



DEPARTMENT OF THE AIR FORCE
AIR NATIONAL GUARD

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ANG/CEVR
3500 Fetched Avenue
Andrews AFB, MD 20762-5157

Mr. Seth Pelepko
Pennsylvania Department of Environmental Protection
Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428

Dear Mr. Pelepko

Thank you for your comments on the Willow Grove Air Reserve Station (ARS) Air National Guard (ANG) Motor Pool Area (MPA) Underground Storage Tanks (UST) Final Work Plan dated 18 December 2001. We have reviewed your letters of 11 January 2002 and 11 February 2002 and prepared the attached responses to address your comments and concerns, point by point.

Point of contact for this action is the undersigned at (301) 836-8155, or email winston.crow@ang.af.mil.

Sincerely

A handwritten signature in black ink, appearing to read "Winston K. Crow".

WINSTON K. CROW, R.E.M.
Program Manager
Environmental Restoration Branch

Attachments:

1. ANG/CEVR Response to Comments from PADEP – Letter of January 11, 2002
2. ANG/CEVR Response to Comments from PADEP – Letter of February 11, 2002

cc:

111 FW/EM

**WILLOW GROVE ARS
MOTOR POOL AREA
PENNSYLVANIA ANG**

**ANG/CEVR RESPONSE TO COMMENTS FROM PADEP – LETTER DATED
JANUARY 11, 2002**

LEAD. We are still trying to determine if leaded gas was stored in one of the USTs. However, the UST with the noted leak stored diesel, which does not require lead analysis. Prior to the next round of sampling, it will be established whether leaded gas was once stored. The proposed groundwater extraction should proceed, since monitoring will occur after three rounds of extraction (2 weeks apart).

MTBE. Methyl tert butyl ether was analyzed during the last round. Groundwater from all wells was non-detect for MTBE. It was proposed in the work plan to continue monitoring of this compound.

SEPARATE PHASE LIQUID (SPL).

In accordance with EPA 510-R-96-001, “How to Effectively Recover SPL at Leaking Underground Storage Tank Sites,” for groundwater media attainment, there must be no measurable free floating product (0.01 ft) at the point of compliance – usually at the property line. As reported in the last six quarterly monitoring reports, only a “trace” of SPL has been detected in monitoring wells MW-02 and MW-03. A “trace” is equivalent to less than 0.01 ft. In accordance with the guidelines, this “trace” amount already constitutes removal to the maximum extent practicable. However, groundwater extraction is planned in order to remove these trace amounts.

DEMONSTRATION FOR ATTAINMENT.

It is understood that attainment of the Statewide Health Standards (SHS) must be demonstrated for site closure. It is proposed that after groundwater extraction from the wells where trace

amounts of SPL have been detected, the continued monitoring will show that regulated substances are below their respective groundwater Medium Specific Concentrations (MSC), and that SPL is not present at or beyond the point of compliance. For this site, the point of compliance is the property boundary that existed at the time the contamination was discovered.

For statistical methods ... demonstration of attainment for groundwater shall be based on at least eight consecutive quarters of groundwater data... the Department may accept four consecutive quarterly sampling events ...”

Demonstration of attainment in the final report will include the following: “A demonstration that the analysis of the data, through the application of statistical tests indicates the standard has been met...For groundwater, a demonstration of a statistical time trend analysis, knowledge of the plume stability or other acceptable method that shows contaminant ... will not exceed the selected standard.

**WILLOW GROVE ARS
MOTOR POOL AREA
PENNSYLVANIA ANG**

**ADDITIONAL ANG/CEVR RESPONSE TO COMMENTS FROM PADEP – LETTER
DATED FEBRUARY 11, 2002**

ACT 2 LIABILITY PROTECTION FOR SOILS. It is agreed that “No Further Action” is applicable for the soils at this site. It is understood that Act 2 Relief of Liability cannot be applied. No further soil sampling is planned.

850-GAL WASTE OIL TANK. The base Environmental Manager (EM) is presently researching this issue. Upon receipt of this information, we will provide it to you. Note that this tank is not eligible for Environmental Restoration Account (ERA) funding. If further work is required to establish that it meets Pennsylvania UST closure requirements, we will pursue closure as a compliance project.

DOWNGRADIENT WELLS. During the Site Characterization in 1997, the locations of MW-04 and MW-05 were selected based on the best information of groundwater flow direction at that time. Reports prepared for the adjacent site, Site 1 POL Area, indicated a general flow direction to the north-northwest. Figure 2.11, Site Characterization Report, based on Dames and Moore Report, 1988, shows groundwater flow direction toward the north-northwest and northwest.

The ponding basin, which is west of the Motor Pool Area, acts as a local discharge zone for groundwater (Dames and Moore 1988). Groundwater flow direction is toward the N-NW near the basin, and to the NW elsewhere, at a distance greater than 200 ft from the basin.

It is believed that attainment of the Statewide Health Standard is demonstrated at the current downgradient wells, which are upgradient of the property boundary. No additional monitoring well installations are planned.

SEPARATE PHASE LIQUID (SPL).

PADEP personnel have expressed concern that it seems unlikely that VOCs cannot be detected in groundwater samples from monitoring wells where free product is present. The BTEX compounds analyzed for are typical of more “fresh” petroleum products, but are not usually detected in weathered, or degraded petroleum. These compounds are very volatile and therefore, may not be present after a period of time. We have observed these same conditions at other sites.

DEMONSTRATION FOR ATTAINMENT.

It is understood that attainment of the Statewide Health Standards (SHS) must be demonstrated for site closure. It is proposed that after groundwater extraction from the wells where trace amounts of SPL have been detected, the continued monitoring will show that regulated substances are below their respective groundwater Medium Specific Concentrations (MSC), and that SPL is not present at or beyond the point of compliance. For this site, the point of compliance is the property boundary that existed at the time the contamination was discovered.

FINAL WORK PLAN (WP). Groundwater extraction is still planned. Additional monitoring will then be conducted. The analyses will include lead, 1,2-dichloroethane, and 1,2-dibromoethane in addition to the other compounds listed in the WP.