

Evaluation Report
A/N 13564
G# 11335
Arco, 3400 Willow Pass Road, Concord

Background

Arco has submitted this application to increase the throughput limit at G11335. No other hardware modifications are being proposed at this time. This station is currently permitted to dispense 2.51 MM gal/yr of gasoline. The baseline for this site is 1.07 MM gal/yr. This station is currently equipped with one 20K tank and one 15K tank and 12 triple product nozzles, with two-point Phase I (OPW EVR) and balance Phase II.

Arco was granted an A/C on 6/28/05 to implement the balance Risk Reduction Measures (RRMs) and increase their throughput to 3.51 MM gal/yr under A/N 11120. Since the modeling for this application was performed, more representative meteorological data (discussed below) has been identified.

This application constitutes a re-evaluation of A/N 11120 using the new meteorological data. A new risk screen was performed using the following emissions factors:

Operation	% change	Controlled VOC, #/Mgal	Benzene, #/MMgal
Loading	none	0.084	0.252
Breathing	75% reduction	0.00625	0.0188
Refueling	56% reduction	0.32	0.96
Spillage	24% reduction	0.32	3.20
TOTAL	34% reduction	0.73	4.43

Modeling

A Health Risk Screening (HRS) was performed for this site using the ISCST3 model and standard District procedures. This site is not within the sphere of influence of any of the District's metrological stations, so the original HRS under A/N 11120 used default metrological data. Land use patterns around the site dictated the use of rural dispersion coefficients.

It has since been determined that metrological data collected at the Concord Sewage Treatment Plant can be used to model the emissions from this site. For this application a new HRS was performed using the Concord STP data and rural dispersions coefficients. Results indicate that a 6.88 million gal/yr. throughput is acceptable under the District's Risk Management Policy upon implementation of the RRMs for balance Phase II systems.

Emission Calculations

Current benzene emissions: 2.51 Mmgal/yr x 6.75#/Mmgal = 16.94 #/yr

Proposed benzene emissions: 6.88 Mmgal/yr x 4.43#/Mmgal = 30.47 #/yr

Implementation of the RRM's in conjunction with the increased throughput will result in an increase of benzene emissions of 13.54 #/yr.

New Source Review

This station will emit more than 10# of VOC in a single day. Thus the Best Available Control Technology (BACT) requirement of Regulation 2-2-301 is triggered.

BACT for GDFs is considered the use of CARB-certified Phase-I and Phase-II vapor recovery equipment. State law prohibits the District from requiring vapor recovery equipment that is not CARB-certified.

Emissions from this station will remain less than 10 tpy. Per Regulation 2-2-302, offsets are not required.

This project is considered to be ministerial under Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors in accordance with Permit Handbook Chapter 2.3 and therefore is not discretionary as defined by CEQA.

TBACT

The increased risk from this project exceeds 1 per million, triggering the use of TBACT equipment. TBACT for GDFs is considered the use of CARB-certified Phase-I and Phase-II vapor recovery equipment. State law prohibits the District from requiring vapor recovery equipment that is not CARB-certified.

Regulation 8 Rule 7

The facility should comply with Regulation 8-7-301 and 302 (Phase I and Phase II) and CARB Executive Orders VR-102 and G-70-17AD, and G-70-52AM.

Public Notice

This project will result in an increase in emissions of a toxic compound. As this station is within 1,000 feet of Wren Elementary School, the Public Notice requirements of the Waters Bill are triggered. There are no other schools within ¼ mile of this station.

Before the throughput increase can be approved, a 30-day public comment period will be held. A notice describing the project and announcing the public comment period will be mailed to the parents of students attending the above school and people living within 1,000 feet of the station. The cost of preparing and distributing this notice will be borne by the applicant.

Recommendation:

Recommend that, upon completion of the public comment period, an A/C be issued for the above project subject to the following conditions:

1. All gasoline storage tank vents at this station shall be manifolded to a single PV valve with a CARB-certified leak rate of no more than 0.05 CFH.
2. Storage tank vent pipes and fill and vapor and manhole tops, shall be maintained in a color which minimizes solar gain (such as white, silver, beige and aluminum) and has a reflective effectiveness of 55% or greater as determined by visual comparison with paint color cards with the color specified according to the "Master Pallet Notation." Manhole covers which are color coded for product identification are exempted from this requirement.
3. Only dispensers configured for "unihoose" gasoline nozzles (a single nozzle delivering multiple gasoline grades) may be used at this station.
4. The connector between the Phase II riser and the dispenser shall have a minimum inner diameter of 1.0 inches.
5. All new and replacement nozzles shall meet the latest effective EVR standards for liquid retention and spitting.
6. All tanks must be equipped with an EVR-certified Phase I system.
7. An EVR-certified In-Station Diagnostics (ISD) system shall be installed at this station within six months of the date they become commercially available.
8. Before a permit can be issued, the station shall conduct a Dynamic Back Pressure Test (ST-27), and a Pressure Decay Test (ST-30). Testing shall be conducted no later than 30 days after completion of any hardware modifications required under this Authority to Construct.
9. Following completion of initial testing, the station shall conduct a Dynamic Back Pressure Test (ST-27), and a Pressure Decay Test (ST-30) at least once every 12 calendar months. Testing must be performed between March 1st and June 15th.
10. The station shall conduct and pass all tests required to be performed periodically by the applicable CARB Phase I EVR Executive Order at least once every 24 calendar months. Testing must be performed between March 1st and June 15th.
11. The applicant shall notify Source Test at (415) 749-5069 or by FAX at (415) 749-4922, at least 48 hours prior to any testing required for permitting. Test results for the performance tests shall be submitted within ten (10) days of testing. Start-up tests results submitted to the District must include the Application Number and the GDF No. (For annual test results submitted to the District, enter "Annual" for Application No.)
12. All Phase I adaptor caps, vapor adaptors, and product adaptors shall be visually inspected at least once every three months.
13. Containment boxes shall be inspected for standing liquid gasoline no later than 8 hours after a bulk delivery. Residual gasoline shall be removed immediately via the Phase I drain valve or a gasoline-resistant hand pump.
14. Dispensing rate shall be maintained between 5.0 and 10.0 gpm. Nozzle dispensing rate shall be tested quarterly using GDF INSPECTION PROCEDURE-IP-05. Failures shall be repaired within 72 hours or locked "Out of Service" until repairs are made.
15. Nozzle spouts shall be inspected for damage both visually and using the "ring test" on a monthly basis. Defects shall be repaired within 72 hours or locked "Out of Service" until repairs are made.
16. Nozzle bellows and face seals, gasoline hoses, and hose breakaways shall be visually inspected on a monthly basis. Defects shall be repaired within 72 hours or the affected nozzle locked "Out of Service" until repairs are made.
17. Nozzle vapor check valves shall be tested quarterly using GDF INSPECTION PROCEDURE IP-06. Failures shall be repaired within 72 hours or locked "Out of Service" until repairs are made.

18. Nozzle insertion interlocks shall be tested monthly using GDF INSPECTION PROCEDURE IP-09. Failures shall be repaired within 72 hours or locked "Out of Service" until repairs are made.
19. Hoses on dispensers using the G-70-52AM Exhibit 10 configuration shall be tested for liquid retention using GDF INSPECTION PROCEDURE-IP-06 on a weekly basis. If more than 35 mls of liquid gasoline is present, the liquid removal device shall be checked using TP-201.6C. Failures shall be repaired within 72 hours or locked "Out of Service" until repairs are made.
20. The station shall maintain a "Customer Complaint Log" and investigate each emissions-related complaint within 96 hours. Defects shall be repaired within the 72 hours of discovery, or locked "Out of Service" until repairs are made.
21. Signs shall be posted at each island offering "self service" instructing customers in the proper operation of the vapor recovery nozzles at the station. These signs shall include prohibitions against "topping off" and using the nozzle "upside down."
22. Station shall have readily available (e.g., at cash register) instruction brochures for customers to educate them on the proper method to refuel their vehicles.
23. The station shall submit an annual report summarizing all testing and maintenance activities at the facility. This report shall be submitted to the District with 30 days after the close of the 12-month period covered by the report.

An amended P/O with the higher throughput will be issued once the station has passed the required initial tests and certifies that all the above modifications and procedures are in place.

By _____ date _____
Scott Owen 2/21/2006
Supervising AQ Engineer