



MAR 15 2012

Matt Polapink
Nob Hill #601
Attn: Permits & Licenses
P O Box 15618
Sacramento, CA 95852

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1114068

Dear Mr. Polapink:

Enclosed for your review and comment is the District's analysis of Nob Hill's application for an Authority to Construct for a 126 bhp natural gas fired emergency engine powering an electric generator, located at 1945 N Street, Newman, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Fred Cruz of Permit Services at (209) 557-6456.

Sincerely,

David Warner
Director of Permit Services

DW:FJC/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061
www.valleyair.org www.healthyairliving.com

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



MAR 15 2012

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1114068

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Nob Hill's application for an Authority to Construct for a 126 bhp natural gas fired emergency engine powering an electric generator, located at 1945 N Street, Newman, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Fred Cruz of Permit Services at (209) 557-6456.

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Merced Sun-Star
Merced Sun-Star

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Nob Hill Stores for a 126 bhp natural gas fired emergency engine powering an electric generator, located at 1945 N Street, Newman, CA.

The analysis of the regulatory basis for this proposed action, Project #N-1114068, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356.**

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Natural-Fired Emergency Standby IC Engine

Facility Name:	Nob Hill #601	Date:	March 5, 2012
	Attn: Permits & Licenses	Engineer:	Fred Cruz
Mailing Address:	P O Box 15618	Lead Engineer:	Mark Schonhoff
	Sacramento, CA 95852		
Contact Person:	Matt Polapink		
Telephone:	(916) 373-6453		
FAX:	(916) 376-6899		
Email:	gbaker@raleys.com		
Application No:	N-8690-1-0		
Project No:	N-1114068		
Complete:	February 9, 2012		

I. PROPOSAL:

Raley's (Nob Hills stores) submitted an Authority to Construct (ATC) application to permit an existing 126 bhp natural gas fired emergency standby internal combustion (IC) engine powering an electrical generator. The applicant stated that this emergency engine was installed in 1995. This emergency engine was installed without first obtaining an ATC permit.

II. APPLICABLE RULES:

Rule 2201 New and Modified Stationary Source Review Rule (4/21/2011)
Rule 2520 Federally Mandated Operating Permits (6/21/2001)
Rule 4001 New Source Performance Standards (4/14/1999)
Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/2004)
Rule 4101 Visible Emissions (2/17/2005)
Rule 4102 Nuisance (12/17/1992)
Rule 4201 Particulate Matter Concentration (12/17/1992)
Rule 4701 Stationary Internal Combustion Engines – Phase 1 (8/21/2003)
Rule 4702 Stationary Internal Combustion Engines – Phase 2 (1/18/2007)
Rule 4801 Sulfur Compounds (12/17/1992)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for
Stationary Compression-Ignition (CI) Engines
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-
15387: CEQA Guidelines

III. PROJECT LOCATION:

The facility is located at 1945 N Street, Newman, CA. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. PROCESS DESCRIPTION:

The emergency standby engine powers an electrical generator. Other than emergency operation, the engine may be operated up to 100 hours per year for maintenance and testing purposes.

V. EQUIPMENT LISTING:

N-8690-1-0: 126 BHP FORD MODEL LSG-6751-6005-A NATURAL GAS FIRED EMERGENCY ENGINE POWERING AN ELECTRIC GENERATOR.

VI. EMISSION CONTROL TECHNOLOGY EVALUATION:

The engine is equipped with:

- Positive Crankcase Ventilation (PCV) or 90% efficient control device
- Non-Selective Catalytic Reduction
- Air/Fuel Ratio or an O₂ Controller
- Lean Burn Technology

The applicant provided information on the controls for this emergency engine.

VII. GENERAL CALCULATIONS:

A. Assumptions

Emergency operating schedule:	24 hours/day
Non-emergency operating schedule:	100 hours/year
EPA F-factor (adjusted to 60 °F):	8,578 dscf/MMBtu (40 CFR 60 Appendix B)
Fuel heating value:	1,000 Btu/dscf (District Policy APR-1720, dated 12/20/2001)
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Sulfur concentration:	2.85 lb-Sulfur/MMscf (District Policy APR-1720, dated 12/20/01)
Thermal efficiency of engine:	commonly ≈ 35%

B. Emission Factors

The engine manufacture provided the emissions factor for NO_x, CO and VOC emissions as detailed below.

Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	5.57	Engine manufacturer
CO	56.0	Engine manufacturer
VOC	0.16	Engine manufacturer
PM ₁₀	0.063	AP-42 Table 3.2-3 (7/2000) *
SO _x	0.0094	Calculated below **

*PM₁₀ value includes both filterable (9.50x10⁻³ lb/MMBtu) and condensable (9.91x10⁻³ lb/MMBtu) emissions. (Based on 4-stroke rich-burn natural gas fired engine.)

$$0.019 \frac{lb}{MMBtu} \times \frac{1 MMBtu}{1,000,000 Btu} \times \frac{2,542.5 Btu}{bhp-hr} \times \frac{1 bhp input}{0.35 bhp out} \times \frac{453.6 g}{lb} = 0.063 \frac{g-PM10}{bhp-hr}$$

**SO_x is calculated as follows:

$$0.00285 \frac{lb-SO_x}{MMBtu} \times \frac{1 MMBtu}{1,000,000 Btu} \times \frac{2,542.5 Btu}{bhp-hr} \times \frac{1 bhp input}{0.35 bhp out} \times \frac{453.6 g}{lb} = 0.0094 \frac{g-SO_x}{bhp-hr}$$

C. Calculations

1. Pre-Project Emissions (PE1)

Since this is a new emissions unit, PE1 = 0 for all pollutants.

2. Post Project PE (PE2)

The potential to emit emissions from this emergency IC engine is based on the maximum operating capacity of the engine for 24 hours per day. The following calculation for NO_x emissions is representative of emission calculations for all pollutants. Annual emissions are based on 100 hours per year for non-emergency operation. PE will be the same for each engine.

NO_x: 5.57 g/hp-hr × 126 hp × lb/453.6 g

NO_x: 1.55 lb/hr, 37.1 lb/day, 155 lb/yr

CO: 15.6 lb/hr, 373.3 lb/day, 1,556 lb/yr

VOC: 0.04 lb/hr, 1.1 lb/day, 4 lb/yr

PM₁₀: 0.02 lb/hr, 0.4 lb/day, 2 lb/yr

SO_x: 0.003 lb/hr, 0.1 lb/day, 0.3 lb/yr¹

	NO _x	CO	VOC	PM ₁₀	SO _x
Daily PE	37.1	373.3	1.1	0.4	0.1
Annual PE	155	1,556	4	2	0

¹ Per District Policy APR 1105, Use of Significant Figures, annual emissions less than 0.5 are set to zero.

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. Since this is new emissions unit at a new facility, SSPE1 is equal to zero for all pollutants.

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Permit No.	NO _x	CO	VOC	PM ₁₀	SO _x
N-8690-1-0	155	1,556	4	2	0
Total:	155	1,556	4	2	0

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, “for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.” This facility does not have any ERCs which have been banked at the source; therefore, SSPE2 does not have to be adjusted.

Major Source Determination					
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Major Source Threshold (lb/yr)	Existing Major Source?	Becoming a Major Source?
NO _x	0	155	20,000	No	No
SO _x	0	0	140,000	No	No
PM ₁₀	0	2	140,000	No	No
CO	0	1,556	200,000	No	No
VOC	0	4	20,000	No	No

As seen in the table above, the facility is not an existing Major Source and also is not becoming a Major Source as a result of this project.

6. Baseline Emissions (BE)

The equipment is considered as new emissions unit and the baseline emissions will equal zero for all pollutants.

7. SB 288 Major Modification:

The purpose of Major Modification calculations is to determine the following:

- A. If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification (District Rule 2201, Section 4.1.3); and
- B. If a public notification is triggered (District Rule 2201, Section 5.4.1).

Based on the pre and post-project stationary source potential to emit calculations (less onsite Emission Reduction Credit's) in this document, the facility is not a Major Source for any pollutant. Therefore, the proposed project cannot trigger a Major modification and no further calculations are required.

8. Federal Major Modification

This facility is not a Major Source for any pollutant. Therefore, this project can not constitute a Federal Major Modification and no further discussion is required.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix B.

VIII. COMPLIANCE

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

- a) Any new emissions unit with a potential to emit exceeding 2.0 pounds per day,

- b) The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding 2.0 pounds per day,
- c) Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding 2.0 pounds per day, and/or
- d) Any new or modified emissions unit, in a stationary source project, which results in a Major Modification.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2.0 lb/day

This engine is considered as a new emissions unit and the daily emissions are compared to the BACT thresholds in the following table:

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions for unit -1-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO _x	37.1	> 2.0	N/A	Yes
SO _x	0.1	> 2.0	N/A	No
PM ₁₀	0.4	> 2.0	N/A	No
CO	373.3	> 2.0 and SSPE2 ≥ 200,000 lb/yr	1,556	No
VOC	1.1	> 2.0	N/A	No

BACT will be triggered for NO_x emissions from the engine.

b. Relocation of emissions units – PE > 2.0 lb/day

This engine is not being relocated from one stationary source to another stationary source as a result of this project.

c. Modification of emissions units – Adjusted Increase in Permitted Emissions (AIPE) > 2.0 lb/day

This engine is not being modified. Therefore, BACT is not triggered for the modification of emissions units with an AIPE > 2.0 lb/day.

d. Major Modification

This project does not constitute a Major Modification. Therefore, BACT is not triggered for a Major Modification.

2. BACT Guideline

BACT Guideline 3-8, 4th quarter 1995, which appears in Appendix C of this report, covers gaseous fueled emergency IC engines rated less than 132 bhp. Since this engine was installed in 1995, this BACT guideline would be the

applicable guideline and this emergency engine would have been subject to this BACT guideline at the time of installation. Per District Policy FYI 98, the BACT analysis will address the cost effectiveness of additional control technologies.

3. Top Down BACT Analysis

Per District Policy APR 1305, Section IX, “A top-down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District’s NSR Rule for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis.”

Pursuant to the attached Top-Down BACT Analysis, which appears in Appendix C of this report, BACT is satisfied with:

NO_x: No control technology (Achieved in practice control technology)

B. Offsets

Since emergency standby IC engines are exempt from the offset requirements of Rule 2201, per Section 4.6.2, offsets are not required for this engine, and offset calculations are not required.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, which is a new facility that also becomes a Major Source,
- b. Major Modifications,
- c. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- d. Any project which results in the offset thresholds being surpassed, and/or
- e. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Source

A New Major Source is a new facility, which also becomes a major source. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b. Major Modification

As demonstrated previously in Sections VII.C.7 and VII.C.8, this project does not constitute a Major Modification; therefore, public noticing for Major Modification purposes is not required.

c. PE > 100 lb/day

The Daily PE for this new emissions unit is compared to the daily PE Public Notice Thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	Daily PE for unit -1-0 (lb/day)	Public Notice Threshold (lb/day)	Public Notice Triggered?
NO _x	37.1	100	No
SO _x	0.1	100	No
PM ₁₀	0.4	100	No
CO	373.3	100	Yes
VOC	1.1	100	No

As detailed in the preceding table, CO emissions exceed the 100 lb/day thresholds and public noticing is required for this project.

d. Offset Threshold

The following table compares the SSPE1 and SSPE2 with the offset thresholds to determine if any offset thresholds have been surpassed.

Offset Threshold				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Offset Threshold (lb/yr)	Public Notice Required?
NO _x	0	155	20,000	No
SO _x	0	0	54,750	No
PM ₁₀	0	2	29,200	No
CO	0	1,556	200,000	No
VOC	0	4	20,000	No

As detailed in the preceding table, there were no offset thresholds surpassed with this project. Therefore, public noticing is not required for this project.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively.

The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

SSIPE Public Notice Threshold					
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)	SSIPE Threshold (lb/yr)	Public Notice Required?
NO _x	155	0	155	20,000	No
SO _x	0	0	0	20,000	No
PM ₁₀	2	0	2	20,000	No
CO	1,556	0	1,556	20,000	No
VOC	4	0	4	20,000	No

As detailed in the preceding table, there are no SSIPE thresholds surpassed with this project. Therefore, public noticing is not required for exceeding the SSIPE thresholds.

2. Public Notice Action

As discussed above, this project will result in emissions, for any criteria pollutant, which would subject the project to the noticing requirements listed above. Therefore, public notice will be required for this project.

D. Daily Emissions Limits

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT. For this emergency standby IC engine, the DELs are stated in the form of emission factors, the maximum engine horsepower rating, and the maximum operational time of 24 hours per day. Therefore, the following conditions will be listed on the ATC to ensure compliance:

- {edited 3501} Emissions from this IC engine shall not exceed any of the following limits: 5.57 g-NO_x/bhp-hr, 0.063 g-PM₁₀/bhp-hr, 56.0 g-CO/bhp-hr, 0.0094 g-SO_x/bhp-hr or 0.16 g-VOC/bhp-hr. [District Rule 2201]

E. Compliance Assurance:

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required for emergency standby IC engines to demonstrate compliance with Rule 2201.

2. Monitoring

Monitoring is not required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. As required by District Rule 4702, *Stationary Internal Combustion Engines - Phase 2*, this IC engine is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, *District Rule 4702*, of this evaluation.

4. Reporting

Reporting is not required to ensure compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

Section 4.14.1 of this rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The Technical Services Division of the SJVAPCD conducted the required analysis.

As shown by the AAQA summary sheet in Appendix D, the proposed equipment will not cause or make worse a violation of an air quality standard for NO_x, CO, PM₁₀, SO_x or PM_{2.5}.

Rule 2520 Federally Mandated Operating Permits

Since this facility's potential to emit does not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignited Internal Combustion Engines

Pursuant to § 60.4230 of Subpart JJJJ, this engine is subject to this federal regulation. However, the District has not been delegated authorization to enforce the requirements of this regulation. The applicant will be so notified in a permit condition.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

40 CFR 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Emissions (RICE)

Pursuant to § 63.6585 of Subpart ZZZZ, this engine is subject to this federal regulation. However, the District has not been delegated authorization to enforce the requirements

of 40 CFR 63 Subpart ZZZZ for non-Part 70 sources (Major Sources). The applicant will be so notified in a permit condition.

Rule 4101 Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Rule 4102 Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources (dated 3/2/01) specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

For the Risk Management Review, toxic emissions from the project were calculated using District approved emission factors for natural gas internal combustion engines. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the proposed project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The project's prioritization score was less than 1.0 (see RMR Summary in Appendix D); therefore, no further analysis was required.

RMR Summary			
Categories	Emergency Natural Gas ICE (Unit 1-0)	Project Totals	Facility Totals
Prioritization Score	0.17*	0.17	0.17
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	No		
Special Permit Conditions?	Yes		

*The unit passed on prioritization with a score less than 1; therefore, no further analysis was required.

To ensure that human health risks will not exceed District allowable levels; the following permit condition listed below will be included on the ATC permit:

Unit # 1-0

1. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702]

As demonstrated previously, T-BACT is not required for this project because the HRA indicates that the risk is not above the District’s thresholds for triggering T-BACT requirements; therefore, compliance with the District’s Risk Management Policy is expected.

Rule 4201 Particulate Matter Concentration

Particulate matter emissions from the engine will be less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions as shown by the following:

$$0.063 \frac{g - PM_{10}}{bhp - hr} \times \frac{1 bhp - hr}{2,542.5 Btu} \times \frac{10^6 Btu}{8,578 dscf} \times \frac{0.35 Btu_{out}}{1 Btu_{in}} \times \frac{15.43 grain}{g} = 0.016 \frac{grain - PM}{dscf}$$

Since 0.016 grain-PM/dscf is ≤ to 0.1 grain per dscf, compliance with Rule 4201 is expected.

Therefore, the following condition will be listed on the ATC to ensure compliance:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Rule 4701 Internal Combustion Engines – Phase 1

District Rule 4701 is applicable to diesel-fired emergency standby or emergency IC engines. Rule 4702 is at least as stringent as this rule in all aspects; therefore, compliance with that rule will ensure compliance with Rule 4701.

Rule 4702 Internal Combustion Engines – Phase 2

The following table demonstrates how the proposed engine will comply with the requirements of District Rule 4702.

District Rule 4702 Requirements Emergency Standby IC Engines	Proposed Method of Compliance with District Rule 4702 Requirements
Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes, verified through the use of a non-resettable elapsed operating time meter.	This emergency engine will be limited to 100 hours per calendar year for non-emergency purposes. Thus, compliance is expected.
Emergency standby engines cannot be used to reduce the demand for electrical power when normal electrical power line service has not failed, or to produce power for the electrical distribution system, or in conjunction with a voluntary utility demand reduction program or interruptible power contract.	The following conditions will be included on the permit: <ul style="list-style-type: none"> • {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] • {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]
The owner/operator must monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.	The following condition will be included on the permit: <ul style="list-style-type: none"> • {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
Records of the total hours of operation of the emergency standby engine, type of fuel used, purpose for operating the engine, all hours of non-emergency and emergency operation,	The following conditions will be included on the permit:

and support documentation must be maintained. All records shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request.

- {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702]
- The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702]
- {3475} All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 4702]

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO₂) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

$$\text{Volume SO}_2 = (n \times R \times T) \div P$$

n = moles SO₂

T (standard temperature) = 60 °F or 520 °R

$$R \text{ (universal gas constant)} = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}}$$

$$2.85 \quad \frac{\text{lb} - S}{\text{MMscf} - \text{gas}} \times \frac{1 \text{ scf} - \text{gas}}{1,000 \text{ Btu}} \times \frac{1 \text{ MMBtu}}{8,578 \text{ scf}} \times \frac{1 \text{ lb} - \text{mol}}{64 \text{ lb} - S} \times \frac{10.73 \text{ psi} - \text{ft}^3}{\text{lb} - \text{mol} - \text{°R}} \times \frac{520 \text{ °R}}{14.7 \text{ psi}} \times 1,000,000 = 1.97 \quad \text{ppmv}$$

Since 1.97 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801. Therefore, the following condition (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- This IC engine shall be fired on Public Utility Commission (PUC) quality natural gas only. [District Rules 2201 and 4801]

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

This regulation applies to any new or in-use stationary diesel-fueled compression ignition (CI) emergency standby engines. The engine involved with this project is fired on natural gas and is not compression ignited. Therefore, this regulation is not applicable to this engine.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001.

The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Consistent with California Environmental Quality Act (CEQA) and CEQA Guidelines requirements, the San Joaquin Valley Air Pollution Control District (District) has adopted procedures and guidelines for implementing CEQA. The District's Environmental Review Guidelines (ERG) establishes procedures for avoiding unnecessary delay during the District's permitting process while ensuring that significant environmental impacts are thoroughly and consistently addressed. The ERG includes policies and procedures to be followed when processing permits for projects that are exempt under CEQA.

The State Legislature granted a number of exemptions from CEQA, including projects that require only ministerial approval. Based upon analysis of its own laws and consideration of CEQA provisions, the District has identified a limited number of District

permitting activities considered to be ministerial approvals. As set forth in §4.2.1 of the ERG, projects permitted consistent with the District's *Guidelines for Expedited Application Review* (GEAR) are standard application reviews in which little or no discretion is used in issuing Authority to Construct (ATC) documents.

For the proposed project, the District performed an Engineering Evaluation (this document) and determined that the project will occur at an existing facility; involves negligible expansion of the existing use; and would not have a significant effect on the environment. The District further determined that the project qualifies for processing under the procedures set forth in the District's Permit Services Procedures Manual in the *Guidelines for Expedited Application Review* (GEAR). Thus, as discussed above, issuance of such ATC(s) is ministerial approval for the District and is not subject to CEQA provisions.

On December 17, 2009, the District's Governing Board adopted the first comprehensive regional policy and guidance on addressing and mitigating GHG emission impacts caused by industrial, commercial, and residential development in the San Joaquin Valley. The adopted District policy – *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* applies to projects for which the District has discretionary approval authority over the project and serves as the lead agency for CEQA purposes. The policy relies on the use of performance based standards, otherwise known as Best Performance Standards (BPS) to assess significance of project specific greenhouse gas emissions on global climate change during the environmental review process, as required by CEQA.

Use of BPS is a method of streamlining the CEQA process of determining significance and is not a required emission reduction measure. However, consistent with the District's objective to achieve the GHG emission reduction targets established pursuant to AB 32, BPS will be incorporated into the District's GEAR application review process. In the interim, projects meeting the existing GEAR requirements will continue to be processed as ministerial approvals.

IX. RECOMMENDATIONS:

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct N-8690-1-0 subject to the permit conditions on the attached Authority to Construct in Appendix A.

X. BILLING INFORMATION:

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
N-8690-1-0	3020-10-B	126 bhp IC engine	\$117

Appendices

- A. Authority to Construct permit N-8690-1-0
- B. QNEC Calculations
- C. BACT Guideline and BACT Analysis
- D. RMR Summary and Ambient Air Quality Analysis (AAQA)

Appendix A

Authority to Construct permit N-8690-1-0

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-8690-1-0

LEGAL OWNER OR OPERATOR: NOB HILL #601
MAILING ADDRESS: ATTN PERMITS & LICENSES
PO BOX 15618
SACRAMENTO, CA 95852

LOCATION: 1945 N ST
NEWMAN, CA 95360

EQUIPMENT DESCRIPTION:
126 BHP FORD MODEL LSG-6751-6005-A NATURAL GAS FIRED EMERGENCY ENGINE POWERING AN ELECTRIC GENERATOR.

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
5. Emissions from this IC engine shall not exceed any of the following limits: 5.57 g-NOx/bhp-hr, 0.063 g-PM10/bhp-hr, 56.0 g-CO/bhp-hr, 0.0094 g-SOx/bhp-hr or 0.16 g-VOC/bhp-hr. [District Rule 2201]
6. {3405} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
7. This IC engine shall be fired on Public Utility Commission (PUC) quality natural gas only. [District Rules 2201 and 4801]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services
N-8690-1-0 : Mar 8 2012 10:32AM - CRUZF : Joint Inspection NOT Required

8. {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
9. {3806} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702]
10. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]
11. {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]
12. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4701 and 4702]
13. U.S. EPA administers the requirements of 40 CFR Part 60 Subpart JJJJ and 40 CFR Part 63 Subpart ZZZZ. The owner or operator shall comply with the emission and operating limitations, testing requirements, initial and continuous compliance requirements as specified in these subparts. The owner or operator shall submit all applicable notifications, reports, and records to the administrator by the required compliance dates. [District Rules 4001 and 4002]
14. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4701 and 4702]

DRAFT

Appendix B

QNEC Calculations

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr
- PE2 = Post-Project Potential to Emit for each emissions unit, lb/qtr
- PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr

Using the emission calculations in this evaluation, PE_{quarterly} and BE_{quarterly} can be calculated as follows:

This calculation is required for application emission profile purposes. It is assumed that each unit's annual emissions are evenly distributed throughout the year as follows: $\Delta PE \text{ (lb/qtr)} = PE \text{ (lb/yr)} \div 4 \text{ qtr/yr}$

N-8690-1-0:

- ΔPE_{NOx} = 155 lb-NOx/year – 0 lb-NOx/year = 155 lb/year
- ΔPE_{CO} = 1,556 lb-CO/year – 0 lb-CO/year = 1,556 lb/year
- ΔPE_{VOC} = 4 lb-VOC/year – 0 lb-VOC/year = 4 lb/year
- ΔPE_{PM10} = 2 lb-PM10/year – 0 lb-PM10/year = 2 lb/year
- ΔPE_{SOx} = 0 lb-SOx/year – 0 lb-SOx/year = 0 lb/year

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
NOx	38	39	39	39
CO	389	389	389	389
VOC	1	1	1	1
PM₁₀	0	0	1	1
SOx	0	0	0	0

Appendix C

Top Down BACT Analysis for the Emergency IC Engine(s)

This emergency engine was installed in 1995 without first obtaining an ATC permit. Per District Policy FYI-98, if the emissions unit was installed with BACT the District's BACT analysis is limited to the specific control technologies covered by the BACT guideline in effect at the time of installation. Oxides of nitrogen (NO_x) are generated from the high temperature combustion of natural gas. A majority of the NO_x emissions are formed from the high temperature reaction of nitrogen and oxygen in the inlet air. The rest of the NO_x emissions are formed from the reaction of fuel-bound nitrogen with oxygen in the inlet air.

1. BACT Analysis for NO_x Emissions:

a. Step 1 - Identify all control technologies

The SJVAPCD BACT Clearinghouse guideline 3-8, 4th quarter 1995, does not list an achieved in practice BACT for NO_x emissions from gaseous fueled emergency IC engines < 132 bhp as follows:

- 1) Use of three way catalyst and use of natural gas, LPG or propane gas
(Technologically feasible)

There are no control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from Step 1.

c. Step 3 - Rank remaining options by control effectiveness

- 1) Three-way catalyst and use of natural gas (Technologically feasible)

d. Step 4 - Cost Effectiveness Analysis

This facility is classified as a small emitter, per the District's BACT Policy (dated 11/9/99) Section III.D, the facility-wide emissions are less than two tons per year for each affected pollutant. Therefore, per the District's BACT Policy, a technologically feasible BACT and cost effective analysis is not required.

e. Step 5 - Select BACT

The technologically feasible control technology was eliminated in Step 4. There are no NO_x control technologies that are required and the applicant's proposal meets the District's BACT requirements.

**San Joaquin Valley
Unified Air Pollution Control District**

Best Available Control Technology (BACT) Guideline 3-8*

Emission Unit: Gaseous Fueled
Emergency I.C. Engine

Industry Type: Emergency Power
for Cellular Phone
Company

Equipment Rating: < 132 hp

Last Update: October 1, 1995

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
VOC		1. VOC catalyst, positive crankcase ventilation (PCV), and natural gas, LPG, or propane as fuel	
SO _x		1. Natural gas, LPG or propane as fuel	
NO _x		1. NOx catalyst and natural gas, LPG, or propane as fuel	
CO		1. CO catalyst and natural gas, LPG, or propane as fuel	
PM ₁₀		1. Positive crankcase ventilation (PCV) and natural gas, LPG, or propane as fuel	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on Next Page(s)**

Appendix D

RMR Summary and Ambient Air Quality Analysis

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Fred Cruz - Permit Services

From: Cheryl Lawler - Permit Services

Date: February 23, 2012

Facility Name: Nob Hill #601

Location: 2323 West Hammer Lane, Stockton

Application No: N-8690-1-0

Project No: N-1114068

A. RMR SUMMARY

RMR Summary			
Categories	Emergency Natural Gas ICE (Unit 1-0)	Project Totals	Facility Totals
Prioritization Score	0.17*	0.17	0.17
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	No		
Special Permit Conditions?	Yes		

*The unit passed on prioritization with a score less than 1; therefore, no further analysis was required.

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit 1-0

1. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed **100** hours per calendar year. [District Rule 4702 and 17 CCR 93115]

B. RMR REPORT

I. Project Description

Technical Services received a request on February 13, 2012, to perform an Ambient Air Quality Analysis (AAQA) and a Risk Management Review (RMR) for a 126 bhp emergency natural gas fired internal combustion engine.

II. Analysis

For the Risk Management Review, toxic emissions from the project were calculated using District approved emission factors for natural gas internal combustion engines. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the proposed project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The project's prioritization score was less than 1.0 (see RMR Summary Table); therefore, no further analysis was required.

The following parameters were used for the review:

Analysis Parameters			
Source Type	Point	Closest Receptor (m)	46
Release Height (m)	5.5	Closest Receptor Type	Business
Stack Diameter (m)	0.08	Project Location Type	Urban
Gas Exit Temperature (K)	922	Stack Gas Velocity (m/s)	70.9

Technical Services also performed modeling for criteria pollutants NO_x, SO_x, PM₁₀, and PM_{2.5}; as well as a RMR. The emission rates used for criteria pollutant modeling were 155 lb/yr NO_x, 0.3 lb/yr SO_x, 2 lb/yr PM₁₀, and 2 lb/yr PM_{2.5}.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Natural Gas ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	NA ¹	X	NA ¹	X	X
NO _x	NA ¹	X	X	X	Pass
SO _x	NA ¹	NA ¹	X	NA ¹	Pass
PM ₁₀	X	X	X	NA ¹	Pass ²
PM _{2.5}	X	X	X	NA ¹	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project is an intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour, 8-hour, and 24-hour) standards is not required.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusions

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

The prioritization score for this project is not above 1.0. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for the proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.