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By dehloptoxic at 12:40 pm, Mar 08, 2007



erSchy Environmental, Inc.

March 7, 2007
Project A51-01

Ms. Irma Salinas
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Re: **Startup Results of SVES System Modification –
Modification to Catalytic Oxidizer**
Alaska Gas
6211 San Pablo Avenue
Oakland, California
Plant #16513

Dear Ms. Salinas:

HerSchy Environmental, Inc. (HerSchy), on behalf of Mr. Pritpaul Sappal of the Alaska Gas Service Station, is pleased to present this report summarizing the startup of the SVES after the modification to a catalytic oxidizer. Written notification was sent to your office February 2, 2007 and following subsequent verbal confirmation, the system began operating February 21, 2007 under Authority to Construct (ATC) permit number 10975.

In compliance with the ATC, the system was monitored for influent and effluent volatile organic compounds (VOCs) and air flow rates during the startup period. The unit has maintained the proper combustion temperature of greater than 600 degrees Fahrenheit and a flow rate below the 300 standard cubic feet per minute (scfm) as required in the ATC. Required continuous recording devices are in operation and record the combustion temperature and process flow rates. After the startup period, monitoring will take place on a monthly basis to confirm system operation within ATC requirements. Monitoring will include the use of a portable organic vapor analyzer (OVA) to monitor influent and effluent concentrations. Periodic air samples will be collected and analyzed by a certified laboratory to verify field measurements.

Table 1 summarizes the analytical results from the influent and effluent air samples collected February 27, 2007. Air samples were collected in tedlar bags by exerting vacuum outside of the tedlar bags, causing each bag to fill with process air. Air velocity was measured using a hotwire style velocity measurement device inserted into the influent airflow. Upon initial system startup air flow was reported at 30.8 cubic feet per minute (cfm) on February 21, 2007. Based on reports on February 27, 2007, current system configurations produce an air flow rate of

approximately 40.5' cfm. A table of field measurements taken during the startup period is included as Attachment A.

Air samples were analyzed by a certified laboratory for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method TO-15, benzene, toluene, ethylbenzene, and xylenes(BTEX), and methyl tertiary butyl ether (MTBE) using EPA Method TO-15. Certified analytical reports are presented in Attachment B.

Table 1
Summary of Laboratory Analytical Results for Influent and Effluent Air
Alaska Gas, February 27, 2007

Sample	Date	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Influent	2/27/2007	1.6	0.005	0.011	0.00061	0.016	0.082
Effluent	2/27/2007	0.150	ND	0.0024	ND	ND	ND

Results in parts per million by volume (ppmV)

ND – non detect at or above the method detection limit

A review of the ATC for this site yielded the following excerpt regarding abatement efficiency guidelines:

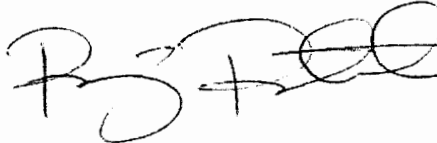
“The [Precursor Organic Compound] POC abatement efficiency of abatement device A-1 shall be maintained at a minimum of 98.5% by weight for inlet POC concentrations greater than or equal to 2000 ppmv (measured as C6). ... The minimum abatement efficiency shall be waived if outlet POC concentrations are shown to be less than 10 ppmv (measured as C6). In no event shall Benzene emissions to the atmosphere exceed 0.020 pounds per day.” – Alaska Gasoline, ATC condition S-1, number 2

Based on a review of laboratory results and ATC requirements, all reported influent and effluent POC concentrations are below the 10 ppmv limit specified at which point minimum abatement efficiencies are waived. Taking the laboratory reporting limit of 0.0005 ppmv for benzene as a conservative surrogate for the “non-detect” reported to calculate daily Benzene emissions we get 0.0000581 lbs/day, which is well below the allowable limit of 0.020 lbs/day. Details of destruction and discharge calculations are included in Attachment C.


Although current POC concentrations are quite low, it is anticipated that future levels will be higher based on previous air monitoring and groundwater sampling data. HerSchy intends to continue system monitoring on a monthly basis to verify any increase in POC concentrations and ensure adherence to ATC requirements.

Thank you in advance for your time. Please contact the undersigned at the letterhead address or at (559) 760-0037 with any questions, comments, or concerns.

Sincerely,
HerSchy Environmental, Inc.



Reijo Ratilainen
Project Geologist



Scott Jackson
Professional Geologist #7948

HerSchy Environmental, Inc., PO Box 229, Bass Lake, CA, 93604-0229
Phone: 559.641.7320
Fax: 559.641.7340

cc: Mr. Pritpaul Sappal, 2718 Washburn Court, Vallejo, CA 94591
Mr. Barney Chan, ACEHS, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA, 94502

Attachment A – Complete Field Data Table

Attachment B – Laboratory Analytical Reports

Attachment C – Destruction & Discharge Calculations

ATTACHMENT A

Complete Field Data Table



Alaska Gas Data Sheet

Site Address: 6211 San Pablo Ave., Oakland, CA 94608

Date	Total Hours	Hours	Flow - pitot (#3) (scfm)	Flow - Manifold (scfm)	Pressure ("-water)	Recirc Valve (# turns open)	SVE Wells operating	Influent (ppm)	Effluent (ppm)	Water in Tank (approx. gal's)	Temp. Cont.(F)	Dilution Cont. (F)	High Limit (F)	Propane (% full)
2/21/2007	3420.4	n/m	31	30.8	n/m	full open	VE-1,2,3,4,5,6,7,12	6.1	0.0	220				
	3421.4	n/m	n/m	n/m	n/m	full open	VE-1,2,3,4,5,6,7,12	0.7	0.0	220	1262	1002	1001	85
2/22/2007	3445.8	25.3	22	21.3	n/m	full open	VE-1,2,3,4,5,6,7,12	0.5	0.0	220	1391	1125	1122	78
2/23/2007	3472.7	52.2	26	n/m	n/m	full open	VE-1,2,3,4,5,6,7,12	n/m	n/m	220	1341	1117	1113	66
**** system efficiency tests														
(1) with all wells open & recirc valve full open														
			n/m	29.2	-31									
(2) with VE-1,2,3,4,5,6,7,12 open & recirc full open														
			n/m	29.3	-31									
(3) with VE-1,2,3,4,5,6,7,12 open & recirc closed 6 turns from full open														
			49	52.5	-60									
(4) with VE-1,2,3 open & recirc closed 5 turns from full open (attempt to dewater short screen intervals)														
			*prior to close											
			41	42.5	-43									
			*after close											
			19	~10	-56	(H2O in influent line)								
(5) with VE-1,2 open and recirc valve closed 6 turns from full open														
			15	over	-88									
			*after 8 minutes	n/m	n/m	-90	-> water being produced slowly (~0.5 cm/5 minutes in visible influent water pipe)							
****System returned to pre-efficiency test status - VE-1,2,3,4,5,6,7,12 open & recirc full open														
2/27/2007	3563.4	143	39	40.5	-46	full open	VE-1,2,3,4,5,6,7,12	n/m *	n/m *	220	992	878	878	72

Alaska Gas Data Sheet (continued)

Individual VE Well Data taken Feb 21, 2007

	VOC's (ppm)		Flow (ft ³ /min)
VE-1	1.4		6.00
VE-2	1.3		8.25
VE-3	0.9		7.70
VE-4	0.9		8.95
VE-5	0.7		7.20
VE-6	0.5		10.50
VE-7	0.3		7.90
VE-8	0.1		10.90
VE-9	0.1		8.50
VE-10	moisture		moisture
VE-11	moisture		moisture
VE-12	moisture		moisture
VE-13	0.1		9.95

ATTACHMENT B

Laboratory Analytical Reports



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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**(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0702587

Work Order Summary

CLIENT: Mr. Reijo Ratilainen
HerSchy Environmental
P.O. Box 229
Bass Lake, CA 93604

BILL TO: Mr. Reijo Ratilainen
HerSchy Environmental
P.O. Box 229
Bass Lake, CA 93604

PHONE: 559-641-7320

P.O. #

FAX:

PROJECT # System Startup Alaska Gas

DATE RECEIVED: 02/28/2007

CONTACT: Kyle Vagadori

DATE COMPLETED: 03/02/2007

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	EFFLUENT AIR	Modified TO-15	Tedlar Bag
02A	INFLUENT AIR	Modified TO-15	Tedlar Bag
03A	Lab Blank	Modified TO-15	NA
04A	CCV	Modified TO-15	NA
05A	LCS	Modified TO-15	NA

CERTIFIED BY: *Sandra J. Freeman*

DATE: 03/02/07

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

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LABORATORY NARRATIVE
Modified TO-15
HerSchy Environmental
Workorder# 0702587

Two 1 Liter Tedlar Bag samples were received on February 28, 2007. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Daily CCV	+/- 30% Difference	<= 30% Difference with two allowed out up to <=40%.; flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



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Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: EFFLUENT AIR

Lab ID#: 0702587-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH ref. to Gasoline (MW=100)	10	150	41	610
Toluene	0.50	2.4	1.9	8.9

Client Sample ID: INFLUENT AIR

Lab ID#: 0702587-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	0.50	82	1.8	290
TPH ref. to Gasoline (MW=100)	10	1600	41	6500
Benzene	0.50	5.0	1.6	16
Toluene	0.50	11	1.9	40
Total Xylenes	0.50	16	2.2	69
Ethyl Benzene	0.50	0.61	2.2	2.6
tert-Amyl methyl ether	2.0	9.9	8.4	41
tert-Butyl alcohol	2.0	2.9	6.1	8.9



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Client Sample ID: EFFLUENT AIR

Lab ID#: 0702587-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7030108	Date of Collection:	2/27/07
Dil. Factor:	1.00	Date of Analysis:	3/1/07 12:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
TPH ref. to Gasoline (MW=100)	10	150	41	610
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	2.4	1.9	8.9
Total Xylenes	0.50	Not Detected	2.2	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Ethyl-tert-butyl ether	2.0	Not Detected	8.4	Not Detected
tert-Amyl methyl ether	2.0	Not Detected	8.4	Not Detected
tert-Butyl alcohol	2.0	Not Detected	6.1	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Isopropyl ether	2.0	Not Detected	8.4	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	105	70-130



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Client Sample ID: INFLUENT AIR

Lab ID#: 0702587-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7030110	Date of Collection:	2/27/07
Dil. Factor:	1.00	Date of Analysis:	3/1/07 02:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	0.50	82	1.8	290
TPH ref. to Gasoline (MW=100)	10	1600	41	6500
Benzene	0.50	5.0	1.6	16
Toluene	0.50	11	1.9	40
Total Xylenes	0.50	16	2.2	69
Ethyl Benzene	0.50	0.61	2.2	2.6
Ethyl-tert-butyl ether	2.0	Not Detected	8.4	Not Detected
tert-Amyl methyl ether	2.0	9.9	8.4	41
tert-Butyl alcohol	2.0	2.9	6.1	8.9
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Isopropyl ether	2.0	Not Detected	8.4	Not Detected

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	108	70-130



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Client Sample ID: Lab Blank

Lab ID#: 0702587-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7030107	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/07 11:49 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Total Xylenes	0.50	Not Detected	2.2	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
Ethyl-tert-butyl ether	2.0	Not Detected	8.4	Not Detected
tert-Amyl methyl ether	2.0	Not Detected	8.4	Not Detected
tert-Butyl alcohol	2.0	Not Detected	6.1	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Isopropyl ether	2.0	Not Detected	8.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	107	70-130



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Client Sample ID: CCV

Lab ID#: 0702587-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	7030102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 3/1/07 07:52 AM

Compound	%Recovery
Methyl tert-butyl ether	103
TPH ref. to Gasoline (MW=100)	Not Spiked
Benzene	105
Toluene	112
Total Xylenes	104
Ethyl Benzene	103
Ethyl-tert-butyl ether	108
tert-Amyl methyl ether	106
tert-Butyl alcohol	121
1,2-Dichloroethane	109
1,2-Dibromoethane (EDB)	103
Isopropyl ether	108

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	107	70-130



CHAIN-OF-CUSTODY RECORD

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Page ___ of ___

Project Manager: Reijo Raitilainen
 Collected by: (Print and Sign) Reijo Raitilainen
 Company: Herschy Env., Inc. Email: Redguy125@aol.com
 Address: PO Box 229 City: Bass Lake State: CA Zip: _____
 Phone: (559) 760-0037 Fax: (510) 724-0355

Project Info:
 P.O. # _____
 Project # System Startup
 Project Name Alaska Gas

Turn Around Time:
 Normal
 Rush
ASAP
specify

Lab. Use Only
 Pressurized by: _____
 Date: _____
 Pressurization Gas: _____
 N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final
<u>01A</u>	<u>EFFLUENT AIR</u>	<u>N/A</u>	<u>2/27/07</u>	<u>10:30 am</u>	<u>TD-15</u>	<u>N/A</u>	<u>N/A</u>		
<u>02A</u>	<u>INFLUENT AIR</u>	<u>N/A</u>	<u>2/27/07</u>	<u>10:40 am</u>	<u>TD-15</u>	<u>N/A</u>	<u>N/A</u>		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>2/27/07 12:15p</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>2/27/07 09:58</u>	Notes: <u>TPH, BTEX, MIBE, ETBE, DIPE, TAME, TBA, 1,2-DCA, EDB</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name: <u>UPS</u>	Air Bill #: <u>124532V30570032612</u>	Temp. (°C): <u>NA</u>	Condition: <u>good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order #: <u>0702587</u>
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ATTACHMENT C

Destruction & Discharge Calculations

Destruction & Discharge Calculations

The following table summarizes the calculations for destruction efficiency and the effluent discharge over a 24-hour period for TPHg, benzene, and MTBE.

<u>Destruction and Discharge Calculations</u>							
Hours of Operation	Influent (ppmV)	Effluent (ppmV)	Air Flow (cfm)	Destruction Efficiency (%)	Effluent Release (lbs/day)	VOCs Removed (lbs/day)	Total VOCs Removed (lbs)
TPH-g							
24	1.60	0.15	40.5	90.63%	0.00	0.024	0.024
Benzene							
24	0.005	0-0.0005	40.5	90.00%	0.00	5.81x10 ⁻⁵	5.81x10 ⁻⁵
MTBE							
24	0.082	0-0.0005	40.5	99.40%	0.00	0.002	0.002

Parts per million by volume (ppmv) VOCs as gasoline-range TPH can be converted to micrograms per liter (ug/L) by multiplying by 4.1 based on the mole weight of TPH. Benzene can similarly be converted to ug/L by multiplying ppmV of benzene by 3.2. One liter is equal to 0.03531 cubic feet. The above destruction efficiency calculations are based on weight. For the purpose of calculating data, values reported as “non-detect” by the laboratory were replaced with the reporting limit in order to give conservative estimates. It is important to note that the range of possible values for a “non-detect” report is from zero to less than the reporting limit.

To calculate pounds per day (lbs/day) of VOCs, the formula is as follows:

$$(\mu\text{g/L})(1 \text{ gram}/1,000,000\mu\text{g})(1 \text{ kg}/1,000 \text{ gram})(2.2 \text{ lbs/kg}) = \text{lbs/L VOCs}$$

Converting lbs/L to lbs/day:

$$(\text{lbs/L})(1/.03531 \text{ cf})(\text{cfm})(1440 \text{ min/day}) = \text{lbs/day VOCs}$$

where cf = cubic feet

cfm = cubic feet per minute