



May 27, 2010

Project 0016030440

Mr. Paul Cho, PG
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013

Re: Work Plan for Soil Vapor Monitoring, South-Central and Southeastern Off-Site Areas, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP No. 0286B, Site No. 204DM00)

Dear Mr. Cho:

On behalf of SFPP, L.P. (SFPP), an operating partner of Kinder Morgan Energy Partners, L.P. (KMEP), AMEC Geomatrix, Inc. (AMEC), formerly Geomatrix Consultants, Inc. (Geomatrix), has prepared this work plan for installation and monitoring of a soil vapor monitoring network in the south-central and southeastern off-site areas of the Defense Fuel Support Point Norwalk Facility (DFSP; the site). The DFSP facility is located at 15306 Norwalk Boulevard in Norwalk, California (Figure 1). This work plan is being submitted in response to comments received from the California Regional Water Quality Control Board, Los Angeles Region (RWQCB) in a letter dated March 30, 2010¹, which requested that SFPP submit a work plan for installing a vapor monitoring network. This work plan also incorporates comments in SFPP's letter dated April 19, 2010², which provided an initial response to the RWQCB's March 30th comments and proposed an alternative approach for addressing the RWQCB's comments related to soil vapor sampling based on our prior experience working at off-site private properties.

As described in the SFPP's April 19th letter, performing soil vapor monitoring in the southern off-site areas will first require receiving approval of this work plan from the RWQCB and obtaining access to the off-site private properties. Based on our prior experience requesting access to off-site properties, the property owner/representative likely will require an approved work plan and schedule prior to providing access. In addition, finalizing the sampling locations prior to requesting and negotiating site access would be more efficient. Therefore, SFPP proposes to obtain written authorization to access the necessary properties after the RWQCB approves this work plan.

¹ California Regional Water Quality Control Board, Los Angeles Region, 2010, Groundwater Investigation, Monitoring and Remediation in the Southern Plume Area, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP No. 0286B, Site No. 204DM00), March 30.

² SFPP, L.P., 2010, Response to Comments Dated March 30, 2010 Regarding "Groundwater Investigation, Monitoring and Remediation in the Southern Plume Area, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California (SCP No. 0286, Site No. 204DM00), April 19.

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In response to SFPP's April 19th letter, the RWQCB requested in its email dated April 20, 2010 that SFPP submit a monthly progress summary regarding off-site access issues by the end of each month, starting with a list of off-site properties and contacts and SFPP's planned activities to obtain access to those properties. Pursuant to the RWQCB's request, SFPP submitted the first monthly progress summary for April 2010 in a letter dated April 30, 2010³, which included a list of properties and contacts and a figure showing tentative proposed soil vapor monitoring point locations. An update on off-site access issues for the month of May 2010 is being submitted concurrently with this work plan. As described in the May 2010 monthly update, AMEC has initiated the process for obtaining access to the necessary off-site properties by performing a field reconnaissance and verifying property contact information.

The following sections of this work plan summarize relevant background information, state the proposed objectives, describe the proposed scope of work and methods for installation and monitoring of a soil vapor monitoring network, and present a general schedule for implementation of the this work plan.

BACKGROUND

The DFSP facility is occupied by 12 inactive aboveground fuel storage tanks and associated piping and facilities belonging to the Defense Energy Support Center (DESC). The tanks had a total maximum capacity of 35 million gallons and were used to store and distribute refined petroleum products including jet propellant numbers 5 and 8 (JP-5 and JP-8) and reportedly also aviation gasoline and JP-4. DESC also previously operated truck fill stands and various fuel transfer systems. The facility was decommissioned in 2001 and is no longer used to handle fuel.

SFPP leases two acres at the site and has easements for its pipelines along the southern and eastern boundaries of the facility. Previously, SFPP operated a pump station near the south-central area of the site. The pump station was decommissioned in 2001 but three pipelines remain in service and continue to convey refined petroleum fuels including gasoline, diesel, and jet fuel. The pipelines are fitted with block valves, two of which are located along a 24-inch-diameter pipeline and within areas currently undergoing remediation. One block valve is located in the south-central portion of the site and is referred to as the "intermediate 24-inch block valve" where a release was detected in 2003. The other block valve is located off-site near the southeastern area of the site where a release was detected in 1994 and is referred to as the "southeastern 24-inch block valve" or "off-site 24-inch block valve."

³ AMEC Geomatrix, Inc., 2010, Soil Vapor Monitoring Network Update – April 2010 (List of Properties for Soil Vapor Monitoring Network), South-Central and Southeastern Off-Site Areas, SFPP Norwalk, 15306 Norwalk Boulevard, Norwalk, California, April 30.

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Site Hydrogeologic Setting

The uppermost groundwater zone in the site vicinity is a semi-perched unit between depths of approximately 25 and 50 feet below ground surface (bgs). Groundwater flow within this uppermost zone, as interpreted during previous assessments and monitoring at the site, is generally northwestward under a horizontal gradient of approximately 0.001 foot/foot (ft/ft).⁴ The uppermost groundwater zone overlies the Bellflower aquitard of the Lakewood Formation. Based on lithologic logs from previous assessments at and near the site, the Bellflower aquitard lies between depths of approximately 50 and 80 feet bgs beneath the site and consists of predominantly clay, silty clay, and sandy clay with some interbedded sand with silt.

The Exposition aquifer underlies the Bellflower aquitard between depths of approximately 80 and 220 feet bgs. The potentiometric surface in the Exposition aquifer is approximately 20 feet lower than that in the semi-perched uppermost groundwater zone.⁵ This relatively consistent difference in hydraulic heads between the semi-perched upper groundwater zone and the Exposition aquifer indicates that the Bellflower aquitard inhibits the vertical movement of groundwater in the site area. The interpreted groundwater flow within the Exposition aquifer beneath the site area is generally southeastward with an approximate horizontal hydraulic gradient of 0.001 ft/ft, which is roughly opposite the general direction of interpreted groundwater flow in the uppermost groundwater zone.⁵ These distinctly different hydraulic conditions consistently interpreted over time above and below the Bellflower aquitard support the interpretation that the Bellflower aquitard in this area comprises a unit that is laterally continuous and has a relatively low bulk vertical hydraulic conductivity.⁵

Previous Assessments

Subsurface assessments have been performed at the DFSP Norwalk facility since 1986. Groundwater monitoring and remediation wells were installed at the site for monitoring and as components of groundwater remediation systems. The investigations have evaluated and defined the extent of the liquid-phase, adsorbed-phase, and dissolved-phase hydrocarbons in soil and groundwater beneath the site and at off-site properties to the south, west, and, to a limited extent, to the southeast. Affected soil beneath the southern off-site area is considered to be primarily associated with groundwater based on release of fuel hydrocarbons at the DFSP Norwalk facility or KMEP lease area and movement of the released hydrocarbons and fuel constituents beyond the southern property boundary.

In early 1990s, soil assessment was conducted in the southern off-site areas during installation of groundwater monitoring wells in these areas. Soil samples were collected from depths ranging from 1 to 10 feet bgs from borings for wells and analyzed for volatile organic

⁴ AMEC Geomatrix, Inc., 2009, Defense Fuel Support Point Norwalk, First Semi-annual 2009 Groundwater Monitoring Report, Norwalk, California, July 27.

⁵ AMEC Geomatrix, Inc., 2010, Supplemental Vertical Delineation in Off-Site 24-Inch Block Valve Area, Defense Fuel Support Point Norwalk, Norwalk, California, April 23.

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compounds (VOCs) and total petroleum hydrocarbons (TPH). Low concentrations of toluene and/or xylenes were detected in the soil samples collected at depths of 5 and/or 10 feet bgs from borings for wells MW-O-1, MW-O-2, and GMW-O-10 located near the DSFP southern boundary and at 5 feet bgs from borings for wells GMW-O-7, GMW-O-8, and GMW-O-9 located farther south of the DFSP.⁵ Figure 2 shows locations of groundwater monitoring wells in the southern off-site areas.

In August and September 2006, Geomatrix collected soil, soil gas, sub-slab soil gas, and crawl space air samples from the residential areas in the south-central and southeastern off-site areas to provide data for vapor intrusion evaluation as part of HHRA.⁶ Attachment A shows locations sampled during the 2006 assessment.

During the 2006 assessment, Geomatrix collected soil samples at approximately 5 feet bgs from six of the soil gas sampling locations and analyzed the soil samples for physical properties. The physical property results indicated that soil samples were mainly composed of silty sand. Review of the lithologic logs for selected monitoring wells located south of the DFSP facility property boundary also indicated that vadose zone soil generally consists of sand ranging from silty sand to poorly graded sand. Some silt and sandy silt layers up to 10 feet thick were also identified. In the top five feet of soil, both sandy silt and sand were identified in boring logs.

The results of the 2006 vapor intrusion evaluation and HHRA indicated that VOCs in subsurface environmental media in the southern off-site area were not expected to pose unacceptable carcinogenic or non-carcinogenic health effects for current or future receptors.⁵ As described in the 2006 HHRA, groundwater exposure pathways are not considered complete because shallow groundwater in the immediate vicinity of the DFSP facility is not used as drinking water source and the depth to water of approximately 20 feet bgs or greater precludes contact during typical construction and underground utility work (typically within 10 feet bgs). In addition, the 2006 HHRA used soil data collected in the early 1990s during the installation of off-site groundwater monitoring wells (prior to remediation) to conservatively represent chemical concentrations in soil. No carcinogens (e.g., benzene or ethylbenzene) were detected in the soil samples. The 2006 HHRA indicated that risks from exposure to soil were not significant. Therefore, soil sampling is not proposed in this work plan for soil vapor monitoring.

Groundwater Monitoring and Remediation

Groundwater monitoring and remediation wells at the site have been monitored on a semiannual basis since 1995. Remediation activities have been ongoing since September 1995 and include total fluids extraction, groundwater extraction, and soil vapor extraction in the south-central and southeastern on- and off-site areas. In addition to the semiannual monitoring events, certain wells are monitored on a quarterly or monthly basis. Assessments and

⁶ Geomatrix Consultants, Inc., 2006, Vapor Intrusion Sampling and Human Health Risk Assessment, DFSP Norwalk Facility, Norwalk, California, December.

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monitoring at the site have defined three distinct free product plumes; the north-central plume, the south-central plume, and the southeastern 24-inch block valve plume. The focus of this evaluation is on chemicals of potential concern (COPCs) present south of the site and related to the south-central and southeastern 24-inch block valve plumes. Attachment A and Figure 2 shows the extent of dissolved benzene, 1,2-dichloroethane (1,2-DCA), and methyl tert-butyl ether (MTBE) in the south-central and southeastern off-site areas during May 2005 and April 2009, respectively. As shown in these figures, the extent of dissolved COPCs in the south-central and southeastern off-site areas has been stable or reduced since 2005.

In April 2009, depth to groundwater measured in the wells south of the site ranged from approximately 21 to 32 feet bgs and groundwater elevation in these wells ranged from approximately 40 to 49 feet above mean seal level (msl). Historically, the overall groundwater flow direction in the uppermost aquifer is to the northwest under a horizontal hydraulic gradient of approximately 0.001 ft/ft.³ Free product was detected in wells GMW-O-11 (0.02 feet thickness) located in southern off-site area and GMW-36 (0.04 feet thickness) and GMW-O-15 (0.05 feet thickness) located in southeastern off-site area. Historical groundwater monitoring data for the site are provided in the semiannual groundwater monitoring reports.

PROPOSED SOIL VAPOR MONITORING

A soil vapor monitoring network is proposed to be installed and monitored in the south-central and southeastern off-site areas to achieve the following objectives:

- evaluate the soil vapor concentrations at depths of approximately 5 and 15 feet bgs in areas overlying the current extent of dissolved COPCs including the area near well GMW-O-14;
- update the HHRA if the new soil vapor data exceed CHHSLs; and
- provide facilities for future soil vapor monitoring in the project area.

Descriptions of the proposed tasks are described below. Proposed tasks include pre-field activities, soil vapor monitoring network installation, soil vapor monitoring and laboratory analysis, and reporting.

Pre-Field Activities

The pre-field activities consist of performing a site reconnaissance, obtaining entry permits to the necessary off-site private properties, coordinating with subcontractors, conducting utility clearance, and updating the site-specific health and safety plan. AMEC will notify Underground Services Alert (USA) of the planned drilling activities and retain a private underground utility locating service to check for the potential presence of underground utilities or other obstructions at the proposed locations for the soil vapor monitoring points. Drilling permits are not required

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for soil vapor monitoring point installations. During preparation of this work plan, AMEC has initiated the process to obtain access to the off-site properties by contacting the property owners/managers by telephone. AMEC has also prepared an entry permit form in both English and Spanish to obtain written authorization from each of the residents where a vapor monitoring point is proposed. An example of entry permit is provided as Attachment B. Prior to beginning of field work, AMEC will notify, in writing, the residents in the south-central and southeastern off-site areas of the field schedule and confirm that access to the proposed soil vapor monitoring point locations will be granted at the time of field work.

Soil Vapor Monitoring Network Installation

The proposed soil vapor monitoring network will consist of up to 10 soil vapor monitoring points in the south-central and southeastern residential areas. Each monitoring point will consist of a soil vapor probe nest with probes installed at depths of 5 and 15 feet bgs in a single borehole. Figure 2 shows locations of the proposed soil vapor monitoring points. In general, soil vapor monitoring points are proposed in the areas where soil gas sampling was previously conducted in 2006 and other areas overlying relatively higher concentrations of dissolved fuel constituents (i.e., near GMW-O-14). As shown in Figure 2, some proposed soil vapor monitoring points (SVM-5 through SVM-8) are near locations from which soil vapor samples were collected in support of the HHRA in 2006⁷. Other vapor monitoring points (SVM-1 through SVM-4, SVM-9, and SVM-10) are proposed at locations designed to provide expanded coverage within and near the boundary of the dissolved extent of COPCs. The proposed soil vapor monitoring point locations are tentative and subject to change based on access, utilities, field logistics, and other factors.

The following paragraphs describe the procedures for soil vapor monitoring point installation. Work will be completed in general accordance with the DTSC's Advisory for Active Soil Gas Investigation (Advisory) and updates.⁸ Field work will be conducted by AMEC personnel under the supervision of a California Professional Geologist or Professional Engineer.

Prior to drilling, each location will be hand-augered to approximately 5 feet bgs to clear underground utilities and other obstructions. Borings will be then advanced using a direct-push rig to approximately 15.5 feet bgs. At each location, semi-permanent soil vapor probes will be installed at 5 and 15 feet bgs. Each vapor probe will be constructed with new ¼-inch outside diameter Teflon[®] tubing with a nominal 6-inch-long stainless steel (or equivalent) screen. A 1-foot thick filter pack consisting of No. 3 sand will be placed around each screen. A 1-foot thick

⁷ Geomatrix Consultants, Inc., 2006, Vapor Intrusion Sampling and Human Health Risk Assessment, DFSP Norwalk Facility, Norwalk, California, December.

⁸ Department Toxic Substances Control and Regional Water Quality Control Board – Los Angeles Region (DTSC/RWQCB), 2003, Advisory Active Soil Gas Investigation, January 28. Draft for Review, Updated March 2010.

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dry granular bentonite will be placed on top of each filter sand pack. The boring will be then backfilled to ground surface in 6-inch thick lifts with granular bentonite hydrated in place. A sampling valve will be fitted to the end of the tubing. The valve will be kept closed until purging and sampling. Each soil vapor monitoring point will be completed at the surface with a flush-mounted, traffic-rated well box. Figure 3 shows a schematic for a typical soil vapor monitoring point.

Initial Soil Vapor Monitoring

A minimum of 48 hours after installation, initial soil vapor samples will be collected from each soil vapor monitoring point. The soil vapor probes at each monitoring point will be purged and sampled in accordance with recommended guidelines in the Advisory.⁶ The sampling procedures including purge volume, shut-in, and leak tests are described below.

Purge Volume Test

Prior to sampling, a site-specific purge volume test will be conducted with 1, 3, and 10 purge volumes at a soil vapor probe installed at 15 feet bgs. A site specific purge volume (3 purge volumes) for soil gas sampling at 5 feet bgs was established during the 2006 soil gas sampling. An appropriate purge volume for sampling at the 15-foot depth will be selected based on the highest concentration for the compounds of concern detected during the step purge tests. If target compounds are not detected in any of the step purge tests, a default of 3 purge volumes will be used. If target compounds are later detected or subsurface conditions change, the number of purge volumes will be recalculated. Soil vapor will be purged from each probe using a vacuum/pressure sampling pump calibrated to a flow rate of between 100 and 200 milliliters per minute (mL/min) to prevent ambient air intrusion. The use of a consistent low rate at each sample location will limit stripping. The purge volume for each probe will be recorded.

Shut-In Test

After the soil vapor probes have been purged, a shut-in test will be conducted to check for leaks in the above-ground sampling train (values, tubing and fittings from downstream from the top of the probe). A vacuum of approximately 100 inches of water (in-H₂O) will be applied to the above-ground sampling train. The vacuum will be monitored for approximately one minute. If the vacuum dissipates during the shut-in test, all above-ground fittings will be adjusted and the test will be repeated until the vacuum in the above-ground sampling train does not noticeably dissipate.

Leak Test

During purging and sampling at each soil vapor probe, a leak test will be conducted using a liquid tracer compound such as isobutane (shaving cream) or isopropanol to evaluate potential leaks of ambient air into the sampling train. The liquid tracer compound will be applied to a towel or clean rags and placed around all sampling train and included in the method analyte list

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for soil vapor samples. In the event a leak-check compound is detected in the sample at a concentration equal to or greater than ten times the reporting limits for target analytes, corrective action will be taken by evaluating the cause of the leak and correcting through re-testing. If the leak persists, a different tracer compound may be used and another soil vapor sample will be collected to further assess potential intrusion of ambient air and to eliminate the possibility that the first compound is actually present in the soil vapor itself. If both the primary and secondary tracer compounds are detected at concentrations of equal to or greater than ten times the reporting limits for target analytes, the probe will be destroyed and a replacement probe installed.

Soil Vapor Sampling and Analysis

As described above, the initial soil vapor sampling will be conducted a minimum of 48 hours after probe installation. The soil vapor probes from each monitoring point will be purged and sampled using a vacuum/pressure sampling pump calibrated to a flow rate between 100 to 200 mL/min in accordance with recommended flow rates in the Advisory.⁶

Soil vapor samples will be collected using glass bulbs wrapped with aluminum foil and will be analyzed at an on-site mobile laboratory for fuel constituents consisting of benzene, toluene, ethylbenzene, total xylenes (collectively, BTEX), MTBE, tert-butyl alcohol (TBA), 1,2-DCA, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, n-butylbenzene, sec-butylbenzene, isopropylbenzene, and n-propylbenzene using EPA Method 8260B. In addition, a confirmation soil vapor sample will be collected in a 1-liter Summa[®] canister during each sampling event and analyzed for the same list of fuel constituents. The confirmation soil vapor samples will be submitted to a fixed laboratory certified by the California Environmental Laboratory Accreditation Program and analyzed for EPA Method TO-15. Tracer compound(s) will be included in both method analyte lists.

In accordance with the Advisory⁶, field duplicates soil vapor samples will be collected at a minimum frequency of one per every 20 soil vapor samples collected. Duplicate soil vapor samples will be collected simultaneously with the primary samples. The duplicate samples will be collected and analyzed in the same manner of the primary samples. A temporal replicate sample may be collected at the end of the sampling activities if any sampling locations show detectable concentrations of VOCs.

Investigation-Derived Waste Management

Prior to each use, any reusable equipment will be steam-cleaned or washed with Alconox-water solution and double-rinsing with potable water. Waste generated during the investigation including equipment wash and rinse water and soil cuttings will be separately contained in DOT-approved 55-gallon steel drums. The drums will be transported to the DFSP facility at the end of each day. Equipment wash and rinse water will be transferred to a holding tank at SFPP's

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onsite groundwater treatment system for treatment and discharge. Soil cuttings will be profiled and disposed of at an appropriate off-site disposal facility.

DATA EVALUATION AND REPORTING

Following completion of the initial soil vapor sampling, validation of the analytical laboratory results, and final analysis of the data, AMEC will prepare an initial soil vapor sampling report (initial report) summarizing field methods, field observations, laboratory analytical results, and a screening level evaluation using CHHSLs. If a CHHSL is not available for a specific chemical (e.g., benzene), a CHHSL-equivalent value will be developed using the CHHSL methodology. If new soil vapor data from the initial round of sampling exceed CHHSLs, the 2006 HHRA⁷ will be updated using the new soil vapor data and any relevant updates to toxicity criteria for detected chemicals, and the results of the HHRA will be included in the initial report. Laboratory data will be tabulated and presented on the figure(s). Copies of laboratory analytical reports will be included as appendixes.

SUBSEQUENT SOIL VAPOR MONITORING AND REPORTING

After the initial soil vapor monitoring event, soil vapor monitoring will be conducted on a semiannual basis for one year. Soil vapor monitoring results will be presented in the remediation progress reports. At the end of the second semiannual monitoring event, we will recommend whether subsequent monitoring is required for the assessment of potential human health risks.

SCHEDULE

We anticipate implementing this work plan after receiving approval from the RWQCB and obtaining access to the necessary off-site properties. As noted above, we have initiated the process for obtaining access to off-site properties in an effort to expedite gaining access to the necessary properties. We anticipate requiring approximately five days for completion of the soil vapor monitoring point installation work, pending receipt of site access agreements and scheduling of subcontractors. Each semiannual soil vapor sampling event is anticipated to take 2 to 3 days. If an update of the 2006 HHRA is required, the results of the HHRA will be included in the initial report. The initial report will be submitted to the RWQCB within approximately eight weeks after receiving the soil vapor data from the analytical laboratory. Subsequently, soil vapor monitoring will commence at least six months after the initial soil vapor sampling event and continue on an approximately semiannual basis for one year, for three monitoring events total. Results for the semiannual soil vapor monitoring events will be presented in the remediation progress reports.

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If you have any questions regarding this work plan, please contact Steve Defibaugh at (714) 560-4802 or any of the undersigned.

Sincerely,
AMEC Geomatrix, Inc.



Thandar Phyu, PG
Project Hydrogeologist



Ann Holbrow Verwiel
Senior Toxicologist



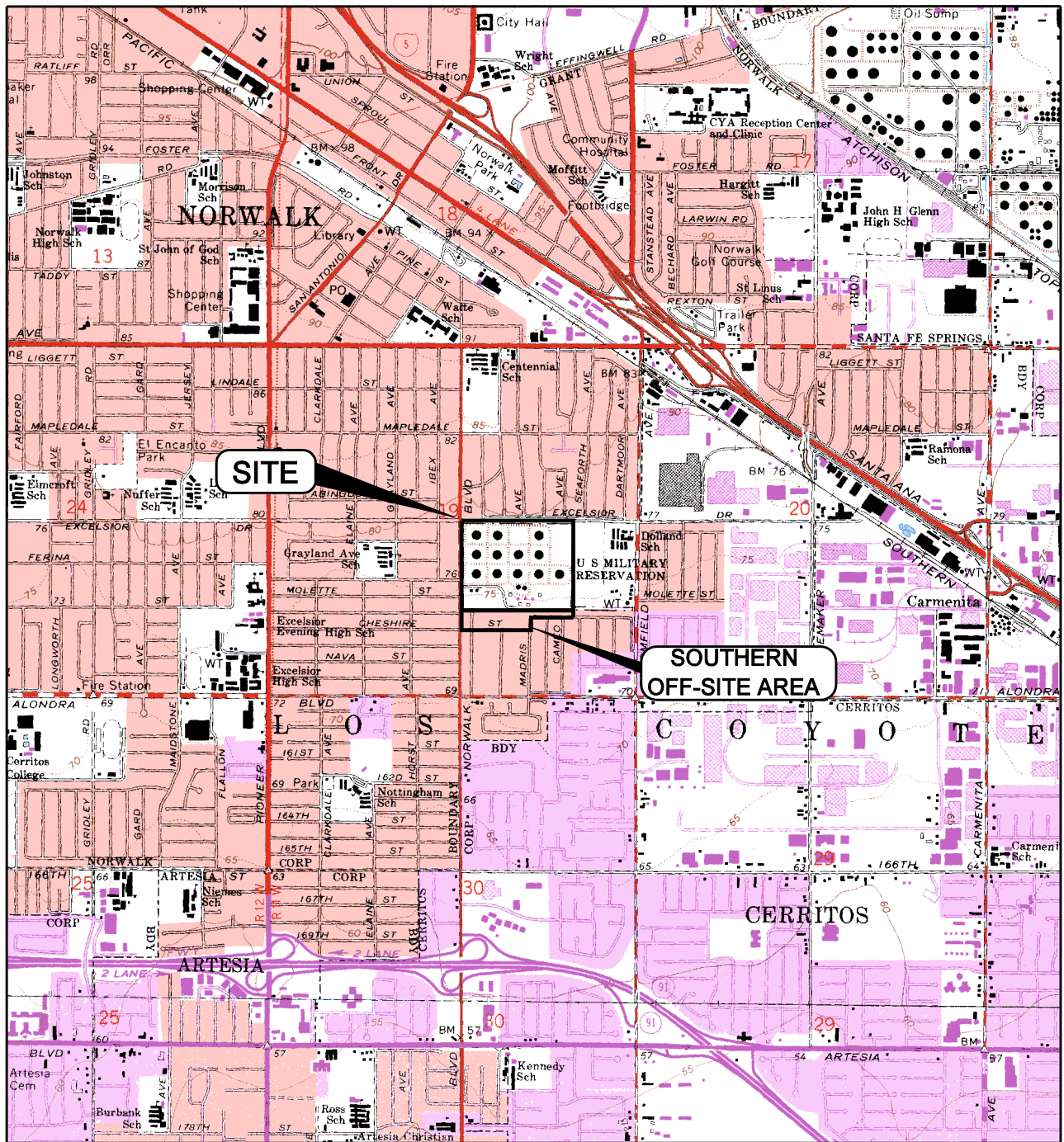
Shioh-Whei Chou, PE
Senior Engineer

Attachments:

- Figure 1 Site Location Map
- Figure 2 Proposed Soil Vapor Monitoring Point Locations
- Figure 3 Proposed Soil Vapor Monitoring Point Construction
- Attachment A 2006 HHRA Sampling Locations
- Attachment B Example Right of Entry Permit Form

cc: Mr. Stephen Defibaugh, KMEP
Ms. Mary Jane McIntosh, RAB
Mr. Bob Hoskins, RAB
Mr. Eugene Garcia, RAB
Ms. Tracy Winkler, RAB
Mr. Tim Whyte, URS
Ms. Adriana Figueroa, City of Norwalk
Mr. Charles Emig, City of Cerritos
Office of Congresswoman Grace F. Napolitano
Lt. Col. Jon Ramer, DESC
Mr. Kola Olowu, DESC
Mr. Redwan Hassan, Parsons
Ms. Mary Lucas, Parsons

FIGURES



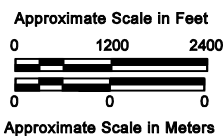
Base map modified from U.S.G.S. 7.5 minute quadrangle maps Los Alamitos 1964, California; photo-revised 1981; and Whittier 1965, California; photorevised 1981.

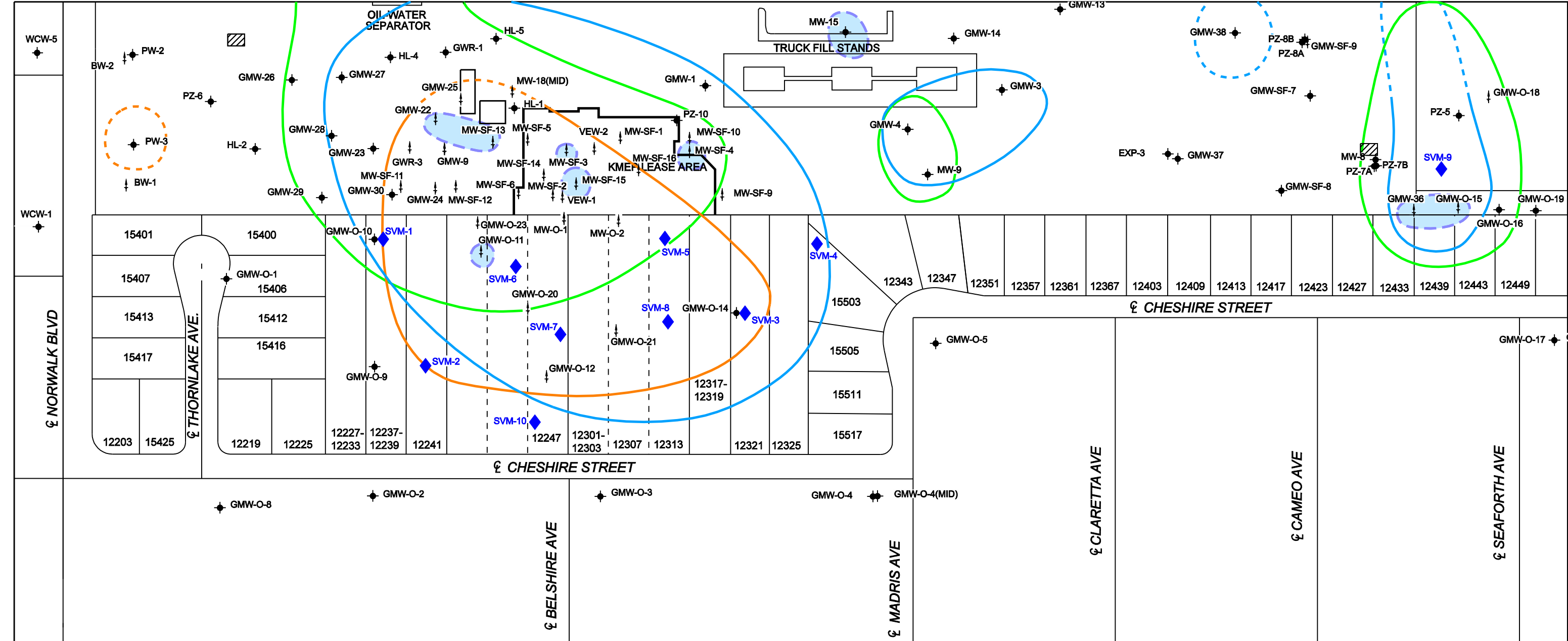
**SITE LOCATION MAP
DFSP NORWALK
Norwalk, California**

| | | |
|---------|----------------|----------------------|
| By: pah | Date: 05/24/10 | Project No: 16030440 |
|---------|----------------|----------------------|

AMEC Geomatrix

Figure **1**





Explanation

- ◆ SVM-10 Proposed soil vapor monitoring point and designation
- ◆ GMW-5 Groundwater monitoring well and designation
- † MW-O-2 Vapor extraction, groundwater extraction, or total fluids extraction well used for site remediation
- Estimated extent of detected dissolved benzene in groundwater based on data from April 2009; dashed where inferred
- Estimated extent of detected dissolved 1,2-dichloroethane in groundwater based on data from April 2009; dashed where inferred
- Estimated extent of detected dissolved methyl tert-butyl ether in groundwater based on data from April 2009; dashed where inferred
- Estimated extent of measurable light nonaqueous phase hydrocarbons (LNAPL, free product) on groundwater based on data from April 2009; dashed where inferred.

Notes:

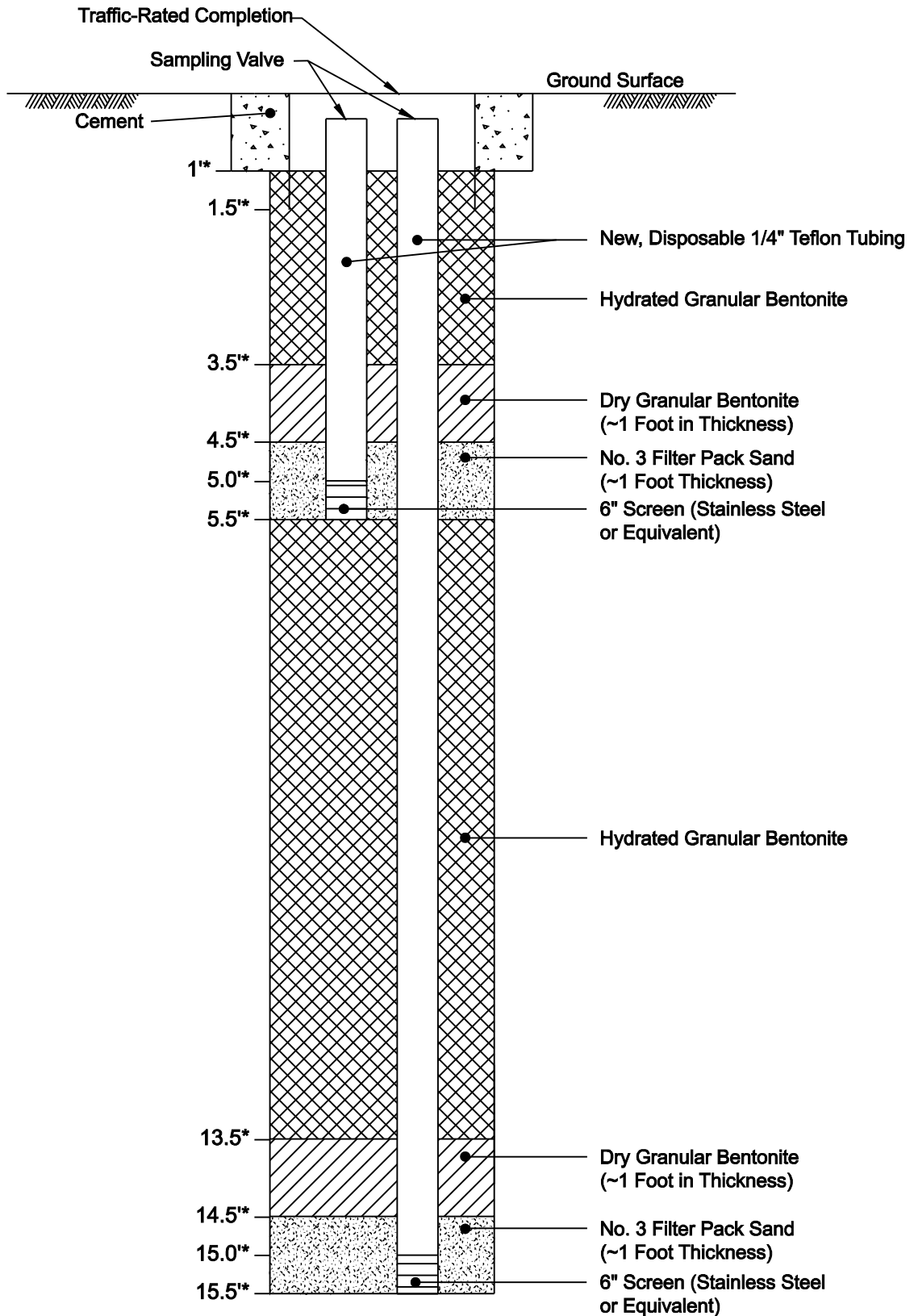
1. The vicinity of the KMEP Lease Area is referred to as "The South-Central Area". The vicinity of the southeastern part of the site is referred to as "The Southeastern 24-Inch Block Valve Area".
2. Estimated extents of petroleum hydrocarbon constituents are from Figures 5, 6, and 7 of the First Semi-Annual 2009 Groundwater Monitoring Report, AMEC, July 27, 2009.



0 60 120
Approximate Scale in Feet

| | | |
|--|----------------|----------------------|
| PROPOSED SOIL VAPOR MONITORING POINT LOCATIONS DFSP Norwalk Norwalk, California | | |
| By: pah | Date: 05/27/10 | Project No: 16030440 |
| AMEC Geomatrix | | Figure 2 |

P:\S1603\GIS\dwg\WP-SoilVaporMonitoringNetwork_Figures.dwg



* Final installation depths to be determined in field based on observed field conditions.

PROPOSED VAPOR
MONITORING POINT CONSTRUCTION
DFSP Norwalk
Norwalk, California

By: pah

Date: 05/ 27/10

Project No: 16030440

Not to Scale

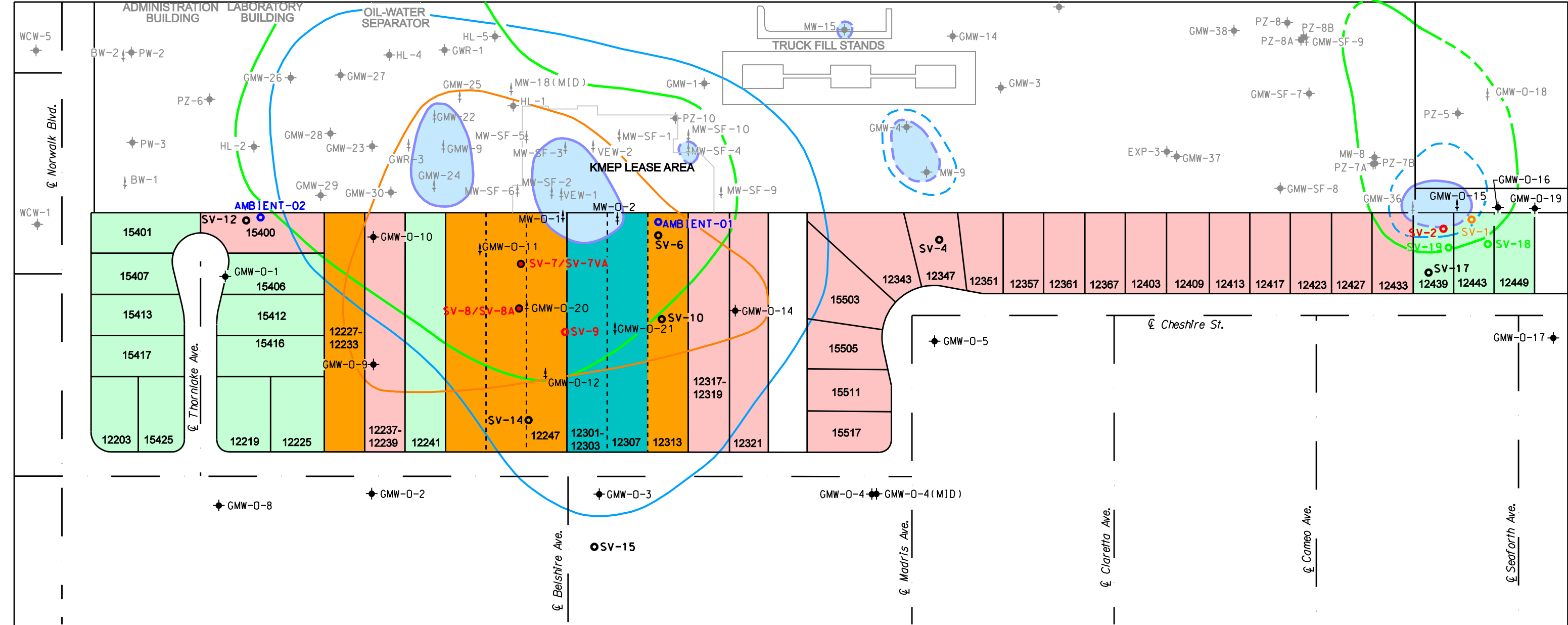
AMEC Geomatrix

Figure 3



ATTACHMENT A

2006 HHRA Sampling Locations



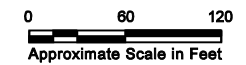
EXPLANATION

- GMW-5 ◆ MONITORING WELL AND DESIGNATION
- VE-1 † VAPOR EXTRACTION, GROUNDWATER EXTRACTION, OR TOTAL FLUIDS EXTRACTION WELL USED FOR SITE REMEDIATION
- SV-17 ● APPROXIMATE SOIL VAPOR SAMPLING LOCATION
- SV-2 ● APPROXIMATE SUB-SLAB VAPOR SAMPLING LOCATION
- SV-18 ● APPROXIMATE CRAWL SPACE SAMPLING LOCATION
- SV-7 ● APPROXIMATE SOIL VAPOR AND SUB-SLAB VAPOR SAMPLING LOCATION
- SV-1 ● APPROXIMATE SOIL SAMPLE LOCATION
- AMBIENT-02 ● APPROXIMATE AMBIENT AIR SAMPLING LOCATION
- ESTIMATED EXTENT OF DETECTED DISSOLVED BENZENE IN GROUNDWATER BASED ON DATA FROM MAY 2006; DASHED WHERE INFERRED
- ESTIMATED EXTENT OF DETECTED DISSOLVED 1,2-DICHLOROETHANE IN GROUNDWATER BASED ON DATA FROM MAY 2006; DASHED WHERE INFERRED
- ESTIMATED EXTENT OF DETECTED DISSOLVED METHYL TERT-BUTYL ETHER IN GROUNDWATER BASED ON DATA FROM MAY 2006; DASHED WHERE INFERRED

- CONSTRUCTED ON-GRADE
- CONSTRUCTED OVER GARAGES
- CONSTRUCTED OVER CRAWL SPACE
- CONSTRUCTED OVER GARAGES OR ON-GRADE
- ESTIMATED EXTENT OF MEASURABLE LIGHT NONAQUEOUS PHASE HYDROCARBONS (LNAPL, FREE PRODUCT) ON GROUNDWATER BASED ON DATA FROM MAY 2006; DASHED WHERE INFERRED

NOTES:

1. THE VICINITY OF THE KMEP LEASE AREA IS REFERRED TO AS "THE SOUTH-CENTRAL" AREA. THE VICINITY OF THE SOUTHEASTERN PART OF THE SITE IS REFERRED TO AS "THE SOUTHEASTERN 24-INCH BLOCK VALVE" AREA.
2. SOIL SAMPLES WERE COLLECTED FROM SAMPLE LOCATIONS SV-1, SV-4, SV-7A, SV-8A, SV-10, AND SV-12.



| | | |
|--|----------------|----------------------|
| MONITORING WELLS AND SAMPLING LOCATIONS FOR HUMAN RISK ASSESSMENT | | |
| DFSP Norwalk Norwalk, California | | |
| By: kle | Date: 12/14/06 | Project No: 1603.044 |
| | | Figure 2 |

P:\S1603\GIS\Map8\WP_SoilVaporMonitoringMapWork_Figures.dgn



ATTACHMENT B

Example Right of Entry Permit Form

RIGHT OF ENTRY PERMIT

STATE OF California

COUNTY OF Los Angeles

The undersigned, whose address is _____
being the OWNER and/or TENANT of the property(ies) corresponding to the above address, hereby grants permission to SFPP, L.P. (SFPP), operating partnership of Kinder Morgan Energy Partners, L.P. (KMEP), its Assigns, Engineers, and Sub-Contractors, the right to enter upon the property listed above for the purpose of conducting work on the property as part of on-going soil and groundwater remediation activities at the Defense Fuel Support Point (DFSP) Norwalk Facility. The remediation activities are being performed under the oversight of the California Regional Water Quality Control Board, Los Angeles Region (RWQCB). The work includes installing and monitoring one or more soil vapor monitoring probes in accordance with the Work Plan for Soil Vapor Monitoring, South-Central and Southeastern Off-Site Areas, Defense Fuel Support Point Norwalk, 15306 Norwalk Boulevard, Norwalk, California dated May 27, 2010 (Work Plan) and approved by RWQCB on _____.

The work on the property is expected to include the following tasks.

Task 1: Installation of Soil Vapor Monitoring Probe(s)

- a) A utility clearance will be performed to check for the potential presence of underground utilities or other obstructions.
- b) Following utility clearance, surface pavement, if present, will be cored (approximately 8 inches in diameter) and soil will be hand-augered to a depth of approximately 5 feet below ground surface (bgs) to further check for subsurface utilities or obstructions.
- c) Using truck-mounted direct-push drilling equipment, a 2-inch diameter drill casing will be pushed to approximately 15 feet bgs and a pair of soil vapor monitoring probes will be installed at depths of approximately 5 and 15 feet bgs.
- d) The surface fittings for each pair of probes will be completed within an 8-inch diameter, flush-mounted, traffic-rated protective vault.

Installation of each soil vapor monitoring probe pair is anticipated to take a total of approximately 3 hours.

Task 2: Monitoring of Soil Vapor Probe(s)

In accordance with RWQCB requirements, KMEP or its representatives will monitor the soil vapor probes quarterly. Soil vapor monitoring will include collecting and analyzing soil vapor samples from the soil vapor probes in accordance with the Work Plan.

Task 3: Soil Vapor Monitoring Probe Decommissioning

The soil vapor monitoring probes will be decommissioned when no longer needed or required by the RWQCB.

We will notify you in writing of the work schedule a minimum of two weeks prior to accessing your property.

SFPP, its Assigns, Engineers, and Sub-Contractors, by exercise of the rights herein granted shall be deemed to have agreed to enter upon the above described lands only for the purposes herein set forth.

It is further understood and agreed that the permission to enter granted herein shall terminate upon completion of the above-mentioned work.

Dated this _____ day of _____, 2010

Witness:

Tenant and/or Owner:
