

Ldn Consulting, Inc.

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January 9, 2015

Hedy Levine
REC Consultants
2442 Second Avenue
San Diego, CA 92101

SUBJECT: Air Quality Evaluation for Lake Jennings Park Road Residential Development – San Diego County

Ldn Consulting, Inc. is pleased to submit the following focused air quality evaluation of potential health risks to the Lake Jennings Park Road Residential Development due to nearby traffic on Interstate 8. This analysis has been performed to satisfy the request by the County of San Diego Department of Planning and Development Services.

Project Location

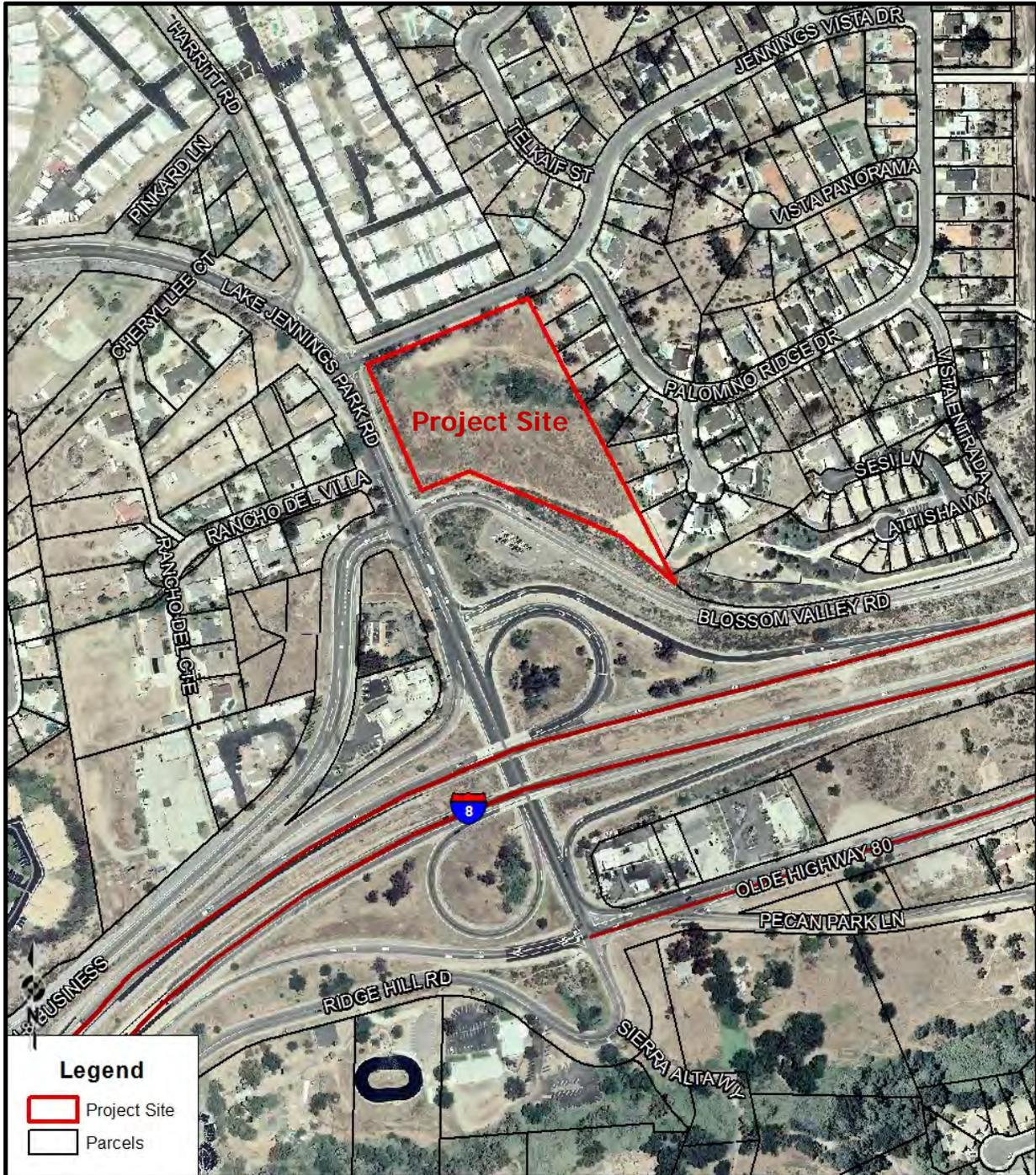
The project consists of a tentative map and includes 18 residential units on a 5.2 acre site with a minimum lot size of 10,000 square feet. The project site is located north of Interstate 8 east of Lake Jennings Park Road, and north of Blossom Valley Road. The project site is located along Lake Jennings Park Road in the Lakeside Planning Area in the unincorporated portion of eastern San Diego County. The project site vicinity map is provided in Figure 1.

Relevant Guidance

The California Air Resources Board (CARB) has the published Air Quality and Land Use Handbook (2005), which included advisory recommendations for siting new sensitive receptors near freeways and heavily traveled roadways. Specifically the recommendations included avoidance of air quality sensitive receptors, such as residential uses, within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads within 50,000 vehicles/day.

**SDC PDS RCVD 06-18-15
TM5578**

Figure 1: Project Vicinity Map



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The proposed project is located in an urbanized area, based on the large amount of homes/parcels surrounding the site, as can be seen in Attachment A. Lot 11 is 500 feet from the centerline of Interstate 8 and the rest of the Lots are located more than 600 feet from the centerline of Interstate 8. Traffic data from SANDAG shows that the existing Annual Average Daily Traffic (AADT) on the segment of Interstate 8 in proximity to the project is 54,400 AADT and based on regional traffic forecasts traffic volumes would increase to 96,000 AADT in the year 2050 (Source: SANDAG Series 12 2050 Traffic Volume Forecast).

Thus, while Lot 11 is located within 500 feet of the centerline of Interstate 8, the traffic volumes on Interstate 8 are below the urban road value of 100,000 vehicles/day and would remain below those levels for the foreseeable future. The prevailing winds in the project area move predominately from west to east as can be seen in Attachment B (Source: Wind Rose Plot View, Lakes Environmental). Additionally, a previously permitted crematory is located across Lake Jennings Park Road to the west (Neptune Society of San Diego). Based on record search and correspondence with APCD, the facility no longer has an operational permit from APCD. The County of San Diego Board of Supervisors revoked the permit in 2011 (see Attachment C). Therefore, no pollutants or health risk is anticipated from the former use. The future residents of the project are not anticipated to be exposed to substantial concentrations of toxic air contaminants (TACs).

It should be noted that the proposed land use is consistent with adjacent land uses, which are also at the same proximity to Interstate 8. It is important to note that this assessment serves simply as a disclosure document to providing a characterization of the background emissions that occupants of the proposed project may be exposed to. If you should have any questions regarding this assessment, please do not hesitate to contact me at (760) 473-1253.

Sincerely,
Ldn Consulting, Inc.



Jeremy Loudon, Principal

Attachments: A - Distances from Lots to Freeway
B - Wind Rose Plot
C - Neptune Society of San Diego Permit Removal



T:\Brendan\Projects\Lake_Jennings\LP_DistanceFromFreeway_061014.mxd

SAN DIEGO COUNTY
AIR POLLUTION CONTROL DISTRICT HEARING BOARD
PETITION FOR HEARING BOARD ACTION
(Attach additional pages, if needed)

Petitioner: SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT
Mailing Address: 10124 OLD GROVE ROAD, SAN DIEGO, CA 92123
E-Mail Address: Heidi.Pack@sdcountry.ca.gov
Telephone #: 858-586-2657 Fax #: 858-586-2651
Name of person authorized to receive notices: Heidi Gabriel-Pack
(Name of Individual)
Organization Name: same as above
Mailing Address: _____
E-Mail Address: _____
Telephone #: _____ Fax #: _____

DATE/TIME STAMP
COUNTY OF SAN DIEGO
BOARD OF SUPERVISORS

2011 APR 8 AM 11 43

THOMAS J. ...
CLERK OF THE BOARD
OF SUPERVISORS

Petition No: 4347
Date Filed: 04/08/11
Fee Paid: N/A
Receipt No: N/A

Description of Business Activity: Air Pollution Control District

Ownership Status: Sole Proprietor Partnership Corporation Government Other (explain): _____

Equipment Address: 14065 Old Highway 80, El Cajon, CA 92021

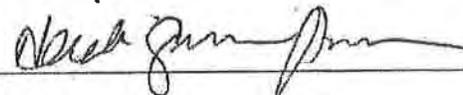
Description of Affected Process and Equipment Involved: a cremation furnace (Tabco model O-VL-A, natural gas fired)

Purpose of the Petition:

- | | |
|--|--|
| <input type="checkbox"/> Emergency Variance—30 days maximum | <input type="checkbox"/> Request Appeal of permit denied, suspended or conditionally granted |
| <input type="checkbox"/> 90-Day Variance—90 days maximum | <input checked="" type="checkbox"/> Request permit revocation or variance revocation |
| <input type="checkbox"/> Interim & Regular Variance—Interim portion valid through date of Hearing on Regular portion | <input type="checkbox"/> Request Hearing Board decision be reheard |
| <input type="checkbox"/> Regular Variance—1 year maximum (except as provided for in 42358(b)) | <input type="checkbox"/> Request variance modification |
| <input type="checkbox"/> Product Variance—1 year maximum (except as provided for in 42372(b)) | <input checked="" type="checkbox"/> Other: <u>Request abatement order</u> |

- a) Rule(s) for which Variance requested: Variance not requested.
- b) Time period requested (include final compliance date): Variance not requested.
- c) The District application and permit numbers that relate to this matter (attach copy of permit): _____
- d) Has this matter been the subject of previous variance requests? If so, please provide petition numbers: _____
- e) Why are you not in compliance and/or why can you not comply now? Variance not requested.
- f) Provide amount of allowable emissions associated with equipment and amount of calculated excess emissions due to non-compliance (provide calculation basis): Variance not requested.
- g) Is this operation a small business as defined by the United States Small Business Administration, and are annual emissions of air contaminants from the entire source less than 10 tons? Variance not requested.
- h) Supporting documents may be attached (indicate name and number submitted): 1) Petition requesting Abatement Order and Permit Revocation 2) (Proposed) Abatement Order and (Proposed) Permit Revocation.

I declare, under penalty of perjury under the laws of the State of California, that the information provided above is true and correct.

Date Signed: 4/8/2011 Authorized Signature: 

PETITION NOT VALID UNLESS ACCOMPANIED BY FILING FEE AND COMPLETED "FACTS TO SUPPORT FINDINGS" FORM (IF REQUIRED)
THE DISTRICT SMALL BUSINESS ASSISTANT IS AVAILABLE TO ASSIST SMALL BUSINESSES
IN COMPLETING THE PETITION FORMS AND DEVELOPING COMPLIANCE SCHEDULES

1 SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT
2 ROBERT J. KARD, Director and Air Pollution Control Officer
3 HEIDI GABRIEL-PACK, Civil Actions Investigator
4 10124 Old Grove Road
5 San Diego, California 92131
6 Telephone: 858-586-2657

7 Petitioner Air Pollution Control District

8 **BEFORE THE SAN DIEGO COUNTY**
9 **AIR POLLUTION CONTROL DISTRICT HEARING BOARD**

10 AIR POLLUTION CONTROL)
11 DISTRICT OF SAN DIEGO COUNTY)

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No. 4347

PETITION FOR ABATEMENT ORDER
PURSUANT TO HEALTH & SAFETY CODE
§ 42451

AND

LENEDA, INC.
(DBA NEPTUNE OF SAN DIEGO)

PETITION FOR PERMIT REVOCATION
PURSUANT TO HEALTH & SAFETY CODE
§ 42307

Hearing Date: April 28, 2011

Time: 9:00 a.m.

Place: Room 358

County Administration Center

1600 Pacific Highway

San Diego, CA 92101

The San Diego County Air Pollution Control District (hereinafter "District") petitions the District Hearing Board for an Abatement Order directed to Respondent, Leneda, Inc. (dba Neptune of San Diego), and all employees, agents, partners, spouses, heirs, assigns, lessees, transferees, and successors thereof (hereinafter "Respondent") with regard to a cremation furnace (Tabo model O-VL-A, natural gas fired). The District also requests that the permit to operate the cremation furnace be revoked. The District alleges as follows:

1. The District is and at all relevant times has been an air pollution control district duly authorized and existing under the laws of the State of California. Health & Safety Code §§ 40000 et seq.

1 2. Respondent does business within the jurisdiction of the District.

2 3. Leneda, Inc., a corporation registered with the State of California, does business as Neptune of
3 San Diego and Neptune Society.

4 APPLICABLE RULES

5 4. Rule 10(a) (Permits Required – Authority to Construct) of the District’s Rules and Regulations
6 states in part, “Any person building, erecting, altering or replacing any article, machine, equipment or
7 other contrivance, the use of which may cause the issuance of air contaminants or the use of which may
8 eliminate or reduce or control the issuance of air contaminant, shall first obtain written authorization for
9 such construction from the Air Pollution Control Officer.”

10 5. Rule 10(b) (Permits Required – Permit to Operate) of the District’s Rules and Regulations states
11 in part, “Before a person operates or uses, or causes to be operated or used, any article, machine,
12 equipment or other contrivance described in Rule 10(a) (Authority to Construct) that person shall obtain
13 a written Permit to Operate from the Air Pollution Control Officer.”

14 6. Rule 21 (Permit Conditions) of the District’s Rules and Regulations states in part, “The Air
15 Pollution Control Officer may issue an Authority to Construct, Permit to Operate ... subject to
16 temporary or permanent conditions which will ensure compliance with the provisions of these Rules and
17 Regulations and applicable State laws and regulations. Such conditions shall be in writing, shall become
18 part of the Authority to Construct, Permit to Operate ... and shall be complied with at all times.
19 Commencing work under such an Authority to Construct or commencing operation under such a Permit
20 to Operate or renting under such a Permit to Rent shall be deemed acceptance of all the conditions
21 specified....”

22 7. Rule 51 (Nuisance) of the District’s Rules and Regulations states in part, “A person shall not
23 discharge from any source whatsoever such quantities of air contaminants or other material which cause
24 injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or
25 which endanger the comfort, repose, health or safety of any such persons or the public or which cause or
26 have a natural tendency to cause injury or damage to business or property....”

27 8. California Health and Safety Code section 41700 states in part, “No person shall discharge from
28 any source whatsoever such quantities of air contaminants or other material which cause injury,

1 detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which
2 endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or
3 have a natural tendency to cause, injury or damage to business or property....”

4 HISTORY

5 9. Respondents operate a crematory business, the Neptune Society, at 14065 Old Highway 80 in El
6 Cajon; the crematory stack is approximately 120 feet from the closest business and approximately 250
7 feet from the closest residence. The Neptune Society operates a single natural gas-fired crematory
8 furnace, which is subject to District Permit to Operate No. APCD1997-PTO-006288.¹ The cremator
9 includes a secondary combustion chamber (afterburner) for the control of smoke and odors. This
10 cremator was installed 31 years ago, in 1980. According to the cremator manufacturer TABO’s
11 website, “Many TABO furnaces last for more than 20 years, and some even over 30 years.”² TABO
12 recognizes that “even with the most modern technique a cremator can still emit dust, mercury, and
13 dioxins,” and therefore, now offers a flue gas filter as an additional control on its incinerators.³
14 Respondent’s facility does not have these new controls.

15 10. In April 1993, through Air Quality Consultant Paul Weir, Respondent submitted an application
16 requesting permit changes allowing the burning of plastics and the removal of process weight
17 limitations. The application also proposed the installation of back end control equipment. The District
18 issued Authority to Construct No. 921341 in November 1993, which authorized construction of a
19 baghouse for particulate emissions control and also allowed burning of polyethylene plastic body bags.
20 However, these controls were never installed.

21 11. Over the last 24 years, the District has received 100 public complaints regarding Respondent’s
22 facility and has investigated those complaints, as well as performed normal inspections. From 1990
23 through 2007, the District issued seven notices of violation for not maintaining records documenting
24 compliance with the 100 pound per hour charge rate and a faulty temperature gauge (1990), failing to
25 weight each case prior to cremation (1992), falsifying the charge weight (1994), operating the primary
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27 ¹ Attachment No. 1 contains a copy of District Permit to Operate APCD1997-PTO-
006288.

28 ² Attachment No. 2, TABO website.

³ Attachment No. 2, TABO website.

1 chamber of the cremation furnace over 1700 degrees F (1997), exceeding the charge rate of 100 pounds
2 per hour (2002), operating the furnace with a faulty afterburner temperature indicator (2006), and
3 exceeding the visible emissions standard (2007).

4 12. From October 17, 2008 through October 2010, the District did not receive any public complaints
5 or issue any notices of violation regarding this facility.

6 13. The District performed a source test of this cremator on May 25, 2010. The cremator passed the
7 grain loading standard—the measured value was 0.26 gr/dscf standardized to 12 percent carbon dioxide
8 (the limit is 0.30 gr/dscf standardized to 12 percent carbon dioxide). However, the test report notes that
9 “There was an inordinate amount of fine sooty ash and visible white smoke exiting the stack. The odor
10 was more pronounced than a ‘normal’ cremation, and had a noticeable ‘sweet’ taste to it. The back-end
11 filter was completely blacked within the first 10 minutes. The other recovered samples were also
12 noticeably blackened, still retaining an odor this tester has never experienced.”⁴ This back-end filter
13 traps particulate matter *after* the exhaust is bubbled through the impingers of water; the District has
14 retained this filter and will bring it to the hearing.

15 14. On November 2, 2010, the District received a complaint of smoke and strong odors from the
16 facility. Then, on November 30, 2010, the District received photographs of smoke coming from the
17 crematory. As a result, the District began conducting off-site surveillance of the crematory with
18 increased frequency. While conducting this off-site surveillance, the inspectors typically did not verify
19 with the operator whether the cremator was actively cremating; instead, they saw heat waves and heard
20 the fan running, and assumed cremations were occurring. Unfortunately, they did not realize that the
21 majority of cremations were happening at night instead of during the day, and that the heat waves and
22 fan motor were sometimes indicative of the crematory cool down cycle instead of active operations. At
23 the beginning of March 2011, the District began inspecting during the evening and night hours.⁵

24 RECENT VIOLATIONS

25 15. On March 3, 2011, from approximately 5 pm to 9 pm, District Air Quality Inspector II Dan
26 Plotner investigated complaints of smoke and odors during crematory operation. That evening, he

27 ⁴ Attachment No. 3 contains the District source test report.

28 ⁵ Attachment No. 4 contains a table detailing surveillance of the facility since November 2010.

1 issued Respondent Notice of Violation No. 221845,⁶ which alleges two separate violations:

- 2 • First, for violating a permit condition (operate the incinerator in accordance with the
3 manufacturer's instructions) by allowing smoke to escape through the building's roof rather than
4 the stack, and
- 5 • Second, for causing a public nuisance by discharging smoke and particulate matter from the
6 furnace.

7 16. On March 9, 2011, beginning at 6:50 pm, District Air Quality Inspector II Matt Allison
8 investigated reports of smoke and odors. He detected distinct and easily noticeable odors of a burning
9 plastic nature on the on the east side of East Main Street (the road immediately to the west of the
10 crematory) for approximately 50 feet along the bicycle lane. He also observed white smoke emissions
11 from the vent stack. Inspector Allison confirmed with the operator that there was a cremation in
12 progress. He also inspected the room of the cremation furnace and could smell the same, though
13 stronger, burning plastic type odors he had smelled on the public street.

14 17. On March 11, 2011, beginning at 7:13 pm, Inspector Allison observed white smoke that was
15 plainly visible under the moonlight without the aid of a flashlight. Inspector Allison also smelled plastic
16 burning type odors to the northeast and east of the facility at least 360 feet from the facility. Inspector
17 Allison again confirmed with the operator that there was a cremation in progress, and the cremation start
18 time coincided with the approximate time he had first observed stack emissions and plastic burning
19 odors.

20 18. On March 16, 2011, the District issued Respondent Notices of Violation Nos. 222836 and
21 222577, which allege three separate violations:

- 22 • First, for failing to comply with Rule 10(a)(b); on March 1, 2011, after recent rebricking had
23 been completed, the Respondent had failed to fully reassemble the cremation furnace (cremator
24 sheathing and front door area were not fully re-assembled).
- 25 • Second, for violating a permit condition during a May 25, 2010 source test by not meeting the
26 minimum heat input to the afterburner. The standard is 6.4 cfm of natural gas, but during the
27

28 ⁶ Attachment No. 5 contains copies of the notices of violation issued since
March 3, 2011.

1 source test, measured heat input to the entire building—not just the afterburner—was 5.9 cfm.
2 (Gas flow is a substitute for direct measurement of heat.)

- 3 • Third, for causing a nuisance by discharging smoke, particulate, and odors from the cremation
4 furnace at various times on March 9 and March 11, 2011.

5 19. On March 16, 2011, District Compliance Chief Jon Adams transmitted Respondent and
6 Respondent's attorney a letter expressing the District's concerns that the facility was not operating in
7 continuous compliance. The letter mentioned a number of concerns, including:

- 8 • Nighttime operation of the crematory was problematic, due to meteorological conditions which
9 cause lower dispersion of the emissions.⁷
- 10 • Possible equipment problems causing backpressure such that the smoke and odors escape prior
11 to being treated in the secondary burner chamber.
- 12 • Significant smoke and odors on a number of occasions.

13 The letter requested that the crematory operate primarily during the day, contact the District prior to
14 incinerating each charge, retain an expert to make recommendations to eliminate smoke and odors,
15 reassemble the cremator to the original design, agree to minimum primary and secondary burner
16 temperatures and install a temperature chart recorder to verify those temperatures.⁸

17 20. On the morning of March 17, 2011, District staff including Director and Air Pollution Control
18 Office Bob Kard, Compliance Chief Jon Adams, Engineering Chief Tom Weeks, Senior Mechanical
19 Engineer John Annicchiarico, and District Counsel Paula Forbis met with Respondent's attorneys
20 Anthony Nash and Taylor Fleming. District staff further explained the concerns raised in its March 16
21 letter, and suggested immediate next steps for Respondent to reduce smoke and odors from its facility.
22 As of the date of this filing, Respondent is conducting most of its cremations during the daytime, has
23 hired an expert, and has fixed the missing cremator sheathing. However, the facility continues to be a
24 source of public nuisance.

25 21. During the evening of March 17, 2011, Supervising District Air Quality Inspector III Gary
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27 ⁷ Attachment No. 6 shows the different wind direction and speed that typically
28 exists between daytime and nighttime hours. The wind rose plots were taken from
the District El Cajon monitoring station, which is 5 miles to the southwest.

⁸ The letter is included as Attachment No. 7.

1 Hartnett conducted an investigation of the facility and surrounding neighborhood starting approximately
2 8 pm. He detected crematory odors on Rancho Del Villa, which is located within the adjacent
3 community to the north, from 8:05 pm to approximately 8:30 pm. Therefore, on March 18, 2011, the
4 District issued to Respondent's attorney (via certified mail and fax) Notice of Violation No. 222861
5 alleging a violation of Rule 51 and California Health and Safety Code section 41700 (nuisance).

6 22. On March 21, 2011, Air Quality Inspector II Paul Clifford conducted an inspection starting at
7 7:45 pm. He smelled a burning plastic/sulfurous odor approximately 350' to northeast of facility, which
8 lasted approximately 20 minutes. Inspector Clifford video recorded smoke and sparks and glowing
9 embers coming from the stack.⁹ Inspector Clifford was joined by Supervising Inspector Gary Hartnett
10 prior to inspecting the facility. They smelled the same odor inside the facility that they had smelled
11 outside and verified that furnace was operating by seeing the fire through the site glass.

12 23. On March 23, 2011, therefore, the District issued Notice of Violation No. 222485 (sent to
13 Respondent's attorney via email) which alleges a violation of Rule 51 public nuisance, by emitting odors
14 and smoke from the crematory on March 21, 2011 from approximately 8 pm to 9 pm.

15 ODORS AND SMOKE CONTINUE

16 24. In spite of the Notices of Violation and the March 16, 2011 letter and March 17 meeting
17 detailing suggestions from the District, smoke and odors from Respondent's crematory have continued
18 to affect the surrounding community. From the beginning of March 2011 to date, the District has issued
19 a total of five notices of violation to this facility; four of these violations—all issued by different
20 inspectors—allege the crematory is causing a public nuisance.

21 25. In addition, many neighbors have complained to local media. The District has received inquiries
22 from a number of local newspapers. A series of investigative reports by Michael Turko has run on local
23 news station KUSI. Mr. Turko interviewed nearby residents who have expressed concern about what
24 they and their children are breathing, and complain of seeing smoke from the facility and soot on their
25 cars and smelling burning plastic. He also interviewed the president of the Cremation Association of
26 North America, who demonstrated at his Palm Springs crematory that a normal crematory operation
27 should not smoke.

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⁹ The District will show a portion of this video at the hearing.

1 10. The District intends to pursue civil penalties in addition to seeking this Abatement Order.

2 11. NOW THEREFORE, the District requests that an Abatement Order be issued against
3 Respondents prohibiting them from continuing to operate a cremator in San Diego County from the date
4 of issuance of this abatement order until Respondent obtains written permission to operate from the
5 District.

6 DISTRICT REQUEST FOR PERMIT REVOCATION

7 1. The crematory is not operating in full compliance with its permit conditions and District rules.

8 2. Permit APCD1997-PTO-006288 was issued pursuant to Rule 10.

9 3. California Health and Safety Code section 42307 provides: "An air pollution control officer may
10 request the hearing board of the district to hold a hearing to determine whether a permit should be
11 revoked, if he finds that the holder of the permit is violating any applicable order, rule, or regulation of
12 the district or any applicable provision of this division." Code section 42309(e) provides that the
13 Hearing Board may revoke an existing permit if it finds "any violation of this part [non-vehicular air
14 pollution control], or of any order, rule, or regulation of the district."

15 4. The operation of the cremator is causing an ongoing nuisance, as documented by the District
16 inspectors' observations and as alleged in Notices of Violation Nos. 221845, 222577, 222861, and
17 222485.

18 5. If the permit were revoked, the Respondent could subsequently apply for a new permit, once it
19 has identified a crematory process and equipment that can be operated in compliance with District rules
20 and regulations.

21 6. NOW THEREFORE, the District requests that Permit No. APCD1997-PTO-006288, which
22 authorizes operation of a cremation furnace (Tabo model O-VL-A, natural gas fired) at 14065 Old
23 Highway 80 in El Cajon, County of San Diego, be revoked.

1 DATED: 4/8/2011

2 Respectfully Submitted,
3 ROBERT J. KARD, Director

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5 _____
6 By HEIDI GABRIEL-PACK, Civil Actions Investigator

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1 SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT
2 ROBERT J. KARD, Director and Air Pollution Control Officer
3 HEIDI GABRIEL-PACK, Civil Actions Investigator
4 10124 Old Grove Road
5 San Diego, California 92131
6 Telephone: 858-586-2657

7 Petitioner Air Pollution Control District

8 **BEFORE THE SAN DIEGO COUNTY**
9 **AIR POLLUTION CONTROL DISTRICT HEARING BOARD**

10 AIR POLLUTION CONTROL)
11 DISTRICT OF SAN DIEGO COUNTY)

12 Petitioner,)

No. 4347

(PROPOSED) ABATEMENT ORDER
PURSUANT TO HEALTH & SAFETY CODE
§ 42451

AND

13 LENEDA, INC.)
14 (DBA NEPTUNE OF SAN DIEGO))

(PROPOSED) PERMIT REVOCATION
PURSUANT TO HEALTH & SAFETY CODE
§ 42307

15 Respondent.)

Hearing Date: April 28, 2011
Time: 9:00 a.m.
Place: Room 358
County Administration Center
1600 Pacific Highway
San Diego, CA 92101

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21 The petition of the San Diego Air Pollution Control District ("District") for an Abatement Order and
22 Permit Revocation came for hearing by this Board on April 28, 2011, pursuant to the petition filed on
23 April 8, 2011. The District appeared represented by Heidi Gabriel-Pack, Civil Actions Investigator.
24 The Respondent was represented by _____. The public was given the opportunity to
25 testify. The Board having heard sworn testimony and received exhibits in evidence on behalf of the
26 District, and the matter having been submitted for decision, the Hearing Board makes the following
27 findings and order:
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FINDINGS OF FACT

1. Petitioner is an air pollution control district duly authorized and existing under the laws of the State of California, and is the local agency responsible for air pollution control in San Diego County.
2. Respondent does business within the jurisdiction of the District and operates a cremation furnace (Tabo model O-VL-A, natural gas fired) at 14065 Old Highway 80, El Cajon, CA 92021.
3. This crematory, which was installed in 1980, operates subject to Permit No. APCD1997-PTO-006288.
4. Respondent Leneda, Inc. (dba Neptune of San Diego) was served through its attorney with a copy of the Petition for an Abatement Order and Permit Revocation on _____, by certified mail to 600 West Broadway, Suite 2600, San Diego, CA 92101. A copy was also sent via regular mail to PO Box 2308, El Cajon, CA 92021.
5. Notice of the time and place of hearing was given as required by law.
6. The District has issued Respondent Notices of Violation Nos. 221845, 222577, 222861, and 222485 alleging that the operation of this crematory causes a nuisance (including odors, smoke, and particulate) in violation of District Rule 51 (nuisance).
7. The District has issued Respondent Notices of Violation No. 221845 alleging that the crematory discharges smoke through the roof vents rather through the stack, and therefore does not operate in accordance with the manufacturer's instructions in violation of Rule 21 (permit conditions).
8. The District has issued Respondent Notices of Violation No. 222836 alleging that the crematory has been modified from the permitted configuration in violation of Rule 10 (permits required).
9. Notice of Violation No. 222836 also alleges that during the May 25, 2010 source test, the minimum heat input to the afterburner was not 400,000 BTU per hour (6.4 CFM of natural gas) as required by Rule 21 (permit conditions).

CONCLUSIONS

1. Respondent continues to operate a cremator so as to be in continuing violation of District Rules 10(b), 21, and 51 and California Health and Safety Code section 41700.

- 1 2. The issuance of this Abatement Order will not constitute a taking of property without due
2 process of law.
- 3 3. In order to prevent future violations of District rules, it is necessary that Respondents' operations
4 be prohibited as set forth in this Abatement Order.
- 5 4. Since Respondent is violating District rules while operating the crematory, the permit to operate
6 the crematory should be revoked.

7 **ORDER**

8 **NOW, THEREFORE, IT IS HEREBY ORDERED THAT:**

- 9 1. Respondents and their officers, agents, employees, spouses, partners, heirs, assignees, lessees,
10 transferees and successors, are hereby **PROHIBITED** from continuing to operate a cremation
11 furnace (Tabo model O-VL-A, natural gas fired) at 14065 Old Highway 80, El Cajon, CA 92021,
12 California, from the date of issuance of this abatement order until Respondent obtains written
13 permission to operate from the District.
- 14 2. This Abatement Order does not act as a variance, and Respondent is subject to all rules and
15 regulations of the District, and with all applicable provisions of California and federal law.
- 16 3. The Hearing Board may modify the Abatement Order only at a properly noticed public hearing.
- 17 4. Permit APCD1997-PTO-006288 is hereby revoked.

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19 **ACTION:**

20 ON MOTION of Member _____, seconded by Member _____, the Air Pollution Control
21 District Hearing Board closed the hearing and granted Petitioner's requests for 1) an Abatement Order
22 issued against Respondent's operation and 2) Revocation of District Permit to Operate No. APCD1997-
PTO-006288.

23 AYES:

24 ABSTAIN:

25 It is so ordered.

26
27 _____
Thomas J. Rappolt, Chairperson, APCD Hearing Board

Attachment No. 1

District Permit to Operate APCD1997-PTO-006288



COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT
 10124 OLD GROVE ROAD, SAN DIEGO, CA 92131
 (858) 586-2600 FAX (858) 586-2601
 www.sdapcd.org

PERMIT NO
 APCD1997-PTO-006288
EXPIRES
 October 31, 2010

Sectors: 04, L
ID#: APCD1981-SITE-02893
APP: APCD1993-APP-921341

PERMIT TO OPERATE

This permit is not valid until required fees are received by the District.

The following is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

Neptune of San Diego
 Vice President
 PO Box 2308
 El Cajon CA 92021

EQUIPMENT ADDRESS
 Neptune of San Diego
 14065 Old Hy 80
 El Cajon CA 92021

EQUIPMENT DESCRIPTION

CREMATION FURNACE (100-LB/HR CAPACITY): TABO MODEL O-VL-A, NATURAL GAS FIRED WITH ECLIPSE BURNERS, H 126-NM (1MM BTU/HR) AND 54 NM (360M BTU/HR) (APPL #12853) 0880 NO APP

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES

1. The incinerator shall be operated at all times in accordance with the manufacturer's instructions. These instructions shall be posted on the equipment or kept readily available on the premises.
2. The secondary chamber burner of the incinerator shall be lit at all times during incineration operation and until burndown is completed.
3. This equipment shall not be used for the cremation of caskets.
4. Each case shall be weighed prior to charge. Based on these weights, a charge rate of 100 pounds per hour shall not be exceeded. Logs documenting compliance with this condition shall be maintained for a period of two years and made available to the District upon request.

Fee Schedules: 1 [14A] Non-Municipal Incinerator, 1 [92B] Incinerator Particulate Matter

BEC: 0172B

Revised Date:

Page 1 of 2

Print Date: July 16, 2010



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5. Temperature indicators to monitor the primary chamber and afterburner temperatures must be installed on the equipment and maintained in good working order.
6. The temperature of the primary chamber shall not exceed 1700 degrees F at anytime.
7. The Neptune Society shall coordinate with District staff the proper location of temperature probes in the afterburner section and an appropriate minimum temperature value for this location. This value may become a condition of this Permit.
8. Each time the incinerator is started up from a cold status, there shall be a thirty minute preheat before material is charged to the incinerator.
9. The minimum heat input to the afterburner shall be 400,000 BTU per hour (6.4 CFM of Natural Gas).
10. Except for polyethylene film plastic, no plastic materials shall be burned in this crematory furnace.
11. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.
12. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
13. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)

Attachment No. 2

TABO (crematory manufacturer) website

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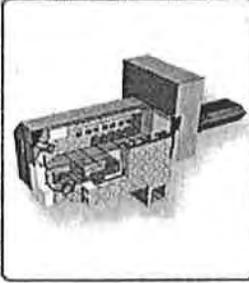
t: +46 (0) 8-447 11 80
f: +46 (0) 8-447 11 89
e: info@tabo.com

W E L C O M E T O T A B O I N C I N E R A T O R A B

r e c e n t n e w s }

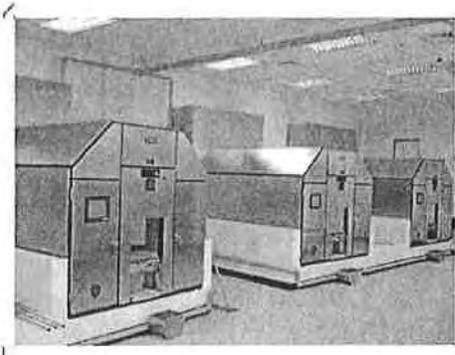
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... more




{ vl-a cremator

TABO has been known as a world standard for cremation furnaces and few furnaces is so widely used as the TABO standard cremator. TABO has manufactured cremation furnaces since 1932 and focus has always been on first-class quality. Many TABO furnaces last for more than 20 years, and some even over 30 years.



The TABO cremator type VL-A

The furnace main burning and post-combustion chamber is built in high-temperature resistant refractory. A preheater device in the valve preheats the combustion air. Through many layers of isolation material as well as recovery of heat, an economic operation can be achieved, as well as a low temperature on the cover plates. When starting, the furnace is preheated to 700-800°C, and then no extra energy is added.

The furnace is the result of a careful study of the cremation process, allied with considerable practical experience over a number of years. Thanks to modern technology the furnace is energy saving and environmental friendly. It satisfies the need for efficient cremation under hygienic conditions with a smoke-, odour- and dustless process. Other major advantages are the extremely low sound level and high efficiency, a normal cremation with a TABO furnace takes 60-80 minutes.

Post-combustion

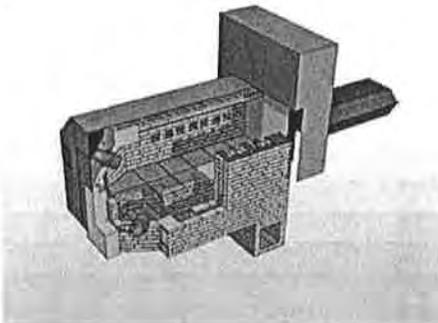
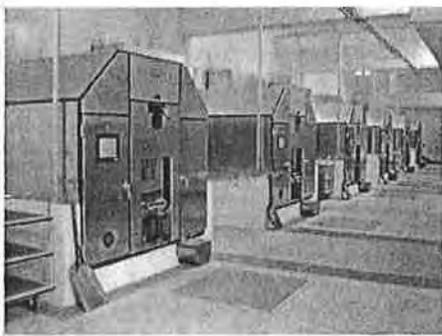
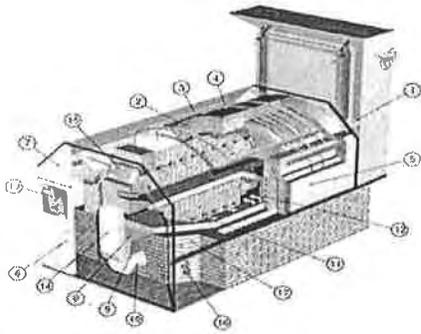
For many years our furnaces have been equipped with post-combustion chamber, which is absolutely essential for reduction of the hydrocarbons present.

The micro processor

A microprocessor with electronic boards controls the regulation of temperature, air supply, draught regulation and smoke density. The computer panel has clear symbols to ensure an easy operation.

Energy saving construction

Due to heavy refractory walls and very efficient heat insulation, successive cremations can normally be made without additional heat from the burner. The combustion air is preheated to a very high temperature from the heat stored in the refractory during the first stage of the cremation cycle. The preheated air speeds up the combustion process and prevent decrease of chamber temperature.



Environmental requirements

Automatic control normally results in flue gases without smoke and odour. Any potential increase in smoke is automatically detected and the air increased so that waste gases are completely combusted at a sufficiently high temperature to eliminate odours.

Safe and silent

A sophisticated security system gives a complete protection against occupational accidents. The noise level is very low. The automatic control maintains a slightly negative pressure in the cremation chamber and thereby prevents any unpleasant smell in the crematory room. Low outlet velocity from the cremation chamber prevents fly ash from mixing with the waste gases.

Insertion

In the delivery an insertion wagon with an electro-hydraulic lift-device is included. The insertion wagon is manufactured for safe operation and good working environment for the operator. The insertion wagon can be delivered for both one-level and two-level installations. There is an optional automatic insertion wagon.

The TABO cremator:

1. *High capacity - automatically controlled air supply and damper*
2. *Recuperation - no additional supply of heat*
3. *Smokeless, odourless and dust free mission of waste gases complies with environmental requirements*
4. *Easy handling - one man can operate up to 3 cremators*
5. *Convenient - only a flat hearth to rake*
6. *Duplicate systems - insurance against power failure*

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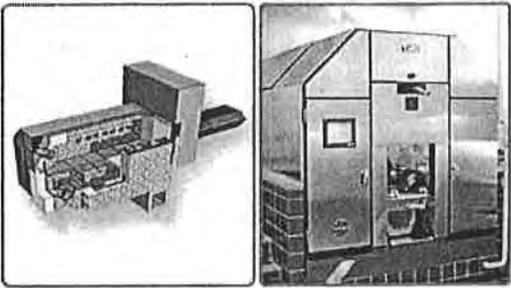
WELCOME TO TABO INCINERATOR AB

TABO
INCINERATOR

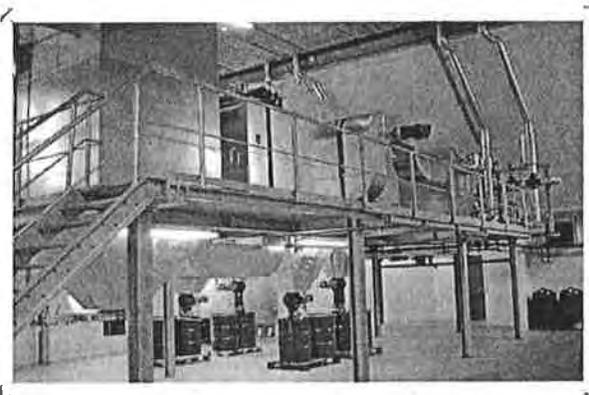
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flue gas cleaning

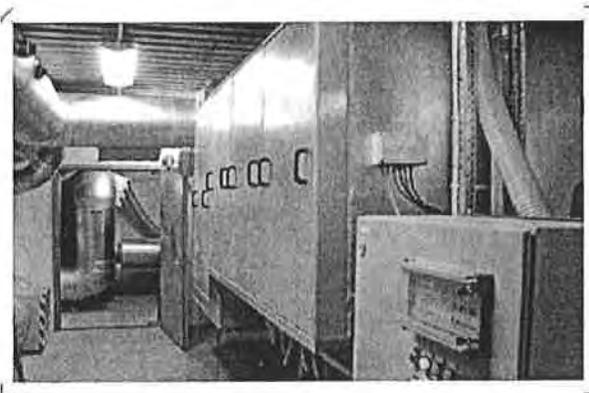


TABO has long experience from installing flue gas filter systems to cremators. TABO installed its first filter to cremators already in the early 90ties. Over the years has TABO worked together with several partners in order to find the best solution for flue gas cleaning in crematoriums.

Environment regulation

The TABO cremator is free from smoke and smell and has lower emissions than other competitors. However, even with the most modern technique a cremator still emits dust, mercury and dioxins. More and more countries demand flue gas cleaning system in order to lower the emissions even more.

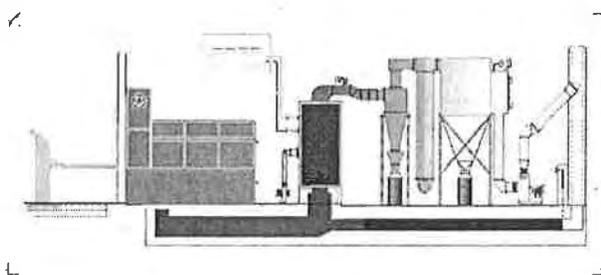
The TABO filter fulfills all environment regulation in Europe, which has the toughest environment regulations in the world. The filter also fulfills all environment and quality requirements.



A distinguished feature with the TABO flue gas filter is the integration with the cremator system. TABO considers the cremator and flue gas filter as one integrated system that must function together. A good cremator is the best guarantee for a trouble-free filter system. Furthermore, the cremator eliminates CO, which can not be separated by the filter.

TABO filter system

The TABO flue gas filter has extremely low consumption of additive. The electricity consumption is low. The lifetime of the filter bags is long. Service and maintenance is cheap. The TABO flue gas filter system has very low operation cost.



Safety

A cremator is different from industrial incinerators. The cremation process has extreme variations in gas flow volume and temperature. The TABO filter manages these variations. There are several built-in safety features to avoid filter fire or other damage on the filter bags. The TABO flue gas filter is probably the safest system in the world.

User friendly

The system is adapted for the sensitive environment of a crematorium. The system has been made with consideration for easy handling of waste, and easy service and maintenance without any leakage of active carbon, oil or similar.

TABO flue gas cleaning system:

- **Economy** – low consumption of additive
- **Environment** – eliminate CO, dust, Hg and dioxins
- **Low noise level** – both in-door and out-door
- **Reliable** – few stops and problems
- **Safety** – safe for operator
- **Dry system** – no added water
- **User friendly** – adapted for crematorium
- **Service** – easy and cheap to service

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Attachment No. 3

District report from May 25, 2010 source test

**SAN DIEGO AIR POLLUTION CONTROL DISTRICT
MONITORING AND TECHNICAL SERVICES DIVISION/SOURCE TEST DEPARTMENT
10124 OLD GROVE ROAD
SAN DIEGO, CALIFORNIA 92131**

RENEWAL PARTICULATE MATTER EMISSIONS SUMMARY REPORT

SECTION 1 : SITE DATA

1a: SITE LOCATION ADDRESS

Neptune of San Diego
14065 Old Hwy 80
El Cajon, CA 92021

1b: SITE MAILING ADDRESS

Rod Hildebrand, Crematory Mgr.
Neptune of San Diego
P.O. Box 2308
El Cajon, CA 92021

1c: SITE IDENTIFICATION

Type of plant (Asphalt, Perlite, Power, Incineration, or Aggregates) no.
Enter number (1 , 2 , 3 , 4 , 5) 4

Type of test (Renewal, Application, or Aggregates) no.
Enter number (1 , 2 , 3) 1

1d: SITE EQUIPMENT IDENTIFICATION

P.O.#: 6288 APP#: N/A BEC: 0172B ID#: 5098A
Type: Crematory Incinerator Make: TABO MODEL O-VL-A
Fuel: Natural gas Rating: 100 lb/hr
Other: Eclipse Burners 1MM BTU / Hr.

SECTION 2 : TEST SUMMARIES

2a: TEST RESULTS SUMMARY

Test #	1	Run 1	SDAPCD			RENEWAL TEST		
Area:	Stack			Flow		Emissions		
Item:	ts (°F)	Ps (in Hg)	vs (ft/sec)	Qs (acfm)	Qstd (dscfm)	Cs (gr/dscf)	Cs(12%) (gr/dscf)	E (lbs/hr)
Value:	737	29.88	28.23	2670	1114	0.04	0.26	0.37

2b: PERSONNEL SUMMARIES

Tester: SDAPCD Date: May. 25, 2010
APCD: J. Such, S. Ross Date: May. 25, 2010
Eng: S. Ross Date: May. 25, 2010
Report: J. Such Date: Jun. 5, 2010
Senior:  Date: 6-11-10
Suzanne Blackburn, Senior Chemist

SECTION 3 : REPORT SUMMARIES

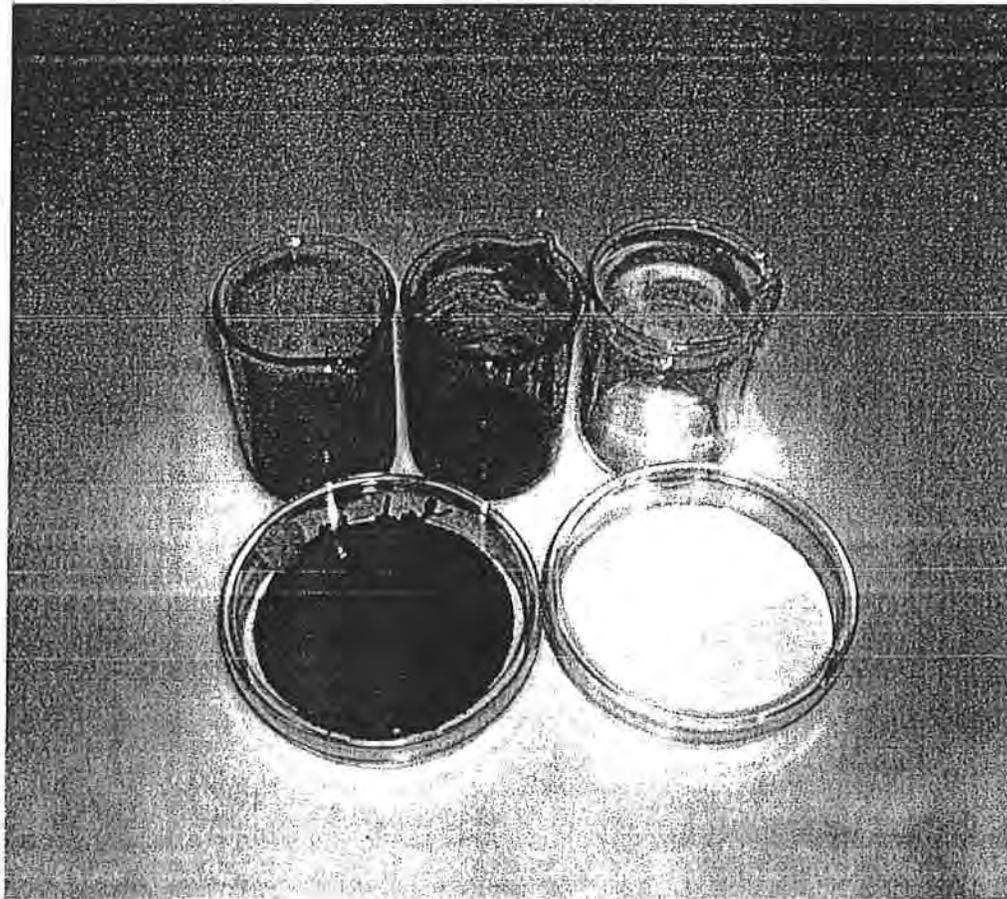
3a: PERFORMANCE SUMMARIES

Rule	Description	Limit	Value	Units	Performance
50	Visible Emissions	20% Opac	None	---	****
53	Incineration	0.30	0.26	gr/dscf	PASS
P.O.	Primary Chamber (max)	1700	1606	°F	PASS
21	All P.O. conditions met?	YES	YES	---	PASS

**** VEE NOT PERFORMED

3b: INDEX SUMMARIES

Topic	Page
Site Data	1
Summary of Results	1
Test Parameters & Data Summaries	2
Field Data	2
Calculations	3
Laboratory Data	4
Site & Test Diagrams	5
Nomenclature	5
Engineering Data	6



Neptune

**Samples
5-25-10**

SECTION 4 : TEST PARAMETERS

4a: SYSTEM DESCRIPTION

The unit is preheated by the afterburner until the furnace reaches a threshold temperature. The charge is then placed into the primary chamber and the flame is introduced into the primary chamber. The charge is burned within its rated capacity. The particulate emissions from the secondary chamber, the afterburner, are routed to a stack. It is these emissions that are the subject of this report

4b: SAMPLING PROCEDURES, EQUIPMENT, & CALCULATIONS

Gas: A CEM analysis was performed on the stack gas

P/M: All procedures were derived from EPA's 40 CFR, July, 1996, Part 60, App. A, Methods 1-5 and the SDAPCD Method 5 QA manual. Deviations are noted below.

Deviations: A back-end filter (p. 5, fig.1) was used.

4c: TEST OBSERVATIONS, SITE RECOMMENDATIONS & REPORT COMMENTS:

Charge weight was 125 lbs. The charge was put into the crematory around 10:10 a.m. The test started at 10:18 after the initial "surge" of charred cardboard had dissipated. There was an inordinate amount of fine sooty ash and visible white smoke exiting the stack. The odor was more pronounced than a "normal" cremation, and had a noticeable "sweet" taste to it. The back-end filter was completely blackened within the first 10 minutes. The other recovered samples were also noticeably blackened, still retaining an odor this tester has never experienced.

SECTION 5 : TEST DATA SUMMARIES

<p>5a: STACK DATA</p> <p>Stack Circular ?= <u>yes</u> (Yes/No) Ds (stack diameter)= <u>17.0</u> in Stack length= <u>N/A</u> in Stack width= <u>N/A</u> in A (upstream)= <u>36.0</u> in B (downstream)= <u>72.0</u> in Port a (direction)= <u>S</u> port Port b (direction)= <u>E</u> port Number of ports= <u>2</u> ports</p>	<p>5b: TEST CONSTANTS</p> <p>Til # of traverse points (tn)= <u>24</u> pts ø (sampling time per point)= <u>3.0</u> min/pt Ym= <u>1.0178</u> ΔH@= <u>1.5743</u> Dn= <u>0.485</u> in Cp= <u>0.84</u> Teflon line used for PM?= <u>YES</u> (Yes/No) CEM used for gas collection ?= <u>YES</u> (Yes/No) Back filter used?= <u>YES</u> (Yes/No)</p>	<p>5b: PRESSURES</p> <p>End leak rate= <u>0.000</u> cfm Leak rate pass?= <u>PASS</u> (Pass/Fail) Pbar= <u>29.88</u> in Hg Pg= <u>0.010</u> in H2O</p> <p>5d: ANALYSIS</p> <p>Total Fuel used= <u>10.96</u> scfm Test Number= <u>1</u> Run number= <u>1</u></p>
--	--	---

SECTION 6 : FIELD DATA

tn (#)	Vm (ft ³)	ΔP (in H2O)	ΔH (in H2O)	ts (°F)	t1 (°F)	t2 (°F)	ti (°F)	tprobe (°F)	tbox (°F)	CO2 (%)	O2 (%)	N2 (%)	Md (g/mo)	Ms (g/mo)	vs (ft/sec)	√Δp (in H2O)		
start	516.512																	
1	519.200	0.095	1.91	739	78	77	58			3.37	16.00	80.63	29.18	28.59	26.22	0.308		
2	521.710	0.105	2.10	744	75	73	49			3.37	16.00	80.63	29.18	28.59	27.62	0.324		
3	524.250	0.120	2.41	718	77	74	51			3.37	16.00	80.63	29.18	28.59	29.21	0.346		
4	526.940	0.115	2.30	737	78	74	51			3.37	16.00	80.63	29.18	28.59	28.82	0.339		
5	529.580	0.110	2.20	696	80	76	50			3.37	16.00	80.63	29.18	28.59	27.70	0.332		
6	532.150	0.100	2.00	724	81	79	48			3.37	16.00	80.63	29.18	28.59	26.73	0.316		
7	534.740	0.105	2.10	745	81	79	49			3.37	16.00	80.63	29.18	28.59	27.63	0.324		
8	537.430	0.115	2.30	755	82	80	48			3.37	16.00	80.63	29.18	28.59	29.04	0.339		
9	540.200	0.120	2.41	753	83	80	48			3.37	16.00	80.63	29.18	28.59	29.64	0.346		
10	543.150	0.140	2.80	731	85	81	49			3.37	16.00	80.63	29.18	28.59	31.72	0.374		
11	545.920	0.120	2.41	760	86	81	50			3.37	16.00	80.63	29.18	28.59	29.73	0.346		
12	548.469	0.090	1.80	747	86	81	51			3.37	16.00	80.63	29.18	28.59	25.61	0.300		
1	551.020	0.105	2.10	718	86	83	54			2.25	17.30	80.45	29.05	28.47	27.38	0.324		
2	553.600	0.095	1.91	738	87	83	50			2.25	17.30	80.45	29.05	28.47	26.26	0.308		
3	556.270	0.115	2.30	689	87	83	48			2.25	17.30	80.45	29.05	28.47	28.30	0.339		
4	559.060	0.120	2.41	730	88	84	48			2.25	17.30	80.45	29.05	28.47	29.42	0.346		
5	561.760	0.115	2.30	748	88	84	47			2.25	17.30	80.45	29.05	28.47	29.02	0.339		
6	564.480	0.115	2.30	759	89	84	48			2.25	17.30	80.45	29.05	28.47	29.15	0.339		
7	567.150	0.115	2.30	760	91	85	49			2.25	17.30	80.45	29.05	28.47	29.16	0.339		
8	569.920	0.120	2.41	751	92	86	47			2.25	17.30	80.45	29.05	28.47	29.68	0.346		
9	572.720	0.120	2.41	740	92	87	49			2.25	17.30	80.45	29.05	28.47	29.54	0.346		
10	575.630	0.100	2.00	733	92	86	49			2.25	17.30	80.45	29.05	28.47	26.89	0.316		
11	577.990	0.105	2.10	731	92	86	50			2.25	17.30	80.45	29.05	28.47	27.53	0.324		
12	580.469	0.090	1.80	740	93	87	51			2.25	17.30	80.45	29.05	28.47	25.59	0.300		
In (#)	Vm (ft ³)	ΔP (in H2O)	ΔH (in H2O)	ts (°F)	t1 (°F)	t2 (°F)	ti (°F)	tprobe (°F)	tbox (°F)	CO2 (%)	O2 (%)	N2 (%)	Md (g/mo)	Ms (g/mo)	vs (ft/sec)	√Δp (in H2O)	(√Δp) ² (in H2O)	
12	63.957	0.110	2.21	737	85	81	50	N/A	N/A	2.81	16.65	80.54	29.12	28.53	28.23	0.33	0.110	
TOTAL	TOTAL	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	CAL

SECTION 7 : CALCULATIONS

7a: TIME

- 1) \emptyset = sampling time per point= 3.0 min/pt
- 2) t_n = total number of sampling pts= 24 pts
- 3) \emptyset = total sampling time= 72 min

7b: TEMPERATURES

- 4) $t_s = (\sum t_s(t_n))/t_n = 737 \text{ }^\circ\text{F}$
- 5) $T_s = t_s + 460 = 1197 \text{ }^\circ\text{R}$
- 6) $t_1 = (\sum t_1(t_n))/t_n = 85 \text{ }^\circ\text{F}$
- 7) $t_2 = (\sum t_2(t_n))/t_n = 81 \text{ }^\circ\text{F}$
- 8) $t_m = (t_1 + t_2)/2 = 83 \text{ }^\circ\text{F}$
- 9) $T_m = t_m + 460 = 543 \text{ }^\circ\text{R}$
- 10) $t_i = (\sum t_i(t_n))/t_n = 50 \text{ }^\circ\text{F}$
- 11) $t_{probe} = (\sum t_{probe}(t_n))/t_n = \text{N/A }^\circ\text{F}$
- 12) $t_{box} = (\sum t_{box}(t_n))/t_n = \text{N/A }^\circ\text{F}$
- 13) $T_{std} = 528 \text{ }^\circ\text{R}$

7c: PRESSURES

- 14) $P_{bar} = (P_{bar}(start) + P_{bar}(end))/2 = 29.88 \text{ in Hg}$
- 15) $\Delta P = (\sqrt{\Delta p})^2 = 0.110 \text{ in H}_2\text{O}$
- 16) $\Delta H @ = 1.5743$
- 17) $\Delta H = (\sum \Delta H(t_n))/t_n = 2.212 \text{ in H}_2\text{O}$
- 18) $P_m = P_{bar} + (\Delta H/13.6) = 30.04 \text{ in Hg}$
- 19) $P_g = \text{read from press. sensing device} = 0.010 \text{ in H}_2\text{O}$
- 20) $P_s = P_{bar} + (P_g/13.6) = 29.88 \text{ in Hg}$
- 21) $P_{std} = 29.92 \text{ in Hg}$

7d: VOLUME

- 22) $V_m (start) = 516.512 \text{ feet}^3$
- 23) $V_m (end) = 580.469 \text{ feet}^3$
- 24) $V_m = (V_m(end) - V_m(start)) = 63.957 \text{ feet}^3$
- 25) Leak Correction = Leak Rate - 0.02 cfm = N/A cfm
- 26) $V_m \text{ Corr} = \text{Leak Correction} * \emptyset = \text{N/A feet}^3$
- 27) $V_m(adj) = (V_m(end) - V_m(start)) - V_m(Corr) = \text{N/A feet}^3$
- 28) $Y_m = 1.0178$
- 29) $V_m' = V_m * Y_m = 65.095 \text{ feet}^3$
- 30) $V_m \text{ std} = [V_m' * (T_{std}/T_m) * (P_m/P_{std})] = 63.513 \text{ feet}^3$
- 31) $V_{ic} = (\sum \text{Volume of impingers}) = 74.50 \text{ ml}$
- 32) $\emptyset = 0.0220 \text{ lbs/ml}$
- 33) $R = 21.85 \text{ in Hg-sf/R-lb-mo}$
- 34) $M_w H_2O = 18.00 \text{ g/mol}$
- 35) $V_{wstd} = (V_{ic} * \emptyset * R * T_{std}) / (P_{std} * M_w H_2O) = 3.513 \text{ feet}^3$
- 36) $B_{ws} = [V_{wstd} / V_{wstd} + V_{mstd}] * 100 = 5.24 \%$

7e: GAS ANALYSIS

- 40) $\%CO_2 = (\sum \%CO_2(t_n))/t_n = 2.81 \%$
 - 41) $\%O_2 = (\sum \%O_2(t_n))/t_n = 16.65 \%$
 - 42) $\%CO = (\sum \%CO(t_n))/t_n = 0.00 \%$
 - 43) $\%N_2 = (\sum \%N_2(t_n))/t_n = 80.54 \%$
 - 44) E.A. = Excess Air = N/A %
- $$[(O_2) - 0.5(CO)] / [0.264(N_2) - ((O_2) - 0.5(CO))] * 100 = \text{N/A } \%$$

7f: MOLECULAR WEIGHT

- 45) $M_d = (\sum (.44 * CO_2(t_n)) + (.32 * O_2(t_n)) + (.28 * N_2(t_n))) / t_n = 29.12 \text{ g/mo}$
- 46) $M_s = (\sum (M_d(t_n) * (1 - B_{ws}\%) + 18.0 * (B_{ws}\%))) / t_n = 28.53 \text{ g/mo}$

-----CORRECTION FOR THE CO2 FROM THE FUEL-----

- A) $CO_2(tl \text{ rate}) = (\%CO_2 * Q_{std}) / 100 = 31.311 \text{ scfm}$
- B) Fuel(tl rate) = read from gas meter = 10.956 scfm
- C) Meter Correction factor = read from meter = 1 *
- D) Corrected Fuel rate = B * C = 10.956 scfm
- E) Volume of CO2 from 1scf of Fuel (Methane) = 1.056 scf
- F) $CO_2(\text{from Fuel Combustion}) = D * E = 11.569 \text{ scfm}$
- G) $CO_2(\text{from Charge combustion}) = A - F = 19.742 \text{ scfm}$
- H) $\%CO_2(\text{from the Charge}) = (G / (Q_{std} - F)) * 100 = 1.79 \%$

* = 1, because meter correction factor is already applied

7g: STACK DIMENSIONS

- 47) $D_s = 17.00 \text{ in} = 1.417 \text{ feet}$
- 48) Length = N/A in = N/A feet
- 49) Width = N/A in = N/A feet
- 50) $A_s = 3.14 * [(D_s)^2 / 4] = 227 \text{ in}^2 = 1.576 \text{ feet}^2$
- 51) $De = D_s = 17.0 \text{ in}$
- 52) $A = 36.0 \text{ in}$
- 53) $A(\text{supstream}) = A / De = 2.12$
- 54) $B = 72.0 \text{ in}$
- 55) $B(\text{downstream}) = 4.24$

7h: TRAVERSE POINTS

- Point 12 = 97.9 %*Ds = 16.5 in
- Point 11 = 93.3 %*Ds = 15.9 in
- Point 10 = 88.2 %*Ds = 15.0 in
- Point 9 = 82.3 %*Ds = 14.0 in
- Point 8 = 75.0 %*Ds = 12.8 in
- Point 7 = 64.5 %*Ds = 11.0 in
- Point 6 = 35.5 %*Ds = 6.0 in
- Point 5 = 25.0 %*Ds = 4.3 in
- Point 4 = 17.7 %*Ds = 3.0 in
- Point 3 = 11.8 %*Ds = 2.0 in
- Point 2 = 6.7 %*Ds = 1.1 in
- Point 1 = 2.1 %*Ds = 0.5 in

7i: VELOCITIES

- 56) $D_n = 0.485 \text{ in} = 0.0404 \text{ feet}$
- 57) $A_n = 3.14 * [(D_n)^2 / 4] = 0.1847 \text{ in}^2 = 0.0013 \text{ feet}^2$
- 58) $C_p = 0.840$
- 59) $v_s(\text{stack}) = v_s = \text{Vel. of the stack at stack cond.} = 28.23 \text{ ft/sec}$
 $[\sum (85.49 * C_p * \{[(T_s(t_n) * \Delta P(t_n)) / (P_s * M_s(t_n))]^0.5\})] / t_n$
- 60) $v_s(\text{std}) = \text{Vel. of the stack at standard cond.} = 11.79 \text{ ft/sec}$
 $[\sum (v_s(\text{stack}) * (T_{std} / T_s(t_n)) * (P_s / P_{std}) * (1 - \%B_{ws}))] / t_n$
- 61) $Q_m = \text{Sampling Rate} = V_{mstd} / \emptyset = 0.882 \text{ scfm}$
- 62) $v_n(\text{std}) = \text{Vel. of the nozzle at standard cond.} = 11.46 \text{ ft/sec}$
 $(Q_m / A_n) * (1 \text{ min} / 60 \text{ sec}) =$

7j: FLOW RATES

- 63) $Q_s = (v_s(\text{stack})) * A_s * 60 = 2,670 \text{ acfm}$
- 64) $Q_{std} = 17.647 * Q_s * (1 - B_{ws}) * P_s / T_s = 1,114 \text{ dscfm}$

7k: ISOKINETICS

- 65) $I = T_{std} * T_s * V_m \text{ std} / (P_s * v_s(\text{stack}) * A_n / 144 * \emptyset) * (1 - B_{ws}) = 97$
- 66) $I = [v_n(\text{std}) / v_s(\text{std})] * 100 = 97 \%$

7l: EMISSIONS

7l, 1: -----FRONT-----

- 67) $m_n(\text{front}) = \text{N/A grams}$
- 68) $C_s(\text{front}) = 15.43 * m_n(\text{front}) / V_m \text{ std} = \text{N/A gr/dscf}$
- 69) $C_s(12\%, \text{front}) = (12\% * CO_2(\text{Charge})) * C_s(\text{front}) = \text{N/A gr/dscf}$
- 70) $E(\text{front}) = (0.00857) * (Q_{std}) * C_s(\text{front}) = \text{N/A lbs/hr}$

7l, 2: -----BACK-----

- 71) $m_n(\text{back}) = \text{N/A grams}$
- 72) $C_s(\text{back}) = 15.43 * m_n(\text{back}) / V_m \text{ std} = \text{N/A gr/dscf}$
- 73) $C_s(12\%, \text{back}) = (12\% * CO_2(\text{Charge})) * C_s(\text{back}) = \text{N/A gr/dscf}$
- 74) $E(\text{back}) = (0.00857) * (Q_{std}) * C_s(\text{back}) = \text{N/A lbs/hr}$

7l, 3: -----TOTAL-----

- 75) $m_n(\text{total}) = m_n(\text{front}) + m_n(\text{back}) = 0.1577 \text{ grams}$
- 76) $C_s(\text{total}) = 15.43 * m_n(\text{total}) / V_m \text{ std} = 0.038 \text{ gr/dscf}$
- 77) $C_s(12\%, \text{tot}) = (12\% * CO_2(\text{Charge})) * C_s(\text{tot}) = 0.257 \text{ gr/dscf}$
- 78) $E(\text{total}) = (0.00857) * (Q_{std}) * C_s(\text{total}) = 0.366 \text{ lbs/hr}$

CORRECTION FOR ANISOKINETIC CONDITIONS

- $C_s(\text{adjusted, total}) = (I / 100) * C_s(\text{total}) = \text{N/A gr/dscf}$
- $C_s(\text{adjusted, 12\%, tot}) = (I / 100) * C_s(12\%, \text{total}) = \text{N/A gr/dscf}$
- $E(\text{adjusted, total}) = (I / 100) * E = \text{N/A lbs/hr}$

SECTION 8 : LABORATORY DATA

SECTION 8a: BLANKS

	item: blank water id #: 1109-7	item: blank acetone id #: 1008-1	item: blank organic id #:	item: blank filter id #:
(a)	final weight: 69.4311 g	final weight: 50.8399 g	final weight: _____ g	final weight: _____ g
(b)	initial weight: 69.4305 g	initial weight: 50.8397 g	initial weight: _____ g	initial weight: _____ g
(c)=(a-b)	net weight: 0.0006 g	net weight: 0.0002 g	net weight: _____ g	net weight: _____ g
(d)	total volume: 500 ml	total volume: 100 ml	total volume: _____ ml	total volume: _____ ml
(e)=(c/d*1,000,000)	std weight: 1.2 mg/L	std weight: 1.5 mg/L	std weight: _____ mg/L	std weight: _____ mg/L
(f)	std wgt limit: 4.0 mg/L	std wgt limit: 10.0 mg/L	std wgt limit: _____ mg/L	std wgt limit: _____ mg/L
(g)	performance: PASS	performance: PASS	performance: _____	performance: _____

SECTION 8b: IMPINGERS

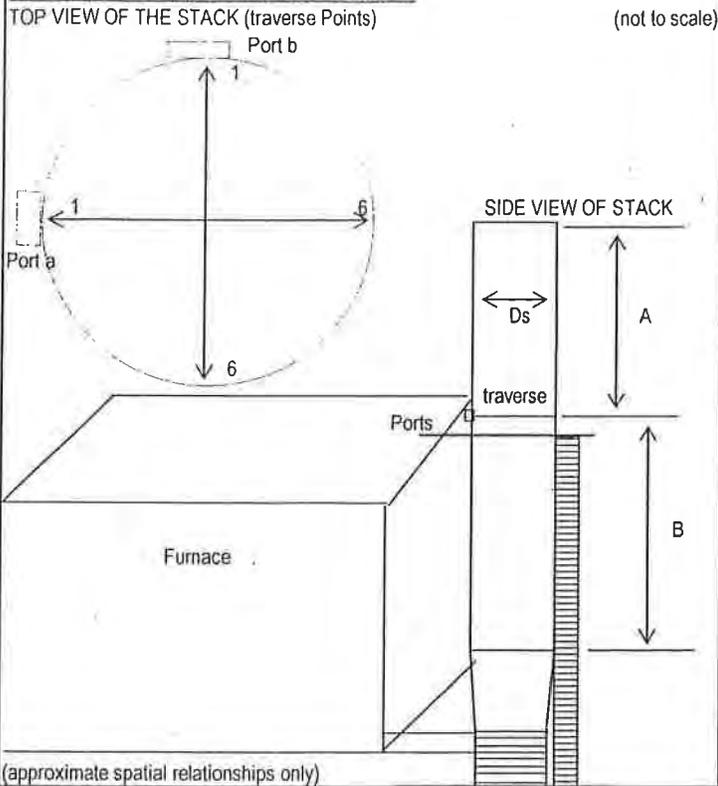
impinger water weights					impinger water weight	
Imp.	Final Vol	Initial Vol/Wgt	Net Vol	Net Wgt	(i)=(∑ initial wgt impingers (#1-#3))	Impinger Charge: 203.1 ml
#1:	148.3 ml	102.0 ml	46.3 ml	46.3 ml	(ii)=(c/d, water)	Water Std Weight: 1.2 E-6 g/ml
#2:	116.0 ml	101.1 ml	14.9 ml	14.9 ml	(iii)=(i*ii)	Impinger Weight: 0.0002 g
#3:	4.4 ml	0.0 ml	4.4 ml	4.4 ml		
#4:	229.8 g	220.9 g	8.9 g + ∅	8.9 ml		
Tot initial vol (#1-#3)= 203.1 ml			Vlc (∑#1-4)= 74.5 ml			

SECTION 8c: WEIGHTS & VOLUMES from the SAMPLING TRAIN

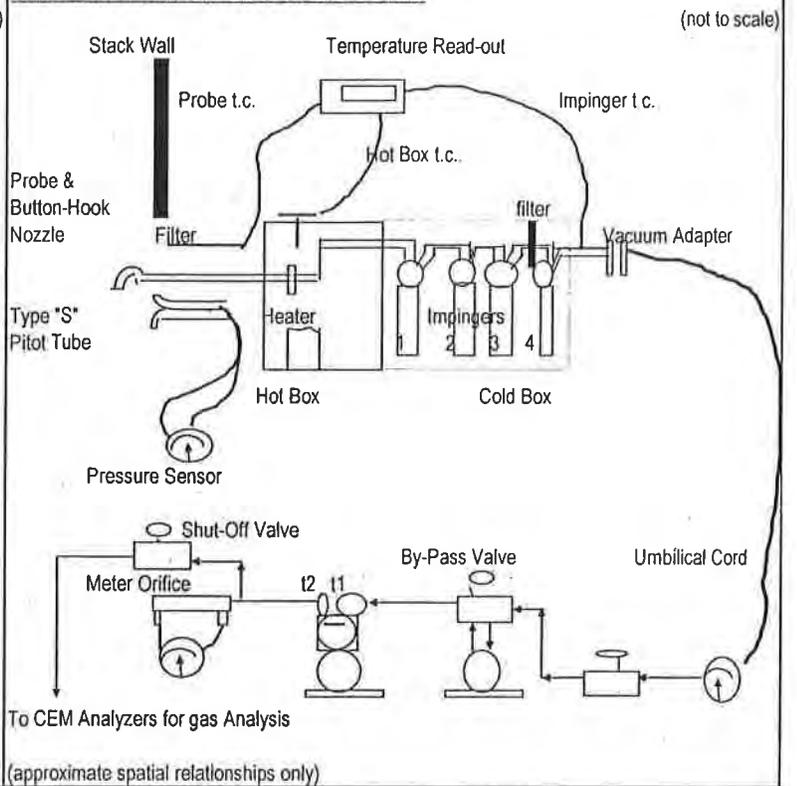
FRONT WASHINGS		BACK WASHINGS		TOTAL WASHINGS	
Item: FRONT WATER	Item: BACK WATER	Item: FRONT ACETONE	Item: BACK ACETONE	Item: FRONT ORGANIC	Item: BACK ORGANIC
Id #: _____	Id #: 906-19	Id #: _____	Id #: 906-20	Id #: _____	Id #: _____
(D) Total Volume: 0.0 ml	(D) Total Volume: 533.4 ml	(D) Total Volume: 0.0 ml	(D) Total Volume: 245.1 ml	(D) Total Volume: 0.00 ml	(D) Total Volume: 0.00 ml
(E)=(D*c*d) H2O PM Wt: 0.0000 g	(E)=(D*c*d) H2O PM Wt: 0.0003 g	(E)=(D*c*d) Solvent PM Wt: 0.0000 g	(E)=(D*c*d) Solvent PM Wt: 0.0004 g	(E)=(D*c*d) Solvent PM Wt: 0.0000 g	(E)=(D*c*d) Solvent PM Wt: 0.0000 g
(EE)=(iii) Impinger PM Wt: N/A g	(EE)=(iii) Impinger PM Wt: 0.0002 g	(A) Final Wt: 0.0000 g	(A) Final Wt: 49.5274 g	(A) Final Wt: 0.0000 g	(A) Final Wt: 0.0000 g
(B) Initial Wt: 0.0000 g	(B) Initial Wt: 48.3815 g	(B) Initial Wt: 0.0000 g	(B) Initial Wt: 49.5104 g	(B) Initial Wt: 0.0000 g	(B) Initial Wt: 0.0000 g
		(C)=(A-B) Net Wt: 0.0000 g	(C)=(A-B) Net Wt: 0.0738 g	(C)=(A-B) Net Wt: _____ g	(C)=(A-B) Net Wt: _____ g
		(F)=(C) Actual Wt: 0.0000 g	(F)=(C) Actual Wt: 0.0738 g	(F)=(C) Actual Wt: _____ g	(F)=(C) Actual Wt: _____ g
				(G)=(∑F's(total)) mn= 0.1577 g	

SECTION 9 : FIGURES

9a: FIGURE 1: STACK & TRAVERSE DIAGRAM



9b: FIGURE 2: CONDENSER SYSTEM DIAGRAM



SECTION 10 : NOMENCLATURE

10a: ALPHABETICAL LISTING OF VARIABLES

VARIABLE	UNITS	EXPLANATION
An, As	in ² , ft ²	nozzle & stack area
Bws	%	water vapor in the gas stream
CO, CO2	%	carbon monoxide & carbon dioxide
Cp	none	pitot tube correction factor
cs()	gr/dscf	concentration of P/M in stack gas
cs(12%,)	gr/dscf	conc. of P/M, corr to 12% CO2
De	in, ft	stack equivalent diameter
Dn, Ds	in, ft	nozzle & stack diameter
E()	lbs/hr	P/M emissions rate
E.A.	%	excess air
ΔH	in H2O	diff. press. across the meter orifice
ΔH@	none	orifice pressure differential at STP
I	%	isokinetics
Md, Ms	g/g-mole	dry & wet stack gas molecular weight
mn()	g	particulate weight
MW	g/mole	molecular weight
N2, O2	%	nitrogen & oxygen
√Δp	√in H2O	square root of the pitot diff. press.
ΔP	in H2O	pitot diff. Press.-vel. Head
Pm, Ps	in Hg	absolute meter & stack pressure
Pg	in H2O	static pressure of the stack
Pstd	in Hg	press at standard conditions (29.92)
Qm	scfm	sampling rate
Qs	acfm	flow rate
Qstd	dscfm	dry vol. stack gas flow rate at STP
t1, t2	°F	dry gas meter inlet & outlet temp.

VARIABLE	UNITS	EXPLANATION
tbox, tprobe	°F	temperature of the front filter & probe
ti, tm	°F	impinger & dgm temperature
T()	°R	temperature in °R
ts	°F	stack temperature in °F
Tstd	°R	temperature at standard conditions (528)
Vlc	ml	water collected from imp and the silica gel
Vm(), Vm'	feet ³	gas meter measurement raw & corrected
Vm std	ft ³	volume of gas sampled, corrected to STP
vs	ft/sec	stack gas velocity
vn(std), vs(std)	ft/sec	stack gas vel. & nozzle vel., corrected to STP
Vw std	ft ³	volume of water vapor in sample, corr. to STP
Y	none	dry gas meter calib. factor

10b: LISTING OF CONVERSION FACTORS

NUMBER	UNITS	EXPLANATION
.09450	in Hg-min/°R	conv to get in Hg-min/°R
.002669	in Hg-ft ³ /°R-ml	conv. to get in Hg-ft ³ /°R
.008570	lb/gr-min/hr	conv from gr/min to lb/hr
.04707	ft ³ /ml	(P°R*Tstd)/(Pstd*MW H2O)
0.454	kg/lb	conversion from lbs to kg
15.43	gr/g	conversion from g to gr
17.64	°R/in H2O	Tstd/Pstd (528/29.92)
85.49	(ft/sec)/((lb-in Hg/lb-mo-°R-in H2O) ^{.5})	conversion factor to get
.3048	ft ³ /m ³	conversion from ft ³ to m ³
13.6	in H2O/in Hg	conv. from in H2O to in Hg



SOURCE TEST ENGINEERING REPORT

SITE : Neptune of San Diego
 PO# : 6288
 DATE : 25-May-10
 APCD PERSONNEL : J. Such, S. Ross, SDAPCD

EQUIPMENT :

Meter	121128	121301	121477	121566	121674	121825	
Time	10:18	10:42	10:53	11:08	11:20	11:33	
# Units		1	1	1	1	1	
Elapsed fuel (scf)		173	176	89	108	151	
Elapsed time (min)		24.0	11.0	15.0	12.0	13.0	
Meter Correction Factor		1.000	1.000	1.000	1.000	1.000	
Fuel usage (SCFH)		433	960	356	540	697	597
Fuel usage (SCFM)		7.2	16.0	5.9 *	9.0	11.6	10.96
Afterburner Temperature °F		706	856	806	801	852	855
Chamber Temperature °F		1302	1606	1522	1438	1552	1585
Charge Weight (lbs)		125					

*Excluded from average due to site shutting off burner temporarily

Fuel Meter Info
 Sprague 1000
 SDG&E 792227
 0.667 CUBIC FEET PER REVOLUTION
 990 CFH @12" WC
 Fuel Meter is NOT dedicated

Attachment No. 4

District surveillance of crematory since November 2010

District Surveillance of Crematory Since November 2010

Note that due to long cool-down cycle on crematories, seeing heat waves and hearing the fan motor are not sufficient to determine whether the cremator is in full operation or is in cool-down mode.

Date	Investigation start time	Wind direction and speed	Sky conditions	Inspector	Observations
11/19/10	2:00 pm	1-2 mph Westerly	Overcast	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
12/1/10	12:30 pm	Not stated	Not stated	Lawless	Heat waves but no smoke Facility also contacted: log shows that body had been inserted at 1:05 pm, and was still being burned
12/2/10	7:15 am	No wind	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/2/10	2:10 pm	~ 3 mph West to east	Cloudy	Gutierrez	10% white emissions while sun in front, but not a valid Method 9 position When in correct position, 0% opacity, no odors, heat waves present, fan motor heard At 4 pm, ~5 percent black smoke for 30 seconds Rod Hildebrand told the inspector the incinerator is opened a few times to move the body around for complete burning, so these emissions leave through the room vent
12/3/10	9:40 am, 1:40 pm	N/A	Clear	Clifford	Saw heat waves leaving the stack, no visible emissions, no odors from this site There are food odors from Jack in the Box restaurant next door
12/6/10	7:30 am	~3 mph West to east	Cloudy/overcast	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/6/10	2:00 pm	~3 to 5 mph West to east	Cloudy	Gutierrez	White emissions at 50% from stack, with sun in front, which is not valid Method 9 position When in correct position, visible emissions during approximately 2 hours ranged from 0 to 30 percent Rod Hildebrand told the inspector about a malfunction with incinerator (blown breaker on fan supplying extra air to combustion chamber)

Date	Investigation start time	Wind direction and speed	Sky conditions	Inspector	Observations
12/7/10	8:55 am	~1 mph West to east	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/7/10	1:55 pm	~1 mph West to east	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/8/10	8:00 am	None	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/8/10	12:00 pm	1-2 mph Westerly	Clear and sunny	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
12/8/10	2:25 pm	~1 mph	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard Inspector communicated with Rod Hildebrand, saw the electric motor that was involved in the breaker circuit malfunction
12/9/10	8:20 am	None	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/9/10	2:45 pm	~5 mph	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/10/10	7:30 am	N/A	Clear and sunny	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
12/13/10	2:00 pm	~3 mph	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/14/10	1:45 pm	~2 mph	Haze	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/17/10	12:00 pm	N/A	Overcast	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
12/20/10	12:40 pm	~5 mph	Overcast and raining	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/21/10	2:40 pm	~10 mph	Rain	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/23/10	2:05 pm	~2 mph NW to SE	Clouds/ overcast	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/27/10	1:30 pm	~2 mph W to E	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard Observed workers on top of roof painting the short stucco wall that had been smoke stained.
12/28/10	1:23 pm	~3 mph W to E	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
12/29/10	10:00 am	5-10 mph	Rainy	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard

Date	Investigation start time	Wind direction and speed	Sky conditions	Inspector	Observations
12/30/10	10:40 pm	~2 mph	Clear	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
1/3/11	12:40 pm	~1 mph S to N	Overcast/ cloudy	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
1/7/11	7:30 am	N/A	Overcast	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
1/11/11	1:05 pm	~<1 mph W to E	High clouds	Gutierrez	0% opacity, no odors, heat waves present, fan motor heard
1/14/11	10:30 am	N/A	Overcast	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
1/21/11	1:00 pm	N/A	Overcast	Plotner	No white smoke, no black smoke, no burning odors, heat waves from stack observed
1/27/11	11:00 am	1-2 mph westerly	Clear and sunny	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
2/4/11	11:00 am	0-2 mph westerly	Clear and sunny	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
2/11/11	10:00 am	0-1 mph westerly	Clear and sunny	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
2/18/11	12:00 pm	2-5 mph westerly	Partly cloudy	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack [however, cremator out of service]
3/1/11	3:00 pm	2-5 mph westerly	Clear and sunny	Plotner	Cremator has not been in operation since 2/12/11, due to re-bricking area around furnace and also electrical problem
3/3/11	4:30 pm	Varied	Cloudy	Plotner	Odors: Burning odors under the eaves near the crematory front door, west and east sides of Lake Jennings Park Road, odors in the cremation room Smoke: Flaming ash from the stack, 30 seconds of white smoke after new bodies inserted, white and black smoke from the stack and other places in the roof, white smoke in the cremation room NOV 221845 issued as a result of these observations.
3/4/11	8:00 am	0-5 mph westerly	Partly cloudy	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
3/9/11	10:00 am	0-2 mph westerly	Clear and sunny	Plotner	Equipment not in operation, no visible emissions or odors
3/9/11	6:40 pm	0-3 mph Out of E		Allison	Burning plastic odors, distinct and easily noticeable to east of facility. White smoke emissions from vent stack.

Date	Investigation start time	Wind direction and speed	Sky conditions	Inspector	Observations
					<p>Also inspected facility, smelled same though stronger burning plastic type odors.</p> <p>NOVs 222577 and 222836 issued as a result of these observations.</p>
3/11/11	6:50 pm	0-3 mph Out of SW		Allison	<p>White smoke emissions from vent stack—thickness of the smoke was plainly visible under the moon light without the need of a flashlight. Odors to the east of facility.</p> <p>Contact with facility: cremation had started 45 minutes to 1 hour before emissions observed.</p> <p>NOV 222577 issued as a result of these observations.</p>
3/17/11	12:30 pm	0-3 mph westerly	Partly cloudy	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
3/17/11	8:00 pm	N/A	N/A	Hartnett	<p>Cremation process odors smelled on E. Main Street and Rancho Del Villa and not upwind from facility.</p> <p>NOV 222861 issued as a result of these observations.</p>
3/21/11	4:15 pm	0-20 mph from west	Clouds	Gutierrez	<p>0% opacity, no odors, heat waves present, fan motor heard.</p> <p>Evidence of prior smoke emissions from staining of short stucco wall on roof of facility</p>
3/21/11	7:45 pm	0-3 mph, varied direction	Partly cloudy	Clifford Hartnett	<p>Burning plastic/sulfurous odor 350 feet to northeast of facility, which lasted approximately 20 minutes.</p> <p>Sparks and white smoke exited stack, captured on video, white smoke plume continuing at least 10 minutes.</p> <p>Conversation with operator: He knows it is smoking, trying to reposition the body.</p> <p>NOV 222485 issued as a result of these observations.</p>
3/22/11	9:05 am	0-1 mph, Westerly	Overcast	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack Inspection of facility to view changes made to cremator.

Date	Investigation start time	Wind direction and speed	Sky conditions	Inspector	Observations
3/23/11	12:20 pm	1-3 mph, Westerly	Partly cloudy	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
3/24/11	9:50 am	2-5 mph, Westerly	Partly cloudy	Plotner	No white smoke, no black smoke, no burning odors, observed heat waves from stack
3/31/11	1:15 pm	N/A	N/A	Hartnett	No smoke observed or odors smelled, heat waves observed. Final stages of cremation in progress.
4/6/11	4:10 pm	3-5 mpg	Light showers, swirling wind	Hartnett	No smoke observed or odors smelled, heat waves observed.

Attachment No. 5

Notices of Violation issued to Respondent since March 3, 2011

221845

AIR POLLUTION CONTROL DISTRICT

COUNTY OF SAN DIEGO
10124 OLD GROVE ROAD
SAN DIEGO CA 92131-1649
PHONE (858) 586-2650
FAX (858) 586-2651

APCD 1981-SITE-0289

Sector/ID	L/
P/O#	APCD 1981-PTO 006288
Fee Code	14A
Method	
Entered	
(APCD use only)	

NOTICE OF VIOLATION

Date(s) of Violation 3/3/11
 Name Neptune of San Diego
 Address 14065 Old Ny 80
 Violation Location Same

Date of Report 3/3/11
 Phone 619.922.2240
 City El Cajon 92021
 (Zip Code)
 City Same
 (Zip Code)

Specifically, the following violation(s) of the San Diego Air Pollution Control District rules and/or laws of the State of California has occurred: (abbreviations: H&S = Cal. Health & Safety Code; CCR = Cal. Code of Regulations; R = Rule)

Section	Description of Violation
R. 21#1	Failure to operate the incinerator in accordance with the manufacturer's instructions, specifically, by allowing smoke to escape ^{through} the roof the building rather than the stack.
R. 51	Discharging air contaminants which cause nuisance ^{and} annoyance to a considerable number of people persons, specifically by discharging smoke and particulate from the cremation furnace at various times on 3/3/11.

Pursuant to California Health And Safety Code section 42400 et seq., any person who violates any Order, Rule, or Regulation of the State Board or of an Air Pollution Control District is guilty of a MISDEMEANOR. Each day a violation occurs constitutes a separate offense.

YOU MUST ADVISE THE DISTRICT IN WRITING, WITHIN TEN DAYS, OF THE ACTION TAKEN TO CORRECT THE ALLEGED VIOLATION(S) OR THE REASON(S) YOU BELIEVE THE VIOLATION(S) DID NOT OCCUR. PLEASE MAIL YOUR RESPONSE TO THE AIR POLLUTION CONTROL DISTRICT, ATTENTION: COMPLIANCE DIVISION, 10124 OLD GROVE RD., SAN DIEGO, CALIFORNIA 92131-1649.

Inspector Dan Plotner Date 3/3/11 Time 23 2230
 SIGNING THIS NOTICE ACKNOWLEDGES RECEIPT OF THIS NOTICE, IT IS NOT AN ADMISSION OF GUILT.
 Received by Gary Stevens Title Operator
 (Print name)
 Signature [Signature] Date 3/3/11

(See reverse side for more information)

222577

AIR POLLUTION CONTROL DISTRICT

COUNTY OF SAN DIEGO
10124 OLD GROVE ROAD
SAN DIEGO CA 92131-1649
PHONE (858) 586-2650
FAX (858) 586-2651

Sector/ID L/2893
P/O# 6288
Fee Code 14A
Method
Entered
(APCD use only)

NOTICE OF VIOLATION

Date(s) of Violation 3/9/11, 3/11/11

Date of Report 3/16/11

Name Neptune of San Diego

Phone 619-922-2240

Address 14065 OLD HY 80

City El Cajon 92021
(Zip Code)

Violation Location Same As Above

City
(Zip Code)

Specifically, the following violation(s) of the San Diego Air Pollution Control District rules and/or laws of the State of California has occurred: (abbreviations: H&S = Cal. Health & Safety Code; CCR = Cal. Code of Regulations; R = Rule)

Table with 2 columns: Section, Description of Violation. Row 1: Rule 51, Discharging air contaminants which cause nuisance and annoyance to a considerable number of persons. Specifically, by discharging smoke, particulate and odors from the cremation furnace at various times on 3/9/11 and 3/11/11.

Pursuant to California Health And Safety Code section 42400 et seq., any person who violates any Order, Rule, or Regulation of the State Board or of an Air Pollution Control District is guilty of a MISDEMEANOR. Each day a violation occurs constitutes a separate offense.

YOU MUST ADVISE THE DISTRICT IN WRITING, WITHIN TEN DAYS, OF THE ACTION TAKEN TO CORRECT THE ALLEGED VIOLATION(S) OR THE REASON(S) YOU BELIEVE THE VIOLATION(S) DID NOT OCCUR. PLEASE MAIL YOUR RESPONSE TO THE AIR POLLUTION CONTROL DISTRICT, ATTENTION: COMPLIANCE DIVISION, 10124 OLD GROVE RD., SAN DIEGO, CALIFORNIA 92131-1649.

Inspector Matt Allison Date 3/16/11 Time 10AM

SIGNING THIS NOTICE ACKNOWLEDGES RECEIPT OF THIS NOTICE, IT IS NOT AN ADMISSION OF GUILT.

Received by Rod Hildebrand (Print name) Title

Signature Refused to Sign Date

(See reverse side for more information)

222836

AIR POLLUTION CONTROL DISTRICT
 COUNTY OF SAN DIEGO
 10124 OLD GROVE ROAD
 SAN DIEGO CA 92131-1649
 PHONE (858) 586-2650
 FAX (858) 586-2651

Sector/ID	<u>L/2893</u>
P/O#	<u>6288</u>
Fee Code	<u>14A</u>
Method	_____
Entered	_____
(APCD use only)	

NOTICE OF VIOLATION

Date(s) of Violation 3/1/11 - continuing; 5/25/10 Date of Report 3/16/11
 Name Neptune of San Diego Phone 619-922-2240
 Address 14065 OLD HV 80 City El Cajon 92021
 (Zip Code)
 Violation Location Same As Above City _____
 (Zip Code)

Specifically, the following violation(s) of the San Diego Air Pollution Control District rules and/or laws of the State of California has occurred: (abbreviations: H&S = Cal. Health & Safety Code; CCR = Cal. Code of Regulations; R = Rule)

Section	Description of Violation
<u>Rule 10AB</u>	<u>Failure to re-assemble the cremation furnace fully after rebrickting AND operating from 3/1/11 and continuing</u>
<u>R21#9</u>	<u>The minimum heat input to the afterburner was not 400,000 BTU per hour (6.4 CFM of natural gas). During the source test on 5/25/10 the heat input to the after burner was 5.9 CFM.</u>

Pursuant to California Health And Safety Code section 42400 et seq., any person who violates any Order, Rule, or Regulation of the State Board or of an Air Pollution Control District is guilty of a MISDEMEANOR. Each day a violation occurs constitutes a separate offense.

YOU MUST ADVISE THE DISTRICT IN WRITING, WITHIN TEN DAYS, OF THE ACTION TAKEN TO CORRECT THE ALLEGED VIOLATION(S) OR THE REASON(S) YOU BELIEVE THE VIOLATION(S) DID NOT OCCUR. PLEASE MAIL YOUR RESPONSE TO THE AIR POLLUTION CONTROL DISTRICT, ATTENTION: COMPLIANCE DIVISION, 10124 OLD GROVE RD., SAN DIEGO, CALIFORNIA 92131-1649.

Inspector Matt Allison Date 3/16/11 Time 10 AM
 SIGNING THIS NOTICE ACKNOWLEDGES RECEIPT OF THIS NOTICE, IT IS NOT AN ADMISSION OF GUILT.
 Received by Rod Hildebrand Title _____
 (Print name)
 Signature Refused to sign Date _____

(See reverse side for more information)

222861

AIR POLLUTION CONTROL DISTRICT

COUNTY OF SAN DIEGO
10124 OLD GROVE ROAD
SAN DIEGO CA 92131-1649
PHONE (858) 586-2650
FAX (858) 586-2651

APCD 1981-Site-02893
Sector/ID L
P/O# APCD 1997-P70
Fee Code 144
Method
Entered
(APCD use only)

NOTICE OF VIOLATION

Date(s) of Violation 3/17/2011

Date of Report 3/18/2011

Name Neptune of San Diego

Phone 619.922.2240

Address 14065 Old Hwy 80

City El Cajon CA 92021 (Zip Code)

Violation Location same as above

City same as above (Zip Code)

Specifically, the following violation(s) of the San Diego Air Pollution Control District rules and/or laws of the State of California has occurred: (abbreviations: H&S = Cal. Health & Safety Code; CCR = Cal. Code of Regulations; R = Rule)

Table with 2 columns: Section, Description of Violation. Row 1: R-51, Discharging odors into the community. Row 2: California Health & Safety Code 41700, Specifically, I smelled intermittent odors emanating from the Neptune crematory along E. Main Street which runs adjacent to Neptune and I also smelled crematory odors on Rancho Del Villa which is located within the adjacent community from 8:05 pm to approximately 8:30 pm on Thursday night March 17, 2011. Row 3: CERT # 7008 0150 0002 1678 3013 APD 3/18/11

Pursuant to California Health And Safety Code section 42400 et seq., any person who violates any Order, Rule, or Regulation of the State Board or of an Air Pollution Control District is guilty of a MISDEMEANOR. Each day a violation occurs constitutes a separate offense.

YOU MUST ADVISE THE DISTRICT IN WRITING, WITHIN TEN DAYS, OF THE ACTION TAKEN TO CORRECT THE ALLEGED VIOLATION(S) OR THE REASON(S) YOU BELIEVE THE VIOLATION(S) DID NOT OCCUR. PLEASE MAIL YOUR RESPONSE TO THE AIR POLLUTION CONTROL DISTRICT, ATTENTION: COMPLIANCE DIVISION, 10124 OLD GROVE RD., SAN DIEGO, CALIFORNIA 92131-1649.

Inspector Gary M. Hartnett Date 3/18/2011 Time 10:30 am

SIGNING THIS NOTICE ACKNOWLEDGES RECEIPT OF THIS NOTICE, IT IS NOT AN ADMISSION OF GUILT.

Received by Sent certified mail to Anthony Nash Title Attorney at Law

Signature Date

(See reverse side for more information)

222485

AIR POLLUTION CONTROL DISTRICT
 COUNTY OF SAN DIEGO
 10124 OLD GROVE ROAD
 SAN DIEGO CA 92131-1649
 PHONE (858) 586-2650
 FAX (858) 586-2651

Sector/ID	9(L)/5094A
P/O#	6248
Fee Code	14A
Method	FU
Entered	
(APCD use only)	

NOTICE OF VIOLATION

Date(s) of Violation 3/21/11
 Name Neptune of San Diego
 Address 14065 Old Hwy 8
 Violation Location 14065 Old Hwy 8

Date of Report 3/22/11
 Phone (619) 922 2240
 City El Cajon 92021
 (Zip Code)
 City El Cajon 92021
 (Zip Code)

Specifically, the following violation(s) of the San Diego Air Pollution Control District rules and/or laws of the State of California has occurred: (abbreviations: H&S = Cal. Health & Safety Code; CCR = Cal. Code of Regulations; R = Rule)

Section	Description of Violation
Rule 51, H&S 41700	Discharging to the atmosphere such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public, specifically by emitting odors from a crematory on 3/21/11, as well as smoke, from approximately 6:00 pm - 9:00 pm.

Pursuant to California Health And Safety Code section 42400 et seq., any person who violates any Order, Rule, or Regulation of the State Board or of an Air Pollution Control District is guilty of a MISDEMEANOR. Each day a violation occurs constitutes a separate offense.

YOU MUST ADVISE THE DISTRICT IN WRITING, WITHIN TEN DAYS, OF THE ACTION TAKEN TO CORRECT THE ALLEGED VIOLATION(S) OR THE REASON(S) YOU BELIEVE THE VIOLATION(S) DID NOT OCCUR. PLEASE MAIL YOUR RESPONSE TO THE AIR POLLUTION CONTROL DISTRICT, ATTENTION: COMPLIANCE DIVISION, 10124 OLD GROVE RD., SAN DIEGO, CALIFORNIA 92131-1649.

Inspector Paul Clifford Date 3/22/11 Time 3:50
 SIGNING THIS NOTICE ACKNOWLEDGES RECEIPT OF THIS NOTICE, IT IS **NOT** AN ADMISSION OF GUILT.
 Received by Sent via e-mail to: Anthony Nash Title Attorney at Law
 (Print name)
 Signature _____ Date 3/23/2011

(See reverse side for more information)

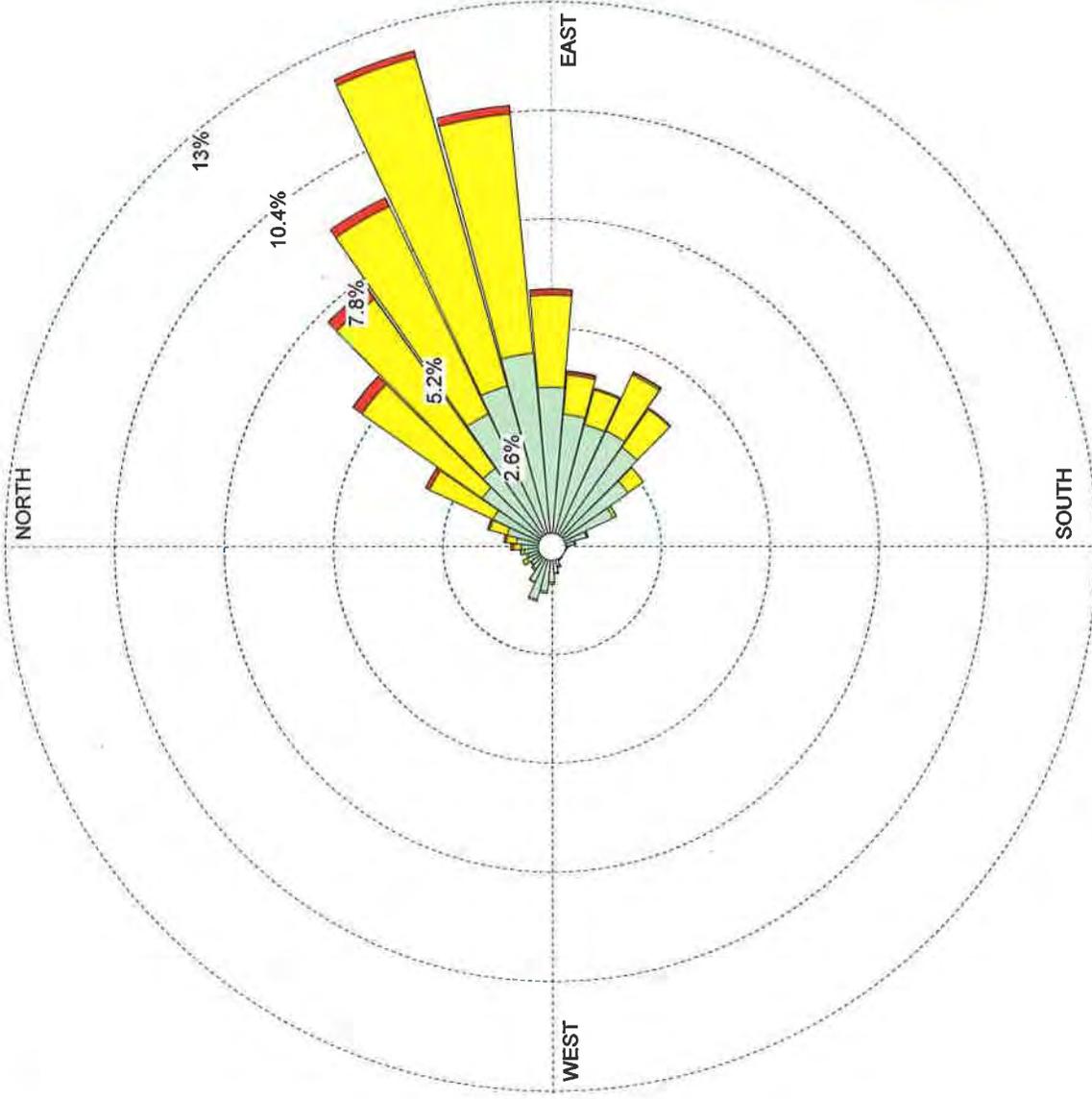
Attachment No. 6

Wind rose plots showing the differences between day and night hours

WIND ROSE PLOT:

NEPTUNE(EL CAJON), CA
2004-2006 DAYTIME (6:00 A.M. to 6:00 P.M.)

DISPLAY:
Wind Speed
Flow Vector (blowing to)



COMMENTS:

DATA PERIOD:

Start Date: 1/1/2004 - 07:00
End Date: 12/31/2006 - 18:00

TOTAL COUNT:

13146 hrs.

CALM WINDS:

7.79%

AVG. WIND SPEED:

3.22 Knots

COMPANY NAME:

MODELER:

DATE:

4/7/2011

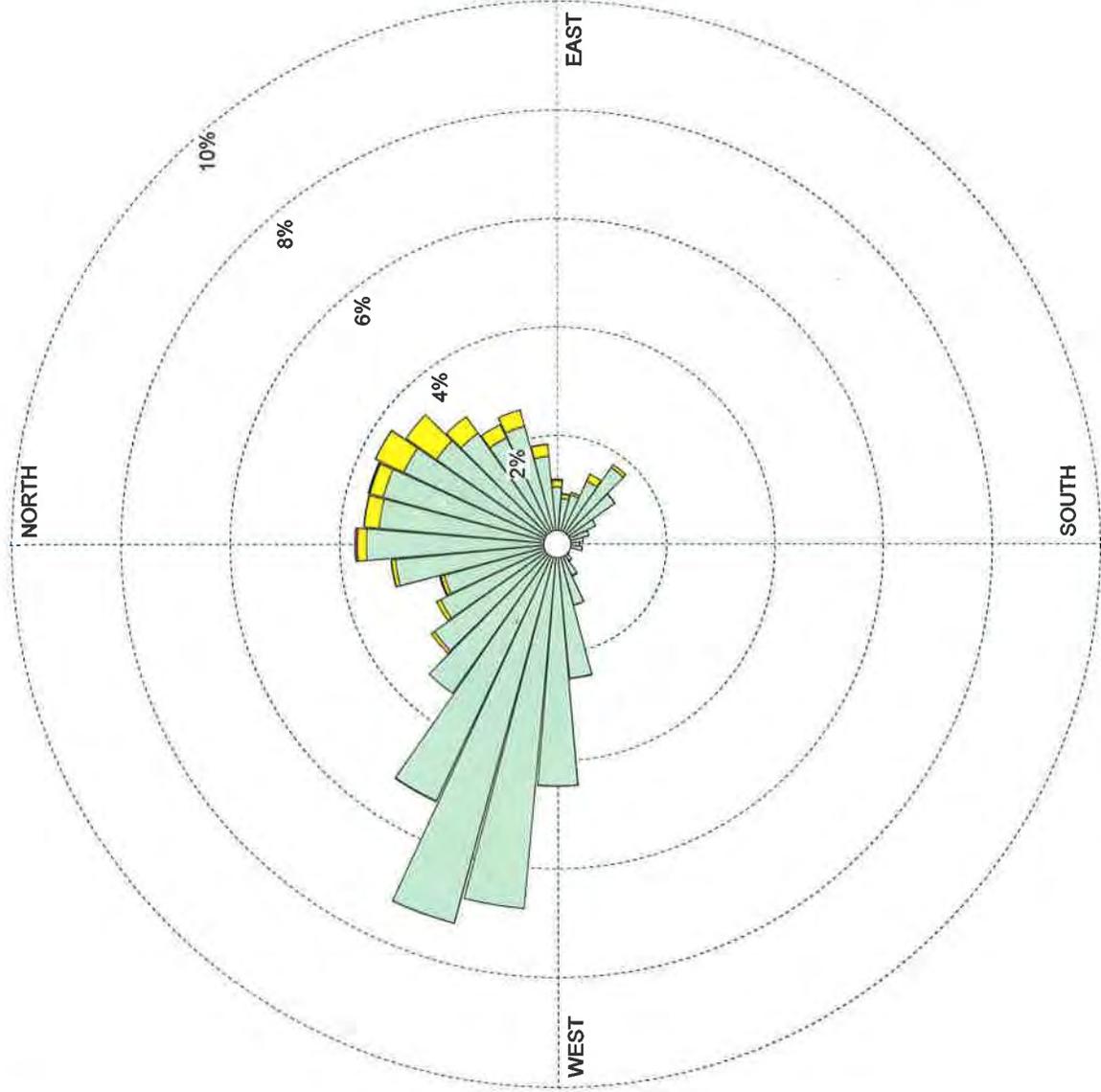
PROJECT NO.:

WIND ROSE PLOT:

NEPTUNE(EL CAJON), CA
2004-2006 NIGHT TIME (6:00 P.M. to 6:00 A.M.)

DISPLAY:
Wind Speed
Flow Vector (blowing to)

COMMENTS:



DATA PERIOD:

Start Date: 1/1/2004 - 00:00
End Date: 12/31/2006 - 23:00

TOTAL COUNT:

13152 hrs.

CALM WINDS:

19.03%

AVG. WIND SPEED:

1.36 Knots

COMPANY NAME:

MODELER:

DATE:

4/7/2011

PROJECT NO.:



Google

Image © 2010 Google

Attachment No. 7

March 16, 2011 letter from District to Respondent



Mr. Rod Hildebrand
Neptune of San Diego
PO BOX 2308
El Cajon CA 92021

Luce Forward Attorneys At Law
Attention: Mr. Anthony D. Nash, Esq.
600 West Broadway, Suite 2600
San Diego, CA 92101

March 16, 2011

Dear Mr. Hildebrand,

This letter is being written to bring you up-to-date on the District's continuing analysis of your crematorium. The District has concerns over the operation based on three nights of surveys, a visit to your facility on March 9, 2011, and a review of source test files for this facility.

On March 3, 2011, there were significant off-property odors in the surrounding area as well as significant visible emissions. The visible emissions continued despite efforts of your employee. On March 9, 2011, staff witnessed one cremation with odors detected beyond your property. On March 11, 2011, staff again detected odors and smoke from your facility. On three other occasions (March 12, 2011 and March 14, and March 16, 2011), staff surveyed the area and found no odors or smoke. The fact we are only witnessing intermittent compliance, concerns the District. These problems are clear indicators that Neptune's cremator cannot operate in compliance at all times.

On March 9, 2011, District staff conducted a daytime inspection at your facility. You provided a tour of incinerator and the top of the roof. The District appreciates the time you spent with us and after reviewing our findings, we have the following concerns:

1. The District believes that meteorological conditions are not optimal for nighttime operation of the cremator. Dispersion is limited during night due to light winds, increased stability, and inversion layer formation. Therefore, incinerator generated emissions will not disperse well as compared to daytime hours, resulting in greater impacts on the surrounding area.
2. The problems or concerns we have seen so far are as follows:
 - a. The gate valve that restricts flue gas flow and the blower fan that injects ambient air into the stack could be causing backpressure, resulting in smoke and odors exiting the unit prior to entering the secondary burner chamber. An expert should evaluate this setup to see if it is causing backpressure that is detrimental to proper operation.

- b. There are smoke and odor emissions produced by the primary chamber that are escaping as fugitive emissions from the cremator. That is, these emissions are not passing through the secondary chamber but are escaping from innumerable leak points. This is a violation any time it occurs, as all emissions must pass through the operational afterburner and through the stack.
- c. The opening at the back of the incinerator where a sight glass was once located must be repaired to its original condition. With your concurrence, the District would consider replacing this condition with a minimum afterburner temperature requirement.
- d. The afterburner must have a dedicated fuel flow meter in order to confirm compliance with the permit to operate condition that specifies a minimum fuel consumption rate.
- e. We have witnessed significant odors and smoke during cremations. On March 3, 2011, the operator tried to eliminate the excess emissions but could not. This concerns the District as the refractory had just been re-bricked and, to the District's knowledge, the unit was operating normally. The furnace should be able to handle any variances in the charge within it. We feel only having manual controls and the inability to regulate gas flow are two possible reasons that prevent the furnace from operating in compliance at all times.

For each day you operate under the current illegal configuration, you are in violation of Rule 10 (Permits Required), Rule 21 (Permit Conditions). The District is also concerned whether you can consistently comply with Rule 50 (Visible Emissions) because of the heavy smoke seen emanating from both the facility's roof vents and the cremator chimney. Further, you have violated Rule 51 (Public Nuisance) on several occasions and problem appears to be continuing unabated. Quite simply, the escape of smoke and odors from Neptune's facility and into the community constitutes a public nuisance, which is unacceptable.

While the District wants businesses in San Diego County to be successful, they must do so while complying with the law. Because we place public health and safety first, and Neptune has continued operational violations and the emissions of smoke and odors continue unabated, are forcing us to seek further legal relief. If your operations do not improve promptly, legal actions will follow for the benefit of the public.

Attached is Notice of Violation (NOV) #222577 for Rule 51, and NOV #222836 for Rule 10 and 21. The Rule 10 violation is for not fully re-assembling the cremator after the last re-bricking of the refractory and lack of a sight glass. The Rule 21 violation is for having a low fuel flow rate during the May 2010 source test (copy attached). The Rule 51 violation is for public nuisance due to Neptune's odors impacting the surrounding area.

I must emphasize that the Neptune Crematorium is in violation of a number of District rules and regulations and each violation is subject to substantial penalties for each day it occurs. The District strongly urges you to locate the manufacturer's operating manual, and if it is in a language other than English you need to have it translated into English. The District also requests you send us a copy of the manual. If you cannot locate your manual, we strongly urge you to locate one. We have contacted the TABO Company and they did not have the manual for your model of crematory.

You have mentioned you want to work with the District and we suggest you consider implementing item numbers 1 through 8, below, contacting TABO for advice, and bringing in expert to help you identify and

correct the problems with your cremator. I say this because the District will not allow the violations to continue.

1. Operate primarily during daylight hours and only continue into the night when demand requires it.
2. Contact the District by email, jon.adams@sdcounty.ca.gov 45 minutes prior to placing each charge in the cremator until further notice.
3. Fully reassemble cremator to return it to its original design, including replacing the sight glass, cremator sheathing, and the front door area.
4. Install dedicated fuel gas lines to primary and secondary burners to allow better regulation of burners, including controls that automatically adjust flow rate to maintain minimum primary and secondary burner temperatures.
5. Agree to minimum primary and secondary burner temperatures.
6. Install temperature chart recorder for primary and secondary burners.
7. Install fuel flow chart recorder to secondary burner (can be waived if 4-6 agreed upon).
8. Have an expert review operation and equipment and make recommendations to eliminate odors and smoke. The expert would provide a report listing the recommendations for you to undertake and you would provide a copy to the District.

We are in receipt of the response letter from Mr. Nash concerning the recently issued Notice of Violation. We respectfully disagree with many of the comments in the letter, as we have detected visible smoke emissions on more than one occasion. Clearly, the smoke was not an isolated event but a recurring problem. We are aware that most cremation furnaces are capable of and do operate in compliance without causing public nuisances despite variations in what is being cremated. While you have proffered excuses and denied the problems exist, the evidence shows that the Neptune facility is not being operated correctly and is failing to comply with the laws. Quite simply, odors and smoke are not allowed to escape the crematory and yet they are, to point of causing public nuisances.

While our preference is to work collaboratively with regulated entities such as Neptune, we must protect the public's well being and are very concerned with Neptune's apparent unwillingness to solve the problems we have identified. As such, please consider what I have said and strongly implementing the suggested items, as that will indicate a good faith effort on Neptune's part. If you have questions or would like to set up a meeting to discuss matters, please call me at (858) 586-2653 or email me at jon.adams@sdcounty.ca.gov.

Sincerely,

Jon Adams.



Chief, Compliance