SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT *ENGINEERING & COMPLIANCE DIVISION* APPLICATION PROCESSING AND CALCULATIONS	PAGES 16	PAGE 1
	APPL. NO. **527509 - 511**	DATE 10/28/2011
	PROCESSED BY Jon Uhl	CHECKED BY

PERMIT TO CONSTRUCT

COMPANY NAME, LOCATION ADDRESS:
DeMenno/Kerdoon, Inc., SCAQMD ID # 800037
2000 North Alameda Street
Compton, CA 90222

EQUIPMENT DESCRIPTION:
Permit to Construct :

Section H of DeMenno/Kerdoon Facility Permit, ID# 800037

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 9: AIR POLLUTION CONTROL					
System 7: AFTERBURNER (modified)					
AFTERBURNER, 23.2 MMBTU/HR (PROCESS GAS AND NAT. GAS), 8.2 MMBTU/HR (NAT. GAS), A/N: ~~459837~~ **527510** Permit to Construct Issued: ~~09/14/10~~ **xx/xx/xx**	C142	C139 D140 D195 D196 D197 D198 D226 D241 D284 D287 D288 D289 C300 D324 **D556**	NOX: LARGE SOURCE**	**CO:** 2000 PPMV NATURAL GAS (5) [**RULE 407; 4-2-1982**]; **NOX:** 130 LBS/MMSCF NATURAL GAS (1) [**RULE 2012, 5-6-2005];** **PM:** (9) [**RULE 404, 2-7-1986**]; **PM:** 0.1 GRAINS/SCF NATURAL GAS (5) [**RULE 409, 8-7-1981**] **SO2**: 500 PPMV AT 15 MINS. (5) [**RULE 407, 4-2-1982**]	C4.1, C8.5, D12.5, D12.7, D28.1, D29.4, D323.1, E71.2, E71.3, E71.4, E448.1, H116.4, H116.5, H116.6, K171.1

Equipment	ID No.	Connected To	Source Type/ Monitoring Unit	Emissions And Requirements	Conditions
Process 9: AIR POLLUTION CONTROL					
System 13 AFTERBURNER (modified)					
AFTERBURNER, ZEECO, WITH URS CORP. BURNER, MODEL RMBF-9-NG 24 MMBTU/HR (PROCESS GAS AND NAT. GAS), 9 MMBTU/HR (NAT. GAS), WITH A HEAT RECOVERY UNIT A/N ~~501494~~ **527511** Permit to Construct Issued: ~~01/21/10~~ **xx/xx/xx**	C281	C139 D140 D141 D195 D196 D197 D198 D284 D287 D288 D289 C301 D324 **D556**	NOX: LARGE SOURCE**	**CO:** 2000 PPMV NATURAL GAS (5) [**RULE 407; 4-2-1982**]; **NOX:** 50 PPMV NATURAL GAS (4) [**RULE 2005, 5-6-2005];** **NOX:** 130 LBS/MMSCF NATURAL GAS (1) [**RULE 2012, 5-6-2005];** **PM:** (9) [**RULE 404, 2-7-1986**]; **PM:** 0.1 GRAINS/SCF NATURAL GAS (5) [**RULE 409, 8-7-1981**] **SO2**: 500 PPMV AT 15 MINS. (5) [**RULE 407, 4-2-1982**]	C4.3, C8.5, D12.5, D12.7, D28.1, D28.2, D28.3, D29.3, D323.1, E71.2, E71.4, E448.1, H116.4, H116.5, H116.6, K171.1
Process 11: MISCELLANEOUS					
System 4: SOIL VAPOR EXTRACTION (new)					S15.2
VAPOR EXTRACTION WELL, UP TO 54 TOTAL A/N: **527509** Permit to Construct Issued: **xx/xx/xx**	D554	D555			E71.5, E193.3, K171.1
BLOWER, VACUUM, BL-xxx, 200 SCFM A/N: **527509** Permit to Construct Issued: **xx/xx/xx**	D555	D554 D556			C1.12, D12.10, D90.12, D90.13, E71.5, E193.3, K67.23, K171.1
KNOCK OUT POT, KO-xxx, HEIGHT: 6 FT; DIAMETER: 2 FT A/N: **527509** Permit to Construct Issued: **xx/xx/xx**	D556	C142 C281 D555			E71.5, E193.3, K171.1

F2.1 The operator shall limit emissions from this facility as follows:

Contaminant	Emissions Limit
VOC	Less than 2550 LBS IN ANY ONE MONTH

The facility afterburners stacks and facility fugitive components shall comply with the above Volatile Organic Compounds (VOC) emission limit.

To ensure compliance with the monthly Volatile Organic Compounds (VOC) emission limit of this condition, the operator shall comply with the following recordkeeping requirements:

(1) Within 14 calendar days after the end of each month, the operator shall total and record VOC emissions for the month from afterburners and fugitive components.

(2) The operator shall retain the VOC emissions records for at least 5 years.

RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002

S15.2 The vent gases from all affected devices of this process/system shall be vented as follows:

All vent gases from this system shall be vented to the Afterburners (Process 9, Systems 7& 13).

This process/system shall not be operated unless at least one of the afterburners is in full use and has a valid permit to receive gases from this system.

RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002;
RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002

[Systems subject to this condition : Process 9, System 1, 2, 3, 4, 5, 8, 9, 11, 12; Process 11, System 4]

C1.12 The operator shall limit the throughput to no more than 200 cubic feet per minute.

RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002
[Devices subject to this condition: D555]

D12.10 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate at the outlet of the blower.

The operator shall measure the flow rate in standard cubic feet per minute (SCFM).

If a pressure sensing device is used instead of the flow meter, a conversion chart shall be made available to indicate the flow rate (in SCFM) corresponding to the pressure reading.

The operator shall calibrate the flow meter per the manufacturer's specifications.

RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002
[Devices subject to this condition: D555]

D90.12 The operator shall periodically monitor the VOC concentration at the outlet of the blower according to the following specifications:

The operator shall use EPA Reference Method 21 to monitor the parameter.

The operator shall calibrate the instrument used to monitor the parameter in ppmv methane.

The operator shall monitor once every week.

The operator shall record the blower flow rate, in SCFM, during the above tests.

RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997;
RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002;
[Devices subject to this condition: D555]

D90.13 The operator shall sample and analyze the VOC concentration in ppmv as methane, and speciated for the compounds listed below, at the outlet of the blower according to the following specifications:

Grab samples shall be collected at the outlet of the blower at least once during the first week of operation, and once each quarter thereafter.

The samples shall be analyzed for VOC in ppmv as methane.

The samples shall be speciated for benzene, ethylbenzene, toluene, xylenes, methyl tert-butyl ether (MTBE), and chlorinated compounds in accordance with AQMD approved methods.

Analysis shall be conducted using EPA Method 8015, EPA Method 8260, EPA Method TO-3/TO-15 or other method approved by the AQMD.

The operator shall record the blower flow rate, in SCFM, during the above tests.

RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997;
RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002;
RULE 1401, 9-10-2010
[Devices subject to this condition: D555]

E71.5 The operator shall not operate this equipment to extract vapors from soils contaminated with any Rule 1401 listed carcinogenic air contaminants (as amended on September 10, 2010) with the exception of benzene, ethylbenzene, MTBE, 1,1-dichloroethane, methylene chloride, perchloroethylene, trichoroethylene and vinyl chloride.

RULE 1401, 9-10-2010
[Devices subject to this condition: D554, D555, D556]

E193.3 The operator shall operate and maintain this equipment according to the following specifications:

Upon completion, any vapor extraction well(s) and duct(s) shall be capped to prevent vapors from venting to the atmosphere. Vapors shall not be extracted from the soil unless vented to the facility afterburners (C142 or C281).

There shall be not detectable leak between the wellheads and the connection to the facility afterburners (C142, C281).

Prior to connecting any vapor extraction wells to the soil vapor extraction system, the completed wells shall be capped to prevent vapors from venting to the atmosphere.

RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002;
RULE 1166, 7-14-1995; RULE 1166, 5-11-2001;
[Devices subject to this condition: D554, D555, D556]

K67.23 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):
VOC measurements.
Grab sample analyses.
Flow rate measurements.

RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997;
RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002;
RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002
RULE 1401, 9-10-2010
[Devices subject to this condition: D555]

K171.1 The operator shall provide to the District the following items:

Final drawings and/or specifications of the equipment installed/constructed/modified, including but not limited to PFD, P&ID and revisions/updates, shall be submitted to the SCAQMD within 60 days after completion of the project.

RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002;
[Devices subject to this condition: C142, C281, C300, C301, D554, D555, D556]

BACKGROUND:

DeMenno/Kerdoon, Inc. (D/K, Facility ID #800037) operates a Title V, NOx-RECLAIM facility in the city of Compton. The initial Title V permit (A/N 334197) was issued on 7/1/2011.

This facility receives RCRA fuel, used oil, used glycol (antifreeze) and oily wastewater. These materials are delivered by truck and unloaded into fixed roof storage tanks. RCRA fuel is stored and consolidated into larger shipments for resale. Oil and antifreeze are processed into recycled products. Oily water is processed in an industrial wastewater treatment system, and discharged to Los Angeles County Sanitation Districts (LACSD). Recycled products are loaded into tanker trucks or drums for shipment. D/K operations are also subject to a permit issued by the California Department of Toxic Substance Control (DTSC).

A new soil vapor extraction (SVE) system will be installed for in-situ remediation of the hydrocarbon contaminated soil at this site, as required by the DTSC. The SVE system will use a 200 scfm vacuum blower to extract volatile organic compounds (VOC) from a network of vapor extraction wells located within the facility. The extracted vapors will pass through a knock-out pot for moisture separation and then routed to the facility afterburners (C142 & C281) for VOC control. The vapor extraction wells are located within 1000 ft of the outer boundary of Jefferson Elementary School, 2508 E. 133rd Street, Compton.

Four applications were submitted on September 20, 2011:

A/N 527509 new soil vapor extraction system

A/N 527510 modify afterburner C142 to accept VOC from the new SVE

A/N 527511 modify afterburner C281 to accept VOC from the new SVE

A/N 527512 RECLAIM/Title V deMinimis Significant Revision

FEE EVALUTION

The fees paid for the applications are:

Table 1 – Application Fees Paid

A/N	Equipment	BCAT/ CCAT	Type	Status	Fee Schedule	Fees Required, $	Fees Paid, $
527509	Soil Vapor Extraction, P11:S4	028100	10	20	C	3,359.43	3,359.43
527510	Afterburner C142, P9:S7	05	50	20	D	4,636.58	4,636.58
527511	Afterburner C281, P9:S13	05	50	20	D	4,636.58	4,636.58
527512	RECLAIM/Title V deMinimis Significant Revision	555009	86	21	--	1,747.19	1,747.19

PROCESS DESCRIPTION:

The SVE system will use a 200 scfm vacuum blower to extract volatile organic compounds (VOC) from an existing network (up to 54 wells) of vapor extraction wells located within the facility. The extracted vapors will pass through a knock-out pot for moisture separation and then are routed to the facility afterburners (C142 & C281) for VOC control.

EMISSIONS CALCULATIONS:

Potential VOC emissions are estimated from the results of 9 well gas samples collected between 8/27/2010 and 6/3/2011 (Attachment # 2). The average VOC concentration reported was 6239 µg/liter. The VOC concentration is expected to decrease during the life of the soil vapor extraction remediation project. The maximum flow rate to the facility afterburners from this system is 200 cfm.

(6239 µg/l)(200 cf/min)(60min/hr)(10^{-6} g/µg)(1 lb / 454 g)(28.32 l/cf) = **4.67 lb/hr uncontrolled VOC**
x(24 hr/day) = **112.08 lb/day**

The facility afterburners are currently permitted to operate with a minimum VOC destruction efficiency of 98%.

(4.67 lb/hr)(1 – 0.98) = **0.0934 lb/hr controlled VOC**
x(24 hr/day) = **2.24 lb/day**

Facility Permit Condition F2.1

Facility permit condition limits the total controlled (R2) VOC potential-to-emit for vent gases controlled by the facility afterburners (C142 & C281) plus fugitive VOC emissions, to 2550 lb/month (85 lb/day). DK has agreed to **no increase** in this limit for the soil vapor extraction system to be vented to the facility afterburners. Therefore there is no net VOC potential-to-emit increase for the facility, and no VOC offsets are required. DK has been operating well under the 2550 lb/month VOC limit (see Attachment #7).

A/N	Total ROG (R2)	R2 at Afterburner	Fugitives	Permit Unit Description
513069	1	0	1	Used Oil Dehydration
512557	1	0	1	Vacuum Distillation Unit No.1
512558	0	0	0	Vacuum Distillation Unit No.2
512556	0	0	0	Naphtha Splitter Unit
512565	1	1	0	EG Recycling
447670	29	28	1	Wastewater Treatment
528472	14	14	0	Sludge Dewatering
many	17	17	0	Storage Tanks
many	14	13	1	Loading Racks
459837	1	1	0	Afterburner C142
501494	0	0	0	Afterburner C281
494498	0	0	0	Firepump
215400	7	7	0	Asphalt Blowing
527509	0	0	0	Soil Vapor Extraction
	85	81	4	TOTAL
	85 x 30 = 2550 lb/month for condition F2.1			

Toxics Emission Calculations

Potential TAC emissions are estimated from the results of 9 well gas samples collected between 8/27/2010 and 6/3/2011 (Attachment # 2). The TAC concentrations are expected to decrease during the life of the soil vapor extraction remediation project. The maximum flow rate to the facility afterburners from this system is 200 cfm.

(TAC conc. µg/l)(200 cf/min)(60min/hr)(10^{-6} g/µg)(1 lb / 454 g)(28.32 l/cf) = R1 (lb/hr) uncontrolled TAC

The primary facility afterburner was source tested on 9/1/2010 giving a destruction efficiency of 99.87% (Attachment #3).

(R1 lb/hr)(1 – 0.9987) = R2 (lb/hr) controlled TAC

		Avg. Conc.	R1	R2
		(ug/l)	(lb/hr)	(lb/hr)
B1	Benzene (including benzene from gasoline)	2.85E+01	2.14E-02	2.78E-05
E5	Ethyl chloride	5.98E+00	4.48E-03	5.82E-06
D6	Dichloroethane, 1,1-	7.21E+01	5.40E-02	7.02E-05
D7	Dichloroethylene, 1,1- (or Vinylidene Chloride)	7.80E-01	5.84E-04	7.60E-07
E4	Ethyl benzene	3.97E+01	2.97E-02	3.86E-05
M13	Methylene chloride(Dichloromethane)	3.50E-01	2.62E-04	3.41E-07
P2	Perchloroethylene (or tetrachloroethylene)	9.00E+00	6.74E-03	8.77E-06
T3	Toluene (methyl benzene)	1.14E+02	8.56E-02	1.11E-04
M8	Methyl chloroform (1,1,1 Trichloroethane (TCA))	4.80E-01	3.60E-04	4.68E-07
T8	Trichloroethylene	1.93E+00	1.45E-03	1.88E-06
V5	Vinyl chloride (chloroethylene)	4.00E+01	3.00E-02	3.90E-05
X1	Xylenes (isomers and mixtures)	1.27E+02	9.48E-02	1.23E-04
M16	Methyl tertiary-butyl ether	3.46E+00	2.59E-03	3.37E-06

200	scfm
0.000749206	conversion factor
0.9987	Afterburner control efficiency

The Rule 1401 Risk Screening Assessment results using the estimated controlled TAC emissions are included as Attachment #4. Passed Tier 2 Assessment at 200 scfm throughput, with the MICR for residential and commercial receptors less than 1 x 10^{-6}.

MICR – residential	1.16 x 10^{-7} @ 25 meters
MICR – commercial	2.26 x 10^{-8} @ 25 meters
HIA & HIC	all < 1.0

Criteria Pollutant Emissions from the Afterburners

Criteria pollutant emissions for the afterburners were calculated based on natural gas combustion only, using the default natural gas emission factors (see A/N 459837 for afterburner C142 [8.2 mmbtu/hr] and A/N 501494 for afterburner C281 [9.0 mmbtu/hr]). Therefore, the **emissions assigned to the afterburners are unchanged.**

For Afterburner C142:

Contaminant	lb/hr		lb/day	
	R1	R2	R1	R2
CO	0.21	0.21	5.04	5.04
NOx	1.07	1.07	25.68	25.68
PM10	0.094	0.094	2.26	2.26
ROG	0.041	0.041	0.98	0.98
SOx	0.0047	0.0047	0.11	0.11

For Afterburner C281 (since only one afterburner runs at a time, these emissions are incremental above the emissions for C142):

Contaminant	lb/hr		lb/day	
	R1	R2	R1	R2
CO	0.09	0.09	2.16	2.16
NOx	0.06	0.06	1.44	1.44
PM10	0	0	0	0
ROG	0.019	0.019	0.46	0.46
SOx	0.0003	0.0003	0.007	0.007

AFTERBURNER CAPACITY:

Additional Input to Afterburners

D/K proposes to add additional 200 scfm containing 4.67 lb/hr of VOC to the existing afterburners. The approximate additional heat load to the afterburners is:

(4.67 lb/hr)x(22,000 btu/lb) = 0.106 mmbtu/hr

C281 – New Afterburner

The design capacity of the C281 afterburner is 7023 scfm maximum waste gas input, with maximum 24 mmbtu/hr heat input (including 9 mmbtu/hr of natural gas combustion), see the ZEECO design basis (Attachment #8). The 2010 source test of the C281 afterburner shows 1666 dscfm for the waste gas input containing 391.7 lb/hr NGNMO, giving a heat load of approximately:

(391.7 lb/hr)x(22,000 btu/lb) = 8.6 mmbtu/hr

Therefore, with the addition of the waste gas stream from the soil vapor extraction blower the total loading is:

By volume: (1666 scfm) + (200 scfm) = 1866 scfm < 7023 scfm (the design capacity)

By heat input: (8.6)+(0.1)+(9.0 from natural gas) = 17.7 mmbtu/hr < 24.0 mmbtu/hr (the design capacity)

The C281 afterburner has adequate capacity to handle the additional 200 scfm waste gas stream from the SVE blower.

C142 – Old Afterburner

The old afterburner is used only when the new afterburner is out-of-service for maintenance or repairs. The A/N 135069 evaluation for the installation of the old afterburner in 1985 indicates that this afterburner was designed to handle 2160 scfm from asphalt blowing operations plus 500 scfm from loading operations. The current permit allows a maximum 23.2 mmbtu/hr heat input (including 8.2 mmbtu/hr of natural gas combustion).

Therefore, with the addition of the waste gas stream from the soil vapor extraction blower the total loading is:

By volume: (1666 scfm) + (200 scfm) = 1866 scfm < 2660 scfm (the design capacity)

By heat input: (8.6)+(0.1)+(9.0 from natural gas) = 17.7 mmbtu/hr < 23.2 mmbtu/hr (the design capacity)

The C142 afterburner has adequate capacity to handle the additional 200 scfm waste gas stream from the SVE blower.

REVIEW OF COMPLIANCE DATABASE:

As of January 5, 2012, the AQMD Compliance Database shows that this facility has no open Notices of Violation (NOV), Attachment #5. The violation of sulfur emission limits is the subject of Order of Abatement Case 5753-1, specifying a schedule for the installation and performance testing of SOx scrubbers on the facility afterburners. D/K submitted a Compliance Schedule/Plan Progress Report on January 1, 2012 (Attachment #6).

RULES EVALUATION:

PART 1 STATE REGULATIONS

California Environmental Quality Act (CEQA)	
	DeMenno/Kerdoon has submitted Form 400-CEQA, which indicated that this is not a significant project.

PART 2 SCAQMD REGULATIONS

Rule 212	**Standards for Approving Permits** **November 14, 1997**
	This equipment meets all the criteria in Rule 212 for permit approval. **Rule 212(c)(1) public notice is required.**

212(a)	The equipment is designed to operate without emitting air contaminants in violation of Division 26 of the State Health and Safety Code or in violation of AQMD's rules and regulations.
212(b)	Does not apply; this is a Permit to Construct.
212(c)(1)	**The vapor extraction wells are located within 1000 feet of a school.** Rule 212 public notice is required.
212(c)(2)	There is no VOC emission increase exceeding 30 lb/day.
212(c)(3)	This equipment does not have an increased cancer risk greater than, or equal to, one in a million (1×10^{-6}) during a lifetime of 70 years or pose a risk of nuisance.

Rule 401	**Visible Emissions**	**November 9, 2001**
	Visible emissions are not expected under normal operation.	

Rule 402	**Nuisance**	**May 7, 1976**
	Nuisance complaints are not expected under normal operating conditions.	

Rule 407	**Liquid and Gaseous Air Contaminants**	**April 2, 1982**
407(a)(1)	Discharge of CO in excess of 2000 ppmv is not expected.	
407(a)(2)	Discharge of sulfur compounds in excess of 500 ppmv, calculated as sulfur dioxide, is not expected.	

Rule 431.1	**Sulfur Content of Gaseous Fuels**	**June 12, 1998**
(c)(2)	D/K is out of compliance with the 40 ppmv sulfur limit for other gases burned in the facility afterburners. The violation of sulfur emission limits is the subject of Order of Abatement Case 5753-1, specifying a schedule for the installation and performance testing of SOx scrubbers on the facility afterburners. D/K submitted a Compliance Schedule/Plan Progress Report on January 1, 2012 (Attachment #6). The additional gaseous fuel directed to the facility afterburners from the soil vapor extraction (SVE) activities is expected to contain less than 40 ppmv sulfur. The SVE vapor stream is therefore in compliance with Rule 431.1	

Rule 1147	**NOx Reductions from Miscellaneous Sources**	**December 5, 2008**
1147(g)(1)(B)	Afterburners located at NOx RECLAIM facilities are exempt from the provisions of Rule 1147.	

Rule 1166	**Volatile Organic Compound Emissions from Decontamination of Soil** **May 11, 2001**
1166(c)(4)	D/K will be treating VOC-contaminated soil in-situ via vapor extraction wells. The vacuum blower discharge is routed to the facility afterburners which is BACT for soil vapor extraction activities. Compliance with Rule 1166 is expected.

Rule 1173	**Control of Volatile Organic Compound Leaks and Releases from Components at Petroleum Facilities and Chemical Plants** **February 6, 2009**
1173(b)	Applicability: Rule applies; this facility is a lubricating oil and grease re-refiner. On Form 400A, D/K gives their primary NAICS code as 32191 – Petroleum Lubricating Oil and Grease Manufacturing. Per the NAICS Association website (www.naics.com), this is equivalent to a 1987 SIC code 2992 – Lubricating Oils and Greases. This facility is included in the definition of a "lubricating oil and grease re-refiner" given in Rule 1173(c)(15), which includes SIC code 2992. This equipment is expected to comply with Rule 1173 given proper recordkeeping and inspections. Compliance with Rule 1173 requirements per condition F16.1.

REG XIII	**New Source Review (NSR)** **December 6, 2002** **Application Deemed Complete: September 29, 2011**
	Emissions Summary – SVE (new) **Pollutant** / **R1** (lb/hr) / **R1** (lb/day) / **R2** (lb/hr) / **R2** (lb/day) ROG / 4.67 / 112.08 / 0.09 / 2.24 Emissions summary – Afterburners (no increase)
1303(a)	BACT: A thermal oxidizer (afterburner) with a minimum 98% VOC destruction efficiency is BACT for soil vapor extraction projects.
1303(b)(1)	Modeling: Modeling for ROG is not required (Rule 1303, Appendix A). There is no increase in CO, NOx, PM10, SOx); no further modeling analysis is required.
1303(b)(2)	Offsets: There is no net increase of any nonattainment air contaminant at this facility. VOC emissions from the facility afterburners are limited by facility condition F2.1.
1303(b)(3)	Sensitive Zone Requirements: ERC's are not required.
1303(b)(4)	Facility Compliance. This facility complies with all applicable District rules and regulations.
1303(b)(5)	Major Polluting Facilities. This is not a new major polluting facility or major modification at an existing major polluting facility. Therefore, the provisions of this paragraph do not apply to this equipment.

Rule 1401	**New Source Review of Toxic Air Contaminants**	**September 10, 2010** **Application Deemed Complete: September 29, 2011**
	Estimates for MICR, cancer burden and chronic HI are calculated per Rule 1401(f)(1) and acute HI is calculated per Rule 1401(f)(2), based on permit conditions. MICR – residential: 1.16×10^{-7} @ 25 meters MICR – commercial: 2.26×10^{-8} @ 25 meters HIA & HIC: all < 1.0 Cancer burden: N/A, MICR < 1×10^{-6} The SVE unit passes the Tier 2 Screening Risk Assessment at 25 meters (included in Attachment #4).	
1401(d)(1)(A)	Permit unit is constructed with BACT; MICR is $\leq 1 \times 10^{-6}$	
1401(d)(1)(C)	Cancer burden is less than 0.5.	
1401(d)(2)	The cumulative increase in total chronic HI for any target organ system will not exceed 1.0 at any receptor location.	
1401(d)(3)	The cumulative increase in total acute HI for any target organ system will not exceed 1.0 at any receptor location.	
1401(d)(4)	The risk per year will not exceed 1/70 of the maximum allowable risk (1×10^{-6}) at any receptor locations in residential areas.	
	Federal NSR for toxics does not apply since this equipment is not located at a plant site that is a major source as defined in 40CFR63, Subpart A, §63.2. This facility emits less than 10 tons per year of any HAP and 25 tons per year of all hazardous air pollutants (HAPs).	

Rule 1401.1	**Requirements for New and Relocated Facilities Near Schools**	**November 4, 2005**
1401.1(b)	This is an existing facility.	

REG XX	**RECLAIM**	**May 6, 2005**
	D/K has been designated as a NOx RECLAIM facility. There is no increase in NOx emissions.	

REG XXX	**Title V**	**November 5, 2011**

D/K was issued a Title V permit effective on July 1, 2011. This is a **de minimis significant permit revision** as defined in Rule 3000(b)(7), where the cumulative emission increases of non-RECLAIM pollutants or hazardous air pollutants (HAP) from all de minimis significant permit revisions during the term of the Title V permit are not greater than the threshold levels given in this rule.

Air Contaminant	Prior revisions	This revision	Total	Threshold level
HAP	0.	0.	0.	30. lb/day
VOC	0.25	2.24	2.49	30. lb/day
PM10	0.	0.	0.	30. lb/day
CO	0.	0.	0.	220. lb/day
SOx	0.	0.	0.	60. lb/day

Rule 3000 (b)(15)(A)(i)	This revision does not require or change a case-by-case evaluation of: reasonably available control technology (RACT) pursuant to Title I of the federal Clean Air Act; or maximum achievable control technology (MACT) pursuant to 40 CFR Part 63, Subpart B.
(b)(15)(A)(ii)	This revision does not violate a regulatory requirement.
(b)(15)(A)(iii)	This revision does not require any significant change in monitoring terms or conditions in the permit.
(b)(15)(A)(iv)	This revision does not require relaxation of any recordkeeping, or reporting requirement, or term, or condition in the permit.
(b)(15)(A)(vii)	This revision does not result in an increase in GHG emissions of >75,000 tpy CO_2e.
(b)(15)(A)(viii)	This revision does not establish or change a permit condition that the facility has assumed to avoid an applicable requirement.
(b)(15)(A)(ix)	This revision is not an installation of a new permit unit subject to a New Source Performance Standard (NSPS) pursuant to 40 CFR Part 60, or a National Emission Standard for Hazardous Air Pollutants (NESHAP) pursuant to 40 CFR Part 61 or 40 CFR Part 63.
(b)(15)(A)(x)	This revision is not a modification or reconstruction of an existing permit unit, resulting in new or additional NSPS requirements pursuant to 40 CFR Part 60, or new or additional NESHAP requirements pursuant to 40 CFR Part 61 or 40 CFR Part 63.

A de minimis significant permit revision is subject to a **45-day EPA review**, Rule 3003(j) and not subject to public participation requirements, Rule 3006(b).

PART 3 FEDERAL REGULATIONS

40CFR Part 61	**Subpart FF - National Emission Standard for Benzene Waste Operations**
§61.340	Applicability (a) This facility is not a chemical manufacturing plant, coke by-product recovery plant or petroleum refinery as defined in §61.341. (b) This facility does not treat, store or dispose of hazardous waste generated by any facility listed in paragraph (a). 40 CFR 61 Subpart FF does not apply to this facility.

40CFR Part 63	**Subpart GGGGG - National Emission Standards for Hazardous Air Pollutants: Site Remediation**
	Applicability - This facility is not a major source as defined in section 112(a) of the Clean Air Act or 40CFR §63.2. This facility emits less than 25 tons per year of all hazardous air pollutants (HAPs) listed in table 1 of this subpart, and less than 10 tons per year of any one HAP; therefore, this facility is not subject to the provisions of these regulations.

CONCLUSION

Required: 1. Rule 212(c)(1) – school public notice
2. 45-day EPA review

Based on the above evaluation, it is recommended that the following be issued:

A/N	Recommendation
527509	Issue Permit to Construct (PC) with conditions listed in the Conditions Section; include new system in the deminimis significant revision to the Title V/RECLAIM facility permit (A/N 527512)
527510	Issue Permit to Construct (PC) with conditions listed in the Conditions Section; include modification in the deminimis significant revision to the Title V/RECLAIM facility permit (A/N 527512)
527511	Issue Permit to Construct (PC) with conditions listed in the Conditions Section; include modification in the deminimis significant revision to the Title V/RECLAIM facility permit (A/N 527512)

List of Attachments

1. Process Flow Diagram – Soil Vapor Extraction System
2. Well Gas Samples
3. Afterburner C281 Source Test – TAC destruction
4. Rule 1401 Tier 2 Screening Risk Assessment
5. AQMD Compliance Database (1/5/2012)
6. 40 CFR Part 70 Compliance Schedule/Plan Progress Report, dated 1/1/2012
7. Compliance Records – Facility condition F2.1 limit
8. Design Basis for the new afterburner C281 – ZEECO, Inc.