

Name of on-site superintendent:Paul Graham or David Cox
Cell Phone Number:951-453-6501 or 951-760-5107

Contract Responsibilities:

80 ton mobile crane to lay vessels down. 345 Cat Excavator to demo vessels and slabs. Debris to be loaded into semi end dumps and hauled to legal dump site. Traffic control provided for trucking.

Truck Route:

Go South on Walnut to 210 Freeway to Punete hills Landfill.

Material Storage Location

N/A

Construction Trailer

N/A

Traffic Control

No lane closures needed. Flagmen at both ends of street will be provided for trucking.

Parking

5 employees, two vehicles. Both vehicles parked on demolition site.

Clean-up

We will provide a water truck for dust control. Work location will be hand swept daily.

III. Excavation and Grading

Contractor:
Address:
City, State, Zip:
Telephone Number:

Estimated Start Date:
Estimated Completion Date:
Working Hours:

ATTACHMENT 5
Notice of Exemption to Los Angeles County

ORIGINAL FILED

NOV 22 2006

LOS ANGELES, COUNTY CLERK

NOTICE OF EXEMPTION

To:
Los Angeles County Clerk
Business Filing & Registration
12400 E Imperial Hwy Rm 1101
Norwalk CA 90650

From:
City of Pasadena
Planning & Development Dept.
175 N. Garfield Avenue
Pasadena, California 91109

Project Title: VOC tower removal

Project Address: The project site is located in the northwest portion of the City of Pasadena, California, Los Angeles County. The site is situated in the Arroyo Seco floodplain just north of Highway 210. The intersection of Ventura and Windsor is located approximately 200 feet northeast of the site. The site is located in the southeastern quarter of the Pasadena California USGS 7.5 minute topographic quadrangle. The site is located at the east side of the private access road that generally parallels Windsor Avenue.

Project City: Pasadena **Project County:** Los Angeles

Project Description: The Department of Water and Power is proposing to remove the existing VOC towers at the above referenced location. A crane will be used to lower the two fiberglass VOC towers and break the towers into pieces for hauling and disposal. In addition, the two steel carbon vessels will also be handled the same way. Since the vessels are made of steel, they will either be crushed by the excavator or cut using oxy-acetylene. The existing concrete pad and electrical panels will also be removed as well as any related equipment such as piping, blowers etc. This exemption is for demolition only.

Name of Public Agency Approving Project: City of Pasadena, Dept. of Water and Power

Project Contact Person: Roumiana Karakanova (626) 744-4486

Exempt Status (Check one):

☐ Ministerial (CEQA Sec. 21080(b)(1);(CEQA Guidelines Section 15268)
☐ Declared Emergency (Sec. 21080(b)(3); 15269(a))
☐ Emergency Project (Sec. 21080(b)(4); 15269)(b)(c))
☒ Categorical Exemption. California Admin. Code Title 14 Chapter 3 Section 15304
☐ Statutory Exemption California Admin. Code Title 14 Chapter 3 Section (insert #)
☐ General Rule California Admin. Code Title 14 Chapter 3 Sec. 15061 (b) (3)

Reason why project is exempt:
This exemption addresses minor public or private alterations in the condition of the land, water or vegetation. The proposed project involves the demolition of an existing VOC treatment

facility. There are no trees proposed for removal and no alterations to the land beyond removal of the existing towers and supporting infrastructure.

Lead Agency
Contact Person: Roumiana Karakanova **Phone:** (626) 744-4486

COMPLETED BY: Roumiana Karakanova
TITLE: Assistant Engineer
DATE: 11/20/06

APPROVED BY : Jennifer Paige-Saeki
TITLE: Senior Planner
DATE: 11/20/06

ATTACHMENT 6
Demolition Permit

Pacific Hydrotech Corporation
314 E. Third st., Perris,CA 92570
Phone: (951) 943-8803 Fax: (951) 943-1093

Fax Cover Sheet

Date 2/15/07

You should receive 4 **pages, including this cover sheet. Please call if all pages are not received.**

To: PASADENA WATER & POWER

Attn: ROUMIANA

PH #

Fax # 626-396-7294

Re. Permit

Sender: Ozzie Garibaldo

Comments: ROUMIANA, I HAVE ATTACHED A COPY OF OUR PERMIT, LICENCE, AND REMAINING DOCUMENTS. WE ARE FINISHED W/ OUR WORK @ THE SITE. WHO DO I NEED TO CONTACT TO GET OUR DEPOSIT BACK?

Ozzie Garibaldo

(Call before 11:00 p.m. for next day inspections)

Permit #: DEM2006-00111

DEMOLITION PERMIT

Issued Date: 12 / 04 / 06

Expire Date: 06 / 02 / 07

Job Address : 21 KARL JOHNSON PKWY UTILITY VENTURA WELL 21

Parcel No : 5823-014-900

Project Name:

Description: NON STRUCTURAL DEMOLITON WATER TREATMENT EQUIPTMENT ONLY

Applicant: OZZIE GARBALDO
314 E 3RD PERRIS CA 92530
Phone: 951-943-8803

Owner: CITY OF PASADENA
P.O. BOX 7115 PASADENA CA 91109-7215
Phone: 626-744-3971

Contractor: PACIFIC HYDROTECH CORP
314 E 3RD ST PERRIS, CA 92530
License #: 517355
Phone: 951-943-8803

BUILDING DATA

Current Valuation : $111,000.00

Original Valuation : $111,000.00

Square Feet 1.00

Demo Units :

PLAN REVIEW FEES

Plan Review Fees Subtotal:

PERMIT FEES

Processing Fee	$24.10
Building Permit Fee	$1,268.10
Records Mgmt 3% Surcharge	$38.77
Permit Fees Subtotal:	**$1,330.97**

Total Calculated Fees: **$1,330.97**

Waived Fees Subtotal:

Total Fees :

PERMIT EXPIRATION
THIS PERMIT SHALL EXPIRE IF THE WORK AUTHORIZED BY THIS PERMIT IS NOT COMMENCED WITHIN 180 DAYS FROM THE DATE OF THIE PERMIT AND VERIFIED BY INSPECTION, OR IF THE WORK AUTHORIZED BY THIS PERMIT IS SUSPENDED OR ABANDONED AT ANY TIME AFTER THE WORK IS COMMENCED FOR A PERIOD OF 180 DAYS (U.B.C. SECTION 106.4.4)

PERMITS FOR WORK IN RESIDENTIAL ZONES SHALL BE COMPLETED WITHIN A MAXIMUM OF 18 MONTHS FROM DATE OF ISSUANCE, UNLESS APPROVAL IS OBTAINED FOR AN EXTENSION. WHEN A PERMIT IN A RESIDENTIAL ZONE EXPIRES, THE PERMITTEE SHALL FOLLOW THE REQUIREMENTS AS SET FORTH IN ORDINANCE 6774, SECTION D. WORK MAY NOT CONTINUE OR RESUME FOR A PERIOD OF NOT LESS THAN 1 YEAR AT WHICH TIME A NEW PERMIT AND FEES MAY BE APPLIED FOR.

CONSTRUCTION HOURS
IF THIS PROJECT IS IN OR WITHIN 500 FEET OF A RESIDENTIAL DISTRICT, CONSTRUCTION WORK AND THE OPERATION OF CONSTRUCTION EQUIPMENT SHALL TAKE PLACE ONLY DURING THE FOLLOWING HOURS (SEE ORDINANCE 6933 AMENDING MUNICIPAL CODE P.M.C. 9.36.110):

MONDAY THRU FRIDAY:	7:00 A.M. - 7:00 P.M.
SATURDAY:	8:00 A.M. - 7:00 P.M.

City of Pasadena

Permit Center
175 N. Garfield Ave.
Pasadena, CA 91101

Receipt #: 92006000000000011687

Date: 12/04/2006

Project Address: 21 KARL JOHNSON PKWY

Line Items:

Case No	Tran Code	Description	Revenue Account No	Amount Paid
DEM2006-00111		Processing Fee	6139-204 / 447000	24.10
DEM2006-00111		Building Permit Fee	6139-204 / 447100	1,268.10
DEM2006-00111		Records Mgmt 3% Surcharge	6143-204 / 447100	38.77
			Line Item Total:	**$1,330.97**

Payments:

Method	Payer	Bank No	Account No	Confirm No	How Received	Amount Paid
Check	PACIFIC HYDROTECH CORPORATION		2116	PNW	In Person	1,330.97
					Payment Total:	**$1,330.97**

cReceipt.rpt

City of Pasadena

Business Services Section
280 Ramona Street • P.O. Box 7115 • Pasadena California 91109-7215

Business License Invoice

Summary of Charges	
Business Lic Fee	$322.64
Total Charges Due:	$322.64
Total Balance Due:	$322.64

Date: 12/4/2006

Account No. 11438186
Business Phone: (951)943-8803
Expiration Date: 3/3/2007
Business Code: 0064

Name: PACIFIC HYDROTECH
Address: 314 E 3RD ST
PERRIS, CA 92570-2225

Mailing Address: PACIFIC HYDROTECH
314 E 3RD ST
PERRIS, CA 92570-2225

Representative: JOG

(For use by Pasadena Business License Department Only)

Actual Payment Amount (If different from Total Balance Due)

$ _____

Authorized By: _____

City of Pasadena

PERMIT #

№ 3484

3 MONTH
CONTRACTORS PERMIT

EXPIRES ON 3/3/07

"DUPLICATION OF THIS DOCUMENT IS PROHIBITED BY LAW."

FIN0167 (7/04)

ATTACHMENT 7
Letter of Subcontract for Pacific Hydrotech

CALGON CARBON CORPORATION

POST OFFICE BOX 717 ♦ PITTSBURGH, PA 15230-0717
PHONE: 1-412-787-6700 ♦ FAX: 1-412-787-6319
www.calgoncarbon.com

PHONE: 1-951-277-3903
FAX: 1-951-963-5227
E-MAIL: dbrooks@calgoncarbon-us.com

December 6, 2006

Attention: Starla Echols
City of Pasadena
Department of Water and Power
Fax: 626-396-8615

Dear Ms. Echols,

The equipment subject to the demolition for the Temporary Treatment Facility for Removal of VOC from Groundwater at 21 Karl Johnson Parkwayin Pasadena is owned by Calgon Carbon Corporation. Calgon Carbon Corporation authorizes its sub-contractor Pacific Hydrotech to apply for a demolition permit for the subject treatment plant.

Should you have any questions please do not hesitate to call.

Thank you,

Dan R. Brooks
Integrated Systems Manager
Calgon Carbon Corporation
c/o Daniel R. Brooks
8832 Dahlia Drive
Corona, CA 92883
Phone: 951-277-3903
Cell: 951-963-5227
Fax: 951-277-4096
Email: dbrooks@calgoncarbon-us.com

ATTACHMENT 8
Analytical Results for Carbon

Calgon Carbon Corporation
Technical Service Request

CCC Rep: Daniel R. Brooks
Business Unit: Korea (MM) Place Holder for MM - Asia
Location: Pittsburgh, PA
Created By: Jeffery Patellis

Date Created: 12/01/2006
Received: ○ TSR ○ Sample ● Both **Status:** Completed

Confidential Readers:
TSR#: 20061205
Date TSR# Assigned: 12/04/2006
Sales Manager: Robert T. Deithorn; Robert A. McLaughlin; Robert A. McLaughlin

Tech Group: Carbon Acceptance
Tech Service Supervisor: Rene Kotyk

Application/Process Engineer: William Zavora
Platform: Service

Chargeable: ☐ Yes **If "Yes", Amount:**

P.O.#: **P.O. Amount:**

Customer: City of Pasedena, Dept. of Water and Power (JPL Pasadena) - Recertification of CAN1117N Click here to change the Customer Name

Carbon Acceptance No.: 1117 ● N ○ R ○ S ○ E ☐ DS

Contact: Brad Boman
Address: 150 S. Los Robles Ave., Ste. 200
City: Pasadena **State:** CA **ZIP:** 91101
Phone: 626-744-4278 **Fax:** 626-744-4670
Email: bboman@cityofpasadena.net

Site Information
Facility Name: VOC Treatment Facility
Facility Address: 21 Karl Johnson Parkway
City: Pasadena **State:** CA **Zip:** 91101

Third Party Information
Bill To: Pasadena Water and Power
Address: 150 S. Los Robles Ave., Suite 200
City: Pasadena **State:** CA **Zip:** 91101
Contact
First Name: Brad
Middle Initial:
Last Name: Boman
Telephone: 626-744-4278

Sold To
Customer Number:
Contract Number:
Ship To
Customer Number: 12178
Contract Number:
Bill To
Customer Number:
Contract Number:

TSR Log

Sales *(Information required for project prioritization)*
Carbon: LB/Year
Carbon Type:

Project Classifications: WST - Western Region
Market Area: Environmental Air
Application: Odor Control
Products: Service

TSR Approver: Rene Kotyk
Industry Manager: Kimberly D. Megonnell
Approved: Rene Kotyk **Date Approved:** 12/04/2006
Additional Approval: **Date Approved:**

Problems/Description:
(Add Attachment (text file, spreadsheet, etc.) in this field by clicking "Paperclip" on Tool Bar)

Safety Precautions:

Recommended Work

Routine Analysis	Instrumental Analysis	Other	Separations Testing
Carbon Acceptance			

Carbon Acceptance - Other

RCRA Status:
Treatment System: non-RCRA
Return Mode:
CA Testing: Quick
Outside Testing: 8260 for 8021 Compound List;(TCLP Volatiles; TCLP Semivolatiles addded 12/12/06)

Comments: STL: 8260 for 8021 Compound List - 5 days - .1
STL: TCLP Volatiles - 3 days - .2 (added 12/12/06)
STL: TCLP Semivolatiles - 3 days - .3 (added 12/12/06)

Disposal Methods

Alternate Fuels Blending: ● Yes ○ No
(thermal destruction)
CCC Reactivation: ● Yes ○ No
Landfill: ● Yes ○ No

Sample Log

Detail

Total Samples: 1
Analyst: Patellis
Batch Number: CA - 5420
Sample Numbers: CA - 5420 - 1

Description: Spent Composite of North and South Units

Type: Carbon
Container: Plastic Bottle - Pint
Comments:
APD Received: ● Yes ○ No
APD Complete: ○ Yes ● No
Priority: Rush
Sample Received: 12/01/2006
Project Sent to Testing: 12/04/2006
Project Due Date: 12/11/2006
Est. Completion Date:
Data Received:
Project Completed: 12/08/2006
Date Released:

CALGON CARBON CORPORATION

Reactivation Acceptance Testing

TSR Number: 20061205
Customer: City of Pasedena, Dept. of Water and Power (JPL Pasadena) - Recertification of CAN1117N
City, State: Pasadena, CA

Applications Engineer: William Zavora
Sales Person: Daniel R. Brooks
Container: Plastic Bottle - Pint

Platform: Service
Sent to Testing: 12/04/2006
Completed: 12/08/2006

Total Samples: 1

Tests	Test Method	Results			Units	Analyst
Sample Numbers:		**CA - 5420 - 1**				
AD/Air	TM-7	0.507	-	-	g/cc	Patellis
Contact pH	Modified SW-846 9045D	3.7	-	-	-	Patellis
Dean-Stark Moisture	TM-49	2.0	-	-	%	Patellis
Ignitability	RTM-10	No	-	-	-	Patellis
Loading Calculation	Calculation	<5.0	-	-	%	Patellis
Nature of Spent Carbon	Physical Description	Dry,GAC,NoOdor	-	-	-	Patellis
TCLP Semivolatiles	SW-846 - Method 8270	Attached	-	-	mg/L	Severn Trent
TCLP Volatiles	SW-846 - 8260/8240	Attached	-	-	mg/L	Severn Trent
Total Bromide	RTM-8	BDL	-	-	%	Patellis
Total Chloride	RTM-8	<0.1	-	-	%	Patellis
Total Fluoride	RTM-8	BDL	-	-	%	Patellis
Total Sulfur	RTM-8	0.8	-	-	%	Patellis
Volatiles,GC/MS for 8021 list	SW-846 Method 8260	Attached	-	-	ug/kg	Severn Trent

Particle Size Distribution:

Samples:

CA - 5420 - 1 Spent Composite of North and South Units

Comments:

CA - 5420 - 1 20061205.3
CA - 5420 - 1 20061205.2
CA - 5420 - 1 20061205.1

STL Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238

Tel: 412 963 7058 Fax: 412 963 2468
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 20061205.2

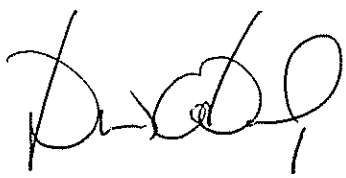
Calgon Carbon

Lot #: C6L140134

Rene Kotyk

Calgon Carbon Corporation

SEVERN TRENT LABORATORIES, INC.



Dave Dunlap
Project Manager

December 18, 2006

METHODS SUMMARY

C6L140134

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Volatile Organics by GC/MS	SW846 8260B	SW846 1311/5030

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

C6L140134

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JLFXL	001	20061205.2	12/13/06	08:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Calgon Carbon Corporation

Client Sample ID: 20061205.2

TCLP GC/MS Volatiles

Lot-Sample #...:	C6L140134-001	**Work Order #...:**	JLFXL1AA	**Matrix.....:**	SOLID
Date Sampled...:	12/13/06	**Date Received..:**	12/14/06	**MS Run #.....:**	6349051
Leach Date.....:	12/14/06	**Prep Date.....:**	12/15/06	**Analysis Date..:**	12/15/06
Leach Batch #..:	P634901	**Prep Batch #...:**	6349188	**Analysis Time..:**	11:11
Dilution Factor:	1				
% Moisture.....:		**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	0.050	mg/L
2-Butanone	ND	0.050	mg/L
Carbon tetrachloride	ND	0.050	mg/L
Chlorobenzene	ND	0.050	mg/L
Chloroform	ND	0.050	mg/L
1,2-Dichloroethane	ND	0.050	mg/L
1,1-Dichloroethene	ND	0.050	mg/L
Tetrachloroethene	ND	0.050	mg/L
Trichloroethene	ND	0.050	mg/L
Vinyl chloride	ND	0.050	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	94	(77 - 120)
Toluene-d8	89	(78 - 111)
4-Bromofluorobenzene	96	(80 - 114)
Dibromofluoromethane	98	(78 - 110)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

METHOD BLANK REPORT

TCLP GC/MS Volatiles

Client Lot #...: C6L140134 **Work Order #...:** JLH901AA **Matrix.....:** SOLID
MB Lot-Sample #: C6L150000-028
Leach Date.....: 12/14/06 **Prep Date.....:** 12/15/06 **Analysis Date..:** 12/15/06
Leach Batch #..: P634901 **Prep Batch #...:** 6349188 **Analysis Time..:** 08:56
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	0.050	mg/L	SW846 8260B
2-Butanone	ND	0.050	mg/L	SW846 8260B
Carbon tetrachloride	ND	0.050	mg/L	SW846 8260B
Chlorobenzene	ND	0.050	mg/L	SW846 8260B
Chloroform	ND	0.050	mg/L	SW846 8260B
1,2-Dichloroethane	ND	0.050	mg/L	SW846 8260B
1,1-Dichloroethene	ND	0.050	mg/L	SW846 8260B
Tetrachloroethene	ND	0.050	mg/L	SW846 8260B
Trichloroethene	ND	0.050	mg/L	SW846 8260B
Vinyl chloride	ND	0.050	mg/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(77 - 120)
Toluene-d8	90	(78 - 111)
4-Bromofluorobenzene	95	(80 - 114)
Dibromofluoromethane	97	(78 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: C6L140134 Work Order #...: JLJPA1AA Matrix.....: SOLID
LCS Lot-Sample#: C6L150000-188
Prep Date.....: 12/15/06 Analysis Date..: 12/15/06
Prep Batch #...: 6349188 Analysis Time..: 09:19
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**88**	**(73 - 123)**	**SW846 8260B**
2-Butanone	**65**	**(10 - 151)**	**SW846 8260B**
Carbon tetrachloride	**88**	**(61 - 143)**	**SW846 8260B**
Chlorobenzene	**99**	**(70 - 122)**	**SW846 8260B**
Chloroform	**99**	**(65 - 131)**	**SW846 8260B**
1,2-Dichloroethane	**100**	**(67 - 132)**	**SW846 8260B**
1,1-Dichloroethene	**84**	**(57 - 138)**	**SW846 8260B**
Tetrachloroethene	**116**	**(70 - 130)**	**SW846 8260B**
Trichloroethene	**92**	**(58 - 141)**	**SW846 8260B**
Vinyl chloride	**87**	**(51 - 133)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	104	(77 - 120)
Toluene-d8	104	(78 - 111)
4-Bromofluorobenzene	98	(80 - 114)
Dibromofluoromethane	101	(78 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

CHAIN OF CUSTODY RECORD

Customer Name	Carbon Acceptance No.	ANALYSES
20061205.2		
Site Description	Sampler: *(Signature)*	
City & State	Sampling Information: Date: Time:	

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	TOC	Phenol	Volatiles				REMARKS
20061205.2	12/13	8:30		Spent Carbon	X						3 Days
											TAT- 12/18 cm
											discussed with Penelope K
											12/15/06

	Date	Time		Date	Time
Relinquished by: *(Signature)*	12/13	9:00	Received by: *(Signature)*	12.13	9:0
Relinquished by: *(Signature)*	12.12	8:4	Received by: *(Signature)*		
Relinquished by: *(Signature)*			Received for Laboratory: *(Signature)* Patrick R Daust	12/14/06	0935
Sample Disposal Method:			Disposed of by: *(Signature)*		

Calgon Carbon Corporation
P.O. Box 717
Pittsburgh, PA 15230-0717

ANALYTICAL LABORATORY

№ 11375

166-F 01/94

White, Yellow - Lab

SEVERN TRENT STL

STL Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238

Tel: 412 963 7058 Fax: 412 963 2468
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 20061205.3

Calgon Carbon

Lot #: C6L140135

Rene Kotyk

Calgon Carbon Corporation

SEVERN TRENT LABORATORIES, INC.

Dave Dunlap
Project Manager

December 18, 2006

METHODS SUMMARY

C6L140135

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Semivolatile Organic Compounds by GC/MS	SW846 8270C	SW846 1311/3510

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

C6L140135

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JLFXQ	001	20061205.3	12/13/06	08:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Calgon Carbon Corporation

Client Sample ID: 20061205.3

TCLP GC/MS Semivolatiles

Lot-Sample #...:	C6L140135-001	**Work Order #...:**	JLFXQ1AA	**Matrix.....:**	SOLID
Date Sampled...:	12/13/06	**Date Received..:**	12/14/06	**MS Run #.....:**	6349088
Leach Date.....:	12/15/06	**Prep Date.....:**	12/15/06	**Analysis Date..:**	12/15/06
Leach Batch #..:	P634805	**Prep Batch #...:**	6349124	**Analysis Time..:**	19:23
Dilution Factor:	1				
% Moisture.....:		**Method.....:**	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,4-Dichlorobenzene	ND	0.050	mg/L
2,4-Dinitrotoluene	ND	0.050	mg/L
Hexachlorobenzene	ND	0.050	mg/L
Hexachlorobutadiene	ND	0.050	mg/L
Hexachloroethane	ND	0.050	mg/L
Nitrobenzene	ND	0.050	mg/L
Pentachlorophenol	ND	0.25	mg/L
Pyridine	ND	0.10	mg/L
2,4,5-Trichloro-phenol	ND	0.050	mg/L
2,4,6-Trichloro-phenol	ND	0.050	mg/L
Cresols (total)	ND	0.050	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	82	(39 - 115)
2-Fluorobiphenyl	95	(35 - 115)
Terphenyl-d14	98	(17 - 129)
2-Fluorophenol	81	(10 - 118)
Phenol-d5	78	(18 - 115)
2,4,6-Tribromophenol	84	(19 - 138)

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: C6L140135 Work Order #...: JLJJR1AA Matrix.....: SOLID
MB Lot-Sample #: C6L150000-124
Prep Date.....: 12/15/06 Analysis Time..: 18:27
Analysis Date..: 12/15/06 Prep Batch #...: 6349124
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,4-Dichlorobenzene	ND	0.050	mg/L	SW846 8270C
2,4-Dinitrotoluene	ND	0.050	mg/L	SW846 8270C
Hexachlorobenzene	ND	0.050	mg/L	SW846 8270C
Hexachlorobutadiene	ND	0.050	mg/L	SW846 8270C
Hexachloroethane	ND	0.050	mg/L	SW846 8270C
Nitrobenzene	ND	0.050	mg/L	SW846 8270C
Pentachlorophenol	ND	0.25	mg/L	SW846 8270C
Pyridine	ND	0.10	mg/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	0.050	mg/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	0.050	mg/L	SW846 8270C
Cresols (total)	ND	0.050	mg/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	79	(39 - 115)
2-Fluorobiphenyl	86	(35 - 115)
Terphenyl-d14	94	(17 - 129)
2-Fluorophenol	82	(10 - 118)
Phenol-d5	75	(18 - 115)
2,4,6-Tribromophenol	75	(19 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: C6L140135 Work Order #...: JLJJR1AC Matrix.....: SOLID
LCS Lot-Sample#: C6L150000-124
Prep Date.....: 12/15/06 Analysis Date..: 12/15/06
Prep Batch #...: 6349124 Analysis Time..: 18:55
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,4-Dichlorobenzene	86	(37 - 115)	SW846 8270C
2,4-Dinitrotoluene	88	(40 - 115)	SW846 8270C
Hexachlorobenzene	91	(51 - 115)	SW846 8270C
Hexachlorobutadiene	107	(42 - 115)	SW846 8270C
Hexachloroethane	83	(33 - 115)	SW846 8270C
Nitrobenzene	94	(45 - 115)	SW846 8270C
Pentachlorophenol	119	(16 - 140)	SW846 8270C
Pyridine	84	(27 - 122)	SW846 8270C
2,4,5-Trichloro-phenol	96	(44 - 115)	SW846 8270C
2,4,6-Trichloro-phenol	98	(49 - 115)	SW846 8270C
Cresols (total)	87	(29 - 144)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	92	(39 - 115)
2-Fluorobiphenyl	101	(35 - 115)
Terphenyl-d14	104	(17 - 129)
2-Fluorophenol	87	(10 - 118)
Phenol-d5	84	(18 - 115)
2,4,6-Tribromophenol	84	(19 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP GC/MS Semivolatiles

Client Lot #...:	C6L140135	Work Order #...:	JLFXQ1AC-MS	Matrix.....:	SOLID
MS Lot-Sample #:	C6L140135-001		JLFXQ1AD-MSD		
Date Sampled...:	12/13/06	Date Received..:	12/14/06	MS Run #.....:	6349088
Leach Date.....:	12/15/06	Prep Date.....:	12/15/06	Analysis Date..:	12/15/06
Leach Batch #..:	P634805	Prep Batch #...:	6349124	Analysis Time..:	19:50
Dilution Factor:	1				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,4-Dichlorobenzene	81	(37 - 115)			SW846 8270C
	83	(37 - 115)	2.9	(0-35)	SW846 8270C
2,4-Dinitrotoluene	93	(40 - 115)			SW846 8270C
	92	(40 - 115)	0.86	(0-42)	SW846 8270C
Hexachlorobenzene	104	(51 - 115)			SW846 8270C
	106	(51 - 115)	1.9	(0-22)	SW846 8270C
Hexachlorobutadiene	103	(42 - 115)			SW846 8270C
	105	(42 - 115)	1.5	(0-28)	SW846 8270C
Hexachloroethane	80	(33 - 115)			SW846 8270C
	81	(33 - 115)	0.99	(0-52)	SW846 8270C
Nitrobenzene	88	(45 - 115)			SW846 8270C
	91	(45 - 115)	3.1	(0-26)	SW846 8270C
Pentachlorophenol	124	(16 - 140)			SW846 8270C
	126	(16 - 140)	1.3	(0-51)	SW846 8270C
Pyridine	82	(27 - 122)			SW846 8270C
	83	(27 - 122)	0.48	(0-65)	SW846 8270C
2,4,5-Trichlorophenol	106	(44 - 115)			SW846 8270C
	104	(44 - 115)	1.5	(0-40)	SW846 8270C
2,4,6-Trichlorophenol	108	(49 - 115)			SW846 8270C
	106	(49 - 115)	1.9	(0-37)	SW846 8270C
Cresols (total)	84	(29 - 144)			SW846 8270C
	83	(29 - 144)	0.64	(0-33)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	84	(39 - 115)
	86	(39 - 115)
2-Fluorobiphenyl	109	(35 - 115)
	109	(35 - 115)
Terphenyl-d14	116	(17 - 129)
	112	(17 - 129)
2-Fluorophenol	81	(10 - 118)
	79	(10 - 118)
Phenol-d5	79	(18 - 115)
	79	(18 - 115)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP GC/MS Semivolatiles

Client Lot #...: C6L140135 **Work Order #...:** JLFXQ1AC-MS **Matrix.....:** SOLID
MS Lot-Sample #: C6L140135-001 JLFXQ1AD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	98	(19 - 138)
	101	(19 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

CHAIN OF CUSTODY RECORD

Customer Name	Carbon Acceptance No.	ANALYSES
20061205.3		
Site Description	Sampler: *(Signature)*	
City & State	Sampling Information: Date: Time:	

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	TVLP Semivolatiles						REMARKS
20061205.3	12/13	8:30		Spent Carbon	X						30 Days
											TAT=12/18 on discussed with Remediation Dept 12/15/06

	Date	Time		Date	Time
Relinquished by: *(Signature)*	12/13	9:00	Received by: *(Signature)*	12/13	910
Relinquished by: *(Signature)*	12/13	910	Received by: *(Signature)*		
Relinquished by: *(Signature)*			Received for Laboratory: *(Signature)* Patrick R Daniel	12/14/06	0935
Sample Disposal Method:			Disposed of by: *(Signature)*		

Calgon Carbon Corporation
P.O. Box 717
Pittsburgh, PA 15230-0717

ANALYTICAL LABORATORY

No. 11374

166-F 01/94

White, Yellow - Lab

ATTACHMENT 9
Letter of Acceptance for Thermal Recycling of Carbon

CALGON CARBON CORPORATION

BIG SANDY PLANT P.O. BOX 664 CATLETTSBURG, KY 41129-0664 (606) 739-8681 Fax (606) 739-5741

January 11, 2007 ***Corrected COT***

City of Pasadena
21 Karl Johnson Parkway
Pasadena, CA 91101

Attn: R. Karakanova (email address: rkarakanova@cityofpasadena.net)

Calgon Carbon Corporation's Big Sandy Reactivation Facility in Catlettsburg, Kentucky has received the following shipment of spent activated carbon from City of Pasadena. This shipment was stored in our permitted storage area until thermally reactivated within 30 days of receipt.

CA #	RMA #	Rec'd Date	Quantity
1117N	10228984	01/02/2007	23 Super Sacks

Please note: The weight of spent carbon returned will vary depending on the application and adsorbate loading.

Regards,

Calgon Carbon Corporation

Ann Boyll
Plant Services Coordinator

CALGON

CALGON CARBON CORPORATION

P.O. Box 717
Pittsburgh, PA 15230-0717

ORDER CONFIRMATION 10228984
DUPLICATE COPY

Document Date	12/27/2006
Customer PO. No.	PASADENA - RMA
Customer PO.Date	12/27/2006
Contract No.	40000568
Contract Date	09/23/1998
Req. Pick-Up Date	12/29/2006
Conf.Pick-Up Date	01/02/2007
Delivered To	Big Sandy Shipping Point
Page:	1 of 2

** A Copy of this RMA Must Accompany All Shipments. **

Customer No. 12177

PASADENA WATER & POWER
FINANCE OFFICE
150 S LOS ROBLES AVENUE
PASADENA CA 91101

Pick-Up Location
CITY OF PASADENA
21 KARL JOHNSON PARKWAY
PASADENA CA 91101

Return-To Address
CALGON CARBON CORPORATION
Big Sandy Plant
Name 2
ROUTE 23 SOUTH
CATLETTSBURG KY 41129

Order Placed By: Cathy Mellert
Telephone No.: 1-866-225-4660

We deliver according to the following conditions:

Ship Via STURGEON AND SON INC

* See Text at end of Order Confirmation *

Account: 40100200 Cost Center: 2100200 Contract: 40000568 Item: 000030

Item	Material Description	Qty UoM	Price unit	Per	UoM	Value USD
030	1000603 SPENT CARBON - VAPOR PHASE	20,000 lb				

Rec 1.2.07 DC

Carbon Acceptance Number: 1117N Offsite Storage: N
Blending: NO RATIO Special Requirements: YES

R# 12716

23 Super Sacks

THIS DOCUMENT MUST ACCOMPANY ALL RETURN SHIPMENTS#CARRIER MUST CALL IN ADVANCE TO MAKE AN APPOINTMENT

** RETURNING (20) SACKS **

Notification will be given for any delivery date delays. If you have any questions please call 1-866-225-4660 or call your Customer Service Expert. Please see Standard Terms and Conditions on reverse. Thank you for your order.

CALGON

CALGON CARBON CORPORATION

PASADENA WATER & POWER
FINANCE OFFICE
ATTN: GARY TAKARA
150 S LOS ROBLES AVENUE
PASADENA CA 91101

Order No. 10228984
Date 12/27/2006
Page 2 of 2

BIG SANDY PLANT CONTACT: STEVE STUMBO 606-739-2323

RETURNS ACCEPTED M-F 7 A.M. TO 2 P.M. ***NO BEARD POLICY***

DOT LAND BAN FORM MUST ACCOMPANY EVERY MANIFESTED RETURN. CUSTOMER IS RESPONSIBLE FOR PROVIDING MANIFEST ON HAZARDOUS RETURNS.

SPENT CARBON ONLY! DRAIN ALL FREE STANDING WATER BEFORE RETURNING. CONTAINERS WITH FREE STANDING WATER OR OTHERFOREIGN MATERIALS WILL BE REJECTED AND RETURNED TO CUSTOMER.

DRUMS AND SUPERSAKS MUST BE ON 44 INCH BY 44 INCH PALLETS. DOT APPROVED DRUMS WITH LATCHING, VENTED LID (WITH BUNG) ONLY. HAZARDOUS & CLASS 9 OR NONHAZ LABELS WITH CARBON ACCEPTANCE NUMBER REQUIRED ON ALL DRUMS. RCRA SPENT MUST BE IN AN APPROPRIATE CONTAINER, FOR EXAMPLE DOT APPROVED SUPERSACKS WITH SEWN IN LINERS.

CUSTOMER WILL BE CHARGED FOR RELIDDING/PALLETIZING & DEMURRAGE IF DRUMS/SACKS ARRIVE WITHOUT PALLETS OR WITH IMPROPER LIDS.

PLEASE MATCH SERIAL NUMBERS ABOVE WITH THE SERIAL NUMBERS ON THE UNITS BEFORE RETURNING TO CALGON CARBON.

CUSTOMER CONTACT, FAX, & PHONE: JIM JENKINS 626-665-9856

CARRIER:STURGEON & SONS ATT: BOB MONTES 800-328-6644

FAX: 661-322-5410

** CALGON CARBON WILL PAY RETURN FREIGHT TO KENTUCKY **

THIS DOCUMENT MUST ACCOMPANY ALL RETURN SHIPMENTS

Calgon Carbon Corporation

P. O. Box 664
Catlettsburg, KY 41129

	Weight	Time	Date
Gross	68590 LB [illegible]	[illegible]	[illegible]
Tare	33000 LB	10:20 AM	01/02/07
Net			

Customer Pasadena water & power Driver Tony Wallis

Tractor No. 264

Trailer No. 378

Weighmaster _____

ATTACHMENT 10
Certificate of Recycling Plastic Materials

25125 Felswood Road
Menifee, CA 92584
(888) 430-DEMO
(951) 244-2235
Fax (951) 244-0961

Fax

From the Desk of Juanita Maes

To:	Roumiana Karakannova	**Company:**	City of Pasadena Water and Power
Fax:	626-396-7294	**Pages:**	2
Phone:	626-744-4486	**Date:**	1/2/2007
Re:	Pasadena Water Vessel Demo	**CC:**	

x **Urgent** x **For Review** ☐ **Please Comment** x **Please Reply** ☐ **Please Recycle**

• **Comments:** Attached please find a copy letter regarding the recycling of the plastic that were removed from the above referenced project.

If you have any questions please contact me at my office (951) 244-2235 or mobile (951) 453-4789

Juanita Gonzlaes, Const. Mgr.

Graham Crackers Demo, Inc

WL WING LEE DEVELOPMENT, INC.

9733 Klingerman Street., South El Monte, CA 91733
Tel: (626) 401-2803 • Fax: (626) 401-2873
URL: w i n g l e e d e v e l o p m e n t . c o m
i n f o @ w i n g l e e d e v e l o p m e n t . c o m

December 28, 2006

Graham Crackers Demo inc.
25125 Felswood Lane,
Menifee, Ca 92584
Attn: Mr. Paul Graham – President

Re: Project know as Pasadena Project Water Vessel Demolition, Pasadena Ca.
Owner city of Pasadena c/o Calgon Carbon Corporation – General Contractor
Pacific Hydrotech Corporation

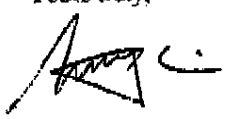
To Whom It May Concern:

Upon the demolition of the water vessel(s) 4 semi loads of plastic scrap (1 load of Black plastic and 3 loads of White plastic) were removed from the demo site by Wing Lee Development Inc (Plastic Recycler) and taken to a proper recycling facility At South El Monte, Ca. This work was performed in the month of December, 06 approximately On 12/20/2006. All above mention plastic scrap from this said demo site was shipped to our china recycle plant immediatcly for recycle process.

If you have any question regarding this matter, please free free to contact me at 626-401-2803.

Best regards,

Yours truly,



Tommy Liu
President

ATTACHMENT 11
Photos from the Demolition Work


PASADENA WATER DEPT.