

AIR MONITORING PLAN

DEMOLITION OF ABOVEGROUND STORAGE TANKS

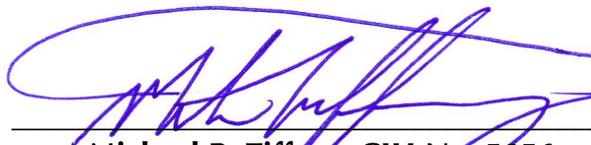
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FOR

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ACG Job No. I1612-1202

December 23, 2016

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**SITE-SPECIFIC
 AIR MONITORING PLAN
 for
 DEMOLITION OF ABOVEGROUND STORAGE TANKS, PIPING, AND EQUIPMENT**

INTRODUCTION

The purpose of this Air Monitoring Plan is to provide site-specific procedures for monitoring of airborne emissions of pollutants during the demolition of aboveground jet fuel storage tanks, piping, and associated equipment at the subject property. The objective of the air monitoring is to document airborne exposures to site workers and the surrounding community and to provide early warning of potential exposures in order to facilitate control of the exposures.

This Plan contains the following information:

- Air quality parameters to be monitored;
- Equipment and methods for monitoring;
- Monitoring locations;
- Data reporting system; and
- Action levels for implementation of additional emission controls.

CONTAMINANTS OF CONCERN

Contaminants of concern during demolition include respirable particulate matter (PM10), lead (Pb), and organic compounds. The table below summarizes the sources, action levels, and controls for the contaminants of concern.

Target Compounds	Source	Method	Action Level	Controls
Dust (PM10)	Soil disturbance during grading, wind	Visual monitoring	Visible dust	Water truck, soil binder
		SidePAK aerosol monitor	50 µg/m ³ †	
Lead (Pb)	Disturbance of paint, contaminated soil	Air sampling (NIOSH Method 7300)	1.5 µg/m ³ †	Dust control, containment if necessary
Jet Fuel/ Hydrocarbons	Residue in piping, contaminated soil	Photoionization detector	50 ppmv at source	Covering/containing source, removal of source
		Odor monitoring	Odor nuisance	

† Downwind value minus upwind value



AIR MONITORING METHODS

Air monitoring will be conducted at the work location(s) and at the perimeter fence line as described below. Upwind and downwind perimeter locations will be selected by the industrial hygienist on a daily basis based on wind direction, work location, and nearby receptor (residence) locations. Regardless of wind direction, at least one monitoring location will be placed between the active work location and the nearest residences.

DUST

Visual observation will be used to continuously monitor the active work area for visible emissions of dust. Observations will be logged on an hourly basis.

TSI AM510 SidePak™ or TSI 8520 DustTrak™ aerosol monitors will be used to monitor airborne respirable dust (PM10) concentrations at the upwind and downwind perimeter of the site continuously during demolition and grading activities. The monitors will be positioned at the top of the perimeter fence. The monitors will continuously record dust concentrations and calculate a time-weighted average concentration. The monitors will be set to alarm at the action level of 50 $\mu\text{g}/\text{m}^3$. The monitoring data will be downloaded on a daily basis and a monitoring report will be posted online and in the project office.

LEAD

Air samples to measure airborne lead concentrations will be collected daily at the upwind and downwind perimeter of the site. Air samples will be collected by drawing air through 37-mm diameter cassettes with 0.8- μm mixed-cellulose-ester membrane filters using sampling pumps. The sample cassettes will be positioned at the top of the perimeter fence. The airflow rate will be measured before and after sampling using a calibrated rotameter. The air samples will be submitted to an accredited laboratory for analysis of lead concentration using inductively-coupled-plasma atomic emission spectroscopy (ICP). Sampling and analysis will be conducted in accordance with NIOSH Method 7303.

Air samples will be analyzed on a 24-hour laboratory turnaround and the results will be posted online and in the project office upon receipt. If all samples from the first two days of any operation are non-detect for lead, subsequent upwind samples will be archived.

JET FUEL/HYDROCARBONS

JP-5 jet fuel is a middle-distillate hydrocarbon with low vapor pressure and a mild odor. Airborne emissions of jet fuel vapors are unlikely to reach action levels at the project perimeter under-worst case conditions, but faint odors may be detected. Weathered (oxidized) hydrocarbons in contaminated soil may produce odors without generating measurable organic vapors.

Odors will be monitored by direct observation at the work location and the project perimeter. A hand-held photoionization detector (PID) will be used to measure organic vapor emissions at the source. The PID will be calibrated using isobutylene and set to read as JP-5 concentration.



ACTION LEVELS AND CONTROLS

DUST

If visible emissions are present, water spray or mist shall be used for dust suppression. If plain water is not effective at controlling visible emissions, the water shall be amended with a wetting agent.

If visible dust emissions reach the west berm, work shall stop until emissions are controlled.

If real-time readings on the PM10 aerosol monitors exceed $150 \mu\text{g}/\text{m}^3$ (the EPA National Ambient Air Quality Standard, NAAQS) at the fenceline, the upwind PM10 value will be subtracted from the downwind value. If the difference exceeds $150 \mu\text{g}/\text{m}^3$, work will stop until the emissions can be controlled. If the 8-hour time-weighted average (TWA) PM10 concentration downwind exceeds the upwind concentration by more than $50 \mu\text{g}/\text{m}^3$ (the California Ambient Air Quality Standard, CAAQS), additional measures (modification of work practices, amended water, soil binder) will be implemented to reduce emissions.

LEAD

The CAAQS for lead, and the project action level, is $1.5 \mu\text{g}/\text{m}^3$. As long as the total airborne dust concentration does not exceed $150 \mu\text{g}/\text{m}^3$ and the soil lead concentration does not exceed 10,000 mg/kg (the highest found to date is 150 mg/kg), the CAAQS for lead will not be exceeded. Visual and instrumental monitoring for dust will ensure that lead emissions do not exceed the action level. Perimeter air sampling will be conducted to confirm that the action level is not exceeded.

Demolition methods which heat lead-based paint (torch-cutting, plasma-cutting, arc-gouging, abrasive sawing) will not be used. Methods which can cause emission of fine lead particulates (abrasive blasting, power sanding, etc.) will require containment of the work area to control emissions. The principal demolition method which will be used is hydraulic shearing, which can cause flakes of paint to separate from the steel but will not cause fine particulate emissions which travel beyond the work area. Demolition will be monitored for visual emissions of dust or debris, in addition to the perimeter air monitoring.

JET FUEL/HYDROCARBONS

Hydrocarbon vapor emissions from contaminated soil will be monitored at the source (the working face of the excavation or the excavator bucket). If organic vapor (VOC) emissions exceed 50 parts per million by volume (ppmv), a water spray will be used to control emissions. Soil with VOC emissions will be placed in stockpiles covered with plastic sheeting pending removal from the site.

Residual hydrocarbons in tanks and pipes, if any, will be removed by vacuum truck prior to demolition in accordance with the demolition plan tank and piping certification procedures. This process will also be monitored using the PID. The tanks and piping will be certified as gas-free prior to demolition.

Odors will be monitored directly at the source and at the perimeter. Nuisance odors from hydrocarbons will be controlled using an amended water spray or other methods as appropriate.



REPORTING

Visual observations for dust, olfactory observations for odors, and PID readings for hydrocarbon emissions will be logged hourly or as observed, along with any response actions taken. Daily logs will be posted in the project office.

Datalogs will be downloaded from PM10 aerosol monitors daily and posted online and in the project office.

Laboratory results of perimeter air samples for lead will be posted online and in the project office.

