ALTA MESA SERVICES, LP
15021 Katy Freeway, Suite 400
Houston, Texas 77094
(281) 530-0991
(281) 530-5278 FAX

December 2, 2013

FedEx Overnight Delivery

Bill Rogers
Stationary Source Permit Program Coordinator
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706

RE: Pre-Permit Construction Approval Application
Alta Mesa Services, LP
Idaho Refrigeration Plant (Gas Processing)

Dear Mr. Rogers:

On behalf of Alta Mesa Services, LP (AMS) please find the enclosed 15-day Pre-Permit Construction Approval Application (PTC) for the above referenced facility. AMS is requesting the ability to construct before obtaining the required permit to construct in accordance with IDAPA 58.01.01.213.01.c. The enclosed application has been assembled following the published IDEQ 15-Day Pre-Permit Construction Approval Application Completeness Checklist. In addition to the complete enclosed application, an application fee of $1,000.00 has also been included with this submittal. A copy of the modeling protocol approval, Public Notice, and anticipated construction timeline have all been included with the application.

If you have any questions or need additional information regarding this submittal, please contact me at (409) 331-9175.

Very Truly Yours,

Billy Wolcott, President
Wolcott & Associates ECS, LLC

Enclosure: 15-Day PTC Application
Compact Disc (CD) Application Support Materials
(1) Copy of Application with Supporting Materials

CC: Alta Mesa Services, LP. 15021 Katy Freeway 4th Floor, Houston, TX 77094

Table of Contents

INTRODUCTION

SECTION 1.0

ALTA MESA SERVICES

IDAHO REFRIGERATION PLANT

PROCESS DESCRIPTION

Raw field gas enters the plant through an 8" gathering line and ball receiver. Liquids are separated from the gas in the Slug Catcher, and level controlled through level control valve where they are pressured to storage tank. The gas vapor leaving passes through a pressure control valve which prevents the pressure from exceeding 575 psig. It next enters the Gas to Gas Exchanger where the gas is cooled to 17 F and then to the Gas Chiller, where the gas is further cooled to -20 F using propane refrigerant. The gas is separated from the condensed natural gas liquids in the Cold Separator, and then delivered to shell side of the Gas to Gas Exchanger and consequently warmed to 50 F. This gas is approximately 95% of the inlet gas and is compressed to pipeline pressure (maximum 850 psig) by compressor(s). These compressors are driven by natural gas powered Caterpillar G398 TA richburn engines equipped with Emit Catalytic Oxidizers (**EPNs: ENG1 and ENG2**). There is a 200 Mbtu Engine heater (**EPN: ENG-HTR1**) which is also natural gas fired which can be used to warm the engines prior to start-up. This heater will rarely be used. The gas then passes through a Filter/Separator to remove particles, oil mist, etc. prior to delivery to Northwest Pipeline.

Liquids from the cold separator flow to the Gas/Liquid Exchanger, where they are warmed to 31 F. The flow is level controlled by a level control valve prior to entering the Glycol Separator. The Glycol Separator is a three phase separator and separates gas, natural gas liquids NGL(s), and glycol. The NGL(s) enter the top of the 10 tray stabilizer and trickle down through the trays. The bottom section of the stabilizer diverts the NGL(s) to the Reboiler, where indirect heat warms the NGL(s) to 180 F. This reboiler (Stabilizer Reboiler Heater) is a 1200 Mbtu natural gas fired unit (**EPN: STBL-HTR1**) which vaporizes the ethane and lighter components which travel from tray to tray up the tower warming the incoming NGL(s) and cooling the gas. The gas leaving the stabilizer is ethane rich and is recompressed back to the plant inlet.

The NGL(s) is cooled in an air cooled heat exchanger, as it passes to the storage tank. All vapors are combined and recompressed to the plant inlet for recycling. The fourth throw of the refrigeration compressor which is powered by a 250 HP electric motor.

Ethylene glycol is injected in the gas to gas exchanger and the chiller to inhibit hydrate formation as the inlet gas is cooled. The glycol travels through a series of exchangers and separators where it is separated by gravity from the NGL(s). Glycol exits the glycol separator and travels to a heat exchanger where it is warmed to 100 F by exchange with the hot glycol from the reboiler. This conserves energy and reduces viscosity for improved operation of the glycol filter. The glycol filter has a spun element and removes particles in the glycol 25 micron and larger. The filter is equipped with an air eliminator to remove vapor and maximize the filtration area.

The warm glycol then flows to the top of the packed section of the glycol reboiler where it acts as reflux for the steam generated in the reboiler to minimize glycol vaporization losses. The glycol is heated in the reboiler by a 750 Mbtu per hour (**EPN: RBLR-HTR1**) direct natural gas fired tube. By operating the reboiler at 235 to 240 F the glycol will maintain a concentration in the 75% range.

Hot glycol from the reboiler accumulates in the surge tank end of the reboiler and then flows to the shell side of the glycol exchanger where it cools to ambient temperature for suction to the glycol pump. The glycol pump is an electric motor driven plunger type which can boost the glycol up to 1000 psig if necessary. Glycol leaving the pump flows to the injection nozzles which are each sized for 1 gpm a 50 psi differential pressure. The nozzles are inserted into the exchangers with removable holders. Operating under the proper conditions the glycol should be evenly distributed across the face of each tubesheet.

The refrigeration is provided in a typical propane/kettle type system. The compressor lowers the pressure of the kettle thereby lowering the temperature of the bath. Propane from the kettle is compressed to 240 psig by a two stage compressor which is equipped with normal operating and shutdown devices. Propane from compressor discharge is condensed with an aerial electric fan driven cooler. The cooler outlet liquids flow to the propane accumulator.

Propane leaves the accumulator and flows to the liquid/liquid exchanger where it is further cooled by the cold NGL(s). A liquid level control valve maintains the propane level in the chiller.

The propane compressor is driven by a 250 HP electric motor. Fluctuations in the refrigeration load are controlled with a hot gas bypass from compressor discharge to the chiller propane inlet thereby maintaining a minimum suction pressure for the compressor.

Emission points are described in the description above, and include the Caterpillar G398 TA engines driving the residue gas compressors, the glycol reboiler, the stabilizer reboiler (Heater) and the engine heater.

ALTA MESA SERVICES, LP
Operating Account
15021 Katy Freeway, Suite 400
Houston, Texas 77094
(281) 530-0991

PAYEE NO. / NAME	CHECK DATE	CHECK NUMBER	AMOUNT
43169 Department of Environmental	**Nov 21, 2013**	**0002033643**	**$1,000.00**

Reference	Inv date	Invoice No.	Invoice Amt	Prior Pmt	Discount	Amount Paid
1311-AP-1770	11/19/13	CK.REQ.1119 13	1000.00	0.00		1000.00
RETURN CK TO KAITLYN MATHEWS						

PAYEE DETACH THIS STATEMENT BEFORE DEPOSITING

CHECK IS VOID IF ANY OF THE FOLLOWING SECURITY FEATURES ARE ABSENT: ORIGINAL DOCUMENT PRINTED ON CHEMICAL REACTIVE PAPER

ALTA MESA SERVICES, LP
Operating Account
15021 Katy Freeway, Suite 400
Houston, Texas 77094
(281) 530-0991

BANK OF TEXAS
1401 MCKINNEY STE 1650
HOUSTON TX 77010

No. **0002033643**
32-1432/1110

VOID AFTER 180 DAYS

DATE	PAY EXACTLY
Nov-21-2013	**$1,000.00**

PAY EXACTLY **$1,000dols00cts**
One thousand dollars and 00 cents

PAY
TO THE ORDER OF

Department of Environmental
Quality
1410 N Hiliton
Boise, ID 83706

RUB RED IMAGE - DISAPPEARS WITH HEAT. SECURITY FEATURES INCLUDED, DETAILS ON BACK. SEE BACK FOR ARTIFICIAL WATERMARK

⑈000203364 3⑈ ⑆111014325⑆ ⑈8091657788⑈

...ay, Trustee 11000 Olson Drive Ste ...Rancho Cordova, CA 95670 Megan ..., Authorized Signature SALE INFOR...ON CAN BE OBTAINED ON LINE AT ...psasap.com FOR AUTOMATED ...S INFORMATION please call ...30-2727 A-4427012 11/27/2013, ...2013, 12/11/2013, 12/18/2013
...ber 81014 November 27, De... 11, 18, 2013

...No. xxxxxx5675
...o. 1347278-39
...No. n5480037016a
...OTICE OF TRUSTEE'S SALE
...bruary 27, 2014, at the hour of ...m. of said day, at In the lobby of ...e county courthouse, 1130 3rd ave ...ayette, Idaho, First American Title ...nce Company, as trustee, will sell at ... auction, to the highest bidder, for ...ashier's check drawn on a State or ...al Bank, a check drawn by a State ...eral Credit Union, or a check drawn ...ate or Federal Savings and Loan As...on, Savings Association, or Savings ...all payable at the time of sale, the ...ng described real property, situated ... County of Payette, state of Idaho, ...scribed as follows, to wit: Lots 16 ... in block 37 of subdivision of blocks ...l 37 of the original townsite of new ...ith, according to the official plat ..., filed in book 1 of plats at page(s) ...official records of Payette county, ... Commonly known as 218 South ...th Avenue New Plymouth Id ... Said sale will be made without ...nt or warranty, express or implied, ...ng title, possession or encum...s to satisfy the obligation secured ... pursuant to the power of sale con...in the Deed of Trust executed by ... Harvey and Mark J. Harvey, Wife ...nd as Grantor, to Alliance Title, ..., for the benefit and security of ...ge Electronic Registration Systems, ...mers") As Nominee For Mortgage ...s Network Usa, Inc., Its Successors ...signs as Beneficiary, recorded De... 26, 2006, as Instrument No. ..., Mortgage records of Payette ..., Idaho. THE ABOVE GRANTORS ...AMED TO COMPLY WITH SECTION ...6(4)(a), IDAHO CODE. NO REPRE...TION IS MADE THAT THEY ARE ...E NOT, PRESENTLY RESPONSIBLE ...HIS OBLIGATION. The default for ...this sale is to be made is: Failure to ...e monthly payment due june 1, ...of principal, interest and impounds ...bsequent installments due thereaf...ether with all subsequent sums ad... by beneficiary pursuant to the ...and conditions of said deed of trust. ...timated balance owing as of this ...n the obligation secured by said ...trust is $146,399.28, including in...costs and expenses actually in...in enforcing the obligation thereun...to this sale, and trustee's fees ... reasonable attorney's fees as ...ed in the promissory note secured ...aforementioned Deed of Trust. First ...an Title Insurance Company C/o ...stom Reconveyance Llc P.O. Box ... El Cajon Ca 92022-9004 ...46-1531 Dated: October 23, 2013 ...ture/By First American Title Insur...ompany. DLPP-434334 11/06/13, ...11/20, 11/27

...umber 80773 November 6, 13, ...2013

will the Deed of Trust described herein as provided under the Note, Deed of Trust and as allowed under Idaho Law.

PIONEER TITLE COMPANY OF ADA COUNTY dba PIONEER LENDER TRUSTEE SERIVCES DATED: 11/14/2013 Signature/By: Ronald W. Jantzen

A-FN4428968 11/27/2013, 12/04/2013, 12/11/2013, 12/18/2013
Legal Number 81015 November 27, Decem ber 4, 11, 18, 2013

Public Notice

Alta Mesa Services, LP has applied to the Idaho Department of Environmental Quality (DEQ) for issuance of a 15-Day Pre-Permit Construction Approval Application in accordance with IDAPA 58.01.01.213. This request will authorize construction of a proposed natural gas processing plant located adjacent to U.S. Highway 30 south of New Plymouth (Payette County), Idaho. The facility will occupy approximately 5.75 acres. A public meeting will be held on Dec 9, 2013 at 6:30pm at the Payette High School Auditorium, 1500 6th Ave S, Payette, ID 83661, to provide information about the proposed project and the DEQ PTC application. This scheduled meeting will be held in accordance with guidelines contained in IDAPA 58.01.01.213.01.c and 58.01.01.213.02.a.
Legal Number 81013 November 27, 2013

NEW PLYMOUTH SCHOOL DISTRICT NO. 372 CALL FOR BID FOR A SCHOOL BUS

NOTICE IS HEREBY GIVEN that sealed bids will be received by the Board of Trustees of New Plymouth School District No. 372, Idaho, for the purchase of a school bus.

Bid documents and detailed specifications are available from the District Clerk, at 103 S.E Avenue, New Plymouth, Idaho between the hours of 11:30 a.m. and 4:00 p.m. Monday through Friday, until the day of bid opening.

Bids must be submitted on or before 1:30 p.m., on Thursday December 12, 2013 to the District Clerk. Bids received after the stated time and date will not be considered. At the stated time and place, bids will be publicly opened and read aloud.

The Board of Trustees reserves the right to accept or reject or to select any portion thereof any or all bids and to waive any technicality. No bidder may withdraw his bid after the opening of such bids unless the awarding of the bid is delayed for a period exceeding thirty days.

Clerk of the Board
New Plymouth School District # 372
103 S.E. Avenue
New Plymouth, Idaho 83655
Legal Number 81012 November 27, December 4, 2013

...ette, in the County of Payette, State of Idaho, Ryan M. Fawcett, as Successor Trustee, will sell at public auction, to the highest bidder, for cash, in lawful money of the United States, all payable at the time of sale, the following described real property situated in the County of Payette, State of Idaho, and described as follows, to wit:

LAND IN THE CITY OF FRUITLAND, COUNTY OF PAYETTE, IDAHO: IN APPLEWOOD ESTATES SUBDIVISION #2, AS PER PLAT IN BOOK 5, PAGE 56, PLAT RECORDS, PAYETTE COUNTY, IDAHO: IN BLOCK 1: LOT 17.

The Successor Trustee has no knowledge of a more particular description of the above referenced real property, but for purposes of compliance with Section 60-113, Idaho Code, the Successor Trustee has been informed that the street address of 2616 Winesap Ave., Fruitland, Idaho, is sometimes associated with said real property.

Said sale will be made without covenant or warranty regarding title, possession or encumbrances to satisfy the obligation secured by and pursuant to the power of sale conferred in the Deed of Trust executed by CRAIG C. BUCKLEY, an Unmarried Person, Grantor, to Ryan M. Fawcett, Successor Trustee, for the benefit and security of FIRST SECURITY BANK, N.A., recorded August 3, 1998, as Instrument No. 275783, Mortgage records of Payette County, Idaho; and assigned to the IDAHO HOUSING AND FINANCE ASSOCIATION by Assignment of Deed of Trust recorded on August 3, 1998, as Instrument No. 275784, Mortgage records of Payette County, Idaho. THE ABOVE GRANTOR IS NAMED TO COMPLY WITH SECTION 45-1506 (4)(a), IDAHO CODE. NO REPRESENTATION IS MADE THAT HE IS, OR IS NOT, PRESENTLY RESPONSIBLE FOR THIS OBLIGATION.

The default for which this sale is to be made is the failure to pay when due, monthly installment payments under the Deed of Trust Note dated July 31, 1998, in the amount of $706.00 each, for the months of June through October, 2013, inclusive; and for each and every month thereafter until date of sale or reimbursement. All delinquent payments are now due, plus accumulated late charges, plus any costs or expenses associated with this foreclosure. The accrued interest is at the rate of 6.49% per annum from May 1, 2013. The principal balance owing as of this date on the obligation secured by said Deed of Trust is $67,238.18, plus accrued interest at the rate of 6.49% per annum from May 1, 2013.

DATED This 12th day of November, 2013.

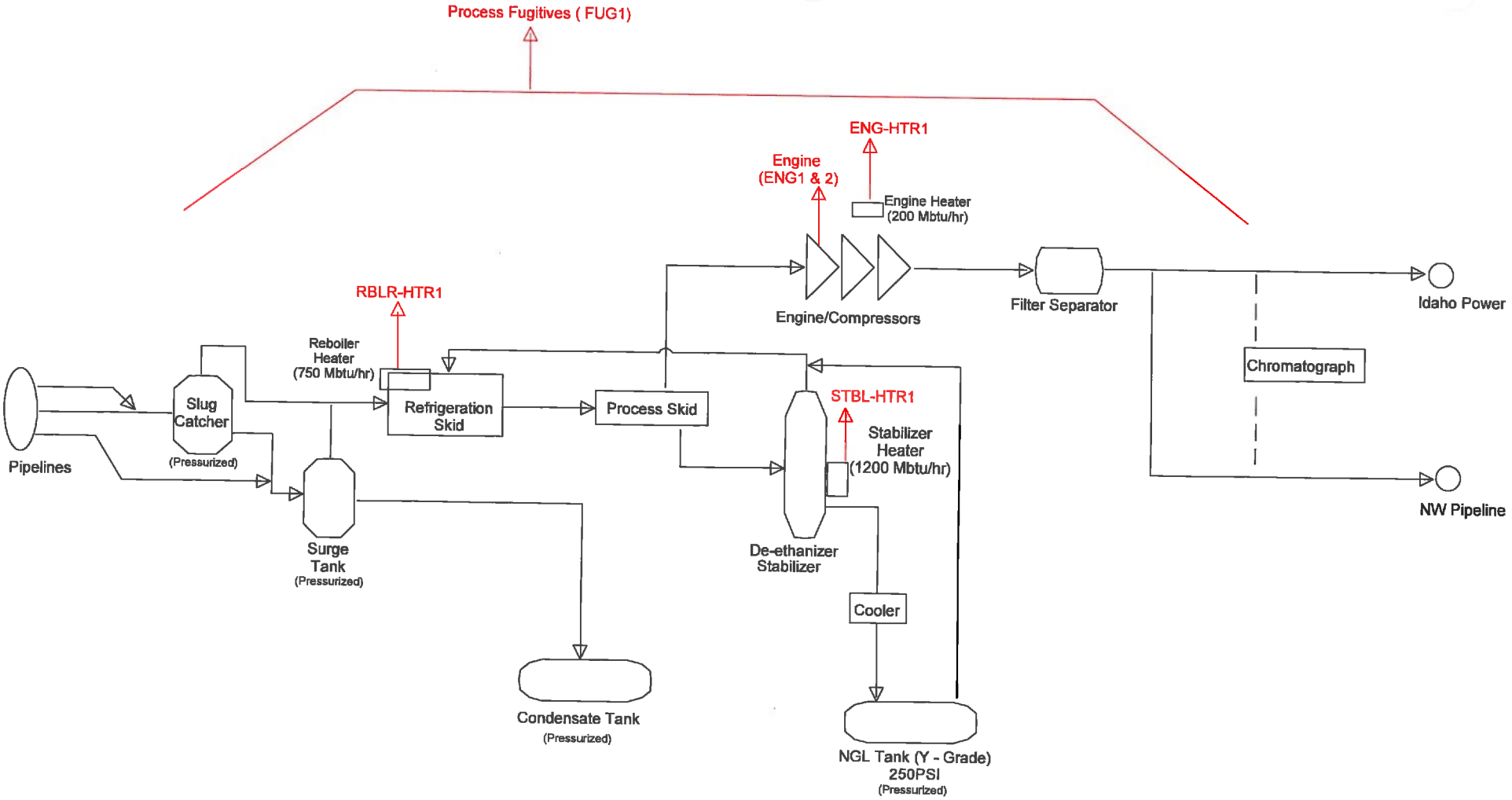
RYAN M. FAWCETT, a Member of the Idaho State Bar, SUCCESSOR TRUSTEE
Legal Number 80986 November 27, December 4, 11, 18, 2013

Sarah Susan Bell Evans
PO Box 442
New Plymouth, ID 83655
(208) 571-1844
IN THE DISTRICT COURT OF THE THIRD JUDICIAL DISTRICT OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF PAYETTE
Case No. CV-2013-1020
NOTICE OF HEARING (Adult)
IN RE: Sarah Susan Bell Evans
Legal Name
A Petition to change the name of Sarah Susan Bell Evans, born 05/16, in Caldwell, ID, residing at 1600 Glenway, Fruitland, has been filed in Payette County District Court, Idaho. The name will change to Sarah Susan Bell Bisby because Bisby is the last name of me biological father.

...test fee of $25.00 ic ...or before 12/09/2 ...must also send a co... applicant.
GARY SPACKMAN, D...
Published on ...11/27/2013
Legal Number 8094... 2013

NOTICE OF T...
T.S. No. 0051... 07N04W129160 On ...AM (recognized local ...Payette County Cour... nue North, Payette ...County of Payette, ...ESQ., a member of t... of PITE DUNCAN, LL... at public auction, to ... cash, in lawful mone... all payable at the ti... ting described real pr... County of Payette, s... scribed as follows, to ...NORTH, RANGE 4 W... COUNTY, IDAHO: I... PORTION OF THE ... THE SE1/4 SE1/4 ... WEST OF THE CE... COUNTY ROAD RI... COUNTY ROAD BEI... OF THE RAILROAD ...Trustee has no kno... ticular description o... real property, but fo... ance with Idaho Cod... Trustee has been ... dress of: 5901 SE ... MOUTH, ID 83655, ... ated with said real p... be made without cov... press or implied, re... sion or encumbrance... tion secured by and ... of sale conferred in ... cuted by MICHAEL L... L. MILLER, HUSBAN... tor, to AMERITITLE ... benefit and security ... TRONIC REGISTRA... AS NOMINEE FOR A... CORPORATION, A U... ITS SUCCESSORS A... ficiary, dated 7/... 7/24/2009, as Instru... ficial records of Pa... Please note: The ab... are named to comply ...tion 45-1506(4) (a); ... made that they are ... responsible for the o... for which this sale is ...ure to make monthly ...from 6/1/2012 ... monthly payments th... stallments of prin... pounds, advances, p... fully due under the ... aforementioned Deed ... Trust and as allowed ... The sum owing on th... by said Deed of Trus... cluding interest, cost... ally incurred in enf... thereunder or in thi... fees and/or reasonal... authorized in the Not... allowed under Idaho ... amounts are now du... cruring late charges, ... accruing taxes, ass... fees, attorney fees a... vanced to protect the ... with the Deed of Trus... provided under the ... and as allowed unde... MAGNUSON, ESQ., a ... Bar of Idaho, of P...
DATED: 11/6/13 ...Magnuson, Esq., A-4... 11/27/2013, 12/04/2...
Legal Number 8092... December 4, 11, 201...

FACILITY DIAGRAMS



Wolcott & Associates, ECS		
Process Flow Diagram		
Site Name: Idaho Refrigeration Plant		
Company Name: Alta Mesa Services, LP		
Rev: 2	Date: October 2013	County/Address: Payette County, Idaho

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

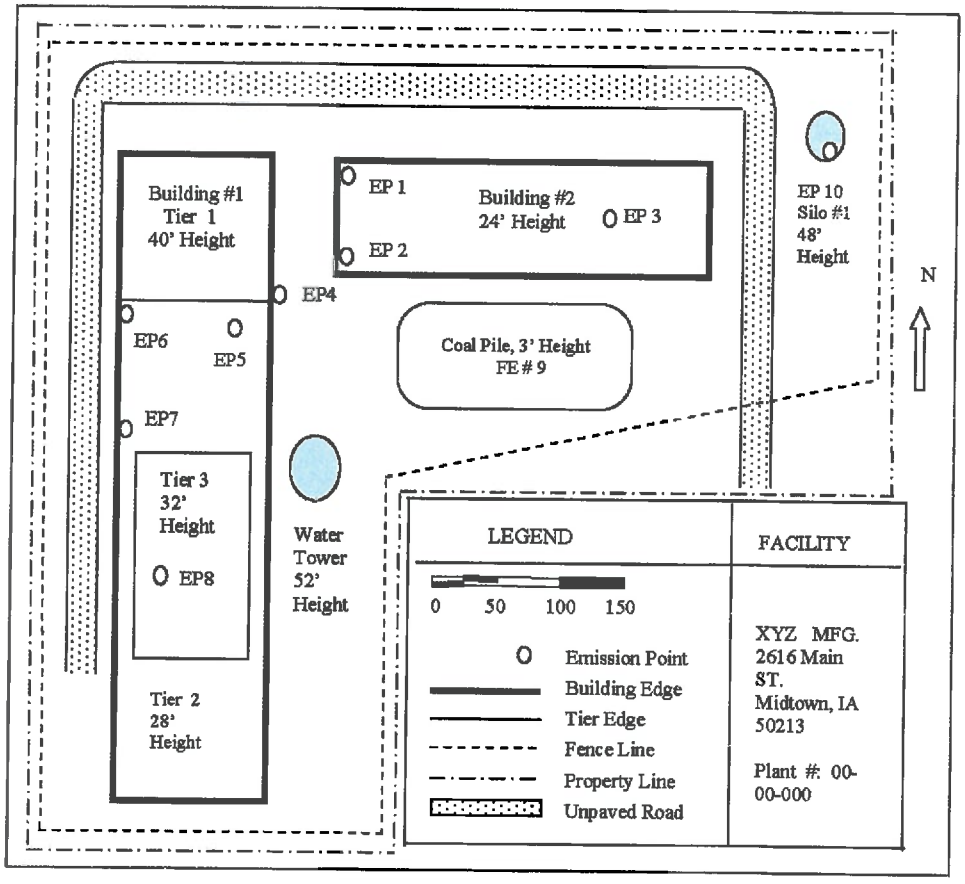
PLOT PLAN REQUIREMENTS

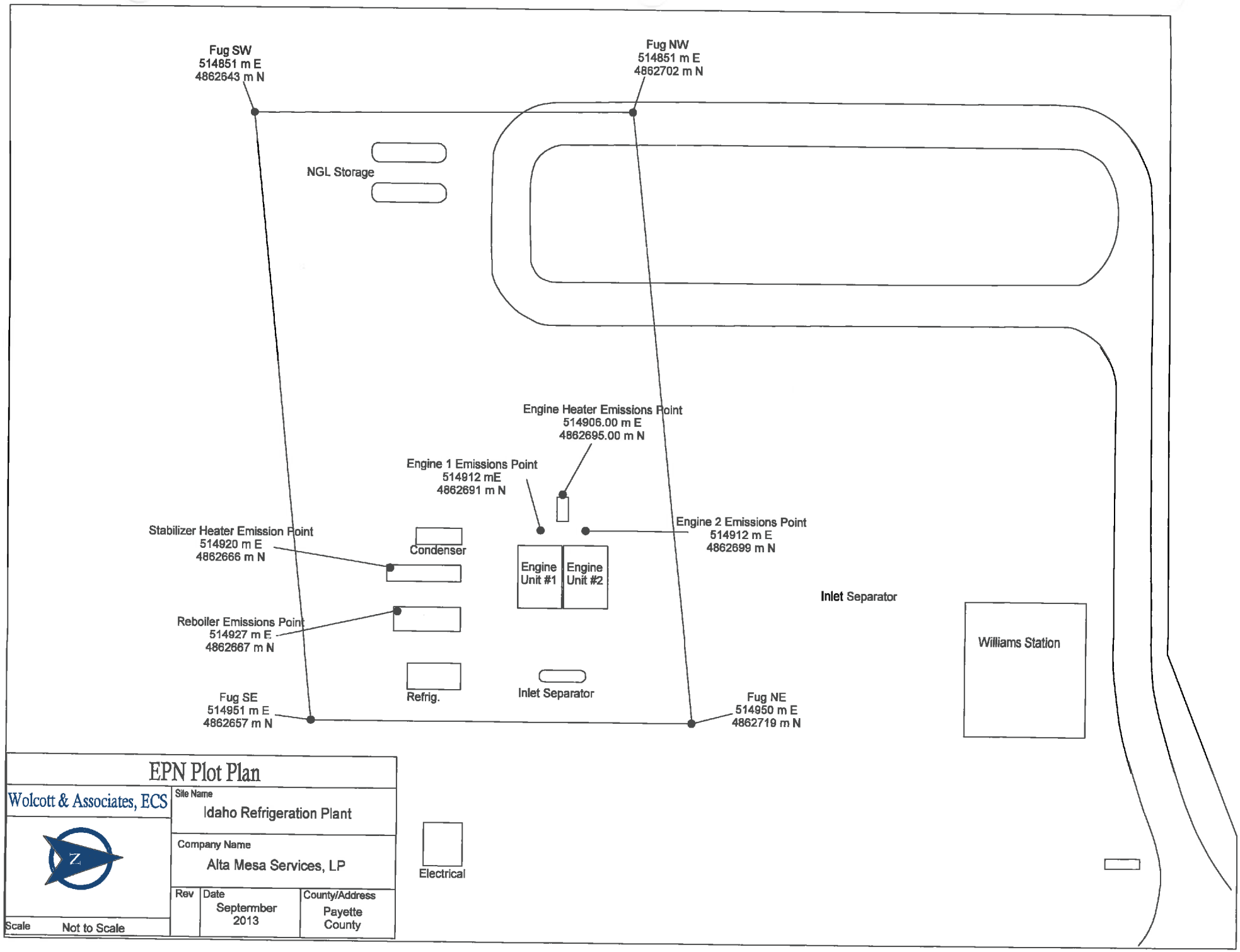
A scaled plot plan of the entire plant is required with your permit application. The plot plan must show:

1. A scale bar and a north arrow. The scale must be of sufficient size to allow drawings to be converted to electronic format.
2. Property lines.
3. If any, fence lines or any physical barriers precluding the public access.
4. Locations of all buildings **within the property lines**. Locations of tiers on multi-level buildings. Include the building and structure heights, and tier heights. A description of the buildings or structures is optional.
5. Locations of **ALL** emission points. Emission point symbols need not be to scale.
6. Locations of all structures **above ground level** and **within property lines**. Structures **above ground level** such as a gasoline storage tank, grain storage silos, etc., must be shown. Structures **at ground level,** such as concrete pads, paved parking lots, etc., should **not** be on the plot plan.
7. Locations of unpaved roads (need not be to scale) and area sources, such as coal piles must be shown, only if fugitive emissions must be included in the permit application.
8. Highlight or mark the emission point that is the subject of this permit application so that it is clearly distinguished from other emission points or labels on the plot plan.

- **All buildings and structures above ground level and all emission points must be marked with identification numbers, which MUST be consistent with all forms in the application.**
- AutoCAD or equivalent computer-aid drawings on paper and on disk are preferred.
- Sketches are acceptable.
- Aerial photographs are not acceptable.

SAMPLE PLOT PLAN




Fug SW
514851 m E
4862643 m N
Fug NW
514851 m E
4862702 m N
NGL Storage
Engine Heater Emissions Point
514906.00 m E
4862695.00 m N
Engine 1 Emissions Point
514912 mE
4862691 m N
Engine 2 Emissions Point
514912 m E
4862699 m N
Stabilizer Heater Emission Point
514920 m E
4862666 m N
Condenser
Engine Unit #1
Engine Unit #2
Inlet Separator
Reboiler Emissions Point
514927 m E
4862667 m N
Williams Station
Refrig.
Inlet Separator
Fug SE
514951 m E
4862657 m N
Fug NE
514950 m E
4862719 m N
Electrical
EPN Plot Plan
Wolcott & Associates, ECS
Site Name
Idaho Refrigeration Plant
Company Name
Alta Mesa Services, LP
Rev
Date
September 2013
County/Address
Payette County
Scale
Not to Scale

0 200 400

Feet

Imagery: ESRI World Imagery Map Service
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Other Data Sources: Payette County, US Census Bureau, USGS, INSIDE Idaho

N

Map Date: 9/16/2013
Document: Q:\ERM_misc\AltaMesa\map_docs\Vicinity_let.mxd

Alta Mesa Refrigeration Plant
Payette County, Idaho

Figure 1. Site Location Map

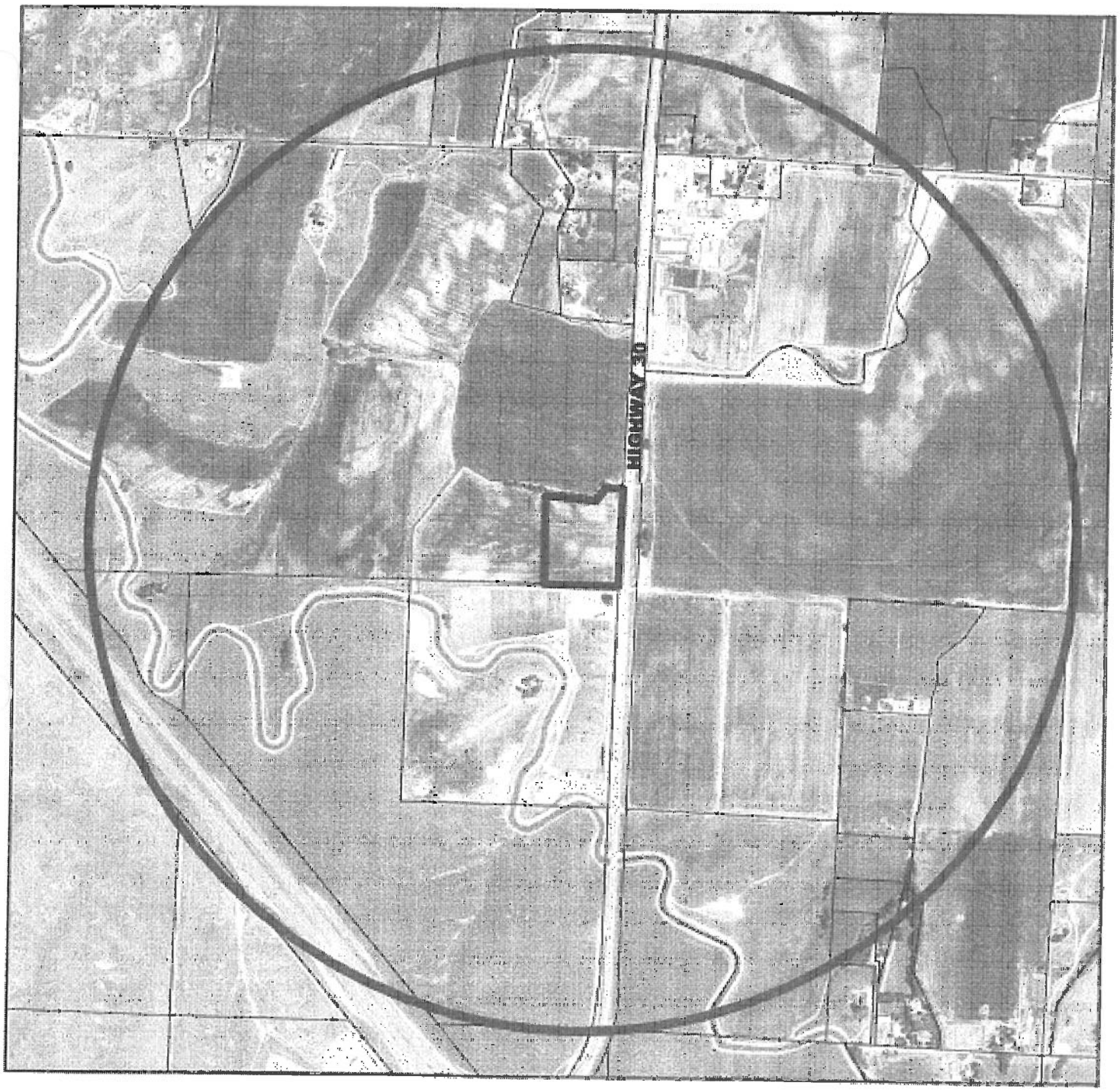


Exhibit Map For Processing Facility Parcel

Section 28 T7N R4W

08/19/13

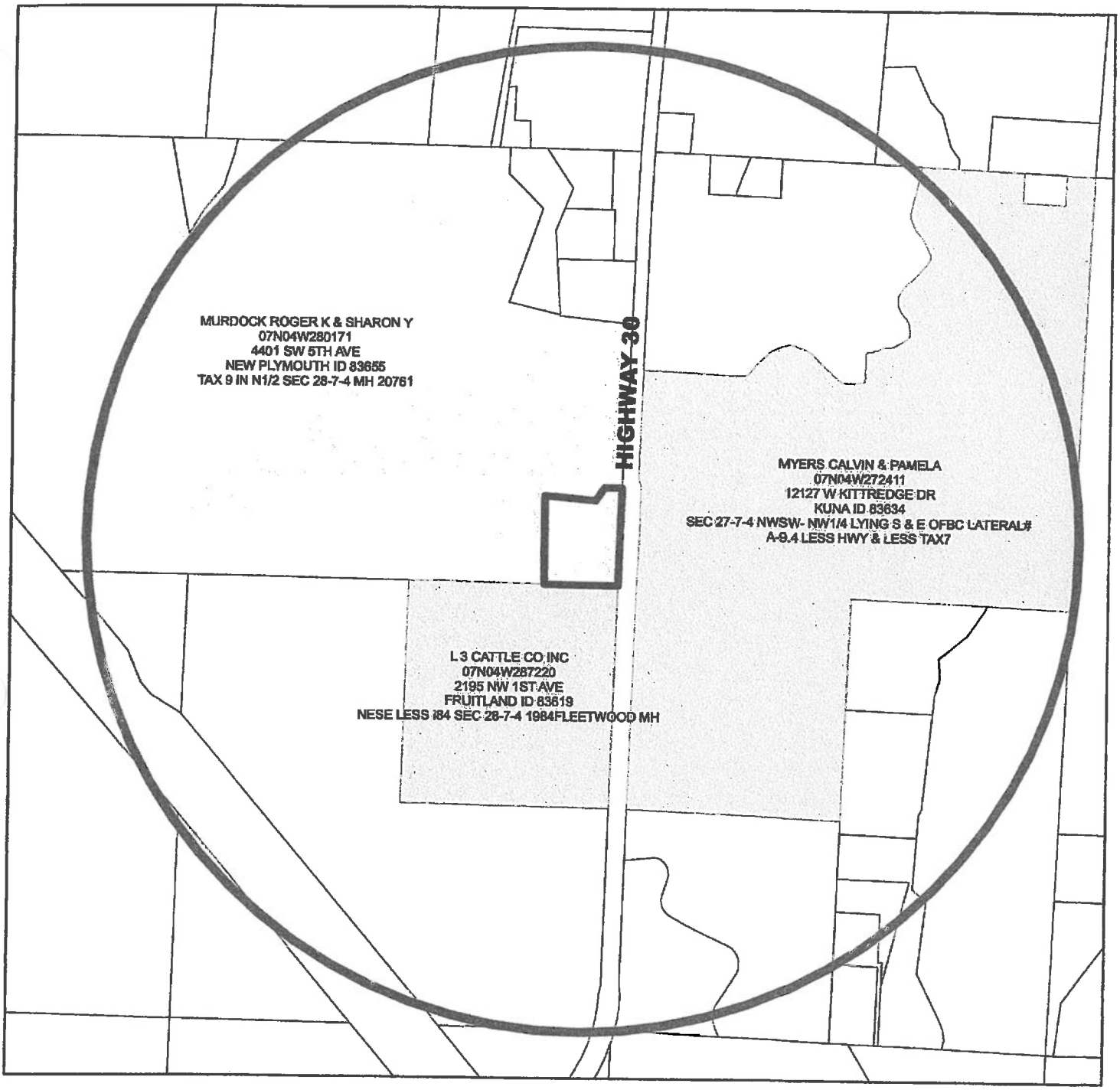
N

Legend

Processing Facility Parcel (5.75 Acres)

Half Acre Boundary

1 inch equals 800 feet



Adjoiners for Processing Facility Parcel

Section 28 T7N R4W

08/19/13

Legend

- Processing Facility Parcel (5.75 Acres)
- 300' Adjoiners
- Rojer Murdock parcel
- Half Acre Boundary

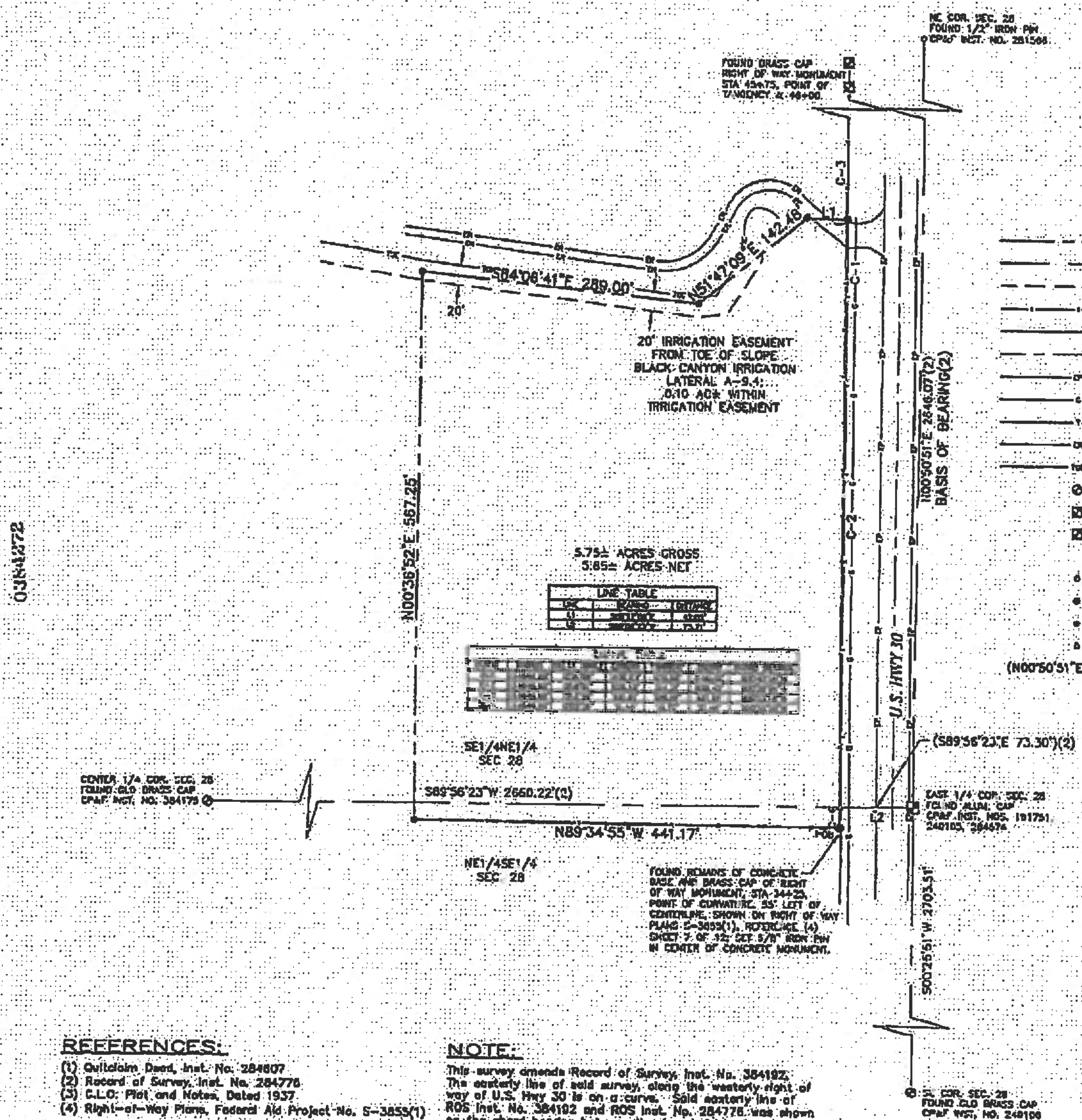
N

1 inch equals 800 feet

0384272

Book 10 Pgs. 119

Instrument # 384272



N.

SCALE: 1" = 80

LEGEND

- Boundary Line
- Section Line
- Easement Line
- Existing Fence
- Existing Right-of-Way
- Centerline
- Existing Edge of Pavement
- Existing Underground Gas Line
- Existing Underground Telephone Line
- Existing Edge of Road, Lateral A-9.4
- Existing Toe of Slope, Lateral A-9.4
- Found Brass Cap (As Noted)
- Found Aluminum Cap (As Noted)
- Found Brass Cap Right-of-Way Monument
- Found 1/2" Iron Pin (As Noted)
- Set 5/8"x24" Iron Pin, PLS 13446
- Set 1/2"x24" Iron Pin, PLS 13446
- Calculated Point
- (N00°50'51"E 2646.07') Data of Record

CERTIFICATE OF SURVEYOR

I, Sean P. Sullivan, do hereby certify that I am a Professional Land Surveyor, licensed by the State of Idaho, and that this map has been prepared from an actual survey made on the ground under my direct supervision, and that this map is an accurate representation of said survey and that it is in conformity with the Corner Perpetuation and Filing Act, Idaho Code 55-1601 through 55-1612.

Sean P. Sullivan

PROFESSIONAL LAND SURVEYOR 13446 6/1/13 STATE OF IDAHO SEAN P. SULLIVAN

License No. 13446

REFERENCES:

(1) Quitclaim Deed, Inst. No. 284607
(2) Record of Survey, Inst. No. 284776
(3) G.L.O. Plat and Notes, Dated 1937
(4) Right-of-Way Plans, Federal Aid Project No. S-3855(1)

NOTE:

This survey amends Record of Survey, Inst. No. 384192. The easterly line of said survey, along the westerly right of way of U.S. Hwy 30 is on a curve. Said easterly line of ROS Inst. No. 384192 and ROS Inst. No. 284776 was shown on the chord bearing between the found right of way monuments, which is incorrect. The data shown hereon, reflects the proper information for this amended survey.

INDEX No. 744-28-1-2-0-00-00
INDEX No. 744-28-2-1-0-00-00

AMENDED RECORD OF SURVEY FOR

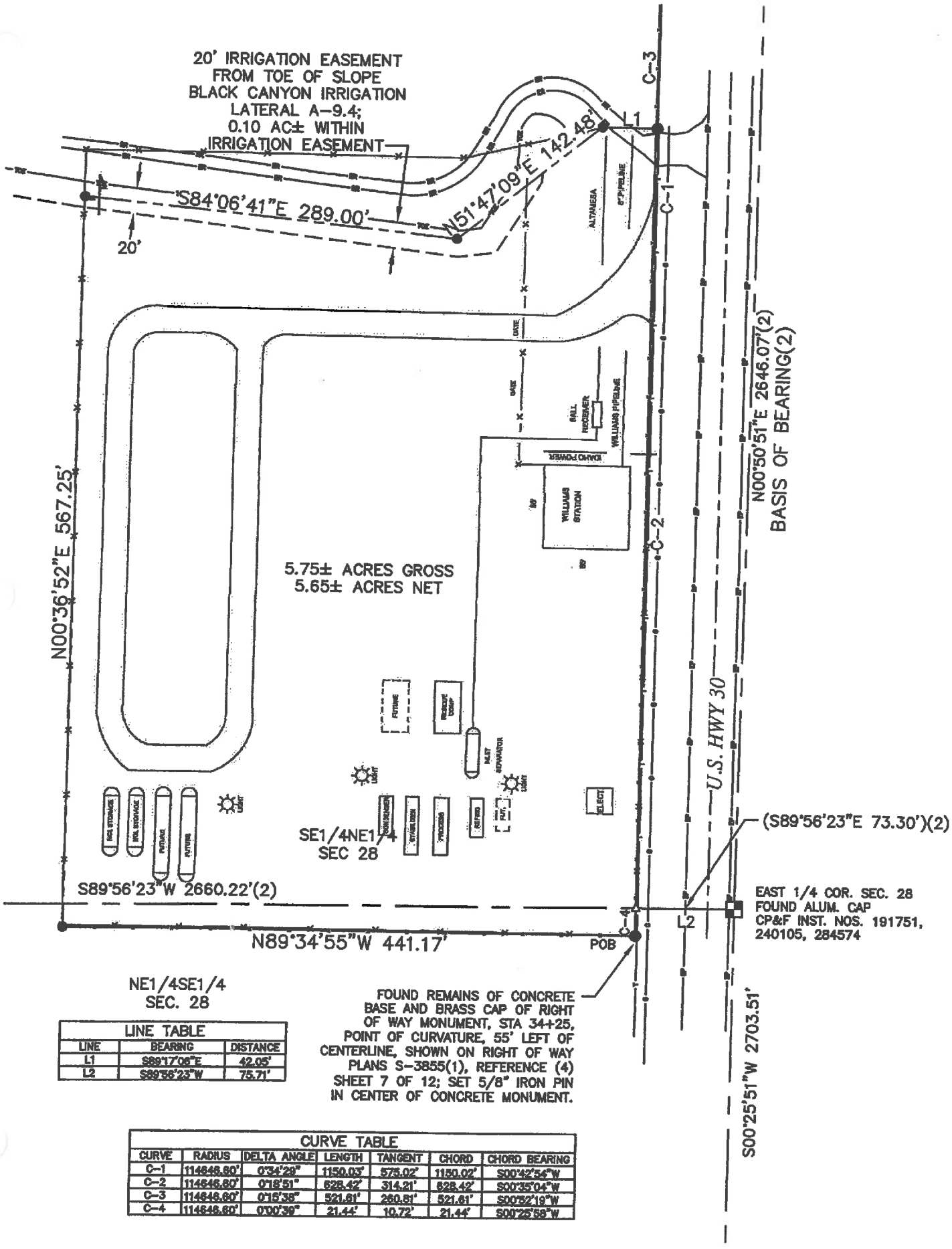
ALTA MESA SERVICE, LP

A PORTION OF THE SE1/4 OF THE NE1/4
AND A PORTION OF THE NE1/4 OF THE SE1/4
OF SECTION 28, T. 7 N., R. 4 W., B.M.,
PAYETTE COUNTY, IDAHO

SCALE: 1" = 80'	DR: SPS	CK: WLN	SHEET: 1 OF 1
DATE: June 1, 2013		FILE: 0165-03 AMENDED ROS.dwg	

ALS

Surveyors • Planners
1103 West Main Street
Middleton, Idaho
208-585-5858



FOUND REMAINS OF CONCRETE BASE AND BRASS CAP OF RIGHT OF WAY MONUMENT, STA 34+25, POINT OF CURVATURE, 55' LEFT OF CENTERLINE, SHOWN ON RIGHT OF WAY PLANS S-3855(1), REFERENCE (4) SHEET 7 OF 12; SET 5/8" IRON PIN IN CENTER OF CONCRETE MONUMENT.

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S89°17'06"E	42.05'
L2	S89°56'23"W	75.71'

CURVE TABLE						
CURVE	RADIUS	DELTA ANGLE	LENGTH	TANGENT	CHORD	CHORD BEARING
C-1	114646.60'	0°34'29"	1150.03'	575.02'	1150.02'	S00°42'54"W
C-2	114646.60'	0°18'51"	628.42'	314.21'	628.42'	S00°35'04"W
C-3	114646.60'	0°15'38"	521.61'	260.81'	521.61'	S00°52'19"W
C-4	114646.60'	0°00'39"	21.44'	10.72'	21.44'	S00°25'58"W

TIMELINE FOR CONSTRUCTION

Timeline for Construction

Start Date	Task	Duration (Days)
12/18/2013	Excavation	14
(Pending DEQ Approval of the PTC)	Gravel Work / Drainage	14
	Building – any foundation work	21
	Move in equipment	21
	Pipe in equipment / Electrical Wiring / Controls	60
	Troubleshoot, Train, Startup	14
	Construction Completion	
		144 Total Days

The construction process will occur over an estimated 4-5 month time period. The project will move forward as the Task(s) above are outlined. It is expected that construction will begin in December 2013 and continue through May 2014. The beginning and ending dates are restricted by written approval from DEQ authorizing the construction process to be initiated. Furthermore, the construction process may be disrupted due to weather and the winter season.

EMISSIONS INVENTORY

Alta Mesa Serv
Idaho Refrigeration Plant Emission Summary

Source Description		Caterpillar G398 TA	Caterpillar G398 TA	Reboiler	Stabilizer Heater	Engine Heater	Fugitive Emissions	Summary of Emissions
Source Information		Compressor Engine - Richburn with Emit Catalytic Oxidizer	Compressor Engine - Richburn with Emit Catalytic Oxidizer	750 Mbtu/hr	1200 Mbtu/hr	200 Mbtu/hr		
EPNs		ENG1	ENG2	RBLR-HTR1	STBL-HTR1	ENG-HTR1	FUG1	
VOC_{total}	lb/hr	0.6718	0.6718	0.0034	0.0054	0.0009	1.0659	**2.4191**
	TPY	2.9425	2.9425	0.0147	0.0235	0.0039	4.6687	**10.5958**
NOx	lb/hr	1.3436	1.3436	0.0610	0.0976	0.0163		**2.8620**
	TPY	5.8850	5.8850	0.2671	0.4273	0.0712		**12.5357**
CO	lb/hr	1.3436	1.3436	0.0512	0.0820	0.0137		**2.8341**
	TPY	5.8850	5.8850	0.2243	0.3589	0.0598		**12.4132**
PM_{10}	lb/hr	0.0452	0.0452	0.0046	0.0074	0.0012		**0.1037**
	TPY	0.1981	0.1981	0.0203	0.0325	0.0054		**0.4544**
$PM_{2.5}$	lb/hr	0.0452	0.0452	0.0035	0.0056	0.0009		**0.1004**
	TPY	0.1981	0.1981	0.0152	0.0244	0.0041		**0.4398**
SO_2	lb/hr	0.0028	0.0028	0.0004	0.0006	0.0001		**0.0066**
	TPY	0.0123	0.0123	0.0016	0.0026	0.0004		**0.0291**
Formaldehyde	lb/hr	0.0976	0.0976	4.57E-06	7.32E-06	1.22E-06		**0.1952**
	TPY	0.4274	0.4274	2.00E-05	3.20E-05	5.34E-06		**0.8549**
Benzene	lb/hr	0.0075	0.0075	1.28E-06	2.05E-06	3.41E-07		**0.0150**
	TPY	0.0329	0.0329	5.61E-06	8.97E-06	1.50E-06		**0.0659**
Toluene	lb/hr	0.0027	0.0027	2.07E-06	3.32E-06	5.53E-07		**0.0053**
	TPY	0.0116	0.0116	9.08E-06	1.45E-05	2.42E-06		**0.0233**
Ethylbenzene	lb/hr	0.0001	0.0001					**0.0002**
	TPY	0.0005	0.0005					**0.0010**
Xylene	lb/hr	0.0009	0.0009					**0.0019**
	TPY	0.0041	0.0041					**0.0081**

FUGITIVE EM ION CALCULATIONS

EPN: FUG1

Component Type	Gas Component Count	Heavy Oil Component Count	Light Oil Component Count	Water/Light Oil Component Count
Valves	189	20	65	24
Pumps	0	4	0	1
Flanges / Connectors	167	40	97	17
Compressors	4	0	0	0
Relief Lines	15	0	2	2
Open-ended Lines	4	0	0	1
Other	0	0	6	6
Process Drains	11	17	14	7

Component Type	Gas lb/hr per component	Heavy Oil lb/hr per component	Light Oil lb/hr per component	Water/Light Oil lb/hr per component	Gas Emission Rate (lbs/hr)	Heavy Oil Emsion Rate (lbs/hr)	Light Oil Emission Rate (lbs/hr)	Water/ Light Oil Emission Rate (lbs/hr)	Control Efficiency %	Control Efficiency %	Total Emissions lbs/hr	Total Emissions tn/yr
Valves	0.0092	0.00002	0.0055	0.0002	0.3972	0.0004	0.3575	0.0052	75%		0.1942	0.8507
Pumps	0.0053	0.0011	0.0287	0.0001	0.0000	0.0045	0.0000	0.0001	75%		0.0046	0.0200
Flanges / Connectors	0.0009	0.000001	0.0002	0.0000	0.0328	0.000034	0.0236	0.0001	75%	30%	0.0396	0.1734
Compressors	0.0194	0.0001	0.0165	0.0309	0.0177	0.000000	0.0000	0.0000	75%		0.0044	0.0194
Relief Lines	0.0194	0.0001	0.0165	0.0309	0.0665	0.000000	0.0330	0.0618	75%		0.0403	0.1766
Open-ended Lines	0.0044	0.0003	0.0031	0.0006	0.0040	0.000000	0.0000	0.0006	75%		0.0012	0.0051
Other	0.0194	0.0001	0.0165	0.0309	0.0000	0.000000	0.0990	0.1854	0%		0.2844	1.2457
Process Drains	0.0194	0.0001	0.0165	0.0309	0.0497	0.0012	0.2310	0.2163	0%		0.4972	2.1778
Totals											**1.0659**	**4.6687**

Component	Mole Wt	Mole%	lb/mol Mix	Wt%	Percentage	EMISSIONS lbs/hr	EMISSIONS TPY
Methane	16.043	84.8561	13.613	66.981	67.0%		
Nitrogen	28.013	0.4883	0.137	0.673	0.7%		
Carbon Dioxide	44.01	0.1403	0.063	0.310	0.3%		
Ethane	30.07	6.2131	1.868	9.192	9.2%	VOC Speciation	
Hydrogen Sulfide	34.08	0.0000	0.000	0.000	0.0%		
Propane	44.097	4.0209	1.773	8.724	8.7%	0.0930	0.4073
Iso-butane	58.124	0.9324	0.542	2.666	2.7%	0.0284	0.1245
N-Butane	58.124	1.5781	0.916	4.505	4.5%	0.0480	0.2103
Iso-Pentane	72.151	0.6374	0.368	1.808	1.8%	0.0203	0.0891
N-Pentane	72.151	0.5433	0.392	1.929	1.9%	0.0206	0.0900
N-Hexane	86.07	0.2249	0.194	0.952	1.0%	0.0102	0.0445
Cyclohexane	84.16	0.0342	0.029	0.142	0.1%	0.0015	0.0066
Heptanes	100.21	0.1201	0.120	0.592	0.6%	0.0063	0.0276
Methylcyclohexane	96.17	0.0266	0.026	0.126	0.1%	0.0013	0.0059
224-Trimethylpentane	114.22	0.0063	0.008	0.038	0.0%	0.0004	0.0018
Benzene	78.11	0.0035	0.003	0.013	0.0%	0.0001	0.0006
Toluene	92.14	0.0021	0.002	0.010	0.0%	0.0001	0.0004
Ethylbenzene	106.17	0.0003	0.000	0.002	0.0%	0.0000	0.0001
Xylenes	106.16	0.0005	0.001	0.003	0.0%	0.0000	0.0001
Hexanes +	92.12	0.2421	0.223	1.097	1.1%	0.0117	0.0512
C8 Heavies	96.09	0.0290	0.028	0.137	0.137%	0.0015	0.0064
		8.30	20.324	100.000	100%		
		100.0000	VOC 22.843		22.8%		

Notes:
Gas Analysis - Questar Applied Technology, 1/3/2013, ML Investments 1-10

EPN: ENG1
Caterpillar G398 TA HCR

Manufacturer's Rated Horsepower 610 hp
Fuel Input 0.007804 MMBtu/hp-hr
Operating Schedule: 8760 hours annually

Pollutant	Reference	Control Efficiency	FACTORS		EMISSIONS	
			grams/bhp-hr	lb/MMBtu	lbs/hr	TPY
NOx	Manuf. Engine Data	----	1.00		1.3436	5.8850
CO	Manuf. Engine Data	----	1.00		1.3436	5.8850
VOC_{total}	Manuf. Engine Data	0%	0.50		0.6718	2.9425
SO2	AP-42	----		0.0006	0.0028	0.0123
PM10	AP-42	----		0.0095	0.0452	0.1981
PM2.5	AP-42	----		0.0095	0.0452	0.1981
HCHO	AP-42	0%		0.0205	0.0976	0.4274
Benzene	AP-42	0%		0.0016	0.0075	0.0329
Toluene	AP-42	0%		0.0006	0.0027	0.0116
Ethylbenzene	AP-42	0%		0.00002	0.0001	0.0005
Xylene	AP-42	0%		0.00020	0.0009	0.0041

Example Calculations:
NOx: ((1.00 grams/bhp-hr)(610 bhp))(1/454) = 1.34 lbs/hr
NOx: (1.34 lbs/hr)(8760 hrs/yr)/2000 = 5.885 TPY

Calculation Notes:
Engine Data based on AP-42 Section 3.2, Manufacturer Engine Data Sheets, Engine Stack Test (TRC-4-08)

Speciation Table

Component	Mole Wt.	Mole%	lb/mol Mix	Wt%	Percentage	EMISSIONS	
						lbs/hr	TPY
Methane	16.043	84.6561	13.583	66.981	67.0%	VOC Speciation	
Nitrogen	28.013	0.4883	0.137	0.673	0.7%		
Carbon Dioxide	44.01	0.1433	0.063	0.310	0.3%		
Ethane	30.07	6.2131	1.868	9.192	9.2%		
Hydrogen Sulfide	34.08	0.0000	0.000	0.000	0.0%		
Propane	44.097	4.0209	1.773	8.724	8.7%	0.0586	0.2567
Iso-butane	58.124	0.9324	0.542	2.666	2.7%	0.0179	0.0785
N-Butane	58.124	1.5751	0.916	4.505	4.5%	0.0303	0.1325
Iso-Pentane	72.151	0.5374	0.388	1.908	1.9%	0.0128	0.0561
N-Pentane	72.151	0.5433	0.392	1.929	1.9%	0.0130	0.0568
N-Hexane	86.07	0.2249	0.194	0.952	1.0%	0.0064	0.0280
Cyclohexane	84.16	0.0342	0.029	0.142	0.1%	0.0010	0.0042
Heptanes	100.21	0.1201	0.120	0.592	0.6%	0.0040	0.0174
Methylcyclohexane	96.17	0.0266	0.026	0.126	0.1%	0.0008	0.0037
224-Trimethylpentane	114.22	0.0068	0.008	0.038	0.0%	0.0003	0.0011
Benzene	78.11	0.0035	0.003	0.013	0.0%	0.0001	0.0004
Toluene	92.14	0.0021	0.002	0.010	0.0%	0.0001	0.0003
Ethylbenzene	106.17	0.0003	0.000	0.002	0.0%	0.00001	0.0000
Xylenes	106.16	0.0005	0.001	0.003	0.0%	0.00002	0.0001
Hexanes +	92.12	0.2421	0.223	1.097	1.1%	0.0074	0.0323
C8 Heavies	96.09	0.0290	0.028	0.137	0.1%	0.0009	0.0040
		8.30	20.324	100.000	100%		
		100.0000	VOC 22.843				

Notes:
Gas Analysis - Questar Applied Technology, 1/3/2013, ML Investments 1-10

EPN: EN
Caterpillar G398 TA HCR

Manufacturer's Rated Horsepower	610	hp
Fuel Input	0.007804	MMBtu/hp-hr

Operating Schedule: 8760 hours annually

Pollutant	Reference	Control Efficiency	FACTORS		EMISSIONS	
			grams/bhp-hr	lb/MMBtu	lbs/hr	TPY
NOx	Manuf. Engine Data	—	1.00		1.3436	5.8850
CO	Manuf. Engine Data	—	1.00		1.3436	5.8850
VOC_{total}	Manuf. Engine Data	0%	0.50		0.6718	2.9425
SO2	AP-42	—		0.0006	0.0028	0.0123
PM10	AP-42	—		0.0095	0.0452	0.1981
PM2.5	AP-42	—		0.0095	0.0452	0.1981
HCHO	AP-42	0%		0.0205	0.0976	0.4274
Benzene	AP-42	0%		0.0016	0.0075	0.0329
Toluene	AP-42	0%		0.0006	0.0027	0.0116
Ethylbenzene	AP-42	0%		0.00002	0.0001	0.0005
Xylene	AP-42	0%		0.00020	0.0009	0.0041

Example Calculations:
NOx: ((1.00 grams/bhp-hr)(610 bhp))(1/454) = 1.34 lbs/hr
NOx: (1.34 lbs/hr)(8760 hrs/yr)/2000 = 5.885 TPY

Calculation Notes:
Engine Data based on AP-42 Section 3.2, Manufacturer Engine Data Sheets, Engine Stack Test (TRC-4-08)

Speciation Table

Component	Mole Wt	Mole%	lb/mol Mix	Wt%	Percentage	EMISSIONS	
						lbs/hr	TPY
Methane	16.043	84.8561	13.613	66.981	67.0%	VOC Speciation	
Nitrogen	28.013	0.4883	0.137	0.673	0.7%		
Carbon Dioxide	44.01	0.1433	0.063	0.310	0.3%		
Ethane	30.07	6.2131	1.868	9.192	9.2%		
Hydrogen Sulfide	34.08	0.0000	0.000	0.000	0.0%		
Propane	44.097	4.0209	1.773	8.724	8.7%	0.0586	0.2567
Iso-butane	58.124	0.9324	0.542	2.666	2.7%	0.0179	0.0785
N-Butane	58.124	1.5751	0.916	4.505	4.5%	0.0303	0.1325
Iso-Pentane	72.151	0.5374	0.388	1.908	1.9%	0.0128	0.0561
N-Pentane	72.151	0.5433	0.392	1.929	1.9%	0.0130	0.0568
N-Hexane	86.07	0.2249	0.194	0.952	1.0%	0.0064	0.0280
Cyclohexane	84.16	0.0342	0.029	0.142	0.1%	0.0010	0.0042
Heptanes	100.21	0.1201	0.120	0.592	0.6%	0.0040	0.0174
Methylcyclohexane	96.17	0.0266	0.026	0.126	0.1%	0.0008	0.0037
224-Trimethylpentane	114.22	0.0068	0.008	0.038	0.0%	0.0003	0.0011
Benzene	78.11	0.0035	0.003	0.013	0.0%	0.0001	0.0004
Toluene	92.14	0.0021	0.002	0.010	0.0%	0.0001	0.0003
Ethylbenzene	106.17	0.0003	0.000	0.002	0.0%	0.00001	0.0000
Xylenes	106.16	0.0005	0.001	0.003	0.0%	0.00002	0.0001
Hexanes +	92.12	0.2421	0.223	1.097	1.1%	0.0074	0.0323
C8 Heavies	96.09	0.0290	0.028	0.137	0.137%	0.0009	0.0040
		8.30	20.324	100.000	100%		
		100.0000	VOC 22.843				

Notes:
Gas Analysis - Questar Applied Technology, 1/3/2013, ML Investments 1-10

EPN:	ENG-HTR1

Name/Type	Engine Heater
Heater Rating (MMBtu/hr	0.2
Operating Hours	8760
Fuel Heat Value (Btu/SCF)	1230

Pollutant	Emission Factor (lb/MMCF)	Reference	lb/hr	tpy
VOC	5.5	AP-42	0.0009	0.0039
NOx	100	AP-42	0.0163	0.0712
CO	84	AP-42	0.0137	0.0598
PM_{10}	7.6	AP-42	0.0012	0.0054
$PM_{2.5}$	5.7	AP-42	0.0009	0.0041
SO_2	0.6	AP-42	0.0001	0.0004
HCHO	0.0075	AP-42	0.000001	0.000005
Benzene	0.0021	AP-42	0.000000	0.000001
Toluene	0.0034	AP-42	0.000001	0.000002

Calculation Notes:
Natural Gas Combustion Factor Data based on AP-42, Table 1.4-1 - 1.4.3.

EPN:	STBL-HTR1

Name/Type	Stabilizer Heater
Heater Rating (MMBtu/hr	1.2
Operating Hours	8760
Fuel Heat Value (Btu/SCF)	1230

Pollutant	Emission Factor (lb/MMCF)	Reference	lb/hr	tpy
VOC	5.5	AP-42	0.0054	0.0235
NOx	100	AP-42	0.0976	0.4273
CO	84	AP-42	0.0820	0.3589
PM_{10}	7.6	AP-42	0.0074	0.0325
$PM_{2.5}$	5.7	AP-42	0.0056	0.0244
SO_2	0.6	AP-42	0.0006	0.0026
HCHO	0.0075	AP-42	0.000007	0.000032
Benzene	0.0021	AP-42	0.000002	0.000009
Toluene	0.0034	AP-42	0.000003	0.000015

Calculation Notes:
Natural Gas Combustion Factor Data based on AP-42, Table 1.4-1 - 1.4.3.

EPN: RBLR-HTR1

Name/Type	Reboiler Heater
Heater Rating (MMBtu/hr	0.75
Operating Hours	8760
Fuel Heat Value (Btu/SCF)	1230

Pollutant	Emission Factor (lb/MMCF)	Reference	lb/hr	tpy
VOC	5.5	AP-42	0.0034	0.0147
NOx	100	AP-42	0.0610	0.2671
CO	84	AP-42	0.0512	0.2243
PM_{10}	7.6	AP-42	0.0046	0.0203
$PM_{2.5}$	5.7	AP-42	0.0035	0.0152
SO_2	0.6	AP-42	0.0004	0.0016
HCHO	0.0075	AP-42	0.000005	0.000020
Benzene	0.0021	AP-42	0.000001	0.000006
Toluene	0.0034	AP-42	0.000002	0.000009

Calculation Notes:
Natural Gas Combustion Factor Data based on AP-42, Table 1.4-1 - 1.4.3.

IDEQ FORMS AND TABLES

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline: 1-877-5PERMIT

General Information **Form GI**
Revision 7
6/29/12

Please see instructions on back page before filling out the form. All information is required. If information is missing, the application will not be processed.

Identification

1. Facility name: Alta Mesa Services, LP

2. Existing facility identification number: N/A

☒ **Check if new facility (not yet operating)**

3. Brief project description: Natural Gas and Hydrocarbon Treatment Facility

Facility Information

4. Primary facility permitting contact name: Kaitlyn Mathews
Contact type: Facility permitting contact
Telephone number: 281-943-1339
E-mail: kmathews@altamesa.net

5. Alternate facility permitting contact name: Bill Wolcott
Alternate contact type: Facility permitting contact
Telephone number: 409-331-9175
E-mail: bwolcott@wolcottenvironmental.com

6. Mailing address where permit will be sent (street/city/county/state/zip code): 15021 Katy Freeway, Suite 400, Houston, Harris County, Texas, 77094

7. Physical address of permitted facility (if different than mailing address) (street/city/county/state/zip code): Near 4303 Hwy. 30 S., New Plymouth, Payette County, Idaho 83661

8. Is the equipment portable? ☐ **Yes*** ☒ **No** ***If yes, complete and attach PERF; see instructions.**

9. NAICS codes: **Primary NAICS**: 211111 **Secondary NAICS**: 211112

10. Brief business description and principal product produced: Crude Petroleum and Natural Gas Production Extraction

11. Identify any adjacent or contiguous facility this company owns and/or operates: N/A

12. Specify type of application

☒ **Permit to construct (PTC); application fee of $1,000 required. See instructions.**

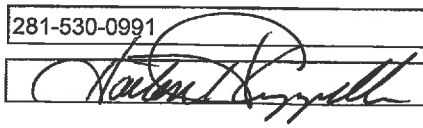
☐ **Tier I permit** ☐ **Tier II permit** ☐ **Tier II/Permit to construct**

For Tier I permitted facilities only: If you are applying for a PTC then you must also specify how the PTC will be incorporated into the Tier I permit.

☐ **Co-process Tier I modification and PTC** ☐ **Incorporate PTC at the time of Tier I renewal** ☐ **Administratively amend the Tier I permit to incorporate the PTC upon applicant's request (IDAPA 58.01.01.209.05.a, b, or c)**

Certification

In accordance with IDAPA 58.01.01.123 (Rules for the Control of Air Pollution in Idaho), I certify based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

13. Responsible official's name: Harlan Chappelle
Official's title: President
Official's address: 15021 Katy Freeway, Suite 400, Houston, Texas 77094
Telephone number: 281-530-0991
E-mail: hchappelle@altamesa.net
Official's signature: 
Date: November 23, 2013

☒ **14. Check here to indicate that you want to review the draft permit before final issuance.**

Instructions for Form GI

This form is used by DEQ to identify a company or facility, equipment locations, and personnel involved with the permit application. Additional information may be required.

Identification

1. Provide the facility name. If the facility is *doing business as* (dba) a facility different in name than the primary facility, provide the dba name.
2. If the facility is an existing permitted facility in Idaho, provide the facility identification number. If the facility is new and not yet operating, check the box.
3. Provide a brief project description as on Form CS, Cover Sheet. This is useful in case any pages of the application are separated.

Facility information

4. Provide name of the *primary* person who should be contacted regarding this permit. Provide telephone number and e-mail address for the primary person.
5. Provide name of an *alternate* person who should be contacted if the person listed in 4 is not available. Provide telephone number and e-mail address for the alternate person.
6. Provide the mailing address where DEQ should mail the permit.
7. Provide the physical address where the equipment is located (if different than 6).
8. Indicate if the permitted equipment is portable by checking the appropriate box. If the permitted equipment is portable, complete and attach the Portable Equipment Relocation Form (PERF) to this application. The PERF is available from DEQ's website at http://www.deq.idaho.gov/media/576773-ptc_relocation.pdf or http://www.deq.idaho.gov/media/576769-ptc_relocation.doc (for Word format).
9. Provide the North American Industry Classification System (NAICS) code for your facility. NAICS codes can be found at http://www.census.gov/epcd/naics02/naicod02.htm.
10. Describe the primary activity and principal product of your business as it relates to the NAICS code listed in 9.
11. Identify and describe any other sources or equipment owned and operated by the primary facility that are located on contiguous or adjacent properties and the role the source or equipment plays in supporting the primary facility.
12. Check the box describing the type of permit application.

    Important note: If application is for a permit to construct (PTC), include the application fee of $1,000 when submitting the application. Per IDAPA 58.01.01.226.02, DEQ cannot process the application without the fee, which must be submitted with the application.

    For existing Tier I facilities that are applying for a PTC, the applicant must specify how the PTC will be incorporated into the Tier I permit (IDAPA 58.01.01.209.05). If you have questions, call the Air Permit Hotline at 1-877-573-7648.

Certification

13. Provide the name, title, address, telephone number, and e-mail of the facility's responsible official. Responsible official is defined in IDAPA 58.01.01.006.99. The responsible official must sign and date the application before it is submitted to DEQ.
14. Check this box to indicate that you want to review a draft before the final permit is issued.

Department of Environmental Quality
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline - 1-877-5PERMIT

AQ-CH-P004

15- Day Pre-Permit Construction Approval Application Completeness Checklist

This checklist is designed to aid the applicant in submitting a complete pre-permit construction approval application. In addition to the items in this checklist, information requested by DEQ during review of the application should be provided in accordance with IDAPA 58.01.01.202.03, or the application may be denied.

I. Actions Needed Before Submitting Application

X Refer to the Rule. Read the Pre-Permit Construction requirements contained in IDAPA 58.01.01.213, Rules for the Control of Air Pollution in Idaho.

X Refer to DEQ's Pre-Permit Construction Approval Guidance Document. DEQ has developed a guidance document to aid applicants in submitting a complete pre-permit construction approval application. The guidance document is located on DEQ's website (go to http://www.deq.idaho.gov/air/permits_forms/permitting/ptc_prepermit_guidance.pdf

X Consult with DEQ Representatives. Schedule a pre-application meeting with DEQ to discuss application requirements before submitting the pre-permit construction approval application. Schedule the meeting by contacting the DEQ Air Permit Hotline at **877-5PERMIT**. The meeting can be in person or on the phone. Refer to IDAPA 58.01.01.213.01b.

X Schedule Informational Meeting. Schedule an informational meeting before submitting the pre-permit construction approval application for the purposes of satisfying IDAPA 58.01.01.213.02.a. The purpose for the informational meeting is to provide information about the proposed project to the general public. Refer to IDAPA 58.01.01.213.01.c.

X Submit Ambient Air Quality Modeling Protocol. It is required that an ambient air quality modeling protocol be submitted to DEQ at least two (2) weeks before the pre-permit construction approval application is submitted. Contact DEQ's Air Quality Hotline at **877-5PERMIT** for information about the protocol.

X Written DEQ Approved Protocol. Written DEQ approval of the modeling protocol must be received before the pre-permit construction approval application is submitted. Refer to IDAPA 58.01.01.213.01.c.

II. Application Content

Application content should be prepared using the checklist below. The checklist is based on the requirements contained in IDAPA 58.01.01.213 and DEQ's Pre-Permit Construction Approval Guidance Document.

X Pre-Permit Construction Eligibility and Proof of Eligibility. Pre-permit construction approval is not available for any new Prevention of Significant Deterioration (PSD) major source, any proposed PSD major modification, or any proposed major NSR project in a non-attainment area. Emissions netting and emissions offsets are not allowed to be used. A certified proof of pre-permit construction eligibility must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.

X Request to Construct Before Obtaining a Permit to Construct. A letter requesting the ability to construct before obtaining the required permit to construct must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.c.

X Apply for a Permit to Construct. Submit a Permit to Construct application using forms available on DEQ's website at http://www.deq.idaho.gov. Refer to IDAPA 58.01.01.213.01.a.

X Permit to Construct Application Fee. The permit to construct application fee of $1000 must be submitted at the time the original pre-permit construction approval application is submitted. Refer to IDAPA 58.01.01.224. If the pre-permit construction approval is denied and a new application is submitted, a new $1,000 application fee will be required to be submitted. The application fee is not transferable or refundable. The application fee can be paid by check, credit card or Electronic Funds Transfer (EFT). If you choose to pay by credit card or EFT, contact DEQ's Fiscal Office at (208) 373-0502 to complete the necessary paper work. If you choose to pay by check, enclose the check with your pre-permit construction approval application.

X Notice of Informational Meeting. Within 10 days after the submittal of the pre-permit construction approval application, an informational meeting must be held in at least one location in the region where the stationary source will be located. The information meeting must be made known by notice published at least 10 days before the informational meeting in a newspaper of general circulation in the county in which the stationary source will be located. A copy of this notice, as published, must be submitted with the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.02.a. Additional information regarding the informational meeting is included in DEQ's Pre-Permit Construction Approval Guidance Document. (go to http://www.deq.idaho.gov/air/permits_forms/permitting/ptc_prepermit_guidance.pdf)

X Process Description(s). The process or processes for which pre-permit construction approval is requested must be described in sufficient detail and clarity such that a member of the general public not familiar with air quality can clearly understand the proposed project. A process flow diagram is required for each process for which pre-permit construction approval is requested. Refer to IDAPA 58.01.01.213.01.c.

X Equipment List. All equipment that will be used for which pre-permit construction approval is requested must be described in detail. Such description includes, but is not limited to, manufacturer, model number or other descriptor, serial number, maximum process rate, proposed process rate, maximum heat input capacity, stack height, stack diameter, stack gas flowrate, stack gas temperature, etc. All equipment that will be used for which pre-permit construction approval is requested must be clearly labeled on the process flow diagram. Refer to IDAPA 58.01.01.213.01.c.

X Scaled Plot Plan. A scaled plot plan is required, with the location of each proposed process and the equipment that will be used in each process clearly labeled.

X Schedule for Construction. A schedule for construction is required, including proposed dates for commencement and for completion of the project. For phased projects, proposed dates are required for each phase of the project.

X Proposed Emissions Limits and Modeled Ambient Concentration for All Regulated Air Pollutants. All proposed emission limits and modeled ambient concentrations for all regulated air pollutants must demonstrate compliance with all applicable air quality rules and regulations. Regulated air pollutants include criteria air pollutants (PM_{10}, SO_x, NO_2, O_3, CO, lead), toxic air pollutants listed pursuant to IDAPA 58.01.01.585 and 586, and hazardous air pollutants listed pursuant to Section 112 of the 1990 Clean Air Act Amendments (go to http://www.epa.gov/ttn/atw/188polls.html). Describe in detail how the proposed emissions limits and modeled ambient concentrations demonstrate compliance with each applicable air quality rule and regulation. It is requested that emissions calculations, assumptions, and documentation be submitted with sufficient detail so DEQ can verify the validity of the emissions estimates. Refer to IDAPA 58.01.01.213.01.c.

X Restrictions on a Source's Potential to Emit. Any proposed restriction on a source's potential to emit such that permitted emissions will be either below major source levels or below a significant increase must be described in detail in the pre-permit construction approval application. Refer to IDAPA 58.01.01.213.01.d.

X List all Applicable Air Quality Rules and Regulations. All applicable rules and regulations must be cited by the rule or regulation section/subpart that applies for each emissions unit. Refer to IDAPA 58.01.01.213.01.c.

X Certification of Pre-Permit Construction Approval Application. The pre-permit construction approval application must be signed by the Responsible Official and must contain a certification signed by the

Responsible Official. The certification must state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Refer to IDAPA 58.01.01.213.01.d and IDAPA 58.01.01.123.

X Submit the Pre-Construction Approval Application. Submit the pre-permit construction approval application and application fee to the following address:

Department of Environmental Quality
Air Quality Division
Stationary Source Program
1410 North Hilton
Boise, ID 83706-1255

Department of Environmental Quality
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline - 1-877-5PERMIT

Department of Environmental Quality - Air Quality Division
Minor Source Permit to Construct Application Completeness Checklist

This checklist is designed to aid the applicant in submitting a complete permit to construct application. In addition to the items in this checklist, information requested by DEQ during review of the application should be provided in accordance with IDAPA 58.01.01.202.03, or the application may be denied.

I. Actions Recommended Before Submitting Application

X Refer to the Rule. Read the Permit to Construct requirements contained in IDAPA 58.01.01.200-228, Rules for the Control of Air Pollution in Idaho. The Rules are available on the Department of Administration's website (go to http://adminrules.idaho.gov/rules/current/58/0101.pdf).

X Refer to DEQ's Permit to Construct Guidance Document. DEQ has developed a guidance document to aid applicants in submitting a complete permit to construction application. The guidance document is located on DEQ's website (go to http://www.deq.idaho.gov/media/656219-applicant-deq-responsibilities.pdf).

X Consult with DEQ Representatives. It is recommended that the applicant schedule a pre-application meeting with DEQ to discuss application requirements before submitting the permit to construct application. The meeting can be in person or on the phone. Contact DEQ's Air Quality Hotline at **877-5PERMIT** to schedule the pre-application meeting.

X Submit Ambient Air Quality Modeling Protocol. It is strongly recommended that an ambient air quality modeling protocol be submitted to DEQ at least two (2) weeks before the permit to construct application is submitted. Contact DEQ's Air Quality Hotline at **877-5PERMIT** for information about the protocol.

II. Application Content

Application content should be prepared using the checklist below. The checklist is based on the requirements contained in IDAPA 58.01.01.202.

X Apply for a Permit to Construct. Submit a Permit to Construct application using forms available on DEQ's website at http://www.deq.idaho.gov/permitting/air-quality-permitting/forms-checklists.aspx.

X Permit to Construct Application Fee. The permit to construct application fee of $1000 must be submitted at the time the original permit to construct application is submitted. Refer to IDAPA 58.01.01.224. If the permit to construct application is withdrawn or denied and a new application is submitted, a new $1,000 application fee is required to be submitted. The application fee is not transferable or refundable. The application fee can be paid by check, credit card or Electronic Funds Transfer (EFT). If you choose to pay by credit card or EFT, contact DEQ's Fiscal Office at (208) 373-0502 to complete the necessary paper work. If you choose to pay by check, enclose the check with your permit to construct application.

X Process Description(s). The process or processes for which construction is requested must be described in sufficient detail and clarity such that a member of the general public not familiar with air quality can clearly understand the proposed project. A process flow diagram is required for each process.

X Equipment List. All equipment that will be used for which construction is requested must be described in detail. Such description includes, but is not limited to, manufacturer, model number or other descriptor, serial number, maximum process rate, proposed process rate, maximum heat input capacity, stack height, stack diameter, stack gas flowrate, stack gas temperature, etc. All equipment that will be used for which construction is requested must be clearly labeled on the process flow diagram.

X Potential to Emit. Submit the uncontrolled potential to emit (pre-control equipment emissions estimates) and the controlled potential to emit (post-control equipment emissions estimates) for all equipment for which construction is requested. Any limit on the equipment for which is construction is requested may become a

limit on that equipment in the permit to construct.

X Potential to Emit and Modeled Ambient Concentration for All Regulated Air Pollutants. All proposed emission limits and modeled ambient concentrations for all regulated air pollutants must demonstrate compliance with all applicable air quality rules and regulations. Regulated air pollutants include criteria air pollutants, toxic air pollutants listed pursuant to IDAPA 58.01.01.585 and 586, and hazardous air pollutants listed pursuant to Section 112 of the 1990 Clean Air Act Amendments (go to http://www.epa.gov/ttn/atw/188polls.html). Describe in detail how the proposed emissions limits and modeled ambient concentrations demonstrate compliance with each applicable air quality rule and regulation. It is requested that emissions calculations, assumptions, and documentation be submitted with sufficient detail so DEQ can verify the validity of the emissions estimates.

X Scaled Plot Plan. A scaled plot plan is required, with the location of each proposed process and the equipment that will be used in each process clearly labeled.

X Schedule for Construction. A schedule for construction is required, including proposed dates for commencement and for completion. For phased projects, proposed dates are required for each phase of the project.

X List all Applicable Requirements. All applicable requirements must be cited by the rule or regulation section/subpart that applies for each emissions unit.

X Certification of Permit to Construct Application. The permit to construct application must be signed by the Responsible Official and must contain a certification signed by the Responsible Official. The certification must state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Refer to IDAPA 58.01.01.123.

X Submit the Permit to Construct Application. Submit the permit to construct application and application fee to the following address:

Air Quality Program Office – Application Processing
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Version 1, August 2010

Facility Wide Hazardous Air Pollutant Potential to Emit
Application Template and Instructions

Provide the facility wide potential to emit for all Hazardous Air Pollutants (HAPs). **The potential to emit provided here must match the emissions rates which are requested to be permitted.**

HAPs are pollutants that are required to be regulated under the Clean Air Act. A list of the HAPs may be found by following this link: HAP list; review the list carefully to be sure you have included all listed HAPs.

All emissions inventories must be submitted with thorough documentation. The emission inventories will be subjected to technical review; prepare your application with sufficient documentation so that either the public or DEQ can verify the validity of the emission estimates. **Applications submitted without sufficient documentation are incomplete. Follow the instructions provided on the following page; do not proceed until you have read the instructions.**

Applicants must use the Potential to Emit Summary table provided below. Identify the individual HAP with the highest emissions and total HAP emissions. The potential to emit provided here must match the emissions rates which are requested to be permitted. **All fugitive emissions of HAPs must be included.**

Table X HAP POTENTIAL TO EMIT EMISSIONS SUMMARY

HAP Pollutants	PTE (T/yr)
Formaldehyde	0.8549
Benzene	0.0665
Toluene	0.0237
Ethylbenzene	0.0011
Xylene	0.0083
n-Hexane	0.1005
2,2,4-Trimethylpentane	0.0040
Total	1.0590

* Maximum Individual HAP

Applicants are encouraged to call DEQ's Air Quality Permit Hotline (1-877-573-7648) to ask questions as they prepare the application.

Emission Inventory Instructions:

1. Use the same emission unit name throughout the application (i.e. in air pollution control equipment forms and for modeling purposes).

2. The application must **show in detail all calculations** used to develop the PTE summary and include:

   - Electronic copies of any spreadsheets used to estimate emissions. If a spreadsheet is used submit an electronic copy of the spread sheet (i.e. Excel File).
   - Documentation of all calculations conducted by hand (i.e. show all calculations).
   - Clear statements on all assumptions relied upon in estimating emissions.
   - Documentation of the emissions factors used to estimate emissions. If the emissions factor documentation is readily available to DEQ, such as an EPA AP-42 emissions factor, a simple reference to the emissions factor suffices. If the emissions factor documentation is not readily available to DEQ the applicant must submit the documentation with the application; ask DEQ if you are uncertain. **Applications without sufficient documentation are incomplete.** Documentation may consist of manufacturer guarantees, research conducted by trade organizations, published emission factors, and source test results. **If there are multiple factors for a given operation, note why the factor used is the most representative.**
   - Copies of manufacturer guarantees upon which emission inventories are based.
   - The best available emission information (see DEQ's Guidance on Emissions Data Hierarchy).
   - If source tests are used as the basis for emissions estimates the source test report must be submitted. If the source test report is on file with DEQ provide the date of the source test was submitted along with the name of the facility and the emission unit that was tested. Source data from similar emissions units may be considered reliable provided it is clearly described why the sources are similar. Similar sources are those that the applicant has shown serve a similar function, use similar raw materials, and have similar processing rates.

2. **All fugitive emissions of HAPs must be included[1].**

[1] November 27, 2001 (66 FR 59161), EPA published a rule, "Change to Definition of Major Source," that requires the fugitive emissions of all hazardous air pollutants ("HAPs") listed under section 112(b) of the Act in determining whether the source is a major source.

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Version 1, August 2010

Toxic Air Pollutant Emissions Inventory

Application Template and Instructions

Applicants must demonstrate preconstruction compliance with toxic air pollutant (TAP) standards contained in IDAPA 58.01.01.210 (*Rules for the Control of Air Pollution in Idaho*). DEQ has developed a TAP completeness checklist in order to assist applicants. DEQ strongly recommends that applicants complete and submit this checklist as part of the application. **Applications which do not follow one of the available methods for demonstrating compliance described in the checklist will be determined incomplete or denied.** Follow this link to the checklist: Toxic Air Pollutant Application Completeness Checklist. Be sure to calculate emissions correctly for the averaging periods as described in the checklist and in the instructions on page 3.

The type of TAP emissions inventory required depends upon which method is used to demonstrate compliance (see the Toxic Air Pollutant Application Completeness Checklist). **All TAP emissions inventories must be summarized using the emissions inventory summary tables provided below** (Table 1 and Table 2).

The applicant must **document all emission calculations as described in the instructions provided on the following page. Applications without sufficient documentation are incomplete; do not proceed until you have read the instructions.**

Applicants are encouraged to call DEQ's Air Quality Permit Hotline (1-877-573-7648) to ask questions as they prepare the application.

Table 1. PRE- AND POST PROJECT NON-CARCINOGENIC TAP EMISSIONS SUMMARY
POTENTIAL TO EMIT

Non-Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Cyclohexane	0	3.41E-03	3.41E-03	70	No
Ethylbenzene	0	2.53E-04	2.53E-04	29	No
Heptane	0	1.43E-02	1.43E-02	109	No
n-Hexane	0	2.29E-02	2.29E-02	12	No
Methylcyclohexane	0	3.03E-03	3.03E-03	107	No
Pentanes	0	9.24E-02	9.24E-02	118	No
Toluene	0	5.42E-03	5.42E-03	25	No
2,2,4-Trimethylpentane	0	9.21E-04	9.21E-04	23.3	No
Xylene	0	1.88E-03	1.88E-03	29	No

Table 2. PRE- AND POST PROJECT CARCINOGENIC TAP EMISSIONS SUMMARY POTENTIAL TO EMIT

Carcinogenic Toxic Air Pollutants (sum of all emissions)	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Benzene[a]	**0**	**1.47E-04**	**1.47E-04**	**8.00E-04**	**No**
Formaldehyde	**0**	**1.31E-05**	**1.31E-05**	**5.10E-04**	**No**

a) *{If you have POM include the following footnote.}* Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.

Pre-project average emissions are the existing allowable emission rates.

Post-project average emissions are the new proposed emission rates.

Emission Inventory Instructions:

1. The averaging period for the emission rate depends upon whether the TAP is non-carcinogenic or carcinogenic. Non-carcinogenic TAP emissions are averaged over 24 hours, carcinogenic TAP emissions are averaged over 8760 hours.

   For more explanation on averaging periods, see the Toxic Air Pollutant Application Completeness Checklist.

2. **Pre**-project average emissions are the existing allowable emission rates.

   Post-project average emissions are the new proposed emission rates.

3. Use the same emission unit name/designation throughout the application (i.e. air pollution control equipment forms and modeling forms).

4. The emission inventories will be subjected to technical review; prepare your application with sufficient documentation so that the public and DEQ can verify the validity of the emission estimates. The application must **show in detail all emission calculations** used to develop the emission inventory summary and must include the following:

   - **Clear documentation of any emissions averaging that was used.** For instance if a source only operates 8 hours during any day and the emissions during that 8 hour period are averaged over 24 hours then this must be clearly described in the application. The emissions averaging calculations must also be shown.
   - Electronic copies of any spreadsheets used to estimate emissions. If a spreadsheet is used submit an electronic copy of the spread sheet (i.e. Excel File).
   - Documentation of all calculations conducted by hand (i.e. show all calculations).
   - Clear statements on all assumptions relied upon in estimating emissions.
   - Documentation of the emissions factors used to estimate emissions. If the emissions factor documentation is readily available to DEQ, such as an EPA AP-42 emissions factor, a simple reference to the emissions factor suffices. If the emissions factor documentation is not readily available to DEQ the applicant must submit the documentation with the application; ask DEQ if you are uncertain. **Applications without sufficient documentation are incomplete.** Documentation may consist of manufacturer guarantees, research conducted by trade organizations, published emission factors, and source test results. **If there are multiple factors for a given operation, note why the factor used is the most representative.**
   - Copies of manufacturer guarantees upon which emission inventories are based.
   - The best available emission information (see DEQ's Guidance on Emissions Data Hierarchy).
   - If source tests are used as the basis for emissions estimates the source test report must be submitted. If the source test report is on file with DEQ provide the date of the source test was submitted along with the name of the facility and the emission unit that was tested. Source test data from similar emissions units may be considered reliable provided it is clearly described why the sources are similar. Similar sources are those that the applicant has shown serve a similar function, use similar raw materials, and have similar processing rates.

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Version 1, August 2010

Facility Wide Potential to Emit Emission Inventory

Application Template and Instructions

For new stationary sources provide the facility's potential to emit for all NSR Regulated Air Pollutants. The potential to emit provided here must match the emissions rates which are requested to be permitted.

For modifications to existing facilities (including the addition of new emissions units), if the existing facility classification is in question an existing facility wide potential to emit emission inventory will be required to be submitted[1]. Contact DEQ to determine if a facility wide emission inventory for the existing facility is required.

All emissions inventories must be submitted with thorough documentation. The emission inventories will be subjected to technical review. Therefore, prepare your application with sufficient documentation so that the public and DEQ can verify the validity of the emission estimates. **Applications submitted without sufficient documentation are incomplete. Follow the instructions provided on page 2; do not proceed until you have read the instructions.**

Applicants must use the Potential to Emit Summary table provided below.

Table 1. POTENTIAL TO EMIT FOR NSR REGULATED POLLUTANTS

Emissions Unit	VOC	NO_X[a]	CO[a]	PM_{10}[a]	$PM_{2.5}$[a]	SO_2[a]
	T/yr	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources						
G398-A	2.9425	5.8850	5.8850	0.1981	0.1981	0.0123
G398-B	2.9425	5.8850	5.8850	0.1981	0.1981	0.0123
RBLR-HTR1	0.0147	0.2671	0.2243	0.0203	0.0152	0.0016
STBL-HTR1	0.0235	0.4273	0.3589	0.0325	0.0244	0.0026
ENG-HTR1	0.0039	0.0712	0.0598	0.0054	0.0041	0.0004
Fugitive Sources *{For listed source categories only, see item 3 below in the instructions}*						
FUG1	4.6687	0.00	0.00	0.00	0.00	0.00
Totals	**10.5958**	**12.5357**	**12.4132**	**0.4544**	**0.4398**	**0.0291**

a) NSR Regulated air Pollutants are defined[2] as: Particulate Matter (PM, PM-10, PM-2.5), Carbon Monoxide, Lead, Nitrogen Dioxide, Ozone (VOC), Sulfur Dioxide, CO_2e[3], Green House Gases (GHG) mass, all pollutants regulated by NSPS (40 CFR 60)(i.e. TRS, fluoride, sulfuric acid mist) & Class I & Class II Ozone Depleting Substances (40 CFR 82)(i.e. CFC, HCFC, Halon, etc.)

Applicants are encouraged to call DEQ's Air Quality Permit Hotline (1-877-573-7648) to ask questions as they prepare the application.**Emission Inventory Instructions:**

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[1] The applicant must determine if the existing facility is a major facility. If the facility is an existing PSD major facility and changes are being made to the facility the major modification test must be conducted.

[2] 40 CFR 52.21(b)(50), as incorporated by reference at IDAPA 58.01.01.107.03.d

[3] Multiply each green house gas (GHG) by the global warming potential (GWP) listed at 40 CFR 98, Table A- 1 of Subpart A then sum all values to determine CO_2e (GHGs are carbon dioxide, nitrous oxide, methane, hydrofluorcarbons, perfluorcarbons, sulfur hexafluoride). Be sure to show all calculations as described in the instructions.

1. Use the same emission unit name throughout the application (i.e. in air pollution control equipment forms and for modeling purposes).

2. The application must **show in detail all calculations** used to develop the PTE summary and include:

- Electronic copies of any spreadsheets used to estimate emissions. If a spreadsheet is used submit an electronic copy of the spread sheet (i.e. Excel File).
- Documentation of all calculations conducted by hand (i.e. show all calculations).
- Clear statements on all assumptions relied upon in estimating emissions.
- Documentation of the emissions factors used to estimate emissions. If the emissions factor documentation is readily available to DEQ, such as an EPA AP-42 emissions factor, a simple reference to the emissions factor suffices. If the emissions factor documentation is not readily available to DEQ the applicant must submit the documentation with the application; ask DEQ if you are uncertain. **Applications without sufficient documentation are incomplete.** Documentation may consist of manufacturer guarantees, research conducted by trade organizations, published emission factors, and source test results. **If there are multiple factors for a given operation, note why the factor used is the most representative.**
- Copies of manufacturer guarantees upon which emission inventories are based.
- The best available emission information (see DEQ's Guidance on Emission Data Hierarchy).
- If source tests are used as the basis for emissions estimates the source test report must be submitted. If the source test report is on file with DEQ provide the date of the source test was submitted along with the name of the facility and the emission unit that was tested. Source data from similar emissions units may be considered reliable provided it is clearly described why the sources are similar. Similar sources are those that the applicant has shown serve a similar function, use similar raw materials, and have similar processing rates.

3. Fugitive emissions of NSR regulated air pollutants from the source categories listed below must be included in the emission inventory.

Listed Source Categories for Inclusion of Fugitive Emissions

- Coal cleaning plants (with thermal dryers)
- Kraft pulp mills
- Portland cement plants
- Primary zinc smelters
- Iron and steel mills
- Primary aluminum ore reduction plants
- Primary copper smelters
- Municipal incinerators -250 T/day of refuse
- Hydrofluoric, sulfuric, or nitric acid plants
- Petroleum refineries
- Lime plants
- Phosphate rock processing plants
- Coke oven batteries
- Sulfur recovery plants
- Carbon black plants (furnace process)
- Primary lead smelters
- Fuel conversion plants
- Sintering plants
- Secondary metal production plants
- Chemical process plants (excluding ethanol plants by natural fermentation).
- Fossil-fuel fired boilers totaling more than 250 MMBtu/hr
- Petroleum storage and transfer units with total capacity of 300,000 barrels
- Taconite ore processing plants
- Glass fiber processing plants
- Charcoal production plants
- Fossil fuel-fired steam electric plants greater than 250 MMBtu/hr)
- Categories regulated by NSPS or NESHAP prior to 8/7/80

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Version 2, January 2011

Ambient Impact Assessment Emission Inventory for New Minor Facilities and Minor Modifications

Application Template and Instructions

New Minor Facilities or Minor Modifications to Existing Facilities

Applicants must demonstrate that the source will not cause or significantly contribute to a violation of an ambient air quality standard for criteria pollutants[1]. As described in the State of Idaho Air Quality Modeling Guideline, there are three methods that an applicant can use to demonstrate compliance:

Method 1. Demonstrate that emissions from the new and/or modified existing facility are below air quality modeling thresholds that are listed in the State of Idaho Air Quality Modeling Guideline.

Method 2. Demonstrate that emissions from the new and/or modified source will not cause ambient impacts at or above significant ambient impact levels (Significant Impact Analysis or Preliminary Analysis).

Method 3. Demonstrate that facility wide emissions, when combined with co-contributing sources and background levels, do not cause an exceedance of ambient standards (Cumulative Analysis).

The type of emission inventory required depends upon which method is used to demonstrate compliance. In the following pages the type of emission inventory that is required to be submitted is discussed for each method. DEQ strongly recommends that the applicant develop and submit for DEQ approval a written modeling protocol prior to submitting the application (refer to the State of Idaho Air Quality Modeling Guideline). The modeling protocol must address what types of emission inventories are required for modeling, and address which fugitive emissions must be included.

All modeling emission inventories must be summarized using the emission inventory summary table provided below (Table 1).

The applicant must document all emission calculations and follow the emission inventory instructions provided. **Applications without sufficient documentation are incomplete; do not proceed until you have read the instructions on page 6.**

[1] Rules for the Control of Air Pollution in Idaho (IDAPA 58.01.01.203 & 403)

Table 1 Emission Increase/Actual Emissions/Proposed Emissions/Existing Allowable Emissions (pick the appropriate header for the specific purpose after reading the instructions)

Emissions Unit	Stack or Emissions Point ID[a]	PM_{10}	$PM_{2.5}$		SO_2		NO_x		CO		Lead	
		lb/hr 24-hr Avg.	lb/hr 24-hr Avg.	lb/hr Annual Avg.	lb/hr Max.	lb/hr 3-hr Avg.	lb/hr Max.	lb/hr Annual Avg.	lb/hr Max.	lb/hr 8-hr Avg.	lb/hr monthly Avg.	lb/hr 1/4ly Avg.
Point Sources												
Caterpillar G398 TA	G398-A	0.0452	0.0452	0.0452	0.0028	0.0028	1.3436	1.3436	1.3436	1.3436	0.0	0.0
Caterpillar G398 TA	G398-B	0.0452	0.0452	0.0452	0.0028	0.0028	1.3436	1.3436	1.3436	1.3436	0.0	0.0
Reboiler	RBLR-HTR1	0.0046	0.0035	0.0035	0.0004	0.0004	0.0610	0.0610	0.0512	0.0512	0.0	0.0
Stabilizer Heater	STBL-HTR1	0.0074	0.0056	0.0056	0.0006	0.0006	0.0976	0.0976	0.0820	0.0820	0.0	0.0
Engine Heater	ENG-HTR1	0.0012	0.0009	0.0009	0.0001	0.0001	0.0163	0.0163	0.0137	0.0137	0.0	0.0
Fugitive Sources												
XXX	F01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
XXX	F02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
XXX	F03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a) Stack or Emissions Point ID must match the ID used in the air dispersion model.

Applicants are encouraged to call DEQ's Air Quality Permit Hotline (1-877-573-7648) to ask questions as they prepare the application.

Following are descriptions of the types of emission inventories that are required for each of the three methods that can be used to demonstrate that the source will not cause or significantly contribute to a violation of ambient air quality standards for criteria pollutants. These descriptions are also covered in the State of Idaho Air Quality Modeling Guideline. The following descriptions are intended to be general guidelines that apply to the vast majority of situations. Even though they cover the vast majority of situations they are not intended to act in place of a DEQ approved modeling protocol that is developed based on consideration of site specific emissions units and air pollution dispersion characteristics.

Method 1

Demonstrate that emissions from the new and/or modified existing facility are below air quality modeling thresholds that are listed in the State of Idaho Air Quality Modeling Guideline.

New facilities

Calculate proposed allowable, or potential to emit, of all new emissions units. "All" emissions units includes those units that would have otherwise qualified for an exemption (do not omit any sources).

Provide an emission inventory summary table for proposed allowable emissions using the template provided above.

Modified Facilities

New Emission Units (including Replacement units) – This includes new units that are replacing existing emission units.

Calculate the proposed allowable emissions, or potential to emit, of all new emissions units. "All" emissions units includes those units that would have otherwise qualified for an exemption (do not omit any sources).

The emission reduction associated with removal of an existing emission unit will not typically be considered in the evaluation of whether emissions exceed modeling thresholds. Prior written DEQ approval is necessary for any emission reduction to be credited in evaluation of whether emissions exceed modeling thresholds.

Provide an emission inventory summary table for proposed allowable emissions using the template provided.

Modified Existing Non-permitted Emission Units – Non-permitted means those emission units not included in a PTC or Tier II operating permit. The emissions units that must be included are all of the emissions units that are part of the project. ***Project*** means a physical change in, or change in the method of operation of, an existing stationary source. **Sources not being physically modified but which could experience emissions increases that result from the change[2, 3] are required to be included in the project.**

For emission units that air pollution dispersion characteristics do not change (i.e. stack height, diameter, flow rate, temperature), calculate the emission increase as the difference of proposed allowable emissions and actual emissions. Actual emissions shall be calculated using the units actual operating hours, production rates, types of materials processed, stored, or combusted during the two during a two year period prior to submitting the application. Actual emissions should represent normal source operations, DEQ may grant written approval of a different time period provided it is demonstrated that it is more representative of normal source operation.

For emission units that air pollution dispersion characteristics do change, comparison to the modeling threshold should be based on the total allowable emissions rate of the modified source.

Provide an emission inventory summary table for proposed allowable emissions using the template provided. For emission units that air pollution dispersion characteristics do not change also provide an emission inventory summary table for actual emissions and emission increase.

Modified Existing Permitted Emission Units – Permitted means those units included in a PTC or Tier II operating permit.

For emission units that air pollution dispersion characteristics do not change (i.e. stack height, diameter, flow rate, temperature), calculate the emission increase as the difference of proposed allowable emissions and the previous allowable emissions.

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[2] David Neleigh, Chief, Air Permits Section EPA Region 6. Letter to Dawson Lasseter, Air Quality Division, Oklahoma DEQ, January 27, 2005.

[3] R. Douglas Neeley, Chief, Air & Radiation Technology Section, Letter to Rs. Rhonda Banks Thompson, South Carolina Department of Health and Environmental Control, March 14, 1997 ("… when a particular physical change or change in the method of operation would cause an increase in emissions from other emissions units, then those "other" emissions must be included in determining PSD applicability for the particular change.")

For emission units that air pollution dispersion characteristics do change, comparison to the modeling threshold should be based on the total allowable emissions rate of the modified source.

Provide an emission inventory summary table for proposed allowable emissions and the emissions increase using the template provided. For emission units that air pollution dispersion characteristics do not change also provide an emission inventory summary table for existing allowable emissions.

Method 2

Demonstrate that emissions from the new and/or modified source will not cause ambient impacts at or above significant ambient impact levels (Significant Impact Analysis or Preliminary Analysis).

New Facilities

Calculate proposed allowable emissions, or potential to emit, of all new emissions units. "All" emissions units includes those units that would have otherwise qualified for an exemption (do not omit any sources). Model the emission rate(s) following a DEQ approved Modeling Protocol and determine if a significant impact occurs.

Modified Facilities

New Emission Units (including Replacement units) – This includes new units that are replacing existing emission units.

Calculate proposed allowable emissions, or potential to emit, of all new emissions units. "All" emissions units includes those units that would have otherwise qualified for an exemption (do not omit any sources).

Calculate the emission reduction associated with removal of an existing emission unit.

- For existing permitted emission units the reduction is equal to the permitted emission rate or the potential to emit. Permitted means those units included in a PTC or Tier II operating permit.
- For existing non-permitted emission units the reduction is based on actual emission of the unit. Actual emissions shall be calculated using the units actual operating hours, production rates, types of materials processed, stored, or combusted during a two during a two year period prior to submitting the application. Actual emissions should represent normal source operations, DEQ may grant written approval of a different time period provided it is demonstrated that it is more representative of normal source operation.

Model the emission rate(s) following a DEQ approved Modeling Protocol and determine if a significant impact occurs. Shutdown emission units are typically modeled as negative emission rates.

Modified Existing Non-permitted Emission Units – Non-permitted means those units not included in a PTC or Tier II operating permit. The emissions units that must be included are all of the emissions units that are part of the project. ***Project*** means a physical change in, or change in the method of operation of, an existing stationary source. **Sources not being physically modified but which could experience emissions increases that result from the change[4, 5] are required to be included in the project.**

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[4] David Neleigh, Chief, Air Permits Section EPA Region 6. Letter to Dawson Lasseter, Air Quality Division, Oklahoma DEQ, January 27, 2005.

For emission units that air pollution dispersion characteristics do not change (i.e. stack height, diameter, flow rate, temperature), calculate the emission increase as the difference of proposed allowable emissions and actual emissions. Actual emissions shall be calculated using the units actual operating hours, production rates, types of materials processed, stored, or combusted during a two during a two year period prior to the modification. Actual emissions should represent normal source operations, DEQ may grant written approval of a different time period provided it is demonstrated that it is more representative of normal source operation. Provide the proposed allowable, actual emissions and emission increase using the template provided.

For emission units that air pollution dispersion characteristics do change, modeling is based on the total allowable emissions rate of the modified source. Provide the proposed allowable emissions rates using the template provided. Model the emission rate(s) following a DEQ approved Modeling Protocol and determine if a significant impact occurs.

Modified Existing Permitted Emission Units – Permitted means those units included in a PTC or Tier II operating permit.

For emission units that air pollution dispersion characteristics do not change (i.e. stack height, diameter, flow rate, temperature), calculate the emission increase as the difference of proposed allowable emissions and the previous allowable emissions. Provide the proposed allowable emissions rates, previous allowable emission rates, and emission increase using the template provided.

For emission units that air pollution dispersion characteristics do change, modeling should be based on the total allowable emissions rate of the modified source. Provide the proposed allowable emissions rates using the template provided.

Model the emission rate(s) following a DEQ approved Modeling Protocol and determine if a significant impact occurs.

Method 3

Demonstrate that facility wide emissions, when combined with co-contributing sources and background levels, do not cause an exceedance of ambient standards (Cumulative Analysis).

Calculate proposed allowable emissions of all emissions units. All emissions units includes those units that would have otherwise qualified for an exemption if they were the only unit being constructed (do not omit any sources). Provide the proposed allowable emissions rates using the template provided. Model the emission rate(s) following a DEQ approved Modeling Protocol, add the appropriate background concentration value, and determine if violation of a standard occurs.

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[5] R. Douglas Neeley, Chief, Air & Radiation Technology Section, Letter to Rs. Rhonda Banks Thompson, South Carolina Department of Health and Environmental Control, March 14, 1997 ("… when a particular physical change or change in the method of operation would cause an increase in emissions from other emissions units, then those "other" emissions must be included in determining PSD applicability for the particular change.")

Modeling Emission Inventory Instructions:

1. Use the same emission unit name throughout the application (i.e. in air pollution control equipment forms and for modeling purposes).

2. The application must **show in detail all calculations** used to develop the PTE summary and include:
   - Electronic copies of any spreadsheets used to estimate emissions. If a spreadsheet is used submit an electronic copy of the spread sheet (i.e. Excel File).
   - Documentation of all calculations conducted by hand (i.e. show all calculations).
   - Clear statements on all assumptions relied upon in estimating emissions.
   - Documentation of the emissions factors used to estimate emissions. If the emissions factor documentation is readily available to DEQ, such as an EPA AP-42 emissions factor, a simple reference to the emissions factor suffices. If the emissions factor documentation is not readily available to DEQ the applicant must submit the documentation with the application; ask DEQ if you are uncertain. **Applications without sufficient documentation are incomplete.** Documentation may consist of manufacturer guarantees, research conducted by trade organizations, published emission factors, and source test results. **If there are multiple factors for a given operation, note why the factor used is the most representative.**
   - Copies of manufacturer guarantees upon which emission inventories are based.
   - The best available emission information (see DEQ's Guidance on Emissions Data Hierarchy).
   - If source tests are used as the basis for emissions estimates the source test report must be submitted. If the source test report is on file with DEQ provide the date of the source test was submitted along with the name of the facility and the emission unit that was tested. Source data from similar emissions units may be considered reliable provided it is clearly described why the sources are similar. Similar sources are those that the applicant has shown serve a similar function, use similar raw materials, and have similar processing rates.

3. **Input to the computer model must match the emission inventory in the summary table(s).** Additionally, the emissions inventory calculations that are submitted must also match the summary table. It would seem that this could go without saying, **but there are a surprising number of applications received where emission calculations do not match the input to the computer model.** DEQ recommends that the applicant print the emission inventory input file in the model and compare it to this summary table (this is one of the first things that DEQ will check during the completeness review). If the inventories do not match the application is incomplete.

4. DEQ highly recommends that a written modeling protocol be submitted for approval prior to conducting modeling. The modeling protocol should address which fugitive emissions must be included. Idaho's Air Quality Modeling Guideline states the following types of fugitive emissions sources should be included:

   > **"Process fugitive emissions from material handling, processing, etc.**
   >
   > Fugitive emissions from vehicle traffic on facility roadways and wind erosion emissions from storage piles will not typically be considered for minor source permitting unless DEQ determines such sources may have a substantial contribution."

5. The applicant must complete the Modeling Information Workbook (Form MI) to provide other modeling input parameters.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Emissions Units Industrial IC Engine Information - **Form EU1**
Revision 9
10/23/13

Please see instructions on page 2 before filling out the form.

IDENTIFICATION

1. Company Name	2. Facility Name
Alta Mesa Services, LP	Idaho Refrigeration Plant

3. Brief Project Description: The proposed facility will allow for natural gas and natural gas condensate production. Specifically, natural gas will be routed to a refrigeration plant where NGL(s) & LPG(s) will be recovered and sold. Natural gas remaining in the facility will be routed to the nearby Williams Northwest Transmission pipeline for transport.

IC ENGINE DESCRIPTION AND SPECIFICATIONS

4. Type of unit:
- ☐ New unit ☒ Unpermitted existing unit ☐ Modification to an existing permitted unit? Permit number: _____
- ☒ Full-time operation (non-emergency standby use)?
- ☐ Emergency standby use only (operation limited to 100 hrs/yr for maintenance and testing and emergency use only)?
- ☐ Emergency fire pump use only?
- ☐ Stationary test cell/stand operation only (as defined in NSPS Subpart ZZZZ)?
- ☐ National security operation only (as defined in NSPS Subpart ZZZZ)?
- ☐ Institutional emergency standby IC engine (as defined in NSPS Subpart ZZZZ)?

IC ENGINE SPECIFICATIONS

Questions 5 through 15 apply to **all IC engines**.

5. IC Engine Manufacturer: Caterpillar 6. Model: G398 TA HCR 7. Date manufactured: 4/5/90 8. Model year: 1990

9. Date of installation (if an existing IC engine): NA 10. IC Engine cylinder displacement: _____ liters per cylinder

11. Maximum rated horsepower (per the data plate/manufacturer specifications): 610 bhp

12. EPA Certification: Tier certification number _____ or ☒ None/not tier certified

13. Ignition type: ☒ Spark ☐ Compression

14. Fuel combusted in the IC engine? ☐ Distillate fuel oil ☒ Natural gas/LNG ☐ LPG/propane
If distillate fuel oil (#1, #2, or a mixture) is used, what is the maximum sulfur content? ☐ 15 ppm (0.0015% by weight) ☐ 500 ppm (0.05% by weight)

15. IC engine exhaust stack parameters: Diameter 8 inches Height 22 feet Temperature 1075 °F Flow rate 3032 acfm

IC ENGINE EMISSIONS PARAMETERS

Questions 16 through 27 apply to **full-time** non-Tier certified IC engines or Tier certified IC engines manufactured prior to July 11, 2005. If you are proposing a Tier certified IC engine manufactured on and after July 11, 2005 or an emergency standby IC engine do not answer questions 17 through 27.

16. Testing schedule (for emergency standby IC engines only): _____ hrs/day _____ hrs/mon _____ hrs/qtr _____ hrs/yr

17. Maximum daily operation: 24 hrs/day 18. Maximum annual operation: 8760 hrs/yr **Note:** These operational limits will be placed in the permit.

19. Will CO emissions be limited to a specific ppmvd (i.e. 49 or 23 ppmvd)? ☐ Yes ☒ No 20. What will the CO emissions limit be? NA ppmvd

21. Will CO emissions be reduced by 70% or more? ☒ Yes ☐ No

22. Will a CEMS (Continuous Emissions Monitoring System) be used to measure pollutants in the IC engine exhaust stream? ☐ Yes ☒ No

23. Will a CPMS (Continuous Parameters Monitoring System) be used to measure parameters of the IC engine exhaust stream? ☐ Yes ☒ No

24. Will the IC engine be equipped with an oxidation catalyst? ☐ Yes ☒ No

25. If applicable, will the oxidation catalyst be equipped with a temperature measurement system to ensure it is operating properly? ☐ Yes ☒ No

26. Will the IC engine be equipped with a diesel particulate filter? ☐ Yes ☒ No

27. If applicable, will the diesel particulate filter be equipped with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached? ☐ Yes ☒ No

Instructions for Form EU1

Please refer to IDAPA 58.01.01.220 for a list of the general exemption criteria for Permit to Construct exemptions.

1 – 3. Provide the same company name, facility name (if different), and brief project description as on Form GI. This is useful if the application pages are separated.

USE ATTACHMENT IF ADDITIONAL SPACE IS REQUIRED.

General Information:

4. Indicate whether the IC engine is a new unit, unpermitted existing unit, being modified, and whether it will be permitted to operate full-time or for emergency use only.

IC Engine Specifications:

5-8. Provide the IC engine manufacturer, model, date the IC engine was manufactured, and the model year (used for EPA certification purposes) of the IC engine.

9. Provide the date of installation of the IC engine.

10. Provide the IC engine cylinder displacement (i.e. 12 liter engine with 8 cylinders = 1.5 liters per cylinder).

11. Provide the maximum horsepower of the IC engine (per the data plate) in bhp.

12. Provide the EPA Tier certification number of the IC engine (i.e. 1, 2, 3, or 4).

13. Provide the IC engine ignition type.

14. Check which fuel is combusted in the IC engine. If distillate fuel oil is combusted, check the maximum proposed sulfur content of the fuel.

15. Provide the IC engine exhaust stack parameters. The temperature and flow rate should be per the IC engine manufacturer. If the stack height is very tall, provide a justification for the exhaust gas temperature.

IC Engine Emissions Parameters:

Questions 16 through 27 apply to **full-time** non-Tier certified IC engines or Tier certified IC engines manufactured prior to July 11, 2005. If you are proposing a Tier certified IC engine manufactured on and after July 11, 2005 or an emergency standby IC engine do not answer questions 17 through 27.

16. For emergency IC engines only, propose a testing schedule.

17. Propose a maximum daily IC engine hourly limit. **Note:** Unless it is 24 hours per day of operation, this proposed daily hourly limit will be placed in the permit.

18. Propose a maximum annual IC engine hourly limit. **Note:** Unless it is 8,760 hours per year of operation, this proposed annual hourly limit will be placed in the permit.

19-21. Subpart ZZZZ requires that CO emissions in the exhaust from existing non-Tier certified IC engines are either limited to a specific concentration, 49 ppmvd for engines rated at 300 bhp to ≤ 500 bhp or 23 ppmvd for engines rated at > 500 bhp, or are to reduce the CO concentration by 70% or more. Therefore, "yes" should only be answered to one of these two questions.

22-23. Subpart ZZZZ requires that, for IC engines rated at > 500 bhp, Applicants either install a CEMS (Continuous Emissions Monitoring System) or a CPMS (Continuous Parameters Monitoring System) in the exhaust stream to demonstrate compliance with the emissions limitations. Therefore, "yes" should only be answered to one of these two questions.

24. Specify if the IC engine is equipped, or will need to be equipped, with an oxidation catalyst to comply with the emissions limitations of Subpart ZZZZ.

25. Specify if the oxidation catalyst will be equipped with a temperature measurement system to ensure that is operating properly to comply with the emissions limitations of Subpart ZZZZ.

26. Specify if the IC engine is equipped, or will need to be equipped, with a diesel particulate filter to comply with the emissions limitations of Subpart ZZZZ.

27. Specify if the diesel particulate filter will be equipped with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

IDEQ REGULATORY ANALYSIS

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

AIR PERMIT APPLICATION

Revision 6
10/7/09

For each box in the table below, CTRL+click on the blue underlined text for instructions and information.

IDENTIFICATION	
1. Company Name: Alta Mesa Services, LP	2. Facility Name: Refrigeration Plant
3. Brief Project Description: Natural Gas Extraction and Production	

APPLICABILITY DETERMINATION	
4. List applicable subparts of the New Source Performance Standards (NSPS) (40 CFR part 60). Examples of NSPS affected emissions units include internal combustion engines, boilers, turbines, etc. The applicant must thoroughly review the list of affected emissions units.	List of applicable subpart(s): Subpart OOOO ☐ Not Applicable
5. List applicable subpart(s) of the National Emission Standards for Hazardous Air Pollutants (NESHAP) found in 40 CFR part 61 and 40 CFR part 63. Examples of affected emission units include solvent cleaning operations, industrial cooling towers, paint stripping and miscellaneous surface coating. EPA has a web page dedicated to NESHAP that should be useful to applicants.	List of applicable subpart(s): Subpart ZZZZ ☐ Not Applicable
6. For each subpart identified above, conduct a complete a regulatory analysis using the instructions and referencing the example provided on the following pages. **Note** - Regulatory reviews must be submitted with sufficient detail so that DEQ can verify applicability and document in legal terms why the regulation applies. Regulatory reviews that are submitted with insufficient detail will be determined incomplete.	☑ A detailed regulatory review is provided (Follow instructions and example). ☐ DEQ has already been provided a detailed regulatory review. Give a reference to the document including the date.

IF YOU ARE UNSURE HOW TO ANSWER ANY OF THESE QUESTIONS, CALL THE AIR PERMIT HOTLINE AT 1-877-5PERMIT

It is emphasized that it is the applicant's responsibility to satisfy all technical and regulatory requirements, and that DEQ will help the applicant understand what those requirements are prior to the application being submitted but that DEQ will not perform the required technical or regulatory analysis on the applicant's behalf.

Instructions for Form FRA

Item 4 & 5. It is important that facilities review the most recent federal regulations when submitting their permit application to DEQ. Current federal regulations can be found at the following Web site: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.

Item 6. For each applicable subpart identified under items 4-5 conduct a complete regulatory analysis. The facility must follow the procedure given below or obtain permission from DEQ to provide the necessary information using an alternative procedure:

1. Retrieve a TEXT or PDF copy of the applicable federal regulation subpart(s) online at http://www.gpoaccess.gov/cfr/retrieve.html

2. Copy and paste the regulation(s) into your DEQ air permit application.

3. Highlight or underline sections in the regulation(s) that are applicable to the source(s).

4. Under each section of the subpart, explain why the source is subject to the section, or why the source is not subject to the section. When providing the explanation use a different font than the regulation (i.e. ***bold, italic***) so that it is easy for the reader to determine the text that the applicant has provided. An example NSPS regulatory analysis is attached. The applicant must provide all necessary information needed to determine applicability. If information is lacking or the analysis is incomplete the application will be determined incomplete.

   EPA provides a web site dedicated to NSPS/NESHAP applicability determinations that may be useful to applicants. Follow this link to the applicability determination index Clean Air Act Applicability Determination Index - Compliance Monitoring - EPA. Another useful source of information is the preamble to the regulation which is published in the Federal Register on the date the regulation was promulgated. Federal Registers may be found online at Federal Register: Main Page. The date the regulation was published in the Federal Register is included in the footnotes of the regulation.

5. DEQ will assist in identifying the applicable requirements that the applicant must include in the application but will not perform the required technical or regulatory analysis on the applicant's behalf. Applicants should contact the Air Quality Permit Hotline (1-877-573-7648) to discuss NSPS/NESHAP regulatory analysis requirements or to schedule a meeting.

6. It also benefits facilities to document a non-applicability determination on federal air regulations which appear to apply to the facility but actually do not. A non-applicability determination will avoid future confusion and expedite the air permit application review. If you conduct an applicability determination and find that your activity is not NSPS or NESHAP affected facility an analysis should be submitted using the methods described above.

7. **It is not sufficient to simply provide a copy of the NSPS or NESHAP. The applicant must address each section of the regulation as described above and as shown in the example that is provided.**

EXAMPLE OF A NSPS REGULATORY ANALYSIS

[Title 40, Volume 6]
[Revised as of July 1, 2008]
From the U.S. Government Printing Office via GPO Access
[CITE: 40CFR60]

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 60_STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES--
Table of Contents

Subpart H_Standards of Performance for Sulfuric Acid Plants

Sec.60.80 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to each sulfuric acid production unit, which is the affected facility.
(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

ACME Chemicals, Inc. is proposing to construct after August 17, 1971 a sulfuric acid plant which burns elemental sulfur as defined by 40 CFR 60.81(a). ACME is therefore affected by this subpart.

(Be sure to use the terms of the regulation to describe applicability; usually applicability is determined based on a specific date, definition of an affected facility, and rated input capacity. All of the applicability criteria must be addressed by the applicant.)

Note – if a determination of non-applicability is being submitted it is not necessary to address the remaining non-applicable regulatory sections. Be sure to provide the applicability determination in terms of the regulation (i.e. construction/modification date, rated input capacity, definition of affected facility).

Sec.60.81 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.
(a) Sulfuric acid production unit means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans, or acid sludge, but does not include facilities where conversion to sulfuric acid is utilized primarily as a means of preventing emissions to the atmosphere of sulfur dioxide or other sulfur compounds.
(b) Acid mist means sulfuric acid mist, as measured by Method 8 of appendix A to this part or an equivalent or alternative method.

ACME Chemicals, Inc. has read and understands these definitions and used them in providing this regulatory analysis.

Sec.60.82 Standard for sulfur dioxide.

(a) On and after the date on which the performance test required to be conducted by Sec.60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of 2 kg per metric ton of acid produced (4 lb per ton), the production being expressed as 100 percent H2/SO4/.

ACME Chemicals, Inc. is subject to this standard and has provided a documented emission inventory (or manufacturer guarantee) which shows compliance.

Sec.60.83 Standard for acid mist.

(a) On and after the date on which the performance test required to be conducted by Sec.60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which:

(1) Contain acid mist, expressed as H2/SO4/, in excess of 0.075 kg per metric ton of acid produced (0.15 lb per ton), the production being expressed as 100 percent H2/SO4/.

ACME Chemicals, Inc. is subject to this standard and has provided a documented emission inventory (or manufacturer guarantee) which shows compliance.

(2) Exhibit 10 percent opacity, or greater.

ACME Chemicals, Inc. understands that this will become a permit condition and has supplied a manufacturer guarantee that the sulfuric acid plant will comply with this standard.

Sec.60.84 Emission monitoring.

(a) A continuous monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained, and operated by the owner or operator. The pollutant gas used to prepare calibration gas mixtures under Performance Specification 2 and for calibration checks under Sec.60.13(d), shall be sulfur dioxide (SO2/). Method 8 shall be used for conducting monitoring system performance evaluations under Sec.60.13(c) except that only the sulfur dioxide portion of the Method 8 results shall be used. The span value shall be set at 1000 ppm of sulfur dioxide.

(b) The owner or operator shall establish a conversion factor for the purpose of converting monitoring data into units of the applicable standard (kg/metric ton, lb/ton). The conversion factor shall be determined, as a minimum, three times daily by measuring the concentration of sulfur dioxide entering the converter using suitable methods (e.g., the Reich test, National Air Pollution Control Administration Publication No. 999-AP-13) and calculating the appropriate conversion factor for each eight-hour period as follows:

$$CF=k[(1.000-0.015r)/(r-s)]$$

where:

CF=conversion factor (kg/metric ton per ppm, lb/ton per ppm).
k=constant derived from material balance. For determining CF in metric units, k=0.0653. For determining CF in English units, k=0.1306.
r=percentage of sulfur dioxide by volume entering the gas converter. Appropriate corrections must be made for air injection plants subject to the Administrator's approval.
s=percentage of sulfur dioxide by volume in the emissions to the atmosphere determined by the continuous monitoring system required under paragraph (a) of this section.

(c) The owner or operator shall record all conversion factors and values under paragraph (b) of this section from which they were computed (i.e., CF, r, and s).

ACME Chemicals, Inc. is not proposing to utilize Sections 60.84(a)-(c) listed above to monitor emissions. Instead ACME Chemicals is utilizing 40 CFR 60.84(d) listed below to monitor emissions of sulfur dioxide.

(d) Alternatively, a source that processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen may use the following continuous emission monitoring approach and calculation procedures in determining SO2/ emission rates in terms of the standard. This procedure is not required, but is an alternative that would alleviate problems encountered in the measurement of gas velocities or production rate. Continuous emission monitoring systems for measuring SO2/, O2/, and CO2/ (if required) shall be installed, calibrated, maintained, and operated by the owner or operator and subjected to the certification procedures in Performance Specifications 2 and 3. The calibration procedure and span value for the SO2/ monitor shall be as specified in paragraph (b) of this section. The span value for CO2/ (if required) shall be 10 percent and for O2/ shall be 20.9 percent (air). A conversion factor based on process rate data is not necessary. Calculate the SO2/ emission rate as follows:

Es/=(Cs/ S)/[0.265-(0.126 %O2/)-(A %CO2/)]

where:

Es/=emission rate of SO2/, kg/metric ton (lb/ton) of 100 percent of H2/SO4/ produced.
Cs/=concentration of SO2/, kg/dscm (lb/dscf).
S=acid production rate factor, 368 dscm/metric ton (11,800 dscf/ton) of 100 percent H2/SO4/ produced.
%O2/=oxygen concentration, percent dry basis.
A=auxiliary fuel factor,
=0.00 for no fuel.
=0.0226 for methane.
=0.0217 for natural gas.
=0.0196 for propane.
=0.0172 for No 2 oil.
=0.0161 for No 6 oil.
=0.0148 for coal.
=0.0126 for coke.
%CO2/= carbon dioxide concentration, percent dry basis.

Note: It is necessary in some cases to convert measured concentration units to other units for these calculations:

Use the following table for such conversions:

From--	To--	Multiply by--
g/scm	kg/scm	10-3
mg/scm	kg/scm	10-6
ppm (SO2)	kg/scm	2.660x10-6
ppm (SO2)	lb/scf	1.660x10-7

ACME Chemicals, Inc. has elected to use the monitoring requirements of the preceding section.

(e) For the purpose of reports under Sec.60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under Sec.60.82.

ACME acknowledges that this section applies to the sulfuric acid plant.

Sec.60.85 Test methods and procedures.

(a) In conducting the performance tests required in Sec.60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in Sec.60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the SO2/ acid mist, and visible emission standards in Sec. Sec. 60.82 and 60.83 as follows:

(1) The emission rate (E) of acid mist or SO2/ shall be computed for each run using the following equation:

E=(CQsd/)/(PK)

where:

E=emission rate of acid mist or SO2/ kg/metric ton (lb/ton) of 100 percent H2/SO4/ produced.
C=concentration of acid mist or SO2/, g/dscm (lb/dscf).
Qsd/=volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).
P=production rate of 100 percent H2/SO4/, metric ton/hr (ton/hr).
K=conversion factor, 1000 g/kg (1.0 lb/lb).

(2) Method 8 shall be used to determine the acid mist and SO2/ concentrations (C's) and the volumetric flow rate (Qsd/) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

(3) Suitable methods shall be used to determine the production rate (P) of 100 percent H2/SO4/ for each run. Material balance over the production system shall be used to confirm the production rate.

(4) Method 9 and the procedures in Sec.60.11 shall be used to determine opacity.

(c) The owner or operator may use the following as alternatives to

the reference methods and procedures specified in this section:

(1) If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:

(i) The integrated technique of Method 3 is used to determine the O2/ concentration and, if required, CO2/ concentration.

(ii) The SO2/ or acid mist emission rate is calculated as described in Sec.60.84(d), substituting the acid mist concentration for Cs/ as appropriate.

ACME Chemicals, Inc. acknowledges that performance tests shall be conducted as specified above.

Detailed Regulatory Analysis

Attainment Designation (40 CFR 81.313)

The facility is located in Payette County, which is designated as attainment or unclassifiable for PM2.5, PM10, SO2, NO2, CO, and Ozone. Refer to 40 CFR 83.313 for additional information.

Permit to Construct (IDAPA 58.01.01.201)

The permittee is requesting that a PTC be issued to the facility for the new emissions source.

Permit to Construct (IDAPA 58.01.01.213)

Pre-permit construction approval is available for non-major sources and non-major modifications and for new sources and modifications proposed in accordance with Subsection 213.01.d. Pre-permit construction in not available for any new source or modification that: uses emissions netting to stay below major source levels; uses optional offsets pursuant to Section 206; or would have an adverse impact on the air quality values of Any Class I area. Owners or operators may ask the Department for the ability to commence construction or modification of qualifying sources under Section 213 before receiving the required permit to construct. To obtain the Department's pre-permit construction approval, the owner or operator shall satisfy the following requirements.

RESPONSE: Alta Mesa is requesting pre-permit construction approval. The proposed facility is not a major source of emissions and the project is not a request for the modification of an existing major source. The facility is not utilizing netting or offsets in construction. The facility will not have an adverse impact on air quality, nor is the facility located in a Class I area.

(a) The owner or operator shall apply for a permit to construct in accordance with Subsections 202.01.a., 202.02, and 202.03 of this chapter.

RESPONSE: The facility is applying for a permit to construct in accordance with the rules identified.

(b) The owner or operator shall consult with Department representatives prior to submitting a pre-permit construction approval application.

RESPONSE: The facility consulted with Department representatives on October 7, 2013. Additional consultations have occurred regarding required modeling, public meeting, and other application form requirements.

(c) The owner or operator shall submit a pre-permit construction approval application which must contain, but not be limited to: a letter requesting the ability to construct before obtaining

the required permit to construct, a copy of the notice referenced in Subsection 213.02; proof of eligibility; process description(s); equipment list(s); proposed emission limits and modeled ambient concentrations for all regulated pollutants and toxic air pollutants, such that they demonstrate compliance with all applicable air quality rules and regulations. The models shall be conducted in accordance with Subsection 202.02 and with written Department approved protocol and submitted with sufficient detail so that modeling can be duplicated by the Department.

RESPONSE: The facility has submitted a letter requesting pre-permit construction approval, proof of eligibility (contained within application), process descriptions, equipment lists, proposed emissions limits, and modeling data.

(d) Owners or operators seeking limitations on a source's potential to emit such that permitted emissions will be either below major source levels or below a significant increase must describe in detail in the pre-permit construction application the proposed restrictions and certify in accordance with Section 123 that they will comply with the restrictions, including any applicable monitoring and reporting requirements.

RESPONSE: The facility is not a major source of air emissions.

Tier II Operating Permit (IDAPA 58.01.01.401)

The permitted is not requesting an optional Tier II operating permit, therefore IDAPA 58.01.01.400-410 is not applicable at this time.

Visible Emissions (IDAPA 58.01.01.625)

The sources of $PM_{2.5}$ and PM_{10} emissions at the proposed facility, while subject to the State of Idaho visible emissions standards, are not expected to exceed 20% opacity.

Standards for New Sources (IDAPA 58.01.01.676)

This project involves the installation of two IC engines, one reboiler, one stabilizer heater, one engine heater, and fugitive emissions.

Title V Classification (IDA.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.006.118 defines a Tier I source as any source located at a major facility as defined in Section 008. IDAPA 58.01.01.008.10 defines a major facility as either:

- For HAP_S a facility with the potential to emit ten (10) tons per year (tpy) or more of hazardous air pollutants, other than radionuclides, or
- The facility emits or has the PTE twenty-five (25) tpy or more of any combination of any HAP_S, other than radionuclides.

or, for non-attainment areas (Note: the State of Idaho currently has no serious non-attainment areas therefore the Major Source threshold is defined as follows):

- The facility emits or has the PTE one-hundred (100) tpy or more of any regulated air pollutant. The fugitive emissions shall not be considered in determining whether the facility is major unless the facility is a "Designated Facility".

The proposed facility will not emit greater than 10 tpy single or 25 tpy combined HAPS emissions. Additionally, the facility will not emit greater than 100 tpy of any regulated air pollutant. The proposed facility PTE is less than 15 tpy for any single regulated pollutant.

PSD Classification (40 CFR 52.21)

The proposed facility is not a major stationary source as defined in 40 CFR 52.21(b)(1). The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 tpy.

NSPS Applicability (40 CFR 60)

- 40 CFR Part 60 Subpart OOOO
  - Pneumatic Controllers
    - Single continuous bleed natural gas driven pneumatic controllers only. Intermittent bleed devices are not subject to the rule.
  - NGPPs
    - 3rd Party LDAR Tagging, Maintenance, and Monitoring Program Monitoring Program

Subpart OOOO—Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution

[SOURCE: 77 FR 49542', Aug, 16, 2012, unless otherwise noted.]

§60.5360 What is the purpose of this subpart?

This subpart establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO_2) emissions from affected facilities that commence construction, modification or reconstruction after August 23, 2011.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is subject to this rule and thus the purposes outlined here are applicable.

§60.5365 Am I subject to this subpart?

You are subject to the applicable provisions of this subpart if you are the owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section for which you commence construction, modification or reconstruction after August 23, 2011.

(a) Each gas well affected facility, which is a single natural gas well.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a gas well affected facility, which is a single natural gas well.

(b) Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals that is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. A centrifugal compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) has internal reciprocating compressor/engines. The facility does not have centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals that is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment.

(c) Each reciprocating compressor affected facility, which is a single reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. A reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not subject to this rule as there are no single reciprocating compressors servicing a single well site. The reciprocating compressors associated with this project service multiple well sites and are thus not affected facilities under this subpart.

(d)(1) For the oil production segment (between the wellhead and the point of custody transfer to an oil pipeline), each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not part of the oil production segment.

(2) For the natural gas production segment (between the wellhead and the point of custody transfer to the natural gas transmission and storage segment and not including natural gas processing plants), each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is a natural gas processing plant under 40 CFR Part 60, Subpart OOOO. See below.

(3) For natural gas processing plants, each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is a natural gas processing plant subject to this rule provision. Thus, any single continuous bleed natural gas driven pneumatic controllers are affected facilities under this subpart.

(e) Each storage vessel affected facility, which is a single storage vessel located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment, and has the potential for VOC emissions equal to or greater than 6 tpy as determined according to this section by October 15, 2013 for Group 1 storage vessels and by April 15, 2014, or 30 days after startup (whichever is later) for Group 2 storage vessels. A storage vessel affected facility that subsequently has its potential for VOC emissions decrease to less than 6 tpy shall remain an affected facility under this subpart. The potential for VOC emissions must be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to the applicable emission determination deadline specified in this section. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or tribal authority. Any vapor from the storage vessel that is recovered and routed to a process through a VRU designed and operated as specified in this section is not required to be included in the determination of VOC potential to emit for purposes of determining affected facility status, provided you comply with the requirements in paragraphs (e)(1) through (4) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not store crude oil, condensate, or intermediates at atmospheric conditions. Storage tanks are pressurized. Thus, there are no storage vessel affected facilities.

(1) You meet the cover requirements specified in §60.5411(b).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not store crude oil, condensate, or intermediates at atmospheric conditions. Storage tanks are pressurized. Thus, there are no storage vessel affected facilities or relating cover requirements applicable to this facility.

(2) You meet the closed vent system requirements specified in §60.5411(c).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not store crude oil, condensate, or intermediates at atmospheric conditions. Storage tanks are pressurized. Thus, there are no storage vessel affected facilities or relating closed vent system requirements applicable to this facility.

(3) You maintain records that document compliance with paragraphs (e)(1) and (2) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not store crude oil, condensate, or intermediates at atmospheric conditions. Storage tanks are pressurized. Thus, there are no storage vessel affected facilities or relating compliance records to be maintained by the facility.

(4) In the event of removal of apparatus that recovers and routes vapor to a process, or operation that is inconsistent with the conditions specified in paragraphs (e)(1) and (2) of this section, you must determine the storage vessel's potential for VOC emissions according to this section within 30 days of such removal or operation.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not store crude oil, condensate, or intermediates at atmospheric conditions. Storage tanks are pressurized. Thus, there are no storage vessel affected facilities or related apparatus that recovers and routes vapors to a process, or operation specified in paragraphs (e)(1) and (2) of this section.

(f) The group of all equipment, except compressors, within a process unit is an affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) has a group of all equipment, and hence affected facility, under this rule.

(1) Addition or replacement of equipment for the purpose of process improvement that is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) has an affected facility under this portion of the rule.

(2) Equipment associated with a compressor station, dehydration unit, sweetening unit, underground storage vessel, field gas gathering system, or liquefied natural gas unit is covered by §§60.5400, 60.5401, 60.5402, 60.5421, and 60.5422 of this subpart if it is located at an onshore natural gas processing plant. Equipment not located at the onshore natural gas processing plant site is exempt from the provisions of §§60.5400, 60.5401, 60.5402, 60.5421, and 60.5422 of this subpart.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) has an affected facility under this portion of the rule.

(3) The equipment within a process unit of an affected facility located at onshore natural gas processing plants and described in paragraph (f) of this section are exempt from this subpart if they are subject to and controlled according to subparts VVa, GGG or GGGa of this part.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) has a group of all equipment subject to this rule not regulated or controlled according to Subparts VVa, GGG or GGGa. The facility is not subject to those rules.

(g) Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have a sweetening unit affected facility.

(1) Each sweetening unit that processes natural gas is an affected facility; and

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have a sweetening unit affected facility.

(2) Each sweetening unit that processes natural gas followed by a sulfur recovery unit is an affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have a sweetening unit affected facility.

(3) Facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H_2S) in the acid gas (expressed as sulfur) are required to comply with recordkeeping and reporting requirements specified in §60.5423(c) but are not required to comply with §§60.5405 through 60.5407 and §§60.5410(g) and 60.5415(g) of this subpart.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have a sweetening unit affected facility.

(4) Sweetening facilities producing acid gas that is completely reinjected into oil-or-gas-bearing geologic strata or that is otherwise not released to the atmosphere are not subject to §§60.5405 through 60.5407, 60.5410(g), 60.5415(g), and 60.5423 of this subpart.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have a sweetening unit affected facility.

(h) The following provisions apply to gas well facilities that are hydraulically refractured.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a gas well affected facility under this subpart.

(1) A gas well facility that conducts a well completion operation following hydraulic refracturing is not an affected facility, provided that the requirements of §60.5375 are met. For purposes of this provision, the dates specified in §60.5375(a) do not apply, and such facilities, as of October 15, 2012, must meet the requirements of §60.5375(a)(1) through (4).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a gas well affected facility under this subpart.

(2) A well completion operation following hydraulic refracturing at a gas well facility not conducted pursuant to §60.5375 is a modification to the gas well affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a gas well affected facility under this subpart.

(3) Refracturing of a gas well facility does not affect the modification status of other equipment, process units, storage vessels, compressors, or pneumatic controllers located at the well site.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a gas well affected facility under this subpart.

(4) A gas well facility initially constructed after August 23, 2011, is considered an affected facility regardless of this provision.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a gas well affected facility under this subpart.

§60.5370 When must I comply with this subpart?

(a) You must be in compliance with the standards of this subpart no later than October 15, 2012 or upon startup, whichever is later.

RESPONSE: The affected facilities under this subpart will comply upon startup. The affected facilities covered under this rule are pneumatic controllers and group of all equipment (Leak Detection and Repair.)

(b) The provisions for exemption from compliance during periods of startup, shutdown and malfunctions provided for in 40 CFR 60.8(c) do not apply to this subpart.

RESPONSE: Alta Mesa understands this provision

(c) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

RESPONSE: Alta Mesa understands this provision and the proposed facility is not required to obtain a Part 70, Title V Permit.

§60.5375 What standards apply to gas well affected facilities?

If you are the owner or operator of a gas well affected facility, you must comply with paragraphs (a) through (f) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a gas well affected facility under this subpart.

§60.5380 What standards apply to centrifugal compressor affected facilities?

You must comply with the standards in paragraphs (a) through (d) of this section for each centrifugal compressor affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a centrifugal compressor affected facility under this subpart.

§60.5385 What standards apply to reciprocating compressor affected facilities?

You must comply with the standards in paragraphs (a) through (d) of this section for each reciprocating compressor affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) is not a reciprocating compressor affected facility under this subpart.

§60.5390 What standards apply to pneumatic controller affected facilities?

For each pneumatic controller affected facility you must comply with the VOC standards, based on natural gas as a surrogate for VOC, in either paragraph (b)(1) or (c)(1) of this section, as applicable. Pneumatic controllers meeting the conditions in paragraph (a) of this section are exempt from this requirement.

(a) The requirements of paragraph (b)(1) or (c)(1) of this section are not required if you determine that the use of a pneumatic controller affected facility with a bleed rate greater than the applicable standard is required based on functional needs, including but not limited to RESPONSE time, safety and positive actuation. However, you must tag such pneumatic controller with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for that pneumatic controller, as required in §60.5420(c)(4)(ii).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not currently have pneumatic controllers in the plant inventory falling under this requirement. Should pneumatic device affected facilities be installed, the devices will be tagged in accordance with the rule requirement.

(b)(1) Each pneumatic controller affected facility at a natural gas processing plant must have a bleed rate of zero.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not currently have pneumatic controllers in the plant inventory falling under this requirement. Should pneumatic device affected facilities be installed, the devices will be tagged in accordance with

the rule requirement. Pneumatic controllers are intermittent devices not covered by this rule. Should pneumatics be installed which are single continuous bleed natural gas driven pneumatics, the bleed rate will be zero as required by this rule.

(2) Each pneumatic controller affected facility at a natural gas processing plant must be tagged with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for that pneumatic controller as required in §60.5420(c)(4)(iv).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not currently have pneumatic controllers in the plant inventory falling under this requirement. Should pneumatic device affected facilities be installed, the devices will be tagged in accordance with the rule requirement. Pneumatic controllers are intermittent devices not covered by this rule. Should pneumatics be installed which are single continuous bleed natural gas driven pneumatics, the bleed rate will be tagged (and records maintained) as required by this rule.

(c)(1) Each pneumatic controller affected facility constructed, modified or reconstructed on or after October 15, 2013, at a location between the wellhead and a natural gas processing plant or the point of custody transfer to an oil pipeline must have a bleed rate less than or equal to 6 standard cubic feet per hour.

(2) Each pneumatic controller affected facility at a location between the wellhead and a natural gas processing plant or the point of custody transfer to an oil pipeline must be tagged with the month and year of installation, reconstruction or modification, and identification information that allows traceability to the records for that controller as required in §60.5420(c)(4)(iii).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not currently have pneumatic controllers in the plant inventory falling under this requirement. The facility is a natural gas processing plant under this rule.

(d) You must demonstrate initial compliance with standards that apply to pneumatic controller affected facilities as required by §60.5410.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not currently have pneumatic controllers in the plant inventory falling under this requirement. Should pneumatic controller affected facilities be installed, the facility will comply with this standard.

(e) You must demonstrate continuous compliance with standards that apply to pneumatic controller affected facilities as required by §60.5415.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not currently have pneumatic controllers in the plant inventory falling under this requirement. Should pneumatic controller affected facilities be installed, the facility will comply with this standard.

(f) You must perform the required notification, recordkeeping, and reporting as required by §60.5420, except that you are not required to submit the notifications specified in §60.5420(a).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not currently have pneumatic controllers in the plant inventory falling under this requirement. Should pneumatic controller affected facilities be installed, the facility will comply with this standard.

§60.5395 What standards apply to storage vessel affected facilities?

Except as provided in paragraph (h) of this section, you must comply with the standards in this section for each storage vessel affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have storage vessel affected facilities under this subpart.

§60.5400 What equipment leak standards apply to affected facilities at an onshore natural gas processing plant?

This section applies to the group of all equipment, except compressors, within a process unit.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) has a group of all equipment subject to this rule requirement.

(a) You must comply with the requirements of §§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in §60.5401.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

40 CFR Part 60, Subpart KKK [By reference from above]

§60.482-2 Standards: Pumps in light liquid service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485(b), except as provided in §60.482-1(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in §60.482-1(c) and (f) and paragraphs (d), (e), and (f) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.482-4 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485(c).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in §60.482-9.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §60.485(c).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in §60.482-10 is exempted from the requirements of paragraphs (a) and (b) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482-9.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.482-5 Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in §60.482-1(c) and paragraph (c) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(1) Gases displaced during filling of the sample container are not required to be collected or captured.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(3) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(i) Return the purged process fluid directly to the process line.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(ii) Collect and recycle the purged process fluid to a process.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482-10.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.482-6 Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c) and paragraphs (d) and (e) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.482-7 Standards: Valves in gas/vapor service and in light liquid service.

(a)(1) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, §60.482-1(c) and (f), and §§60.483-1 and 60.483-2.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup. It is not expected these facilities will be necessary to the proposed operations.

(2) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, §60.482-1(c), and §§60.483-1 and 60.483-2.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(ii) If the valves on the process unit are monitored in accordance with §60.483-1 or §60.483-2, count the new valve as leaking when calculating the percentage of valves leaking as described in §60.483-2(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(c)(1)(i) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into 2 or 3 subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup. It is not expected these facilities will be necessary to the proposed operations.

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(f) Any valve that is designated, as described in §60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) if the valve:

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(1) Has no external actuating mechanism in contact with the process fluid,

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485(c), and

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(g) Any valve that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if:

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a), and

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup. It is not expected these facilities will be necessary to the proposed operations.

(h) Any valve that is designated, as described in §60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) The process unit within which the valve is located either becomes an affected facility through §60.14 or §60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.482-8 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall follow either one of the following procedures:

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in §60.485(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under §§60.482-2(c)(2) and 60.482-7(e).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.482-9 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482-10.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(f) When delay of repair is allowed for a leaking pump or valve that remains in service, the pump or valve may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.482-10 Standards: Closed vent systems and control devices.

(a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup. It is not expected these facilities will be necessary to the proposed operations. No closed vent system will be employed by the facility.

[RETURN TO NSPS, Subpart OOOO]

(b) You may elect to comply with the requirements of §§60.483-1a and 60.483-2a, as an alternative.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup. It is not expected these facilities will be necessary to the proposed operations. AM will evaluate and may choose to comply with these requirements as an alternative. Notification of such will be provided to IDEQ in advance of pursuing the alternative method.

(c) You may apply to the Administrator for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in this subpart according to the requirements of §60.5402 of this subpart.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup. It is not expected these facilities will be necessary to the proposed operations. AM will evaluate and may choose to comply with these requirements as an alternative. Notification of such will be provided to IDEQ in advance of pursuing the alternative method.

(d) You must comply with the provisions of §60.485a of this part except as provided in paragraph (f) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(e) You must comply with the provisions of §§60.486a and 60.487a of this part except as provided in §§60.5401, 60.5421, and 60.5422 of this part.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(f) You must use the following provision instead of §60.485a(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-93, E168-92, or E260-96 (incorporated by reference as specified in §60.17) must be used.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.5401 What are the exceptions to the equipment leak standards for affected facilities at onshore natural gas processing plants?

(a) You may comply with the following exceptions to the provisions of §60.5400(a) and (b).

(b)(1) Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in §60.485a(b) except as provided in §60.5400(c) and in paragraph (b)(4) of this section, and §60.482-4a(a) through (c) of subpart VVa.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(3)(i) When a leak is detected, it must be repaired as soon as practicable, but no later than 15 calendar days after it is detected, except as provided in §60.482-9a.

(ii) A first attempt at repair must be made no later than 5 calendar days after each leak is detected.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(4)(i) Any pressure relief device that is located in a nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are on-site, instead of within 5 days as specified in paragraph (b)(1) of this section and §60.482-4a(b)(1) of subpart VVa.

(ii) No pressure relief device described in paragraph (b)(4)(i) of this section must be allowed to operate for more than 30 days after a pressure release without monitoring.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(c) Sampling connection systems are exempt from the requirements of §60.482-5a.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(d) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,200 standard cubic meters per day (scmd) (10 million standard cubic feet per day) or more of field gas are exempt from the routine monitoring requirements of §§60.482-2a(a)(1) and 60.482-7a(a), and paragraph (b)(1) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup. It is not expected these facilities will be necessary to the proposed operations.

(e) Pumps in light liquid service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service within a process unit that is located in the Alaskan North Slope are exempt from the routine monitoring requirements of §§60.482-2a(a)(1), 60.482-7a(a), and paragraph (b)(1) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(f) An owner or operator may use the following provisions instead of §60.485a(e):

(1) Equipment is in heavy liquid service if the weight percent evaporated is 10 percent or less at 150 °C (302 °F) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).

(2) Equipment is in light liquid service if the weight percent evaporated is greater than 10 percent at 150 °C (302 °F) as determined by ASTM Method D86-96 (incorporated by reference as specified in §60.17).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

(g) An owner or operator may use the following provisions instead of §60.485a(b)(2): A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in §60.486a(e)(8). Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

§60.5402 What are the alternative emission limitations for equipment leaks from onshore natural gas processing plants?

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under any design, equipment, work practice or operational standard, the Administrator will publish, in the FEDERAL REGISTER, a notice permitting the use of that alternative means for the purpose of compliance with that standard. The notice may condition permission on requirements related to the operation and maintenance of the alternative means.

(b) Any notice under paragraph (a) of this section must be published only after notice and an opportunity for a public hearing.

(c) The Administrator will consider applications under this section from either owners or operators of affected facilities, or manufacturers of control equipment.

(d) The Administrator will treat applications under this section according to the following criteria, except in cases where the Administrator concludes that other criteria are appropriate:

(1) The applicant must collect, verify and submit test data, covering a period of at least 12 months, necessary to support the finding in paragraph (a) of this section.

(2) If the applicant is an owner or operator of an affected facility, the applicant must commit in writing to operate and maintain the alternative means so as to achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved under the design, equipment, work practice or operational standard.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup. Should alternative monitoring requirements be utilized, this activity will be done in accordance with these provisions.

§60.5405 What standards apply to sweetening units at onshore natural gas processing plants?

(a) During the initial performance test required by §60.8(b), you must achieve at a minimum, an SO_2 emission reduction efficiency (Z_i) to be determined from Table 1 of this subpart based on the sulfur feed rate (X) and the sulfur content of the acid gas (Y) of the affected facility.

(b) After demonstrating compliance with the provisions of paragraph (a) of this section, you must achieve at a minimum, an SO_2 emission reduction efficiency (Z_c) to be determined from Table 2 of this subpart based on the sulfur feed rate (X) and the sulfur content of the acid gas (Y) of the affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have sweetening units subject to this portion of the rule.

§60.5406 What test methods and procedures must I use for my sweetening units affected facilities at onshore natural gas processing plants?

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have sweetening units subject to this portion of the rule.

§60.5407 What are the requirements for monitoring of emissions and operations from my sweetening unit affected facilities at onshore natural gas processing plants?

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have sweetening units subject to this portion of the rule.

§60.5410 How do I demonstrate initial compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my reciprocating compressor

affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my equipment leaks and sweetening unit affected facilities at onshore natural gas processing plants?

RESPONSE: The Alta Mesa refrigeration plant (processing plant) has affected facilities under this rule in two categories. Pneumatic controller affected facilities and equipment leaks. Those provisions of the rule are contained below.

(d) To achieve initial compliance with emission standards for your pneumatic controller affected facility you must comply with the requirements specified in paragraphs (d)(1) through (6) of this section, as applicable.

(1) You must demonstrate initial compliance by maintaining records as specified in §60.5420(c)(4)(ii) of your determination that the use of a pneumatic controller affected facility with a bleed rate greater than 6 standard cubic feet of gas per hour is required as specified in §60.5390(a).

(2) You own or operate a pneumatic controller affected facility located at a natural gas processing plant and your pneumatic controller is driven by a gas other than natural gas and therefore emits zero natural gas.

(3) You own or operate a pneumatic controller affected facility located between the wellhead and a natural gas processing plant and the manufacturer's design specifications indicate that the controller emits less than or equal to 6 standard cubic feet of gas per hour.

(4) You must tag each new pneumatic controller affected facility according to the requirements of §60.5390(b)(2) or (c)(2).

(5) You must include the information in paragraph (d)(1) of this section and a listing of the pneumatic controller affected facilities specified in paragraphs (d)(2) and (3) of this section in the initial annual report submitted for your pneumatic controller affected facilities constructed, modified or reconstructed during the period covered by the annual report according to the requirements of §60.5420(b).

(6) You must maintain the records as specified in §60.5420(c)(4) for each pneumatic controller affected facility.

RESPONSE: Alta Mesa will comply with these provisions upon startup. Single continuous bleed natural gas driven pneumatic controllers, at the point of installation, modification, or reconstruction, will be zero-bleed devices. These devices will be tagged with the month and year of installation. Records will be maintained of the manufacturer's specifications demonstrating compliance with these provisions. The annual report will be completed detailed those affected facilities in accordance with the provisions of this subpart.

(f) For affected facilities at onshore natural gas processing plants, initial compliance with the VOC requirements is demonstrated if you are in compliance with the requirements of §60.5400.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.5411 What additional requirements must I meet to determine initial compliance for my covers and closed vent systems routing materials from storage vessels and centrifugal compressor wet seal degassing systems?

You must meet the applicable requirements of this section for each cover and closed vent system used to comply with the emission standards for your storage vessel or centrifugal compressor affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have storage tank or centrifugal compressor affected facilities subject to this rule. Thus, the closed cover and closed vent system requirements do not apply.

60.5412 What additional requirements must I meet for determining initial compliance with control devices used to comply with the emission standards for my storage vessel or centrifugal compressor affected facility?

You must meet the applicable requirements of this section for each control device used to comply with the emission standards for your storage vessel or centrifugal compressor affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have storage tank or centrifugal compressor affected facilities subject to this rule. Thus, the additional requirements for these types of facilities do not apply.

§60.5413 What are the performance testing procedures for control devices used to demonstrate compliance at my storage vessel or centrifugal compressor affected facility?

This section applies to the performance testing of control devices used to demonstrate compliance with the emissions standards for your centrifugal compressor affected facility. You must demonstrate that a control device achieves the performance requirements of §60.5412(a) using the performance test methods and procedures specified in this section. For condensers, you may use a design analysis as specified in paragraph (c) of this section in lieu of complying with paragraph (b) of this section. In addition, this section contains the requirements for enclosed combustion device performance tests conducted by the manufacturer applicable to both storage vessel and centrifugal compressor affected facilities.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have storage tank or centrifugal compressor affected facilities subject to this rule. Thus, the additional requirements for these types of facilities do not apply.

§60.5415 How do I demonstrate continuous compliance with the standards for my gas well affected facility, my centrifugal compressor affected facility, my stationary reciprocating compressor affected facility, my pneumatic controller affected facility, my storage vessel affected facility, and my affected facilities at onshore natural gas processing plants?

RESPONSE: The Alta Mesa refrigeration plant (processing plant) has affected facilities under this rule in two categories. Pneumatic controller affected facilities and equipment leaks. Those provisions of the rule are contained below.

(d) For each pneumatic controller affected facility, you must demonstrate continuous compliance according to paragraphs (d)(1) through (3) of this section.

(1) You must continuously operate the pneumatic controllers as required in §60.5390(a), (b), or (c).

(2) You must submit the annual report as required in §60.5420(b).

(3) You must maintain records as required in §60.5420(c)(4).

RESPONSE: Alta Mesa will comply with these provisions upon startup. Single continuous bleed natural gas driven pneumatic controllers, at the point of installation, modification, or reconstruction, will be zero-bleed devices. These devices will be tagged with the month and year of installation. Records will be maintained of the manufacturer's specifications demonstrating compliance with these provisions. The annual report will be completed detailed those affected facilities in accordance with the provisions of this subpart.

f) For affected facilities at onshore natural gas processing plants, continuous compliance with VOC requirements is demonstrated if you are in compliance with the requirements of §60.5400.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.5416 What are the initial and continuous cover and closed vent system inspection and monitoring requirements for my storage vessel and centrifugal compressor affected facility?

For each closed vent system or cover at your storage vessel or centrifugal compressor affected facility, you must comply with the applicable requirements of paragraphs (a) through (c) of this section.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have storage tank or centrifugal compressor affected facilities subject to this rule. Thus, the additional requirements for these types of facilities do not apply.

§60.5417 What are the continuous control device monitoring requirements for my storage vessel or centrifugal compressor affected facility?

You must meet the applicable requirements of this section to demonstrate continuous compliance for each control device used to meet emission standards for your storage vessel or centrifugal compressor affected facility.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have storage tank or centrifugal compressor affected facilities subject to this rule. Thus, the additional requirements for these types of facilities do not apply.

§60.5420 What are my notification, reporting, and recordkeeping requirements?

(a) You must submit the notifications according to paragraphs (a)(1) and (2) of this section if you own or operate one or more of the affected facilities specified in §60.5365 that was constructed, modified, or reconstructed during the reporting period.

(1) If you own or operate a gas well, pneumatic controller, centrifugal compressor, reciprocating compressor or storage vessel affected facility you are not required to submit the notifications required in §60.7(a)(1), (3), and (4).

RESPONSE: Alta Mesa will comply with these provisions upon startup. Notifications will be completed as required. No notifications are required for pneumatic controllers, however an initial notification will occur for the group of all equipment in accordance with *§60.7(a)(1), (3), and (4) [LDAR].*

(b) Reporting requirements. You must submit annual reports containing the information specified in paragraphs (b)(1) through (6) of this section to the Administrator and performance test reports as specified in paragraph (b)(7) or (8) of this section. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to §60.5410. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in paragraphs (b)(1) through (6) of this section. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

RESPONSE: Alta Mesa will comply with these provisions upon startup.

(5) For each pneumatic controller affected facility, the information specified in paragraphs (b)(5)(i) through (iii) of this section.

(i) An identification of each pneumatic controller constructed, modified or reconstructed during the reporting period, including the identification information specified in §60.5390(b)(2) or (c)(2).

(ii) If applicable, documentation that the use of pneumatic controller affected facilities with a natural gas bleed rate greater than 6 standard cubic feet per hour are required and the reasons why.

(iii) Records of deviations specified in paragraph (c)(4)(v) of this section that occurred during the reporting period.

RESPONSE: Alta Mesa will comply with these provisions upon startup.

(c) *Recordkeeping requirements.* You must maintain the records identified as specified in §60.7(f) and in paragraphs (c)(1) through (13) of this section. All records required by this subpart must be maintained either onsite or at the nearest local field office for at least 5 years.

RESPONSE: Alta Mesa will comply with these provisions upon startup.

(4) For each pneumatic controller affected facility, you must maintain the records identified in paragraphs (c)(4)(i) through (v) of this section.

(i) Records of the date, location and manufacturer specifications for each pneumatic controller constructed, modified or reconstructed.

(ii) Records of the demonstration that the use of pneumatic controller affected facilities with a natural gas bleed rate greater than the applicable standard are required and the reasons why.

(iii) If the pneumatic controller is not located at a natural gas processing plant, records of the manufacturer's specifications indicating that the controller is designed such that natural gas bleed rate is less than or equal to 6 standard cubic feet per hour.

(iv) If the pneumatic controller is located at a natural gas processing plant, records of the documentation that the natural gas bleed rate is zero.

(v) Records of deviations in cases where the pneumatic controller was not operated in compliance with the requirements specified in §60.5390

RESPONSE: Alta Mesa will comply with these provisions upon startup.

§60.5421 What are my additional recordkeeping requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?

(a) You must comply with the requirements of paragraph (b) of this section in addition to the requirements of §60.486a.

(b) The following recordkeeping requirements apply to pressure relief devices subject to the requirements of §60.5401(b)(1) of this subpart.

(1) When each leak is detected as specified in §60.5401(b)(2), a weatherproof and readily visible identification, marked with the equipment identification number, must be attached to the leaking equipment. The identification on the pressure relief device may be removed after it has been repaired.

(2) When each leak is detected as specified in §60.5401(b)(2), the following information must be recorded in a log and shall be kept for 2 years in a readily accessible location:

(i) The instrument and operator identification numbers and the equipment identification number.

(ii) The date the leak was detected and the dates of each attempt to repair the leak.

(iii) Repair methods applied in each attempt to repair the leak.

(iv) "Above 500 ppm" if the maximum instrument reading measured by the methods specified in paragraph (a) of this section after each repair attempt is 500 ppm or greater.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(ix) The date of successful repair of the leak.

(x) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §60.482-4a(a). The designation of equipment subject to the provisions of §60.482-4a(a) must be signed by the owner or operator.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.5422 What are my additional reporting requirements for my affected facility subject to VOC requirements for onshore natural gas processing plants?

(a) You must comply with the requirements of paragraphs (b) and (c) of this section in addition to the requirements of §60.487a(a), (b), (c)(2)(i) through (iv), and (c)(2)(vii) through (viii).

(b) An owner or operator must include the following information in the initial semiannual report in addition to the information required in §60.487a(b)(1) through (4): Number of pressure relief devices subject to the requirements of §60.5401(b) except for those pressure relief devices designated for no detectable emissions under the provisions of §60.482-4a(a) and those pressure relief devices complying with §60.482-4a(c).

(c) An owner or operator must include the following information in all semiannual reports in addition to the information required in §60.487a(c)(2)(i) through (vi):

(1) Number of pressure relief devices for which leaks were detected as required in §60.5401(b)(2); and

(2) Number of pressure relief devices for which leaks were not repaired as required in §60.5401(b)(3).

RESPONSE: The Alta Mesa refrigeration plant (processing plant) will comply with these provisions by implementing a 3rd Party LDAR Tagging, Maintenance, and Monitoring Program upon initial startup.

§60.5423 What additional recordkeeping and reporting requirements apply to my sweetening unit affected facilities at onshore natural gas processing plants?

(a) You must retain records of the calculations and measurements required in §60.5405(a) and (b) and §60.5407(a) through (g) for at least 2 years following the date of the measurements. This requirement is included under §60.7(d) of the General Provisions.

RESPONSE: The Alta Mesa refrigeration plant (processing plant) does not have sweetening units subject to this portion of the rule.

§60.5425 What part of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

RESPONSE: These provisions as indicated below apply to both pneumatic controller affected facilities and LDAR. Should additional affected facilities under NSPS OOOO be installed, modified, or reconstructed, the requirements of this subchapter will be followed.

§60.5430 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act, in subpart A or subpart VVa of part 60; and the following terms shall have the specific meanings given them.

RESPONSE: All definitions apply to this project. Alta Mesa understands these definitions.

Table 3 to Subpart OOOO of Part 60—Applicability of General Provisions to Subpart OOOO

As stated in §60.5425, you must comply with the following applicable General Provisions:

General provisions citation	Subject of citation	Applies to subpart?	Explanation
§60.1	General applicability of the General Provisions	Yes.	
§60.2	Definitions	Yes	Additional terms defined in §60.5430.
§60.3	Units and abbreviations	Yes.	
§60.4	Address	Yes.	
§60.5	Determination of construction or modification	Yes.	
§60.6	Review of plans	Yes.	
§60.7	Notification and record keeping	Yes	Except that §60.7 only applies as specified in §60.5420(a). Applies to LDAR affected equipment
§60.8	Performance tests	Yes	Performance testing is required for control devices used on storage vessels and centrifugal compressors. None in project
§60.9	Availability of information	Yes.	
§60.10	State authority	Yes.	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart OOOO.
§60.12	Circumvention	Yes.	
§60.13	Monitoring requirements	Yes	Continuous monitors are required for storage vessels. None is project.
§60.14	Modification	Yes.	
§60.15	Reconstruction	Yes.	
§60.16	Priority list	Yes.	
§60.17	Incorporations by reference	Yes.	

§60.18	General control device requirements	Yes	Except that §60.18 does not apply to flares.
§60.19	General notification and reporting requirement	Yes.	

NESHAP Applicability (40 CFR 61)

- Not Applicable

NESHAP Applicability (40 CFR 63)

- 40 CFR Par 63 Subpart ZZZZ

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

§63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

RESPONSE: Alta Mesa will own and operate a stationary RICE at an area source of HAP emissions. Caterpillar G3908

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

§63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

RESPONSE: The Alta Mesa Idaho Refrigeration Plant (Processing Plant) is considered an area source of HAP emissions.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

RESPONSE: The engines located at the facility are considered ZZZZ applicable engines with one having a manufacture date of 04/05/1990.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

RESPONSE: The engines located at the facility are considered ZZZZ applicable engines with one having a manufacture date of 04/05/1990.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(f) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

§63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

RESPONSE: Alta Mesa will install the ZZZZ applicable engines at the Idaho refrigeration plant after October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

RESPONSE: Alta Mesa will comply with this standard upon startup of the affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

Emission and Operating Limitations

§63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

RESPONSE: This Section is not applicable - the Alta Mesa Idaho Refrigeration Plant (Processing Plant) is considered an area source of HAP emissions.

§63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

RESPONSE: This Section is not applicable - the Alta Mesa Idaho Refrigeration Plant (Processing Plant) is considered an area source of HAP emissions.

§63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

RESPONSE: This Section is not applicable - the Alta Mesa Idaho Refrigeration Plant (Processing Plant) is considered an area source of HAP emissions.

§63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

RESPONSE: The Alta Mesa Idaho Refrigeration Plant (Processing Plant) is considered an area source of HAP emissions and will comply with all emission limitations, operating limitations and other requirements. The facility is also considered to be in a non-remote area therefore the > 500 hp engines will be equipped with NSCR (catalyst systems) required for rich burn engines.

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

RESPONSE: Alta Mesa will perform the required test in accordance with 63.6620 procedures and Table 4 by demonstrating compliance with the CO concentration limits.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

RESPONSE: In accordance with Table 2d the facility is considered to be in a non-remote area therefore the > 500 hp engines will be equipped with NSCR (catalyst systems) required for rich burn engines. Table 2B is not applicable – non CI RICE and non-major source facility.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

RESPONSE: NA – This engine is not considered a "CI RICE"

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

RESPONSE: NA – This engine is not considered a "CI RICE"

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in §63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in §63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

RESPONSE: NA – This engine is not considered a "CI RICE"

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

RESPONSE: NA – This engine is not considered a "CI RICE"

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in §63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at

area sources of HAP that meet the definition of remote stationary RICE in §63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in §63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

RESPONSE: The Idaho Refrigeration Plant is considered non-remote.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

§63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

RESPONSE: NA – This engine is not considered a "CI RICE"

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

§63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

RESPONSE: Alta Mesa will comply with all general requirements that are applicable to the identified sources.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

Testing and Initial Compliance Requirements

§63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

RESPONSE: This Section is not applicable - the Alta Mesa Idaho Refrigeration Plant (Processing Plant) is considered an area source of HAP emissions.

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

§63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

RESPONSE: This Section is not applicable - the Alta Mesa Idaho Refrigeration Plant (Processing Plant) is considered an area source of HAP emissions.

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance

date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

RESPONSE: Alta Mesa will comply with the applicable performance testing requirements found in section 6612 (initial performance test), 6615 (subsequent performance test), and 6620 (testing procedures).

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§63.6615 When must I conduct subsequent performance tests?

RESPONSE: Alta Mesa will comply with the applicable performance testing requirements found in section 6612 (initial performance test), 6615 (subsequent performance test), and 6620 (testing procedures).

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

RESPONSE: Alta Mesa will comply with Table 3 of this subpart as appropriate.

§63.6620 What performance tests and other procedures must I use?

RESPONSE: Alta Mesa will comply with the applicable performance testing requirements found in section 6612 (initial performance test), 6615 (subsequent performance test), and 6620 (testing procedures).

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad \text{(Eq. 1)}$$

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Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209\ F_d}{F_c} \quad \text{(Eq. 2)}$$

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Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu)

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq. 3)$$

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Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

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Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load

in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

RESPONSE: NA - CEMS will not be used on the engines.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is

complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

RESPONSE: NA – A CPMS Program will not be used on the engines.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric

flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

RESPONSE: NA – Landfill or digester gas is not used as fuel.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

RESPONSE: NA – This facility is located at an area source of HAP emissions.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

RESPONSE: Alta Mesa will operate the engines according to proper manufacturer's recommendations.

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

RESPONSE: Alta Mesa will not operate emergency RICE.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

RESPONSE: NA – The engines are not CI Engines.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart.

The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

RESPONSE: Alta Mesa will operate the engines according to proper manufacturer's recommendations and maintenance procedures.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

RESPONSE: Alta Mesa will comply with all initial compliance demonstrations applicable to this source. Proper notifications will be made at least 60 days prior to performance test. Compliance demonstrations will be submitted within 60 days following the completion of the relevant compliance demonstrations.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

RESPONSE: Alta Mesa will demonstrate continuous compliance through the annual compliance test according to section 6640(c) of this part.

§63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

RESPONSE: Alta Mesa will continuously monitor engine operations as necessary to comply with this subpart.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

RESPONSE: Alta Mesa will perform and complete all required tests, reports, and notifications in accordance with this rule. Specifically, the annual compliance test will be completed in accordance with 6640(c) of this subpart.

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating

parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand RESPONSE, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand RESPONSE for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation

(NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand RESPONSE provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand RESPONSE, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand RESPONSE provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand RESPONSE, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand RESPONSE to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

RESPONSE: Alta Mesa will comply with the notification requirements found in 63.7 (b) and (c) section 1 and 2.

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

RESPONSE: Alta Mesa will submit all required pretest notifications and compliance demonstrations according to these sections and within the appropriate timeframes

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

RESPONSE: Alta Mesa will submit all required compliance reports according to these sections and within the appropriate timeframes.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this

subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise

affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The

report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6655 What records must I keep?

RESPONSE: Alta Mesa will maintain records in accordance with (a)(1)-(5).

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

RESPONSE: NA – No CEMS or CPMS programs are required.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

§63.6660 In what form and how long must I keep my records?

RESPONSE: Alta Mesa will maintain the appropriate records specified in (a)-(c) of this section.

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas

equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

RESPONSE: This Section is not applicable - the Alta Mesa Idaho Refrigeration Plant (Processing Plant) is considered an area source of HAP emissions.

IDEQ PTC MODELING PROTOCOL AND REPORTS

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 NORTH HILTON, BOISE, ID 83706 · (208) 373-0502

C. L. "BUTCH" OTTER, GOVERNOR
CURT FRANSEN, DIRECTOR

November 20, 2013

VIA EMAIL

Ms. Kaitlyn Mathews
Alta Mesa Services, LP
15021 Katy Freeway, #400
Houston, Texas 77094-1813

RE: Facility ID No. TBD, Alta Mesa Services, LP, Natural Gas Production, Idaho Refrigeration Plant
Modeling Protocol Approval for Initial Permit to Construct for Refrigeration Plant

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- Two Caterpillar G398 TA engines driving residue gas compressors (ENG1, ENG2),
- A 750 MMBtu/hr glycol reboiler (RBLR-HTR1),
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The modeling protocol has been reviewed and DEQ has the following comments.

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- If the maximum capacity of the source (i.e., the post-project facility-wide emissions) to emit an air pollutant under its physical and operational design without consideration of limitations on emissions such as air pollution control equipment, restrictions on hours of operation and restrictions on the type and amount of material combusted, stored or processed facility-wide emissions of any regulated pollutant is below 100 tons per year, and

- The maximum capacity of the source (i.e., the post-project facility-wide emissions) to emit a particular criteria pollutant under its physical and operational design considering limitations on emissions such as air pollution control equipment, restrictions on hours of operation and restrictions on the type and amount of material combusted, stored or processed are less than 10% of the significant emission rates set out in Section 006 of the Idaho Air Rules (i.e., are below regulatory concern, "BRC").

Based on the emissions inventory presented in the modeling protocol, emissions of PM_{10}, $PM_{2.5}$, and SO_2 from the proposed project are BRC. Modeling is not required for these pollutants for any averaging period.

Comment 2. At this time, DEQ does not require project-specific modeling for emissions of VOCs from minor source projects.

Comment 3. State-regulated Toxic Air Pollutants (TAPs). In accordance with Section 210.20 of the Idaho Air Rules, a compliance demonstration with state-only TAPs standards (see Sections 585 and 586 of the Rules) is not required for:

- TAPs emitted from engines subject to NSPS 40 CFR 60 Subpart IIII or JJJJ and/or NESHAP 40 CFR 63 Subpart ZZZZ, or
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Comment 4. The "largest" sources of NO_2 emissions at the proposed project are the two natural gas-fired compressor engines. The NO_x emission rates for each of these engines were described as 1.3 lb/hr in the modeling protocol. Representative stack parameters for a CAT 398 gas-fired engine[1] and the approximate nearest distance from the engine exhaust to ambient air at the proposed Alta Mesa project are shown in Table P-2, for comparison with assumptions used to generate the modeling thresholds. Although the engine stack height will typically be fairly short, the exit temperature and velocity provide substantial greater thermal buoyancy and momentum than assumed for the modeling thresholds. As shown in the table, the Level II modeling thresholds are appropriate for this project.

Table P-2. COMPARISON OF SITE AND THRESHOLD MODELED PARAMETERS

	Stack Height (m)	Exit Dia. (m)	Exit Temp (°F/K)	Exit Velocity (m/s)	Downwash?	Distance to Ambient Air (m)
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Level I Threshold	10	0.3 m	150/339	10	Yes	Minimum 100 m
Level II Threshold	15	1.0 m	260/400	20	Yes	Minimum 100 m

Comment 5. Based on the emission rates presented in the modeling protocol, facility-wide emissions of CO are below the Level I modeling threshold, and emissions of NO_x are below the Level II

[1] BLM, Moxa Arch Area Infill Gas Development Project, Draft EIS, Appendix C: Air Quality Technical Support Document, Appendix B: Cumulative Emissions Inventory, Table B4.1.2, County FIPS = 103, Site ID = 0010, accessed at http://www.blm.gov/wy/st/en/info/NEPA/documents/kfo/moxa_arch.html

modeling threshold for the annual averaging period. Modeling is therefore not required to demonstrate compliance with CO or annual NO_x air quality standards.

Comment 6. The $PM_{2.5}$ 24-hour and annual significant impact levels (SILs) were vacated and remanded by the D.C. Circuit of the U.S. Court of Appeals in a decision issued on January 22, 2013. This decision directly affects "major" projects subject to the Prevention of Significant Deterioration (PSD) program. For minor source permitting, however, DEQ has determined the SILs for $PM_{2.5}$ and other criteria pollutants will still be used as a screening tool to evaluate when a cumulative impact analysis must be performed. The SILs may be used as a *screening level* below which impacts of a new source or modification can be considered to not cause or significantly contribute to a NAAQS violation only if other criteria are met.

Additional considerations used to evaluate the need for a cumulative impact analysis include the following:

1. Other potentially co-contributing sources in the area. Idaho Power's Langley Gulch Power Plant is located about 1.6 km (1 mile) south of the proposed Alta Mesa processing plant. The initial permit to construct for the power plant was based on the following emission levels:

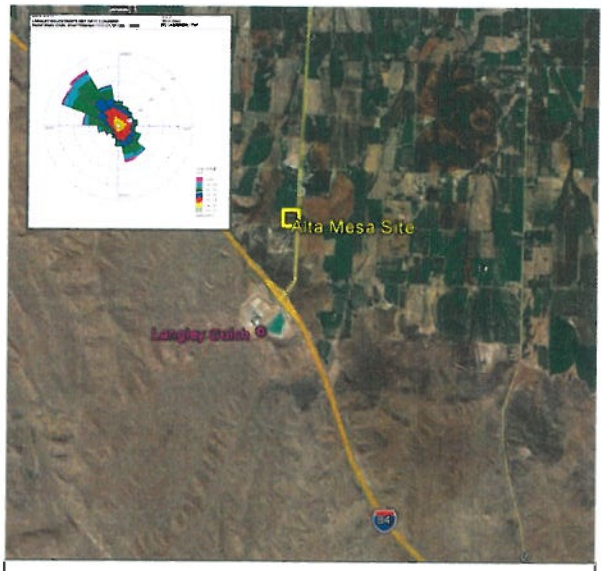

Figure P-1. PROXIMITY TO LANGLEY GULCH POWER PLANT

Tons/yr	
$PM_{10} = PM_{2.5}$	= 52.4
NO_x	= 88.2
SO_2	= 13.4
CO	= 278.3

The maximum annual NO_2 modeled impact from power plant screening analyses was 0.910 $\mu g/m^3$.[2] In simple terrain, this can be adjusted to represent a 1-hour impact by dividing by 0.08, resulting in a maximum 1-hr NO_2 ambient impact equal to 11.4 $\mu g/m^3$.

2. Background concentrations for the area impacted.

NW Airquest Tool, http://lar.wsu.edu/nw-airquest/lookup.html, 43.917 °N, 116.815 °W

These results reflect monitoring data that include exceptional events:

1-hr NO_2 background (2009-2011): 31 ppb = 58.3$\mu g/m^3$

Annual NO_2 background (2009-2011): **2.6** ppb = 4.9 $\mu g/m^3$

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EPA AirData, NO_2, 2006-2008, Burke, Dun, and McKenzie Counties, North Dakota, and Jackson County, South Dakota, general background monitors, agricultural locations, average of 2nd high values plus one standard deviation, does not include exceptional events:

1-hr NO_2 background (2006-2008): 22.5 ppb = 42.4 $\mu g/m^3$

Annual NO_2 background (2006-2008): 1.8 ppb = 3.5 $\mu g/m^3$

3. Results of the SIL analysis in relation to other sources and background concentrations.

   The EPA's interim SIL for the 1-hr NO_2 NAAQS is 4 ppb (7.5$\mu g/m^3$). Combining the SIL with the potential impacts from the Langley Gulch Power Plant (11.4 $\mu g/m^3$) and a conservative background value equal to 58.3 $\mu g/m^3$ results in a total ambient impact of 77.2 $\mu g/m^3$, or only about 41% of the applicable 188 $\mu g/m^3$ 1-hrNO_2 NAAQS.

4. The presence of sensitive receptors in the area such as residences, schools, hospitals, and parks. No nearby sensitive receptors were identified in DEQ's brief review.

If the maximum ambient impact is less than 7.5 $\mu g/m^3$ from the increase in 1-hr NO_2 emissions associated with the proposed project, a full-impact analysis will not be required to demonstrate compliance with the 1-hr NO_2 NAAQS.

Comment 7. Facility-wide emissions of NO_x shown in the modeling protocol are 2.86 lb/hr, with the two compressor engines contributing 2.6 lb/hr (~91%) to the total. DEQ's modeling threshold emission rates were set—based on screening-level modeling analyses—to ensure that ambient air quality impacts would be below significance. The Level II modeling threshold for 1-hr NO_2 is 2.4 lb/hr. The maximum 1-hr NO_2 ambient impact from this project would be about 9 $\mu g/m^3$, using a simple ratio: 7.5 $\mu g/m^3$ x (2.86 lb/hr)/(2.4 lb/hr). Combined with impacts from the Langley Gulch Power Plant and a conservative background concentration, results of a full-impact analysis for this project can reasonably be expected to be below 50- 60% of the 188 $\mu g/m^3$ 1-hr NO_2 NAAQS.

Based on the emissions presented in the modeling protocol, the proposed facility layout, the prevailing winds, and the nature of the emission sources, dispersion modeling will not be required for this project. If you have any questions or comments, please contact me at (208) 373-0220 or cheryl.robinson@deq.idaho.gov.

Sincerely,

Cheryl Robinson

Cheryl A. Robinson, P.E.
NSR Modeling Analyst, Air Quality Division

ec: Kaitlyn Mathews, Alta Mesa Services, LP, kmathews@altamesa.net
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STATE OF IDAHO
DEPARTMENT OF
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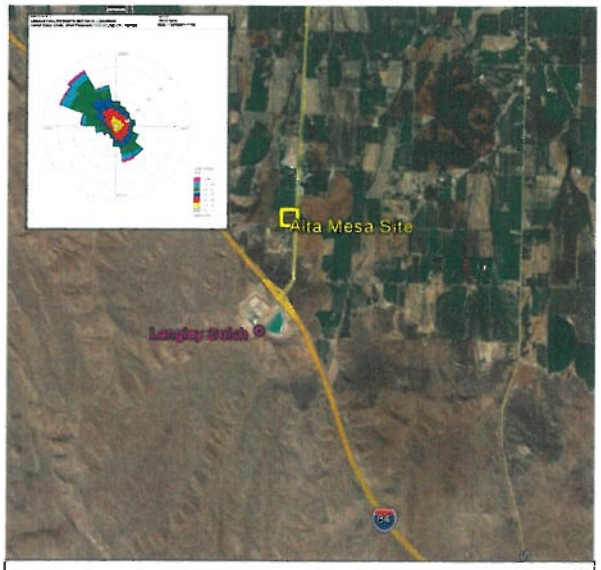

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Department of Environmental Quality - Air Quality Division
Toxic Air Pollutant (TAP) Preconstruction Compliance Application Completeness Checklist

This checklist is designed to aid the applicant in submitting a complete preconstruction compliance demonstration for toxic air pollutants (TAPs) in permit to construct applications. The applicant must place a check mark in the box for each section below that applies.

I. Actions Needed Before Submitting Application

X Refer to the Rule. Read the Demonstration of Preconstruction Compliance with Toxic Standards contained in IDAPA 58.01.01.210 (Rules Section 210) Rules for the Control of Air Pollution in Idaho (Rules). Toxic air pollutants (TAPs) are regulated in accordance with Rules Section 210 only from emission units constructed or modified on or after July 1, 1995.

Determine if a new (constructed after June 30, 1995) emission unit has the potential to emit a TAP listed in IDAPA 58.01.01.585 (Rules Section 585) or IDAPA 58.0101.586 (Rules Section 586). Potential toxic air pollutants can be determined by reviewing commonly available emission factors, such as EPA's AP-42, or calculating emissions using a mass balance. For TAPs that are emitted but not listed in Rules Section 585 and 586, contact the Air Permit Hotline at 877-5PERMIT.

Determine if the proposed construction or modification is exempt from the need to obtain a permit to construct in accordance with IDAPA 58.01.01.220-223. Use the Exemption Criteria and Reporting Requirements for TAPs IDAPA 58.01.01.223 checklist to assist you in the exemption determination. If the source does not qualify for an exemption in accordance with IDAPA 58.01.01.220-223 complete the following checklist and submit it with the permit application. Please note that fugitive TAP emissions are not included in the IDAPA 58.01.01.223 exemption determination, but fugitive TAP emissions are included in the analysis if a permit is required. Stated another way: if a source is required to obtain a Permit to Construct because it does not meet the exemption criteria for any reason all TAP emissions, including fugitive TAPs, are included in the compliance demonstration in the application for the permit to construct. Should you have any questions regarding the fact that all TAPs, including fugitive TAPs, are included in the TAP preconstruction compliance demonstration submitted with a permit to construct application you may call the Air Permit Hotline at 877-5PERMIT.

Will the new or modified source result in new or increased potential emissions of TAPs?

X Yes. If yes, continue to section II.

☐ No. If no, no further action is required.

II. Application Content

If a new source has the potential to emit a TAP, or if a modification to an existing source increases the potential to emit of a TAP, then one of the following methods (A-J) of demonstrating TAP preconstruction compliance must be documented for each TAP. Standard methods are one of A-C. The applicant may also use one of the specialized methods in D-J. Fugitive TAP emissions shall be included in the analysis. The compliance methods are based on the requirements of Rules Section 210. Applicants are often able to demonstrate preconstruction TAP compliance using a combination of methods A and B.

Emission Calculations

Emissions calculation methodologies used are dependent on whether a specific TAP is a non-carcinogen or a carcinogen and whether the compliance method chosen from the list below calls

for controlled or uncontrolled emissions. Non-carcinogens are regulated based on a 24-hour averaging period and emission rates used for comparison to the non-carcinogen screening emissions level (EL) should be the maximum controlled or uncontrolled emissions quantity during any 24-hour period divided by 24. Carcinogens are regulated as a long term increment and emission rates used for comparison to the carcinogen EL should be the maximum controlled or uncontrolled emissions quantity during any 1 year period divided by 8760.

Modeling Analyses

Atmospheric dispersion modeling is required when controlled TAP emissions rates exceed ELs. Modeling analyses should be conducted in accordance with IDAPA 58.01.01.210.03. Quantification of Ambient Concentrations and the State of Idaho Air Quality Modeling Guideline (http;//www.deq.idaho.gov/air/data_reports/publications.cfm#model). For non-carcinogen 24-hour increments, compliance is demonstrated using the maximum modeled 24-hour-averaged concentration from available meteorological data (typically a five-year data set). For carcinogen long-term increments, compliance is demonstrated using the maximum modeled average concentration for the duration of the data set (one-year to five-year data set).

A submitted modeling report should clearly specify modeled emissions rates and results. All electronic model input files should be submitted, including BPIP input files.

Poly aromatic Hydrocarbons

Questions often arise regarding polyaromatic hydrocarbons as they are listed in Rules Section 586 of the Rules. The following two points are provided for clarification.

1) The following group of 7 PAH's (i.e. named POM), shall be combined and considered as one TAP equivalent in potency to benzo(a)pyrene:

   Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a, h) anthrancene, chrysene, indeno(1,2,3,-cd) pyrene, benzo (a) pyrene

2) All other PAH's are considered as a single pollutant and the emission of each is compared the PAH increment listed in Rules Section 586.

Compliance Methods

Fill in letter(s) (A-J) from the list below for TAP compliance demonstration method(s) used: _____.

A. TAPs Compliance Using Uncontrolled Emissions (Rules Section 210.05)

X Calculate the uncontrolled emissions (Rules Section 210.05) of each TAP from new emissions units. Uncontrolled emission rates are emissions at maximum capacity without the effect of physical or operational limitations. See Quantification of Emission Rates (Rules Section 210.02). Show calculations and state all assumptions.

X Calculate the increase of TAP emissions from modified emissions units. Show calculations and state all assumptions. The increase in emissions for a modified emission unit is determined by subtracting the potential to emit the TAP before the modification from the uncontrolled potential to emit after the modification. In conducting this analysis please note the following for TAP emission rate increase determinations:

Uncontrolled emission rates after the modification are emissions at maximum capacity without the effect of physical or operational limitations.

When determining the emissions increase from existing permitted emissions units the emission rate before the modification is equivalent to the emission limits contained in the permit for the

TAPs or, if there no emission limits in the permit, by determining what the emission rate is under the physical or operational limitations contained in the permit.

X Aggregate the uncontrolled emissions for each TAP from all new emissions units with the increase in emissions from all modified emissions units.

X If the aggregated emissions increase for each TAP from the new and modified units, as determined above, are less than or equal to the respective TAP screening emissions level (EL) then preconstruction compliance with toxic standards has been demonstrated and no further analysis is required. Submit a table comparing the uncontrolled emissions rate to the applicable EL.

If aggregated emissions are greater than the respective screening emissions level (EL) for any pollutants, use another compliance demonstration method for those pollutants, such as methods B, C, or D.

B. TAP Compliance Using Uncontrolled Ambient Concentration (Rules Section 210.06)

X Determine the uncontrolled emissions of each TAP from new emission units and the increase in emissions from all modified emissions units as described above in compliance Method A. Show calculations and state all assumptions.

X Model the uncontrolled emissions of each TAP from new emissions units and the increase in emissions from all modified emissions units.

X If the uncontrolled ambient concentration is less than or equal to the acceptable ambient concentration increment listed in Rules Section 585 and 586 no further procedures for demonstrating preconstruction compliance will be required for that TAP as part of the application process. Submit a table comparing uncontrolled ambient concentrations to the applicable acceptable ambient concentration.

C. TAP Compliance Using Controlled Ambient Concentrations (Rules Section 210.08)

☐ Determine the controlled emissions from new emissions units and the controlled emission increase from modified emissions units. Show all calculations and state all assumptions, including the control methods.

☐ Model the controlled emissions of each TAP from new emissions units and the increase in controlled emissions from all modified emissions units.

TAP emissions levels (EL) included in Rules Section 585 and 586 are derived based on generic modeling. If the sum the of emissions from new and modified sources is below the EL compliance is demonstrated without the need to conduct site-specific dispersion modeling.

☐ If the controlled ambient concentration from emission increases from new emissions units and modified emissions units is less than the applicable acceptable ambient concentration no further procedures for demonstrating preconstruction compliance are required.

☐ The Department shall include an emission limit for the TAP in the permit to construct that is equal to or, if requested by the applicant, less than the emission rate that was used in the modeling (Rules Section 210.08.c).

In some instances the Department may consider a throughput limit or other inherently-limiting operational restriction in a permit as an effective emission limit for the TAP, rather than including a specific emission rate limit.. Note that the applicant may model uncontrolled emissions as described in compliance Method B in an attempt to avoid TAPs emissions limitations.

D. TAPs Compliance for NSPS and NESHAP Sources (Rules Section 210.20)

X If the owner or operator demonstrates that the TAP emissions from the source or modification is regulated by 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63, no further procedures for demonstrating preconstruction compliance will be required for that TAP.

X Provide a demonstration that the TAP is regulated under 40 CFR Part 60, 40 CFR Part 61 or 40 CFR Part 63. This demonstration must be specific for each TAP emitted.

E. TAP Compliance Using Net Emissions (Rules Section 210.09)

An applicant may use TAP net emissions to show preconstruction compliance; however this analysis may require more work than some of the others procedures available to demonstrate preconstruction compliance. When netting, all emissions increases and decreases of the TAP that have occurred within five years must be included in the analysis as described below.

☐ Determine the net emission increase for a TAP. A net emissions increase shall be an emission increase from a particular modification plus any other increase and decreases in actual emissions at the facility that are creditable and contemporaneous with particular modification (Rules Section 210.09). Show all calculations and state all assumptions.

☐ A creditable increase or decrease in actual emissions is contemporaneous with a particular modification if it occurs within five (5) years of the commencement of the construction or modification (Rules Section 210.09.a).

Actual emissions are (Rules Section 006.03):

- ☐ In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of normal source operation. The Department shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, productions rates, and types of materials processed, stored, or combusted during the selected time period.

- ☐ The Department may presume that the source-specific allowable emissions for the unit are equivalent to actual emissions of the unit.

- ☐ For any emission unit (except electric utility steam generating units) that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

☐ Do not include emissions increases from emission units that have an uncontrolled emission rate that is 10% or less than the applicable screening emission level (EL) in Rules Section 585 and 586 (Rules Section 007.09.c.ii) and do not include emission increases from environmental remediation sources (Rules Section 007.09.c.iii). Show all calculations and state all assumptions.

☐ If the net emission increase is less than or equal to the applicable screening emissions level (EL) listed in Rules Section 585 and 586, no further procedures for demonstrating preconstruction compliance will be required (Rules Section 210.09.c).

☐ The Department shall include emission limits and other permit terms for the TAP in the permit to construct that will assure that the facility will be operated in the manner described in the preconstruction compliance demonstration (Rules Section 210.09.d).

In some instances the Department may consider a throughput limit or other inherently-limiting operational restriction in a permit as an effective emission limit for the TAP. rather than including a specific emission rate limit..

F. TAP Compliance Using Net Ambient Concentration (Rules Section 210.10)

☐ Determine the emission increase from the new source or modification, and all other creditable emission increases and decrease using the methods described above in compliance Method E.

☐ Model the emissions increases and decreases for each TAP. Modeling TAP decreases is accomplished by using negative valued emissions rates in the model input.

☐ If the net ambient concentration is less than or equal to the applicable ambient concentration increment listed in Rules Section 585 and 586, no further procedures for demonstrating preconstruction compliance are required.

☐ The Department shall include emission limits and other permit terms for the TAP in the permit to construct that will assure that the facility will be operated in the manner described in the preconstruction compliance demonstration (Rules Section 210.10.d).

In some instances the Department may consider a throughput limit or other inherently-limiting operational restriction in a permit as an effective emission limit for the TAP, rather than including a specific emission rate limit..

G. TAP Compliance Using T-RACT Ambient Concentration for Carcinogens (Rules Section 210.12)

The applicant may use T-RACT to demonstrate preconstruction compliance for TAPs listed in Rules Section 586 only.

T-RACT is an emissions standard based on the lowest emission of TAPs that a particular source is capable of meeting by application of control technology that is reasonably available, as determined by the Department, considering technological and economic feasibility. If control technology is not feasible, the emission standard may be based on the application of a design, equipment, work practice or operational requirement, or combination thereof (Rules Section 007.16).

T-RACT Submittal Requirements

☐ The applicant shall submit the following information to the Department identifying and documenting which control technologies or other requirements the applicant believes to be T-RACT (Rules Section 210.14).

The technical feasibility of a control technology or other requirements for a particular source shall be determined considering several factors including but not limited to:

☐ Process and operating procedures, raw materials and physical plant layout.

☐ The environmental impacts caused by the control technology that can not be mitigated, including but not limited to, water pollution and the production of solid wastes.

☐ The energy requirements of the control technology.

The economic feasibility of a control technology or other requirement, including the costs of necessary mitigation measures, for a particular source shall be determined considering several factors including, but not limited to:

- ☐ Capital costs.
- ☐ Cost effectiveness, which is the annualized cost of the control technology divided by the amount of emission reduction.
- ☐ The difference in costs between the particular source and other similar sources, if any, that have implemented emissions reductions.

☐ Compare the source's or modification's approved T-RACT ambient concentration to the applicable acceptable ambient concentration increment listed in Rules Section 586 multiplied by a factor of 10. If the sources approved T-RACT concentration is less than or equal to 10 times the applicable acceptable ambient concentration increment listed in Rules Section 586, no further procedures for demonstrating preconstruction compliance will be required.

☐ If an application is submitted to the Department without T-RACT and determined complete, and T-RACT is later determined to be applicable the completeness determination of the application will be revoked until a supplemental application is submitted and determined complete. When the supplemental application is determined complete, the timeline for agency action shall be reinitiated (Rules Section 210.13.b).

☐ If the Department determines that the source has proposed T-RACT, the Department shall develop emission standards to be incorporated into a permit to construct.

In some instances, the Department may consider a throughput limit or other inherently limiting operational restriction in a permit as an effective emission limit for the TAP, rather than including a specific emission rate limit..

H. TAP Compliance Using the Short Term Source Factor (Rules Section 210.15)

☐ For short term sources, the applicant may utilize a short term adjustment factor of ten (10) only for a carcinogenic pollutant listed in Rules Section 586. For a carcinogen listed in Rules Section 586 multiply either the applicable acceptable ambient concentration increment or the screening emission rate (EL), but not both, by ten (10) to demonstrate preconstruction compliance (Rules Section 210.15).

☐ A short term source is any new stationary source or modification to an existing source, with an operational life no greater than five (5) years from the inception of any operations to cessation of actual operations (Rules Section 210.15).

I. TAP Compliance for Environmental Remediation Sources (Rules Section 210.16)

☐ For remediation sources subject to or regulated by the Resource Conservation and Recovery Act and the Idaho Rules and Standard for Hazardous Waste, or the comprehensive Environmental Response, Compensation and Liability Act or a consent order, if the estimated ambient concentration is greater than the acceptable ambient impact increment listed in Rules Section 585 and 586, Best Available Control Technology shall be applied and operated until the estimated uncontrolled emission from the remediation source are below the applicable acceptable ambient concentration increment (Rules Section 210.16).

J. TAP Compliance Using Offset Ambient Concentration (Rules Section 210.11)

☐ Contact the Department prior to proposing to utilize Offset Ambient Concentrations to demonstrate preconstruction compliance.

☐ Emission offsets must satisfy the requirements for emission reduction credits (Rules Section 460).

- The proposed level of allowable emissions must be less than the actual emissions of the emissions units providing the offsets (Rules Section 460.01).
- An air quality permit must be issued that restricts the potential to emit of the emission unit providing the offset.
- Emission reduction imposed by local, state or federal regulations or permits shall not be allowed.

☐ Compare the source's or modifications approved emission offset ambient concentration to the applicable acceptable ambient concentration listed in Rules Section 585 and 586. If the source's or modifications approved offset concentration is less than the acceptable ambient concentration listed in Rules Section 585 and 586, no further procedures for demonstrating preconstruction compliance will be required.

☐ The Department shall include emission limits and other permit terms for the TAP in the permit to construct that will assure that the facility will be operated in the manner described in the preconstruction compliance demonstration (Rules Section 210.10.d).

MODELING PROTOCOL CHECKLIST

Introduction and Purpose

- General overview, facility description, description of area where facility is located.

Response: The proposed facility is a Greenfield site on a parcel of land in Payette County, Idaho. The proposed site is located on the west side of State Highway 30 approximately ¾ mile north of the State Highway 30 and U.S. Highway 84 intersection (see Aerial Photo map in Attachment 1). The proposed site is located in an agricultural area with few residences or other critical receptors in the vicinity.

- Project overview.

Response: Alta Mesa Services, LP (hereinafter "AM") applied for this Permit to Construct (PTC) to allow construction of a facility necessary for the processing of natural gas and natural gas condensate. AM and its working interest partners acquired the interest of Bridge Energy Inc. Since the purchase of Bridge's interest, AM has developed additional wells and tested some of the existing wells, giving it sufficient information to justify the construction of the processing plant. The information collected by AM demonstrates that the proposed processing facility is necessary to be able to place the recovered raw gas into a pipeline quality state and to remove the associated natural gas liquids for sale. After processing, the natural gas will be delivered into the nearby Williams Northwest transmission pipeline for transport to market.

- Goals of the air quality impact analysis (i.e., demonstrate compliance for a PTC for a modification, PTC for a new facility, or a Tier II operating permit).

Response: The goals of this air quality analysis are to demonstrate compliance for a PTC for a new facility.

- Applicable regulations and requirements.

Response: The PTC application contains a complete review of the applicable air quality regulations and requirements.

- Pollutants of concern.

Response: See Attachment 2. The proposed new facility will be a source of emissions of the following criteria pollutants: nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter less than 10 micrometers in diameter (PM_{10}), particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$), and sulfur dioxide (SO_2). The emission increases in PM_{10}, $PM_{2.5}$, and SO_2 will be less than the 10 percent of the Significant Emission Rates defined in 40 CFR 52.21(b)(23). Because of this, these three pollutants are exempted from additional modeling review in accordance with verbal guidance from IDEQ modeling staff.

The levels of CO and NO2 emission increases are next evaluated against the Levels I and II thresholds specified in Table 2 of the *State of Idaho Guidelines for Performing Air Quality Impact Analyses.* CO meets the Level 1 exemption threshold in the table and is

excluded from additional modeling review. A formal modeling analysis is required for the emissions of NO_2.

A similar review is performed for the toxic air pollutants proposed to be emitted from the facility (Attachment 3). Since the two Caterpillar engines (EPNs: G398-A and G398-B) are subject to 40 CFR 63 Subpart ZZZZ, the toxic air pollutant emissions from these engines are considered regulated and are exempt from this TAP review. The proposed emissions increases of benzene, cyclohexane, ethylbenzene, formaldehyde, heptane, n-hexane, methylcyclohexane, pentane, toluene, 2,2,4-trimethylpentane, and xylene are compared against the TAP increments provided in Idaho Air Rules Section 585 and 586. As a result of this analysis, the emissions of all toxic air pollutants are exempt from additional modeling review.

Emissions and Source Data

- Description of facility processes and emissions controls affected by the permitting action.

Response: The requested information is enclosed in Attachment 4.

- List of emissions points that will be included in the modeling analyses.

Response: The requested emission point table is enclosed in Attachment 5.

- Present a table showing current actual/allowable, the future allowable emission rates, and the requested emissions increase.

Response: Because this facility is a Greenfield facility, there are no current actual/allowable emission rates. The future allowable emission rates are listed in the table contained in Attachment 5.

- Good engineering practice (GEP) stack-height analysis for any stacks approaching GEP height.

Response: All stack release heights used in this modeling are expected to be far below the GEP formula height.

- Graphic showing the facility layout: location of sources, buildings, emissions points, and fence lines.

Response: Requested graphic is enclosed in Attachment 6.

- Description of methods used to calculate or otherwise determine source parameters for each source included in the modeling analyses.

Response: All emission release parameters for the stack emission sources will be based on data provided by the vendor.

- Methodology for including area and volume sources in the modeling analysis, including justification and calculations of initial dispersion coefficients and release heights.

Response: There will not be a requirement to model any area or volume sources in this project.

- Methodology for including/excluding sources from the modeling analyses.

Response: All stack emission sources are included in the modeling.

Air Quality Modeling Methodology

- Description of model selection and justification. This may be minimal in cases where the regulatory guideline model is used (AERMOD in most cases).

Response: AERMOD will be used in this modeling analysis.

- Description of model setup and application.
    - Model options (i.e., regulatory default). Describe and provide justification for any non-default settings.

Response: This modeling analysis will not use any non-default settings.

    - Averaging periods used in the analyses and how emissions rates were calculated for specific averaging periods.

Response: The emission allowables for all averaging periods proposed in the PTC are based on maximum hourly emission rates. For example, the proposed annual emission allowable is the product of the maximum hourly emission rate with all the hours of the year. No emission rate averaging is used in the PTC application or will be used in the modeling.

    - Land-use analysis in all cases where "urban" is used and in cases where land use is not obviously "rural."

Response: The land use in the vicinity of the proposed plant qualifies as A2 and A3 land use types. Rural dispersion parameters will be used in this modeling.

    - Methods used to account for building downwash in the analyses.

Response: The engine houses will be the only building structures on the property. Direction-specific building dimensions and the dominant downwash structure parameters used as input to the model are determined using the BPIP-Prime software, a built-in part of *BEEST for Windows*. This software incorporates the algorithms of the U.S. EPA approved BPIP-Prime, version 04274. BPIP-Prime is designed to incorporate the concepts and procedures expressed in the GEP Technical Support document, the Building Downwash Guidance document, and other related documents.

    - Treatment of any chemical transformations (e.g., NO to NO_2) accounted for in the analyses.

Response: The applicant anticipates being able to demonstrate compliance with the NO_2 NAAQS by assuming that all NOx is NO_2. IDEQ Modeling staff will be contacted for guidance if Ozone Limiting Method or some other NOx to NO_2 partitioning method becomes necessary.

- Any other unique methods or data used.

Response: No other unique modeling methods or data are planned.

- Description of how elevations of sources, buildings, and receptors were determined.

Response: Terrain elevations for sources, receptors, and buildings will be determined using terrain elevations from the National Elevation Datasets developed by the USGS.

- Receptor network.
  - Description of receptor grids – include methodology for ensuring the maximum concentration will be estimated.

Response: This modeling study will use regular Cartesian receptor grids consisting of 100 meter receptor spacing anchored on the facility ambient boundary (fence line) extending out 5,000 meters from the property.

- Discussion/justification of ambient air boundary, including a description of how the general public will be excluded from areas not considered ambient air.

Response: The ambient air boundary at the site will be defined by a perimeter fence which will preclude public access.

- Meteorological data.
  - Selection of meteorological databases – justification of appropriateness of meteorological data to area of interest.

Response: The applicant requests that IDEQ provide appropriate meteorological data.

- Meteorological data processing.

Response: No meteorological data processing will be performed by the applicant since the data has already been processed by IDEQ modeling staff.

- Meteorological data analysis (e.g., wind rose).

Response: No additional meteorological data analysis will be performed since the meteorological data has already been processed by IDEQ modeling staff.

- Background concentrations.

Response: IDEQ modeling staff will be contacted to obtain the appropriate background concentration if a SIL is exceeded.

Applicable Regulatory Limits

- Methodology for evaluation of compliance with standards (i.e., determination of design concentration).

Response: The maximum concentrations predicted by the model will be compared against the NO_2 SIL.

- Significant Impact analysis.
    - Comparison to SILs.

Response: The maximum 1-hour and annual concentrations of NO_X will be compared against the respective NO_2 SILs of 7.5 $\mu g/m^3$ and 1.0 $\mu g/m^3$.

    - TAPs analysis.

Response: A TAP analysis is not required.

- Cumulative NAAQS impact analysis.
    - NAAQS analysis.

Response: A cumulative NAAQS impact analysis is not anticipated being necessary.

- Presentation of results – state how the results of the modeling analysis will be displayed.

Response: The example tables in Appendix E of the *State of Idaho Guidelines for Performing Air Quality Impact Analyses* will be used to report the results of the modeling analysis.

ATTACHMENT 1

Aerial Photo Map

SITE LOCATION

BASE MAP INFO:

Aerial Photo dated 10/5/12

PHOTO EXTRACTED FROM: Google Earth Pro

1" = 1000 FT

Alta Mesa Idaho Refrigeration Plant

Payette County, Idaho

Aerial Photo

ATTACHMENT 2

Criteria Pollutant Modeling Threshold Evaluation

Alta Mesa Services
Criteria Pollutant Emission Summary
Modeling Threshold Evaluation

		Summary of Emissions	Significant Emission Rate (SER)	10% of SER	Below 10% of SER Threshold?	Level I Thresholds	Below Level I Thresholds?	Level II Thresholds	Below Level II Thresholds?	Modeling Required?
NOx	lb/hr	2.8620				0.2	No	2.4	No	Yes
	TPY	12.5357	40	4	No	1.2	No	14	Yes	
CO	lb/hr	2.8341				15	Yes, Exempted			No
	TPY	12.4132	100	10	No					
PM_{10}	lb/hr	0.1037								No
	TPY	0.4544	15	1.5	Yes, Exempted					
$PM_{2.5}$	lb/hr	0.1004								No
	TPY	0.4398	10	1	Yes, Exempted					
SO_2	lb/hr	0.0066								No
	TPY	0.0291	40	4	Yes, Exempted					

ATTACHMENT 3

Toxic Air Pollutant Modeling Threshold Evaluation

Alta Mesa Services
Toxic Air Pollutant Emission Summary
Modeling Threshold Evaluation

		Summary of Emissions	Section 586 Increment	Below Section 586 Increment?	Section 585 Increment	Below Section 585 Increment?	Modeling Required?
Benzene	lb/hr	0.000147	0.00080	Yes, Exempted			No
	TPY	0.000644					
Cyclohexane	lb/hr	0.0034			70	Yes, Exempted	No
	TPY	0.0149					
Ethylbenzene	lb/hr	0.0003			29	Yes, Exempted	No
	TPY	0.0011					
Formaldehyde	lb/hr	0.00001	0.00051	Yes, Exempted			No
	TPY	0.0001					
Heptane	lb/hr	0.0143			109	Yes, Exempted	No
	TPY	0.0625					
n-Hexane	lb/hr	0.0229			12	Yes, Exempted	No
	TPY	0.1005					
Methylcyclohexane	lb/hr	0.0030			107	Yes, Exempted	No
	TPY	0.0133					
Pentanes	lb/hr	0.0924			118	Yes, Exempted	No
	TPY	0.4049					
Toluene	lb/hr	0.0054			25	Yes, Exempted	No
	TPY	0.0237					
2,2,4-Trimethylpentane	lb/hr	0.0009			23.3	Yes, Exempted	No
	TPY	0.0040					
Xylene	lb/hr	0.0019			29	Yes, Exempted	No
	TPY	0.0083					

ATTACHMENT 4

Process Description

ALTA MESA SERVICES

IDAHO REFRIGERATION PLANT

PROCESS DESCRIPTION

Raw field gas enters the plant through an 8" gathering line and ball receiver. Liquids are separated from the gas in the Slug Catcher, and level controlled through level control valve where they are pressured to storage tank. The gas vapor leaving passes through a pressure control valve which prevents the pressure from exceeding 575 psig. It next enters the Gas to Gas Exchanger where the gas is cooled to 17 F and then to the Gas Chiller, where the gas is further cooled to -20 F using propane refrigerant. The gas is separated from the condensed natural gas liquids in the Cold Separator, and then delivered to shell side of the Gas to Gas Exchanger and consequently warmed to 50 F. This gas is approximately 95% of the inlet gas and is compressed to pipeline pressure (maximum 850 psig) by compressor(s). These compressors are driven by natural gas powered Caterpillar G398 TA richburn engines equipped with Emit Catalytic Oxidizers (**EPNs: ENG1 and ENG2**). There is a 200 Mbtu Engine heater (**EPN: ENG-HTR1**) which is also natural gas fired which can be used to warm the engines prior to start-up. This heater will rarely be used. The gas then passes through a Filter/Separator to remove particles, oil mist, etc. prior to delivery to Northwest Pipeline.

Liquids from the cold separator flow to the Gas/Liquid Exchanger, where they are warmed to 31 F. The flow is level controlled by a level control valve prior to entering the Glycol Separator. The Glycol Separator is a three phase separator and separates gas, natural gas liquids NGL(s), and glycol. The NGL(s) enter the top of the 10 tray stabilizer and trickle down through the trays. The bottom section of the stabilizer diverts the NGL(s) to the Reboiler, where indirect heat warms the NGL(s) to 180 F. This reboiler (Stabilizer Reboiler Heater) is a 1200 Mbtu natural gas fired unit (**EPN: STBL-HTR1**) which vaporizes the ethane and lighter components which travel from tray to tray up the tower warming the incoming NGL(s) and cooling the gas. The gas leaving the stabilizer is ethane rich and is recompressed back to the plant inlet.

The NGL(s) is cooled in an air cooled heat exchanger, as it passes to the storage tank. All vapors are combined and recompressed to the plant inlet for recycling. The fourth throw of the refrigeration compressor which is powered by a 250 HP electric motor.

Ethylene glycol is injected in the gas to gas exchanger and the chiller to inhibit hydrate formation as the inlet gas is cooled. The glycol travels through a series of exchangers and separators where it is separated by gravity from the NGL(s). Glycol exits the glycol separator and travels to a heat exchanger where it is warmed to 100 F by exchange with the hot glycol from the reboiler. This conserves energy and reduces viscosity for improved operation of the glycol filter. The glycol filter has a spun element and removes particles in the glycol 25 micron and larger. The filter is equipped with an air eliminator to remove vapor and maximize the filtration area.

The warm glycol then flows to the top of the packed section of the glycol reboiler where it acts as reflux for the steam generated in the reboiler to minimize glycol vaporization losses. The glycol is heated in the reboiler by a 750 Mbtu per hour (**EPN: RBLR-HTR1**) direct natural gas fired tube. By operating the reboiler at 235 to 240 F the glycol will maintain a concentration in the 75% range.

Hot glycol from the reboiler accumulates in the surge tank end of the reboiler and then flows to the shell side of the glycol exchanger where it cools to ambient temperature for suction to the glycol pump. The glycol pump is an electric motor driven plunger type which can boost the glycol up to 1000 psig if necessary. Glycol leaving the pump flows to the injection nozzles which are each sized for 1 gpm a 50 psi differential pressure. The nozzles are inserted into the exchangers with removable holders. Operating under the proper conditions the glycol should be evenly distributed across the face of each tubesheet.

The refrigeration is provided in a typical propane/kettle type system. The compressor lowers the pressure of the kettle thereby lowering the temperature of the bath. Propane from the kettle is compressed to 240 psig by a two stage compressor which is equipped with normal operating and shutdown devices. Propane from compressor discharge is condensed with an aerial electric fan driven cooler. The cooler outlet liquids flow to the propane accumulator.

Propane leaves the accumulator and flows to the liquid/liquid exchanger where it is further cooled by the cold NGL(s). A liquid level control valve maintains the propane level in the chiller.

The propane compressor is driven by a 250 HP electric motor. Fluctuations in the refrigeration load are controlled with a hot gas bypass from compressor discharge to the chiller propane inlet thereby maintaining a minimum suction pressure for the compressor.

Emission points are described in the description above, and include the Caterpillar G398 TA engines driving the residue gas compressors, the glycol reboiler, the stabilizer reboiler (Heater) and the engine heater.

ATTACHMENT 5

Refrigeration Plant Emission Summary

Alta Mesa Services
Idaho Refrigeration Plant Emission Summary

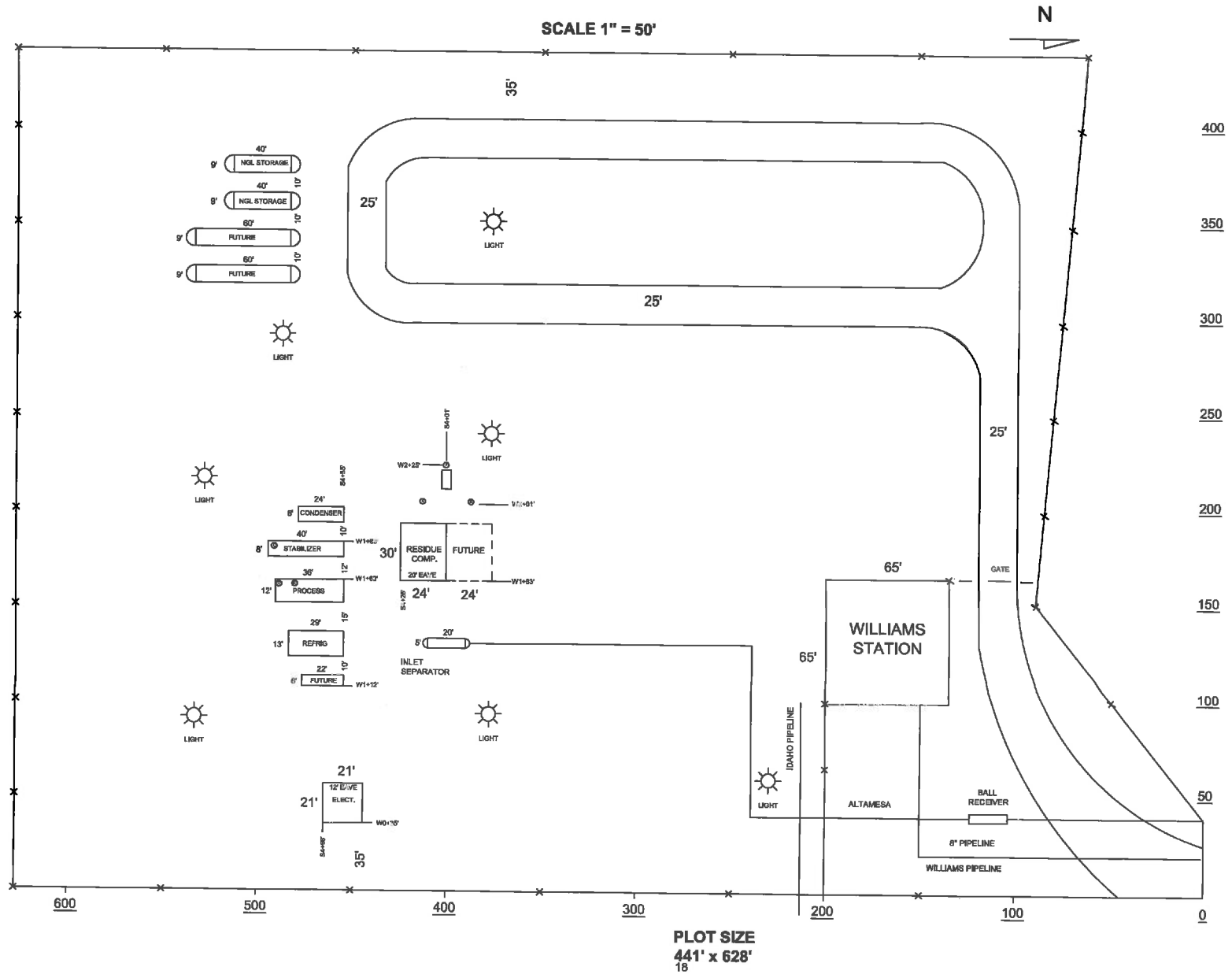
Source Description		Caterpillar G398 TA	Caterpillar G398 TA	Reboiler	Stabilizer Heater	Engine Heater	Fugitive Emissions	Summary of Emissions
Source Information		Compressor Engine - Richburn with Emit Catalytic Oxidizer	Compressor Engine - Richburn with Emit Catalytic Oxidizer	750 Mbtu/hr	1200 Mbtu/hr	200 Mbtu/hr		
EPNs		ENG1	ENG2	RBLR-HTR1	STBL-HTR1	ENG-HTR1	FUG1	
VOC_{total}	lb/hr	0.6718	0.6718	0.0034	0.0054	0.0009	1.0659	2.4191
	TPY	2.9425	2.9425	0.0147	0.0235	0.0039	4.6687	10.5958
NOx	lb/hr	1.3436	1.3436	0.0610	0.0976	0.0163		2.8620
	TPY	5.8850	5.8850	0.2671	0.4273	0.0712		12.5357
CO	lb/hr	1.3436	1.3436	0.0512	0.0820	0.0137		2.8341
	TPY	5.8850	5.8850	0.2243	0.3589	0.0598		12.4132
PM_{10}	lb/hr	0.0452	0.0452	0.0046	0.0074	0.0012		0.1037
	TPY	0.1981	0.1981	0.0203	0.0325	0.0054		0.4544
$PM_{2.5}$	lb/hr	0.0452	0.0452	0.0035	0.0056	0.0009		0.1004
	TPY	0.1981	0.1981	0.0152	0.0244	0.0041		0.4398
SO_2	lb/hr	0.0028	0.0028	0.0004	0.0006	0.0001		0.0066
	TPY	0.0123	0.0123	0.0016	0.0026	0.0004		0.0291
Formaldehyde	lb/hr	0.0976	0.0976	4.57E-06	7.32E-06	1.22E-06		0.1952
	TPY	0.4274	0.4274	2.00E-05	3.20E-05	5.34E-06		0.8549
Benzene	lb/hr	0.0075	0.0075	1.28E-06	2.05E-06	3.41E-07	0.0001	0.0152
	TPY	0.0329	0.0329	5.61E-06	8.97E-06	1.50E-06	0.0006	0.0665
Toluene	lb/hr	0.0027	0.0027	2.07E-06	3.32E-06	5.53E-07	0.0001	0.0054
	TPY	0.0116	0.0116	9.08E-06	1.45E-05	2.42E-06	0.0004	0.0237
Ethylbenzene	lb/hr	0.0001	0.0001				0.00002	0.0003
	TPY	0.0005	0.0005				0.0001	0.0011
Xylene	lb/hr	0.0009	0.0009				0.00003	0.0019
	TPY	0.0041	0.0041				0.0001	0.0083
Pentanes	lb/hr	0.0258	0.0258				0.0409	0.0924
	TPY	0.1129	0.1129				0.1791	0.4049
n-Hexane	lb/hr	0.0064	0.0064				0.0102	0.0229
	TPY	0.0280	0.0280				0.0445	0.1005
Cyclohexane	lb/hr	0.0010	0.0010				0.0015	0.0034
	TPY	0.0042	0.0042				0.0066	0.0149
Heptane	lb/hr	0.0040	0.0040				0.0063	0.0143
	TPY	0.0174	0.0174				0.0276	0.0625
Methylcyclohexane	lb/hr	0.0008	0.0008				0.0013	0.0030
	TPY	0.0037	0.0037				0.0059	0.0133
2,2,4-Trimethylpentane	lb/hr	0.0003	0.0003				0.0004	0.0009
	TPY	0.0011	0.0011				0.0018	0.0040

ATTACHMENT 6

Preliminary Plot Plan

PRELIMINARY PLOT PLAN
ALTAMESA PLANT
10-11-2013

SCALE 1" = 50'



PLOT SIZE
441' x 628'
16

EMISSION POINT INDEX

- (A) – RESIDUE COMP. EXH. (8" x 22' HIGH)
- (B) – FUTURE RESIDUE COMPRESSOR EXH. (8" x 22' HIGH)
- (C) – STABILIZER HEATER (10" x 18' ABOVE GR.)
- (D) – GLYCOL HEATER (10" x 18' ABOVE GR.)
- (E) – E.G EMISSIONS
- (F) – JACKET WATER HEATER (6" x 12' HIGH)

11/12/2013

LDAR GUIDANCE BEST MANAGEMENT PRACTICE (BMP)

Leak Detection and Repair

A Best Practices Guide

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

United States
Environmental Protection Agency
Office of Compliance
Office of Enforcement and Compliance Assurance
1200 Pennsylvania Avenue, NW
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Washington, DC 20460

Disclaimer

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Contents

Tables

Appendices

1.0 Purpose

In general, EPA has found significant widespread noncompliance with Leak Detection and Repair (LDAR) regulations and more specifically, noncompliance with Method 21 requirements. In 1999, EPA estimated that, as a result of this noncompliance, an additional 40,000 tons of VOCs are emitted annually from valves at petroleum refineries alone.

This document is intended for use by regulated entities as well as compliance inspectors to identify some of the problems identified with LDAR programs focusing in on Method 21 requirements and describe the practices that can be used to increase the effectiveness of an LDAR program. Specifically, this document explains:

- The importance of regulating equipment leaks;
- The major elements of an LDAR program;
- Typical mistakes made when monitoring to detect leaks;
- Problems that occur from improper management of an LDAR program; and
- A set of best practices that can be used to implement effective an LDAR program.

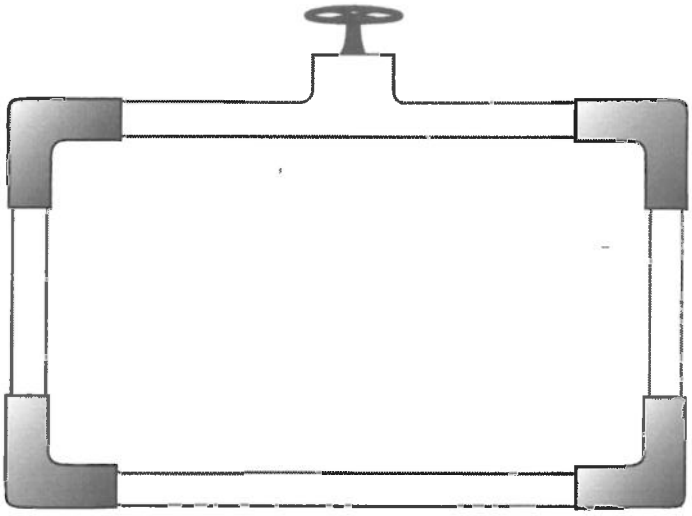
Some of the elements of a model LDAR program, as described in Section 7.0, are required by current Federal regulations. Other model LDAR program elements help ensure continuous compliance although they may not be mandated from a regulatory standpoint. Furthermore, State or local requirements may be more stringent than some elements of the model LDAR program, such as with leak definitions. Prior to developing a written LDAR program plan, all applicable regulations should be reviewed to determine and ensure compliance with the most stringent requirements.

2.0 Why Regulate Equipment Leaks?

EPA has determined that leaking equipment, such as valves, pumps, and connectors, are the largest source of emissions of volatile organic compounds (VOCs) and volatile hazardous air pollutants (VHAPs) from petroleum refineries and chemical manufacturing facilities. The Agency has estimated that approximately 70,367 tons per year of VOCs and 9,357 tons per year of HAPs have been emitted from equipment leaks. Emissions from equipment leaks exceed emissions from storage vessels, wastewater, transfer operations, or process vents.

VOCs contribute to the formation of ground-level ozone. Ozone is a major component of smog, and causes or aggravates respiratory disease, particularly in children, asthmatics, and healthy adults who participate in moderate exercise. Many areas of the United States, particularly those areas where refineries and chemical facilities are located, do not meet the National Ambient Air Quality Standard (NAAQS) for ozone. Ozone can be transported in the atmosphere and contribute to nonattainment in downwind areas.

Some species of VOCs are also classified as VHAPs. Some known or suspected effects of exposure to VHAPs include cancer, reproductive effects, and birth defects. The highest concentrations of VHAPs tend to be closest to the emission source, where the highest public exposure levels are also often detected. Some common VHAPs emitted from refineries and chemical plants include acetaldehyde, benzene, formaldehyde, methylene chloride, naphthalene, toluene, and xylene.



3.0 Sources, Causes And Control Of Equipment Leaks

A typical refinery or chemical plant can emit 600-700 tons per year of VOCs from leaking equipment, such as valves, connectors, pumps, sampling connections, compressors, pressure-relief devices, and open-ended lines.

Table 3.1 shows the primary sources of emissions from components subject to equipment leak regulations. In a typical facility, most of the emissions are from valves and connectors because these are the most prevalent components and can number in the thousands (Table 3.2). The major cause of emissions from valves and connectors is seal or gasket failure due to normal wear or improper maintenance.

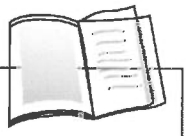
Previous EPA studies have estimated that valves and connectors account for more than 90% of emissions from leaking equipment with valves being the most significant source (Table 3.3). Newer information suggests that open-ended lines and sampling connections may account for as much as 5-10% of total VOC emissions from equipment leaks.

3.1 How are emissions from equipment leaks reduced?

Facilities can control emissions from equipment leaks by implementing a leak detection and repair (LDAR) program or by modifying/replacing leaking equipment with "leakless" components. Most equipment leak regulations allow a combination of both control methods.

- Leaks from open-ended lines, compressors, and sampling connections are usually fixed by modifying the equipment or component. Emissions from pumps and valves can also be reduced through the use of "leakless" valves and "sealless" pumps. Common leakless valves include bellows valves and diaphragm valves, and common sealless pumps are diaphragm pumps, canned motor pumps, and magnetic drive pumps. Leaks from pumps can also be reduced by using dual seals with or without barrier fluid.

- Leakless valves and sealless pumps are effective at minimizing or eliminating leaks, but their use may be limited by materials of construction considerations and process operating conditions. Installing leakless and sealless equipment components may be a wise choice for replacing individual, chronic leaking components.



LDAR is a work practice designed to identify leaking equipment so that emissions can be reduced through repairs. A component that is subject to LDAR requirements must be monitored at specified, regular intervals to determine whether or not it is leaking. Any leaking component must then be repaired or replaced within a specified time frame.

Table 3.1 – Sources of equipment leaks.

Pumps are used to move fluids from one point to another. Two types of pumps extensively used in petroleum refineries and chemical plants are centrifugal pumps and positive displacement, or reciprocating pumps.	**Leaks from pumps** typically occur at the seal.
Valves are used to either restrict or allow the movement of fluids. Valves come in numerous varieties and with the exception of connectors, are the most common piece of process equipment in industry.	**Leaks from valves** usually occur at the stem or gland area of the valve body and are commonly caused by a failure of the valve packing or O-ring.
Connectors are components such as flanges and fittings used to join piping and process equipment together. Gaskets and blinds are usually installed between flanges.	**Leaks from connectors** are commonly caused from gasket failure and improperly torqued bolts on flanges.
Sampling connections are utilized to obtain samples from within a process.	**Leaks from sampling connections** usually occur at the outlet of the sampling valve when the sampling line is purged to obtain the sample.
Compressors are designed to increase the pressure of a fluid and provide motive force. They can have rotary or reciprocating designs.	**Leaks from compressors** most often occur from the seals.
Pressure relief devices are safety devices designed to protect equipment from exceeding the maximum allowable working pressure. Pressure relief valves and rupture disks are examples of pressure relief devices.	**Leaks from pressure relief valves** can occur if the valve is not seated properly, operating too close to the set point, or if the seal is worn or damaged. Leaks from rupture disks can occur around the disk gasket if not properly installed.
Open-ended lines are pipes or hoses open to the atmosphere or surrounding environment.	**Leaks from open-ended lines** occur at the point of the line open to the atmosphere and are usually controlled by using caps, plugs, and flanges. Leaks can also be caused by the incorrect implementation of the block and bleed procedure.

Table 3.2 – Equipment component counts at a typical refinery or chemical plant.

Component	Range	Average
Pumps	10 – 360	100
Valves	150 – 46,000	7,400
Connectors	600 – 60,000	12,000
Open-ended lines	1 – 1,600	560
Sampling connections	20 – 200	80
Pressure relief valves	5 – 360	90

Source: "Cost and Emission Reductions for Meeting Percent Leaker Requirements for HON Sources." Memorandum to Hazardous Organic NESHAP Residual Risk and Review of Technology Standard Rulemaking docket. Docket ID EPA-HQ-OAR-2005-0475-0105.

Table 3.3 – Uncontrolled VOC emissions at a typical facility.

Component	Average Uncontrolled VOC Emissions (ton/yr)	Percent of Total Emissions
Pumps	19	3
Valves	408	62
Connectors	201	31
Open-ended lines	9	1
Sampling connections	11	2
Pressure relief valves	5	1
Total	653	

Source: Emission factors are from Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, Nov 1995, and equipment counts in Table 3.2.

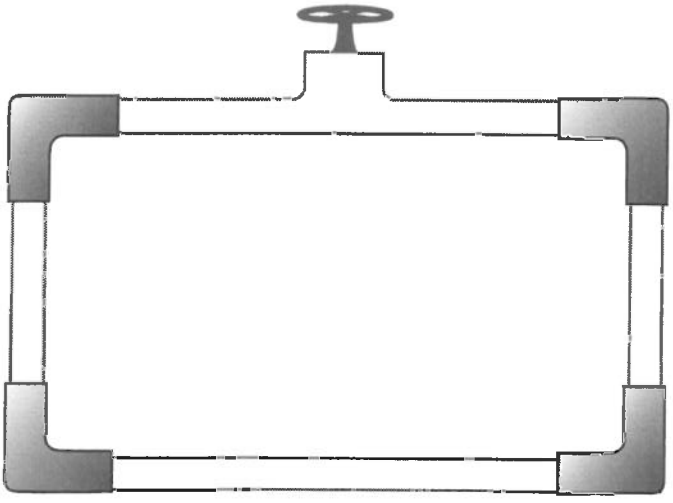
More recent data indicates that open-ended lines and sampling connections each account for approximately 5-10% of total VOC emissions.

3.2 What regulations incorporate LDAR programs?

LDAR programs are required by many New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), State Implementation Plans (SIPs), the Resource Conservation and Recovery Act (RCRA), and other state or local requirements. There are 25 federal standards that require facilities to implement LDAR programs. Appendix A shows the 25 federal standards that require the implementation of a formal LDAR program using Method 21. Appendix B lists 28 other federal regulations that require some Method 21 monitoring, but do not require LDAR programs to be in place.

- NSPS (40 CFR Part 60) equipment leak standards are related to fugitive emissions of VOCs and apply to stationary sources that commence construction, modification, or reconstruction after the date that an NSPS is proposed in the Federal Register.
- NESHAP (40 CFR Parts 61, 63, and 65) equipment leak standards apply to both new and existing stationary sources of fugitive VHAPs.
- RCRA (40 CFR Parts 264 and 265) equipment leak standards apply to hazardous waste treatment, storage, and disposal facilities.
- Many state and local air agencies incorporate federal LDAR requirements by reference, but some have established more stringent LDAR requirements to meet local air quality needs.

A facility may have equipment that is subject to multiple NSPS and NESHAP equipment leaks standards. For example, a number of manufacturing processes listed in the Hazardous Organic NESHAP (HON) equipment leak standard (40 CFR 63, Subpart H) may utilize equipment for which other NESHAP or NSPS equipment leak standards could apply (such as 40 CFR 60, Subpart VV). In addition, one process line may be subject to one rule and another process line subject to another rule. Facilities must ensure that they are complying with the proper equipment leak regulations if multiple regulations apply.



4.0 What Are the Benefits of an LDAR Program?

When the LDAR requirements were developed, EPA estimated that petroleum refineries could reduce emissions from equipment leaks by 63% by implementing a facility LDAR program. Additionally, EPA estimated that chemical facilities could reduce VOC emissions by 56% by implementing such a program.

Table 4.1 presents the control effectiveness of an LDAR program for different monitoring intervals and leak definitions at chemical process units and petroleum refineries.

Emissions reductions from implementing an LDAR program potentially reduce product losses, increase safety for workers and operators, decrease exposure of the surrounding community, reduce emissions fees, and help facilities avoid enforcement actions.

Example – Emissions reductions at a typical SOCMI facility.

Applying the equipment modifications and LDAR requirements of the HON to the sources of uncontrolled emissions in the typical facility presented in Tables 3.2 and 3.3 would reduce the emissions per facility by approximately 582 tons per year of emissions, an 89% reduction.

Table 4.1 – Control effectiveness for an LDAR program at a chemical process unit and a refinery.

Equipment Type and Service	Control Effectiveness (% Reduction)		
	Monthly Monitoring 10,000 ppmv Leak Definition	Quarterly Monitoring 10,000 ppmv Leak Definition	500 ppm Leak Definition[a]
Chemical Process Unit			
Valves – Gas Service[b]	87	67	92
Valves – Light Liquid Service[c]	84	61	88
Pumps – Light Liquid Service[c]	69	45	75
Connectors – All Services			93
Refinery			
Valves – Gas Service[b]	88	70	96
Valves – Light Liquid Service[c]	76	61	95
Pumps – Light Liquid Service[c]	68	45	88
Connectors – All Services			81

Source: Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, Nov 1995.

[a] Control effectiveness attributable to the HON negotiated equipment leak regulation (40 CFR 63, Subpart H) is estimated based on equipment-specific leak definitions and performance levels. However, pumps subject to the HON at existing process units have a 1,000 to 5,000 ppm leak definition, depending on the type of process.

[b] Gas (vapor) service means the material in contact with the equipment component is in a gaseous state at the process operating conditions.

[c] Light liquid service means the material in contact with the equipment component is in a liquid state in which the sum of the concentration of individual constituents with a vapor pressure above 0.3 kilopascals (kPa) at 20°C is greater than or equal to 20% by weight.

4.1 Reducing Product Losses

In the petrochemical industry, saleable products are lost whenever emissions escape from process equipment. Lost product generally translates into lost revenue.

4.2 Increasing Safety for Facility Workers and Operators

Many of the compounds emitted from refineries and chemical facilities may pose a hazard to exposed workers and operators. Reducing emissions from leaking equipment has the direct benefit of reducing occupational exposure to hazardous compounds.

4.3 Decreasing Exposure for the Surrounding Community

In addition to workers and operators at a facility, the population of a surrounding community can be affected by severe, long-term exposure to toxic air pollutants as a result of leaking equipment. Although most of the community exposure may be episodic, chronic health effects can result from long-term exposure to emissions from leaking equipment that is either not identified as leaking or not repaired.

4.4 Potentially Reducing Emission Fees

To fund permitting programs, some states and local air pollution districts charge annual fees that are based on total facility emissions. A facility with an effective program for reducing leaking equipment can potentially decrease the amount of these annual fees.

4.5 Avoiding Enforcement Actions

In setting Compliance and Enforcement National Priorities for Air Toxics, EPA has identified LDAR programs as a national focus. Therefore, facilities can expect an increased number and frequency of compliance inspections and a closer review of compliance reports submitted to permitting authorities in an effort by the Agency to assess LDAR programs and identify potential LDAR problems. A facility with an effective LDAR program decreases the chances of being targeted for enforcement actions and avoids the costs and penalties associated with rule violations.

Example – Cost of product lost.

In previous rulemaking efforts, EPA has estimated that the average value of product lost due to equipment leaks is $1,370 per ton.[a]

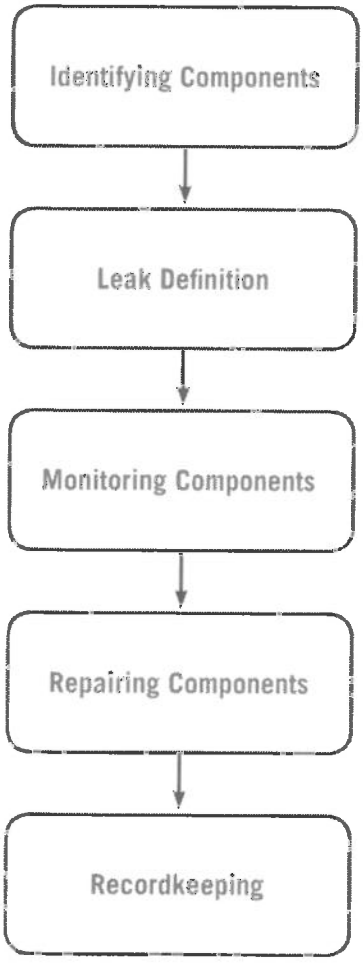
Applying this cost factor results in a potential savings of $730,000 per year per facility.

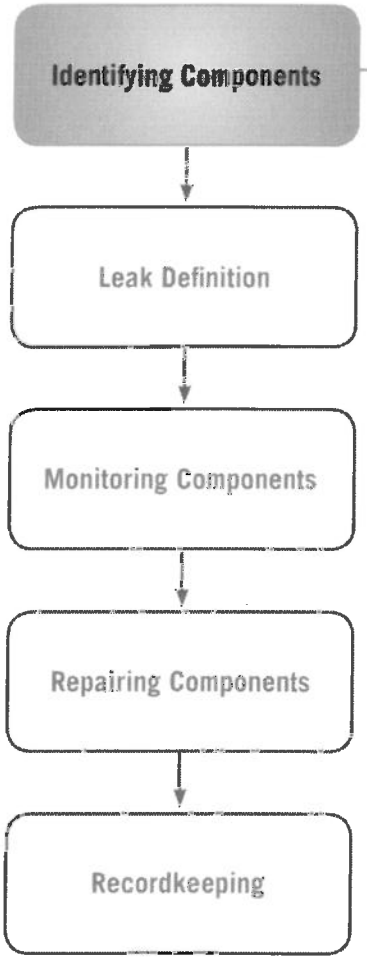
[a] Source: Hazardous Air Pollutant Emissions From Process Units in the Synthetic Organic Chemical Manufacturing Industry-Background Information for Proposed Standards, Vol. 1C-Model Emission Sources. Emission Standards Division, US EPA, Office of Air and Radiation, OAQPS, Research Triangle Park, NC. Nov 1992.

5.0 Elements of an LDAR Program

The requirements among the regulations vary, but all LDAR programs consist of five basic elements, which are discussed in detail in Sections 5.1 through 5.5.

For each element, this section outlines the typical LDAR program requirements, common compliance problems found through field inspections, and a set of best practices used by facilities with effective LDAR programs.





Current Requirements

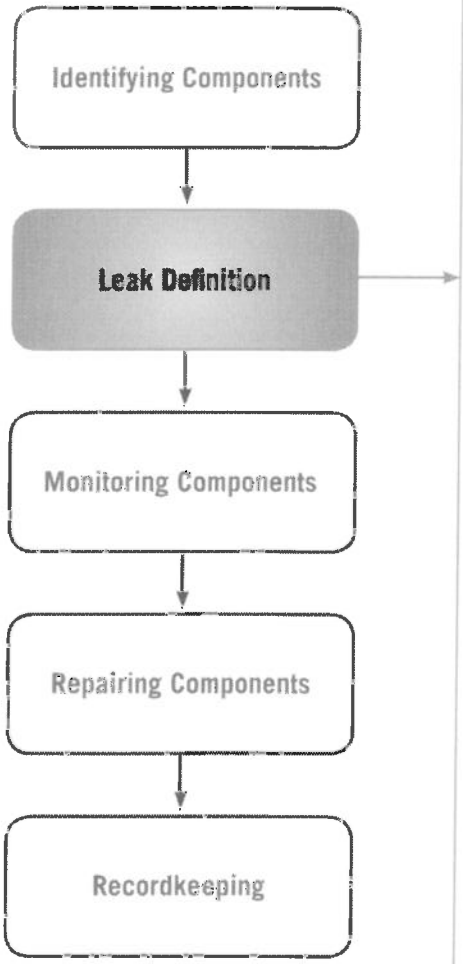
- Assign a unique identification (ID) number to each regulated component.
- Record each regulated component and its unique ID number in a log.
- Physically locate each regulated component in the facility, verify its location on the piping and instrumentation diagrams (P&IDs) or process flow diagrams, and update the log if necessary. Some states require a physical tag on each component subject to the LDAR requirements.
- Identify each regulated component on a site plot plan or on a continuously updated equipment log.
- Promptly note in the equipment log when new and replacement pieces of equipment are added and equipment is taken out of service.

Common Problems

- Not properly identifying all regulated equipment components.
- Not properly documenting exempt components (e.g., <300 hour exemption and <5 (or <10) weight % HAP).

Best Practices

- Physically tag each regulated equipment component with a unique ID number.
- Write the component ID number on piping and instrumentation diagrams.
- Institute an electronic data management system for LDAR data and records, possibly including the use of bar coding equipment.
- Periodically perform a field audit to ensure lists and diagrams accurately represent equipment installed in the plant.



Current Requirements

- Method 21 requires VOC emissions from regulated components to be measured in parts per million (ppm). A leak is detected whenever the measured concentration exceeds the threshold standard (i.e., **leak definition**) for the applicable regulation.
  - Leak definitions vary by regulation, component type, service (e.g., light liquid, heavy liquid, gas/vapor), and monitoring interval.
  - Most NSPS have a leak definition of 10,000 ppm. Many NESHAP use a 500-ppm or 1,000-ppm leak definition.
- Many equipment leak regulations also define a leak based on visual inspections and observations (such as fluids dripping, spraying, misting or clouding from or around components), sound (such as hissing), and smell.

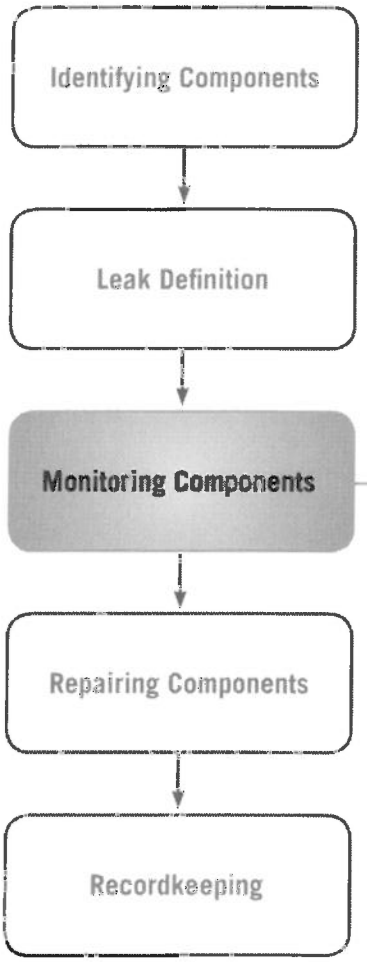
  Note: The LDAR requirements specify weekly visual inspections of pumps, agitators, and compressors for indications of liquids leaking from the seals.

Common Problems

- Using the wrong leak definition for a particular component due to confusion at facilities where multiple LDAR regulations apply.

Best Practices

- Utilize a leak definition lower than what the regulation requires.
- Simplify the program by using the lowest leak definition when multiple leak definitions exist.
- Make the lowest leak definition conservative to provide a margin of safety when monitoring components.
- Keep the lowest leak definition consistent among all similar component types. For example, all valves in a facility might have a leak definition of 500 ppm.



Current Requirements

- For many NSPS and NESHAP regulations with leak detection provisions, the primary method for monitoring to detect leaking components is EPA Reference Method 21 (40 CFR Part 60, Appendix A).
- Method 21 is a procedure used to detect VOC leaks from process equipment using a portable detecting instrument.
- Appendix C of this guide explains the general procedure and Appendix D presents the complete Method 21 requirements.
- Monitoring intervals vary according to the applicable regulation, but are typically weekly, monthly, quarterly, and yearly. For connectors, the monitoring interval can be every 2, 4, or 8 years. The monitoring interval depends on the component type and periodic leak rate for the component type.

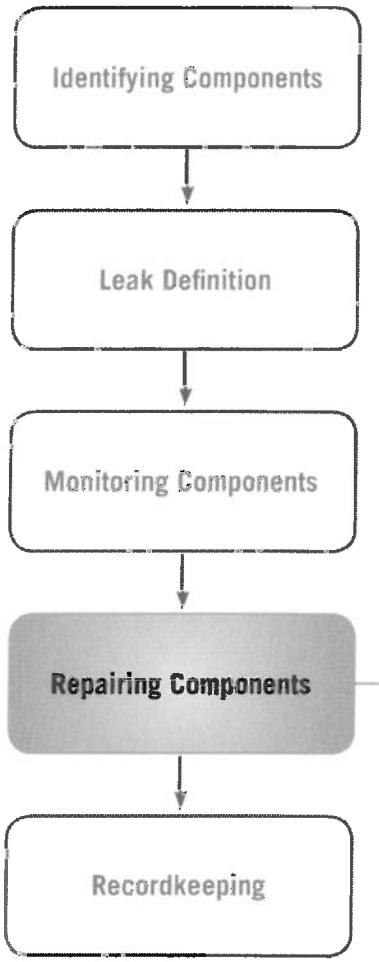
Common Problems

- Not following Method 21 properly.
- Failing to monitor at the maximum leak location (once the highest reading is obtained by placing the probe on and around the interface, hold the probe at that location approximately two times the response rate of the instrument).
- Not monitoring long enough to identify a leak.
- Holding the detection probe too far away from the component interface. The reading must be taken at the interface.
- Not monitoring all potential leak interfaces.
- Using an incorrect or an expired calibration gas.
- Not monitoring all regulated components.
- Not completing monitoring if the first monitoring attempt is unsuccessful due to equipment being temporarily out of service.

Best Practices

- Although not required by Method 21, use an automatic (electronic) data logger to save time, improve accuracy, and provide an audit record.
- Audit the LDAR program to help ensure that the correct equipment is being monitored, Method 21 procedures are being followed properly, and the required records are being kept.
- Monitor components more frequently than required by the regulations.
- Perform QA/QC of LDAR data to ensure accuracy, completeness, and to check for inconsistencies.
- Eliminate any obstructions (e.g., grease on the component interface) that would prevent monitoring at the interface.
- If a rule allows the use of alternatives to Method 21 monitoring, Method 21 should still be used periodically to check the results of the alternative monitoring method.

The **monitoring interval** is the frequency at which individual component monitoring is conducted. For example, valves are generally required to be monitored once a month using a leak detection instrument, but the monitoring interval may be extended (e.g. to once every quarter for each valve that has not leaked for two successive months for Part 60 Subpart VV, or on a process unit basis of once every quarter for process units that have less than a 2% leak rate for Part 63 Subpart H).



Current Requirements

- Repair leaking components as soon as practicable, but not later than a specified number of calendar days (usually 5 days for a first attempt at repair and 15 days for final attempt at repair) after the leak is detected.
- First attempts at repair include, but are not limited to, the following practices where practicable and appropriate:
- Tightening bonnet bolts
- Replacing bonnet bolts
- Tightening packing gland nuts
- Injecting lubricant into lubricated packing
- If the repair of any component is technically infeasible without a process unit shutdown, the component may be placed on the Delay of Repair list, the ID number is recorded, and an explanation of why the component cannot be repaired immediately is provided. An estimated date for repairing the component must be included in the facility records.

  Note: The "drill and tap" method for repairing leaking valves is generally considered technically feasible without requiring a process unit shutdown and should be tried if the first attempt at repair does not fix the leaking valve. See section 6.7 for a discussion of "drill and tap".

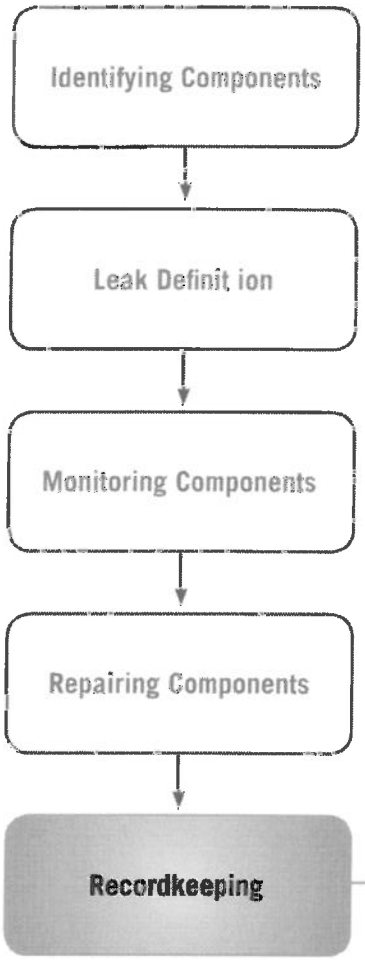
- The component is considered to be repaired only after it has been monitored and shown not to be leaking above the applicable leak definition.

Common Problems

- Not repairing leaking equipment within the required amount of time specified by the applicable regulation.
- Improperly placing components on the Delay of Repair list.
- Not having a justifiable reason for why it is technically infeasible to repair the component without a process unit shutdown.
- Not exploring all available repair alternatives before exercising the Delay of Repair exemption (specifically as it pertains to valves and "drill and tap" repairs).

Best Practices

- Develop a plan and timetable for repairing components.
- Make a first attempt at repair as soon as possible after a leak is detected.
- Monitor components daily and over several days to ensure a leak has been successfully repaired.
- Replace problem components with "leakless" or other technologies.



Current Requirements

For each regulated process:

- Maintain a list of all ID numbers for all equipment subject to an equipment leak regulation.
- For valves designated as "unsafe to monitor," maintain a list of ID numbers and an explanation/review of conditions for the designation.
- Maintain detailed schematics, equipment design specifications (including dates and descriptions of any changes), and piping and instrumentation diagrams.
- Maintain the results of performance testing and leak detection monitoring, including leak monitoring results per the leak frequency, monitoring leakless equipment, and non-periodic event monitoring.

For leaking equipment:

- Attach ID tags to the equipment.
- Maintain records of the equipment ID number, the instrument and operator ID numbers, and the date the leak was detected.
- Maintain a list of the dates of each repair attempt and an explanation of the attempted repair method.
- Note the dates of successful repairs.
- Include the results of monitoring tests to determine if the repair was successful.

Common Problems

- Not keeping detailed and accurate records required by the applicable regulation.
- Not updating records to designate new components that are subject to LDAR due to revised regulations or process modifications.

Best Practices

- Perform internal and third-party audits of LDAR records on a regular basis to ensure compliance.
- Electronically monitor and store LDAR data including regular QA/QC audits.
- Perform regular records maintenance.
- Continually search for and update regulatory requirements.
- Properly record and report first attempts at repair.
- Keep the proper records for components on Delay of Repair lists.

6.0 What Compliance Problems Have Been Found With Current LDAR Programs?

Many regulatory agencies determine the compliance status of LDAR programs based on a review of submitted paperwork. Some conduct walk-through inspections to review LDAR records maintained on site and perform a visual check of monitoring practices. However, a records review will not show if monitoring procedures are being followed. Similarly, the typical walkthrough inspection will not likely detect improper monitoring practices since operators will tend to ensure that they are following proper procedures when they are being watched.

EPA's National Enforcement Investigations Center (NEIC) conducted a number of sampling investigations of LDAR programs at 17 petroleum refineries. Appendix E summarizes the comparative monitoring results, and Appendix F contains a copy of the 1999 Enforcement Alert that explains the monitoring results. The investigations consisted of records review and comparative leak monitoring (comparing the leak rate found by NEIC to the facility's historic leak rate) at a subset of the facility's total components. These investigations have shown a pattern of significantly higher equipment leak rates (5%) than what the refineries reported (1.3%). While there have been improvements since 1999, facility audits are still showing significantly elevated leak rates, especially in the chemical manufacturing industries.

The discrepancy in leak rates indicates that monitoring staff may not be complying with Method 21 procedures. Failure to accurately detect leaks may be due to a lack of internal quality control oversight or management accountability for the LDAR programs regardless of whether the monitoring is done by contractors or in-house personnel.

Each leak that is not detected and repaired is a lost opportunity to reduce emissions. In the October 1999 Enforcement Alert, EPA estimates that an additional 40,000 tons of VOCs are emitted annually from petroleum refineries because leaking valves are not found and repaired.

Several important factors contribute to failing to identify and repair leaking components:

1. **Not identifying all regulated components/units in inventory**

   If a facility does not properly identify all of its regulated components, some leaks may go unidentified. Unidentified components may leak or have existing leaks that will worsen over time if the components are not properly identified, monitored and repaired. Facilities can fail to identify regulated components when new processes are constructed, existing process are modified, or new or revised equipment leak regulations are published.

2. **Not monitoring components**

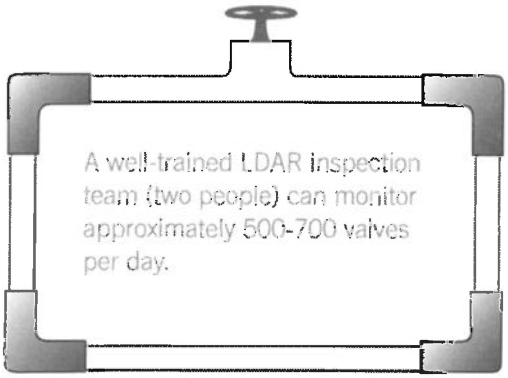
   In some cases, the number of components reported to have been monitored may indicate problems with monitoring procedures. What facility inspectors have found:

   - A data logger time stamp showed valves being monitored at the rate of one per second with two valves occasionally be-

ing monitored within the same 1-second period.

- At one facility, a person reported monitoring 8,000 components in one day (assuming an 8-hour work day, that represents one component every 3.6 seconds).
- Records evaluations showed widely varying component monitoring counts, suggesting equipment might not always be monitored when required.
- Equipment was marked "temporarily out of service" because the initial inspection attempt could not be performed. However, the equipment was in service for most of the period, and no subsequent (or prior) inspection attempts were performed to meet the monitoring requirement.

However, even when records show a realistic number of components are being monitored, if there are no oversight or accountability checks, then there is no guarantee that components are actually being monitored.



3. Insufficient time to identify a leak

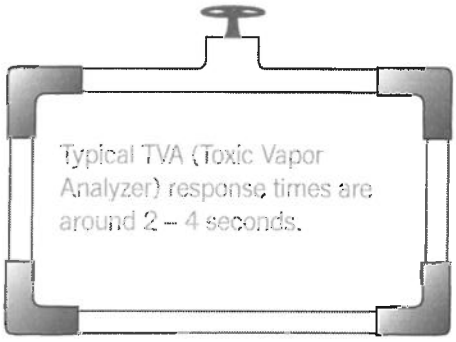
In other cases, facilities are not following proper monitoring procedures, resulting in a lower number of leaking components being reported.

- If a worker moves the probe around the component interface so rapidly that the instrument does not have time to properly respond, then a component may never be identified as leaking.
- If a worker fails to find the maximum leak location for the component and then does not spend twice the response time at that location, then the monitoring instrument will not measure the correct concentration of hydrocarbons and the leak may go undetected. **Optical leak imaging shows the importance of identifying the maximum leak location, as hydrocarbons are quickly dispersed and diluted by air currents around the component.**

4. Holding the probe away from the component interface

The probe must be placed at the proper interface of the component being analyzed. Placing the probe even 1 centimeter from the interface can result in a false reading, indicating that the component is not leaking, when in fact it is leaking. Eliminate any issues (e.g., grease on the component interface) that prevent monitoring at the interface (e.g., remove excess grease from the component before monitoring or use a monitor that won't be impacted by the grease and is easy to clean.

For equipment with rotating shafts (pumps and compressors), Method 21 requires the probe be placed within 1 centimeter of the



shaft-seal interface. Placing the probe at the surface of the rotating shaft is a safety hazard and should be avoided.

5. Failing to properly maintain monitoring instrument

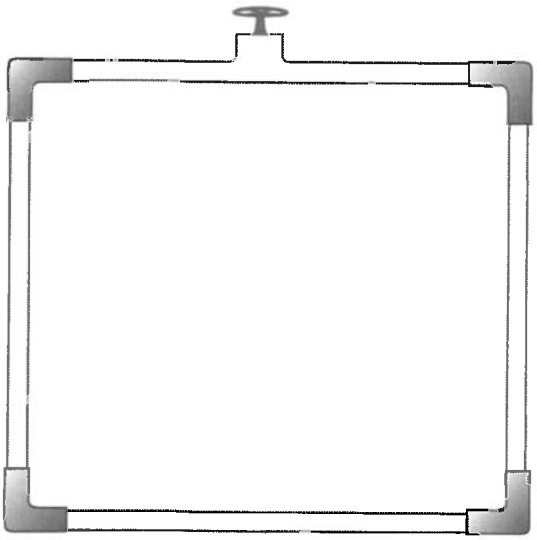
Factors that may prevent the instrument from identifying leaks are:

- Not using an instrument that meets the specifications required in Method 21, section 6.
- Dirty instrument probes;
- Leakage from the instrument probes;
- Not zeroing instrument meter;
- Incorrect calibration gases used; and
- Not calibrating the detection instrument on a daily basis.

6. Improperly identifying components as "unsafe" or "difficult" to monitor

Components that are identified as being "unsafe to monitor" or "difficult to monitor" must be identified as such because there is a safety concern or an accessibility issue that prevents the component from being successfully monitored.

All unsafe or difficult-to-monitor components must be included on a log with identification numbers and an explanation of why the component is "unsafe to monitor" or "difficult to monitor." Monitoring can be deferred for all such components, but the facility must maintain a plan that explains the conditions under which the components become safe to monitor or no longer difficult to monitor.



7. Improperly placing components/units on the "Delay of Repair" list

Generally, placing a leaking component on the "Delay of Repair" list is permissible only when the component is technically infeasible to repair without a process unit shutdown (e.g., for valves the owner/operator must demonstrate that the emissions from immediate repair will be greater than waiting for unit shutdown).

Repair methods may exist, such as "drill and tap" for valves, that allow leaks to be fixed while the component is still in service. Failing to consider such repair methods before exercising the "Delay of Repair" list may constitute noncompliance with repair requirements (usually 15 days under federal LDAR standards).

Components placed on the "Delay of Repair" list must be accompanied by their ID numbers and an explanation of why they have been placed on the list. These components cannot remain on the list indefinitely – they must be repaired by the end of the next process unit shutdown.

Drill and Tap is a repair method where a hole is drilled into the valve packing gland and tapped, so that a small valve and fitting can be attached to the gland. A packing gun is connected to this fitting and the small valve is opened allowing new packing material to be pumped into the packing gland.

Many companies consider this a permanent repair technique, as newer, pumpable packing types are frequently superior to the older packing types they replace. Packing types can be changed and optimized for the specific application over time.

7.0 Model LDAR Program

Experience has shown that facilities with an effective record of preventing leaks integrate an awareness of the benefits of leak detection and repair into their operating and maintenance program. This section outlines some of the major elements of successful LDAR programs. These program elements were developed from:

- Evaluation of best practices identified at facilities with successful LDAR programs, and
- Analysis of the root causes of noncompliance at facilities that were found to have recurring violations of LDAR regulatory requirements.

LDAR programs that incorporate most or all of the elements described in the following sections have achieved more consistent results in their LDAR programs, leading to increased compliance and lower emissions.

7.1 Written LDAR Program

A written LDAR program specifies the regulatory requirements and facility-specific procedures for recordkeeping certifications, monitoring, and repairs. A written program also delineates the roles of each person on the LDAR team as well as documents all the required procedures to be completed and data to be gathered, thus establishing accountability. The plan should identify all process units subject to federal, state, and local LDAR regulations and be updated as necessary to ensure accuracy and continuing compliance.

Elements:

- An overall, facility-wide leak rate goal that will be a target on a process-unit-by-process-unit basis;
- A list of all equipment in light liquid and/or in gas/vapor service that has the potential to leak VOCs and VHAPs, within process units that are owned and maintained by each facility;
- Procedures for identifying leaking equipment within process units;
- Procedures for repairing and keeping track of leaking equipment;
- A process for evaluating new and replacement equipment to promote the consideration of installing equipment that will minimize leaks or eliminate chronic leakers;
- A list of "LDAR Personnel" and a description of their roles and responsibilities, including the person or position for each facility that has the authority to implement improvements to the LDAR program; and
- Procedures (e.g., a Management of Change program) to ensure that components added to each facility during maintenance and construction are evaluated to determine if they are subject to LDAR requirements, and that affected components are integrated into the LDAR program.

Within thirty (30) days after developing the written facility-wide LDAR program, submit a copy of the Program to EPA and to the appropriate state agency.

7.2 Training

A training program will provide LDAR personnel the technical understanding to make the written LDAR program work. It also will educate members of the LDAR team on their individual responsibilities. These training programs can vary according to the level of involvement and degree of responsibility of LDAR personnel.

Elements:

- Provide and require initial training and annual LDAR refresher training for all facility employees assigned LDAR compliance responsibilities, such as monitoring technicians, database users, QA/QC personnel, and the LDAR Coordinator;
- For other operations and maintenance personnel with responsibilities related to LDAR, provide and require an initial training program that includes instruction on aspects of LDAR that are relevant to their duties (e.g., operators and mechanics performing valve packing and unit supervisors that approve delay of repair work). Provide and require "refresher" training in LDAR for these personnel at least every three years.
- Collect training information and records of contractors, if used.

7.3 LDAR Audits

Whether LDAR monitoring is done in house or contracted to third parties outside the company, the potential exists for LDAR staff not to adhere correctly to the LDAR program. Internal and third-party audits of a facility LDAR program are a critical component of effective LDAR programs. The audits check that the correct equipment is being monitored, Method 21 procedures are being followed, leaks are being fixed, and the required records are being kept. In short, the audits ensure that the LDAR program is being conducted correctly and problems are identified and corrected.

Elements:

- Review records on a regular cycle to ensure that all required LDAR-related records, logs, and databases are being maintained and are up to date.
- Ensure and document that the correct equipment is included in the LDAR program and that equipment identified as leaking is physically tagged with the equipment ID number.
- Observe the calibration and monitoring techniques used by LDAR technicians, in particular to ensure the entire interface is checked and the probe is held at the interface, not away from the interface.
- Retain a contractor to perform a third-party audit of the facility LDAR program at least once every four (4) years.
- Perform facility-led audits every four (4) years.
  - Use personnel familiar with the LDAR program and its requirements from one or more of the company's other facilities or locations (if available).
  - Perform the first round of facility-led LDAR audits no later than two (2) years after completion of the third-party audits outlined above, and every four (4) years thereafter.
  - This rotation ensures that the facility is being audited once every two (2) years.
- If areas of noncompliance are discovered, initiate a plan to resolve and document those issues.
- Implement, as soon as practicable, steps necessary to correct causes of noncompliance, and prevent, to the extent practicable, a recurrence of the cause of the noncompliance.
- Retain the audit reports and maintain a written record of the corrective actions taken in response to any deficiencies identified.

7.4 Contractor Accountability

Contractors performing monitoring are frequently compensated for the number of components they monitor, which might provide an incentive to rush through monitoring procedures and not adhere to Method 21 requirements for response time, monitoring distance, etc. If this happens, some equipment leaks may not be detected. To overcome this potential problem, facilities should have in place sufficient oversight procedures to increase the accountability of contractors.

Elements:

- Write contracts that emphasize the quality of work instead of the quantity of work only.
- Require contractors to submit documentation that their LDAR personnel have been trained on Method 21 and facility-specific LDAR procedures.
- Ensure that the contractor has a procedure in place to review and certify the monitoring data before submitting the data to the facility.
- Review daily results of contractor work to ensure that a realistic number of components are being monitored.
- Perform spot audits in the field to ensure that Method 21 procedures are being followed. This can include spot-checking monitored components with another hydrocarbon analyzer or following LDAR personnel as they perform monitoring.
- Have periodic reviews of contractor performance (e.g., quarterly or semi-annually) to resolve issues and correct problems.

7.5 Internal Leak Definition for Valves and Pumps

The varying leak definitions that can apply to different process units and components can be confusing and lead to errors in properly identifying leaks. To counter this potential problem, operate your LDAR program using an internal leak definition for valves and pumps in light liquid or gas vapor service. The internal leak definition would be equivalent to or lower than the applicable definitions in your permit and the applicable federal, state, and local regulations. Monitoring against a uniform definition that is lower than the applicable regulatory definition will reduce errors and provide a margin of safety for identifying leaking components. The internal leak definition would apply to valves and pumps (and possibly connectors) in light liquid or gas vapor service.

Elements:

- Adopt a 500-ppm or lower internal leak definition for VOCs for all valves in light liquid and/or gas vapor service, excluding pressure relief devices.
- Adopt a 2,000-ppm or lower internal leak definition for pumps in light liquid and/or gas/vapor service.
- Record, track, repair, and monitor leaks in excess of the internal leak definition. Repair and monitor leaks that are greater than the internal leak definitions but less than the applicable regulatory leak definitions within thirty (30) days of detection.

Consent Decrees between EPA and many chemical facilities subject to the HON require using a 250-ppm leak definition for valves and connectors and a 500-ppm leak definition for pumps.

Note: If a state or local agency has lower leak definitions, then the internal leak definition should be set to the lowest definition or even lower to include/allow for margin of error.

7.6 More Frequent Monitoring

Many regulations allow for less frequent monitoring (i.e. skip periods) when good performance (as defined in the applicable regulation) is demonstrated. Skip period is an alternative work practice found in some equipment leak regulations and usually applies only to valves and connectors. After a specified number of leak detection periods (e.g., monthly) during which the percentage of leaking components is below a certain value (e.g., 2% for NSPS facilities), a facility can monitor less frequently (e.g., quarterly) as long as the percentage of leaking components remains low. The facility must keep a record of the percentage of the component type found leaking during each leak detection period.

Experience has shown that poor monitoring rather than good performance has allowed facilities to take advantage of the less frequent monitoring provisions. To ensure that leaks are still being identified in a timely manner and that previously unidentified leaks are not worsening over time, implement a plan for more frequent monitoring for components that contribute most to equipment leak emissions.

Elements:

- Monitor pumps in light liquid and/or gas vapor service on a monthly basis.
- Monitor valves in light liquid and/or gas vapor service – other than difficult-to-monitor or unsafe-to-monitor valves – with no skip periods.

Consent Decrees between EPA and many chemical facilities subject to the HON require semiannual monitoring of connectors.

7.7 Repairing Leaking Components

To stop detected leaks while they are still small, most rules require a first attempt at repair within 5 days of the leak detection and a final repair within 15 days. However, any component that cannot be repaired within those time frames must be placed on a "Delay of Repair" list to be repaired during the next shutdown cycle.

First attempts at repair include, but are not limited to, the following best practices where practicable and appropriate:

- Tightening bonnet bolts;
- Replacing bonnet bolts;
- Tightening packing gland nuts; and
- Injecting lubricant into lubricated packing.

Elements:

- Schedule the "first attempt at repair" of those components that the monitoring personnel are not authorized to repair consistent with the existing regulatory requirements.
- Monitor the component for which a "first attempt at repair" was performed no later than the next regular business day to ensure the leak has not worsened.
- If the first attempt at repair has not succeeded then other methods, such as "drill and tap" should be employed where feasible. Drill and tap procedures are no longer considered extraordinary practices.

7.8 Delay of Repair Compliance Assurance

Any component that cannot be repaired during the specified repair interval must be placed on a "Delay of Repair" list to be repaired during the next shutdown cycle. Delay of repair compliance assurance procedures ensure that the appropriate equipment is justifiably on the "Delay of Repair" list and that facilities have a plan to fix these components.

Elements:

- Have the unit supervisor approve in advance and certify all components that are technically infeasible to repair without a process unit shutdown.
- Continue to monitor equipment that is placed on the "Delay of Repair" list in the facility's regular LDAR monitoring. For leaks above the internal leak definition rate and below the regulatory rate, put the equipment on the "Delay of Repair" list within 30 days.
- Implement the following repair policies and procedures within 15 days of implementing the written LDAR program:
  - For valves, other than control valves or pressure relief valves, that are leaking at a rate of 10,000 ppm or greater and cannot be feasibly repaired without a process unit shutdown, use "drill and tap" repair methods to fix the leaking valve, unless you can determine and document that there is a safety, mechanical, or major environmental concern posed by repairing the leak in this manner.
  - Perform up to two "drill and tap" repair attempts to repair a leaking valve, if necessary, within 30 days of identifying the leak.

7.9 Electronic Monitoring and Storage of LDAR Data

Electronic monitoring and storage of LDAR data will help evaluate the performance of monitoring personnel (via time/date stamps), improve accuracy, provide an effective means for QA/QC, and retrieve records in a timely manner for review purposes. Incorporate and maintain an electronic database for storing and reporting LDAR data. Use data loggers or other data collection devices during all LDAR monitoring.

Elements:

- Use best efforts to transfer, on a daily basis, electronic data from electronic data logging devices to the database.
- For all monitoring events in which an electronic data collection device is used, include a time and date stamp, operator identification, and instrument identification.
- Paper logs can be used where necessary or more feasible (e.g., small rounds, re-monitoring fixed leaks, or when data loggers are not available or broken), and should record, at a minimum, the monitoring technician, date, and monitoring equipment used.
- Transfer any manually recorded monitoring data to the database within 7 days of monitoring.
- Review records to identify "problem" components for preventative maintenance (repair prior to anticipated failure) or for replacement with "leakless" technology.

7.10 QA/QC of LDAR Data

QA/QC audits ensure that Method 21 procedures are being followed and LDAR personnel are monitoring the correct components in the proper manner. Develop and implement a procedure to ensure QA/QC review of all data generated by LDAR monitoring technicians on a daily basis or at the conclusion of each monitoring episode.

Elements:

Some QA/QC procedures include:

- Daily review/sign-off by monitoring technicians of the data they collected to ensure accuracy and validity.
- Periodic review of the daily monitoring reports generated in conjunction with recordkeeping and reporting requirements.
- Quarterly QA/QC of the facility's and contractor's monitoring data including:
  - Number of components monitored per technician;
  - Time between monitoring events; and
  - Abnormal data patterns.

7.11 Calibration/Calibration Drift Assessment

Always calibrate LDAR monitoring equipment using an appropriate calibration gas, in accordance with 40 CFR Part 60, EPA Reference Test Method 21.

Elements:

- Conduct calibration drift assessments of LDAR monitoring equipment at the end of each monitoring shift, at a minimum.
- Conduct the calibration drift assessment using, at a minimum, approximately 500 ppm of calibration gas.
- If any calibration drift assessment after the initial calibration shows a negative drift of more than 10% from the previous calibration, re-monitor all valves that were monitored since the last calibration with a reading of greater than 100 ppm. Re-monitor all pumps that were monitored since the last calibration with a reading of greater than 500 ppm.

7.12 Records Maintenance

Organized and readily available records are one potential indication of an effective LDAR program. Well-kept records may also indicate that the LDAR program is integrated into the facility's routine operation and management. The equipment leak regulations specify recordkeeping and reporting requirements; incorporating the elements below will help ensure your facility LDAR records are thorough and complete.

Elements:

Records to maintain:

- A certification that the facility implemented the "first attempt at repair" program.
- A certification that the facility implemented QA/QC procedures for review of data generated by LDAR technicians.
- An identification of the person/position at each facility responsible for LDAR program performance as defined in the written program.
- A certification that the facility developed and implemented a tracking program for new valves and pumps added during maintenance and construction defined in the written program.
- A certification that the facility properly completed calibration drift assessments.
- A certification that the facility implemented the "delay of repair" procedures.
- The following information on LDAR monitoring:
  - (1) The number of valves and pumps present in each process unit during the quarter;
  - (2) The number of valves and pumps monitored in each process unit;
  - (3) An explanation for missed monitoring if the number of valves and pumps present exceeds the number of valves and pumps monitored during the quarter;
  - (4) The number of valves and pumps found leaking;
  - (5) The number of "difficult to monitor" pieces of equipment monitored;
  - (6) A list of all equipment currently on the "Delay of Repair" list and the date each component was placed on the list;
  - (7) The number of repair attempts not completed promptly or completed within 5 days;
  - (8) The number of repairs not completed within 30 days and the number of components not placed on the "Delay of Repair" list; and
  - (9) The number of chronic leakers that do not get repaired.
- Records of audits and corrective actions. Prior to the first third-party audit at each facility, include in your records a copy of each audit report from audits conducted in the previous calendar year and a summary of the actions planned or taken to correct all deficiencies identified in the audits.
- For the audits performed in prior years, identification of the auditors and documentation that a written plan exists identifying corrective action for any deficiencies identified and that this plan is being implemented.

8.0 Sources of Additional Information

Inspection Manual: Federal Equipment Leak Regulations for the Chemical Manufacturing Industry, EPA/305/B-98/011, December 1998.
http://cfpub.epa.gov/compliance/resources/publications/assistance/sectors/chemical/index.cfm

Vol 1: Inspection Manual
http://www.epa.gov/compliance/resources/publications/assistance/sectors/insmanvol1.pdf

Vol 2: Chemical Manufacturing Industry Regulations (3 parts on the Internet)
http://www.epa.gov/compliance/resources/publications/assistance/sectors/insmanvol2pt1.pdf
http://www.epa.gov/compliance/resources/publications/assistance/sectors/insmanvol2pt2.pdf
http://www.epa.gov/compliance/resources/publications/assistance/sectors/insmanvol2pt3.pdf

Vol 3: Petroleum Refining Industry Regulations
http://www.epa.gov/compliance/resources/publications/assistance/sectors/insmanvol3.pdf

1995 Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, Nov 1995.
http://www.epa.gov/ttnchie1/efdocs/equiplks.pdf

Enforcement Alert, EPA Office of Enforcement and Compliance Assurance,
EPA 300-N-99-014, Oct 1999.
http://www.epa.gov/compliance/resources/newsletters/civil/enfalert/emissions.pdf

National Petroleum Refinery Initiative, EPA.
http://www.epa.gov/compliance/resources/cases/civil/caa/refineryinitiative032106.pdf

Petroleum Refinery Initiative Fact Sheet, EPA.
http://www.epa.gov/compliance/resources/cases/civil/caa/petroleumrefinery-fcsht.html

Petroleum Refinery National Priority Case Results.
http://www.epa.gov/compliance/resources/cases/civil/caa/oil/

Draft Staff Report, Regulation 8, Rule 18, Equipment Leaks, Bay Area Air Quality Management District, Jul 1997.
http://www.baaqmd.gov/pln/ruledev/8-18/1997/0818_sr_071097.pdf

Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry; Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries; Proposed Rule, [EPA-HQ-OAR-2006-0699; FRL-] RIN 2060-AN71.
http://www.epa.gov/ttn/oarpg/t3/fr_notices/equip_leak_prop103106.pdf

Industrial Organic Chemicals Compliance Incentive Program, EPA Compliance and Enforcement.
http://www.epa.gov/compliance/incentives/programs/ioccip.html

Leak Detection and Repair Program Developments.
http://www.epa.gov/compliance/neic/field/leak.html

Compliance and Enforcement Annual Results: Important Environmental Problems / National Priorities.
http://www.epa.gov/compliance/resources/reports/endofyear/eoy2006/sp-airtoxics-natl-priorities.html

Portable Instruments User's Manual For Monitoring VOC Sources, EPA-340/1-86-015.
Inspection Techniques For Fugitive VOC Emission Sources, EPA 340/1-90-026a,d,e,f (rev May 1993) Course #380.

Environmental compliance assistance resources can be found at:

http://cfpub.epa.gov/clearinghouse/
http://www.assistancecenters.net/
http://www.epa.gov/compliance/assistance/sectors/index.html

Appendix A Federal Regulations That Require a Formal LDAR Program With Method 21

40 CFR Part	40 CFR Subpart	Regulation Title
60	VV	SOCMI VOC Equipment Leaks NSPS
60	DDD	Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry
60	GGG	Petroleum Refinery VOC Equipment Leaks NSPS
60	KKK	Onshore Natural Gas Processing Plant VOC Equipment Leaks NSPS
61	J	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene
61	V	Equipment Leaks NESHAP
63	H	Organic HAP Equipment Leak NESHAP (HON)
63	I	Organic HAP Equipment Leak NESHAP for Certain Processes
63	J	Polyvinyl Chloride and Copolymers Production NESHAP
63	R	Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)
63	CC	Hazardous Air Pollutants from Petroleum Refineries
63	DD	Hazardous Air Pollutants from Off-Site Waste and Recovery Operations
63	SS	Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process
63	TT	Equipment Leaks – Control Level 1
63	UU	Equipment Leaks – Control Level 2
63	YY	Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards
63	GGG	Pharmaceuticals Production
63	III	Hazardous Air Pollutants from Flexible Polyurethane Foam Production
63	MMM	Hazardous Air Pollutants for Pesticide Active Ingredient Production
63	FFFF	Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing
63	GGGGG	Hazardous Air Pollutants: Site Remediation
63	HHHHH	Hazardous Air Pollutants: Miscellaneous Coating Manufacturing
65	F	Consolidated Federal Air Rule – Equipment Leaks
264	BB	Equipment Leaks for Hazardous Waste TSDFs
265	BB	Equipment Leaks for Interim Status Hazardous Waste TSDFs

Note: Many of these regulations have identical requirements, but some have different applicability and control requirements.

Appendix B Federal Regulations That Require the Use of Method 21 But Do Not Require a Formal LDAR Program

40 CFR Part	40 CFR Subpart	Regulation Title
60	XX	Bulk Gasoline Terminals
60	QQQ	VOC Emissions from Petroleum Refinery Wastewater Systems
60	WWW	Municipal Solid Waste Landfills
61	F	Vinyl Chloride
61	L	Benzene from Coke By-Products
61	BB	Benzene Transfer
61	FF	Benzene Waste Operations
63	G	Organic Hazardous Air Pollutants from SOCMI for Process Vents, Storage Vessels, Transfer Operations, and Wastewater
63	M	Perchloroethylene Standards for Dry Cleaning
63	S	Hazardous Air Pollutants from the Pulp and Paper Industry
63	Y	Marine Unloading Operations
63	EE	Magnetic Tape Manufacturing Operations
63	GG	Aerospace Manufacturing and Rework Facilities
63	HH	Hazardous Air Pollutants from Oil and Gas Production Facilities
63	OO	Tanks – Level 1
63	PP	Containers
63	QQ	Surface Impoundments
63	VV	Oil/Water, Organic/Water Separators
63	HHH	Hazardous Air Pollutants from Natural Gas Transmission and Storage
63	JJJ	Hazardous Air Pollutant Emissions: Group IV Polymers and Resins
63	VVV	Hazardous Air Pollutants: Publicly Owned Treatment Works
65	G	CFAR – Closed Vent Systems
264	AA	Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities - Process Vents
264	CC	Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities - Tanks, Surface Impoundments, Containers
265	AA	Interim Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities – Process Vents
265	CC	Interim Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities - Tanks, Surface Impoundments, Containers
270	B	Hazardous Waste Permit Program – Permit Application
270	J	Hazardous Waste Permit Program – RCRA Standardized Permits for Storage Tanks and Treatment Units

Appendix C Method 21 General Procedure

Failure of facilities to follow Method 21 can lead to them not properly identifying and subsequently repairing leaking components. It is critical for facilities to refer to the complete text of Method 21 (see Appendix D) for detailed explanations of each general procedure found below and how to properly perform each step.

1. Evaluate Instrument Performance

Performance criteria for the monitoring instrument:

- For each VOC measured, the response factor should be <10 unless specified in the applicable regulation. Response factor is the ratio of the known concentration of a VOC compound to the observed meter reading when measured using an instrument calibrated with the reference compound specified in the applicable regulation.
- The calibration precision should be <10 percent of the calibration gas value. Calibration precision is the degree of agreement between measurements of the same known value, expressed as the relative percentage of the average difference between the meter readings and the known concentration to the known concentration.
- The response time should be ≤30 seconds. Response time is the time interval from a step change in VOC concentration at the input of the sampling system to the time at which 90% of the corresponding final value is reached as displayed on the instrument readout meter.

2. Calibrate Instrument

Before each monitoring episode:

- Let the instrument warm up.
- Introduce the calibration gas into the instrument probe.
- Adjust the instrument meter readout to match the calibration gas concentration value.

3. Monitor Individual components

When monitoring components:

- Place the probe at the surface of the component interface where leakage could occur.
- Move the probe along the interface periphery while observing the instrument readout.
- Locate the maximum reading by moving the probe around the interface.
- Keep the probe at the location of the maximum reading for 2 times the response factor.
- If the concentration reading on the instrument readout is above the applicable leak definition, then the component is leaking and must be repaired.

Appendix D Method 21—Determination of Volatile Organic Compound Leaks

1.0 Scope and Application

1.1 Analytes.

Analyte	CAS No.
Volatile Organic Compounds (VOC).....	No CAS number assigned.

1.2 Scope. This method is applicable for the determination of VOC leaks from process equipment. These sources include, but are not limited to, valves, flanges and other connections, pumps and compressors, pressure relief devices, process drains, open-ended valves, pump and compressor seal system degassing vents, accumulator vessel vents, agitator seals, and access door seals.

1.3 Data Quality Objectives. Adherence to the requirements of this method will enhance the quality of the data obtained from air pollutant sampling methods.

2.0 Summary of Method

2.1 A portable instrument is used to detect VOC leaks from individual sources. The instrument detector type is not specified, but it must meet the specifications and performance criteria contained in Section 6.0. A leak definition concentration based on a reference compound is specified in each applicable regulation. This method is intended to locate and classify leaks only, and is not to be used as a direct measure of mass emission rate from individual sources.

3.0 Definitions

3.1 Calibration gas means the VOC compound used to adjust the instrument meter reading to a known value. The calibration gas is usually the reference compound at a known concentration approximately equal to the leak definition concentration.

3.2 Calibration precision means the degree of agreement between measurements of the same known value, expressed as the relative percentage of the average difference between the meter readings and the known concentration to the known concentration.

3.3 Leak definition concentration means the local VOC concentration at the surface of a leak source that indicates that a VOC emission (leak) is present. The leak definition is an instrument meter reading based on a reference compound.

3.4 No detectable emission means a local VOC concentration at the surface of a leak source, adjusted for local VOC ambient concentration, that is less than 2.5 % of the specified leak definition concentration. That indicates that a VOC emission (leak) is not present.

3.5 Reference compound means the VOC species selected as the instrument calibration basis for specification of the leak definition concentration. (For example, if a leak definition concentration is 10,000 ppm as methane, then any source emission that results in a local concentration that yields a meter reading of 10,000 on an instrument meter calibrated with methane would be classified as a leak. In this example, the leak definition concentration is 10,000 ppm and the reference compound is methane.)

3.6 Response factor means the ratio of the known concentration of a VOC compound to the observed meter reading when measured using an instrument calibrated with the reference compound specified in the applicable regulation.

3.7 Response time means the time interval from a step change in VOC concentration at the input of the sampling system to the time at which 90 percent of the corresponding final value is reached as displayed on the instrument readout meter.

4.0 Interferences [Reserved]

5.0 Safety

5.1 Disclaimer. This method may involve hazardous materials, operations, and equipment. This test method may not address all of the safety problems associated with its use. It is the responsibility of the user of this test method to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to performing this test method.

5.2 Hazardous Pollutants. Several of the compounds, leaks of which may be determined by this method, may be irritating or corrosive to tissues (e.g., heptane) or may be toxic (e.g., benzene, methyl alcohol). Nearly all are fire hazards. Compounds in emissions should be determined through familiarity with the source. Appropriate precautions can be found in reference documents, such as reference No. 4 in Section 16.0.

6.0 Equipment and Supplies

A VOC monitoring instrument meeting the following specifications is required:

6.1 The VOC instrument detector shall respond to the compounds being processed. Detector types that may meet this requirement include, but are not limited to, catalytic oxidation, flame ionization, infrared absorption, and photoionization.

6.2 The instrument shall be capable of measuring the leak definition concentration specified in the regulation.

6.3 The scale of the instrument meter shall be readable to ±2.5 % of the specified leak definition concentration.

6.4 The instrument shall be equipped with an electrically driven pump to ensure that a sample is provided to the detector at a constant flow rate. The nominal sample flow rate, as measured at the sample probe tip, shall be 0.10 to 3.0 l/min (0.004 to 0.1 ft 3 /min) when the probe is fitted with a glass wool plug or filter that may be used to prevent plugging of the instrument.

6.5 The instrument shall be equipped with a probe or probe extension or sampling not to exceed 6.4 mm (1/4 in) in outside diameter, with a single end opening for admission of sample.

6.6 The instrument shall be intrinsically safe for operation in explosive atmospheres as defined by the National Electrical Code by the National Fire Prevention Association or other applicable regulatory code for operation in any explosive atmospheres that may be encountered in its use. The instrument shall, at a minimum, be intrinsically safe for Class 1, Division 1 conditions, and/or Class 2, Division 1 conditions, as appropriate, as defined by the example code. The instrument shall not be operated with any safety device, such as an exhaust flame arrestor, removed.

7.0 Reagents and Standards

7.1 Two gas mixtures are required for instrument calibration and performance evaluation:

7.1.1 Zero Gas. Air, less than 10 parts per million by volume (ppmv) VOC.

7.1.2 Calibration Gas. For each organic species that is to be measured during individual source surveys, obtain or prepare a known standard in air at a concentration approximately equal to the applicable leak definition specified in the regulation.

7.2 Cylinder Gases. If cylinder calibration gas mixtures are used, they must be analyzed and certified by the manufacturer to be within 2 % accuracy, and a shelf life must be specified. Cylinder standards must be either reanalyzed or replaced at the end of the specified shelf life.

7.3 Prepared Gases. Calibration gases may be prepared by the user according to any accepted gaseous preparation procedure that will yield a mixture accurate to within 2 percent. Prepared standards must be replaced each day of use unless it is demonstrated that degradation does not occur during storage.

7.4 Mixtures with non-Reference Compound Gases. Calibrations may be performed using a compound other than the reference compound. In this case, a conversion factor must be determined for the alternative compound such that the resulting meter readings during source surveys can be converted to reference compound results.

8.0 Sample Collection, Preservation, Storage, and Transport

8.1 Instrument Performance Evaluation. Assemble and start up the instrument according to the manufacturer's instructions for recommended warmup period and preliminary adjustments.

8.1.1 Response Factor. A response factor must be determined for each compound that is to be measured, either by testing or from reference sources. The response factor tests are required before placing the analyzer into service, but do not have to be repeated at subsequent intervals.

8.1.1.1 Calibrate the instrument with the reference compound as specified in the applicable regulation. Introduce the calibration gas mixture to the analyzer and record the observed meter reading. Introduce zero gas until a stable reading is obtained. Make a total of three measurements by alternating between the calibration gas and zero gas. Calculate the response factor for each repetition and the average response factor.

8.1.1.2 The instrument response factors for each of the individual VOC to be measured shall be less than 10 unless otherwise specified in the applicable regulation. When no instrument is available that meets this specification when calibrated with the reference VOC specified in the applicable regula-

tion, the available instrument may be calibrated with one of the VOC to be measured, or any other VOC, so long as the instrument then has a response factor of less than 10 for each of the individual VOC to be measured.

8.1.1.3 Alternatively, if response factors have been published for the compounds of interest for the instrument or detector type, the response factor determination is not required, and existing results may be referenced. Examples of published response factors for flame ionization and catalytic oxidation detectors are included in References 1–3 of Section 17.0.

8.1.2 Calibration Precision. The calibration precision test must be completed prior to placing the analyzer into service and at subsequent 3-month intervals or at the next use, whichever is later.

8.1.2.1 Make a total of three measurements by alternately using zero gas and the specified calibration gas. Record the meter readings. Calculate the average algebraic difference between the meter readings and the known value. Divide this average difference by the known calibration value and multiply by 100 to express the resulting calibration precision as a percentage.

8.1.2.2 The calibration precision shall be equal to or less than 10 % of the calibration gas value.

8.1.3 Response Time. The response time test is required before placing the instrument into service. If a modification to the sample pumping system or flow configuration is made that would change the response time, a new test is required before further use.

8.1.3.1 Introduce zero gas into the instrument sample probe. When the meter reading has stabilized, switch quickly to the specified calibration gas. After switching, measure the time required to attain 90 % of the final stable reading. Perform this test sequence three times and record the results. Calculate the average response time.

8.1.3.2 The instrument response time shall be equal to or less than 30 seconds. The instrument pump, dilution probe (if any), sample probe, and probe filter that will be used during testing shall all be in place during the response time determination.

8.2 Instrument Calibration. Calibrate the VOC monitoring instrument according to Section 10.0.

8.3 Individual Source Surveys.

8.3.1 Type I—Leak Definition Based on Concentration. Place the probe inlet at the surface of the component interface where leakage could occur. Move the probe along the interface periphery while observing the instrument readout. If an increased meter reading is observed, slowly sample the interface where leakage is indicated until the maximum meter reading is obtained. Leave the probe inlet at this maximum reading location for approximately two times the instrument response time. If the maximum observed meter reading is greater than the leak definition in the applicable regulation, record and report the results as specified in the regulation reporting requirements. Examples of the application of this general technique to specific equipment types are:

8.3.1.1 Valves. The most common source of leaks from valves is the seal between the stem and housing. Place the probe at the interface where the stem exits the packing gland and sample the stem circumference. Also, place the probe at the interface of the packing gland take-up flange seat and sample

the periphery. In addition, survey valve housings of multipart assembly at the surface of all interfaces where a leak could occur.

8.3.1.2 Flanges and Other Connections. For welded flanges, place the probe at the outer edge of the flange-gasket interface and sample the circumference of the flange. Sample other types of nonpermanent joints (such as threaded connections) with a similar traverse.

8.3.1.3 Pumps and Compressors. Conduct a circumferential traverse at the outer surface of the pump or compressor shaft and seal interface. If the source is a rotating shaft, position the probe inlet within 1 cm of the shaft-seal interface for the survey. If the housing configuration prevents a complete traverse of the shaft periphery, sample all accessible portions. Sample all other joints on the pump or compressor housing where leakage could occur.

8.3.1.4 Pressure Relief Devices. The configuration of most pressure relief devices prevents sampling at the sealing seat interface. For those devices equipped with an enclosed extension, or horn, place the probe inlet at approximately the center of the exhaust area to the atmosphere.

8.3.1.5 Process Drains. For open drains, place the probe inlet at approxima tely the center of the area open to the atmosphere. For covered drains, place the probe at the surface of the cover interface and conduct a peripheral traverse.

8.3.1.6 Open-ended Lines or Valves. Place the probe inlet at approximately the center of the opening to the atmosphere.

8.3.1.7 Seal System Degassing Vents and Accumulator Vents. Place the probe inlet at approximately the center of the opening to the atmosphere.

8.3.1.8 Access door seals. Place the probe inlet at the surface of the door seal interface and conduct a peripheral traverse.

8.3.2 Type II—"No Detectable Emission". Determine the local ambient VOC concentration around the source by moving the probe randomly upwind and downwind at a distance of one to two meters from the source. If an interference exists with this determination due to a nearby emission or leak, the local ambient concentration may be determined at distances closer to the source, but in no case shall the distance be less than 25 centimeters. Then move the probe inlet to the surface of the source and determine the concentration as outlined in Section 8.3.1. The difference between these concentrations determines whether there are no detectable emissions. Record and report the results as specified by the regulation. For those cases where the regulation requires a specific device installation, or that specified vents be ducted or piped to a control device, the existence of these conditions shall be visually confirmed. When the regulation also requires that no detectable emissions exist, visual observations and sampling surveys are required. Examples of this technique are:

8.3.2.1 Pump or Compressor Seals. If applicable, determine the type of shaft seal. Perform a survey of the local area ambient VOC concentration and determine if detectable emissions exist as described in Section 8.3.2.

8.3.2.2 Seal System Degassing Vents, Accumulator Vessel Vents, Pressure Relief Devices. If applicable,

observe whether or not the applicable ducting or piping exists. Also, determine if any sources exist in the ducting or piping where emissions could occur upstream of the control device. If the required ducting or piping exists and there are no sources where the emissions could be vented to the atmosphere upstream of the control device, then it is presumed that no detectable emissions are present. If there are sources in the ducting or piping where emissions could be vented or sources where leaks could occur, the sampling surveys described in Section 8.3.2 shall be used to determine if detectable emissions exist.

8.3.3 Alternative Screening Procedure.

8.3.3.1 A screening procedure based on the formation of bubbles in a soap solution that is sprayed on a potential leak source may be used for those sources that do not have continuously moving parts, that do not have surface temperatures greater than the boiling point or less than the freezing point of the soap solution, that do not have open areas to the atmosphere that the soap solution cannot bridge, or that do not exhibit evidence of liquid leakage. Sources that have these conditions present must be surveyed using the instrument technique of Section 8.3.1 or 8.3.2.

8.3.3.2 Spray a soap solution over all potential leak sources. The soap solution may be a commercially available leak detection solution or may be prepared using concentrated detergent and water. A pressure sprayer or squeeze bottle may be used to dispense the solution. Observe the potential leak sites to determine if any bubbles are formed. If no bubbles are observed, the source is presumed to have no detectable emissions or leaks as applicable. If any bubbles are observed, the instrument techniques of Section 8.3.1 or 8.3.2 shall be used to determine if a leak exists, or if the source has detectable emissions, as applicable.

9.0 Quality Control

Section	Quality control measure	Effect
8.1.2.....	Instrument calibration precision check.	Ensure precision and accuracy, respectively, of instrument response to standard.
10.0.....	Instrument calibration.	

10.0 Calibration and Standardization

10.1 Calibrate the VOC monitoring instrument as follows. After the appropriate warmup period and zero internal calibration procedure, introduce the calibration gas into the instrument sample probe. Adjust the instrument meter readout to correspond to the calibration gas value.

Note: If the meter readout cannot be adjusted to the proper value, a malfunction of the analyzer is indicated and corrective actions are necessary before use.

11.0 Analytical Procedures [Reserved]

12.0 Data Analyses and Calculations [Reserved]

13.0 Method Performance [Reserved]

14.0 Pollution Prevention [Reserved]

15.0 Waste Management [Reserved]

16.0 References

1. Dubose, D.A., and G.E. Harris. Response Factors of VOC Analyzers at a Meter Reading of 10,000 ppmv for Selected Organic Compounds. U.S. Environmental Protection Agency, Research Triangle Park, NC. Publication No. EPA 600/2–81051. September 1981.
2. Brown, G.E., et al. Response Factors of VOC Analyzers Calibrated with Methane for Selected Organic Compounds. U.S. Environmental Protection Agency, Research Triangle Park, NC. Publication No. EPA 600/2–81–022. May 1981.
3. DuBose, D.A. et al. Response of Portable VOC Analyzers to Chemical Mixtures. U.S. Environmental Protection Agency, Research Triangle Park, NC. Publication No. EPA 600/2–81–110. September 1981.

4. Handbook of Hazardous Materials: Fire, Safety, Health. Alliance of American Insurers. Schaumberg, IL. 1983.

17.0 Tables, Diagrams, Flowcharts, and Validation Data [Reserved]

Appendix E Summary of NEIC Comparative Monitoring Results of Leaking Valves at 17 Refineries

	Refineries Total	NEIC Total
Valves Monitored	170,717	47,526
Number of Leaks	2,266	2,372
Leak Rate (%)	1.3	5.0 (avg)
Emissions Rate (lb/hr)	1,177.0	2,775.5
Potential Emissions from Undetected Leaks (lb/hr)[a]	**1,598.5**	

Source: Enforcement Alert – Proper Monitoring Essential to Reducing 'Fugitive Emissions' Under Leak Detection and Repair Programs, EPA 300-N-99-014. US EPA Office of Enforcement and Compliance Assurance. Vol. 2, No. 9, Oct 1999.

[a] Potential Emissions from Undetected Leaks (lb/hr) = NEIC Total Emissions Rate (lb/hr) – Refineries Total Emissions Rate (lb/hr)

Appendix F Enforcement Alert

United States Environmental Protection Agency | Office of Enforcement and Compliance Assurance (2201A) | EPA 300-N-99-014

EPA Enforcement Alert

Volume 2, Number 9 | Office of Regulatory Enforcement | October 1999

Proper Monitoring Essential to Reducing 'Fugitive Emissions' Under Leak Detection and Repair Programs

The Clean Air Act requires refineries to develop and implement a Leak Detection and Repair (LDAR) program to control fugitive emissions. Fugitive emissions occur from valves, pumps, compressors, pressure relief valves, flanges, connectors and other piping components.

Comparison monitoring conducted by the U.S. Environmental Protection Agency's (EPA) National Enforcement Investigations Center (NEIC) shows that the number of leaking valves and components is up to 10 times greater than had been reported by certain refineries (*see Table, Page 2*). EPA believes this great disparity between what refineries are reporting and what EPA is finding may be attributable to refineries not monitoring in the manner prescribed in 40 CFR Part 60, Appendix A, Method 21.

Federal regulations require refiners to routinely monitor for leaks and to fix any equipment found leaking. Failure to identify leaking equipment results in necessary repairs not being made and continuing fugitive emissions of volatile organic chemicals (VOCs) and other hazardous chemicals. EPA estimates that the failure to identify and repair leaks at petroleum refineries could be resulting in additional VOC emissions of 80 million pounds annually. VOCs contribute to ground-level ozone, a principal component of smog, which can cause significant health and environmental problems.

> EPA estimates that leaks not found and repaired could be resulting in additional volatile organic chemical emissions of 80 million pounds annually.

What the Law Requires

Specific requirements for refinery fugitive emissions are identified in 40 CFR Part 60, New Source Performance Standards (NSPS), and 40 CFR Parts 61 and 63, National Emission Standards for Hazardous Air Pollutants (NESHAP). Many State and local air agencies incorporate federal requirements but some have established more stringent requirements as authorized by law. The various regulations require refineries to implement an LDAR program to reduce fugitive emissions from valves, pumps, compressors, pressure relief valves, flanges, connectors, and other piping components.

Valves are usually the single largest source of fugitive emissions. Emissions from any single piece of equipment are usually small. Based on the large number of equipment components that can leak and are subject to LDAR requirements, however, cumulative emissions can be very large. To obtain a proper reading of emissions from leaking components the monitoring equipment must be calibrated cor-

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About Enforcement Alert

"Enforcement Alert" is published periodically by the Office of Regulatory Enforcement to inform and educate the public and regulated community of important environmental enforcement issues, recent trends and significant enforcement actions.

This information should help the regulated community anticipate and prevent violations of federal environmental law that could otherwise lead to enforcement action. Reproduction and wide dissemination of this newsletter is encouraged.

See Page 4 for useful EPA Websites and additional resources.

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This publication is found on the Internet at http://www.epa.gov/oeca/ore/enfalert

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rectly and held at the component interface where leakage could occur (e.g., at the seal between the valve stem and housing) for a sufficient length of time to obtain a valid measurement.

LDAR Programs Should Consist of Several Processes

LDAR programs are generally comprised of four processes. Regulations vary but usually require refineries to:

- Identify components to be included in the program;
- Conduct routine monitoring of identified components;
- Repair any leaking components; and
- Report monitoring results.

Compliance issues associated with each of these processes have resulted in numerous enforcement actions by EPA Regional offices, State agencies, or local air boards, depending on the specific regulations. Common violations include:

- Failure to identify process units and components that must be monitored;
- Failure to follow prescribed monitoring procedures;
- Use of incorrect or expired calibration gases;
- Failure to repair components within specified timeframes; and
- Failure to submit quarterly reports and maintain appropriate calibration and/or monitoring records.

Comparative Monitoring Results

Refinery	Company Monitoring: Valves/Leaks	NEIC Monitoring: Valves/Leaks	Leak Rate: Company/ NEIC (%)	Emissions Rate: Company/ NEIC (lb/hr)	Potential Emissions: Undetected Leaks (lb/hr)
A	7,694/170	3,363/354	2.3/10.5	38.8/106.6	67.8
B	7,879/223	3,407/216	2.8/6.3	44.0/73.5	29.5
C	3,913/22	2,008/108	0.6/5.4	18.3/90.1	71.8
D	2,229/26	1,784/24	1.2/1.4	15.5/17.1	1.6
E	5,555/96	2,109/112	0.7/5.3	50.7/125.8	75.1
F	42,505/124	3,053/53	0.3/1.7	154.7/382.3	227.6
G	14,307/226	3,852/236	1.6/6.1	122.2/369.7	247.5
H	20,719/736	3,351/179	3.6/5.3	332.2/469.7	137.5
I	5,339/9	2,754/84	0.2/3.1	16.9/76.6	59.7
J	8,374/78	2,981/55	0.9/1.8	50.8/78.5	27.7
K	6,997/101	1,658/114	1.4/6.9	56.1/201.2	145.1
L	12,686/26	3,228/125	0.2/3.8	34.9/84.0	49.1
M	4,160/40	1,926/222	1.0/11.5	25.7/192.2	166.5
N	5,944/29	2,487/106	0.5/4.3	26.1/112.3	86.2
O	7,181/112	2,897/130	1.6/4.5	60.8/140.9	80.1
P	8,532/203	4,060/181	2.4/4.5	98.8/167.5	68.7
Q	6,640/36	2,608/74	0.5/2.8	30.5/87.5	57.0
Total	170,717/2,266	47,526/2,372	1.3/5.0 (avg)	1,177.0/ 2,775.5	1,598.5

Refinery Monitoring Reports: What EPA is Finding

During the past several years, NEIC has monitored for leaking components at refineries. For 17 facilities investigated by NEIC, the average leak rate reported by the facilities was 1.3 percent. The average leak rate determined by NEIC and confirmed by the facilities was 5.0 percent. One explanation for this difference in leak rates may be found in a report published by the Bay Area Air Quality Management District ("Rule Effectiveness Study"). The Bay Area Air Quality Management District determined that when valves were inspected at a distance of one centimeter (0.4 inches) from the component instead of at the interface with the component, as the regulations require,

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57 percent of the leaking valves would be missed when monitoring above the 500 ppm level.

Fugitive emissions account for 22 percent of all emissions from non-refineries but account for more than 55 percent of all refinery emissions identified in the 1996 Toxic Release Inventory (TRI). Since TRI includes only "reportable" hydrocarbons, total fugitive emissions were significantly larger than the 33 million pounds then identified by reporting refineries.

The failure to identify leaks means that they remain unrepaired and will continue to release VOCs and hazardous substances into the atmosphere. Emission estimates using a 50/50 split between components in gas/light liquid service (*See Table, Page 2*) suggest that these 17 refineries' annual fugitive emissions could be more than 6,000 tons per year greater than previously believed. Extrapolating this difference to all refineries larger than the smallest refinery investigated by NEIC also suggests that there may be an additional 80 million pounds of VOCs being emitted each year because refinery leaks are not being identified properly and repaired promptly, as required by LDAR programs. Significantly and as recognized by industry, fugitive emissions can be reduced by up to 90 percent if leaks are detected and repaired in a timely manner.

EPA Policies for Reducing, Eliminating Penalties for Self-Policing

EPA has adopted two policies designed to encourage the regulated community to comply with environmental laws.

For more information, see EPA's Audit Policy Website at: http://www.epa.gov/oeca/auditpol.html, and the Small Business Policy at: http://www.epa.gov/oeca/smbusi.html.

Regulatory Impacts of Inadequate Fugitive Monitoring

By not fully identifying all leaking components, refineries are likely causing the unnecessary release of excess hydrocarbons. The impacts of these additional hydrocarbon releases may result in:

- Additional VOC emissions that could worsen local or transboundry smog problems;
- Under reporting of fugitive emissions on the annual Toxic Reporting Inventory;
- Under reporting of various TRI chemicals on annual Form R submissions; and
- Delayed or denied permits for expansion.

Most LDAR regulations allow for decreased monitoring frequency if certain performance standards are consistently achieved. Monitoring frequency is decreased from quarterly to annual monitoring if less than two percent of the valves within a process unit are found leaking. Conversely, if greater than two percent of the valves are found to be leaking, monitoring must be conducted quarterly. EPA monitoring showing a greater than two percent leak rate has resulted in refineries reverting back to quarterly monitoring.

Improving Leak Detection Monitoring Reliability

Although not required under current LDAR programs, several practices appear to improve the reliability of monitoring data and LDAR compliance:

- Energetic LDAR coordinators (advocates) with the responsibility and authority to make things happen;
- Continuing education/refresher programs for plant operators. Plant operators can have a major impact on LDAR compliance;
- Diligent and well-motivated monitoring personnel;
- Use of a lower than required leak definition. Several refineries use a leak definition lower than the regulatory limit. For example, several refineries use a 500 ppm limit rather than the regulatory limit of 10,000 ppm;
- More frequent monitoring than required. Rather than monitoring annually, some refineries monitor quarterly. More frequent monitoring also may permit lower emissions to be reported on the annual Toxic Reporting Inventory and/or Form Rs; and
- Established Quality Assurance/Quality Control procedures. Several refineries have initiated a program to check the monitoring results submitted by the monitoring team (in-house or contractor).

EPA's Office of Enforcement and Compliance Assurance is encouraged by efforts currently underway by the National Advisory Committee on Environmental Policy and Technology (NACEPT) petroleum refining workgroup to find more cost-effective ways to identify significant leaks

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through new technology that allows for quick identification of the most significant losses. Meanwhile, however, the regulated industry is expected to comply fully with existing LDAR requirements.

Contact Ken Garing, National Enforcement Investigations Center, (303)236-6658;Email: garing.ken@epa.gov; Tom Ripp, Office of Compliance, Manufacturing, Energy and Transportation Division, (202)564-7003;Email: ripp.tom@epamail.epa.gov; or Jim Jackson, Office of Regulatory Enforcement, Air Enforcement Division, (202) 564-2002;Email: jackson.james@epamail.epa.gov.

EPA'S Y2K Enforcement Policy

EPA's Y2K Enforcement Policy is designed to encourage the expeditious testing of computer associated hardware and software that may be potentially vulnerable to Y2K problems.

Under this policy, which was published in the Federal Register on March 10, 1999, EPA intends to waive 100 percent of the civil penalties and recommend against criminal prosecution for environmental violations resulting from Y2K testing designed to identify and eliminate Y2K-related malfunctions. To receive the policy's benefits (e.g., waiver of penalties due to testing), regulated entities must address specific criteria and conditions identified in the policy.

For more about the Y2K Enforcement Policy, contact *Gary Jonesi, Office of Regulatory Enforcement, (202) 564-4002 or E-mail: jonesi.gary@epa.gov.*

Useful Websites

EPA's Technical Web site for Information Transfer and Sharing Related to Air Pollution Topics: http://www.epa.gov/ttn/

Toxics Release Inventory (TRI): http://www.epa.gov/opptintr/tri/

EPA Home Page: http://www.epa.gov/epahome

National Enforcement Investigations Center: http://www.epa.gov/oeca/oceft/neic/index.html

EPCRA Hotline: 1-800-424-9346. For callers in the DC area, please call (703) 412-9810. Also, the TDD is (800) 553-7672.

Office of Regulatory Enforcement http://www.EPA.gov/oeca/ore.html

EPA Compliance Assistance Centers: http://www.epa.gov/oeca/mfcac.html

Small Business Gateway: http://www.epa/gov/smallbusiness

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