2007 OPERATIONS, MAINTENANCE & MONITORING ANNUAL REPORT

DEL AMO WASTE PITS
LOS ANGELES, CALIFORNIA

PREPARED FOR:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PREPARED ON BEHALF OF:

THE DEL AMO RESPONDENTS

PREPARED BY:

C2REM
An Environmental Management & Development Company

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ACRONYMS AND ABBREVIATIONS

AO	Administrative Order
C_1	Carbon Vessel 1
CAL EPA	California Environmental Protection Agency
Cap Gas System	Cap Gas Collection and Treatment System
CO_2	Carbon Dioxide
COC	Constituents of Concern
DTSC	Department of Toxic Substances Control
GAC	Granulated Activated Carbon
LEL	Lower Explosive Limit
ND	non-detected
O_2	Oxygen
OM&M	Operations, Maintenance and Monitoring
OM&M Manual	Operations, Maintenance and Monitoring Manual
PID	Photo Ionization Detector
PLC	Programmable Logic Controller
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
SCAQMD	South Coast Air Quality Management District
SVE/IBT System	Soil Vapor Extraction/ Insitu Biodegradation Technology System
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
Waste Pits	Del Amo Waste Pits Operable Unit

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1.0 INTRODUCTION

This Annual Report (Report) has been prepared by C2 REM on behalf of the Del Amo Respondents to summarize the Operations, Maintenance and Monitoring (OM&M) activities conducted at the Del Amo Waste Pits Operable Unit (Waste Pits) site, pursuant to requirements in the *Administrative Order (AO) for Remedial Action, Docket No. 99-08, Del Amo Waste Pits Operable Unit, Torrance, California,* United States Environmental Protection Agency (USEPA), May 3, 1999 and the *Operations, Maintenance and Monitoring Manual for the Del Amo Waste Pits Operable Unit, Torrance, California,* Parsons Engineering Science, March 12, 1999 (OM&M Manual). This Report provides a summation of the OM&M activities conducted from January 2007 through December 2007 at the Waste Pits during the eighth year of operation of the Phase I remedy (e.g., multi-layer cap, soil vapor monitoring probes) and the first year operation of the Phase II remedy (i.e., Soil Vapor Extraction/Insitu Biodegradation Technology System [SVE/IBT System]).

This Report includes discussions on:

1) Inspections (pursuant to both quarterly requirements and post rain events) of the cover system, drainage systems, Cap Gas Collection and Treatment System (Cap Gas System), SVE/IBT System and general physical site characteristics;
2) Monument survey results;
3) Assessments of field-observed benzene concentrations within the Cap Gas System;
4) Monthly perimeter well monitoring;
5) OM&M of the soil vapor treatment technology; and
6) Summaries of maintenance and repairs.

The remainder of this Report is outlined in the following sections:

2.0 SITE HISTORY

The Waste Pits are located in Los Angeles County, California and include Lots 36 and 37 of the Los Angeles County Assessor's Map. The Waste Pits property is located between

Vermont Avenue (to the east) and Normandie Avenue (to the west) (see Figure 1.0). The northern boundary of the property is a Los Angeles Department of Water and Power easement, and the southern boundary is Del Amo Boulevard. One major petroleum and petrochemical pipeline corridor is located within the property on the southern boundary of the Waste Pits property.

The Waste Pits include two adjoining parcels of land (Lots 36 and 37), which contained six small rectangular pits (2-series pits) and three large rectangular impoundments (1-series pits) (see Figure 2.0). Both the 1-series and the 2-series pits were used for the disposal of wastes and waste liquids during operation of a synthetic rubber manufacturing facility. The 2-series pits were located on the western side of Lot 36 and the 1-series pits, 1-B and 1-C, were located on the eastern side of Lot 36. Immediately east of Lot 36 is Lot 37, which contains a former large, rectangular impoundment, designated as Pit 1-A. Impacted soils from Pit 1-A were excavated in four phases from 1982 –1984 to a depth of 6 feet at the east side of the pit and to a depth of 25 feet at the west side of the pit. This excavation process was completed under the direction of the California Department of Health Services, with jurisdiction for the Waste Pits under California Environmental Protection Agency's (CAL EPA) Department of Toxic Substances Control (DTSC).

As outlined in the *Remedial Design Work Plan, Del Amo Pits Operable Unit, Torrance, California*, Dames and Moore, June 30, 1998, the USEPA provided oversight for the construction and installation of the Phase I remedy including installation of the SVE wells (a component of the proposed Phase II remedy). The Phase I remedy, which was performed on the 2-series pits and 1-series pits 1-B and 1-C, consisted of a Resource Conservation and Recovery Act (RCRA) equivalent multi-layer cap, soil vapor monitoring probes, the Cap Gas System, security fences, deed restrictions, and surface and subsurface drainage features. During 2006, the treatment technology for site vapor was selected, designed, and installed. The Phase II Remedy, which is the SVE/IBT System, was placed into optimization testing and full-time operation in August 7, 2006.

3.0 INSPECTIONS

Quarterly inspections with the USEPA, DTSC, or their designee were conducted quarterly in accordance with the OM&M Manual (Section 4.0) on February 16, 2007, May 9, 2007, August 20, 2007 and December 20, 2007 for the cover system, the Cap Gas System, the SVE/IBT System, surface and subsurface water drainage systems, security fences, and access roads (see Appendix A).

Additionally, the SVE well heads, which are capped with blank tee flanges and are not currently connected to the SVE/IBT System, were inspected and monitored for leaks utilizing a Photo Ionization Detector (PID) calibrated to benzene. These inspections are conducted quarterly and will continue at this frequency throughout the SVE/IBT System's operations (see OM&M Manual, Section 6.2.1).

Finally, C2 REM conducted a post rain inspection event on December 3, 2007 to identify matters of concern or areas of needed repair. Post rain inspection events are conducted

following periods of "heavy rainfall," defined as every rainfall of 1-inch or greater within a 24-hour period. The inspection forms used during this inspection are presented in Appendix A.

3.1 SUMMARY OF COVER SYSTEM INSPECTION EVENTS

During the cover system inspection events, no unusual or significant settlement, erosion, sediment build-up, slope instability, or shifting was observed. A few areas exhibited some evidence of burrowing animals, which were tended to during routine site maintenance. Additionally, some areas of the cover system exhibited stressed vegetation due to especially dry conditions in 2007. In response to stressed vegetation, a temporary above ground irrigation system was installed to assist with re-establishing the cover system vegetation. The results of the C2 REM cover system inspection events are presented in Table 1.0. Given that this is the eighth year of operation, a survey of the monuments shall not take place until 2010.

3.2 SUMMARY OF CAP GAS SYSTEM INSPECTION EVENTS

Inspection of the Cap Gas System included observations of the above ground components including: air intake and outlet collection headers, inlet and outlet valves, hoses and fittings, two 55-gallon carbon canisters, extraction blower, sampling ports, and a moisture separator canister. The results of the Cap Gas System inspection events are presented in Table 2.0. C2 REM did not observe any significant repair/maintenance issues with the Cap Gas System.

3.3 SUMMARY OF SURFACE AND SUBSURFACE DRAINAGE INSPECTION EVENTS

The concrete lined drainage swales, catch basins, and drainage culverts were checked by C2 REM to identify the presence of cracks, soil slumping, sediment build-up, separation, and the accumulation of vegetative debris (see Tables 3.0 and 4.0). The results of the surface and subsurface drainage inspection events show no significant issues with cracking, soil slumping, sediment build-up, separation, and accumulation of vegetation.

3.4 SUMMARY OF SECURITY FENCE AND ACCESS ROAD INSPECTION EVENTS

Visual inspections of the security fence and gates were performed to identify breaks, settlement damage, loose tension, and corrosion (see Table 5.0). The gravel access road was inspected to identify dispersion of gravel, vegetation overgrowth, and excessive growth. C2 REM did not observe any significant repair issues regarding the access road (see Table 6.0). There was one event of excessive dispersion of gravel recorded on February 16, 2007, which was repaired during routine maintenance. Breaks, damage, and general signs of deterioration of the perimeter fence were repaired as part of routine maintenance.

3.5 SUMMARY OF SVE/IBT INSPECTION EVENTS

Inspection of the SVE/IBT System included visual assessments of system condition as well as mechanical assessments on an as-needed basis. Visual inspections were conducted on above ground components and included the following:

- SVE wellheads;
- Ball valves;
- Sampling ports;
- Fittings;
- Carbon absorber vessels;
- Blowers A & B;
- Oxygen generator; and,
- System sensors.

After the first three months of operations, inspections were conducted every quarter to ensure reliability of all SVE/IBT System components. C2 REM did not observe any significant repair issues regarding the SVE/IBT System and the components listed above except for a few of the system sensors which experienced sensor failures and calibration issues (see Table 7.0). Sensors that needed repair were returned to the manufactures and re-installed following corrective measures. (note: due to the location and type of sensor, the SVE/IBT System remained operational during sensor repair periods).

4.0 MONUMENT SURVEY EVENT

After completion of the final cover, eight survey monuments were installed at various locations to monitor and track historical ground movement and settlement. The general location of each survey monument is provided on Figure 2.0. C2 REM conducted the last monument survey event on January 10, 2005. These results were compared to the baseline event conducted in 2000 and the comparison showed the cap did not undergo any significant settlement or grade adjustments. Pursuant to the OM&M Manual, after primary consolidation has been reached, the monument survey frequency shall be every 5 years. Therefore, the next monument survey event is scheduled for the first quarter of 2010.

5.0 CAP GAS SYSTEM OPERATION AND MONITORING

5.1 OBJECTIVES

C2 REM conducted the Cap Gas System monitoring activities pursuant to the requirements as approved by the USEPA and as presented in the report entitled *Cap Gas Collection and Treatment Baseline Monitoring and Long-term Monitoring Recommendations Report, Del Amo Waste Pits Operable Unit, Los Angeles County, California,* C2 REM, December 2000. These monitoring activities were conducted to assess the efficiency of the Cap Gas System in the collection and treatment of fugitive

soil vapor emissions from the sand layer within the cap. The Cap Gas System operates for 4 hours a day, 5 days a week.

5.2 BI-MONTHLY CAP GAS SYSTEM MONITORING RESULTS

In an effort to assess the efficiency and performance of the carbon units of the Cap Gas System, bi-monthly monitoring was conducted from four sample locations (i.e., system influent [#1], effluent of the lead carbon vessel [#2], effluent of the secondary carbon vessel [#3], and system effluent [#4]). During bi-monthly monitoring, a site-dedicated PID (calibrated to benzene) was used to measure total Volatile Organic Compound (VOC) concentrations at each of the four sample locations. As indicated in Table 8.0, influent sample readings ranging from 0.4 parts per million (ppm) to 10.2 ppm, and system effluent readings ranging from 0.0 ppm to 2.5 ppm were recorded during 2007. As outlined in the OM&M Manual and the USEPA-approved carbon bed change-out protocol, system effluent readings greater than 5 ppm require action to assure that the Cap Gas System is operating in compliance. The low concentrations detected at the Cap Gas System effluent demonstrate that the carbon is efficient in controlling VOC emissions (see Figure 3.0). The forms used to record results of the bi-monthly Cap Gas System monitoring events are presented in Appendix B.

The guidelines established for carbon change-out of the Cap Gas System state that when VOC concentrations at the effluent are greater than 5 ppm and/or when the lead vessel efficiency (in relation to the system influent) falls within Zone 2 for two consecutive monitoring events or Zone 3 (see Figure 4.0), carbon shall be replaced. Based on the aforementioned protocol, the carbon did not need to be changed out in 2007.

5.3 CONFIRMATION SAMPLING

C2 REM, with the approval of the USEPA (December 4, 2002), has modified the scope and frequency of the Cap Gas System annual confirmation sampling event. The frequency of the confirmation sampling event has been changed from an annual program to once every 5 years. In addition, South Coast Air Quality Management District (SCAQMD) Method 25.1 has been eliminated from the required list of analyses for collected Cap Gas System samples due to the lack of relevant information obtained from the method, as well as the redundancy of using both SCAQMD Method 25.1 and USEPA Method TO14 (the latter of which provides an adequately detailed analysis of site Constituents of Concern (COC) and other related compounds).

Based on the approved scope and frequency for confirmation sampling, the next sampling event will be conducted during the second quarter of 2010 (to coincide with the second 5-year review) and thereafter in 2015.

6.0 SVE/IBT OPERATION AND MONITORING

6.1 OVERVIEW

The SVE/IBT System was placed into optimization testing and full-time operation in August 7, 2006. C2 REM conducted SVE/IBT System monitoring activities pursuant to the requirements, as approved by the USEPA and as presented in the Report entitled *SVE/IBT Operations, Maintenance and Monitoring Manual,* C2 REM, January 2006. Additional information regarding the design and construction of the SVE/IBT System can be found in the following documents:

- *Remedial Design Work Plan Addendum,* C2 REM 2005
- *SVE/IBT Pre-Final Design Report Addendum,* C2 REM 2005
- *Process Hazard Analysis Report* ,Webb, Murray, & Associates 2005
- *SVE/IBT Operations, Maintenance, & Monitoring Manual,* C2 REM 2006
- *SVE/IBT Final Design Report,* C2 REM 2006
- *SVE/IBT Construction Quality Assurance Plan,* C2 REM 2006
- *SVE/IBT Remedial Action Workplan,* C2 REM 2006

6.2 SVE/IBT SYSTEM

The SVE/IBT System treatment technology combines extraction, re-injection, biodegradation, and adsorption to meet the Record of Decision objectives which:

- Protect groundwater from contaminants that migrate out of the pits;
- Protect groundwater from contaminants that migrate out of the vadose zone soil below the pits, and;
- Protect groundwater from contaminants in the soils below the pits in the event that the water table rises into contaminated soil.

The SVE/IBT System final design includes injection at four SVE wells (3, 4, 8, and 9) and extraction at nine SVE wells (1, 2, 5, 6, 7, 10, 11, 12, and 20A) in sequence to enhance the natural aerobic degradation observed within the vadose zone.

Construction of the SVE/IBT System began on February 27, 2006 and was completed on April 28, 2006. The pre-system startup period occurred from May 1, 2006 through August 4, 2006. Pre-system startup activities included testing and troubleshooting as well as diagnosis of any malfunction or non-responsiveness of the system's Programmable Logic Controller (PLC) unit and machinery such as the blowers, oxygen generator, automated check valves, sensors, and devices.

On August 7, 2006, Short-Term OM&M activities began, which included operation and full-scale monitoring of the SVE/IBT System. The SVE/IBT System normally operates 8 hours per day (8:00 am – 4:00 pm), 5 days per week (Monday – Friday). The SVE/IBT System is controlled via a PLC System with capabilities for remote start and stop as well

as alarm/emergency shutdown protocols. The results of both the pre-system and short-term operations are presented in the *Summary of SVE/IBT Pre-System Startup Operations Technical Memorandum,* C2 REM, February 2007 and the *Summary of SVE/IBT 3-Month Short-Term Operations Technical Memorandum,* C2 REM, December 2006.

On November 8, 2006, Short-Term Operations ended and the SVE/IBT System has been in long-term OM&M since that date. The frequency of monitoring the SVE/IBT System was weekly in 2007 with monthly lab results taken from the four SVE/IBT System sample stations.

The four SVE/IBT System sample stations are as follows:

- Station 1 - Influent: the inlet (the combined flow of the nine extraction wells);
- Station 2 - Post Ambient Air: the diversion loop (to the Granulated Activated Carbon [GAC] beds) just after the ambient air intake;
- Station 3 - Carbon Vessel 1 (C_1): at the effluent of the primary GAC bed; and
- Station 4 - Effluent: the effluent stack.

These four measurement points were monitored for VOCs, Oxygen (O_2), Carbon Dioxide (CO_2), and flow rate using hand-held monitoring equipment, and corresponding inline measurements from the PLC System were also recorded where applicable.

Based on laboratory results, the benzene concentrations at the inlet ranged from 9,300 to 33,000 ppm with an average of 22,664 ppm. The benzene concentrations at post ambient air ranged from non-detected (ND) to 5,400. The benzene concentrations at the outlet of C_1 ranged from 2.9 to 3,600 ppm. The benzene concentrations at the effluent ranged from ND to 3.4 ppm with all but one sample reporting below laboratory detection limits (see Table 9.0). Benzene concentrations at Stations 1-4 demonstrated that the SVE/IBT System was effective in controlling lower explosive limit (LEL) conditions and maintaining acceptable emission limits (i.e., less than 50 ppm) (see Figure 5.0).

Additionally, full-scale monitoring was conducted quarterly from all cluster, vacuum performance wells, and SVE injection and extraction wells for pressure, LEL, VOCs, O_2, and CO_2 using hand-held monitoring equipment. A more detailed discussion regarding the OM&M activities for the SVE/IBT System can be found in the *1-Year SVE/IBT Operations Technical Memorandum*, which is included in Appendix C of this Report for completeness.

7.0 MONTHLY PERIMETER WELL MONITORING

C2 REM conducted monthly field monitoring of the perimeter monitoring wells in 2007. The procedures for monitoring the perimeter wells included measuring well pressure (inches of water), purging the appropriate pore volume (see Table 10.0), analyzing vapors from each well with a PID calibrated to benzene and a RKI Eagle that measures O_2, LEL, CO_2, and Hydrogen Sulfide. Oxygen concentrations ranged from 9.5 to 20.9% with an average of 18.0%. Carbon Dioxide concentrations ranged from 0.0 to 9.3% with an

average of 3.2%. Pressures ranged from -0.5 to 0.08 inches of water with an average of -0.03 inches of water (see Table 11.0). VOC concentrations measured with a PID ranged from 0.0 to 11.1 ppm with and average of 0.18 ppm. The VOC concentration of 11.1 ppm was detected at Perimeter Monitoring Well C on May 17, 2007. The VOC concentrations detected at Perimeter Monitoring Well C during other monthly monitoring events in 2007 ranged from 0.0 to 0.2 ppm, most likely indicating that the observed May 17, 2007 concentration was an anomaly.

The continued low concentrations of VOC's detected at the perimeter wells indicate good control of injected air volumes, the cover system is performing as designed, and the contaminated soil vapors are not migrating beyond the cap boundaries (see Figure 6.0).

8.0 ROUTINE MAINTENANCE

8.1 OBJECTIVES

C2 REM conducted routine system maintenance to: 1) assure that the integrity of the completed containment system is maintained; 2) reduce the probability of malfunction; 3) provide a mechanism for early detection of system failures; 4) repair identified system failures; and 5) ensure the efficient management of OM&M activities (see Appendix D for Field Daily Reports/Completed Maintenance Forms).

8.2 COVER SYSTEM

Routine maintenance of the cover system included control of weeds, vegetation (turf height), and burrowing animals. Regularly scheduled mowing of the California grass mix on the cap and the surrounding areas has maintained the required turf height (maximum grass height of one foot) and helped control potential fire outbreaks by eliminating the build-up of dry grass thatch. The occurrence of burrowing animals has been regulated via pest control companies in order to prevent damage to the cover system. Due to a particularly dry year, the issues of stressed vegetation were addressed with the installation of an above ground irrigation system in July 2007 which has been operated routinely.

8.3 GAS COLLECTION AND TREATMENT SYSTEM

C2 REM conducted bi-monthly visual observations of the Cap Gas System's above ground components and onsite system enclosure to identify potential maintenance requirements and/or repairs. Routine maintenance items conducted on the Cap Gas System included painting system components that regularly exhibit rust build-up, replacement of sample ports, and change-out of carbon canisters. Additionally, C2 REM staff routinely accessed and viewed the PLC viewer to assure that the mechanical components of the blower motor and control unit are operating as designed to reduce the probability of malfunction.

8.4 SVE/IBT SYSTEM

C2 REM conducted weekly visual observations of the SVE/IBT System above ground components and onsite system enclosure to identify potential maintenance requirements and/or repairs. Routine maintenance items conducted on the SVE/IBT System included replacement of sample ports, change-out of carbon vessels, and the calibration of in-line sensors. Additionally, C2 REM staff routinely accessed and viewed the PLC viewer to assure that the mechanical components of the blow motor, oxygen generator, automated check valves, and in-line sensors are operating as designed to reduce the probability of malfunctions.

8.5 SURFACE AND SUBSURFACE DRAINAGE SYSTEMS

As part of the scheduled landscape and maintenance of the site cover system, the surface and subsurface drainage systems were routinely inspected for any cracking, spalling, settlement, and/or debris build-up. C2 REM regularly cleaned the surface drainage swales and catch basins of any vegetative debris or sediment build-up. Gravel dispersion observed during February 16, 2007 quarterly inspection was repaired as part of the normal property maintenance. No additional maintenance or repair of the surface and subsurface drainage systems was required in 2007.

8.6 ACCESS ROAD

The gravel access road was routinely inspected for the dispersion of gravel and/or vegetation overgrowth. The access road was regularly cleared of encroaching vegetative material during scheduled landscape maintenance activities. There was one event of excessive dispersion of gravel recorded on February 16, 2007, which was repaired during routine maintenance. No additional maintenance or repair of the existing gravel access road was required in 2007.

8.7 SECURITY AND PERIMETER FENCE

The perimeter fence was routinely inspected for damage as part of the normal property maintenance. C2 REM regularly repaired sections of the perimeter fence exhibiting breaks or structural damage in 2007.

8.8 ON-SITE TRAILERS

C2 REM observed several incidents of vandalism to the on-site trailer. The proper authorities were notified and the on-site trailer exterior was repaired and repainted. During this maintenance, unrelated to the vandalism that took place, C2 REM also repaired leaks and repainted the interior of the on-site trailer in 2007. Shortly after, four surveillance cameras were installed on property to provide additional security to equipment and employees on-site.

9.0 REPAIRS

9.1 OBJECTIVES

In an effort to ensure the integrity of the implemented remedy, C2 REM regularly identified and repaired failed or non-functional components of the Phase I & Phase II remedies pursuant to Section 10.0 of the OM&M Manual.

9.2 REQUIRED REPAIRS

The cover system as well as other systems subject to inspection and assessment did not require any significant repairs. Minor repair issues (i.e., fence repair, trailer repair, gravel dispersion, and system component repairs due to sensor malfunctions) were completed during routine and non-routine maintenance at the Waste Pits (see Appendix D). In-line sensors and components of the SVE/IBT System that required repair were returned to the manufacture and subsequently re-installed following corrective measures.

10.0 CONCLUSIONS AND RECOMMENDATIONS

Following the eighth year of operation of the Phase I remedy (e.g., multilayer cap, soil vapor monitoring probes) and the first year operation of the Phase II remedy (i.e., SVE/IBT System), the Waste Pits are in good condition and the implemented remedies are functioning as designed. Regularly scheduled inspections, monitoring, and maintenance activities have assisted in the early identification of possible repair issues with limited system operation interruption. Issues requiring action were quickly identified, assessed, and rectified in 2007. Minor concerns will continue to be closely monitored in 2008 during routine and non-routine inspections.

The current inspection requirements and bi-monthly monitoring frequency of the Cap Gas System appears appropriate and no modification is proposed. The cover system and the other associated systems have performed well during the eighth year of operation, and the required inspection requirements and monitoring frequency are adequate to assess whether the remedies for the Waste Pits are functioning as designed.

The analysis of the collected data indicates that the SVE/IBT System is performing at a level consistent with design parameters. A more detailed discussion regarding the OM&M activities for the SVE/IBT System and recommendations can be found in the 1-Year SVE/IBT Operations Technical Memorandum located in Appendix C of this Report.

Survey data suggests that primary consolidation has been reached; therefore, the next monument survey event is scheduled for the year 2010. Further inspections and monitoring activities for 2008 shall be conducted in accordance with the schedule provided on Table 12.0.

11.0 REFERENCES

C2 REM, *Cap Gas Collection and Treatment Baseline Monitoring and Long-term Monitoring Recommendations Report, Del Amo Waste Pits Operable Unit, Los Angeles County, California,* December 2000.

C2 REM, *Final Design Report,* January 2006.

C2 REM, *Pre-Final Design Report Addendum,* September 2005.

C2 REM, *Remedial Design Work Plan Addendum-In Situ Bioventing Technology Assessment, Del Amo Waste Pits,* January 2005.

C2 REM, *Summery of SVE/IBT Pre-System Start-up Operations, Technical Memorandum*, February 2007.

C2 REM, *Summery of SVE/IBT 3-Month Short-Term Operations, Technical Memorandum*, December 2006.

C2 REM, *SVE/IBT Construction Quality Assurance Plan*, January 2006.

C2 REM, SVE*/IBT Operation, Maintenance and Monitoring Manual, Del Amo Waste Pits,* January 2006.

Dames and Moore, *Remedial Design Work Plan, Del Amo Pits Operable Unit, Torrance, California,* June 30, 1998.

Parsons Engineering Science, *Operational, Maintenance and Monitoring Manual for the Del Amo Waste Pits Operable Unit, Torrance, California,* March 12, 1999.

USEPA, *Administrative Order (AO) for Remedial Design, Docket No. 98-06, Del Amo Waste Pits Operable Unit,* May 5, 1998.

USEPA, *Administrative Order (AO) for Remedial Action, Docket No. 99-08, Del Amo Waste Pits Operable Unit, Torrance, California,* May 3, 1999.

USEPA, *Record of Decision for Del Amo Waste Pits Operable Unit,* September 1997.

Webb, Murray, & Associates, *Process Hazard Analysis Report*, September 2005.

Table 1.0
Cover System Inspection Summary
Del Amo Waste Pits

Cover System					
Inspection Date	**February 16, 2007**	**May 9, 2007**	**August 20, 2007**	**December 3, 2007**	**December 20, 2007**
Inspection Type	1st Quarterly Inspection	2nd Quarterly Inspection	3rd Quarterly Inspection	Post Rain Inspection	4th Quarterly Inspection
Inspection Items					
Erosion	4	4	4	4	4
Stressed Vegetation (Plant Die-Back) (1)	3	2	3	4	4
Sediment Build-Up	4	4	4	4	4
Local Subsidence or Loss of Grade	4	4	4	4	4
Water Ponding	4	4	4	4	4
Turf Height	4	4	3	4	4
Burrowing Animals (1)	2	3	3	4	4
Weeds or Undesirable Vegetation	4	4	4	4	4
Evidence of Fires or Vandalism	4	4	4	4	4
Soil Quality Check	3	3	3	4	4
Unauthorized Traffic	4	4	4	4	4
Slope Instability or Sloughing	4	4	4	4	4
Survey Monuments	4	4	4	4	4
Vertical Cracking	4	3	4	4	4
Intrusions	4	3	3	4	4
Evidence of Waste Pit Materials	4	4	4	4	4

(1) Area of concern was repaired/addressed during routine property maintenance.

Conditions/Remarks Key:
4 = Satisfactory
3 = Slight (Continue Observing)
2 = Moderate (Needs Scheduled Repair)
1 = Poor (Needs Immediate Repair)

Table 2.0
Cap Gas Collection Treatment Inspection Summary
Del Amo Waste Pits

Cap Gas Collection Treatment System					
Inspection Date	**February 16, 2007**	**May 9, 2007**	**August 20, 2007**	**December 3, 2007**	**December 20, 2007**
Inspection Type	1st Quarterly Inspection	2nd Quarterly Inspection	3rd Quarterly Inspection	Post Rain Inspection	4th Quarterly Inspection
Inspection Items					
Collection System Valves					
Adequate Free Movement	4	4	4	4	4
Seals-Complete	4	4	4	4	4
Signs of Rust/Corrosion	3	3	3	3	3
Condensate Collection					
Air Moisture Separator	4	4	4	4	4
Carbon Adsorbers-Vessels					
Exterior Damage	4	4	4	4	4
FRP Grating and Mesh	4	4	4	4	4
Blower [(1)]					
General Motor Maintenance	4	4	4	4	4
Drive Maintenance	4	4	4	4	4
Bearing Maintenance	4	4	4	4	4
Lubrication	4	4	4	4	4
Structural Maintenance	4	4	4	4	4

(1) Blower and motor are permanently lubricated and sealed units.

Conditions/Remarks Key:
4 = Satisfactory
3 = Slight (Continue Observing)
2 = Moderate (Needs Scheduled Repair)
1 = Poor (Needs Immediate Repair)

Table 3.0
Surface Water Drainage Inspection Summary
Del Amo Waste Pits

Surface Water Drainage					
Inspection Date	**February 16, 2007**	**May 9, 2007**	**August 20, 2007**	**December 3, 2007**	**December 20, 2007**
Inspection Type	1st Quarterly Inspection	2nd Quarterly Inspection	3rd Quarterly Inspection	Post Rain Inspection	4th Quarterly Inspection
Inspection Items					
Washouts or Erosion of Contoured Grade	4	4	4	4	4
Ponding on Contoured Grade	4	4	4	4	4
Gullies and Ruts on Contoured Grade	4	4	4	4	4
Plugging of Drainage Culverts (1)	3	4	4	4	4
Holes and Cracks in Swales or Catch Basins	4	4	4	4	4
Sediment Build-Up in Swales or Catch Basins (1)	4	3	4	4	4
Surface Cracking of Swales/Catch Basins	4	4	4	4	4
Spalling of Swales/Catch Basins	4	4	4	4	4
Structural Failure of Swales/Catch Basins	4	4	4	4	4

(1) Repair/maintenance completed during routine maintenance.

Conditions/Remarks Key:

4 = Satisfactory

3 = Slight (Continue Observing)

2 = Moderate (Needs Scheduled Repair)

1 = Poor (Needs Immediate Repair)

Table 4.0
Subsurface Drainage Inspection Summary
Del Amo Waste Pits

Subsurface Drainage					
Inspection Date	**February 16, 2007**	**May 9, 2007**	**August 20, 2007**	**December 3, 2007**	**December 20, 2007**
Inspection Type	1st Quarterly Inspection	2nd Quarterly Inspection	3rd Quarterly Inspection	Post Rain Inspection	4th Quarterly Inspection
Inspection Items					
Holes and Cracks in Swales, Catch Basin	4	4	4	4	4
Plugging of Drainage Inlets	3	4	4	4	4
Sediment Build-Up or Debris in Catch Basin	4	4	4	4	4
Structural Failure of Catch Basin	4	4	4	4	4

Note: Surface and subsurface drainage system components were regularly cleaned of any debris.

Conditions/Remarks Key:

4 = Satisfactory

3 = Slight (Continue Observing)

2 = Moderate (Needs Scheduled Repair)

1 = Poor (Needs Immediate Repair)

Table 5.0
Security Fence Inspection Summary
Del Amo Waste Pits

Security Fence					
Inspection Date	**February 16, 2007**	**May 9, 2007**	**August 20, 2007**	**December 3, 2007**	**December 20, 2007**
Inspection Type	1st Quarterly Inspection	2nd Quarterly Inspection	3rd Quarterly Inspection	Post Rain Inspection	4th Quarterly Inspection
Inspection Items					
Perimeter Fence					
Breaks and Holes	4	4	4	4	4
Settlement Damage	4	4	4	4	4
Loose Posts/Tension	4	4	4	4	4
Rust/Corrosion	4	4	4	4	4
Ruts and Burrows Beneath Fence	3	4	4	4	4
Vegetation Overgrowth	4	4	4	4	4
General Signs of Deterioration	4	4	4	4	4
Vandalism/Animal/Wind Damage	4	4	4	4	4
Gates					
Adequate Movement of Hinges and Gates	4	4	4	4	4
Proper Function of Lock(s)	4	4	4	4	4

Conditions/Remarks Key:

4 = Satisfactory

3 = Slight (Continue Observing)

2 = Moderate (Needs Scheduled Repair)

1 = Poor (Needs Immediate Repair)

Table 6.0
Access Road Inspection Summary
Del Amo Waste Pits

Access Road					
Inspection Date	**February 16, 2007**	**May 9, 2007**	**August 20, 2007**	**December 3, 2007**	**December 20, 2007**
Inspection Type	1st Quarterly Inspection	2nd Quarterly Inspection	3rd Quarterly Inspection	Post Rain Inspection	4th Quarterly Inspection
Inspection Items					
Holes and Cracks	4	4	4	4	4
Vegetation Overgrowth	4	4	4	4	4
Settlement	4	4	4	4	4
Excessive Dispersion of Gravel (1)	2	4	4	4	4
General Signs of Deterioration	4	4	4	4	4

(1) Repair completed during routine maintenance.

Conditions/Remarks Key:

4 = Satisfactory

3 = Slight (Continue Observing)

2 = Moderate (Needs Scheduled Repair)

1 = Poor (Needs Immediate Repair)

Table 7.0
SVE/IBT Inspection Summary
Del Amo Waste Pits

Access Road					
Inspection Date	**February 16, 2007**	**May 9, 2007**	**August 20, 2007**	**December 3, 2007**	**December 20, 2007**
Inspection Type	1st Quarterly Inspection	2nd Quarterly Inspection	3rd Quarterly Inspection	Post Rain Inspection	4th Quarterly Inspection
Inspection Items					
Manifold					
Adequate - Free Movement	4	4	4	4	4
Seals - Complete	4	4	4	4	4
Visible Damage	4	4	4	4	4
Condensate Collection					
AirMoisture Separator	4	4	4	4	4
Additional System Components					
Carbon Adsorber Vessels					
Exterior Damage	4	4	4	4	4
Vessel Configuration (A-B or B-A)	A-B	A-B	B-A	B-A	B-A
Blowers					
General Motor Maintenance	4	4	4	4	4
Drive Maintenance	4	4	4	4	4
Bearing Maintenance	4	4	4	4	4
Osygen Generator					
Signs of Rust/Corrosion	4	4	4	4	4
Mechanical Functioning	4	4	4	4	4
Oxygen Purity	4	4	4	4	4
System Sensors					
Visible Damage	4	4	4	4	4
Mechanical Functioning (1)	2	4	4	2	2
SVE Wellheads					
Tee Flanges	4	4	4	4	4
Valves	3	4	4	4	4

(1) Sensors needing repair were returned to manufacturer and re-installed following corrective measures.

Conditions/Remarks Key:

4 = Satisfactory

3 = Slight (Continue Observing)

2 = Moderate (Needs Scheduled Repair)

1 = Poor (Needs Immediate Repair)

Table 8.0
2007 Bi-Monthly Cap Gas System Monitoring Results
Del Amo Waste Pits

Date	System Influent VOCs (ppm)	Effluent Lead Carbon Vessel VOCs (ppm)	Effluent Secondary Carbon Vessel VOCs (ppm)	System Effluent VOCs (ppm)	System Efficiency Based on PID Readings
1/18/2007	1.1	0.3	0.2	0.1	91%
2/1/2007	0.8	3.9	1	0.7	13%
2/15/2007	0.8	0.9	0.8	0.4	50%
3/8/2007	0.5	0.2	0.2	0.3	40%
3/22/2007	0.5	0.5	0.2	0.1	80%
4/5/2007	1.3	0.2	0.2	0.2	85%
4/19/2007	1.7	0.3	0.1	0	100%
5/3/2007	4.9	2.7	0.3	0.8	84%
5/24/2007	0.7	1.1	0.6	0.6	14%
6/15/2007	1.7	3.5	2.4	1.6	6%
6/21/2007	3.6	2.7	1.5	2.5	31%
7/6/2007	0.9	0.6	0	0	100%
7/19/2007	1.1	0.4	2.6	1.8	-64%
8/6/2007	1.2	3.6	2.2	1.8	-50%
8/16/2007	2.6	1.4	0.9	1.5	42%
8/31/2007	1.2	1.8	1.7	2.2	-83%
9/13/2007	10.2	1.2	1.4	1.9	81%
9/27/2007	8.9	1.0	1.4	1.5	83%
10/11/2007	1.7	3.6	5.0	1.7	0%
10/25/2007	1.9	1.3	1.3	0.7	63%
11/8/2007	1.9	3.4	3.0	1.8	5%
11/21/2007	0.4	3.0	3.0	1.8	-350%
12/6/2007	1.2	1.9	1.8	1.4	-17%
12/19/2007	2.6	9.6	5.6	1.5	42%

Readings taken with a PID calibrated to 50 ppm benzene.

Table 9.0
Laboratory Data Summary for SVE/IBT Enclosure (Sections 1-4)
Del Amo Waste Pits

Date	Sample ID	Benzene (ppm)	Oxygen (%)	Carbon Dioxide (%)	Nitrogen (%)
3/22/2007	INLET	22000	9.2	11	79
4/19/2007	INLET	9300	21	10	69
5/17/2007	INLET	21000	16	9.1	75
6/28/2007	INLET	28000	14	9.5	77
7/26/2007	INLET	*	20	9.3	71
8/23/2007	INLET	29000	20	9.4	71
9/27/2007	INLET	31000	18	9.4	73
10/25/2007	INLET	33000	15	9.2	76
11/29/2007	INLET	*	20	8	72
12/19/2007	INLET	22000	14	8.4	78
8/23/2007	INLET DUP	19000	20	9.3	71
9/27/2007	INLET DUP	18000	18	9.2	73
10/25/2007	INLET DUP	2100	15	8.9	76
12/19/2007	INLET DUP	17000	14	8	78
3/22/2007	POST AMBIENT AIR	1600	21	0.7	79
4/19/2007	POST AMBIENT AIR	300	21	1.2	77
5/17/2007	POST AMBIENT AIR	5400	21	1.3	78
6/28/2007	POST AMBIENT AIR	4500	20	1.6	78
7/26/2007	POST AMBIENT AIR	2000	22	0.59	78
8/23/2007	POST AMBIENT AIR	1200	21	0.58	78
9/27/2007	POST AMBIENT AIR	ND	22	0.1	78
10/25/2007	POST AMBIENT AIR	950	22	0.38	78
11/29/2007	POST AMBIENT AIR	ND	21	0.1	78
12/19/2007	POST AMBIENT AIR	2500	21	1.1	78
3/22/2007	CARBON 1	27	21	0.86	79
5/17/2007	CARBON 1	3600	21	1.2	78
6/28/2007	CARBON 1	41	20	1.5	78
7/26/2007	CARBON 1	1000	21	0.32	78
8/23/2007	CARBON 1	2.9	22	0.13	78
9/27/2007	CARBON 1	1100	22	0.1	78
10/25/2007	CARBON 1	230	22	0.34	78
11/29/2007	CARBON 1	320	22	0.1	78
12/19/2007	CARBON 1	420	21	1.1	78
3/22/2007	EFFLUENT	ND	20	0.98	79
4/19/2007	EFFLUENT	ND	21	1.1	77
5/17/2007	EFFLUENT	ND	21	1.3	78
6/28/2007	EFFLUENT	ND	21	1.6	78
7/26/2007	EFFLUENT	ND	21	0.67	78
8/23/2007	EFFLUENT	ND	22	0.66	78
9/27/2007	EFFLUENT	3.4	22	0.1	78
10/25/2007	EFFLUENT	ND	21	0.43	78
11/29/2007	EFFLUENT	ND	22	0.1	78
12/19/2007	EFFLUENT	ND	21	1.1	78

ND: Sample detected at concentration less than reporting limit of 1.6 ppm

* Error with sample collection

Table 10.0
SVE Perimeter Well Purge Volume
Del Amo Waste Pits

Perimeter Monitoring Well ID	Depth (ft bgs)	Screen interval (ft)	Radius of casing (ft)	Radius of annulus (ft)	Soil porosity	Annulus Volume (ft^3)	Casing Volume (ft^3)	Pore Volume (ft^3)	Volume Required for Purging (ft^3)
A	23.6	5	0.0208	0.0729	0.3	0.03	0.03	0.06	0.17
B	17.6	5	0.0208	0.0729	0.3	0.03	0.02	0.05	0.15
C	17.3	5	0.0208	0.0729	0.3	0.03	0.02	0.05	0.15
D	16.9	5	0.0208	0.0729	0.3	0.03	0.02	0.05	0.14
E	15.9	5	0.0208	0.0729	0.3	0.03	0.02	0.05	0.14
F	15.7	5	0.0208	0.0729	0.3	0.03	0.02	0.05	0.14
G	14.3	5	0.0208	0.0729	0.3	0.03	0.02	0.04	0.13
H	14.1	5	0.0208	0.0729	0.3	0.03	0.02	0.04	0.13
I	13.1	5	0.0208	0.0729	0.3	0.03	0.02	0.04	0.13
J	15.2	5	0.0208	0.0729	0.3	0.03	0.02	0.05	0.14
K	13.7	5	0.0208	0.0729	0.3	0.03	0.02	0.04	0.13
L	10.7	5	0.0208	0.0729	0.3	0.03	0.01	0.04	0.12

Table 11.0
Perimeter Wells Monitoring
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
1/31/2007	A	0	0	20.9	0	0
2/21/2007	A	NA	0	20.9	0	0
4/19/2007	A	0.5	0	20.9	0	0
4/26/2007	A	0	0	20.9	0	0
5/17/2007	A	0.1	0	20.9	0	0
6/28/2007	A	0	0	20.9	0	-0.05
7/24/2007	A	0.1	0	20.9	0.4	-0.02
8/23/2007	A	0.1	0	20.9	0.2	0.05
10/11/2007	A	0	0	20.9	0	0
11/29/2007	A	0.5	0	20.9	0	0
12/20/2007	A	0	0	20.5	1.02	0
1/31/2007	B	0.5	0	17.6	5	0
2/21/2007	B	NA	0	17.9	5	0
4/19/2007	B	0.9	0	18.4	4.6	-0.1
4/26/2007	B	0.5	0	18.5	4.8	0
5/17/2007	B	0.3	0	18.4	4.8	0
6/28/2007	B	0	0	18	4.8	-0.05
7/24/2007	B	0.2	0	18	3.6	-0.05
8/23/2007	B	0.1	0	15.7	5.4	0.05
10/11/2007	B	0.4	0	14.7	6.8	-0.03
11/29/2007	B	0.5	0	13.6	7.6	0
12/20/2007	B	0.4	0	12.7	9.2	-0.05
1/31/2007	C	0	0	16.1	6.6	0
2/21/2007	C	NA	0	15.8	6.4	0
4/19/2007	C	0.1	0	15.8	5.8	-0.1
4/26/2007	C	0	0	15.8	5.8	0
5/17/2007	C	11.1	0	15.9	6	-0.05
6/28/2007	C	0	0	15.8	6	-0.05
7/24/2007	C	0	0	15.6	6	-0.05
8/23/2007	C	0	0	14.4	6	0.025
10/11/2007	C	0	0	12.1	7.6	-0.02
11/29/2007	C	0.2	0	10.8	7.8	0
12/20/2007	C	0.1	0	9.5	9.3	0
1/31/2007	D	0	0	20.9	0	0
2/21/2007	D	NA	0	20.9	0	0
4/19/2007	D	0.8	0	20.9	0	0
4/26/2007	D	0	0	20.9	0	0
5/17/2007	D	0.1	0	20.9	0	-0.1
6/28/2007	D	0	0	20.9	0	-0.05
7/24/2007	D	0	0	18.5	2.4	-0.06
8/23/2007	D	0	0	20.4	0.6	0.05
10/11/2007	D	0	0	20.9	0	-0.02
11/29/2007	D	0.4	0	20.9	0	0.05
12/20/2007	D	0.1	0	20.9	0	0

NA: On Feburary 21, 2007, PID was malfunctioning and VOCs could not be monitored.

Table 11.0
Perimeter Wells Monitoring
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
1/31/2007	E	0.1	0	17.2	4.8	0
2/21/2007	E	NA	0	16.5	4.6	0
4/19/2007	E	0.3	0	17.6	4	-0.05
4/26/2007	E	0.1	0	17.6	4	0
5/17/2007	E	0	0	17.8	4.2	-0.05
6/28/2007	E	0	0	17.5	4.2	-0.05
7/24/2007	E	0	0	17.3	4.2	-0.02
8/23/2007	E	0	0	15.9	4.2	0.05
10/11/2007	E	0	0	17.6	4.8	-0.01
11/29/2007	E	0.1	0	17.8	4.4	0.05
12/20/2007	E	0	0	17.3	4.5	-0.05
1/31/2007	F	0	0	17.8	4.2	0
2/21/2007	F	NA	0	16.7	4	0
4/19/2007	F	0.1	0	18.1	3.6	-0.05
4/26/2007	F	0	0	18	3.6	0
5/17/2007	F	0	0	18.1	3.6	-0.05
6/28/2007	F	0	0	17.5	3.8	-0.1
7/24/2007	F	0	0	17.3	3.8	-0.02
8/23/2007	F	0	0	15	3.8	0.05
10/11/2007	F	0	0	17.5	2.58	-0.03
11/29/2007	F	0	0	18.2	4	0.02
12/20/2007	F	0.1	0	17.6	4.1	0
1/31/2007	G	0	0	19.1	2.4	0
2/21/2007	G	NA	0	19.4	2.4	0
4/19/2007	G	0	0	19.3	2	-0.05
4/26/2007	G	0	0	19.4	2.2	0
5/17/2007	G	0	0	19.3	2.2	-0.05
6/28/2007	G	0	0	18.5	2.2	-0.05
7/24/2007	G	0	0	18.7	2.2	-0.02
8/23/2007	G	0	0	18.9	2.2	0.025
10/11/2007	G	0	0	18.6	1.54	-0.02
11/29/2007	G	0	0	19.3	2.4	0.01
12/20/2007	G	0.1	0	18.8	2.3	0
1/31/2007	H	0	0	18	4.2	0
2/21/2007	H	NA	0	18.2	4.2	0
4/19/2007	H	0	0	18.1	3.6	-0.05
4/26/2007	H	0.2	0	18.4	3.6	-0.05
5/17/2007	H	0	0	18.3	3.6	-0.05
6/28/2007	H	0	0	17.5	3.6	-0.025
7/24/2007	H	0	0	17.4	3.8	-0.02
8/23/2007	H	0	0	18	3.6	0.025
10/11/2007	H	0	0	17.5	3.28	-0.05
11/29/2007	H	0	0	20.3	2.2	0.01
12/20/2007	H	1.4	0	17.8	4.6	0

NA: On Feburary 21, 2007, PID was malfunctioning and VOCs could not be monitored.

Table 11.0
Perimeter Wells Monitoring
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
1/31/2007	I	0.1	0	19.2	2.4	-0.02
2/21/2007	I	NA	0	19.4	2.4	0
4/19/2007	I	0.3	0	19	2.2	-0.1
4/26/2007	I	0	0	15.3	2.2	0
5/17/2007	I	0	0	18	2.2	-0.05
6/28/2007	I	0	0	17.4	2.2	-0.5
7/24/2007	I	0	0	20.9	0	-0.01
8/23/2007	I	0	0	20.9	0	0
10/11/2007	I	0	0	20.9	0.02	0
11/29/2007	I	0	0	18.1	4.2	0.08
12/20/2007	I	0	0	20.1	1.8	0
1/31/2007	J	0	0	18.5	2.8	0
2/21/2007	J	NA	0	18.8	3	0
4/19/2007	J	0	0	18.5	2.6	-0.05
4/26/2007	J	0	0	18.5	2.8	0
5/17/2007	J	0	0	14.7	2.8	-0.05
6/28/2007	J	0	0	17.7	3	-0.5
7/24/2007	J	0	0	17.6	3.2	-0.04
8/23/2007	J	0	0	14.2	3.2	0.05
10/11/2007	J	0.1	0	17.8	2.24	0
11/29/2007	J	0	0	18.8	2.8	0
12/20/2007	J	0.2	0	18.1	3.4	-0.05
1/31/2007	K	0	0	19.1	2	0
2/21/2007	K	NA	0	19.3	2.2	0
4/19/2007	K	0	0	19	1.8	-0.05
4/26/2007	K	0	0	19.3	1.8	0
5/17/2007	K	0	0	19.1	1.8	0
6/28/2007	K	0	0	18.4	2	-0.5
7/24/2007	K	0	0	17.5	2.8	-0.02
8/23/2007	K	0	0	17.7	3	0.05
10/11/2007	K	0	0	19.9	0.74	0
11/29/2007	K	0	0	20.8	1.2	0.05
12/20/2007	K	0	0	18.5	3	-0.07
1/31/2007	L	0.1	0	16.6	4.6	-0.01
2/21/2007	L	NA	0.05	17	4.6	0
4/19/2007	L	0.1	0	16.3	4.2	-0.1
4/26/2007	L	0	0	16.4	4.6	0
5/17/2007	L	0	0	16.9	4.8	-0.05
6/28/2007	L	0	0	15.4	5.2	-0.5
7/24/2007	L	0.1	0	14.7	6	-0.02
8/23/2007	L	0.1	0	12.2	6.2	0.05
10/11/2007	L	0.1	0	15	4.42	0
11/29/2007	L	0	0	16.9	4.8	0
12/20/2007	L	0.1	0	16.3	5.9	-0.05

NA: On Feburary 21, 2007, PID was malfunctioning and VOCs could not be monitored.

Table 12.0
Proposed Monitoring and Inspection Activities
Del Amo Waste Pits

EVENT	FREQUENCY	METHOD OF DOCUMENTATION
Cover System	Quarterly and after heavy rains [(1)] for the Seventh Year of Operation	Cover System Inspection Form
Cap Gas Collection and Treatment System	Quarterly and after heavy rains [(1)] for the Seventh Year of Operation	Cap Gas System Inspection Form
Surface Water Drainage System	Quarterly and after heavy rains [(1)] for the Seventh Year of Operation	Surface Water Drainage Inspection Form
Subsurface Drainage Systems	Quarterly and after heavy rains [(1)] for the Seventh Year of Operation	Subsurface Drainage Inspection Form
Security Fences	Quarterly and after heavy rains [(1)] for the Seventh Year of Operation	Security Fence Inspection Form
Access Road	Quarterly and after heavy rains [(1)] for the Seventh Year of Operation	Access Road Inspection Form
SVE/IBT System	Quarterly and after heavy rains [(1)] for the Seventh Year of Operation	SVE/IBT System Inspection Form
SVE Perimeter Well Monitoring Event	Quarterly	Perimeter Soil Vapor Monitoring Form
SVE/IBT System Field Monitoring	Bi-monthly	SVE/IBT System Monitoring Form
SVE/IBT System Lab Sampling	Monthly	Laboratory Analytical Report
Cap Gas Collection and Treatment System Monitoring	Bi-monthly	Cap Gas System Monitoring Form
Cap Gas Collection and Treatment Confirmation Sampling Event	Once every 5 years [(2)]	Laboratory Analytical Report
Monument Survey Event	Once every 5 years [(2)]	Monument Survey Record
Repairs	As Required	Maintenance/Corrective Work Report

(1) Defined as precipitation events with intensity exceeding 1.0 inches over a 24-hour period.
(2) Next scheduled monument survey event to be conducted in the year 2009.
(3) Next scheduled confirmation sampling event to be cunducted in the year 2010.

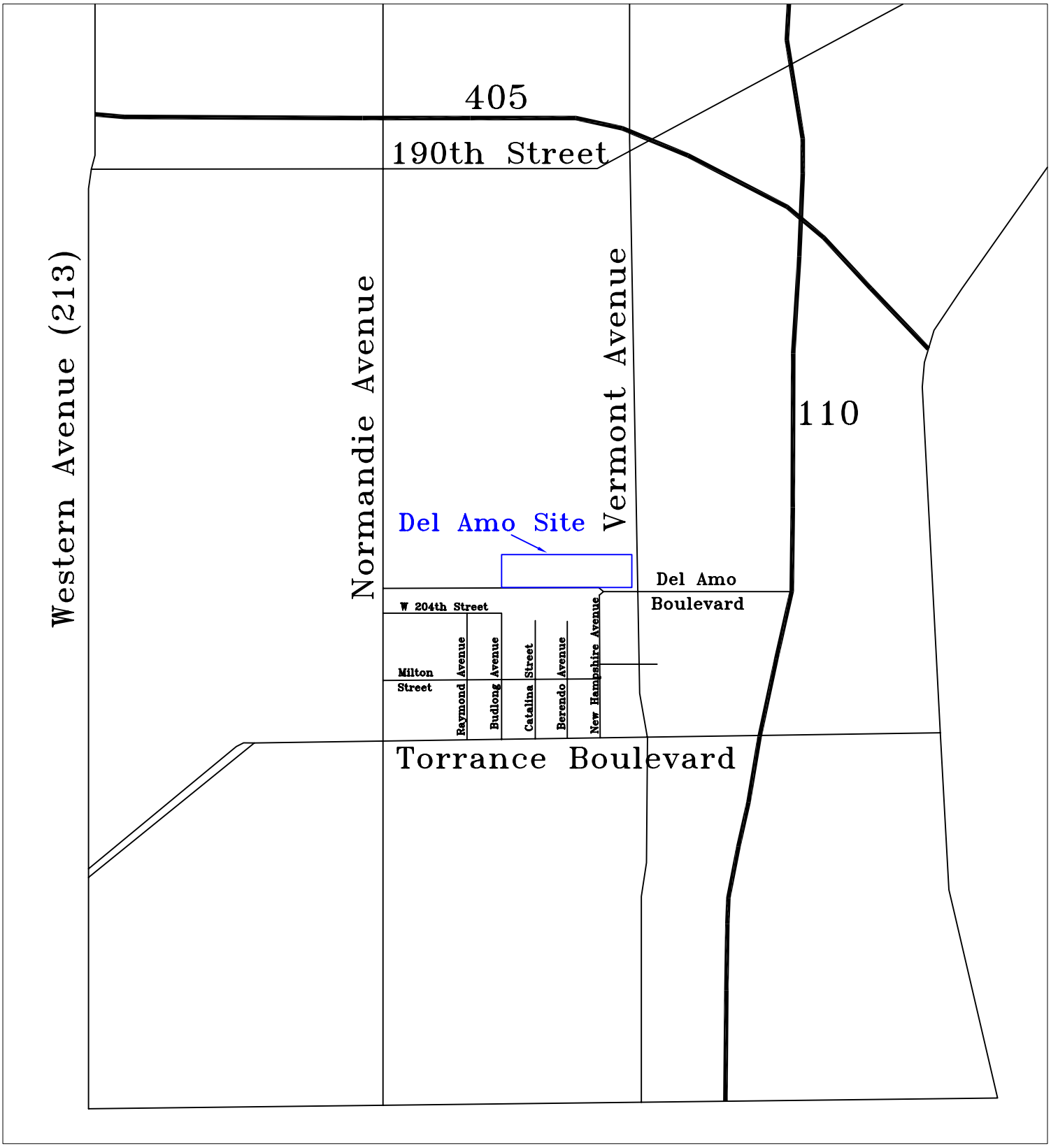
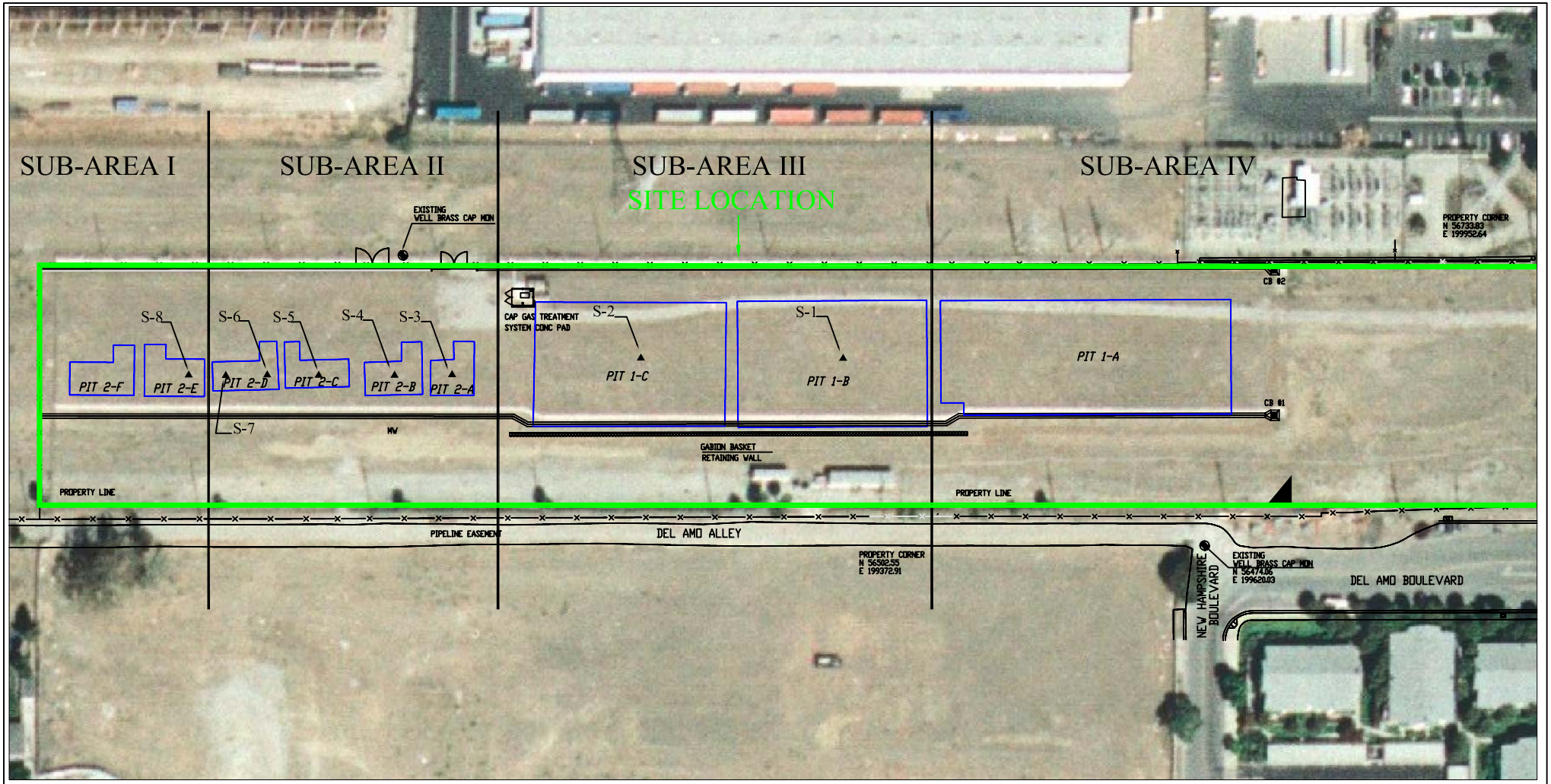


Figure 1.0
Site Vicinity Map
Del Amo Waste Pits OU
Los Angeles, California

DATE: 01.05.05	PROJECT NO: 97-101	REV: 01

AN ENVIRONMENTAL MANAGEMENT AND DEVELOPMENT COMPANY

NEWPORT BEACH, CALIFORNIA 949.261.8098



Reference: Final Design Report Drawings - Appendix C, Parsons Engineering Science, April 9, 1999

LEGEND

- Pit 1-C — Estimated Extent of Subsurface Impoundment
- Site Location
- Sub-Area Delineations
- ▲ Survey Monument Marker
- ● Existing Monument Marker

N

FIGURE 2.0
PROPERTY MAP
DEL AMO WASTE PITS OU

C2REM An Environmental Management & Development Company

AN ENVIRONMENTAL MANAGEMENT & DEVELOPMENT COMPANY

NEWPORT BEACH, CALIFORNIA 949.261.8098

Figure 3.0
Cap Gas Treatment System
2007 Bi-Monthly Monitoring Results (Influent vs. Effluent)

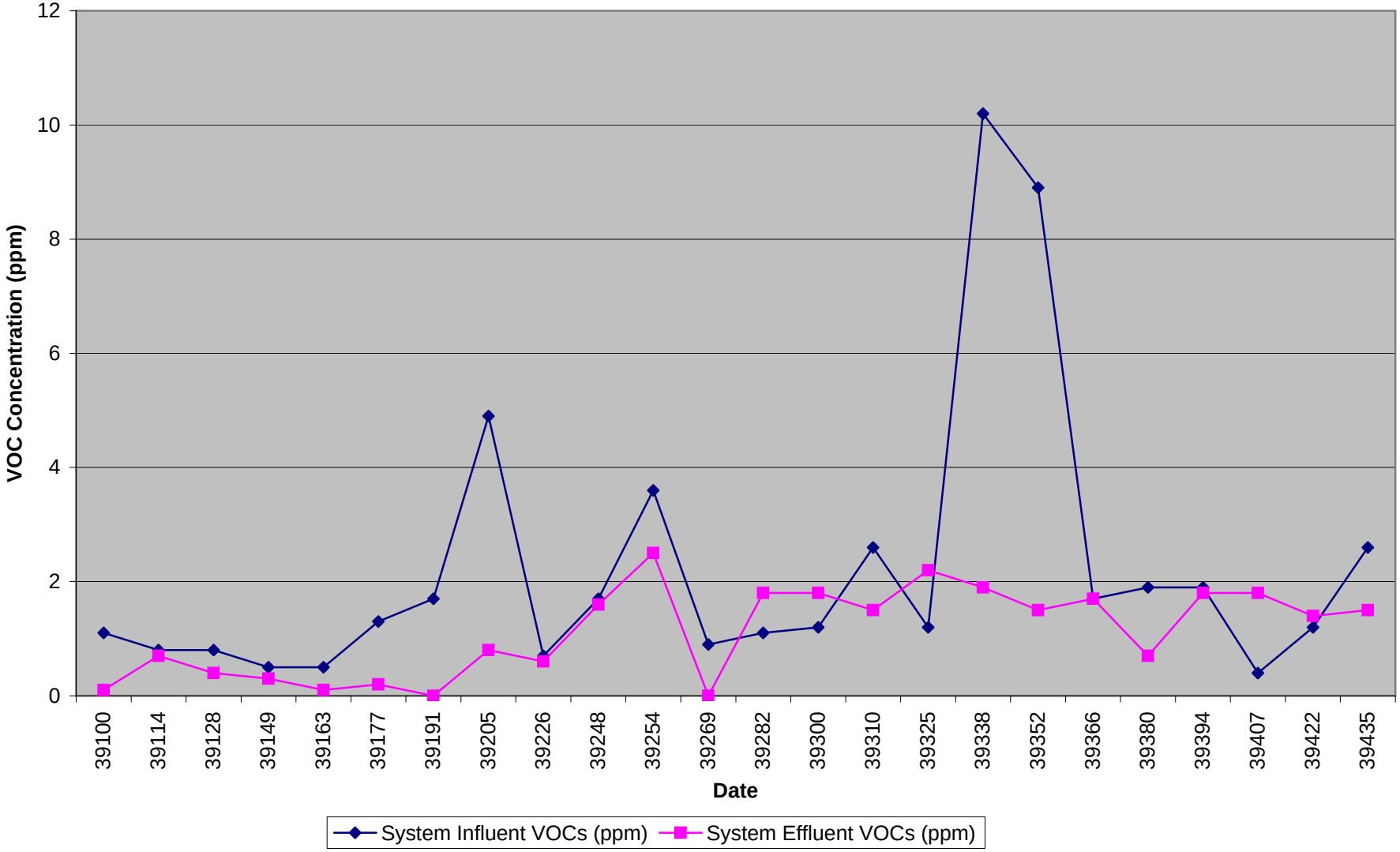


Figure 4.0
Carbon Replacement Protocol
Del Amo Waste Pits

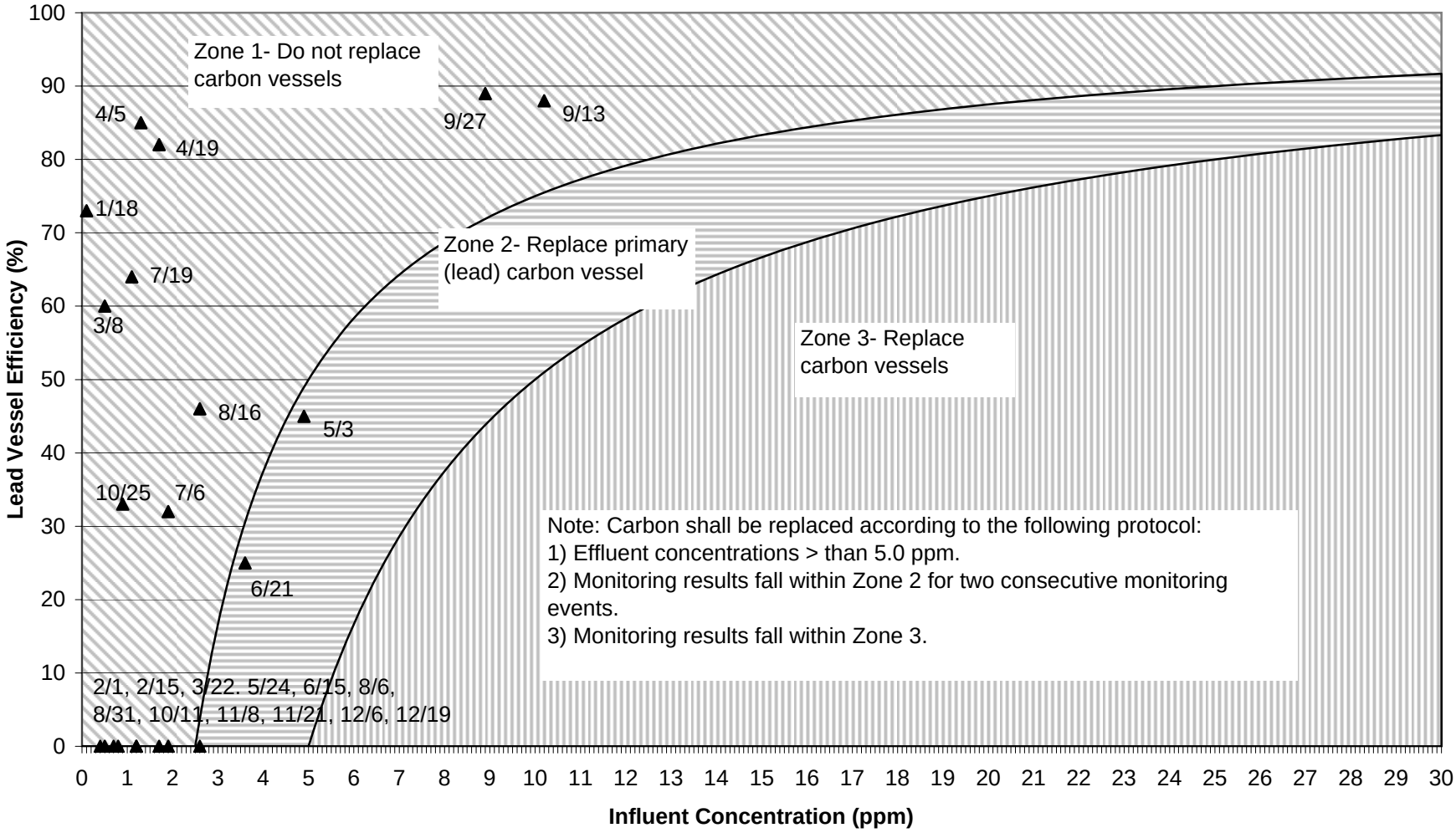


Figure 5.0
Station 1-4, Laboratory Data Summary for Benzene
Del Amo Waste Pits

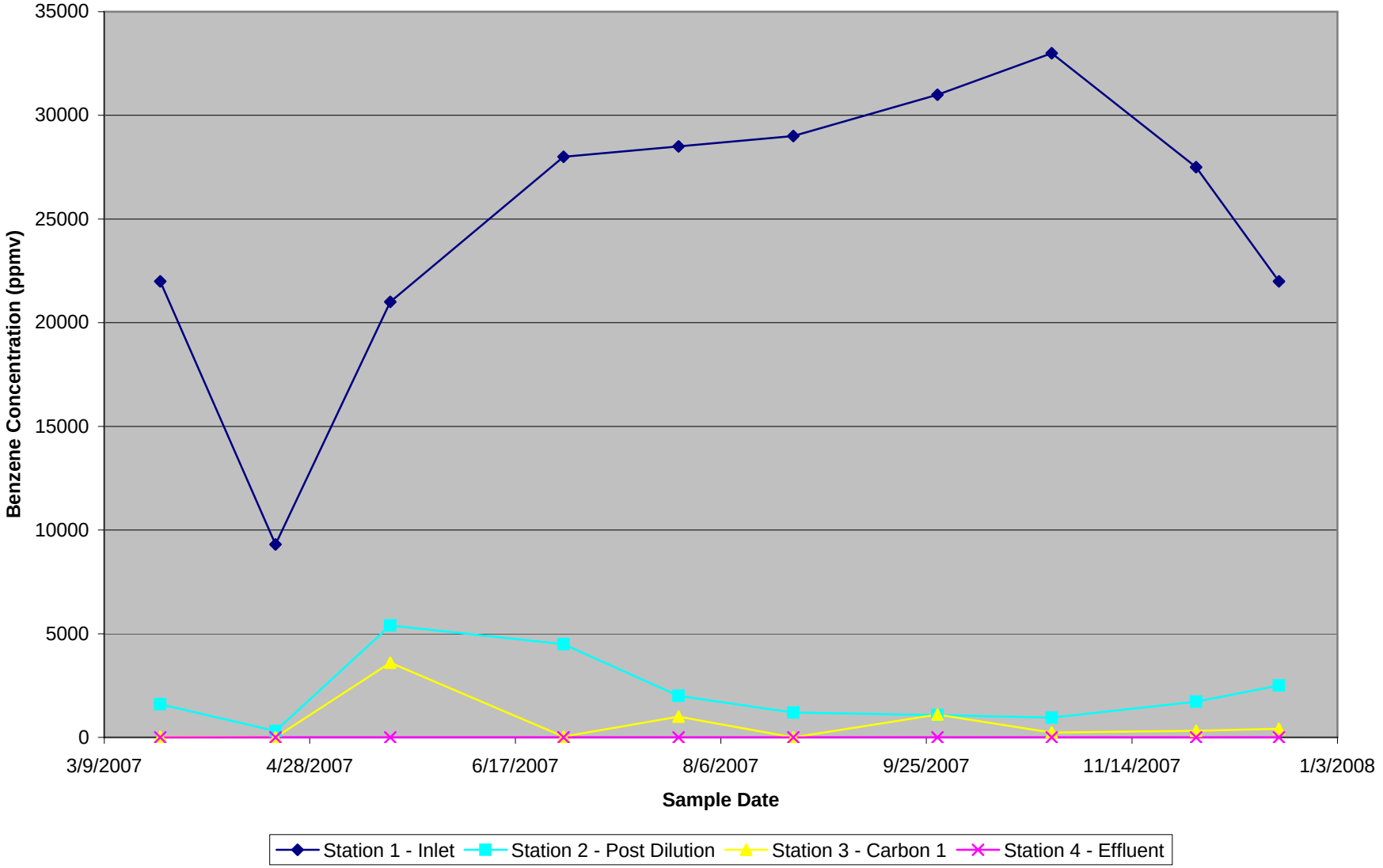
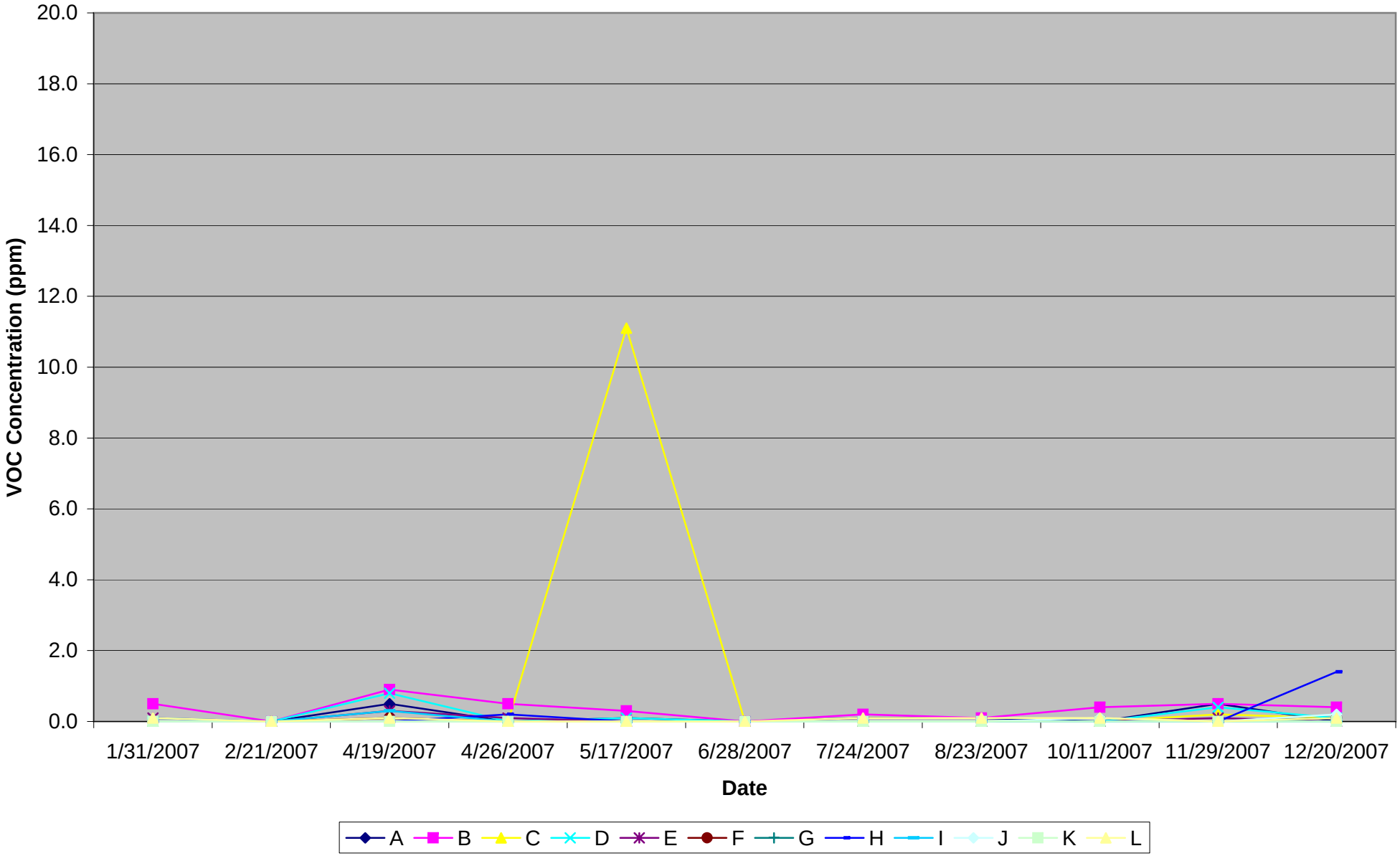


Figure 6.0
Perimeter Well Field Monitoring Results
Del Amo Waste Pits



APPENDIX A

2007 INSPECTION FORMS

CZ REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 2/16/07

WEATHER: Temperature ~ 75° F Winds: — Precipitation: —

DESCRIPTION OF THE WORK: 1ST QUARTERLY INSPECTION / SENSOR TROUBLESHOOTING

8:30 ARRIVE ONSITE WITH IAN YUSKO AND SHINTA AIZAWA
- MARC SMITH ARRIVES ON SITE
- JACK KEENER ARRIVES ON SITE
- BEGIN WORKING ON WIRING OF SENSORS
- ALL PRO FENCING ARRIVES ON SITE TO PUT UP A CANOPY OVER THE ENCLOSURE
- ABLE TO REWIRE AND RUN ALL SENSORS EXCEPT FOR FLOW METER 1 AT THE DIVERSION LOOP
- DECIDE TO SEND IN FLOWMETER 1 AT THE END OF THE DAY FOR RECALIBRATION OR POSSIBLY REPAIR
-

10:45
- ED BOURKE ARRIVES ON SITE WITH GEORGE LANDRETH
- SAFOUH SAYED ARRIVES ON SITE WITH ANOTHER DTSC REPRESENTATIVE
- CHRIS FROM CH2MHILL ARRIVES ONSITE
- ALL PRESENT GO ON A SITE WALK TO CHECK PERIMETER FENCE
- EVERYONE WALKS TO DEL AMO PARK TO CHECK ON SEWER REPAIR ACTIVITIES AT THAT SITE
- CONTINUE 1ST QUARTERLY INSPECTION OF SITE
- SEE RESULTS ON ATTACHED PAGE

12:00 LUNCH BREAK

13:00 BACK ONSITE
- TAKE FLOW METER 1 OFF PIPELINE AND SEAL CONNECTION
- TAKE FLOW METER 1 DIGITAL PANEL OFF

14:00 OFFSITE

Prepared by: RYAN TEOXON Signed: RT

DEL AMO WASTE PITS OU

SVE/IBT SYSTEM INSPECTION FORM

Completed By: RT/IY/SA — Sheet 1 of 9

Title: PROJECT ENGINEER — Date: 2/16/07

Time: _____

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

(✓) Other (explain) Quarterly

( ) Heavy Rain _____

Manifold

1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Visible Damage	[redacted] ✓

Condensate Collection [1]		Comments/Corrective Action
4.	Air Moisture Separator	✓

Additional System Components

5.	Carbon Adsorber Vessels	
	- Exterior Damage	✓
	- Vessel Configuration (A-B or B-A)	A-B
6.	Blowers	
	- General Motor Maintenance	✓
	- Drive Maintenance	✓
	- Bearing Maintenance	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
SVE/IBT SYSTEM INSPECTION FORM

7. Oxygen Generator
   - Signs of Rust/Corrosion ✓
   - Mechanical Functioning ✓
   - Oxygen Purity ✓

8. System Sensors
   - Visible Damage ✓
   - Mechanical Functioning FLOW METER 1

9.(2) SVE Wellheads
   - Tee Flanges ✓
   - Valves SOME BROKEN HANDLES

Recommendations for maintenance or repair (attach additional sheets as needed):

SEND FLOWMETER 1 BACK TO CONSPEC FOR RECALIBRATION/REPAIR

(2) Tee flanges monitored for leaks using a PID.

DEL AMO WASTE PITS OU

SURFACE WATER DRAINAGE INSPECTION FORM

Completed By: RT/IY/SA — Sheet 3 of 9

Title: PROJECT ENGINEER — Date: 2/16/07

Time: _____

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

(✓) Quarterly ( ) After Seismic Event[1]

( ) Other (explain) _____

Item Description	Condition*/Remarks
SURFACE-WATER DRAINAGE SYSTEMS [2]	
1. Washouts or Erosion of Contoured Grade	✓
2. Ponding on Contoured Grade	✓
3. Gullies and Ruts on Contoured Grade	✓
4. Plugging of Drainage Culverts	SOME DEBRIS
5. Holes and Cracks in Swales or Catch Basins	✓
6. Sediment Build-Up in Swales or Catch Basin	✓
7. Surface Cracking of Swales/Catch Basins	✓
8. Spalling of Swales/Catch Basins	✓
9. Structural Failure of Swales/Catch Basins	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

MANUALLY CLEAR DEBRIS OR HAVE AVENUE 2 DO IT WHEN THEY VISIT SITE

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) Contoured grades, swales, and catch basins

DEL AMO WASTE PITS OU

SUBSURFACE DRAINAGE INSPECTION FORM

Completed By: RT/IY/SA Sheet 4 of 9

Title: PROJECT ENGINEER Date: 2/16/07

Time: _____

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

( ) Semi-annual

( ) Heavy Rainfall[2]

(✓) Other (explain) 1ST QUARTERLY INSPECTION

Item Description		Condition*/Remarks
SUBSURFACE DRAINAGE SYSTEMS		
1.	Holes and Cracks in Swales, Catch Basin	✓
2.	Plugging of Drainage Inlets	SOME DEBRIS
3.	Sediment Build-Up or Debris in Catch Basin	✓
4.	Structural Failure of Catch Basin	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

MANUALLY CLEAN OUT DRAINAGE OR HAVE AVENUE 2 TAKE CARE OF IT

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999).

DEL AMO WASTE PITS OU

SECURITY FENCE INSPECTION FORM

Completed By: RT/IY/SA — Sheet 5 of 9

Title: _____ — Date: 2/16/01

Time: _____

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

(✓) Quarterly

( ) Other (explain) _____

Item Description		Condition*/Remarks
Perimeter Fence		
1.	Breaks and Holes	✓
2.	Settlement Damage	✓
3.	Loose Posts/Tension	✓
4.	Rust/Corrosion	✓
5.	Ruts and Burrows Beneath Fence	SOME BURROWS
6.	Vegetation Overgrowth	✓
7.	General Signs of Deterioration	✓
8.	Vandalism/Animal/Wind Damage	✓
Gates		
9.	Adequate Movement of Hinges and Gates	✓
10.	Proper Function of Lock(s)	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

CALL VECTOR CONTROL (TERMINIX) TO GET AN UPDATE ON PEST PROBLEM

DEL AMO WASTE PITS OU

COVER SYSTEM INSPECTION FORM

Completed By: RT/IY/SA — Sheet 6 of 9

Title: PROJECT ENGINEER — Date: 2/16/07

Time: _____

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

(✓) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

	Item Description	Condition*/Remarks
1.	Erosion	✓
2.	Stressed Vegetation (Plant Die-Back)	✓
3.	Sediment Build-Up	✓
4.	Local Subsidence or Loss of Grade	✓
5.	Water Ponding	✓
6.	Turf Height	✓
7.	Burrowing Animals	GOPHER HOLES EVERYWHERE
8.	Weeds or Undesirable Vegetation	✓
9.	Evidence of Fires or Vandalism	✓
10.	Soil Quality Check	✓
11.	Unauthorized Traffic	✓
12.	Slope Instability or Sloughing	✓
13.	Survey Monuments	✓
14.	Vertical Cracking	✓
15.	Intrusions	✓
16.	Evidence of Waste Pit Materials	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

CALL VECTOR CONTROL (TERMINIX) TO GET AN UPDATE ON PEST CONTROL

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the Waste Pits OU.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

DEL AMO WASTE PITS OU

CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

Completed By: RT/IY/SA Sheet 7 of 9

Title: PROJECT ENGINEER Date: 2/16/07

Time: _____

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

(✓) Other (explain) QUARTERLY INSPECTION

( ) Heavy Rain _____

Collection System Valves		
1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Signs of Rust/Corrosion	SOME RUST
Condensate Collection (1)		**Comments/Corrective Action**
4.	Air Moisture Separator	✓
Carbon Adsorbers		
5.	Vessels	✓
	- Exterior Damage	✓
	- FRP Grating and Mesh	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

6. Blower	
- General Motor Maintenance	✓
- Drive Maintenance	✓
- Bearing Maintenance	✓
- Lubrication	✓
- Structural Maintenance	✓

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

ACCESS ROAD INSPECTION FORM

Completed By: RT/IY/SA Sheet 9 of 9

Title: PROJECT ENGINEER Date: 2/16/07

Time: _____

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

(✓) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

Item Description		Condition*/Remarks
Access Road		
1.	Holes and Cracks	✓
2.	Vegetation Overgrowth	✓
3.	Settlement	✓
4.	Excessive Dispersion of Gravel	AT ENTRANCE
5.	General Signs of Deterioration	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets as needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

SHOVEL GRAVEL BACK ONTO THE RAMP AT MAIN ENTRANCE

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

C2 REM

FIELD DAILY REPORT

OJECT NAME: DEL AMO PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 5/9/2007

WEATHER: Temperature ~ 85° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: MEET W/ CENTER ELECTRIC, 2nd Quarterly Site Inspection

9:15 ARRIVE ONSITE WITH IAN YUSKO

- CLEAN TRAILER OF LOOSE ITEMS ON FLOOR
- DRIVE TO FRONT OF SITE NEXT TO DRIVEWAY
- PUT AWAY HOSE OUTSIDE OF "SEA-TRAIN"

10:15 - CENTER ELECTRIC ARRIVES ON SITE

- JESSIE ASKS TO SEE WHICH LAMP POST IS OUT
- GO TO ENCLOSURE TO CHECH LAMP POST
- I GO TO THE TRAILER TO PURGE TEDLAR BAGS

- IAN ASSISTS JESSE WITH THE TALL LADDER NEEDED TO ACCESS THE LAMP
- JESSE INSPECTS LIGHTBULB AND WIRING

11:30 - ED BOURKE AND GEORGE LANDRETH ON SITE

- SITE WALK W/ ED BOURKE & GEORGE LANDRETH
- GEORGE LANDRETH ASKS QUESTION ABOUT THE SYSTEM

12:00 ED BOURKE AND GEORGE LANDRETH LEAVE SITE

- JESSIE SAYS THAT HE FIXED A LOOSE WIRE PROBLEM WITH THE LAMP POST AND THAT HE NEEDED TO PICK UP A LIGHT BULB FROM THE CENTER ELECTRIC OFFICE IN RIVERSIDE

12:30 CENTER ELECTRIC OFFSITE

OFFSITE

pared by: RYAN TEOXON Signed: [signature]

DEL AMO WASTE PITS OU

ACCESS ROAD INSPECTION FORM

Completed By: IY / RT — Sheet 1 of 9

Title: Project Engineers — Date: 5/9/07

Time: 11:30 AM

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

(X) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

Item Description		Condition*/Remarks
Access Road		
1.	Holes and Cracks	✓
2.	Vegetation Overgrowth	✓
3.	Settlement	✓
4.	Excessive Dispersion of Gravel	✓
5.	General Signs of Deterioration	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets as needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

DEL AMO WASTE PITS OU

COVER SYSTEM INSPECTION FORM

Completed By: IV / RT
Title: Project Engineers

Sheet 2 of 9
Date: 5/9/07
Time: 11:30 AM

Verified By: _____
Title: _____

Date: _____

Type of Inspection (check only one):

(X) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

	Item Description	Condition*/Remarks
1.	Erosion	✓
2.	Stressed Vegetation (Plant Die-Back)	COMMENTED ON BY CLIENT
3.	Sediment Build-Up	✓
4.	Local Subsidence or Loss of Grade	✓
5.	Water Ponding	✓
6.	Turf Height	COMMENTED ON BY CLIENT
7.	Burrowing Animals	FEW HOLES, GETTING BETTER
8.	Weeds or Undesirable Vegetation	✓
9.	Evidence of Fires or Vandalism	✓
10.	Soil Quality Check	SIGNS OF DRY, CRACKING
11.	Unauthorized Traffic	✓
12.	Slope Instability or Sloughing	✓
13.	Survey Monuments	✓
14.	Vertical Cracking	SLIGHT CRACKING
15.	Intrusions	SOME HOLES
16.	Evidence of Waste Pit Materials	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

INSTALL IRRIGATION SYSTEM ON COVER SYSTEM TO ALLOW VEGETATION GROWTH & SLOPE STABILITY & SATURATION

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the Waste Pits OU.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

DEL AMO WASTE PITS OU

SECURITY FENCE INSPECTION FORM

Completed By: IY / RT
Title: Project Engineers

Sheet 3 of 9
Date: 5/9/07
Time: 11:30 AM

Verified By: _____
Title: _____

Date: _____

Type of Inspection (check only one):

☒ Quarterly

( ) Other (explain) _____

Item Description		Condition*/Remarks
Perimeter Fence		
1.	Breaks and Holes	✓
2.	Settlement Damage	✓
3.	Loose Posts/Tension	✓
4.	Rust/Corrosion	✓
5.	Ruts and Burrows Beneath Fence	✓
6.	Vegetation Overgrowth	✓
7.	General Signs of Deterioration	✓
8.	Vandalism/Animal/Wind Damage	✓
Gates		
9.	Adequate Movement of Hinges and Gates	✓
10.	Proper Function of Lock(s)	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

SUBSURFACE DRAINAGE INSPECTION FORM

Completed By: IY / RT — Sheet 4 of 9

Title: Project Engineers — Date: 5/9/07

Time: 11:30 AM

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

( ) Semi-annual

( ) Heavy Rainfall[2]

~~(X)~~ Other (explain) Quarterly

Item Description	Condition*/Remarks
SUBSURFACE DRAINAGE SYSTEMS	
1. Holes and Cracks in Swales, Catch Basin	✓
2. Plugging of Drainage Inlets	✓
3. Sediment Build-Up or Debris in Catch Basin	✓
4. Structural Failure of Catch Basin	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999).

DEL AMO WASTE PITS OU

SURFACE WATER DRAINAGE INSPECTION FORM

Completed By: IV / RT
Title: Project Engineers

Sheet 5 of 9
Date: 5/9/07
Time: 11:30 AM

Verified By: _____
Title: _____

Date: _____

Type of Inspection (check only one):

(X) Quarterly ( ) After Seismic Event[1]

( ) Other (explain) _____

Item Description		Condition*/Remarks
SURFACE-WATER DRAINAGE SYSTEMS [2]		
1.	Washouts or Erosion of Contoured Grade	✓
2.	Ponding on Contoured Grade	✓
3.	Gullies and Ruts on Contoured Grade	✓
4.	Plugging of Drainage Culverts	✓
5.	Holes and Cracks in Swales or Catch Basins	✓
6.	Sediment Build-Up in Swales or Catch Basin	● SOME SEDIMENT IN SWALES
7.	Surface Cracking of Swales/Catch Basins	✓
8.	Spalling of Swales/Catch Basins	✓
9.	Structural Failure of Swales/Catch Basins	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

SEDIMENT TO BE SHOVELED OUT TO CREATE BETTER FLOW & DRAINAGE OF WATER.

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.
(2) Contoured grades, swales, and catch basins

DEL AMO WASTE PITS OU

CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

Completed By: IY / RT — Sheet 6 of 9

Title: _____ Date: 5/9/07

Time: 11:30 AM

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

(X) Other (explain) QUARTERLY

( ) Heavy Rain _____

Collection System Valves

1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Signs of Rust/Corrosion	SOME RUST (MINOR)

Condensate Collection (1)		Comments/Corrective Action
4.	Air Moisture Separator	✓

Carbon Adsorbers

5.	Vessels	✓
	- Exterior Damage	✓
	- FRP Grating and Mesh	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

POSSIBLY NEED TO PAINT IN FUTURE

DEL AMO WASTE PITS OU
CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

6.	Blower	✓
	- General Motor Maintenance	✓
	- Drive Maintenance	✓
	- Bearing Maintenance	✓
	- Lubrication	✓
	- Structural Maintenance	✓

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

SVE/IBT SYSTEM INSPECTION FORM

Completed By: IY / RT — Sheet 8 of 9

Title: Project Engineers — Date: 5/9/07

Time: 11:30 AM

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

(X) Other (explain) QUARTERLY

( ) Heavy Rain _____

Manifold

1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Visible Damage	✓

Condensate Collection [1]		Comments/Corrective Action
4.	Air Moisture Separator	✓

Additional System Components

5.	Carbon Adsorber Vessels	
	- Exterior Damage	✓
	- Vessel Configuration (A-B or B-A)	A - B
6.	Blowers	
	- General Motor Maintenance	✓
	- Drive Maintenance	✓
	- Bearing Maintenance	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
SVE/IBT SYSTEM INSPECTION FORM

7. Oxygen Generator
   - Signs of Rust/Corrosion ✓
   - Mechanical Functioning ✓
   - Oxygen Purity ✓

8. System Sensors
   - Visible Damage ✓
   - Mechanical Functioning ✓

9.(2) SVE Wellheads
   - Tee Flanges ✓
   - Valves ✓

Recommendations for maintenance or repair (attach additional sheets as needed):

(2) Tee flanges monitored for leaks using a PID.

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del AMO PITS
PROJECT NUMBER: 97-101
PAGE 1 of 1
DATE: 8-20-2007
WEATHER: Temperature: 90° Winds: Light Precipitation: 0
DESCRIPTION OF THE WORK: CONDUCT 3RD QUARTERLY Site Inspection & Irrigate Cap

Time Line	
8:00 AM	
9:00 AM	
10:00 AM	10.15 am TT & SM ON SITE.
11:00 AM	Walked the Site Starting at the West end & CONTINUED around the Service Site.
	See attached Results.
12:00 PM	Irrigated the Cap, all Sprinklers Working well.
~~1:00 PM~~	WINDS were light So we got more even coverage.
~~2:00 PM~~	Good Growth in areas that are well irrigated.
~~3:00 PM~~	
	11.45 SM & TT offsite.
~~4:00 PM~~	
~~5:00 PM~~	

Special Notes

Prepared by: SEAMUS MC GEOUGH

Signed: Seamus McGeough

DEL AMO WASTE PITS OU

ACCESS ROAD INSPECTION FORM

Completed By: S. Mc GEOUGH Sheet 1 of 9

Title: PROJECT ENGINEER Date: 8-20-07

Time: 10-AM

Verified By: TRI TRAN Date: 8-20-07

Title: FIELD Tech.

Type of Inspection (check only one):

(X) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

Item Description		Condition*/Remarks
Access Road		
1.	Holes and Cracks	✓
2.	Vegetation Overgrowth	✓
3.	Settlement	✓
4.	Excessive Dispersion of Gravel	✓
5.	General Signs of Deterioration	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets as needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

DEL AMO WASTE PITS OU

COVER SYSTEM INSPECTION FORM

Completed By: S. Mc GEOUGH — Sheet 2 of 9
Title: PROJECT ENGINEER — Date: 8-20-07
Time: 10 AM
Verified By: TRI TRAN — Date: 8-20-07
Title: FIELD TECH

Type of Inspection (check only one):

(X) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

	Item Description	Condition*/Remarks
1.	Erosion	✓
2.	Stressed Vegetation (Plant Die-Back)	Begining to grow back.
3.	Sediment Build-Up	✓
4.	Local Subsidence or Loss of Grade	✓
5.	Water Ponding	✓
6.	Turf Height	Begins to grow back.
7.	Burrowing Animals	Still evident but Diminished.
8.	Weeds or Undesirable Vegetation	✓
9.	Evidence of Fires or Vandalism	✓
10.	Soil Quality Check	less cracking
11.	Unauthorized Traffic	✓
12.	Slope Instability or Sloughing	✓
13.	Survey Monuments	✓
14.	Vertical Cracking	✓
15.	Intrusions	BURROWING ANIMALS less evident.
16.	Evidence of Waste Pit Materials	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

6. Continue to irrigate.
10. Due to irrigation soil is
15. New extermination Techniques & Closer monitoring ARE SHOWING SIGNS of SUCCESS.

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the Waste Pits OU.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

DEL AMO WASTE PITS OU

SECURITY FENCE INSPECTION FORM

Completed By: S. Mc CEOUGH — Sheet 3 of 9
Title: PROJECT ENGINEER. — Date: 8-20-07
Time: 10AM
Verified By: TRI TRAN — Date: 8-20-07
Title: FIELD TECH

Type of Inspection (check only one):

(X) Quarterly

( ) Other (explain) _____

Item Description		Condition*/Remarks
Perimeter Fence		
1.	Breaks and Holes	✓
2.	Settlement Damage	✓
3.	Loose Posts/Tension	✓
4.	Rust/Corrosion	✓
5.	Ruts and Burrows Beneath Fence	✓
6.	Vegetation Overgrowth	✓
7.	General Signs of Deterioration	✓
8.	Vandalism/Animal/Wind Damage	✓
Gates		
9.	Adequate Movement of Hinges and Gates	✓
10.	Proper Function of Lock(s)	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

SUBSURFACE DRAINAGE INSPECTION FORM

Completed By: S. Mc GEOUGH Sheet 4 of 9

Title: PROJECT ENGINEER. Date: 8-20-07

Time: 8 AM

Verified By: TRI TRAN Date: 8-20-07

Title: FIELD TECH

Type of Inspection (check only one):

( ) Semi-annual

( ) Heavy Rainfall(2)

(X) Other (explain) _____

Item Description	Condition*/Remarks
SUBSURFACE DRAINAGE SYSTEMS	
1. Holes and Cracks in Swales, Catch Basin	✓
2. Plugging of Drainage Inlets	✓
3. Sediment Build-Up or Debris in Catch Basin	✓
4. Structural Failure of Catch Basin	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999).

DEL AMO WASTE PITS OU

SURFACE WATER DRAINAGE INSPECTION FORM

Completed By: S. Mc GEOUGH — Sheet 5 of 9
Title: PROJECT ENGINEER. — Date: 8-20-07
Time: 10 AM
Verified By: TRI TRAN — Date: 8-20-07
Title: FIELD TECH

Type of Inspection (check only one):

(X) Quarterly ( ) After Seismic Event[1]

( ) Other (explain) _____

Item Description	Condition*/Remarks
SURFACE-WATER DRAINAGE SYSTEMS [2]	
1. Washouts or Erosion of Contoured Grade	✓
2. Ponding on Contoured Grade	✓
3. Gullies and Ruts on Contoured Grade	✓
4. Plugging of Drainage Culverts	✓
5. Holes and Cracks in Swales or Catch Basins	✓
6. Sediment Build-Up in Swales or Catch Basin	✓
7. Surface Cracking of Swales/Catch Basins	✓
8. Spalling of Swales/Catch Basins	✓
9. Structural Failure of Swales/Catch Basins	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.
(2) Contoured grades, swales, and catch basins

DEL AMO WASTE PITS OU

CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

Completed By: S. Mc GEOUGH Sheet 6 of 9

Title: PROJECT ENGINEER. Date: 8-20-07

Time: 10 AM

Verified By: TRI TRAN Date: 8-20-07

Title: FIELD TECH

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

(X) Other (explain) _____

( ) Heavy Rain _____

		Comments/Corrective Action
Collection System Valves		
1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Signs of Rust/Corrosion	MINOR RUST ON CARBON VESSELS
Condensate Collection (1)		
4.	Air Moisture Separator	✓
Carbon Adsorbers		
5.	Vessels	✓
	- Exterior Damage	✓
	- FRP Grating and Mesh	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

6. Blower ✓
   - General Motor Maintenance ✓
   - Drive Maintenance ✓
   - Bearing Maintenance ✓
   - Lubrication ✓
   - Structural Maintenance ✓

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

SVE/IBT SYSTEM INSPECTION FORM

Completed By: S. Mc GEOUGH Sheet 8 of 9

Title: PROJECT ENGINEER. Date: 8-20-07

Time: 10 AM

Verified By: TRI TRAN Date: 8-20-07

Title: FIELD TECH

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

(X) Other (explain) QUARTERLY

( ) Heavy Rain

Manifold

1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Visible Damage	✓ [redacted]

Condensate Collection [1]		Comments/Corrective Action
4.	Air Moisture Separator	✓

Additional System Components

5.	Carbon Adsorber Vessels	
	- Exterior Damage	✓
	- Vessel Configuration (A-B or B-A)	✓
6.	Blowers	
	- General Motor Maintenance	✓
	- Drive Maintenance	✓
	- Bearing Maintenance	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
SVE/IBT SYSTEM INSPECTION FORM

7. Oxygen Generator
   - Signs of Rust/Corrosion ✓
   - Mechanical Functioning ✓
   - Oxygen Purity ✓

8. System Sensors
   - Visible Damage ✓
   - Mechanical Functioning ✓

9.(2) SVE Wellheads
   - Tee Flanges ✓
   - Valves ✓

Recommendations for maintenance or repair (attach additional sheets as needed):

(2) Tee flanges monitored for leaks using a PID.

C$_2$ REM
FIELD DAILY REPORT

OJECT NAME: Del Amo Waste Pits **PAGE** 1 of 1

ROJECT NUMBER: 97-101 **DATE:** 12/3/2007

WEATHER: Temperature: 72 **Winds:** none **Precipitation:** none

DESCRIPTION OF THE WORK: Post Rain Inspection

Time Line

TT/SM arrived at site at 12:00

Landscape contractors were already at the site

TT / SM conducted post rain inspection

TT/SM checked the condition of the system, landscape, ditch, perimeter …

TT/SM collected data and left the site at 3:00 PM

A. Inspection forms
B GCTS Mothly Fo
C Lab date
D GCTS usage
E 2007 GW date
F Field/Maint Forms

Special Notes

epared by: TRi , KMV

Signed:

DEL AMO WASTE PITS OU

ACCESS ROAD INSPECTION FORM

Completed By: SEAMUS McCLOUGH Sheet 1 of 1

Title: PROJECT ENGINEER Date: 12-3-07

Time: 1:15pm

Verified By: TRI TRAN Date: _____

Title: ENTRY LEVEL ENGINEER.

Type of Inspection (check only one):

( ) Quarterly ( ) After Seismic Event[1] (✓) After Heavy Rain[2]

( ) Other (explain) _____

Item Description	Condition*/Remarks
Access Road	
1. Holes and Cracks	✓
2. Vegetation Overgrowth	✓
3. Settlement	✓
4. Excessive Dispersion of Gravel	✓
5. General Signs of Deterioration	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets as needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

DEL AMO WASTE PITS OU

SECURITY FENCE INSPECTION FORM

Completed By: SEAMUS Mc GEOUGH
Title: PROJECT ENGINEER.

Sheet 1 of 1
Date: 12-3-2007
Time: 1.30

Verified By: _____
Title: _____

Date: 12-3-2007

Type of Inspection (check only one):

( ) Quarterly

(✓) Other (explain) Heavy Rain

Item Description		Condition*/Remarks
Perimeter Fence		
1.	Breaks and Holes	✓
2.	Settlement Damage	✓
3.	Loose Posts/Tension	✓
4.	Rust/Corrosion	✓
5.	Ruts and Burrows Beneath Fence	✓
6.	Vegetation Overgrowth	✓
7.	General Signs of Deterioration	✓
8.	Vandalism/Animal/Wind Damage	✓
Gates		
9.	Adequate Movement of Hinges and Gates	✓
10.	Proper Function of Lock(s)	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

COVER SYSTEM INSPECTION FORM

Completed By: SEAMUS Mc CROUGH
Title: _____

Sheet 1 of 1
Date: 12-3-07
Time: 1:30pm

Verified By: _____
Title: _____

Date: _____

Type of Inspection (check only one):

( ) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

	Item Description	Condition*/Remarks
1.	Erosion	✓
2.	Stressed Vegetation (Plant Die-Back)	✓
3.	Sediment Build-Up	✓
4.	Local Subsidence or Loss of Grade	✓
5.	Water Ponding	✓
6.	Turf Height	✓
7.	Burrowing Animals	✓
8.	Weeds or Undesirable Vegetation	✓
9.	Evidence of Fires or Vandalism	✓
10.	Soil Quality Check	✓
11.	Unauthorized Traffic	✓
12.	Slope Instability or Sloughing	✓
13.	Survey Monuments	✓
14.	Vertical Cracking	✓
15.	Intrusions	✓
16.	Evidence of Waste Pit Materials	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the Waste Pits OU.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

DEL AMO WASTE PITS OU

SURFACE WATER DRAINAGE INSPECTION FORM

Completed By: SEAMUS Mc GEOUGH — Sheet 1 of 1
Title: _____ — Date: 12/3/07
Time: _____
Verified By: TRI TRAN — Date: _____
Title: _____

Type of Inspection (check only one):

( ) Quarterly ( ) After Seismic Event[1]
(✓) Other (explain) HEAVY RAINFALL

Item Description	Condition*/Remarks
SURFACE-WATER DRAINAGE SYSTEMS [2]	
1. Washouts or Erosion of Contoured Grade	✓
2. Ponding on Contoured Grade	✓
3. Gullies and Ruts on Contoured Grade	✓
4. Plugging of Drainage Culverts	✓ (Repair CAULKING)
5. Holes and Cracks in Swales or Catch Basins	✓
6. Sediment Build-Up in Swales or Catch Basin	✓
7. Surface Cracking of Swales/Catch Basins	✓
8. Spalling of Swales/Catch Basins	✓
9. Structural Failure of Swales/Catch Basins	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.
(2) Contoured grades, swales, and catch basins

DEL AMO WASTE PITS OU

SUBSURFACE DRAINAGE INSPECTION FORM

Completed By: SM Sheet 1 of 1

Title: _____ Date: 12/3/07

Time: _____

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

( ) Semi-annual

(✓) Heavy Rainfall[2]

( ) Other (explain) _____

Item Description	Condition*/Remarks
SUBSURFACE DRAINAGE SYSTEMS	
1. Holes and Cracks in Swales, Catch Basin	✓
2. Plugging of Drainage Inlets	✓
3. Sediment Build-Up or Debris in Catch Basin	✓
4. Structural Failure of Catch Basin	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999).

DEL AMO WASTE PITS OU

CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

Completed By: SM Sheet 1 of 2

Title: _____ Date: 12/3/07

Time: _____

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

( ) Other (explain) _____

(✓) Heavy Rain _____

Collection System Valves

1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Signs of Rust/Corrosion	SOME RUST ✓

Condensate Collection[1]		Comments/Corrective Action
4.	Air Moisture Separator	✓

Carbon Adsorbers

5.	Vessels	
	- Exterior Damage	✓
	- FRP Grating and Mesh	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

6.	Blower	✓
	- General Motor Maintenance	✓
	- Drive Maintenance	✓
	- Bearing Maintenance	✓
	- Lubrication	✓
	- Structural Maintenance	✓

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

SVE/IBT SYSTEM INSPECTION FORM

Completed By: SEAMUS McGEOUGH Sheet 1 of 2

Title: _____ Date: 12-3-2007

Time: _____

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

( ) Other (explain) _____

( ) Heavy Rain _____

Manifold

1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Visible Damage	✓

Condensate Collection [1]		Comments/Corrective Action
4.	Air Moisture Separator	✓

Additional System Components

5.	Carbon Adsorber Vessels	
	- Exterior Damage	✓
	- Vessel Configuration (A-B or B-A)	✓
6.	Blowers	
	- General Motor Maintenance	✓
	- Drive Maintenance	✓
	- Bearing Maintenance	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
SVE/IBT SYSTEM INSPECTION FORM

2 of 2

7. Oxygen Generator
   - Signs of Rust/Corrosion ✓
   - Mechanical Functioning ✓
   - Oxygen Purity ✓

8. System Sensors
   - Visible Damage ✓
   - Mechanical Functioning FT1 & FT5 [redacted] - Faulty

9.(2) SVE Wellheads
   - Tee Flanges ✓
   - Valves ✓

Recommendations for maintenance or repair (attach additional sheets as needed):

Send to manufacturer for further troubleshooting.

(2) Tee flanges monitored for leaks using a PID.

C2 REM
FIELD DAILY REPORT

PROJECT NAME: PAGE 1 OF 1

PROJECT NUMBER: DATE: 12/20/07

WEATHER: Temperature 65° Winds: Precipitation:

DESCRIPTION OF THE WORK: 4th Quarter Site Inspection

9:00 am: arrive on-site and met Bill Breedlove CH2MHILL to conduct 4th Quarter Inspection Event

- Conduct site walk and observe components of remedy system including:
  - Cover System
  - GCTS
  - SVE/IBT System
  - Perimeter Fence
  - Access Road
  - Subsurface/Surface drainage System
- No identified issues of concern. Component systems are in good shape and performing as designed.
- Field staff on-site conducting 4th Quarter Full Scale Monitoring Event
- As part of the 4th Quarter Monitoring Event all of the flanges of SVE wells are sniffed with PID (No issues)

See Attached Inspection Forms for Details

Prepared by: Signed: Steve K

27336
9104

DEL AMO WASTE PITS OU

SVE/IBT SYSTEM INSPECTION FORM

Completed By: Stefan Klemm — Sheet 1 of 1

Title: Project Manager — Date: 12/20/07

Time: _____

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

(✓) Other (explain) 4th Quarter Inspection Event

( ) Heavy Rain _____

Manifold

1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Visible Damage	✓

Condensate Collection (1)		Comments/Corrective Action
4.	Air Moisture Separator	✓

Additional System Components

5.	Carbon Adsorber Vessels	
	- Exterior Damage	✓
	- Vessel Configuration (A-B or B-A)	✓
6.	Blowers	
	- General Motor Maintenance	✓
	- Drive Maintenance	✓
	- Bearing Maintenance	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
SVE/IBT SYSTEM INSPECTION FORM

7. Oxygen Generator
   - Signs of Rust/Corrosion ✓
   - Mechanical Functioning ✓
   - Oxygen Purity ✓

8. System Sensors
   - Visible Damage ✓
   - Mechanical Functioning FT5 & FT1 [illegible] @ manufacturer

9.(2) SVE Wellheads
   - Tee Flanges ✓
   - Valves ✓

Recommendations for maintenance or repair (attach additional sheets as needed):

(2) Tee flanges monitored for leaks using a PID.

DEL AMO WASTE PITS OU

SURFACE WATER DRAINAGE INSPECTION FORM

Completed By: Stefan Klemm — Sheet 1 of 1
Title: Project Manager — Date: 12/20/07
Time: _____
Verified By: _____ — Date: _____
Title: _____

Type of Inspection (check only one):

(✓) Quarterly ( ) After Seismic Event[1]

( ) Other (explain) _____

Item Description		Condition*/Remarks
SURFACE-WATER DRAINAGE SYSTEMS [2]		
1.	Washouts or Erosion of Contoured Grade	✓
2.	Ponding on Contoured Grade	✓
3.	Gullies and Ruts on Contoured Grade	✓
4.	Plugging of Drainage Culverts	✓
5.	Holes and Cracks in Swales or Catch Basins	✓
6.	Sediment Build-Up in Swales or Catch Basin	✓
7.	Surface Cracking of Swales/Catch Basins	✓
8.	Spalling of Swales/Catch Basins	✓
9.	Structural Failure of Swales/Catch Basins	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.
(2) Contoured grades, swales, and catch basins

DEL AMO WASTE PITS OU

SUBSURFACE DRAINAGE INSPECTION FORM

Completed By: Stefan Klemm Sheet 1 of 1

Title: Project Manager Date: 12/20/07

Time: _____

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

( ) Semi-annual

( ) Heavy Rainfall[2]

(✓) Other (explain) 4th Quarter

Item Description		Condition*/Remarks
SUBSURFACE DRAINAGE SYSTEMS		
1.	Holes and Cracks in Swales, Catch Basin	✓
2.	Plugging of Drainage Inlets	✓
3.	Sediment Build-Up or Debris in Catch Basin	✓
4.	Structural Failure of Catch Basin	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999).

DEL AMO WASTE PITS OU

SECURITY FENCE INSPECTION FORM

Completed By: Stefan Klemm — Sheet 1 of 1

Title: Project Manager — Date: 12/20/07

Time: _____

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

(✓) Quarterly

( ) Other (explain) _____

Item Description		Condition*/Remarks
Perimeter Fence		
1.	Breaks and Holes	✓
2.	Settlement Damage	✓
3.	Loose Posts/Tension	✓
4.	Rust/Corrosion	✓
5.	Ruts and Burrows Beneath Fence	✓
6.	Vegetation Overgrowth	✓
7.	General Signs of Deterioration	✓
8.	Vandalism/Animal/Wind Damage	✓
Gates		
9.	Adequate Movement of Hinges and Gates	✓
10.	Proper Function of Lock(s)	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

COVER SYSTEM INSPECTION FORM

Completed By: Stefan Klemm — Sheet 1 of 1

Title: Project Manager — Date: 12/20/07

Time: _____

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

(✓) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

Item	Description	Condition*/Remarks
1.	Erosion	✓
2.	Stressed Vegetation (Plant Die-Back)	✓
3.	Sediment Build-Up	✓
4.	Local Subsidence or Loss of Grade	✓
5.	Water Ponding	✓
6.	Turf Height	✓
7.	Burrowing Animals	✓
8.	Weeds or Undesirable Vegetation	✓
9.	Evidence of Fires or Vandalism	✓
10.	Soil Quality Check	✓
11.	Unauthorized Traffic	✓
12.	Slope Instability or Sloughing	✓
13.	Survey Monuments	✓
14.	Vertical Cracking	✓
15.	Intrusions	✓
16.	Evidence of Waste Pit Materials	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets if more space is needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the Waste Pits OU.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

DEL AMO WASTE PITS OU

CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

Completed By: Steban Klemm — Sheet 1 of 2

Title: Project Manager — Date: 12/20/07

Time: _____

Verified By: _____ — Date: _____

Title: _____

Type of Inspection (check only one):

( ) Monthly ( ) Semi-Annual

(✓) Other (explain) 4th Quarter

( ) Heavy Rain _____

Collection System Valves

1.	Adequate-Free Movement	✓
2.	Seals - Complete	✓
3.	Signs of Rust/Corrosion	✓ SOME RUST

Condensate Collection (1)		Comments/Corrective Action
4.	Air Moisture Separator	✓

Carbon Adsorbers

5.	Vessels	✓
	- Exterior Damage	✓
	- FRP Grating and Mesh	✓

(1) Initial condensate collected from (1) the drainage system downstream of the valve vaults, and (2) from the carbon absorber vessels must be characterized to determine methods of appropriate disposal.

DEL AMO WASTE PITS OU
CAP GAS COLLECTION AND TREATMENT INSPECTION FORM

6. Blower

- General Motor Maintenance ✓
- Drive Maintenance ✓
- Bearing Maintenance ✓
- Lubrication ✓
- Structural Maintenance ✓

Recommendations for maintenance or repair (attach additional sheets as needed):

DEL AMO WASTE PITS OU

ACCESS ROAD INSPECTION FORM

Completed By: Stefan Klemm Sheet 1 of 1

Title: Project Manager Date: 12/20/07

Time: _____

Verified By: _____ Date: _____

Title: _____

Type of Inspection (check only one):

(✓) Quarterly ( ) After Seismic Event[1] ( ) After Heavy Rain[2]

( ) Other (explain) _____

Item Description		Condition*/Remarks
Access Road		
1.	Holes and Cracks	✓
2.	Vegetation Overgrowth	✓
3.	Settlement	✓
4.	Excessive Dispersion of Gravel	✓
5.	General Signs of Deterioration	✓

* Indicate satisfactory condition with a check; briefly describe conditions other than satisfactory; use additional sheets as needed.

Recommendations for maintenance or repair (attach additional sheets as needed):

(1) Refer to Table 3.3-2 of the OM&M Plan for frequency based on magnitude and distance from the site.

(2) For heavy rains exceeding 1.0 inches (per USEPA's letter dated December 6, 1999) within a 24-hour period.

APPENDIX B

2007 BI-MONTHLY CAP GAS
SYSTEM MONITORING EVENTS

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits. PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 01/18/2007

WEATHER: Temperature ~65° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Bimonthly Monitoring.

11:45 AM. IY/SA arrive onsite.

- Prepare Instruments.

[Bimonthly Monitoring]

- Samples taken from ports 1~4 (Inlet, C1, C2, Outlet) using pump/bag system and 1L of tedlar bags.
- VOCs monitored with PID calibrated to 50 ppm benzene.
- Flows monitored with Velocicalc.
- Temperatures monitored with inline gauges.

Ports	VOCs.	Flow	Temp.
4	0.1	185	110°
3	0.2	—	82°
2	0.3	—	—
1.	1.1	162	60°

Prepared by: Shinta Aizawa Signed: Shinta Aizawa
IAN Yusko Ian Yusko

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: SA/[redacted]IY
Title: Project Engineers

Sheet 1 of 1
Date: 1/18/07
Time: 12:00

Verified By: _____
Title: _____

Date: _____

( ) Type of Monitoring Devices: Mini RAE 2000 P.I.D

Weather Conditions: Sunny Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(X) Other Frequency (explain) Bimonthly

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports

		VOCs (ppm)
✓ 1.	System Inlet (required)	1.1
✓ 2.	Outlet, Carbon Adsorber Vessel A (required)	0.3
✓ 3.	Outlet, Carbon Adsorber Vessel B (required)	0.2
4.	Blower Inlet (optional)	___
✓ 5.	Blower Outlet (required)	0.1

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: SA/IY
Title: Project Engineers

Sheet: 1 of 1
Date: 1/18/07
Time: 1200
Date: _____

Verified By: _____
Title: _____

Type of Monitoring Devices: Velocicalc

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{X} Other Frequency: Bimonthly

Air Velocity

	FPM
1. System Inlet (Required)	162
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	185

Voltage

	Volts (V)
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

Amperage

	Amps (A)
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

Temperature

	Temp (F°)
1. System Inlet (Required)	60°
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	82°
4. Blower Outlet (Required)	110°

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF

PROJECT NUMBER: 97-101 DATE: 2/1/07

WEATHER: Temperature ~75° Winds: Precipitation:

DESCRIPTION OF THE WORK: BIMONTHLY MONITORING

10:00 ARRIVE ONSITE W/ IAN YUSKO

- PREPARE INSTRUMENTS
- WALK IN AND AROUND ENCLOSURE TO ENSURE THAT SYSTEM IS OPERATING CORRECTLY

[BIMONTHLY MONITORING]

- SAMPLES TAKEN FROM PORTS 1-4 USING PUMP/LUNG SYSTEM AND 1L TEDLAR BAGS

- VOCS MONITORED WITH MINIRAE 2000 P.I.D.(1) CALIBRATED TO 50 PPM BENZENE
- FLOW MONITORED WITH VELOCICALC
- TEMPERATURE MONITORED WITH INLINE GAUGES

11:00 OFFSITE

Prepared by: RYAN TEOXON Signed:

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: LY/RT

Title: PROJECT ENGINEER

Sheet 1 of 2

Date: 2/1/07

Time: _____

Verified By: _____

Date: _____

Title: _____

( ) Type of Monitoring Devices: VELOCICALC, P.I.D.(1) MINIRAE 2000

Weather Conditions: _____ Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(✓) Other Frequency (explain) BIMONTHLY

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	0.8
2.	Outlet, Carbon Adsorber Vessel A (required)	3.9
3.	Outlet, Carbon Adsorber Vessel B (required)	1.0
4.	Blower Inlet (optional)	___
5.	Blower Outlet (required)	0.7

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: IV / RT
Title: Project Engineer

Sheet: 1 of 2
Date:
Time:
Date: 02/01/07

Verified By:
Title:

Type of Monitoring Devices: PID 2000, Velocicalc

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{X} Other Frequency: Bi-Monthly

Air Velocity

	FPM
1. System Inlet (Required)	146
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	195

Voltage

	Volts (V)
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

Amperage

	Amps (A)
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

Temperature

	Temp (F°)
1. System Inlet (Required)	60
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	102

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 2
PROJECT NUMBER: 97-101 DATE: 02/15/07
WEATHER: Temperature ~70° Winds: — Precipitation: —
DESCRIPTION OF THE WORK: Bimonthly Monitoring / Troubleshooting of sensors.

10:30 RT/IY/SA arrive onsite.

RT/SA start checking inline sensors installed on 02/14/07.
IY start bimonthly monitoring of GCTS system.

[Bimonthly Monitoring]

- Vapor samples pulled using pump/Lung system and 1L of Tedlar bags. from ports 1~4
- VOCs monitored with MINIRAE 2000 PID (1) calibrated to 50ppm benzene
- Flow rates monitored with Velocicalc
- Temperatures monitored with in-line gauge

Ports	VOCs		Flow	Temp.
4	0.4	inlet	152	64
3	0.8	outlet	188	116
2	0.9			
1	0.8			

[Troubleshooting of Sensors]

At station 1, O2 sensor show 16~17% on its display, but PLC panel show 25% and does not move at all. LEL sensor show negative value.
At station 4, O2 sensor does not show anything on its display although PLC panel show some value.
At station 5, O2 sensor has the same problem as at station 1

RT/SA check all wirings and connections.

Around 12:30 pm, We had blackout in the facilities. RA shut down PLC Computer, Electricity backup around 2:30 pm.

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

C2 REM
FIELD DAILY REPORT

OJECT NAME: Del Amo Pits
OJECT NUMBER: 97-101
PAGE 2 OF 2
DATE: 02/15/07
WEATHER: Temperature ~70° Winds: —
Precipitation: —
DESCRIPTION OF THE WORK:

Sensors were placed back, ~~and~~

Problems were not solved.

4:30pm OFF site.

Prepared by: Shinta Aizawa
Signed: Shinta Aizawa

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: RT/IY/SA Sheet: 1 of 2

Title: Project Engineers. Date: 02/15/07

Time: _____

~~Verified By:~~ _____ ~~Date:~~ _____

Title: _____

Type of Monitoring Devices: MINIRAE 2000 PID. Velocicalc.

Weather Condition _____

Type of Inspection (Check Only One):

{ } Daily { } Weekly { } Monthly

{X} Other Frequency: Bimonthly.

Vessel Operation

{ } Series, Vessel A to Vessel B
{ } Series, Vessel B to Vessel A
{ } Parallel
{ } One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	0.8
2.	Outlet, Carbon Adsorber Vessel A (required)	0.9
3.	Outlet, Carbon Adsorber Vessel B (required)	0.8
4.	Blower Inlet (optional)	
5.	Blower Outlet (required)	0.4

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: RT/IY/SA
Title: Project Engineers

Sheet: 2 of 2
Date: 02/15/07
Time: _____

Verified By: _____
Title: _____

Date: _____

Type of Monitoring Devices: MINIRAE 2000 PID, Velocicalc.

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{X} Other Frequency: Bimonthly.

	FPM
Air Velocity	
1. System Inlet (Required)	152
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	188

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	64
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	116

C_2 REM
FIELD DAILY REPORT

OJECT NAME: Del Amo Pits PAGE ____ OF ____

PROJECT NUMBER: 97-101 DATE: 03/08/2007

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Bimonthly and Enclosure Monitoring

10:00 AM RT/IY/DR/SA arrive on site.

Prepare instruments.

[Bimonthly Monitoring]

- Vapor samples pulled using pump/lung system and 1L of tedlar bags from ports 1~4 (inlet, C1, C2, outlet)
- VOCs monitored with MINIRAE 2000 PID (1) calibrated to 50 ppm benzene.
- Flowrates monitored with Velocicalc.
- Temperatures monitored with in-line gauge

Ports	VOCs.	Flow	Temp.
4	0.3	185	117°
3	0.2	—	—
2	0.2	—	—
1.	0.5	162	65°

[Enclosure Monitoring]

- Vapor samples pulled from inlet, post ambient air, C1, and outlet using pump/lung system and 1L of tedlar bags.
- VOCs monitored with MINIRAE 2000 PID (1) calibrated to 50 ppm benzene.
- O_2, CO_2, LEL, and H_2S monitored with RKI Eagle.
- O_2, ~~CO~~, LEL, Flow monitored with inline sensors.
- Flow monitored with Velocicalc ~~at outlet~~.
- Pressure monitored with Magnehelic at inlet.

Prepared by: Shinta Arzawa Signed: Shinta Arzawa

IAN YUSKO Ian Yusko

RYAN TEOXOI

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits. PAGE 2 OF 2

PROJECT NUMBER: 97-101 DATE: 03/08/2007

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Bimonthly and Enclosure Monitoring

Vapor sample from post ambient Air contains a little amount of liquid water (colored brown).

11:15 AM OFF site

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

JIAN YUSKO

RYAN TEOXON

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: SA — Sheet 1 of 2

Title: Project Engineer — Date: 03/08/07

Time: 10:15 AM

Verified By: DR — Date: _____

Title: Project Geologist

( ) Type of Monitoring Devices: PID, Velocicalc

Weather Conditions: Sunny 79°F — Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(X) Other Frequency (explain) Bimonthly

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	0.5
2.	Outlet, Carbon Adsorber Vessel A (required)	0.2
3.	Outlet, Carbon Adsorber Vessel B (required)	0.2
4.	Blower Inlet (optional)	[redacted]
5.	Blower Outlet (required)	0.3

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: SA
Title: Project Engineer

Sheet: 2 of 2
Date: 03/08/07
Time: 10:15 AM
Date: _____

Verified By: DR
Title: Project Geologist

Type of Monitoring Devices: PID, VelociCalc

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{X} Other Frequency: Bimonthly

	FPM
Air Velocity	
1. System Inlet (Required)	152
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	180

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	65
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	117

C2 REM
FIELD DAILY REPORT

JECT NAME: Del Amo Pits PAGE 1 OF 3

PROJECT NUMBER: 97-101 DATE: 03/22/07

WEATHER: Temperature 78°F Winds: None Precipitation: None

DESCRIPTION OF THE WORK: GCTS Bi-Monthly Monitoring

10:00 AM RT/IY/SA ARRIVE ON-SITE

PREPARE MATERIALS AND INSTRUMENTS

- SAMPLES TAKEN FROM INLET, C1, C2, AND OUTLET USING PUMP LUNG AND 1 LITER TEDLAR BAGS FROM GCTS SYSTEM

- VOCs MONITORED WITH MINIRAE 2000 PID (1) CALIBRATED TO 50 BENZENE

- FLOW RATES MONITORED W/ VELOCICALC FROM INLET AND OUTLET.

- TEMPERATURE RECORDED FROM GAUGES AT INLET & OUTLET.

* SEE ATTACHED PAPERS FOR RESULTS.

SYSTEM WAS VISUALLY IN GOOD CONDITION AND RUNNING AS DESIGNED.

11:15 AM PACK UP INSTRUMENTS & LOCK-UP SITE

11:30 AM DEPART FROM SITE

pared by: IAN YUSKO Signed: Ian Yusko
RYAN TEOXON RT
Shinta Aizawa Shinta Aizawa

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: SA/RT/IY

Title: Project Engineers

Sheet 1 of 2

Date: 3/22/07

Time: 10:30

Verified By: _____

Date: _____

Title: _____

(X) Type of Monitoring Devices: Bimonthly Monitoring VelociCALC, PID(1)

Weather Conditions: Sunny Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(X) Other Frequency (explain) Bi-Monthly

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	0.5
2.	Outlet, Carbon Adsorber Vessel A (required)	0.5
3.	Outlet, Carbon Adsorber Vessel B (required)	0.2
4.	Blower Inlet (optional)	[illegible]
5.	Blower Outlet (required)	0.1

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: SA/IY/RT
Title: Project Engineers

Sheet: 2 of 2
Date: 3/22/07
Time: 10:30

Verified By: _____
Title: _____
Date: _____

Type of Monitoring Devices: Bimonthly Monitoring
VELOCICALC, MINIRAE 2000 PID (1)

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{X} Other Frequency: Bimonthly.

	FPM
Air Velocity	
1. System Inlet (Required)	158
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	180

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	66
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	88
4. Blower Outlet (Required)	116

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 4/5/2007

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: BIMONTHLY MONITORING / MEET W/ BUGMAN / PURGING MODIFICATIONS

10:30 ARRIVE ONSITE W/ SHINTA AIZAWA AND SEAMUS MCGEOUGH
- IAN YUSKO ALREADY ONSITE

- IAN AND SEAMUS BREAK OFF TO WORK ON WELL HEAD MODIFICATIONS FOR PURGING

- SHINTA AND I START BIMONTHLY MONITORING

[BIMONTHLY MONITORING]

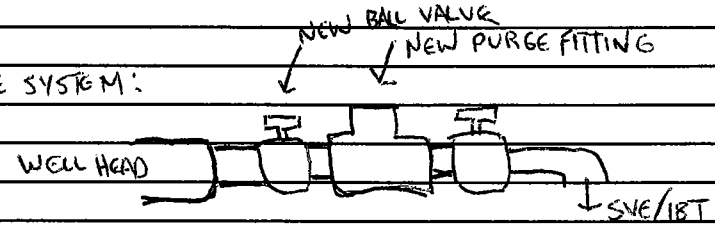
- SAMPLES PULLED FROM PORTS 1-4 USING PUMP/LUNG SYSTEM AND 1L TEDLAR BAGS
- VOCs MONITORED WITH MINIRAE 2000 P.I.D.(1) CALIBRATED TO 50 PPM BENZENE
- FLOW RATE MONITORED WITH VELOCICALC
- TEMPERATURE MONITORED WITH INLINE GAUGES

PORT	VOCs		FLOW	TEMP
4	0.2	INLET	158	70
3	0.2	OUTLET	170	118
2	0.2			
1	1.3			

* SEE FULL RESULTS ON ATTACHED

11:30 IAN AND SEAMUS COMPLETE FIRST PURGING MODIFICATION
- PURGING MODIFICATION INCLUDED ADDITION OF AN EXTRA BALL VALVE AND TEE

NEW PURGE SYSTEM:



13:00 BUGMAN ARRIVES ON SITE

Prepared by: RYAN TEOXON Signed: RT

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DELAMO PITS PAGE 2 OF 2

PROJECT NUMBER: 97-101 DATE: 4/5/07

WEATHER: Temperature ~70 Winds: ~ Precipitation: —

DESCRIPTION OF THE WORK: BIMONTHLY MONITORING/ MEET W/ BUGMAN/ PURGING MODIFICATIONS CONT.

- BUGMAN REPRESENTATIVE'S NAME IS KEVIN
- KEVIN SAYS THAT HE WILL BE THE PERSON DOING ROUTINE SITE VISITS AND SITE WORK
- I ASK KEVIN WHAT HE IS USING FOR PEST CONTROL; HE SAYS HE IS USING POISONOUS® BAIT PELLETS
- KEVIN SAYS HE WILL FINISH HIS WORK AT 3:00 P.M.
- I ASK HIM IF HE COULD LOCK THE GATE FOR US

- OFFSITE

Prepared by: RYAN TEOXON Signed:

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: RT/SA Sheet 1 of 2

Title: PROJECT ENGINEER Date: 4/5/07

Time: _____

Verified By: _____ Date: _____

Title: _____

( ) Type of Monitoring Devices: PID(1), VELOCICALC

Weather Conditions: _____ Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(✓) Other Frequency (explain) BIMONTHLY

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports

		VOCs (ppm)
1.	System Inlet (required)	1.3
2.	Outlet, Carbon Adsorber Vessel A (required)	0.2
3.	Outlet, Carbon Adsorber Vessel B (required)	0.2
4.	Blower Inlet (optional)	
5.	Blower Outlet (required)	0.2

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: RT/SA
Title: _____

Sheet: 1 of 1
Date: 4/5/07
Time: _____

Verified By: _____
Title: _____

Date: _____

Type of Monitoring Devices: PID(1), VELOCICALC

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{✓} Other Frequency: BIMONTHLY

	FPM
Air Velocity	
1. System Inlet (Required)	158
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	170

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	70
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	84
4. Blower Outlet (Required)	118

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO
PROJECT NUMBER: 97-101
PAGE 1 OF 1
DATE: 4-19-07
WEATHER: Temperature 76° Winds: 0 Precipitation: 0
DESCRIPTION OF THE WORK: GCTS MONITORING

9.00 AM RT + SA, SM arrive onSite.
IY + JK ONSITE.

9.30 RT + SM CONDUCT GCTS MONITORING.

IY + SA Inventory SEA TRAIN for up coming REPAIRS

10.00 RT + SM CLEAN GRAFITI off TRAILER.

11.30 am All Staff offsite.

Prepared by: SEAMUS MC GEOUGH Signed: Seamus Mc Geough.

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: RT/SM Sheet 1 of 2

Title: PROJECT ENGINEER Date: 4/19/2007

Time: _____

Verified By: _____ Date: _____

Title: _____

( ) Type of Monitoring Devices: P.I.D.(1), MAGNEHELIC, VELOCICALC

Weather Conditions: _____ Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(√) Other Frequency (explain) BIMONTHLY

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	1.7
2.	Outlet, Carbon Adsorber Vessel A (required)	0.3
3.	Outlet, Carbon Adsorber Vessel B (required)	0.1
4.	Blower Inlet (optional)	____
5.	Blower Outlet (required)	0.0

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: RT/SA/JK/IV
Title: PROJECT ENGINEER

Sheet: 1 of 2
Date: 4/19/2007
Time: _____
Date: _____

Verified By: _____
Title: _____

Type of Monitoring Devices: VELOCICALC, MINIRAE 2000 P.I.D. (1)

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{✓} Other Frequency: BIMONTHLY

	FPM
Air Velocity	
1. System Inlet (Required)	160
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	180

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	

C2 REM
FIELD DAILY REPORT

OJECT NAME: 97-DEL AMO PITS | PAGE 1 OF 1

PROJECT NUMBER: 97101 | DATE: 5/3/07

WEATHER: Temperature ~75° Winds: — | Precipitation: —

DESCRIPTION OF THE WORK: BIMONTHLY MONITORING

10:30 ARRIVE ONSITE WITH IAN YUSKO ALREADY ON SITE
- ALL PRO FENCING ON SITE

[BIMONTHLY MONITORING]

- SAMPLES PULLED FROM PORTS 1-4 USING PUMP/LUNG SYSTEM AND 1 L TEDLAR BAGS

- VOCs MONITORED WITH MINRAE 2000 P.I.D.(1) CALIBRATED TO 50 PPM BENZENE
- FLOW MONITORED WITH VELOCICALC
- TEMPERATURE MONITORED WITH INLINE GAUGES

PORT	VOCs		FLOW	TEMPERATURE
4	0.8	INLET	155	74
3	0.3	OUTLET	175	127
2	2.7			
1	4.9			

11:00 - SPEAK WITH ALL PRO FENCING & TELL THEM WE ARE ABOUT TO LEAVE THE SITE
- ALL PRO NEEDS MORE MATERIALS FOR PAINTING THE TRAILER THEY ASK FOR:
  - 1 TILE SPONGE
  - 6 TUBES OF CERAMIC CAULKING
  - 2 EXTRA PAINT ROLLER HEADS

11:15 - OFFSITE TO HOME DEPOT

12:00 BACK ONSITE TO DELIVER MATERIALS

12:15 OFFSITE

pared by: RYAN TOXON Signed: [signature]

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: IY

Title: PE

Sheet 2 of 2

Date: 05/03/07

Time: 10:45 AM

Verified By: RT

Title: PE

Date: _____

( ) Type of Monitoring Devices: PID, VELOCICALC, PUMP LUNG

Weather Conditions: 80°F, CALM Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(✓) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports

		VOCs (ppm)
1.	System Inlet (required)	4.9
2.	Outlet, Carbon Adsorber Vessel A (required)	2.7
3.	Outlet, Carbon Adsorber Vessel B (required)	0.3
4.	Blower Inlet (optional)	/
5.	Blower Outlet (required)	0.8

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: IAN YUSKO
Title: PROJECT ENGINEER

Sheet: 1 of 2
Date: 05/03/07
Time: 10:45 AM
Date:

Verified By: RYAN TEDXON
Title: PROJECT ENGINEER

Type of Monitoring Devices: PID, VELOCICALC, PUMP LUNG

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{✓} Other Frequency: BI-MONTHLY

	FPM
Air Velocity	
1. System Inlet (Required)	155
2. Outlet Carbon Adsorber Vessel A (Optional)	/
3. Outlet Carbon Adsorber Vessel B (Optional)	/
4. Blower Outlet (Required)	175

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	74°
2. Outlet Carbon Adsorber Vessel A (Optional)	/
3. Outlet Carbon Adsorber Vessel B(Optional)	/
4. Blower Outlet (Required)	127°

C2 REM
FIELD DAILY REPORT

PROJECT NAME:

PROJECT NUMBER:

PAGE 1 OF 3

DATE: 05/24/07

WEATHER: Temperature 72° Winds: None Precipitation: None

DESCRIPTION OF THE WORK: GCTS Monitoring & SVE Monitoring

11:00 ARRIVE ON-SITE WITH SM & RT

11:15 PREPARE MONITORING EQUIPMENT FOR USE
CALIBRATE PID (1) TO ZERO AIR FOR ZERO GAS & 50 ppm BENZENE FOR SPAN GAS

11:30 PERFORM GCTS MONITORING
PULL TEDLAR BAGS FROM INLET, C_1, C_2, & OUTLET FOR VOCs
TAKE FLOW READINGS W/ VELOCICALC @ INLET & OUTLET
TAKE TEMP. READINGS @ INLET & OUTLET W/ INLINE GAUGES

12:15 PM CONDUCT SVE/IBT MONITORING
PULL TEDLAR BAGS FROM INLET, C_1, C_2, & OUTLET & SAMPLE FOR VOCs, LEL, O_2, & CO_2.
TAKE FLOW FROM STATIONS 1-4 W/ VELOCICALC
TAKE PRESSURE W/ MAGNAHELIC WHERE APPLICABLE

1:00 PM DOWNLOAD DATA FROM SURVEILANCE COMPUTER

2:00 PM DEPART FROM SITE

* SEE ATTACHED FIELD SHEETS FOR RESULTS

Prepared by: IAN YUSKO Signed: Ian Yusko

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: IY
Title: PE

Sheet: 1 of 2
Date: 05/24/07
Time: 11:20 AM
Date:

Verified By: SA
Title: PE

Type of Monitoring Devices: Velocicalc, Inline Temp. Gauges

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{X} Other Frequency: Bi-Monthly

	FPM
Air Velocity	
1. System Inlet (Required)	38.6
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	41.5

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	76
2. Outlet Carbon Adsorber Vessel A (Optional)	#
3. Outlet Carbon Adsorber Vessel B(Optional)	90
4. Blower Outlet (Required)	122

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: TV | Sheet 2 of 2

Title: PE | Date: 05/24/07

Time: 11:25 AM

Verified By: SA | Date: _____

Title: PE

(✓) Type of Monitoring Devices: MINIRAE PID 2000 (1)

Weather Conditions: _____ Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(✕) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	0.7
2.	Outlet, Carbon Adsorber Vessel A (required)	1.1
3.	Outlet, Carbon Adsorber Vessel B (required)	0.6
4.	Blower Inlet (optional)	____
5.	Blower Outlet (required)	0.6

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 6-15-2007.

WEATHER: Temperature 80° Winds: Precipitation:

DESCRIPTION OF THE WORK: INSTALL NEW PLC POWER SOURCE - ENCLOSURE MONITORING, MEETING WITH GREG FROM AKINS about COMPUTER PROBLE

7.30AM IY ARRIVE ONSITE TO MEET ROBERT FROM PRIME SYSTEMS. ROBERT INSTALLED NEW ALLEN BRADELY POWER SOURCE.

8.15AM SM ARRIVED ONSITE W/MONITORING EQUIPMENT.

9.00 AM STARTED THE SYSTEM AGAIN & EVERYTHING WORKING FINE, WITH THE EXCEPTION of 2 INLINE O_2 SENSORS

10.00 AM IY, SM MONITORED THE ENCLOSURE GCTS & IBT SYSTEMS.

12.00 GREG FROM AKINS ONSITE TO TROUBLESHOOT COMPUTER, RECONNECT TO M-DRIVE & RE BOOT COMPUTER FOR REMOTE SURVELANCE.

1pm GREG off Site.

2.30. SM off Site.

IY REMAINED ON SITE TO WORK ON THE COMPUTER & TRY TO fix THE O_2 SENSORS.

4.30 IY off SITE.

Prepared by: SEAMUS McGEOUGH Signed: Seamus McGeough

IAN YUSKO Ian Yusko

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: IY Sheet 1 of 2

Title: PE Date: 06/15/07

Time: _____

Verified By: SM Date: _____

Title: PE

(✓) Type of Monitoring Devices: PID (1) 2000

Weather Conditions: 82°F Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(✓) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

(✓) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	1.7
2.	Outlet, Carbon Adsorber Vessel A (required)	3.5
3.	Outlet, Carbon Adsorber Vessel B (required)	2.4
4.	Blower Inlet (optional)	___
5.	Blower Outlet (required)	1.6

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: IY
Title: PE

Sheet: 2 of 2
Date: 06/15/07
Time: _____
Date: _____

Verified By: SM
Title: PE

Type of Monitoring Devices: VELOCICALC, INLINE TEMP. GAUGES

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{✓} Other Frequency: BI-MONTHLY

	FPM
Air Velocity	
1. System Inlet (Required)	149
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	170

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	80°
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	131°

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 3

PROJECT NUMBER: 97-101 DATE: 06/21/07

WEATHER: Temperature 82°F Winds: None Precipitation: None

DESCRIPTION OF THE WORK: GCTS Monitoring; Sprinkler Installation

9:00 AM	ARRIVE ON-SITE W/ SM
9:30 AM	2" PVC PIPE DROPPED OFF BY SINCLAIR
10:15 AM	BEGIN INSTALLING IRRIGATION SYSTEM W/ 20' PVC RUNS ALONG MIDDLE OF PROPERTY HOOKING INTO THE EXISTING WATER PIPING BEHIND TRAILER & AT WATER CAGE
	* GOAL IS TOO GET VEGETATION TO GROW AGAIN ON & AROUND CAP SLOPES TO PREVENT EROSION & PROVIDE MOISTURE TO SOIL TO PREVENT CRACKING
12:00 PM	BREAK FOR LUNCH
1:00 PM	RETURN FROM LUNCH AND CONDUCT GCTS BI-MONTHLY MONITORING COULD NOT PERFORM SVE/IBT MONITORING BECAUSE OF NEEDED CARBON-CHANGEOUT TO BE CONDUCTED FOLLOWING DAY
2:00 PM	CONTINUE WORKING ON IRRIGATION SYSTEM INSTALL AFTER COMPLETION OF GCTS MONITORING
4:15 PM	LOCK-UP SITE & DEPART FROM SITE

Prepared by: IAN YUSKO Signed: Ian Yusko

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: IY
Title: PE

Sheet: 1 of 2
Date: 6/21/07
Time: _____

Verified By: SM
Title: PE

Date: _____

Type of Monitoring Devices: Velocicalc & Inline Temp. Gauges

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{X} Other Frequency: Bi-monthly

	FPM
Air Velocity	
1. System Inlet (Required)	154
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	168

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	82
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	137

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: IY

Title: PE

Sheet 2 of 2

Date: 6/21/07

Time: _____

Verified By: SM

Title: PE

Date: _____

(√) Type of Monitoring Devices: PID (1) MINIRAE 2000

Weather Conditions: SUNNY 84°F Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(X) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

( ) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports

		VOCs (ppm)
1.	System Inlet (required)	3.6
2.	Outlet, Carbon Adsorber Vessel A (required)	2.7
3.	Outlet, Carbon Adsorber Vessel B (required)	1.5
4.	Blower Inlet (optional)	
5.	Blower Outlet (required)	2.5

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF 3

PROJECT NUMBER: 97-101 DATE: 07/06/07

WEATHER: Temperature 88°F Winds: NONE Precipitation: NONE

DESCRIPTION OF THE WORK: GCTS MONITORING, INSTALL REPAIRED O_2 SENSOR

11:30 AM	ARRIVE ON-SITE W/ SM
11:45 AM	PREPARE MONITORING EQUIPMENT FOR EVENT
12:00 PM	CONDUCT GCTS MONITORING
12:30 PM	COMPLETE GCTS MONITORING * SEE ATTACHED RESULTS
12:45 PM	RUN SPRINKLERS ON-SITE
1:00 PM	BREAK FOR LUNCH
1:45 PM	RETURN FROM LUNCH
2:00 PM	INSTALL O_2 SENSOR BACK INTO SYSTEM
2:30 PM	VERIFY O_2 SENSOR IS FUNCTIONING PROPERLY
3:00 PM	DEPART FROM SITE

Prepared by: IAN YUSKO Signed: Ian Yusko

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: IV | Sheet 1 of 2

Title: PE | Date: 07/06/07

Time: 1:15 PM

Verified By: SM | Date: _____

Title: PE

(✓) Type of Monitoring Devices: MINIRAE PID 2000 (1)

Weather Conditions: 80° SUNNY | Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(✓) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

(✓) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	0.9
2.	Outlet, Carbon Adsorber Vessel A (required)	0.6
3.	Outlet, Carbon Adsorber Vessel B (required)	Ø
4.	Blower Inlet (optional)	___
5.	Blower Outlet (required)	Ø

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: IY
Title: PE

Sheet: 2 of 2
Date: 07/06/07
Time: 1:15 PM

Verified By: SM
Title: PE
Date:

Type of Monitoring Devices: VELOCICALC, INLINE TEMP. GAUGES

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{✓} Other Frequency: BI-MONTHLY

	FPM
Air Velocity	
1. System Inlet (Required)	155
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	178

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	86
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	140

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS — PAGE 1 OF 3

PROJECT NUMBER: 97-101 — DATE: 07/19/07

WEATHER: Temperature 89° F Winds: NONE — Precipitation: NONE

DESCRIPTION OF THE WORK: GCTS MONITORING, SVE/IBT MONITORING, DOWNLOAD PLC DATA

9:00 AM	ARRIVE ON-SITE W/ SM & MA
9:15 AM	TURN ON FIRST RUN OF SPRINKLERS
9:30 AM	PREPARE INSTRUMENTS W/ CALIBRATION PROCEDURES
10:00 AM	TAKE ALL TRASH FROM TRAILER TO DUMPSTER FOR PICK-UP
10:30 AM	BEGIN DOWNLOADING ALL PAST SURVEILANCE DATA ONTO EXTERNAL HARD DRIVE FROM COMPUTER INSIDE TRAILER
11:00 AM	BEGIN CONDUCTING GCTS MONITORING
11:45 AM	COMPLETE GCTS & BEGIN SVE/IBT MONITORING
12:15 PM	COMPLETE ~~SVE~~/IBT MONITORING & TURN-ON 2nd RUN OF SPRINKLERS TURN-OFF 1st RUN
12:30 PM	BREAK FOR LUNCH
1:30 PM	BACK ON-SITE
1:45 PM	FIELD TECH. DELIVERABLES MEETING ON-SITE
2:15 PM	TURN-ON 3rd & FINAL RUN / TURN OFF 2nd RUN
2:30 PM	FINISH DOWNLOADING SURVEILANCE DATA & GO TO ENCLOSURE W/ EXTERNAL HARD DRIVE & HOOK INTO PLC COMPUTER
3:00 PM	BEGIN DOWNLOADING PLC DATA ONTO HARD DRIVE
3:30 PM	COMPLETE DOWNLOADING PLC DATA CLEAN-UP TOOLS USED & SITE / TURN OFF 3rd RUN
4:15 PM	DEPART FROM SITE

Prepared by: IAN YUSKO — Signed: Ian Yusko

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: IY Sheet 2 of 2

Title: PE Date: 07/19/07

Time: _____

Verified By: SM Date: _____

Title: PE

(√) Type of Monitoring Devices: PID 2000 (1)

Weather Conditions: 80° F Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(X) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

(X) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	1.1
2.	Outlet, Carbon Adsorber Vessel A (required)	0.4
3.	Outlet, Carbon Adsorber Vessel B (required)	2.6
4.	Blower Inlet (optional)	____
5.	Blower Outlet (required)	1.8

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: IY
Title: PE

Sheet: 1 of 2
Date: 07/19/07
Time: _____
Date: _____

Verified By: SM
Title: PE

Type of Monitoring Devices: Velocicalc, Inline Temp Gauges

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{X} Other Frequency: Bi-MONTHLY

	FPM
Air Velocity	
1. System Inlet (Required)	135
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	155

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	85
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	139

C2 REM
FIELD DAILY REPORT

OJECT NAME: DEL AMO PITS | PAGE 1 OF 3

PROJECT NUMBER: 97-101 | DATE: 8/6/07

WEATHER: Temperature 86° Winds: NONE | Precipitation: NONE

DESCRIPTION OF THE WORK: GCTS MONITORING

1:30 PM	BACK ON SITE TO PERFORM GCTS MONITORING AFTER BEING ON-SITE EARLIER TO OVERSEE CARBON CHANGE-OUT OF SVE/IBT SYSTEM BY BAKER FILTRATION AND TO IRRIGATE PROPERTY
1:40 PM	CONDUCT GCTS MONITORING
2:00 PM	DEPART FROM SITE

pared by: IAN YUSKO Signed: Ian Yusko

DEL AMO WASTE PITS OU

CAP GAS SYSTEM MONITORING FORM

Completed By: IY Sheet 2 of 3

Title: PE Date: 8/6/07

Time: _____

Verified By: SM Date: _____

Title: PE

(√) Type of Monitoring Devices: PID (1) 2000, VELOCICALC

Weather Conditions: 84°F Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly

( ) Monthly

(√) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

(√) Series, Vessel A to Vessel B

( ) Series, Vessel B to Vessel A

( ) Parallel

( ) One Vessel (A) or (B)

Sample Ports		VOCs (ppm)
1.	System Inlet (required)	[redacted]1.2
2.	Outlet, Carbon Adsorber Vessel A (required)	3.6
3.	Outlet, Carbon Adsorber Vessel B (required)	2.2
4.	Blower Inlet (optional)	___
5.	Blower Outlet (required)	1.8

Comments, Maintenance, or Corrective Action (attach additional sheets if required):

DEL AMO WASTE PITS OU
CAP GAS SYSTEM MECHANICAL PROCESS MONITORING FORM

Completed By: IY
Title: PE

Sheet: 3 of 3
Date: 8/6/07
Time: _____
Date: _____

Verified By: SM
Title: PE

Type of Monitoring Devices: PID (1) 2000, VELOCICALC

Type of Inspection (Check Only One):
{ } Daily { } Weekly { } Monthly
{✓} Other Frequency: BI-MONTHLY

	FPM
Air Velocity	
1. System Inlet (Required)	143
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B (Optional)	
4. Blower Outlet (Required)	155

	Volts (V)
Voltage	
A. System "ON", Blower Motor "OFF"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	
B. System "ON", Blower Motor "ON"	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Amps (A)
Amperage	
1. F1 Leg	
2. F2 Leg	
3. F3 Leg	

	Temp (F°)
Temperature	
1. System Inlet (Required)	86
2. Outlet Carbon Adsorber Vessel A (Optional)	
3. Outlet Carbon Adsorber Vessel B(Optional)	
4. Blower Outlet (Required)	145

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Waste Pits PAGE 1 OF 3

PROJECT NUMBER: 97-101 DATE: 8/16/07

WEATHER: Temperature 86 °F Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: INSTALL ADD. IRRIGATION, GCTS & SVE/IBT MONITORING

12:45 PM	ARRIVE ON-SITE W/ SM PREPARE EQUIPMENT & INSTRUMENTATION FOR MONITORING
1:10 PM	CONDUCT GCTS MONITORING * SEE ATTACHED RESULTS
1:40 PM	COMPLETE GCTS & CONDUCT SVE/IBT MONITORING * SEE ATTACHED RESULTS
2:10 PM	COMPLETE SVE/IBT MONITORING BEGIN INSTALLING ADDITIONAL PVC PIPE RUNS FOR MORE SPRINKLER HEADS TO PROVIDE MORE COVERAGE OF IRRIGATED LAND
4:20 PM	LOAD EQUIPMENT & INSTRUMENTATION IN WORK VEHICLE LOCK-UP SITE
4:30 PM	DEPART FROM SITE

Prepared by: IAN YUSKO Signed: Ian Yusko

SEAMUS MCGEOUGH Seamus McGeough

Del Amo Waste Pits
Gas Collection and Treatment System
Torrance, California

Completed By: IY
Title: PE

Sheet 1 of 1
Date: 08/16/07
Time: 1:15 PM

Verified By: SM
Title: PE

Date: _____

(√) Type of Monitoring Devices: PID, VELOCICALC, PUMP LUNG
Weather Conditions: 90° F Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
(√) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

(√) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	2.6
2.	Outlet, Carbon Adsober Vessel A	1.4
3.	Outlet, Carbon Adsorber Vessel B	0.9
4.	System Effluent	1.5

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	129°	136.7
Effluent	90°	156

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Waste Pits | PAGE 1 OF 3

PROJECT NUMBER: 97-101 | DATE: 8/31/07

WEATHER: Temperature 90 °F Winds: Slight | Precipitation: None

DESCRIPTION OF THE WORK: IRRIGATE CAP, SVE/IBT MONITORING & GCTS MONITORING

9:00 AM	ARRIVE ON-SITE WITH SM & TT TURN ON IRRIGATION SYSTEM TO WATER LAND
9:30 AM	CLEAN TRAILER FOR SITE VISIT FROM CLIENT
10:00 AM	HOSE & SWEEP OUT ENCLOSURE
10:30 AM	SWITCH IRRIGATION VALVES ON PROPERTY
10:45 AM	SITE WALK W/ JK, FB, & Client George Landreth
11:45 AM	TAKE LUNCH & SM DEPARTS FROM SITE
12:20 PM	RETURN FROM LUNCH
12:30 PM	SWITCH IRRIGATION VALVES AGAIN
12:45 PM	PREPARE INSTRUMENTATION FOR MONITORING PERFORM GCTS MONITORING ↳ SEE ATTACHED RESULTS
1:20 PM	COMPLETE GCTS MONITORING PERFORM SVE/IBT MONITORING
1:50 PM	COMPLETE SVE/IBT MONITORING ↳ SEE ATTACHED RESULTS
2:00 PM	DEPART FROM SITE

Prepared by: IAN YUSICO
SEAMUS MC GEOUGHT

Signed: Ian Yusico
Seamus McGeought

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: TT / IY / SM
Title: _____

Sheet 1 of 1
Date: 8/31/07
Time: _____

Verified By: _____
Title: _____

Date: _____

(✓) Type of Monitoring Devices: PID, VELOCICALC, PUMP LUNG
Weather Conditions: 85° F Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
(✓) Other Frequency (explain) Bi-monthly

Vessel Operation:

(✓) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	1.2
2.	Outlet, Carbon Adsober Vessel A	1.8
3.	Outlet, Carbon Adsorber Vessel B	1.7
4.	System Effluent	2.2

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	85°	155
Effluent	134	150

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C_2 REM

FIELD DAILY REPORT

OJECT NAME: Del Amo Waste Pits Superfund Site PAGE 1 of 1

PROJECT NUMBER: 97-101 DATE: 9/13/2007

WEATHER: Temperature: 88 Winds: Precipitation: None

DESCRIPTION OF THE WORK: Using PID, Pump Lung, Velocical to conduct GCTS, SVE/IBT monitoring

Time Line	
8:00 AM	
9:00 AM	
10:00 AM	
11:00 AM	IY- TT arrive at site
	Turn on First run water sprinkler
	checking fences and equiments for routine maintaining site
12:00 PM	Fixing the water's vault on the sprinkler system
	intergrating the soil
	Leaving For Lunch 12:30
1:00 PM	
	Coming Back at site at 1:30
	Switch and turn on the second sprinkler system
2:00 PM	Initiate GCTS and SVE/IBT monitoring, Checking for IDLH
	Enter the enclose area and conduct the monitoring using the VelociCal to measure flow rates,
	PID to measure VOCs concentration, Presusre, Pump Lung to obtain 1 liter air sample bag
3:00 PM	TT- IY depart the site at 3:00
4:00 PM	
5:00 PM	
Special Notes	

pared by: TRI TRAN
IAN YUSKO

Signed:

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: IY
Title: PE

Sheet 1 of 1
Date: 09/13/07
Time: _____

Verified By: TT
Title: PE

Date: _____

(✓) Type of Monitoring Devices: _____
Weather Conditions: 88° F Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
(✓) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

(✓) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	10.2
2.	Outlet, Carbon Adsober Vessel A 1	1.2
3.	Outlet, Carbon Adsorber Vessel B 2	1.4
4.	System Effluent	1.9

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	85°	155
Effluent	136°	152

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Waste Pits PAGE 1 OF 2

PROJECT NUMBER: 97-101 DATE: 9/27/07

WEATHER: Temperature 80°F Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: Irrigate land, SVE/IBT MONITORING, Site GCTS Monitoring

11:00 AM	ARRIVE ONSITE TURN ON SPRINKLERS
11:30 AM	CHECK SYSTEM OPS FOR BOTH SYSTEMS BOTH SYSTEMS OPERATING AS DESIGNED
11:50 AM	PURGE DIRTY TEDLAR BAGS FOR SITE AND LABEL FOR REUSE
12:15 PM	TURN ON NEW SET OF SPRINKLERS ORGANIZE SEATRAIN & TRAILER A BIT (TAKE OUT TRASH)
1:00 PM	PREPARE INSTRUMENTS FOR MONITORING CONDUCT GCTS MONITORING W/ PUMP LUNG, PID, & VELOCICALC * SEE ATTACHED RESULTS TURN ON LAST SET OF SPRINKLERS
1:45 PM	COMPLETE GCTS & BEGIN SVE/IBT MONITORING USE PUMP LUNG, PID, VELOCICALC, & MAGNAHELIC, & RKI * SEE ATTACHED FIELD RESULTS ALSO PULL 1 LTR. TEDLAR BAG SAMPLES FOR LAB ANALYSIS FROM THE INLET, POST AMBIENT, C1, & OUTLET
2:45 PM	COMPLETE SVE/IBT MONITORING PACK-UP EQUIPMENT & LOCK-UP SITE TURN OFF ALL SPRINKLERS
3:00 PM	DEPART SITE & DROP-OFF LAB SAMPLES @ DEL MAR

Prepared by: IAN YUSKO Signed: Ian Yusko

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: IAN VUSKO
Title: PROJECT ENGINEER

Sheet 1 of 1
Date: 09/27/07
Time: _____

Verified By: _____
Title: _____

Date: _____

(√) Type of Monitoring Devices: PID 2000, VELOCICALC
Weather Conditions: 76° F, Slight Wind Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
(√) Other Frequency (explain) BI-MONTHLY

Vessel Operation:

(√) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	8.9
2.	Outlet, Carbon Adsober Vessel A	1.0
3.	Outlet, Carbon Adsorber Vessel B	1.4
4.	System Effluent	1.5

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	80	128
Effluent	129	165

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C_2 REM
FIELD DAILY REPORT

OJECT NAME: Del Amo Pits | PAGE 1 of 1

PROJECT NUMBER: 97-101 | DATE: 10/11/2007

WEATHER: Temperature: 65 Winds: none Precipitation: none

DESCRIPTION OF THE WORK: 3rd Quarterly Full Sale Monitoring, Enclosure GCTS Monitoring

Time Line	
7:50 AM	IY, SM, TT, SA arrive onsite
	Prepare purge systems and monitoring devices
8:15	Turn on the system, SM/SA conduct enclosure monitoring, IY/TT start monitoring pressures at perimeter, cluster and vacuum performance wells
	SM/SA start monitoring pressure at SVE wells
	IY/TT conduct GCTS monitoring
11:20 AM	Turn off the system,
	IY/SM and TT/SA start monitoring LEL, O2, CO2, VOCs at perimeter, cluster, and vacuum performance wells
1:00 PM	CH2M HILL arrive onsite, IY explain all updates
1:45 PM	CH2M HILL off site
2:00 PM	Lunch
2:30 PM	IY/SM prepare purge system for SVE wells, TT/SA continue monitoring wells.
3:00 PM	IY/SM start purging SVE wells, TT/SA start monitoring SVE wells for LEL, O2, CO2, VOCs
5:00 PM	Finishi monitoring
5:15 PM	Offsite

Special Notes

repared by: Shinta Aizawa

Signed: Shinta Aizawa

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: TT
Title: PE

Sheet 1 of 1
Date: 10/11/07
Time: 9:10

Verified By: IY
Title: PE

Date: _____

( ) Type of Monitoring Devices: PID, RKI, Velocicalc.
Weather Conditions: _____ Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
( ) Other Frequency (explain) Bimonthly.

Vessel Operation:

(✓) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	1.7
2.	Outlet, Carbon Adsober Vessel A 1	3.6
3.	Outlet, Carbon Adsorber Vessel B 2	5.0
4.	System Effluent	1.7

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	75°	148
Effluent	120°	155

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C2 REM

FIELD DAILY REPORT

PROJECT NAME: DELAMO PITS PAGE _____ OF _____

PROJECT NUMBER: 97-101 DATE: 10-25-07

WEATHER: Temperature _____ Winds: _____ Precipitation: _____

DESCRIPTION OF THE WORK: WEEKLY & BI WEEKLY MONITORING / MONTHLY LAB SAMPLE

9AM TT & SM arrive on Site.

Start irrigating the cap.

9.30 Begin Monitoring GCTS System. (PID, & Velocicalc & Temp Gauges).

10 AM Monitor the SVE / IRT System.

10.45 Take LAB SAMPLES.

11.30 TT & SM offsite. / Turn off IRRIGATION.

Prepared by: SEAMUS Mc GEOUGH Signed: Seamus Mc Geough.

TRI TRAN

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: SM
Title: PROJECT ENGINEER.

Sheet 1 of 1
Date: 10-25-07
Time: 10:40 AM

Verified By: TT
Title: FIELD TECH.

Date: 10/25/07.

( ) Type of Monitoring Devices: ~~BKG~~ PID, VELOCICALC.
Weather Conditions: _____ Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
(✓) Other Frequency (explain) BI MONTHLY.

Vessel Operation:

( ) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	1.9
2.	Outlet, Carbon Adsober Vessel A	1.3
3.	Outlet, Carbon Adsorber Vessel B	1.3
4.	System Effluent	0.7.

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	98.7	148
Effluent	125^0	168

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS

PAGE 1 of 1

PROJECT NUMBER: 97-101

DATE: 11/8/2007

WEATHER: Temperature: 79 Winds: Light Precipitation: None

DESCRIPTION OF THE WORK: :SVE/IBT and GCTS monitoring, remove FT1 and FT5 flow sensor

Time Line	
8:00 AM	
9:00 AM	TT, IY arrived at 9:00
	Conducted SVE/IBT and bi-monthly GCTS monitoring
10:00 AM	
	Irrigated land
11:00 AM	
	Replaced O2 sensor head at AT4B
12:00 PM	
1:00 PM	
	Removed FT 1 & FT5 to send back to manufacturer
2:00 PM	
3:00 PM	
	Left site at 3:30
4:00 PM	
5:00 PM	

Special Notes Shut the system down, took off FT1 and FT5 to send back to manufacture, turn the system back on before left

Prepared by: TRI TRAN

Signed: TRAN

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: TT/IY
Title: _____

Sheet 1 of 1
Date: 11/8/07
Time: _____

Verified By: TT/IY
Title: _____

Date: 11/8/07

( ) Type of Monitoring Devices: GCTS - BIMONTHLY
Weather Conditions: cloudy Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
(X) Other Frequency (explain) Bi-MONTHLY

Vessel Operation:

( ) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	1.9
2.	Outlet, Carbon Adsober Vessel A	3.4
3.	Outlet, Carbon Adsorber Vessel B	3.0
4.	System Effluent	1.8

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	70.0	146
Effluent	110.5	186

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS PAGE 1 of 1

PROJECT NUMBER: 97-101 DATE: 11/21/07

WEATHER: Temperature: 80 Winds: NONE Precipitation: NONE

DESCRIPTION OF THE WORK: GCTS, SVE/IBT monitoring

Time Line	
8:00 AM	
9:00 AM	
	Arrived at Site at 9:30
	Conducted SVE/IBT monitoring
10:00 AM	Finished SVE/IBT monitoring and started GCTS monitoring
	Finished GCTS monitoring at 11:00
	Checked flow meters #1 and #5
11:00 AM	Checked needed parts / equipments for reinstallation flow meters
	Opened flow meter package and placed them in locked trailer
	Closed and left the site at 11:30
12:00 PM	
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	
5:00 PM	
Special Notes	

Prepared by: TRI TRAN
JAN YUSKO

Signed:

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: IV
Title: _____

Sheet 1 of 1
Date: 11/21/07
Time: _____

Verified By: TT
Title: _____

Date: 11/21/07

( ) Type of Monitoring Devices: RKI, PID, PUMP LUNG, VEL CAL
Weather Conditions: SUNNY Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
(✓) Other Frequency (explain) BI MONTHLY

Vessel Operation:

( ) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	0.4
2.	Outlet, Carbon Adsober Vessel A	3.6
3.	Outlet, Carbon Adsorber Vessel B	3.0
4.	System Effluent	1.8

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	71	132
Effluent	114	159

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C_2 REM

FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS PAGE 1 of 1

PROJECT NUMBER: 97-101 DATE: 12/6/2007

WEATHER: Temperature: 68 F Winds: None Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT, GCTS, NORMAL ROUTINE SITE MAINTAIN PROCEDURE

Time Line	
8:00 AM	
9:00 AM	
10:00 AM	
11:00 AM	
12:00 PM	TT / SM arrived at site at 12:00
	Proceeded normal routine check up
1:00 PM	Unloaded tools and equipments down from the truck
	conducted SVE/IBT monitoring at 1:30
2:00 PM	
	conducted GCTS monitoring at 2:30
	Checked gate and fence for sign of vandalized
3:00 PM	
	Loaded tools and equipment back to truck and ready for take off
	Left site at 3:30
4:00 PM	
5:00 PM	
Special Notes	

epared by: TRi TRAN
SEAMUS Mc GEOUGH

Signed: Seamus Mc Geough

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: SEAMUS Mc GEOUGH
Title: Project Eng.

Sheet 1 of 1
Date: 12-6-07
Time: 1:45 pm

Verified By: TRI TRAN
Title: Entry Level Eng.

Date: 12-6-07

( ) Type of Monitoring Devices: _____
Weather Conditions: Cloudy Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
(✓) Other Frequency (explain) Bi Monthly

Vessel Operation:

( ) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	1.2
2.	Outlet, Carbon Adsober Vessel A	1.9
3.	Outlet, Carbon Adsorber Vessel B	1.8
4.	System Effluent	1.4

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	~~140~~ 68°	170.5
Effluent	170	162.5

Comments, Maintenance or Corrective Action (attach additional sheets if required):

C_2 REM

FIELD DAILY REPORT

OJECT NAME: DEL AMO WASTE PITS

PAGE 1 of 1

PROJECT NUMBER: 97-101

DATE: 12/19/2007

WEATHER: Temperature: 70 Winds: Light Precipitation: None

DESCRIPTION OF THE WORK: Fix enclosure' roof , SVE/IBT and GCTS monitoring, Lap Sample, Calibrate LEL

Time Line	
8:00 AM	
	TT, SA arrived at 8:40
	Checked perimeter fence, SVE/IBT, GCTS system for sign of vandalizing (no problem found)
9:00 AM	Fixed the roof of enclosure area
10:00 AM	Fixed the roof of enclosure area
11:00 AM	
12:00 PM	
	Conducted SVE/IBT and GCTS monitoring
1:00 PM	
2:00 PM	
	Took lab sample
	Shut down SVE/IBT system to calibrate LEL
3:00 PM	Problem found with the inline sensor AT1A (knob PT2 is broken)
	Fixed and calibrate the inline sensor using PT1 and PT3 knob
4:00 PM	
5:00 PM	
	left site at 5:30
Special Notes	

epared by: TRI TRAN

Shinta Aizawa

Signed:

Del Amo Waste Pits Superfund Site
Gas Collection and Treatment System
Torrance, California

Completed By: TRI TRAN
Title: ENTRY Level Engineer

Sheet 1 of 1
Date: 12/19-/07
Time: 1.pm

Verified By: SEAMUS McCARTHY
Title: PROJECT Engineer

Date: 12/19-07

( ) Type of Monitoring Devices: PID Velocalc
Weather Conditions: Rain/cloudy Barometric Pressure: _____

Type of Inspection (check only one):

( ) Daily ( ) Weekly ( ) Monthly
( ) Other Frequency (explain) _____

Vessel Operation:

( ) Series, Vessel A to Vessel B
( ) Series, Vessel B to Vessel A
( ) Parallel
( ) One Vessel (A) or (B)

Sample Ports:		**VOCs (ppm)**
1.	System Inlet	2.6
2.	Outlet, Carbon Adsober Vessel A	9.6
3.	Outlet, Carbon Adsorber Vessel B	5.6
4.	System Effluent	1.5

	Temperature (^{0}F)	**Air Flow (scfm)**
Influent	62	170
Effluent	106	182

Comments, Maintenance or Corrective Action (attach additional sheets if required):

APPENDIX C

1-YEAR SVE/IBT OPERATIONS TM

TECHNICAL MEMORANDUM

SUBMITTED TO: Dante Rodriguez, US Environmental Protection Agency (USEPA)

SUBMITTED BY: Edmond Bourke, C2 REM

DATE: June 3, 2008

SOIL VAPOR EXTRACTION/INSITU BIODEGRADATION TECHNOLOGY 1-YEAR LONG-TERM OPERATIONS, MAINTENANCE AND MONITORING PERIOD DEL AMO WASTE PITS OU

1.0 INTRODUCTION

This Technical Memorandum has been prepared to present the summary of the 1-Year Long-Term Operations, Maintenance and Monitoring (OM&M) activities for the Soil Vapor Extraction/Insitu Biodegradation Technology System (SVE/IBT System) installed at the Waste Pits area of the Del Amo Superfund Site (Site) located in Torrance, California (see Figure 1.0). The SVE/IBT System utilizes the existing extraction/monitoring well network to extract vapors at the outer edges of the Waste Pits and inject re-circulated vapors along with generated oxygen gas to allow for enhanced vadose zone biodegradation, to comply with the Record of Decision (ROD). The ROD cleanup goal is to prevent the migration of contaminants, primarily benzene, from the Waste Pits such that they do not contribute a 0.5% increase in concentration to the existing impacted groundwater underlying the Waste Pits. While benzene is not the only constituent detected on the Site, it is detected in concentrations substantially above others (monthly laboratory results taken from the SVE/IBT system's inlet station for benzene average 22,664 parts per million [ppm] while ethylbenzene and toluene average 685 ppm and 464 ppm, respectively, during this period) and given that the current SVE/IBT System performance parameters are chemical specific, benzene was selected for this purpose.

For reporting purposes, the 1-Year Long-Term OM&M period for the SVE/IBT System began on November 9, 2006 and ended on December 31, 2007. The SVE/IBT System was operated in accordance with the design scenario presented in the *SVE/IBT Final Design Report* (C2 REM, 2006). The information collected during this period, includes field notes (see Attachment A), laboratory data (see Attachment B [CD ROM]), and in-line sensor data (see Attachment C [CD ROM]), which are discussed in detail in the following sections. The analysis of the collected information indicates that the SVE/IBT System is performing at a level consistent with design parameters.

2.0 LONG TERM OM&M OPERATING SUMMARY

During the 1-Year Long-Term OM&M period from November 9, 2006 through December 31, 2007, the SVE/IBT System operated for approximately 2096 hours with the oxygen (O_2) generator operating a total of 1177 hours. Total estimated operating parameters are as follows:

- Injected re-circulated air volume - approximately 5,206,464 standard cubic feet (scf) at an average flow rate of 41.4 standard cubic feet per minute (scfm).
- Generated oxygen gas injected - approximately 451,968 scf at an average flow rate of 6.4 scfm and 91% purity.
- Extracted air volume - approximately 6,791,040 scf at an average flow rate of 54 scfm.
- Treated air volume - approximately 1,584,576 scf at an average flow rate of 12.6 scfm.

Based on the results obtained from the 2006 respiration test (i.e., oxygen saturation and decreased O_2 utilization rates), C2 REM tested various operating scenarios during the 1-Year Long-Term OM&M period including:

- The O_2 generator was operated until the subsurface O_2 concentration, measured by an in-line O_2 meter at the inlet of the SVE/IBT system, was approximately 18.0 % to 19.0 % and then was shutoff in order to observe oxygen utilization rates at various oxygen levels. The objective of this testing was to determine what level of oxygen in the subsurface provides for the highest rates of oxygen utilization.
- The O_2 generator was pulsed with a 6-7 day on/off cycle for approximately 6 weeks during September and October 2007 to observe any significant changes in the oxygen utilization rate.
- The SVE/IBT system and O_2 generator were operated throughout a weekend in July 2007 to observe potential benefits of oxygen replenishment.

During the 1-Year Long-Term OM&M period, the SVE/IBT System operated in a manner consistent with design parameters and has effectively removed approximately 27,500 lbs (12,500 kg) of benzene via degradation (20,200 lbs [9,200 kg]) and adsorption (7,300 lbs [3,300 kg]). Table 1.0 provides the parameters and calculations used to estimate the total mass of benzene removed through degradation and adsorption. Based on in-line sensor treatment rate data, the SVE/IBT System is adsorbing approximately 28 lbs/day (12.6 kg/day) of benzene through the carbon beds, and is degrading approximately 48 lbs/day (22 kg/day) of benzene *insitu* (as measured by O_2 utilization).

This estimated adsorbed mass is supported by the carbon change-out frequency and weight differentials. Approximately 7,400 lbs of Volatile Organic Compounds (VOCs) (of which about 95% is benzene) were adsorbed on both the primary and secondary vessels. Nine carbon change-outs were conducted during this period for an average of 822 lbs of VOCs adsorbed per carbon change-out (see Table 2.0). Based on the carbon

vendor data, an expected 4:1 carbon to benzene ratio was used to develop a cost estimate for budgeting purposes. It was observed during this period that carbon usage was closer to a 5:1 carbon to benzene ratio.

3.0 LONG TERM OM&M ACTIVITES

On November 9, 2006, Long-Term OM&M activities began and included system operation, weekly enclosure monitoring, monthly perimeter well monitoring, and quarterly [full-scale] monitoring of the SVE/IBT System (see Attachment A for field notes and observations). The SVE/IBT System generally operated for approximately 8 hours per day [8:00 am – 4:00 pm], 5 days per week (Monday – Friday). The SVE/IBT System is controlled via a Programmable Logic Controller System (PLC System) with capabilities for remote start and stop as well as alarm/emergency shutdown protocols. The SVE/IBT System did not operate during the respiration test (December 7, 2006 through January 2, 2007) and several additional days for system maintenance such as trouble shooting of the PLC, sensor calibrations, and carbon change-out.

During the 1-Year Long-Term OM&M period, all perimeter, cluster, vacuum performance, and SVE wells were monitored quarterly for pressure, VOCs, O_2, and Carbon Dioxide (CO_2) using hand-held monitoring equipment. Perimeter wells were monitored monthly for VOCs, O_2, and CO_2 to ensure that soil vapors do not migrate out beyond the cap boundaries (see Figure 2.0 for well locations).

During the 1-Year Long-Term period, measurements were taken weekly from the SVE/IBT System enclosure (see Figure 3.0) as follows:

- Station 1 - Influent: the inlet (combined flow of the 9 extraction wells);
- Station 2 - Post Ambient Air Inlet: the diversion loop (to the Granulated Activated Carbon [GAC] beds) just after the ambient air intake (Note: ambient air is introduced to the contaminant stream to dilute the concentration below the lower explosive limit [LEL] for safety reasons);
- Station 3 - Carbon Vessel 1 (C_1): at the effluent of the primary GAC bed; and
- Station 4 – Effluent: the effluent stack.

These four measurement points were monitored for VOCs, O_2, CO_2, and flow rate using hand-held monitoring equipment. Corresponding in-line measurements from the PLC System were also recorded where applicable. Along with the field monitoring that was conducted, samples were also obtained from the SVE/IBT enclosure at the four stations once a month and analyzed for VOCs using USEPA Method 8260B and for fixed gases using American Society of Testing and Materials (ASTM) Method 1946.

4.0 LONG TERM OM&M MONITORING RESULTS

The following sections describe the results obtained during each of the above mentioned monitoring protocols.

4.1 PERIMETER WELL RESULTS

Field data collected from perimeter monitoring wells demonstrate that the SVE/IBT System is effective in the mitigation of offsite migration of Constituents of Concern (COCs) (see Table 3.0). VOC concentrations ranged from 0.0 to 11.1 ppm with an average of 0.18 ppm.

VOC volumes have not increased from historical levels. The results of perimeter well monitoring indicate good control of injected air volumes, that the cover system is performing as designed, and that contaminated soil vapors are not migrating significantly beyond the cap boundaries. Samples of the other perimeter wells for laboratory analysis were not collected during this period; however, they were collected at the end of the 3-Month Short-Term Operations period and the results and detailed discussion are presented in the *Summary of SVE/IBT 3-Month Short-Term Operations TM (C2 REM, 2006).*

4.2 VACUUM PERFORMANCE WELL RESULTS

The primary function of the vacuum performance wells is to assess radius of influence of the SVE/IBT System. The nature of the SVE/IBT System (e.g., air re-circulation) makes this observation difficult in subareas 1 and 2, and as such C2 REM's use of these wells was to assess the oxygen and vapor distribution between extraction and injection points. In subarea 3, where extraction well 20A is located, no injection is occurring in the vicinity; therefore, the radius of influence from this extraction well was calculated using the following equation:

$$\text{ROI}=R_w * \text{EXP}\left\{\ln\left(\frac{r}{R_w}\right)*\left(\frac{P_{atm}^2 - P_w^2}{P_r^2 - P_w^2}\right)\right\},$$

where:

ROI = radius of influence where pressure is equal to preset value;
R_w = well radius of the vapor extraction well;
r = radial distance from the vapor extraction well;
P_{atm} = atmospheric pressure or a preset value;
P_r = pressure at a radial distance, r, from the vapor extraction well; and
P_w = pressure at the vapor extraction well.

Two monitoring locations (I"-1 and J') were used to calculate the radius of influence for extraction well 20A. The results are 37.37 ft and 51.52 ft, respectively (see Table 4.0).

The field data collected from the vacuum performance wells during this operation period is presented in Table 5.0. VOC concentrations ranged from 0.0 to greater than 9,999 ppm with an average greater than 2,015 ppm. Due to the limitations of field equipment (i.e., 0-9,999 ppm) the field results for VOCs are presented herein for completeness only.

4.3 CLUSTER WELL RESULTS

The field data collected from the cluster wells during this operation period are presented in Table 6.0. O_2 concentrations ranged from 0.0 to 28.5% with an average of 15.3%. CO_2 concentrations ranged from 0.0 to 22.8% with an average of 5.75%. VOC concentrations ranged from 0.0 to greater than 9,999 ppm with an average greater than 2,070 ppm. Due to the limitations of field equipment (i.e., 0-9,999 ppm) the field results for VOCs are presented herein for completeness only (see Table 6.0).

Results from the 2003 baseline and 2006 laboratory confirmation sampling event are compared with field results obtained during the 1-Year Long-Term OM&M period and presented in Figure 4.0 through 6.0. O_2 levels in 2007 continue to show increases compared to the 2003 O_2 levels demonstrating that the SVE/IBT System is effective in mixing of subsurface airflow and increasing the O_2 available for biodegradation.

Cluster well samples for laboratory analysis were not collected during this period; however, they were collected in the end of the 3-Month Short-Term Operations period and the results and detailed discussion are presented in the *Summary of SVE/IBT 3-Month Short-Term Operations TM*.

4.4 SVE EXTRACTION WELL RESULTS

The field data collected from the SVE wells during this operation period are presented in Table 7.0. O_2 concentrations ranged from 0.0 to 29.3% with an average of 8.4%. CO_2 concentrations ranged from 1.6 to 21.6% with an average of 11.5%. VOC concentrations ranged from 0.0 to greater than 9,999 with an average greater than 6,141 ppm. Due to the limitations of field equipment (i.e., 0-9,999 ppm) the field results for VOCs are presented herein for completeness only (see Table 7.0).

4.5 SVE/IBT SYSTEM MONITORING RESULTS

During the Long-Term OM&M period, system inlet, post ambient air, outlet of C_1, and system effluent locations in the enclosure were sampled using 1-liter Tedlar bags on a weekly basis and analyzed using field instruments (see Attachment A). Samples were also taken monthly to the laboratory for USEPA 8260B and ASTM 1946 analysis.

Based on laboratory results, the benzene concentrations at the inlet ranged from 9,300 to 33,000 ppm with an average of 22,664 ppm. The benzene concentrations at post ambient air ranged from 300 to 5,400 ppm. The benzene concentrations at the outlet of C_1 ranged from 2.9 to 3,600 ppm. The benzene concentrations at the effluent ranged from 0.0 to 3.4 ppm with an average of less than 1.8 ppm (see Table 8.0). Benzene concentrations at Stations 1-4 demonstrated that the SVE/IBT System was effective in controlling lower explosive limit (LEL) conditions and maintaining acceptable emission limits (i.e., less than 50 ppm) (see Figure 7.0). Oxygen concentration at the inlet ranged from 9.2 to 21.0% with an average of 16.7%. Carbon dioxide concentration at the inlet ranged from 8.0 to 11.0 % with an average of 9.2 %.

The field data collected from the SVE/IBT System are presented in Table 9.0. Due to the limitations of field equipment (i.e., 0-9,999 ppm) the field results for VOCs are presented herein for completeness only.

4.5 SVE/IBT SYSTEM OPERATING SCENARIOS RESULTS

During the 1-Year Long-Term OM&M period, C2 REM tested various operating scenarios to assess the optimal conditions for O_2 utilization. The O_2 generator was operated until the subsurface O_2 concentration was approximately 18.0% to 19.0% and then was shut-off in order to observe O_2 utilization rates at various levels (see Table 10.0). The rates of O_2 utilization were calculated for each O_2 level to determine the optimal oxygen level. Based on the O_2 in-line sensor at Station 1 during this period, the highest average O_2 utilization rate was 0.0020 at an O_2 concentration of 15%. However, the calculated O_2 utilization rates at an O_2 concentration of 15% varied considerably, and therefore will be further refined with additional testing.

Additional operating scenarios tested during this period included pulsing the O_2 generator on a 6-7 day on/off cycle for approximately 6 weeks and operating the SVE/IBT system and O_2 generator throughout a weekend. The results of these different operating scenarios did not result in any significant changes in oxygen utilization rates and oxygen replenishment.

5.0 CONCLUSIONS

During the Long-Term OM&M period, the SVE/IBT System was performing at a level consistent with the design performance parameters. Data collected from the PLC unit, laboratory data, and field data support the overall conclusion that the SVE/IBT System is effective and that biodegradation of Site COCs is occurring.

The current estimate is that the SVE/IBT System is degrading approximately 48 lbs (21.9 kgs) of benzene per day and adsorbing approximately 28 lbs (12.6 kgs) of benzene per day. Based on the 2007 results, the carbon expenditure has been improved and is closer to the model estimates. The current optimal O_2 concentration for O_2 utilization is 15%, however, the O_2 utilization rates varied considerably and therefore should be confirmed with additional pulsing of O_2 generator.

C2 REM recommends the frequency of field monitoring of the SVE/IBT System be modified from once a week to twice per month and that perimeter well monitoring be modified from monthly to quarterly. The frequency of lab samples taken from the SVE/IBT System as well as full scale monitoring of cluster, vacuum performance, and SVE wells will remain the same.

6.0 REFERENCES

C2 REM, *Summary of SVE/IBT 3-Month Short-Term Operations TM – Del Amo Waste Pits, Los Angeles, California,* December 2006.

C2 REM, SVE/IBT Final Design Report Del Amo Waste Pits, Los Angeles, California, January 2000.

Table 1.0
1-Year Long-Term
OMM Period SVE/IBT System Operation Summary
Comparison of Design to Actual Operations
Del Amo Waste Pits

Parameter	Original Design	Performance Based on Inline Monitoring Devices
Vapor Injection Rate (CFM)	50	47.8
System Operation Time (hours per day)*	8	7.94
O2 Injection Rate (CFM)	5	6.4
O2 Percentage (%)	100%	91%
O2 Utilization 1st Order Rate Constant (1/hr) **	0.0021	0.0021
Extracted Vapor Concentration (ppmv)	15,000	22,664
Extraction Rate (CFM) (1)	60	54
Treatment Rate (CFM)	15	12.6
Time for Pore Volume (days)	7.09	7.41
Injected O2 Concentration 1st Order	27%	30%
Benzene Degridation (kg/day)	**20**	**21.9**
Benzene Degridation (kg/year)	7,355	9,169
Benzene Removal (kg/day)	**10**	**12.6**
Benzene Removal (kg/year)	3,626	3,328
Total Benzene Removed/Degraded (kg/day)	**30**	**35**
Total Benzene Removed/Degraded (kg/year)	10,981	12,497
Carbon to Benzene Ratio	4:1	5:1
Projected Carbon Required (lbs/day)	87	111
Projected Annual Carbon Required (lbs/year)	**31,906**	**29,289**
1 Year Actual Carbon Use (lbs)		**36,124**

* In the beginning of the short-term period, the system was operated more than 8 hours, including weekends, for testing.
** 0.0021 of design value was used for oxygen utilization constant.

(1) Extraction rate is derived from the sum of the treatment rate and the recycle rate.

The calculation used for this estimate

Q = (O2 Injection rate + Recycle rate)
$[O_2]$ = (Term1*0.20+Term2*0.91)/{1-Term3*Exp(-k*t_{pv})}
$\acute{\eta}$ = 1-Exp(-k*t_{pv})
f_{bio} = 1-(0.0035/k)

Term1 = FT4/Q*(Excess Vapor Extraction rate)/(Treatment rate + Recycle rate)
Term2 =O2 injection rate/Q
Term3 = Recycle rate/(Treatment rate + Recycle rate)
t_{pv} (Time for Pore Volume) = 8505/Q
k = 0.0021

[Benzene] = 22664

Mass Degraded = Q*$[O_2]$* $\acute{\eta}$* f_{bio}* 5.8864
Mass Treated = Treatment rate *[Benzene]*0.000044148
Mass Total = Mass Degraded + Mass Treated

Table 2.0
Carbon Change-Out Frequency and Usage
Del Amo Waste Pits

Date	Operational Days Between Change-Outs	Fresh & Spent Carbon Weights for Each Period	lbs Adsorbed
10/30/2006	NR	Spent Carbon - 5240 lbs Fresh Carbon - 4040 lbs (Primary: 2019lbs, Secondary: 2021lbs) Lead Vessel is still A.	968
11/20/2006	21	Spent Carbon - 5008 lbs Fresh Carbon - 4040 lbs (Primary: 2019 lbs, Secondary: 2021 lbs) Lead Vessel is still A.	716
12/8/2006	13.8	Spent Carbon - 4756 lbs (Primary: 2375 lbs, Secondary: 2381 lbs) Fresh Carbon - 4056 lbs (Primary: 2019 lbs, Secondary: 2037 lbs) Lead Vessel is still A.	928
3/16/2007	43.5	Spent Carbon - 4984 lbs (Primary: 2605 lbs, Secondary: 2379 lbs) Fresh Carbon - 3666 lbs (Primary: 1813 lbs, Secondary: 1853 lbs) Lead Vessel is still A.	928
4/25/2007	25.5	Spent Carbon - 4594 lbs (Primary: 2207 lbs, Secondary: 2387 lbs) Fresh Carbon - 4057 lbs (Primary: 2097 lbs, Secondary: 1960 lbs) Lead Vessel is still A.	885
5/21/2007	17.1	Spent Carbon - 4942 lbs (Primary: 2608 lbs, Secondary: 2334 lbs) Fresh Carbon - 4007 lbs (Primary: 2005 lbs, Secondary: 2002 lbs) Lead Vessel is still A.	940
6/22/2007	17.3	Spent Carbon - 4947 lbs (Primary: 2452 lbs, Secondary: 2495 lbs) Fresh Carbon - 4078 lbs (Primary: 2100 lbs, Secondary: 1978 lbs) Lead Vessel is now B.	632
8/6/2007	31.6	Spent Carbon - 4710 lbs (Primary: 2492 lbs, Secondary: 2218 lbs) Fresh Carbon - 4030 lbs (Primary: 2010 lbs, Secondary: 2020 lbs) Lead Vessel is still B.	678
9/28/2007	38.1	Spent Carbon - 4708 lbs (Primary: 2335 lbs, Secondary: 2373 lbs) Fresh Carbon - 4150 lbs (Primary: 2050 lbs, Secondary: 2100 lbs) Lead Vessel is still B.	726
12/21/2007	62.5	Spent Carbon - 4876 lbs (Primary: 2457 lbs, Secondary: 2419 lbs) Fresh Carbon - 3985 lbs (Primary: 1974 lbs, Secondary: 2011 lbs) Lead Vessel is still B.	NA
Total	270.4	Spent Carbon - 48792 lbs Fresh Carbon - 40109 ibs (primary: 20106, Secondary:20003)	7401
Average	30.0	Average operational days - Average spent carbon weights (lbs)	822

NA: The weight adsorbed is unknown until next carbon change-out

Table 3.0
Field Data Summary for Perimeter Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
1/31/2007	A	0	0	20.9	0	0
2/21/2007	A	NA	0	20.9	0	0
4/19/2007	A	0.5	0	20.9	0	0
4/26/2007	A	0	0	20.9	0	0
5/17/2007	A	0.1	0	20.9	0	0
6/28/2007	A	0	0	20.9	0	-0.05
7/24/2007	A	0.1	0	20.9	0.4	-0.02
8/23/2007	A	0.1	0	20.9	0.2	0.05
10/11/2007	A	0	0	20.9	0	0
11/29/2007	A	0.5	0	20.9	0	0
12/20/2007	A	0	0	20.5	1.02	0
1/31/2007	B	0.5	0	17.6	5	0
2/21/2007	B	NA	0	17.9	5	0
4/19/2007	B	0.9	0	18.4	4.6	-0.1
4/26/2007	B	0.5	0	18.5	4.8	0
5/17/2007	B	0.3	0	18.4	4.8	0
6/28/2007	B	0	0	18	4.8	-0.05
7/24/2007	B	0.2	0	18	3.6	-0.05
8/23/2007	B	0.1	0	15.7	5.4	0.05
10/11/2007	B	0.4	0	14.7	6.8	-0.03
11/29/2007	B	0.5	0	13.6	7.6	0
12/20/2007	B	0.4	0	12.7	9.2	-0.05
1/31/2007	C	0	0	16.1	6.6	0
2/21/2007	C	NA	0	15.8	6.4	0
4/19/2007	C	0.1	0	15.8	5.8	-0.1
4/26/2007	C	0	0	15.8	5.8	0
5/17/2007	C	11.1	0	15.9	6	-0.05
6/28/2007	C	0	0	15.8	6	-0.05
7/24/2007	C	0	0	15.6	6	-0.05
8/23/2007	C	0	0	14.4	6	0.025
10/11/2007	C	0	0	12.1	7.6	-0.02
11/29/2007	C	0.2	0	10.8	7.8	0
12/20/2007	C	0.1	0	9.5	9.3	0
1/31/2007	D	0	0	20.9	0	0
2/21/2007	D	NA	0	20.9	0	0
4/19/2007	D	0.8	0	20.9	0	0
4/26/2007	D	0	0	20.9	0	0
5/17/2007	D	0.1	0	20.9	0	-0.1
6/28/2007	D	0	0	20.9	0	-0.05
7/24/2007	D	0	0	18.5	2.4	-0.06
8/23/2007	D	0	0	20.4	0.6	0.05
10/11/2007	D	0	0	20.9	0	-0.02
11/29/2007	D	0.4	0	20.9	0	0.05
12/20/2007	D	0.1	0	20.9	0	0

NA: On February 21, 2007, PID was malfunctioning and VOCs could not be monitored.

Table 3.0
Field Data Summary for Perimeter Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
1/31/2007	E	0.1	0	17.2	4.8	0
2/21/2007	E	NA	0	16.5	4.6	0
4/19/2007	E	0.3	0	17.6	4	-0.05
4/26/2007	E	0.1	0	17.6	4	0
5/17/2007	E	0	0	17.8	4.2	-0.05
6/28/2007	E	0	0	17.5	4.2	-0.05
7/24/2007	E	0	0	17.3	4.2	-0.02
8/23/2007	E	0	0	15.9	4.2	0.05
10/11/2007	E	0	0	17.6	4.8	-0.01
11/29/2007	E	0.1	0	17.8	4.4	0.05
12/20/2007	E	0	0	17.3	4.5	-0.05
1/31/2007	F	0	0	17.8	4.2	0
2/21/2007	F	NA	0	16.7	4	0
4/19/2007	F	0.1	0	18.1	3.6	-0.05
4/26/2007	F	0	0	18	3.6	0
5/17/2007	F	0	0	18.1	3.6	-0.05
6/28/2007	F	0	0	17.5	3.8	-0.1
7/24/2007	F	0	0	17.3	3.8	-0.02
8/23/2007	F	0	0	15	3.8	0.05
10/11/2007	F	0	0	17.5	2.58	-0.03
11/29/2007	F	0	0	18.2	4	0.02
12/20/2007	F	0.1	0	17.6	4.1	0
1/31/2007	G	0	0	19.1	2.4	0
2/21/2007	G	NA	0	19.4	2.4	0
4/19/2007	G	0	0	19.3	2	-0.05
4/26/2007	G	0	0	19.4	2.2	0
5/17/2007	G	0	0	19.3	2.2	-0.05
6/28/2007	G	0	0	18.5	2.2	-0.05
7/24/2007	G	0	0	18.7	2.2	-0.02
8/23/2007	G	0	0	18.9	2.2	0.025
10/11/2007	G	0	0	18.6	1.54	-0.02
11/29/2007	G	0	0	19.3	2.4	0.01
12/20/2007	G	0.1	0	18.8	2.3	0
1/31/2007	H	0	0	18	4.2	0
2/21/2007	H	NA	0	18.2	4.2	0
4/19/2007	H	0	0	18.1	3.6	-0.05
4/26/2007	H	0.2	0	18.4	3.6	-0.05
5/17/2007	H	0	0	18.3	3.6	-0.05
6/28/2007	H	0	0	17.5	3.6	-0.025
7/24/2007	H	0	0	17.4	3.8	-0.02
8/23/2007	H	0	0	18	3.6	0.025
10/11/2007	H	0	0	17.5	3.28	-0.05
11/29/2007	H	0	0	20.3	2.2	0.01
12/20/2007	H	1.4	0	17.8	4.6	0

NA: On February 21, 2007, PID was malfunctioning and VOCs could not be monitored.

Table 3.0
Field Data Summary for Perimeter Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
1/31/2007	I	0.1	0	19.2	2.4	-0.02
2/21/2007	I	NA	0	19.4	2.4	0
4/19/2007	I	0.3	0	19	2.2	-0.1
4/26/2007	I	0	0	15.3	2.2	0
5/17/2007	I	0	0	18	2.2	-0.05
6/28/2007	I	0	0	17.4	2.2	-0.5
7/24/2007	I	0	0	20.9	0	-0.01
8/23/2007	I	0	0	20.9	0	0
10/11/2007	I	0	0	20.9	0.02	0
11/29/2007	I	0	0	18.1	4.2	0.08
12/20/2007	I	0	0	20.1	1.8	0
1/31/2007	J	0	0	18.5	2.8	0
2/21/2007	J	NA	0	18.8	3	0
4/19/2007	J	0	0	18.5	2.6	-0.05
4/26/2007	J	0	0	18.5	2.8	0
5/17/2007	J	0	0	14.7	2.8	-0.05
6/28/2007	J	0	0	17.7	3	-0.5
7/24/2007	J	0	0	17.6	3.2	-0.04
8/23/2007	J	0	0	14.2	3.2	0.05
10/11/2007	J	0.1	0	17.8	2.24	0
11/29/2007	J	0	0	18.8	2.8	0
12/20/2007	J	0.2	0	18.1	3.4	-0.05
1/31/2007	K	0	0	19.1	2	0
2/21/2007	K	NA	0	19.3	2.2	0
4/19/2007	K	0	0	19	1.8	-0.05
4/26/2007	K	0	0	19.3	1.8	0
5/17/2007	K	0	0	19.1	1.8	0
6/28/2007	K	0	0	18.4	2	-0.5
7/24/2007	K	0	0	17.5	2.8	-0.02
8/23/2007	K	0	0	17.7	3	0.05
10/11/2007	K	0	0	19.9	0.74	0
11/29/2007	K	0	0	20.8	1.2	0.05
12/20/2007	K	0	0	18.5	3	-0.07
1/31/2007	L	0.1	0	16.6	4.6	-0.01
2/21/2007	L	NA	0.05	17	4.6	0
4/19/2007	L	0.1	0	16.3	4.2	-0.1
4/26/2007	L	0	0	16.4	4.6	0
5/17/2007	L	0	0	16.9	4.8	-0.05
6/28/2007	L	0	0	15.4	5.2	-0.5
7/24/2007	L	0.1	0	14.7	6	-0.02
8/23/2007	L	0.1	0	12.2	6.2	0.05
10/11/2007	L	0.1	0	15	4.42	0
11/29/2007	L	0	0	16.9	4.8	0
12/20/2007	L	0.1	0	16.3	5.9	-0.05

NA: On February 21, 2007, PID was malfunctioning and VOCs could not be monitored.

Table 4.0
SVE/IBT ROI Calculations
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Monitoring Well	P_{atm}	P_w (in H_2O) (1)	P_w (atm)	P_r (in H_2O) (1)	P_r (atm)	R_w (ft)	r (ft)	ROI (ft)
20a - I"-1	1	-6.05	1.014829	-0.018	1.000043	0.17	36.79	37.37
20a - J'	1	-6.05	1.014829	-0.023	1.000055	0.17	50.44	51.52

$(P^2_r - P^2_w) = (P^2_{atm} - P^2_w)*\{\ln(r/R_w)/\ln(ROI/R_w)\}$

$(P^2_r - P^2_w)/(P^2_{atm} - P^2_w) = \ln(r/R_w)/\ln(ROI/R_w)$

$\ln(ROI/R_w) = \ln(r/R_w)*(P^2_{atm} - P^2_w)/(P^2_r - P^2_w)$

$ROI/R_w = EXP\{\ln(r/R_w)*(P^2_{atm} - P^2_w)/(P^2_r - P^2_w)\}$

$ROI = R_w*EXP\{\ln(r/R_w)*(P^2_{atm} - P^2_w)/(P^2_r - P^2_w)\}$

P_{atm} = atmospheric pressure or a preset value

P_w = pressure at the vapor extraction well

P_r = pressure at a radial distance r from the vapor extraction well

r = radial distance from the vapor extraction well

R_w = well radius of the vapor extraction well

ROI = radius of influence where pressure is equal to preset value

(1) Pressure measurements are average during long-term OM&M period (November 9, 2006 - December 31, 2007)

Table 5.0
Field Data Summary for Vacuum Performance Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
4/26/2007	A'	> 9999	20	7.2	18.2	0
6/28/2007	A'	6	0	20	0	-0.8
10/11/2007	A'	3.6	0	2.2	1.6	-0.7
12/20/2007	A'	> 9999	27	11.1	17.2	-0.5
4/26/2007	B'	0.2	0	20.9	0	0
6/28/2007	B'	1.2	0	14.5	7.8	-0.05
10/11/2007	B'	0	0	8.4	18.6	-0.03
12/20/2007	B'	0.1	0	5.4	20	-0.02
4/26/2007	C'	> 9999	42	4.7	17.4	0
6/28/2007	C'	3300	1.375	6.5	12.2	-0.66
10/11/2007	C'	> 9999	52	8.8	12.4	0.4
12/20/2007	C'	> 9999	54	7.5	12.6	0.24
4/26/2007	D'	> 9999	52	0.2	19.8	0
6/28/2007	D'	12.2	0	19.7	0.6	-0.25
10/11/2007	D'	> 9999	51	0	15.6	-0.2
12/20/2007	D'	> 9999	2.85	0	19	-0.16
4/26/2007	E'	0	0	20.9	0	-0.1
6/28/2007	E'	1452	0.55	8.6	7.6	-0.05
10/11/2007	E'	8.7	0	20.9	0	-0.06
12/20/2007	E'	31.5	0	15.1	4.3	0
4/26/2007	F'	0	0	20.9	0	-0.2
6/28/2007	F'	22	0	20.9	0	-0.2
10/11/2007	F'	0	0	20.9	0	-0.15
12/20/2007	F'	80	0	20.9	0.2	0
4/26/2007	G'	0.9	0	17.2	0.8	-0.1
6/28/2007	G'	262	0.15	3.6	13	-0.1
10/11/2007	G'	6.6	0.05	2	15.8	-0.1
12/20/2007	G'	3.4	0	1.8	18	-0.01
4/26/2007	H'	2.1	0	11	8.6	-0.05
6/28/2007	H'	0.6	0	11.9	6.6	-0.15
10/11/2007	H'	2.7	0	12.4	7.8	-0.05
12/20/2007	H'	6.6	0	12	11.3	-0.1
4/26/2007	I'	2329	3.95	1.4	2.8	0
6/28/2007	I'	1240	1.35	4.9	5.6	-0.1
10/11/2007	I'	2385	2.35	2	2.2	-0.03
12/20/2007	I'	2044	1.65	6.9	2.6	0
4/26/2007	J'	0.4	0	20.9	0	0
6/28/2007	J'	46.8	0	20.9	0	0
10/11/2007	J'	0.2	0	20.9	0	-0.05
12/20/2007	J'	13.1	0	10.5	7.6	-0.04
4/26/2007	K'	4.5	0	7	10.6	0
6/28/2007	K'	1	0	20.9	0	-0.15
10/11/2007	K'	1.6	0	20.9	0.02	-0.05
12/20/2007	K'	4.2	0	5.7	13	-0.04
4/26/2007	L'	36.8	0	2.7	18	0
6/28/2007	L'	27.7	0	20.6	0.2	-0.175
10/11/2007	L'	16.5	0	20.9	0.1	-0.15
12/20/2007	L'	4.6	0	20.9	0	-0.06
4/26/2007	M'	> 9999	13	8.2	11.2	0
6/28/2007	M'	739	0.75	7	12	-0.05
10/11/2007	M'	71	6	14.6	6.4	0
12/20/2007	M'	4732	20.5	8.1	14	-0.02
4/26/2007	N'	481	0	20.9	0	0
6/28/2007	N'	106	0.35	20	1	-0.1
10/11/2007	N'	3258	38	16.5	7.8	-0.08
12/20/2007	N'	85	55.5	17.1	10	0.2

Table 6.0
Field Data Summary for Cluster Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Well ID		VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
4/26/2007	A"1		0	0	19.2	0.22	0
6/28/2007	A"1		0	0	19.2	1.8	-0.05
10/11/2007	A"1		0.2	0.15	19.9	0.7	-0.05
12/20/2007	A"1		0.1	0	19.7	1	0
4/26/2007	B"1	>	9999	43	26.2	9.8	0
6/28/2007	B"1		8000	2.175	14.8	9.2	-0.5
10/11/2007	B"1	>	9999	44	11.9	10.2	0.5
12/20/2007	B"1		3500	35	17.5	7.8	0
4/26/2007	C"1		11.5	0	20.9	0	0
6/28/2007	C"1		23	0	20.9	0	-0.4
10/11/2007	C"1		0.3	0.25	20.7	0.1	0.05
12/20/2007	C"1		2	0	20.9	0	0
4/26/2007	D"1	>	9999	34	2.4	18	0
6/28/2007	D"1		90.1	0	15.8	3.2	-0.5
10/11/2007	D"1	>	9999	41.5	6.8	18.8	-0.45
12/20/2007	D"1	>	9999	41.5	6.2	19.4	-0.4
4/26/2007	E"1		0.6	0	20.9	0	-0.75
6/28/2007	E"1		0	0	20.9	0	-0.05
10/11/2007	E"1		0.2	0	20.9	0	-0.1
12/20/2007	E"1		0.1	0	20.9	0	-0.05
4/26/2007	F"1		0.4	0	9	9.6	-0.05
6/28/2007	F"1		10.2	0	20.1	0.2	-0.05
10/11/2007	F"1		0	0	20.9	0	-0.05
12/20/2007	F"1		14.4	0	9.8	11.8	-0.1
4/26/2007	G"1		0	0	15.2	5.2	-0.05
6/28/2007	G"1		0	0	20.1	0.6	-0.1
10/11/2007	G"1		0	0	14.4	3.9	-0.05
12/20/2007	G"1		0	0	15.1	6.2	-0.1
4/26/2007	H"1		0	0	20.9	0	0
6/28/2007	H"1		0.6	0	20.9	0	0
10/11/2007	H"1		0	0	20.9	0	-0.05
12/20/2007	H"1		19	0	20.9	0	-0.02
4/26/2007	I"1		2410	4.45	0	16.4	0
6/28/2007	I"1		192	0.0025	18.3	1.4	-0.05
10/11/2007	I"1		3105	3.35	0	16.8	-0.05
12/20/2007	I"1		920	3.3	0	18	-0.08
4/26/2007	J"1		1.5	0	20.9	0	0
6/28/2007	J"1		1.5	0	20.9	0	-0.1
10/11/2007	J"1		0.1	0	20.9	0	-0.01
12/20/2007	J"1		3.5	0	20.9	0	0
4/26/2007	K"1		0.5	0	20.9	0	0
6/28/2007	K"1		0.5	0	20	1	-0.05
10/11/2007	K"1		5	0	20.9	0.4	-0.05
12/20/2007	K"1		18.1	0	19.6	2.3	-0.04
4/26/2007	L"1	>	9999	45.5	2.7	17.4	0
6/28/2007	L"1	>	9999	43.5	3.9	16.8	-0.25
10/11/2007	L"1	>	9999	37.5	8.3	13.2	0.15
12/20/2007	L"1	>	9999	34	8.2	12.8	0.14
4/26/2007	M"1		7154	2.1	8.2	10.2	0
6/28/2007	M"1		3020	1.1	9.8	9.2	-0.15
10/11/2007	M"1		1139	0.3	6	6.2	-0.15
12/20/2007	M"1		2486	0.7	12	7.8	-0.1

Table 6.0
Field Data Summary for Cluster Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Well ID		VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
4/26/2007	A"2		0.1	0	20.9	0	0
6/28/2007	A"2		0	0	20.9	0	-0.05
10/11/2007	A"2		0	0.15	20.9	0.8	-0.1
12/20/2007	A"2		0.2	0	20.9	0	-0.14
4/26/2007	B"2	>	9999	37.5	16.3	14.2	0
6/28/2007	B"2		102	0	20.4	0.4	0
10/11/2007	B"2	>	9999	37.5	13.9	9.2	0.12
12/20/2007	B"2	>	9999	35.5	16.1	9.2	0
4/26/2007	C"2	>	9999	45.5	28.1	9.2	0
6/28/2007	C"2		3250	1.525	11.6	10	-0.35
10/11/2007	C"2	>	9999	38	11.9	10.6	0.4
12/20/2007	C"2	>	9999	35.5	12.8	7.6	0.2
4/26/2007	D"2		3.6	0	20.9	0	0
6/28/2007	D"2		75.4	0	20.9	0	-0.25
10/11/2007	D"2		331	0.75	14.4	4	-0.4
12/20/2007	D"2		201	0.4	17.7	2	-0.12
4/26/2007	E"2		0	0	17.8	2.4	0
6/28/2007	E"2		0	0	19.8	1.2	-0.05
10/11/2007	E"2		0	0	19.6	0.56	-0.02
12/20/2007	E"2		0	0	19.4	1.02	-0.05
4/26/2007	F"2		0	0	20.6	0	-0.05
6/28/2007	F"2		0.2	0	8	10	-0.05
10/11/2007	F"2		7.8	0	20.2	0.4	-0.05
12/20/2007	F"2		149	0	20.9	0.4	-0.1
4/26/2007	G"2		0.1	0	18.7	1.2	0
6/28/2007	G"2		0	0	18.7	1.2	-0.05
10/11/2007	G"2		0	0	18.8	0.6	-0.02
12/20/2007	G"2		0	0	19.7	0.8	-0.05
4/26/2007	H"2		0.2	0	20.9	0	0
6/28/2007	H"2		0	0	20.9	0	-0.05
10/11/2007	H"2		0	0	20.9	0.04	-0.05
12/20/2007	H"2		22.3	0	20.9	0	-0.02
4/26/2007	I"2		562	1.1	7.3	9.6	0
6/28/2007	I"2		50.4	0.005	18.2	4.4	-0.05
10/11/2007	I"2		528	1.65	0	17.4	-0.06
12/20/2007	I"2		225	1.55	0	18.5	-0.12
4/26/2007	J"2		935	7.5	0.5	21.8	0
6/28/2007	J"2		720	0.425	0.7	20.8	-0.1
10/11/2007	J"2		860	7.5	0.4	22.2	-0.01
12/20/2007	J"2		657	0.35	1.3	22.8	-0.02
4/26/2007	K"2	>	9999	5	8.7	14.6	0
6/28/2007	K"2		8406	9.5	7.9	14.2	-0.15
10/11/2007	K"2	>	9999	2.55	10.9	13.2	-0.1
12/20/2007	K"2		3228	1.3	10	15.6	-0.06
4/26/2007	L"2	>	9999	27.5	28.5	9	0
6/28/2007	L"2		3375	1.6	11.4	10	-1.25
10/11/2007	L"2	>	9999	29	11.7	10	0.9
12/20/2007	L"2	>	9999	20	12.4	8.4	0.5
4/26/2007	M"2		2369	0.65	4.9	14.2	0
6/28/2007	M"2		790	0.25	5.7	13.6	-0.15
10/11/2007	M"2		118	0	0	12.8	-0.2
12/20/2007	M"2		250	0.1	8.1	13	-0.14

Table 6.0
Field Data Summary for Cluster Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Well ID		VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
4/26/2007	A"3		0.1	0	20.9	0	0
6/28/2007	A"3		0	0	20.9	0	-0.1
10/11/2007	A"3		0.1	0.15	20.9	0.06	-0.2
12/20/2007	A"3		0.1	0	20.9	0	0
4/26/2007	B"3		6728	33.5	19.5	13.2	0
6/28/2007	B"3		1480	0.25	14.8	8	-0.2
10/11/2007	B"3	>	9999	35	14.9	9.6	0.24
12/20/2007	B"3	>	9999	33	16.3	8.2	0
4/26/2007	C"3		15.9	0	20.9	0	0
6/28/2007	C"3		510	0	20.9	0	-0.25
10/11/2007	C"3		1.4	0.2	20.9	0	-0.18
12/20/2007	C"3		36.3	0	20.9	0	0
4/26/2007	D"3	>	9999	18	0.5	16.6	0
6/28/2007	D"3		4.3	0	20.4	0.2	-0.45
10/11/2007	D"3		9074	1.8	10	13.4	0
12/20/2007	D"3	>	9999	4.2	5.4	13.4	-0.16
4/26/2007	E"3		0.2	0	20.9	0	0
6/28/2007	E"3		0	0	20.9	0	-0.05
10/11/2007	E"3		0.1	0	20.9	0	-0.01
12/20/2007	E"3		0.1	0	20.9	0	-0.2
4/26/2007	F"3		0	0	20.5	0	0
6/28/2007	F"3		4.5	0	20.9	0	-0.025
10/11/2007	F"3		0	0	20.9	0.08	0
12/20/2007	F"3		141	0	20.9	0	-0.1
4/26/2007	G"3		0.9	0	5.5	14.4	0
6/28/2007	G"3		0	0	5.3	14.4	-0.05
10/11/2007	G"3		0.2	0	6.7	15.4	-0.02
12/20/2007	G"3		0.1	0	6.8	17.3	-0.15
4/26/2007	H"3		0.1	0	9.2	9.8	0
6/28/2007	H"3		0	0	7.7	1	-0.1
10/11/2007	H"3		2.7	0	8.7	10	-0.08
12/20/2007	H"3		2.3	0	8.8	12.2	-0.04
4/26/2007	I"3		238	0.35	12.7	5.4	0
6/28/2007	I"3		0.8	0	20.9	0	-0.05
10/11/2007	I"3		0.1	0	20.9	0.02	-0.03
12/20/2007	I"3		115	0.1	6.2	11.9	-0.02
4/26/2007	J"3		1.1	0	6.7	13.2	0
6/28/2007	J"3		1.5	0	14.1	5.2	-0.1
10/11/2007	J"3		36	0	13	6	-0.08
12/20/2007	J"3		2.9	0	13.8	6.6	-0.02
4/26/2007	K"3		3.2	0	20.9	0	0
6/28/2007	K"3		9.9	0	20.9	0	-0.05
10/11/2007	K"3		0.5	0	20.9	0.06	-0.01
12/20/2007	K"3		380	0	20.9	0	-0.02
4/26/2007	L"3		35.2	0	20.9	0	0
6/28/2007	L"3		198	0	20.7	0	0
10/11/2007	L"3		971	0.05	20.9	0.02	0
12/20/2007	L"3		3255	0.25	20.9	0	0.06
4/26/2007	M"3		113	0	20.9	0	0
6/28/2007	M"3		80		20.7	0	-0.05
10/11/2007	M"3		0	0	20.9	0.04	0
12/20/2007	M"3		122	0	20.9	0	-0.04

Table 7.0
Field Data Summary for SVE Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
4/26/2007	SVE 1	4431	1.35	18.8	1.6	-20
6/28/2007	SVE 1	9350	19.5	10.4	9	-3
10/11/2007	SVE 1	> 9999	20.5	13.6	8.2	-30
12/20/2007	SVE 1	> 9999	20	12.8	9.2	-16
4/26/2007	SVE 2	> 9999	25.5	18.2	10	-5
6/28/2007	SVE 2	5002	24	13.9	11	-8
10/11/2007	SVE 2	> 9999	31.5	13.8	11	-2.5
12/20/2007	SVE 2	> 9999	30.5	15.2	9.8	-2
4/26/2007	SVE 3	> 9999	19.5	27.7	8	-5
6/28/2007	SVE 3	7904	25	11.5	9.2	-6
10/11/2007	SVE 3	> 9999	28.5	11	10	3.5
12/20/2007	SVE 3	> 9999	21.5	12.6	9	1.5
4/26/2007	SVE 4	> 9999	21	29.3	8.2	-5
6/28/2007	SVE 4	> 9999	28	12	9.4	-11
10/11/2007	SVE 4	> 9999	28.5	11.8	9.8	4.5
12/20/2007	SVE 4	> 9999	22.5	12.4	9.2	3
4/26/2007	SVE 5	> 9999	40	14.5	12.8	-10
6/28/2007	SVE 5	7920	24.5	14.4	6.4	-8
10/11/2007	SVE 5	> 9999	52	11.2	11.2	-3
12/20/2007	SVE 5	> 9999	45.5	15.2	10.2	-1.5
4/26/2007	SVE 6	> 9999	38.5	5.8	10.8	-60
6/28/2007	SVE 6	> 9999	34.5	6.4	10.2	-62
10/11/2007	SVE 6	> 9999	36	4.8	8.6	-20
12/20/2007	SVE 6	> 9999	32	10.6	9	-11
4/26/2007	SVE 7	9694	65	13.6	8.4	-20
6/28/2007	SVE 7	1700	14	14	5.4	-18
10/11/2007	SVE 7	> 9999	10	14.3	11	-0.1
12/20/2007	SVE 7	> 9999	49.5	10.9	13	-3.5
4/26/2007	SVE 8	> 9999	20.5	28.8	7.8	-10
6/28/2007	SVE 8	9017	24.5	12.5	9.2	-6
10/11/2007	SVE 8	> 9999	27.5	12	9.6	4.5
12/20/2007	SVE 8	> 9999	20	12.9	8.6	3.5
4/26/2007	SVE 9	> 9999	19.5	29	7.8	-30
6/28/2007	SVE 9	> 9999	26	12.2	9.8	-4
10/11/2007	SVE 9	> 9999	28	7.8	9.8	4.5
12/20/2007	SVE 9	> 9999	21.5	12.6	9	1
4/26/2007	SVE 10	> 9999	39.5	10.8	13.6	-50
6/28/2007	SVE 10	4010	38.5	7.6	11.4	-48
10/11/2007	SVE 10	> 9999	42	7.1	10.6	-16
12/20/2007	SVE 10	> 9999	40.5	9.2	11.9	-5.5
4/26/2007	SVE 11	> 9999	30	25.8	10	-15
6/28/2007	SVE 11	7609	35.5	11.6	10	-12
10/11/2007	SVE 11	> 9999	30	8.5	10.4	-3
12/20/2007	SVE 11	> 9999	27.5	12.9	7	-1.5
4/26/2007	SVE 12	> 9999	7	22.6	4.8	-50
6/28/2007	SVE 12	8146	4.25	17.2	3.2	-46
10/11/2007	SVE 12	> 9999	18	5.6	7.4	-26

Table 7.0
Field Data Summary for SVE Wells
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Pressure (in. water)
12/20/2007	SVE 12	> 9999	17	13.9	7.6	-9
4/26/2007	SVE 13	> 9999	17	4.7	1.8	-40
6/28/2007	SVE 13	5151	20	3.3	1.8	-8
10/11/2007	SVE 13	> 9999	22	2.1	1.8	-0.1
12/20/2007	SVE 13	> 9999	0.93	3	2	-0.18
4/26/2007	SVE 14	1850	0.9	1.2	17.4	-9
6/28/2007	SVE 14	1568	16	1.2	16.8	-10
10/11/2007	SVE 14	1826	0.6	1.2	19.4	-0.1
12/20/2007	SVE 14	1610	0.45	0.4	21.6	0.05
4/26/2007	SVE 15A	4224	1.35	0.5	14.8	-10
6/28/2007	SVE 15A	3209	26	0.3	14.8	-10
10/11/2007	SVE 15A	4369	1.35	0	15.6	-0.1
12/20/2007	SVE 15A	3890	1.2	0	16	-0.05
4/26/2007	SVE 15B	1172	0.3	3.4	16.2	-10
6/28/2007	SVE 15B	750	5	0.6	17.6	-10
10/11/2007	SVE 15B	367	0.1	1.7	18.6	-0.4
12/20/2007	SVE 15B	321	0.05	1.2	20	0
4/26/2007	SVE 16	4028	1.9	1.1	12.4	-10
6/28/2007	SVE 16	2958	32	0.5	12	-10
10/11/2007	SVE 16	4220	1.65	0	13.6	0.1
12/20/2007	SVE 16	4203	1.55	0	14.2	0
4/26/2007	SVE 18	64	0	8.6	11.2	-7
6/28/2007	SVE 18	146	1	6.9	12	-8
10/11/2007	SVE 18	10	0	7.2	13.2	0.06
12/20/2007	SVE 18	6	0	8.1	14.9	-0.05
4/26/2007	SVE 19	391	0.2	2.2	14.6	-5
6/28/2007	SVE 19	462	5	0.4	15.4	-6
10/11/2007	SVE 19	515	0.25	0	17.2	-0.1
12/20/2007	SVE 19	432	0.1	0	20	-0.05
4/26/2007	SVE 20A	1465	1.25	1.1	16.2	-10
6/28/2007	SVE 20A	1418	24	0.9	15.4	-12
10/11/2007	SVE 20A	1816	1.1	0	18	-0.7
12/20/2007	SVE 20A	1650	0.95	0	18.6	-1.5
4/26/2007	SVE 20B	2048	3.85	1.2	16.2	-10
6/28/2007	SVE 20B	1640	75	0.4	16.2	-20
10/11/2007	SVE 20B	2925	0.3	0	17.8	-0.1
12/20/2007	SVE 20B	2529	3.1	0.4	18.2	-0.1
4/26/2007	SVE 21	671	0.6	2.5	12	-50
6/28/2007	SVE 21	782	15	5.3	13.4	-24
10/11/2007	SVE 21	758	12	3.1	15.6	-0.1
12/20/2007	SVE 21	212	0.2	9	12.5	0

Table 8.0
Laboratory Data Summary for SVE/IBT Enclosure (Stations 1-4)
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Sample ID	Benzene (ppm)	Oxygen (%)	Carbon Dioxide (%)	Nitrogen (%)	Carbon Monoxide (%)	Methane (%)
3/22/2007	INLET	22000	9.2	11	79	ND	ND
4/19/2007	INLET	9300	21	10	69	ND	ND
5/17/2007	INLET	21000	16	9.1	75	ND	ND
6/28/2007	INLET	28000	14	9.5	77	ND	ND
7/26/2007	INLET	NA	20	9.3	71	ND	ND
8/23/2007	INLET	29000	20	9.4	71	ND	ND
9/27/2007	INLET	31000	18	9.4	73	ND	ND
10/25/2007	INLET	33000	15	9.2	76	ND	ND
11/29/2007	INLET	NA	20	8	72	ND	ND
12/19/2007	INLET	22000	14	8.4	78	ND	ND
8/23/2007	INLET DUP	19000	20	9.3	71	ND	ND
9/27/2007	INLET DUP	18000	18	9.2	73	ND	ND
10/25/2007	INLET DUP	2100	15	8.9	76	ND	ND
12/19/2007	INLET DUP	17000	14	8	78	ND	ND
3/22/2007	POST AMBIENT AIR	1600	21	0.7	79	ND	ND
4/19/2007	POST AMBIENT AIR	300	21	1.2	77	ND	ND
5/17/2007	POST AMBIENT AIR	5400	21	1.3	78	ND	ND
6/28/2007	POST AMBIENT AIR	4500	20	1.6	78	ND	ND
7/26/2007	POST AMBIENT AIR	2000	22	0.59	78	ND	ND
8/23/2007	POST AMBIENT AIR	1200	21	0.58	78	ND	ND
9/27/2007	POST AMBIENT AIR	ND	22	0.1	78	ND	ND
10/25/2007	POST AMBIENT AIR	950	22	0.38	78	ND	ND
11/29/2007	POST AMBIENT AIR	ND	21	0.1	78	ND	ND
12/19/2007	POST AMBIENT AIR	2500	21	1.1	78	ND	ND
3/22/2007	CARBON 1	27	21	0.86	79	ND	ND
5/17/2007	CARBON 1	3600	21	1.2	78	ND	ND
6/28/2007	CARBON 1	41	20	1.5	78	ND	ND
7/26/2007	CARBON 1	1000	21	0.32	78	ND	ND
8/23/2007	CARBON 1	2.9	22	0.13	78	ND	ND
9/27/2007	CARBON 1	1100	22	0.1	78	ND	ND
10/25/2007	CARBON 1	230	22	0.34	78	ND	ND
11/29/2007	CARBON 1	320	22	0.1	78	ND	ND
12/19/2007	CARBON 1	420	21	1.1	78	ND	ND
3/22/2007	EFFLUENT	ND	20	0.98	79	ND	ND
4/19/2007	EFFLUENT	ND	21	1.1	77	ND	ND
5/17/2007	EFFLUENT	ND	21	1.3	78	ND	ND
6/28/2007	EFFLUENT	ND	21	1.6	78	ND	ND
7/26/2007	EFFLUENT	ND	21	0.67	78	ND	ND
8/23/2007	EFFLUENT	ND	22	0.66	78	ND	ND
9/27/2007	EFFLUENT	3.4	22	0.1	78	ND	ND
10/25/2007	EFFLUENT	ND	21	0.43	78	ND	ND
11/29/2007	EFFLUENT	ND	22	0.1	78	ND	ND
12/19/2007	EFFLUENT	ND	21	1.1	78	ND	ND

NA: 53 ppm and 67 ppm of benzene were detected on 7/26 and 11/29. C2 REM suspects that there were some errors in sample collection and these concentrations were not used for calculation of the average.

ND: Benzene Concentration <1.6 of Reporting Limit
ND: Carbon Monoxide Concentration <0.1 of Reporting Limit
ND: Methane Concentration <0.1 of Reporting Limit

Table 9.0
Field Data Summary for SVE/IBT Enclosure (Stations 1-4)
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)
11/15/2006	INLET	9999	31.5	16.7	12.2
11/29/2006	INLET	9999	29.5	17.5	13.4
1/31/2007	INLET	9999	38	19.1	11.6
2/21/2007	INLET	9999	25.5	15.6	13.2
3/8/2007	INLET	9999	26	7.9	14.6
3/16/2007	INLET	9999	40	6.3	15.8
3/22/2007	INLET	9999	37.5	6.1	14.2
3/28/2007	INLET	9999	39.5	5.1	15.6
4/5/2007	INLET	9999	2.05	9.2	15
4/13/2007	INLET	9999	27.5	16.8	10.8
4/19/2007	INLET	9999	27	18.5	10.2
4/27/2007	INLET	9999	1.25	18.6	3.2
5/3/2007	INLET	9999	29	20.8	9.6
5/10/2007	INLET	9999	26	16.3	8.6
5/17/2007	INLET	9999	27	14.3	9.4
5/24/2007	INLET	9999	26	13.7	9.2
5/31/2007	INLET	9999	29.5	16.4	9.6
6/15/2007	INLET	9999	25	15	9.2
6/22/2007	INLET	9999	27	13.2	9
6/28/2007	INLET	9999	25	12	9.6
7/5/2007	INLET	9999	23	10.7	9.8
7/19/2007	INLET	9999	21.5	17.2	9
7/26/2007	INLET	9999	26.5	17.6	9.6
8/9/2007	INLET	9999	27	11.4	10.4
8/16/2007	INLET	9999	21.5	16.4	8.4
8/23/2007	INLET	9999	24.5	17.1	9.2
8/31/2007	INLET	9999	25	18.1	9.2
9/6/2007	INLET	9999	25	19.2	9.6
9/13/2007	INLET	9999	25	19.5	9
9/20/2007	INLET	9999	25	15	9.6
9/27/2007	INLET	9999	25.5	16.1	9.4
10/4/2007	INLET	9999	24.5	14.2	9.6
10/11/2007	INLET	9999	26.5	12	10.8
10/18/2007	INLET	9999	22	15.1	8.8
10/25/2007	INLET	9999	23	12.7	8.8
11/1/2007	INLET	9999	21.5	15.6	9
11/8/2007	INLET	9999	22	16.8	9
11/15/2007	INLET	9999	22.5	16.8	8
11/21/2007	INLET	9999	22.5	17.1	8.6
11/29/2007	INLET	9999	21	18	8.2
12/6/2007	INLET	9999	6.5	17.9	4.2
12/13/2007	INLET	9999	7.5	16.5	7
12/19/2007	INLET	9999	17	13.1	8.4
12/28/2007	INLET	9999	3.45	12.2	NA

Table 9.0
Field Data Summary for SVE/IBT Enclosure (Stations 1-4)
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)
11/15/2006	POST AMBIENT AIR	9999	2.5	20.3	2.6
11/29/2006	POST AMBIENT AIR	9999	2.3	20.5	2.8
1/31/2007	POST AMBIENT AIR	1518	0.3	20.9	0.4
2/21/2007	POST AMBIENT AIR	1235	0.35	20.9	0.8
3/8/2007	POST AMBIENT AIR	2392	0.7	19.3	1.4
3/16/2007	POST AMBIENT AIR	725	0.15	20.9	0.4
3/22/2007	POST AMBIENT AIR	1803	0.6	19.3	1
3/28/2007	POST AMBIENT AIR	2331	0.55	20	1
4/5/2007	POST AMBIENT AIR	1722	0.4	20.2	0.8
4/13/2007	POST AMBIENT AIR	3066	0.8	20.9	1.2
4/19/2007	POST AMBIENT AIR	1060	0.8	20.9	1.2
4/27/2007	POST AMBIENT AIR	2038	0.75	20.8	1.2
5/3/2007	POST AMBIENT AIR	3262	1	20.9	1.2
5/10/2007	POST AMBIENT AIR	4032	0.95	20.9	1
5/17/2007	POST AMBIENT AIR	4749	1.15	20.5	1.4
5/24/2007	POST AMBIENT AIR	4682	1.2	20.1	1.6
5/31/2007	POST AMBIENT AIR	5262	1.25	20.9	1.4
6/15/2007	POST AMBIENT AIR	3964	0.6	20.8	1
6/22/2007	POST AMBIENT AIR	4809	1.05	19.6	1.2
6/28/2007	POST AMBIENT AIR	4102	1.4	19.1	1.8
7/5/2007	POST AMBIENT AIR	702	0.15	20.9	0.6
7/19/2007	POST AMBIENT AIR	1378	0.3	20.9	0.8
7/26/2007	POST AMBIENT AIR	1742	0.4	20.7	0.6
8/9/2007	POST AMBIENT AIR	2513	0.6	19.6	1
8/16/2007	POST AMBIENT AIR	2306	0.4	20.9	0.8
8/23/2007	POST AMBIENT AIR	1401	0.35	20.9	0.6
8/31/2007	POST AMBIENT AIR	1559	0.35	20.9	0.6
9/6/2007	POST AMBIENT AIR	1363	0.35	21	0.6
9/13/2007	POST AMBIENT AIR	1547	0.4	20.9	0.6
9/20/2007	POST AMBIENT AIR	1060	0.2	21	0.4
9/27/2007	POST AMBIENT AIR	19	0	20.9	0
10/4/2007	POST AMBIENT AIR	1120	0.25	20.9	0.4
10/11/2007	POST AMBIENT AIR	1220	0.25	20.9	0.4
10/18/2007	POST AMBIENT AIR	1630	0.2	20.7	0.4
10/25/2007	POST AMBIENT AIR	1020	0.2	20.3	0.4
11/1/2007	POST AMBIENT AIR	413	0.1	20.9	0.2
11/8/2007	POST AMBIENT AIR	808	0.2	20.9	0.4
11/15/2007	POST AMBIENT AIR	854	0.15	20.6	0.2
11/21/2007	POST AMBIENT AIR	502	0.15	20.8	0.2
11/29/2007	POST AMBIENT AIR	20.9	0	20.9	0
12/6/2007	POST AMBIENT AIR	16.5	0	20.9	0
12/13/2007	POST AMBIENT AIR	0.2	0	20.9	0
12/19/2007	POST AMBIENT AIR	2993	0.8	19.9	1.2
12/28/2007	POST AMBIENT AIR	19.4	0	20.9	NA

Table 9.0
Field Data Summary for SVE/IBT Enclosure (Stations 1-4)
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)
11/15/2006	CARBON 1	437	0.05	20.9	0.2
11/29/2006	CARBON 1	701	0.1	20.9	1.2
1/31/2007	CARBON 1	1	0	20.9	40
2/21/2007	CARBON 1	95.6	0	20.9	0
3/8/2007	CARBON 1	804	0.15	20	1
3/16/2007	CARBON 1	1200	0.25	18.6	1.8
3/22/2007	CARBON 1	60	0	20.7	0.6
3/28/2007	CARBON 1	18.2	0	20.9	0.6
4/5/2007	CARBON 1	81	0	19.3	40
4/13/2007	CARBON 1	574	0.1	20.9	0.4
4/19/2007	CARBON 1	9999	0.2	20.9	0.4
4/27/2007	CARBON 1	NA	NA	NA	NA
5/3/2007	CARBON 1	37.9	0.05	20.9	0.6
5/10/2007	CARBON 1	393	0.1	20.9	0.4
5/17/2007	CARBON 1	3024	0.55	20.9	0.6
5/24/2007	CARBON 1	11.9	NA	20.9	0
5/31/2007	CARBON 1	29.5	0.05	20.9	0.6
6/15/2007	CARBON 1	103	0	20.9	0
6/22/2007	CARBON 1	31.5	0	20.9	0
6/28/2007	CARBON 1	45.1	0.05	20.2	1
7/5/2007	CARBON 1	75	0	20.9	0
7/19/2007	CARBON 1	826	0.2	20.9	0.4
7/26/2007	CARBON 1	1111	0.25	20.9	0
8/9/2007	CARBON 1	2	0.1	20.2	0.2
8/16/2007	CARBON 1	7.5	0	20.9	0
8/23/2007	CARBON 1	21.6	0	20.9	0.4
8/31/2007	CARBON 1	11.4	0	20.9	0
9/6/2007	CARBON 1	NA	NA	NA	NA
9/13/2007	CARBON 1	877	0.15	20.9	0.2
9/20/2007	CARBON 1	451	0.05	20	0
9/27/2007	CARBON 1	957	0.25	20.9	0
10/4/2007	CARBON 1	145	0	20.9	0.2
10/11/2007	CARBON 1	72.2	0.05	20.9	0.2
10/18/2007	CARBON 1	36.6	0	20.3	0
10/25/2007	CARBON 1	185	0	20.4	0
11/1/2007	CARBON 1	3	0	20.9	0
11/8/2007	CARBON 1	315	0.05	20.9	0.4
11/15/2007	CARBON 1	1497	0.25	20.6	0.2
11/21/2007	CARBON 1	400	0	20.9	0
11/29/2007	CARBON 1	520	0.1	20.9	0
12/6/2007	CARBON 1	415	0	20.9	0
12/13/2007	CARBON 1	140	0	20.9	0
12/19/2007	CARBON 1	372	0.05	20.1	1.2
12/28/2007	CARBON 1	87.3	0	20.9	NA

Table 9.0
Field Data Summary for SVE/IBT Enclosure (Stations 1-4)
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

Date	Location ID	VOCs (ppm)	Methane (%)	Oxygen (%)	Carbon Dioxide (%)
11/15/2006	EFFLUENT	1.8	0	20.4	2.4
11/29/2006	EFFLUENT	0	0	20.8	2.6
1/31/2007	EFFLUENT	0	0	20.9	0.6
2/21/2007	EFFLUENT	0.4	0	20.9	1
3/8/2007	EFFLUENT	0.3	0	19.4	1.2
3/16/2007	EFFLUENT	0	0	20.7	2
3/22/2007	EFFLUENT	0	0	19.8	1.2
3/28/2007	EFFLUENT	0	0	20	1
4/5/2007	EFFLUENT	0	0	18.9	1
4/13/2007	EFFLUENT	0.3	0	20.9	1.2
4/19/2007	EFFLUENT	1	0	20.9	1.2
4/27/2007	EFFLUENT	0.5	0	20.9	1.2
5/3/2007	EFFLUENT	2.7	0.05	20.9	1.2
5/10/2007	EFFLUENT	0	0	20.9	0.8
5/17/2007	EFFLUENT	0.1	0	20.5	1.2
5/24/2007	EFFLUENT	0	NA	20.9	1.4
5/31/2007	EFFLUENT	0.5	0.05	20.9	1.6
6/15/2007	EFFLUENT	0.1	0	20.9	0.8
6/22/2007	EFFLUENT	0.7	0	20	1.2
6/28/2007	EFFLUENT	5.6	0	19.2	1.8
7/5/2007	EFFLUENT	0.1	0	20.7	1.2
7/19/2007	EFFLUENT	1.6	0	20.9	0.6
7/26/2007	EFFLUENT	3.4	0	20.9	0.8
8/9/2007	EFFLUENT	0	0	20.2	0.8
8/16/2007	EFFLUENT	0.1	0	20.9	0.4
8/23/2007	EFFLUENT	0	0	20.9	0.6
8/31/2007	EFFLUENT	0.4	0	20.9	0.6
9/6/2007	EFFLUENT	0	0	21	0.6
9/13/2007	EFFLUENT	0.1	0	20.9	0.6
9/20/2007	EFFLUENT	0	0	20	0.4
9/27/2007	EFFLUENT	2.3	0	20.9	0
10/4/2007	EFFLUENT	0.1	0	20	0.4
10/11/2007	EFFLUENT	0.1	0	20.9	0
10/18/2007	EFFLUENT	0.7	0	20.5	0.4
10/25/2007	EFFLUENT	0.3	0	20.5	0.4
11/1/2007	EFFLUENT	0.1	0	20.9	0.4
11/8/2007	EFFLUENT	0	0	20.9	0.4
11/15/2007	EFFLUENT	0	0	20.6	0.2
11/21/2007	EFFLUENT	0.1	0	20.8	0
11/29/2007	EFFLUENT	0.1	0	20.9	0
12/6/2007	EFFLUENT	0	0	20.9	0
12/13/2007	EFFLUENT	0	0	20.9	0
12/19/2007	EFFLUENT	0	0	20.1	1.2
12/28/2007	EFFLUENT	0	0	20.9	NA

Table 10.0
Oxygen Utilization Test Results
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits

O_2 %	Feb	May	Jun	Jul	Sep	Oct_1	Oct_2	Nov	Average O_2 Utilizataion Rate
18	*	*	0.0005	0	0.0016	*	*	0.0002	0.0006
17	0.0009	0.0011	0.001	0.0003	0.005	*	*	0.0000008	0.0014
16	0.0001	0.0015	0.0002	0.0041	0.001	*	*	0.00005	0.0012
15	0.0053	0.0007	0.0005	0.0049	0.0009	0.0028	0.0005	0.0003	0.0020
14	*	0.0006	0.0004	0.0014	0.0003	0.0013	0.0003	0.0001	0.0006
13	0.0017	0.0005	0.0002	0.0003	*	0.004	0.0004	0.0002	0.0010
12	0.0026	0.0008	0.00007	0.0004	*	*	*	0.0002	0.0008
11	0.0023	0	*	*	*	*	*	*	0.0012
10	0.0013	*	*	*	*	*	*	*	0.0013
9	0.0007	*	*	*	*	*	*	*	0.0007
8	0.0002	*	*	*	*	*	*	*	0.0002

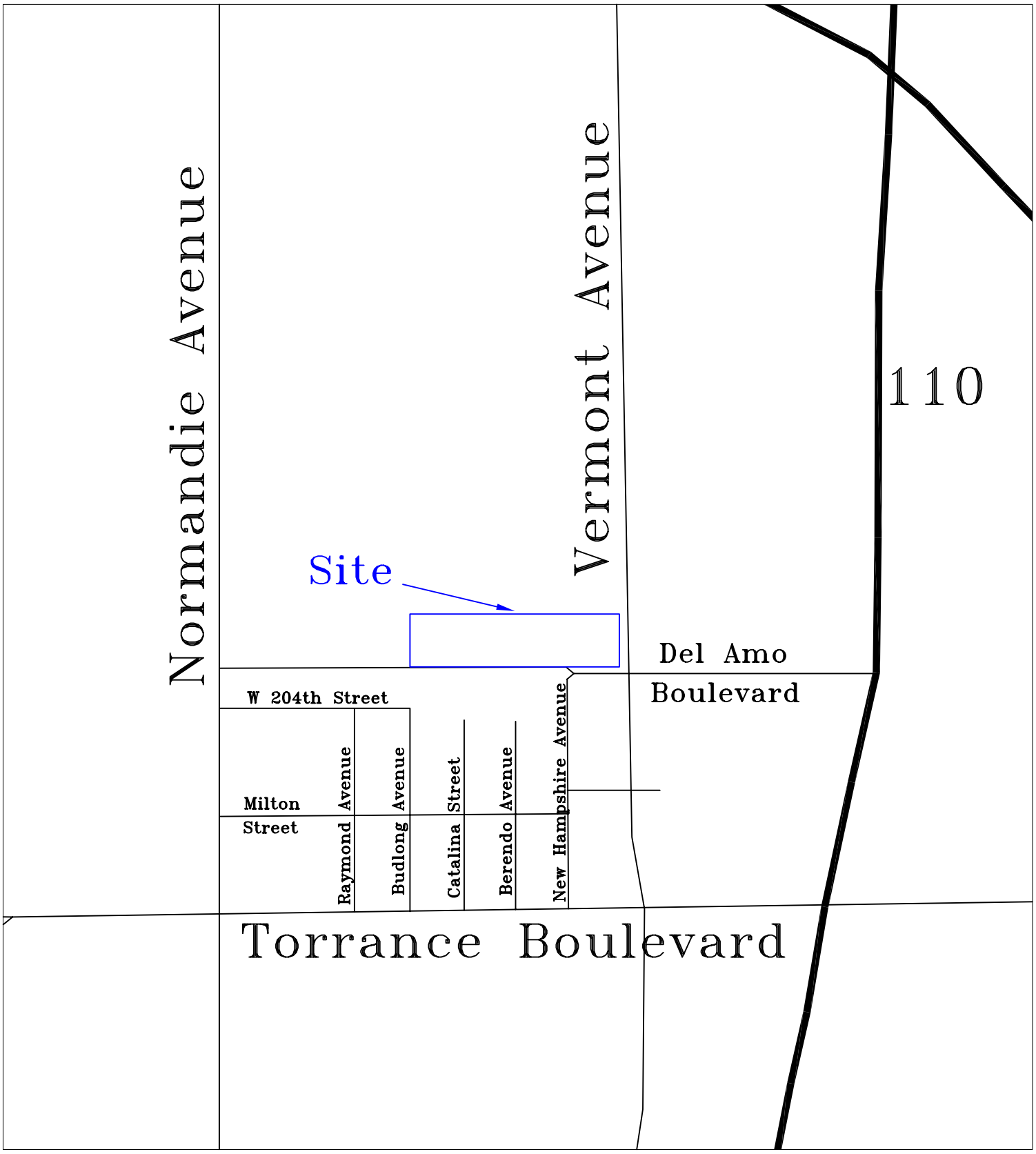


FIGURE 1.0

Site Vicinity Map

Del Amo Waste Pits

AN ENVIRONMENTAL MANAGEMENT & DEVELOPMENT COMPANY

NEWPORT BEACH, CALIFORNIA 949.261.8098

LEGEND

- Soil Vapor Extraction (SVE) Concentration Monitoring Cluster
- Soil Vapor Extraction (SVE) Perimeter Well
- Soil Vapor Extraction (SVE) Pressure and Performance Standard Well Location
- Soil Vapor Extraction (SVE) Well Location
- SVE/IBT Extraction Well
- SVE/IBT Injection Well

FIGURE 2.0

Well Location Map

Del Amo Waste Pits

C2REM

AN ENVIRONMENTAL MANAGEMENT & DEVELOPMENT COMPANY

NEWPORT BEACH, CALIFORNIA 949.261.8006

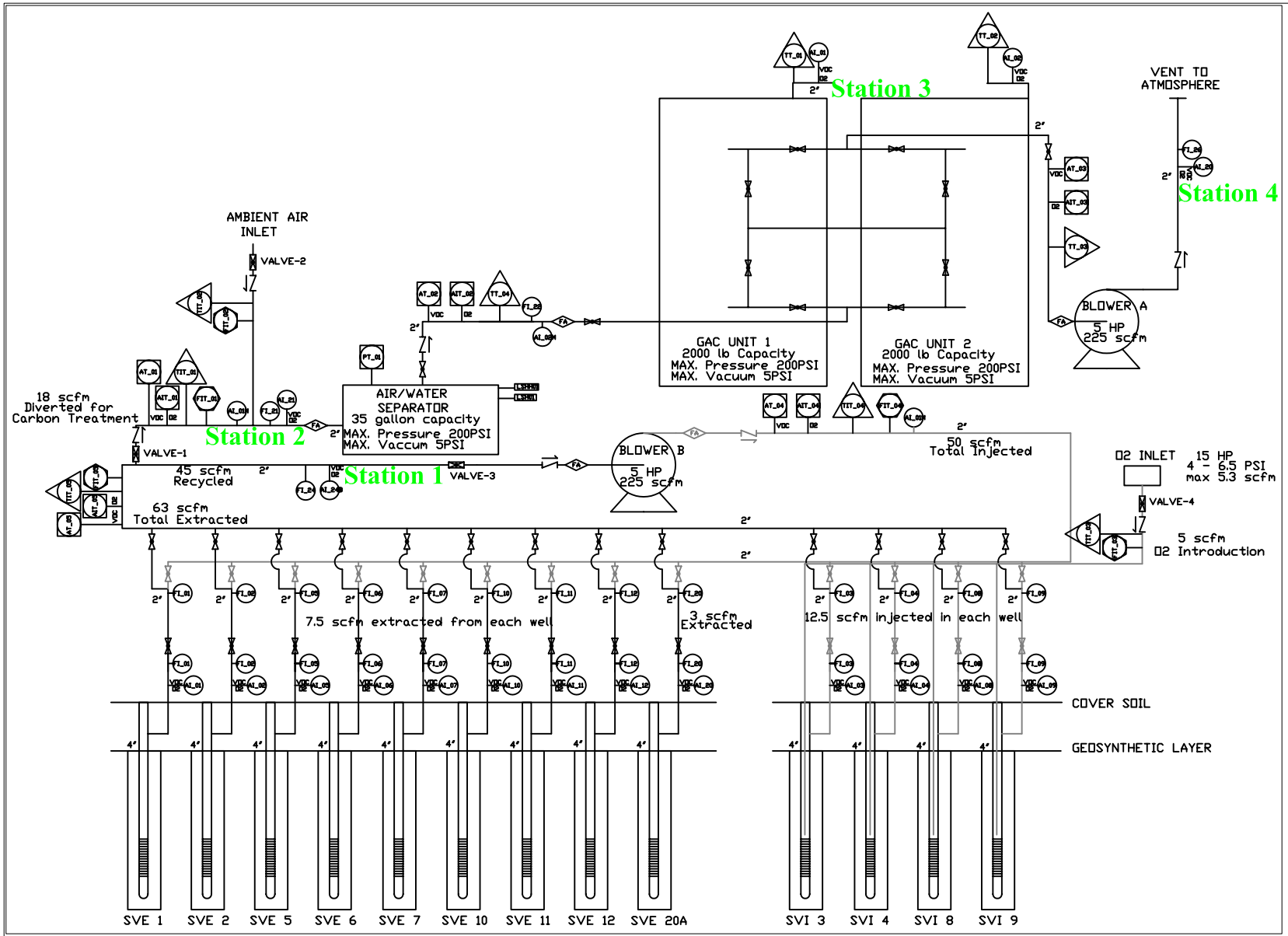


FIGURE 3.0

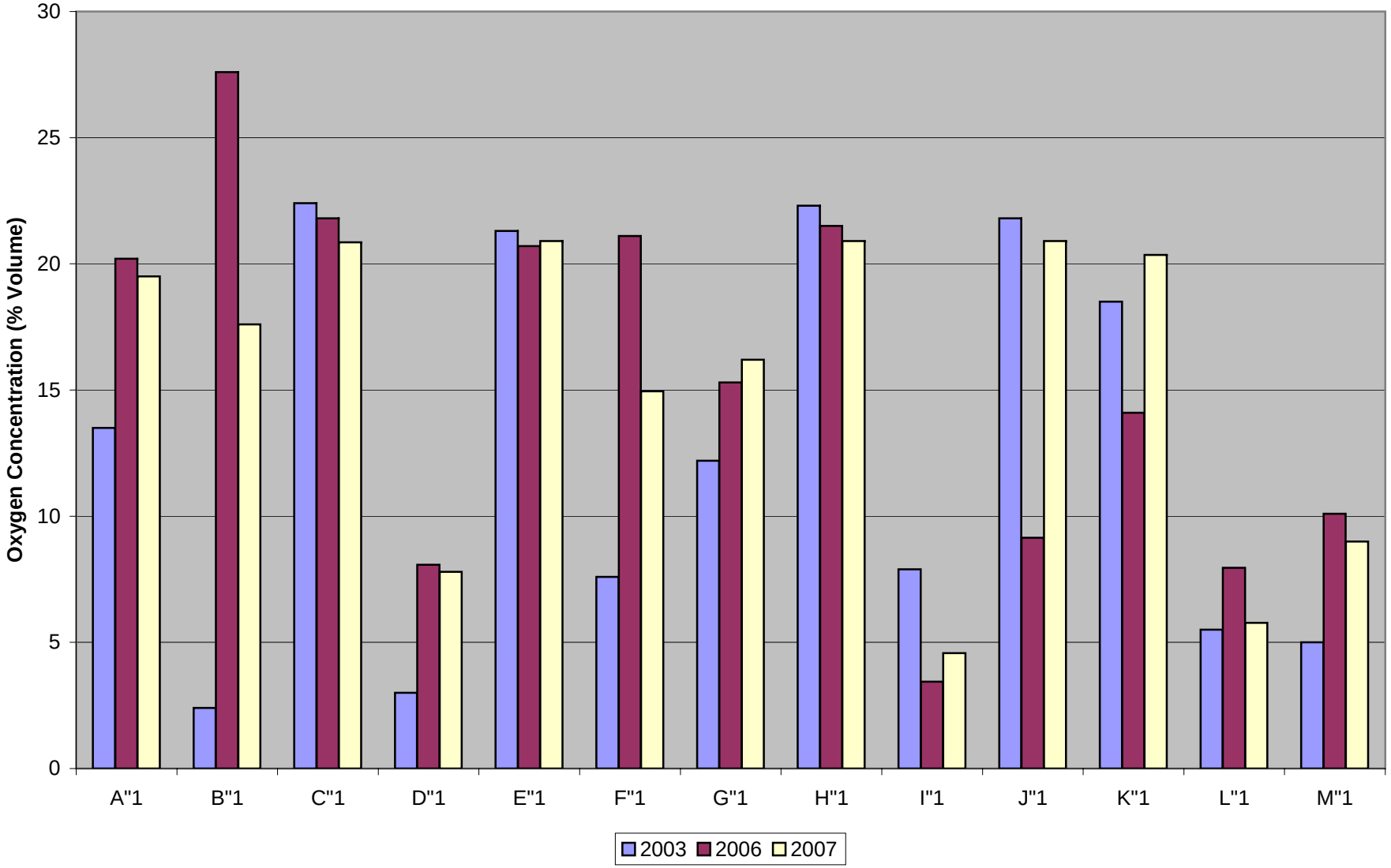
Enclosure Sampling Locations

Del Amo Waste Pits

AN ENVIRONMENTAL MANAGEMENT & DEVELOPMENT COMPANY

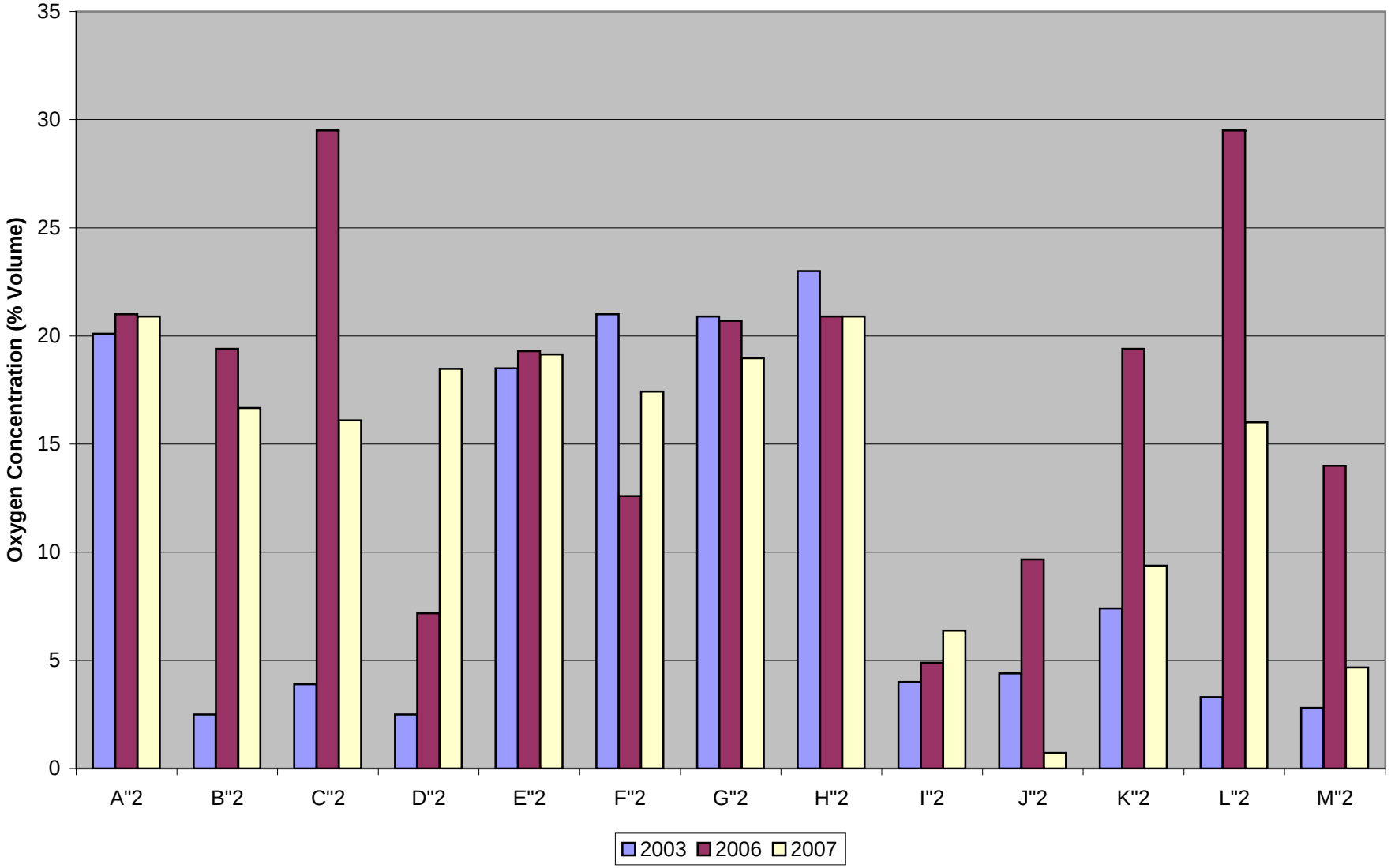
NEWPORT BEACH, CALIFORNIA 949.261.8098

Figure 4.0
Oxygen Concentration at Cluster Wells +10 MSL
Del Amo Waste Pits



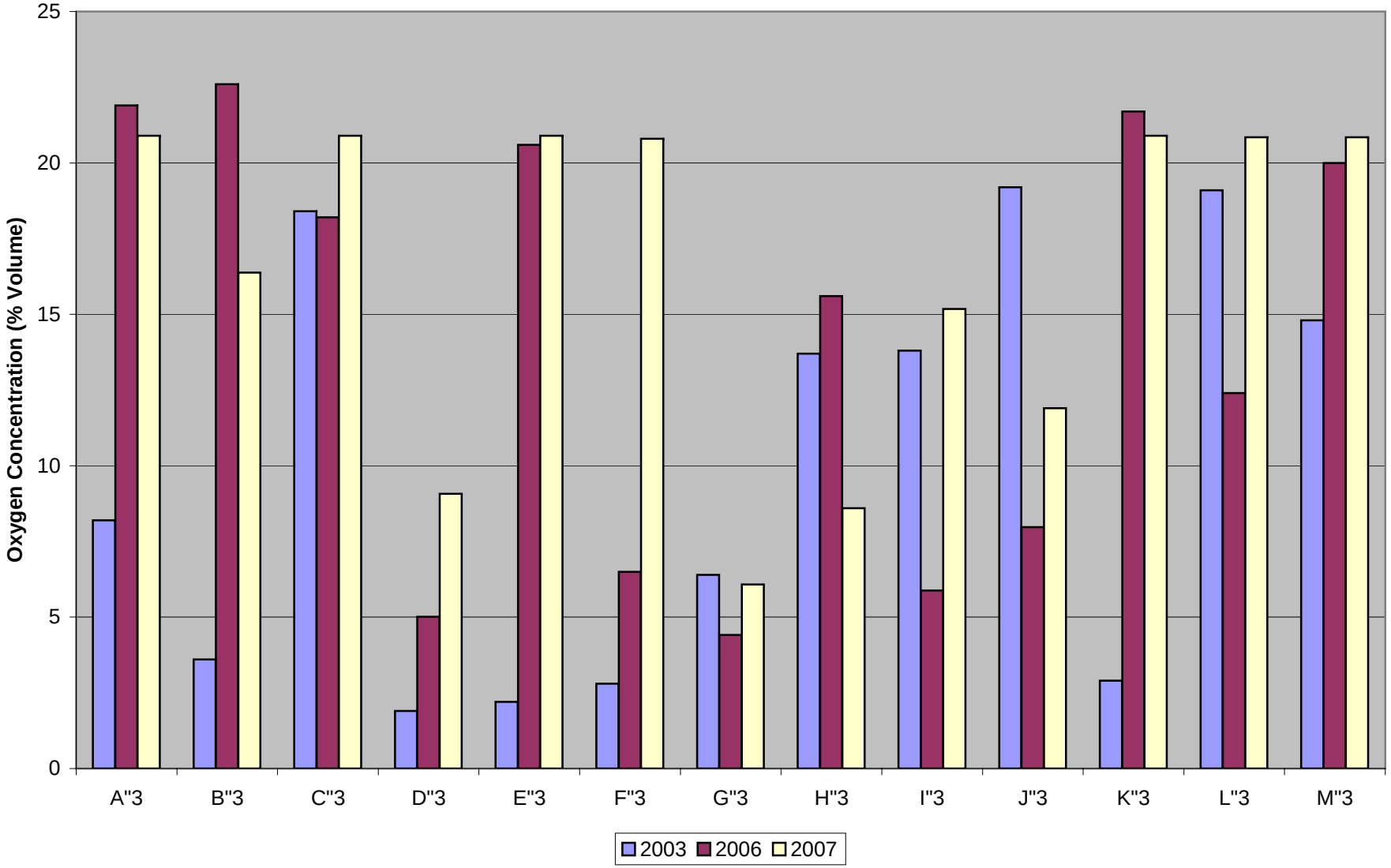
Note: 2003 and 2006 results are from confirmation laboratory sampling events.
2007 results are the average from quarterly field monitoring events.

Figure 5.0
Oxygen Concentrations at Cluster Wells +/- 0 MSL
Del Amo Waste Pits



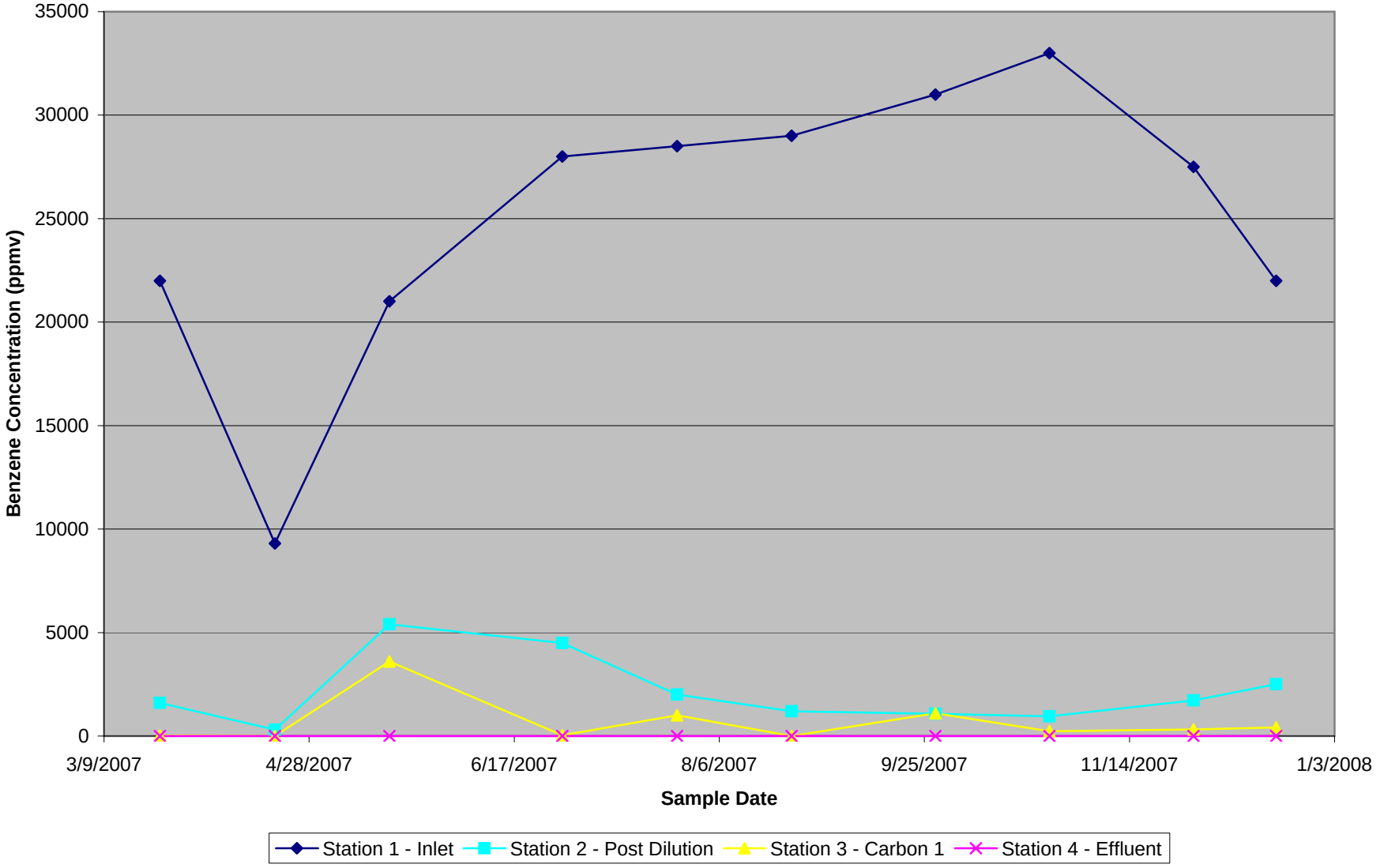
Note: 2003 and 2006 results are from confirmation laboratory sampling events.
2007 results are the average from quarterly field monitoring events.

Figure 6.0
Oxygen Concentrations at Cluster Wells -10 MSL
Del Amo Waste Pits



Note: 2003 and 2006 results are from confirmation laboratory sampling events.
2007 results are the average from quarterly field monitoring events.

Figure 7.0
Station 1-4, Laboratory Data Summary for Benzene
1-Year Long-Term Period (November 9, 2006 - December 31, 2007)
Del Amo Waste Pits



ATTACHMENT A

FIELD MONITORING NOTES

C2 REM
FIELD DAILY REPORT

PROJECT NAME: VAPOR TREATMENT PAGE 1 OF 1

PROJECT NUMBER: 99-106 DATE: 1/31/07

WEATHER: Temperature ~ 75°F Winds: — Precipitation: —

DESCRIPTION OF THE WORK: PERIMETER AND ENCLOSURE MONITORING

10:30 ARRIVE WITH IAN YUSKO

- PREPARE ALL MONITORING EQUIPMENT AND PURGE TEDLAR BAGS
- ENTER ENCLOSURE TO CHECK IF SYSTEM IS RUNNING

[PERIMETER MONITORING]

- WELLS PURGED W/ PUMP AT A RATE OF 0.3 SCFM FOR ~ 30 SECONDS EACH WELL
- SAMPLES THEN TAKEN FROM WELL HEADS DIRECTLY

- PRESSURE MONITORED WITH MAGNAHELIC (0-1.0 H_2O IN. RANGE)
- VOCs MONITORED WITH MINIRAE 2000 P.I.D.(2) CALIBRATED TO 50 PPM BENZENE
- O_2, CO_2, LEL, AND H_2S MONITORED WITH RKI EAGLE

[ENCLOSURE MONITORING]

- SAMPLES PULLED FROM INLET, POST AMBIENT AIR, C1, AND OUTLET USING PUMP/LUNG DEVICE AND 1L TEDLAR BAGS

- VOCs MONITORED WITH MINIRAE 2000 P.I.D.(2) CALIBRATED TO 50 PPM BENZENE AND INLINE SENSORS
- LEL, O_2, & CO_2 MONITORED BY RKI EAGLE AND INLINE SENSORS
- FLOW MONITORED BY INLINE SENSORS

1:00 pm. OFFSITE

Prepared by: RYAN TEOXON Signed: [signature]

PERIMETER MONITORING

Monitoring of cluster (") and pressure perfomance wells (') during short term operations

Monitored by: RT/IY
Date: 1/31/07
Weather: ~75°F

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
A	0	20.9	0	0	0
B	0	17.6	0	5.0	0.5
C	0	16.1	0	6.6	0
D	0	20.9	0	0	0
E	0	17.2	0	4.8	0.1
F	0	17.8	0	4.2	0
G	0	19.1	0	2.4	0
H	0	18.0	0	4.2	0
I	-0.02	19.2	0	2.4	0.1
J	0	18.5	0	2.8	0
K	0	19.1	0	2.0	0
L	-0.01	16.6	0	4.6	0.1
A'					
B'					
C'					
D'					
E'					
F'					
G'					
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B"-1					
B"-2					
B"-3					
C"-1					
C"-2					
C"-3					
D"-1					
D"-2					
D"-3					
E"-1					
E"-2					
E"-3					
F"-1					
F"-2					
F"-3					
G"-1					
G"-2					

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	1/31	11:30		—	28 SCFM	OVER	38.0V	104%	19.1%	—	11.6%
Post Ambient Air	1/31	11:32		—	—	1518	6%	17%	20.9%	21%	0.4%
C1 (Outlet of Primary Vessel)	1/31	11:43		—	—	1.0	0%	3%	20.9%	—	0.4%
EFFLUENT	1/31	11:56		—	—	0	0%	0.2 PPM	20.9%	20%	0.6%

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits. PAGE ____ OF ____

PROJECT NUMBER: 97-101. DATE: 02/21/2007

WEATHER: Temperature ~65° Winds: slight Precipitation: —

DESCRIPTION OF THE WORK: Perimeter and Enclosure monitoring, Adjustment of SVE/IBT system.

11:30 IY / SA arrive onsite.

12:00 start the system.

At station 5, 4, 1, and 3, O_2 sensor's red lights were flashing and then red lights were cleared followed by green light. except for station 3.

At station 5 and 4, O_2 sensors read 12~13%, but PLC readings are 15~16%.

When increased blower B, monitoring port @ station 4 was shooting water. (~1L)

Flow @ manifold were monitored with the valves completely opened. velocicalc. and
@ 3 → 18 @ 4 → 13 scfm
@ 8 and 9 → 15 scfm
@ 7 → 10 scfm.
@ other wells → over.

[Enclosure Monitoring]

- Sample taken from inlet, post dilution, C1, and outlet.
- Pump/Lung box and 1L of tedlar bags were used.
- VOCs monitored with MINIRAE 2000 PID calibrated to 50 ppm benzene.
- O_2, CO_2, CH_4 LEL, monitored with RKI EAGLE
- Pressures monitored with Magnahelic @ inlet and outlet.
- Flow rates monitored with velocicalc.

[Perimeter Monitoring]

- Perimeter wells A ~ L were monitored. at well head.
- Pressures monitored with Magnahelic.
- VOCs monitored with MINIRAE 2000 PID (1).
- O_2, CO_2, CH_4 LEL, monitored with RKI EAGLE
- PID seems malfunctioning, and stop using it @ J, K, L.

4:15 PM OFFsite.

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

FIEL. ORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% Vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	2/21/07	1:30 PM	66	54	35	over	25.5V	103	15.6	13	13.2
Post Ambient Air	2/21/07	1:30 PM	N/A	~~88~~	NA	1235	7	60	20.9	17	0.8
C1 (Outlet of Primary Vessel)	2/21/07	1:30PM	N/A	NA	NA	95.6	Ø	NA	20.9	NA	Ø
EFFLUENT	2/21/07	1:30 PM	28	115	NA	0.4	Ø	0	20.9	17	1.0

Monitoring of cluster (") and pressure perfomance wells (') during short term operations

Monitored by: SA / IY
Date: 02/21/2007
Weather: Sunny

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
A	Ø	Ø 20.9	Ø	Ø	Ø 0.1
B	Ø	17.9	Ø	5.0	2.6
C	Ø	15.8	Ø	6.4	27.3
D	Ø	20.9	Ø	Ø	12.0
E	Ø	16.5	Ø	4.6	Ø 2.6
F	Ø	16.7	Ø	4.0	20.8
G	Ø	19.4	Ø	2.4	1.8
H	Ø	18.2	Ø	4.2	4.1
I	Ø	19.4	Ø	2.4	70 ↑
J	Ø	18.8	Ø	3.0	N/A (PID methane trigging)
K	Ø	19.3	Ø	2.2	N/A
L	Ø	17.0	Ø 1	4.6	N/A
A'					
B'					
C'					
D'					
E'					
F'					
G'					
H'					
I'					
J'					
K'					
L'					
M'					
N'					
A"-1					
A"-2					
A"-3					
B"-1					
B"-2					
B"-3					
C"-1					
C"-2					
C"-3					
D"-1					
D"-2					
D"-3					
E"-1					
E"-2					
E"-3					
F"-1					
F"-2					
F"-3					
G"-1					
G"-2					

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE ____ OF ____

PROJECT NUMBER: 97-101 DATE: 03/08/2007

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Bimonthly and Enclosure Monitoring

10:00 AM RT/IY/DR/SA arrive on site.

Prepare instruments.

[Bimonthly Monitoring]

- Vapor samples pulled using pump/Lung system and 1L of tedlar bags from ports 1~4 (inlet, C1, C2, outlet)
- VOCs monitored with MINIRAE 2000 PID (1) calibrated to 50 ppm benzene.
- Flowrates monitored with Velocicalc.
- Temperatures monitored with in-line gauge

Ports	VOCs.	Flow	Temp.
4	0.3	185	117°
3	0.2	—	—
2	0.2	—	—
1.	0.5	162	65°

[Enclosure Monitoring]

- Vapor samples pulled from inlet, post ambient air, C1, and outlet using pump/Lung system and 1L of tedlar bags.
- VOCs monitored with MINIRAE 2000 PID (1) calibrated to 50 ppm benzene.
- O_2, CO_2, LEL, and H_2S monitored with RKI Eagle.
- O_2, ~~CO~~, LEL, Flow monitored with inline sensors.
- Flow monitored with Velocicalc ~~at inlet~~.
- Pressure monitored with Magnehelic at inlet.

Prepared by: Shinta Arzawa Signed: Shinta Arzawa

IAN YUSKO Ian Yusko

RYAN TEOXON

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits. PAGE 2 OF 3

PROJECT NUMBER: 97-101 DATE: 03/08/2007

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Bimonthly and Enclosure Monitoring

Vapor sample from post ambient Air contains a little amount of liquid water (colored brown).

11:15 AM OFF site

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

IAN YUSKO

RYAJ TEOXON

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	3/8/07	10:40	20	59.0	45	Over	26.0 (V)	104%	7.9	9%	14.6
Post Ambient Air	"	10:40		78.0	—	2392	14	22%	19.3	20%	1.4
C1 (Outlet of Primary Vessel)	"	10:40			—	804	3	20%	20.0	—	1.0
EFFLUENT	"	10:40		110.0	—	0.3	Ø	0.2 ppm	19.4	19%	1.2

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 3/15/2007

WEATHER: Temperature ~80° Winds: - Precipitation: -

DESCRIPTION OF THE WORK: 1ST QUARTERLY FULL SCALE MONITORING EVENT / GRAFFITI POLICE REPORT

9:30 ARRIVE ONSITE W/ IAN YUSKO, SHINTA AIZAWA, AND SEAMUS McGEOWGH
- I TAKE PICTURES OF GRAFFITI ON SOUTH SIDE OF THE TRAILER AND "SEA-TRAIN"
- SHINTA AND I BEGIN TO REWIRE/REINSTALL FLOWMETER 1
- IAN AND SEAMUS BEGIN MONITORING PERIMETER WELLS

[FULL SCALE MONITORING]
- ALL WELLS PURGED FOR ~30 SECONDS USING A PUMP AND CARBON VESSEL
- SAMPLES PULLED FROM EXTRACTION/INJECTION, PERIMETER, VACUUM PRESSURE & PERFORMANCE, AND CLUSTER WELLS DIRECTLY

- PRESSURE MONITORED WITH MAGNAHELIC (0-2 IN. H_2O)
- LEL(METHANE), O_2, CO_2, AND H_2S MONITORED WITH RKI EAGLE
- VOCs MONITORED WITH MINIRAE 2000 P.I.D.(2) CALIBRATED TO 50 PPM BENZENE

* SEE RESULTS ON ATTACHED

- FINISHED WIRING DEVICE & CHECKED IF IT WAS READING CORRECTLY

12:30 OFFSITE FOR LUNCH

13:30 BACK ONSITE

- MEET WITH LOS ANGELES SHERIFF REPRESENTATIVE
- IAN SPEAKS WITH OFFICER AND GIVES HIM HIS TESTIMONY OF WHAT HAPPENED IN THE MORNING WHEN HE DISCOVERED THE GRAFFITI

- CONTINUE FULL SCALE MONITORING EVENT

16:15 OFFSITE

Prepared by: RYAN TEOXON
IAN YUSKO

Signed: RT
Ian Yusko

Monitoring of cluster (") and pressure perfomance wells (') during short term operations

Monitored by: RT/IY/SA/SM
Date: 3-15-2007
Weather:

H2S

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
A	-0.05	20.9	0	0	0
B	-0.1	18.4	0	4.8	0.4
C	-0.1	15.7	0	6.0	0
D	0	20.9	0	0	0
E	-0.05	17.5	0	4.2	0
F	0	18.1	0	3.8	0
G	0	19.3	0	2.4	0
H	0	18.9	0	3.6	5.9
I	0	19.6	0	2.2	0.5
J	0	19.0	0	2.6	0.9
K	-0.05	18.7	10	0	0.3
L	-0.05	16.6	0	4.4	0.6
A'	0	6.7	24V	19.4	OVER
B'	0	20.9	0	0	0
C'	0	1.9	48V	17.8	OVER
D'	0	0.4	37V	22.0	OVER
E'	0	20.9	0	0	42
F'	-0.05	20.9	0	0	145
G'	0	1.8	0	15.8	16.3
H'	0	13.8	0	6.4	6.9
I'	0	0.8	68	2.2	2701
J'	0	17.5	0	2.4	836
K'	0	6.8	0	11.8	40.0
L'	0	2.7	0	19.0	37.1
M'	0	8.4	11.5V	11.4	230
N'	-0.05	20.1	0	0.4	10.1
A"-1	0	19.2	0	1.8	0
A"-2	-0.05	20.9	0	0	0
A"-3	-0.1	20.9	0	0	0
B"-1	-0.05	7.2	45.5V	15.0	OVER
B"-2	-0.05	7.5	11.0V	11.8	OVER
B"-3	-0.05	13.7	9.5V	9.6	9439
C"-1	0	20.9	0	0	387
C"-2	-0.05	5.8	48.5V	15.6	2444
C"-3	-0.05	20.9	0	0	2641
D"-1	0	2.3	44.5V	19.6	OVER
D"-2	0	20.9	1	0	791
D"-3	0	0.3	18.0V	17.0	OVER
E"-1	-0.05	20.9	0	0	0
E"-2	-0.1	19.6	0	1.4	0
E"-3	0	20.9	0	0	0
F"-1	0	8.2	302	12.2	13.5
F"-2	0	20.9	0	0	175
F"-3	0	20.9	0	0	182
G"-1	0	15.0	0	5.6	0
G"-2	0	19.8	0	0.8	0

3.2

Monitored by: RT/IY/SA/SM
Date: 3/15/07
Weather: _____

H_2S

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
G"-3	0	5.0	0	15.2	0.1
H"-1	0	20.9	0	0	68.9
H"-2	-0.05	20.9	0	0	20.6
H"-3	0	10.5	0	9.6	2.7
I"-1	0	0	95	15.8	1869
I"-2	0	0	33	18.4	653
I"-3	0	6.0	7	9.6	53.6
J"-1	0	20.9	0	0	51.6
J"-2	0	0.7	8.0	22.2	950
J"-3	0	14.2	0	8.8	40.0
K"-1	-0.05	18.4	0	0	181
K"-2	-0.05	9.2	5.0	15	OVER
K"-3	-0.05	20.9	0	0	621
L"-1	0	3.6	42.5 V	17.6	OVER
L"-2	-0.05	6.5	31.5 V	15.0	OVER
L"-3	-0.05	18.8	0	0	1075
M"-1	0	8.5	43	10.4	7348
M"-2	0	15.2	19	14.4	3377
M"-3	0	20.7	0	0	737

2.0

Monitoring of SVE/IBT Wells during short term operations

Monitored by: RT/IY/SA/SM
Date: 3-15-2007
Weather:

Well ID	Flow (scfm)	P (in. H20)	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)	
1			7.7	26 V	12.6	OVER	-3500
2			8.1	34 V	16.2	7560	
3			6.3	32 V	15.0	7346	
4			7.1	27.5V	13.8	OVER	-3200
5			5.5	54.0V	16.2	OVER	-1900
6			3.0	33.5V	12.6	OVER	-3800
7			20.3	21	0	3184	
8			14.6	5.5 V	5.4	6152	
9			13.6	7.5 V	6.2	7255	
10			4.3	47 V	16.4	9256	
11			8.2	40.0V	13.0	7751	
12			11.7	12.0V	9.6	8702	
20A			0.7	29	17.2	1979	

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 3/16/07

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Measurement of flows at SVE wells to determine purge volume.

9:00 SA / SM arrive onsite.

~1:00 Carbon change out was conducted.

[Measurement of flows at SVE wells]

- At manifold, all extraction valves were opened.
- Injection valves were ~~fete~~ closed.
- The system was turned on
  - Blower A : 100%
  - Blower B : 0%
  - V1 : 100%
  - V3 : 0%
  - V2 : 50% (~~Fos~~ Ambient Air)

- Flows at SVE 1~12, and 20A., monitored with Velocicalc.

well ID.	Flow (scfm)
1	1.4
2	4.8
3	0.5
4	Ø
5	6.3
6	2.7
7	0.70
8	0.05
9	Ø
10	1.0
11	0
12	0.7
20A	5.9

~~3~~ 3:45 PM.
OFFsite

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: DelAmo Pits PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 3/16/2007

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Enclosure Monitoring.

9:00 AM SA / SM arrive onsite

~1:00 PM. Conducted Carbon change out.

~15:00 PM conducted flow measurments at SVE wells.

[Enclosure Monitoring].

- Vapor samples pulled from inlet, Post Ambient Air, C1, and outlet. using pump/Lung system and 1L of tedlar bags.
- VOCs monitored with MINIRAE 2000 PID (1) calibrated to 50 ppm benzene.
- O_2, CO_2, LEL, and H_2S monitored with RKI EAGLE
- O_2, LEL, Flows, and VOC @ outlet monitored with inline sensors.
- Flows monitored with Velocicalc.
- Pressures monitored with Magnahelic at inlet and outlet.

3:45 offsite

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

SEAMUS Mc GEOUGH Seamus Mc Geough

FIEL RM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	3/16/07	15:05	30	162	120 (70~180)	Over.	40 V	104	6.3	8	15.8
Post Ambient Air	3/16/07	15:05	NA	78.5	81	725	3	9	20.9	21	0.4
C1 (Outlet of Primary Vessel)	3/16/07	15:05	NA	NA	NA	1200	5	3	18.6	NA	1.8
EFFLUENT	3/16/07	15:05	66	95	NA	0	0	(PID) 0.2	20.7	20	2.0

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 3/22/2007

WEATHER: Temperature ~80° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: SVE/IBT Enclosure Monitoring.

10:15 RT/IY/SA arrive onsite.

Prepare materials and instruments.

- Samples taken from inlet, post dilution, C1, and outlet using pump/Lung box and 1L of tedlar bags.
- VOCs monitored with MINIRAE 2000 PID(1) calibrated to 50 ppm benzene.
- O_2, CO_2, CH_4 LEL, and H_2S monitored with RKI EAGLE
- Pressures monitored with Magnahelic @ inlet and outlet.
- Flow rates monitored with Velocicalc.
- O_2, LEL, Flow, and VOC @outlet monitored with inline sensors.
- Lab samples also taken from inlet, post dilution, C1, outlet.

Flow@ ~~post~~ FT1 = 14.5 with Velocicalc.

O_2 sensors @ 5B shows 3%, but PLC panel shows 8% (2.7%)

The same issue is found in O_2 sensors @ 4B and 1B.

11:30 OFFSITE.

Prepared by: Shinta Aizawa Signed: Shinta Aizawa
IAN YUSKO Ian Yusko
RYAN TEOXON

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	3/22/07	10:40	30	42	37	Over	37.5V	104	~~8~~ 6.1	8 *2.7	14.2
Post Ambient Air	3/22/07	10:40	NA	85	68	1803	12	21	~~20~~ 19.3	20	1
C1 (Outlet of Primary Vessel)	3/22/07	10:40	NA	NA	NA	60	0	4	~~NA~~ 20.7	NA	0.6
EFFLUENT	3/22/07	10:40	68	111	NA	0	0	0.1	~~19.9~~ 19.8	19	1.2

Post Divergence flow 14.5

* PLC panel shows ~~8~~% O2, but sensor's display shows 2.7%
AT1B, AT4B have the same problems.

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 2

PROJECT NUMBER: 97-101 DATE: 03/28/07

WEATHER: Temperature 69°F Winds: 10 mph Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT MONITORING, EXTERMINATOR QUOTE

9:20 AM	- ARRIVE ON-SITE WITH RT
9:30 AM	- PREPARE INSTRUMENTS AND MATERIALS - VISUALLY CHECK SYSTEM: LOOKS TO BE OPERATING PROPERLY
10:00 AM	- PERFORM SVE/IBT ENCLOSURE MONITORING - PULL BAG SAMPLES W/ PUMP LUNG FROM INLET, POST AMBIENT, C_2, & EFFLUENT. - TAKE READINGS FROM BAGS USING PID (1) & RKI EAGLE FOR VOCs, LEL, O_2, & CO_2. - TAKE FLOW READINGS USING VELOCICALC - RECORD ANY CORRESPONDING DATA FROM PLC DISPLAY FOR COMPARATIVE ANALYSIS
11:00 AM	- COMPLETE SVE/IBT ENCLOSURE MONITORING - PACK-UP EQUIPMENT & ORGANIZE SITE - PURGE TEDLAR BAGS WITH NITROGEN
11:30 AM	MEET WITH THE BUGMAN EXTERMINATOR DISCUSS OPTIONS & WALK SITE FOR MEASUREMENTS IDENTIFY CAP AREA & AREAS WHERE GOPHERS HAVE BURROWED
12:00 AM	DEPART SITE WITH RT

Prepared by: IAN YUSKO
RYAN TOOXON

Signed: [signature]
RT

FIELD .M 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	3/28/07	11:00	-30 in H_2O	44.3 scfm	36 SCFM	OVER	39.5 V	104%	5.1%	8%	15.6%
Post Ambient Air	"	11:03		91.5 scfm	—	2331	11 LEL	20%	20.0%	20%	1.0%
C1 (Outlet of Primary Vessel)	"	11:10			—	18.2	0%	5%	20.9%	—	0.6%
EFFLUENT	"	11:15		99.5 scfm	—	0.0	0%	0.1 ppm	20.0%	19%	1.0%

DISPLAY O_2 VALUES

INLET 2.4%
POST AMBIENT 20.0%
INJECTION 1.9%

FLOW @ DIVERSION 7.5 SCFM

C2 REM
FIELD DAILY REPORT

PROJECT NAME: VAPOR TREATMENT PAGE 1 OF 1

PROJECT NUMBER: 99-106 DATE: 4/5/2007

WEATHER: Temperature ~75° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: ENCLOSURE MONITORING

10:30 ARRIVE ONSITE WITH IAN YUSKO
- CHECK ENCLOSURE AND TRAILER FOR INSTANCES OF GRAFFITI AND VANDALISM
- NO NEW SIGNS OF VANDALISM

[ENCLOSURE MONITORING]
- SAMPLES PULLED FROM INLET, POST AMBIENT AIR, C1, AND OUTLET USING PUMP/LUNG SYSTEM AND 1L TEDLAR BAGS

- VOCs MONITORED WITH MINIRAE 2000 P.I.D.(1) CALIBRATED TO 50 PPM BENZENE
- LEL(METHANE), O_2, CO_2, AND H_2S MONITORED WITH RKI EAGLE
- FLOW RATE MONITORED WITH VELOCICALC
- PRESSURE MONITORED W/ MAGNAHELIC
- ALL PARAMETERS COMPARED TO INLINE SENSOR READINGS

* SEE RESULTS ON ATTACHED

11:30 OFFSITE

Prepared by: RYAN TEXON Signed: RT

FIEL ,RM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	4/5/07	11:20	30	41.5	37	over	41.0 (V)	104	9.2 ~~(5)~~	10 (5)	15.0
Post Ambient Air	4/5/07	11:20	NA	92.5	(FT2+FT1) 72+17	1722	8	18	20.2 ~~19.0~~	~~NA~~ 21	0.8
C1 (Outlet of Primary Vessel)	4/5/07	11:20	NA	NA	NA	81	.0	12	19.3	NA	0.4
EFFLUENT	4/5/07	11:20	68	92.5	NA	0 ~~0.2~~	0	~~0~~ 0.2 ppm	18.9	19	1.0

( ) O_2 senser shows 5% O_2

C2 REM
FIELD DAILY REPORT

JECT NAME: DEL AMO PITS/VAPOR TREATMENT PAGE 1 OF 1

PROJECT NUMBER: 97-101/99-106 DATE: 4/13/2007

WEATHER: Temperature ~75° Winds: - Precipitation: -

DESCRIPTION OF THE WORK: ENCLOSURE MONITORING / INSTALLATION OF SECURITY CAMERAS / 2ND QUARTERLY INSPECTIO

8:15 ARRIVE ONSITE WITH IAN YUSKO
- START TO CLEAN SITE TRAILER & ENCOSURE
- PURGED ALL TEDLAR BAGS
- PREPARE MONITORING MATERIALS/EQUIPMENT

9:00 CENTER ELECTRIC ARRIVES (CHRIS AND JAMES)
JACK KEENER ARRIVES ON SITE

- CENTER ELECTRIC STARTS TO WORK ON WIRING FOR THE ENCLOSURE
- IAN AND I START ENCLOSURE MONITORING

[ENCLOSURE MONITORING]
- SAMPLES PULLED FROM INLET, POST DILUTION, C1, AND EFFLUENT USING PUMP/LUNG SYSTEM AND 1L TEDLAR BAGS
- VOCs MONITORED WITH MINIRAE 2000 P.I.D.(1) CALIBRATED TO 50 PPM BENZENE
- LEL (METHANE), O_2, CO_2, AND H_2S MONITORED USING RKI EAGLE
- FLOW RATE MONITORED USING VELOCICALC.
- PRESSURE MONITORED USING MAGNAHELIC (0-100 IN. H_2O RANGE)

-RESULTS COMPARED WITH INLINE SENSOR READINGS

10:30 EDMOND BOURKE ONSITE
DTSC ONSITE (SAFOUH SAYED & ASSISTANT)
EPA ONSITE (DANTE RODRIGUEZ AND FAMILY)

11:00 JACK AND ED CONDUCT SITE WALK WITH DTSC AND EPA

11:15 OFFSITE

ared by: RYAN TEOYON Signed: RT

FIELD M 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	4/13/07	9:51	-30	49.8	42	OVER	27.5%	104%	16.8	15%	10.8
Post Ambient Air	4/13/07	9:58		~~95~~ 91	—	3066	16%	25%	20.9%	21%	1.2%
C1 (Outlet of Primary Vessel)	4/13/07	10:02			—	574	2%	19%	20.9%	—	0.4
EFFLUENT	4/13/07	10:10		77.5	—	0.3	0	0.5 ppm	20.9%	20%	1.2%

DIVERSION FLOW = 11.2 SCFM

C2 REM
FIELD DAILY REPORT

JECT NAME: 99 VAPOR TREATMENT PAGE 1 OF 1

PROJECT NUMBER: 99-106 DATE: 4/19/07

WEATHER: Temperature ~ 75° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: WEEKLY ENCLOSURE MONITORING & MONTHLY PERIMETER MONITORING

10:00 ARRIVE ONSITE WITH SEAMUS McGEOUGH & DANE ROBINSON
- IAN YUSKO ALREADY ON SITE
- CLEAN OUT SITE TRAILER & CLEAR WALLS OF POSTERS & OF OTHER HANGING ITEMS

- IAN RETROFITS PORTABLE CARBON UNIT SO THAT INLET IS AT THE BOTTOM OF THE BUCKET AND OUTLET IS AT THE TOP

SEAMUS AND I CONDUCT ENCLOSURE MONITORING

[ENCLOSURE MONITORING]

- SAMPLES PULLED FROM INLET, POST AMBIENT AIR, C1, AND EFFLUENT USING PUMP LUNG TECHNIQUE AND 1 L TEDLAR BAGS

- VOCs MONITORED USING MINIRAE 2000 P.I.D.(1) CALIBRATED TO 50 PPM BENZENE
- LEL (METHANE), O_2, CO_2, AND H_2S MONITORED WITH RKI EAGLE
- FLOW RATE MEASURED USING VELOCICALC
- PRESSURE MONITORED USING MAGNEHELIC

- FIELD READINGS COMPARED WITH INLINE SENSOR READINGS

[PERIMETER WELLS]

- SAMPLES PULLED FROM WELLS A THROUGH M DIRECTLY FROM WELLHEAD

- VOCs MONITORED USING MINIRAE 2000
- LEL, O_2, CO_2, AND H_2S MONITORED W/ RKI EAGLE
- PRESSURE MONITORED W/ MAGNEHELIC

pared by: RYAN TEOXON Signed:

FIELD F...M 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

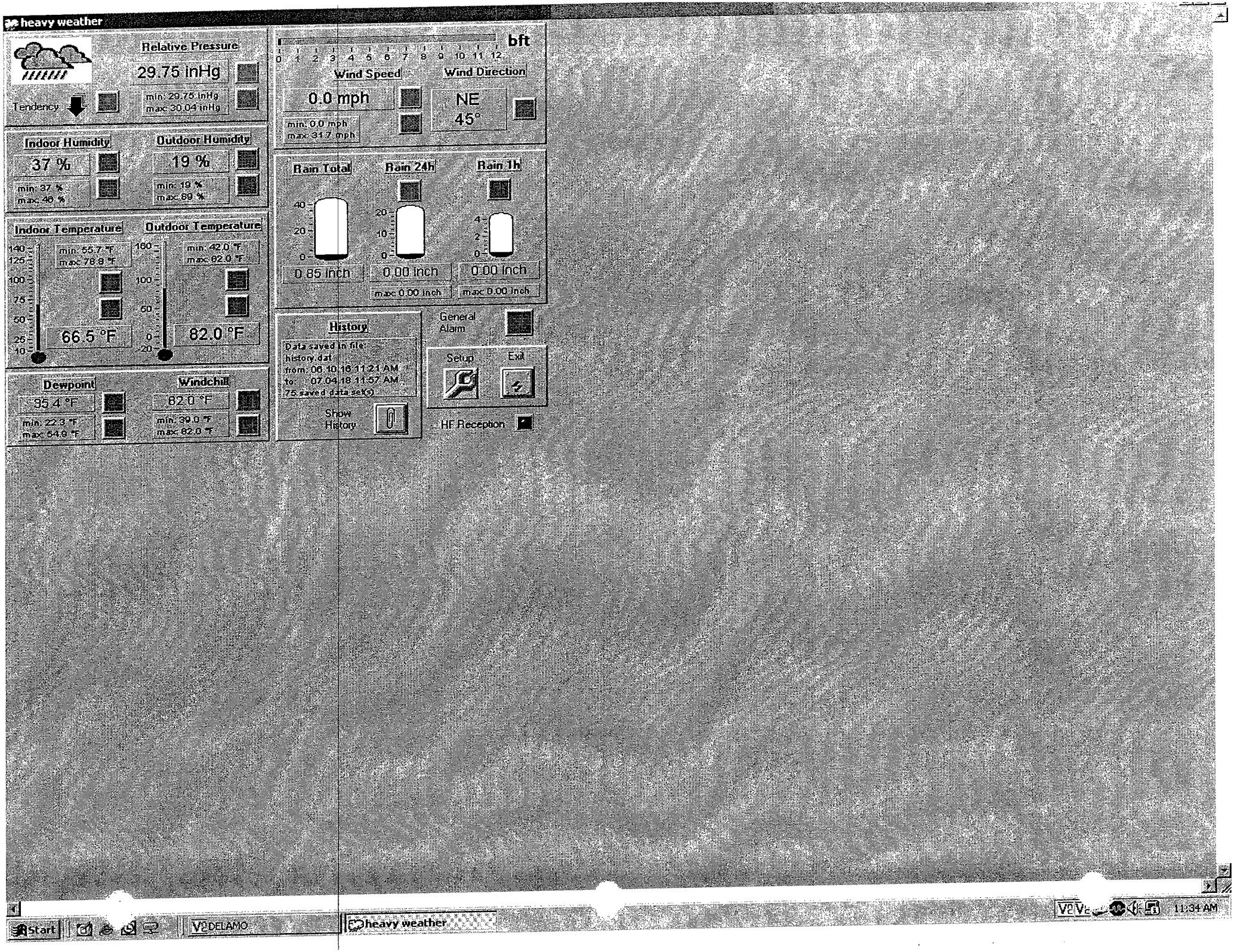
				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	4/19	10:15	-30	42.0	41	OVER	27 V	109%	18.5	16%	10.2
Post Ambient Air	4/19	10:18	—	87.20	—	1060	16	17%	20.9	21%	1.2
C1 (Outlet of Primary Vessel)	4/19	10:2[illegible]	—	—	—	950	4	17%	20.9	19%	0.4
EFFLUENT	4/19	10:31	—	95.5	—	10	0	0.1 ppm	20.9	[illegible]	1.2

Monitoring of cluster (") and pressure perfomance wells (') during short term operations

Monitored by: IY / SM
Date: 4-19-07
Weather:

Well ID	P	O2 (%)	LEL methane (%)	VOCs (ppm)	CO2
A prime	- 0	20.9	0	0.5	0
B PRIME	- 0.1	18.4	0	0.9	4.6
C PRIME	- 0.1	15.8	0	0.1	5.8
D PRIME	- 0	20.9	0	0.8	0
E PRIME	- 0.05	17.6	0	0.3	4.0
F PRIME	- 0.05	18.1	0	0.1	3.6
G PRIME	- 0.05	19.3	0	0	2.0
H PRIME	- 0.05	18.1	0	0	3.6
I PRIME	- 0.01	19.0	0	0.3	2.2
J PRIME	- 0.05	18.5	0	0	2.6
K PRIME	- 0.05	19.0	0	0	1.8
L	- 0.1	16.3	0	0.1	4.2

Notes: the well to be monitored are A"1, A"2, A"3 thru M"1, M"2, M"3 and A' thru N'


heavy weather
Relative Pressure
29.75 inHg
min: 29.75 inHg
max: 30.04 inHg
Tendency
bft
0 1 2 3 4 5 6 7 8 9 10 11 12
Wind Speed
Wind Direction
0.0 mph
min: 0.0 mph
max: 31.7 mph
NE
45°
Indoor Humidity
37 %
min: 37 %
max: 46 %
Outdoor Humidity
19 %
min: 19 %
max: 89 %
Rain Total
Rain 24h
Rain 1h
0.85 inch
0.00 inch
0.00 inch
max: 0.00 inch
max: 0.00 inch
Indoor Temperature
min: 55.7 °F
max: 78.8 °F
66.5 °F
Outdoor Temperature
min: 42.0 °F
max: 82.0 °F
82.0 °F
History
Data saved in file:
history.dat
from: 06.10.16 11:21 AM
to: 07.04.18 11:57 AM
75 saved data set(s)
Show History
General Alarm
Setup
Exit
HF Reception
Dewpoint
95.4 °F
min: 22.3 °F
max: 84.9 °F
Windchill
82.0 °F
min: 39.0 °F
max: 82.0 °F
Start
DELAMO
heavy weather
11:34 AM

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 4/28/2007

WEATHER: Temperature ~75° Winds: - Precipitation: -

DESCRIPTION OF THE WORK: FIRST QUARTERLY FULL SCALE MONITORING EVENT

9:00 ARRIVE ONSITE W/ IAN YUSKO AND SHINTA AIZAWA

- START TO ASSEMBLE PURGING APPARATUS
  - MISSING TUBING TO CONNECT PUMP TO CARBON UNIT
  - IAN LEAVES SITE TO PICK UP TUBING
  - SHINTA AND I ASSEMBLE CLUSTER, VACUUM PRESSURE AND PERFORMANCE, AND PERIMETER WELL PURGING APPARATUS

10:00 - IAN RETURNS ONSITE FROM CARSON
- TUBING OBTAINED
- GAS CAN FILLED (IN CASE GENERATOR USED FOR PURGING RAN OUT OF GAS)

- ALL PURGING SYSTEMS ASSEMBLED

[FULL SCALE MONITORING]

[SVE WELLS]

- SAMPLES PULLED FROM SVE WELLS 1 → 21 USING THE PUMP/LUNG SYSTEM AND 1 L TEDLAR BAGS
- WELLS PURGED 3 WELL VOLUMES AT AN AVERAGE OF ~25 SCFM @ ~20 IN. H_2O (PRESSURE)
- PURGE FLOW & PRESSURE MONITORED WITH VELOCICALC AND MAGNEHELIC, RESPECTIVELY
- VOCs MONITORED USING MINIRAE 2000 P.I.D. (1) CALIBRATED TO 50 PPM BENZENE
- O_2, CO_2, & METHANE (LEL), MONITORED USING RKI EAGLE

[CLUSTER, VACUUM PRESSURE & PERFORMANCE, AND PERIMETER WELLS]

- SAMPLES PULLED FROM ALL CLUSTER, VACUUM, AND PERIMETER WELLS DIRECTLY

- PRESSURE MONITORED WITH MAGNEHELIC (0-1 IN. H_2O RANGE)
- VOCs MONITORED WITH MINIRAE 2000 P.I.D. (1)
- O_2, CO_2, & METHANE (LEL) MONITORED USING RKI EAGLE

16:00 OFFSITE

Prepared by: RYAN TEOXON Signed: [signature]

Monitoring of SVE/IBT Wells during short term operations

Monitored by: RT/IY
Date: 4/26/2007
Weather:

Well ID	Flow (scfm)	P (in. H20)	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
1	36	-20 - 80	18.8	27	1.6	4431
2	24	-5	18.2	25.5 V	10.0	OVER
3	24	-5	27.7	19.5 V	8.0	OVER
4	24	-5	29.3	21.0 V	8.2	OVER
5	26	-10	14.5	40 V	12.8	OVER
6	19	-60	5.8	38.5 V	10.8	OVER
7	21	-20	13.6	65	8.4	9694
8	25	-10	28.8	20.5V	7.8	Over
9	26	-30	29	19.5 V	7.8	Over
10	30	-50	10.8	39.5 V	13.6	OVER
11	28	-15	25.8	30.0V	10.0	OVER
12	16	-50	22.6	7.0 V	4.8	OVER
13	23	-40	4.7	17.0 V	1.8	OVER
14	28	-9	1.2	18	17.4	1850
15A	23	-10	0.5	27	14.8	4224
15B	26	-10	3.4	6	16.2	1172
16	23	-10	1.1	38	12.4	4028
17	NO WELLHEAD CONNECTION					
18	23	-7	8.0	0	11.2	64
19	26	-5	2.2	4	14.6	391
20A	23	-10	1.1	25	16.2	1465
20B	23	-10	1.2	77	16.2	2048
21	29	-50	7.5	12	120	671

MOISTURE

12:22

12:09

12:04

4/25 CARBON CHANGEOUT

	PRIMARY	SECONDARY
SPENT	2207	2387
FRESH	2097	1960

Monitoring of cluster (") and pressure perfomance wells (') during short term operations

Monitored by: SA
Date: 4/26/2007
Weather:

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)	
A	Ø	20.9	Ø	Ø	Ø	
B	Ø	18.5	Ø	4.8	0.5	
C	Ø	15.8	Ø	5.8	Ø	
D	Ø	20.9	Ø	Ø	Ø	low flow
E	Ø	17.6	Ø	4.0	0.1	
F	Ø	18.0	Ø	3.6	Ø	
G	Ø	19.4	Ø	2.3	Ø	
H	-0.05	18.4	Ø	3.6	0.2	
I	Ø	~~Ø~~ 15.3	Ø	2.2	Ø	
J	Ø	18.5	Ø	2.8	Ø	
K	Ø	19.3	Ø	1.8	Ø	
L	Ø	18.4	Ø	4.6	Ø	
A'	Ø	7.2	20 V	18.2	over	
B'	Ø	20.9	Ø	Ø	0.2	
C'	Ø	4.7	42 V	17.4	over	H_2S 5.0 ppm
D'	Ø	0.2	~~46 V~~ 52 V	19.8	over	
E'	-0.1	20.9	Ø	Ø	Ø	
F'	-0.20	20.9	Ø	Ø	Ø	
G'	-0.10	17.2	Ø	0.8	0.9	
H'	-0.05	11.0	Ø	8.6	2.1	
I'	Ø	1.4	79	2.8	2329	
J'	Ø	20.9	Ø	Ø	0.4	
K'	Ø	7.0	Ø	10.6	4.5	
L'	~~Ø~~	~~Ø~~ 2.7	Ø	18.0	36.8	
M'	~~Ø~~ Ø	8.2	13 V	11.2	over	
N'	Ø	20.9	Ø	Ø	487	
A"-1	Ø	19.2	Ø	0.2	Ø	
A"-2	Ø	20.9	Ø	Ø	0.1	low flow
A"-3	Ø	20.9	Ø	Ø	0.1	
B"-1	Ø	26.2	43 V	9.8	over	
B"-2	Ø	16.3	37.5 V	14.2	over	
B"-3	Ø	19.5	33.5 V	13.2	6728	
C"-1	Ø	20.9	Ø	Ø	11.5	
C"-2	Ø	28.1	45.5 V	9.2	over	
C"-3	Ø	20.9	Ø	Ø	15.9	Low Flow
D"-1	Ø	2.4	34 V.	18.0	over	
D"-2	Ø	20.9	Ø	Ø	3.6	
D"-3	Ø	0.5	18 V	16.6	over	
E"-1	-0.15	20.9	Ø	Ø	0.6	low flow
E"-2	Ø	17.8	Ø	2.4	Ø	
E"-3	Ø	20.9	Ø	Ø	0.2	low flow
F"-1	-0.05	9.0	Ø	9.6	0.4	
F"-2	-0.05	20.6	Ø	Ø	Ø	
F"-3	Ø	20.5	Ø	Ø	Ø	
G"-1	-0.05	15.2	Ø	5.2	~~0.05~~ Ø	
G"-2	Ø	18.7	Ø	1.2	~~Ø~~ 0.1	

Monitored by: SA
Date: 4/26/2007
Weather:

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)	
G"-3	Ø	5.5	Ø	14.4	~~Ø~~ 0.9	&
H"-1	Ø	20.9	Ø	Ø	0.0	Low Flow
H"-2	Ø	20.9	Ø	Ø	0.2	
H"-3	NA	9.2	Ø	9.8	0.1	
I"-1	Ø	Ø	89	~~Ø~~ 16.4	2410	
I"-2	Ø	7.3	22	9.6	562	
I"-3	Ø	12.7	7	5.4	238	
J"-1	Ø	20.9	Ø	Ø	1.5	
J"-2	Ø	0.5	~~5 V~~ 7.5 V.	21.8	935	
J"-3	Ø	6.7	Ø	13.2	1.1	
K"-1	Ø	20.9	Ø	Ø	0.5	low
K"-2	Ø	8.7	5 V	14.6	over	
K"-3	Ø	20.9	Ø	Ø	3.2	
L"-1	Ø	2.7	45.5 V	17.4	over	
L"-2	Ø	28.5	27.5 V	9.0	over	
L"-3	Ø	20.9	Ø	Ø	35.2	Low Flow
M"-1	Ø	8.2	42	10.2	7154	
M"-2	Ø	4.9	13	14.2	2369	
M"-3	Ø	20.9	Ø	Ø	113	Low Flow

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 04/27/2007

WEATHER: Temperature ~75° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Enclosure Monitoring.

9:15 AM SA/SM arrive onsite.

prepare instruments, equipments.

- Samples taken from inlet, post dilution, ..., and outlet. using pump/Lung box and 1 L of tedlar bags.
- VOCs monitored with MINIRAE 2000 PID (1) calibrated to 50 ppm benzene.
- O_2, CO_2, CH_4 %LEL, and H_2S monitored with RKI Eagle.
- Pressures monitored with Magnahelic @ inlet and outlet.
- Flow rates monitored with Velocicalc.
- O_2, LEL, Flow, and VOC@outlet monitored with inline sensors.
- Sample @ Carbon 1 was not taken because the pump/Lung box does not have strong vacuum enough to pull vapors.
- Flow @ FT1 = 20 scfm with velocicalc.
- @ post Ambient Air (Post Dilution), lots of moisture exist.

10:45 AM OFFSITE.

Prepared by: Shinta Aizawa
SEAMUS Mc GEOUGHT

Signed: Shinta Aizawa
Seamus McGeough

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	4/27/07	9:52	26	45.0	36	Over	25.0 V	104	18.6	16	3.2
Post Ambient Air	4/27/07	9:58	NA	86.0	~~80~~	2038	15.0	27	20.8	21	1.2
C1 (Outlet of Primary Vessel)	4/27/07	NA	NA	NA	NA	NA	NA	2	NA	NA	NA
EFFLUENT	4/27/07	10:00	68	105.0	NA	0.5	~~0~~	(PID) 0.2 ppm	20.9	20	1.2

Post Divergence. 20 scfm

Recirculation. 32 scfm

* C1: Sample was not taken b/c the pump was not sitting to pull vapors.

* Post Ambient Air : Moisture exist

C2 REM
FIELD DAILY REPORT

OJECT NAME: DEL AMO VAPOR TREATMENT PAGE 1 OF 1

PROJECT NUMBER: '99-106 DATE: 5/3/2007

WEATHER: Temperature ~80° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: WEEKLY ENCLOSURE MONITORING

10:30 - ARRIVE ONSITE
- IAN YUSKO ALREADY ONSITE
- ALL PRO FENCING ALREADY ONSITE

[ENCLOSURE MONITORING]

- SAMPLES PULLED FROM INLET, POST AMBIENT AIR, C1, AND EFFLUENT USING PUMP/LUNG SYSTEM AND 1L TEDLAR BAGS

- VOCs MONITORED WITH MINIRAE 2000 P.I.D. (1) CALIBRATED TO 50 PPM BENZENE
- METHANE(LEL), O_2, CO_2, AND H_2S MONITORED WITH RKI EAGLE
- FLOW MONITORED USING VELOCICALC
- PRESSURE MONITORED USING MAGNEHELIC

- RESULTS COMPARED TO INLINE SENSOR DATA

- SPEAK W/ APL PRO FENCING

1200 OFFSITE

pared by: RYAN TEOXON Signed: RT

FIELD [illegible]M 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (Scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	05/03/07	10:55	—	118	38	OVER	29 V	104%	20.8	17%	9.6
Post Ambient Air	05/03/07	10:50	—	96.5	—	3262	20	26%	20.9	21%	1.2
C1 (Outlet of Primary Vessel)	05/03/07	10:45	—	N/A	—	37.9	1	20%	20.9	20%	0.6
EFFLUENT	05/03/07	10:40	—	416	—	2.7	1	0.1 PPM	20.9	—	1.2

Diversion 10.5

C2 REM
FIELD DAILY REPORT

OJECT NAME: Del Amo Pits PAGE 1 OF 2

PROJECT NUMBER: 97-101 DATE: 05/10/07

WEATHER: Temperature 80°F Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT WEEKLY MONITORING, OVERSIGHT

10:00 AM	ARRIVE ON-SITE W/ RT
10:15 AM	PREPARE INSTRUMENTATION & EQUIPMENT FOR ENCLOSURE MONITORING
10:35 AM	BEGIN MONITORING: IY RECORDS FLOW USING VELOCICALC [redacted] FROM DESIGNATED AREAS WHILE RT COLLECTS TEDLAR BAG SAMPLES USING PUMP/LUNG FROM DESIGNATED AREAS TO RECORD VOCs, O_2, LEL, & CO_2.
10:55 AM	ALL-PRO ARRIVES ON-SITE IY ASSISTS 3 MEN MOVE SECURITY CABINET INTO TRAILER WHILE RT COMPLETES MONITORING
11:45 AM	CLEAN SITE TRAILER WHILE ALL-PRO BOLTS & SECURES SECURITY CABINET TO TRAILER AND RT CLEANS & PACKS-UP EQUIPMENT FROM MONITORING
12:30 PM	GO TO LUNCH WHILE ALL-PRO WORKS ON SEALING UNDER-CARRIAGE OF TRAILER W/ BOARDS, ETC. TO PREVENT CRITTER ENTRY
1:30 PM	ARRIVE BACK ON-SITE AND ALL-PRO HAS FINISHED THEIR WORK & DEPARTING SITE
1:45 PM	RT & IY RELOCATE ALL COMPUTER EQUIPMENT & RE-WIRE ALL INTO THE SECURITY CABINET
3:00 PM	DEPART FROM SITE AFTER LOCKING UP

pared by: IAN YUSKO Signed: Ian Yusko
RYAN TEOXON

FIELD . .M 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	% Inline	RKI
SYSTEM INLET	05/10/07	11:27	—	52.5	44	OVER	26 V	103	16.3	13	8.6
Post Ambient Air	05/10/07	11:20	—	102	70	4032	19	22	20.9	19	1.0
C1 (Outlet of Primary Vessel)	05/10/07	11:14	—	N/A	N/A	393	2	12	20.9	20	0.4
EFFLUENT	05/10/07	11:08	—	104	N/A	ϕ	ϕ [illegible]	N/A	20.9	20	0.8
DIVERSION	05/10/07	11:05		11.5	30						

C2 REM
FIELD DAILY REPORT

OJECT NAME: VAPOR TREATMENT PAGE 1 OF 1

PROJECT NUMBER: 99-106 DATE: 5/17/07

WEATHER: Temperature ~ 75 Winds: — Precipitation: —

DESCRIPTION OF THE WORK: WEEKLY ENCLOSURE / MONTHLY PERIMETER MONITORING (LAB SAMPLES)

11:00 ARRIVE ONSITE WITH SEAMUS McGEOUGH AND SHINTA AIZAWA

- SEAMUS AND SHINTA PREPARE PURGING DEVICE
- NOTICE THAT TEDLAR BAGS ARE ALL "DIRTY"
- BEGIN PURGING TEDLAR BAGS W/ NITROGEN
- SEAMUS AND SHINTA BEGIN PERIMETER WELL MONITORING

[PERIMETER WELL MONITORING]

- WELLS PURGED FOR ~30 SECONDS EACH
- SAMPLES PULLED FROM PERIMETER MONITORING WELLS A THROUGH L DIRECTLY
- VOCs MONITORED USING MINIRAE 2000 P.I.D. (1) CALIBRATED TO 50 PPM BENZENE
- METHANE/LEL, O_2, CO_2, AND H_2S MONITORED USING RKI EAGLE
- PRESSURE MONITORED USING MAGNEHELIC (0-2.0 H_2O RANGE)

- SEAMUS AND SHINTA RETURN FROM PERIMETER MONITORING
- FINISH PURGING ALL TEDLAR BAGS

[ENCLOSURE MONITORING]

- SAMPLES PULLED FROM INLET, POSTAMBIENT AIR, C1, AND EFFLUENT USING PUMP/LUNG DEVICE AND 1L TEDLAR BAGS

- FLOW RATE MONITORED USING VELOCICALC
- PRESSURE MONITORED USING MAGNEHELIC
- VOCs MONITORED USING MINIRAE 2000 P.I.D. (1)
- METHANE (LEL), O_2, CO_2, AND H_2S
- VALUES FROM FIELD HAND-HELD INSTRUMENTATION COMPARED TO INLINE SENSOR DATA

- LAB SAMPLES PULLED FROM INLET, POST AMBIENT AIR, C1, AND EFFLUENT

15:00 OFFSITE

pared by: RYAN TEOXON Signed:

SEAMUS McGEOUGH

SHINTA AIZAWA

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	5/17/07	2:10	26	53	41	over	27 ✓	104	14.3	11	9.4
Post Ambient Air	5/17/07	2:10	NA	94	76	4749	23	28	20.5	20	1.4
C1 (Outlet of Primary Vessel)	5/17/07	2:10	NA	NA	NA	3024	11	24	20.9	NA	0.6
EFFLUENT	5/17/07	2:10	67	104	NA	0.1	Ø	PID 0.4ppm	20.5	19	1.2

Monitoring of Perimeter Wells during long term operations

Monitored by: SA/SM
Date: 5/17/2007
Weather: Cloudy

Well ID	P (in. H20)	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)	
A	Ø	20.9	Ø	Ø	0.1	
B	Ø	~~4.7~~ 18.4	Ø	4.8	0.3	O2 sensor not working well.
C	-0.05	15.9	Ø	6.0	11.1	
D	-0.10	~~24.5~~ 20.9	Ø	Ø	0.1	
E	-0.05	17.8	Ø	4.2	Ø	
F	-0.05	18.1	Ø	3.6	Ø	
G	-0.05	19.3	Ø	2.2	Ø	
H	-0.05	18.3	Ø	3.6	Ø	
I	-0.05	18.0	Ø	2.2	Ø	
J	-0.05	14.7	Ø	2.8	Ø	
K	Ø	19.1	Ø	1.8	Ø	
L	-0.05	~~8.0~~ 16.9	Ø	4.8	Ø	

C2 REM
FIELD DAILY REPORT

PROJECT NAME:

PROJECT NUMBER:

PAGE 1 OF 3

DATE: 05/24/07

WEATHER: Temperature 72° Winds: None Precipitation: None

DESCRIPTION OF THE WORK: GCTS Monitoring & SVE Monitoring

11:00 ARRIVE ON-SITE WITH SM & RT

11:15 PREPARE MONITORING EQUIPMENT FOR USE
CALIBRATE PID (1) TO ZERO AIR FOR ZERO GAS & 50 ppm BENZENE FOR SPAN GAS

11:30 PERFORM GCTS MONITORING
PULL TEDLAR BAGS FROM INLET, C_1, C_2, & OUTLET FOR VOCs
TAKE FLOW READINGS W/ VELOCICALC @ INLET & OUTLET
TAKE TEMP. READINGS @ INLET & OUTLET W/ INLINE GAUGES

12:15 PM CONDUCT SVE/IBT MONITORING
PULL TEDLAR BAGS FROM INLET, C_1, C_2, & OUTLET & SAMPLE FOR VOCs, LEL, O_2, & CO_2.
TAKE FLOW FROM STATIONS 1-4 W/ VELOCICALC
TAKE PRESSURE W/ MAGNAHELIC WHERE APPLICABLE

1:00 PM DOWNLOAD DATA FROM SURVEILANCE COMPUTER

2:00 PM DEPART FROM SITE

* SEE ATTACHED FIELD SHEETS FOR RESULTS

Prepared by: IAN YUSKO Signed: Ian Yusko

FIELD FO. .0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	05/24/07	12:00	26	53.0	44	9999	26 VM	104	13.7	14	9.2
Post Ambient Air	" "	11:55	NA	89.0	77	4682	24	29	20.1	20	1.6
C1 (Outlet of Primary Vessel)	" "	11:50	NA	NA	NA	11.9	Ø	1	20.9	~~20.9~~ NA	0.0
EFFLUENT	" "	11:45	66	109.0	NA	0.0	Ø	(PID) 0.1 ppm	20.9	~~20.9~~ 19	1.4

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 2

PROJECT NUMBER: 97-101 DATE: 05/31/07

WEATHER: Temperature 76° Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT WEEKLY MONITORING

9:00	ARRIVE ON-SITE W/ SA
9:15	PREPARE INSTRUMENTS FOR MONITORING CALIBRATE PID (1) W/ ZERO GAS & 50 PPM BENZENE SPAN GAS
9:45	CONDUCT SVE/IBT MONITORING * TAKE 1 LT. TEDLAR BAG SAMPLES FROM STATIONS 1-4 & MONITOR THEM FOR VOCs W/ PID(1) & O_2, CO_2, & LEL W/ RKI * TAKE FLOW READINGS W/ VELOCICALC FROM STATIONS 1-4 * TAKE PRESSURE READINGS W/ MAGNAHELIC WHERE APPLICABLE
10:45	FINISH MONITORING & PACK-UP MONITORING EQUIPMENT
11:00	TAKE ALL TRASH FROM ENCLOSURE & TRAILER TO DUMPSTER BEFORE TRASH TRUCK PICKS IT UP @ SITE
11:30	DEPART FROM SITE

Prepared by: Seamus McGeough Signed: Seamus McGeough

FIEL. RM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	5/31/07	10 00	26	56	47	9999	29.5 vol	104	16.4	17	9.6
Post Ambient Air	"	10.05	N/A	92.	64	5262.	25	29	209	20	1.4.
C1 (Outlet of Primary Vessel) ✓	"	10.10	NA	NA	NA	29.5	1		20.9	N/A	0.6
✓ EFFLUENT	"	10.15	67	93.5.	NA	0.5	1	0	20.9	20	1.6

C2 REM
FIELD DAILY REPORT

OJECT NAME: DEL AMO PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 6-15-2007.

WEATHER: Temperature 80° Winds: Precipitation:

DESCRIPTION OF THE WORK: INSTALL NEW PLC POWER SOURCE, ENCLOSURE MONITORING, MEETING WITH GREG FROM AKINS about COMPUTER PROBLEM

7.30AM IY ARRIVE ONSITE TO MEET ROBERT FROM PRIME SYSTEMS. ROBERT INSTALLED NEW ALLEN BRADELY POWER SOURCE.

8.15AM SM ARRIVED ONSITE W/MONITORING EQUIPMENT.

9.00 AM STARTED THE SYSTEM AGAIN & EVERYTHING WORKING FINE, WITH THE EXCEPTION OF 2 INLINE O_2 SENSORS

10.00 AM IY, SM MONITORED THE ENCLOSURE GCTS & IBT SYSTEMS.

12.00 GREG FROM AKINS ONSITE TO TROUBLESHOOT COMPUTER, RECONNECT TO M-DRIVE & REBOOT COMPUTER FOR REMOTE SURVELANCE.

1pm GREG off Site.

2.30. SM off Site.

IY REMAINED ON SITE TO WORK ON THE COMPUTER & TRY TO FIX THE O_2 SENSORS.

4.30 IY off SITE.

Prepared by: SEAMUS McGEOUGH
IAN YUSKO

Signed: Seamus McGeough
Ian Yusko

FIEL RM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	06/15/07	11:25	24	57	51	OVER	25 V	104	15.0	16	9.2
DIVERSION Post Ambient Air	06/15/07	11:20	28/30	85/88	19/87	3964	12	92/20	20.8	21	1.0
C1 (Outlet of Primary Vessel)	06/15/07	11:15	43	NA	NA	103	∅	20.0	20.9	NA	∅
EFFLUENT	06/15/07	11:10	2	106	NA	0.1	∅	0.1	20.9	20	0.8

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS | PAGE 1 OF 2

PROJECT NUMBER: 97-101 | DATE: 6/22/07

WEATHER: Temperature 79° Winds: NONE | Precipitation: NONE

DESCRIPTION OF THE WORK: CARBON CHANGE-OUT, ENCLOSURE MONITORING

9:00 AM	ARRIVE ON-SITE W/ SM BAKER FILTRATION ON-SITE
9:15 AM	OVERSEE BAKER PERFORM CARBON CHANGE-OUT DURING CHANGE-OUT PROCEDURES, BEGAN TO FINISH INSTALLING SPRINKLER SYSTEM PIPING
11:00 AM	BAKER COMPLETES CHANGE-OUT
11:15 AM	BEGIN RUNNING SYSTEM (SUE/1BT)
12:00 PM	TAKE LUNCH
1:00 PM	CONDUCT SUE/1BT MONITORING
1:40 PM	COMPLETE MONITORING; PUT EQUIPMENT AWAY
1:45 PM	CONTINUE W/ SPRINKLER SYSTEM RUNS
4:30 PM	DEPART FROM SITE AFTER LOCKING UP

Prepared by: IAN YUSKO Signed: Ian Yusko

FIEL RM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	6/22/07	3:25	28	52		9999	27 V		13.2		9.0
DIVERSION Post Ambient Air	" "	3:32	30/30	8/12.5		4809	21		19.6		1.2
C1 (Outlet of Primary Vessel)	" "	3:39	54	NA		315	Ø		20.9		Ø
EFFLUENT	" "	3:45	NA	NA		0.7	Ø		20.0		1.2

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 7

PROJECT NUMBER: 97-101 DATE: 06/28/07

WEATHER: Temperature 79° Winds: NONE Precipitation: NONE

DESCRIPTION OF THE WORK: 2nd Quarterly Full-Scale Monitoring

8:30 AM	ARRIVE ON-SITE W/ RT, SM, & MA
8:45 AM	PREPARE PURGE SYSTEMS ON TRUCK FOR SUE WELLS & IN WAGON FOR CLUSTER, VACUUM/PERFORMANCE, & PERIMETER WELLS
9:00 AM	SM & MA BEGIN W/ WAGON PURGER ON WELLS IY & RT BEGIN W/ LARGER TRUCK PURGER ON SUE WELLS
12:00 PM	BREAK FOR LUNCH
1:00 PM	CONTINUE W/ PURGING WELLS (BOTH TEAMS)
3:00 PM	COMPLETE ROUND OF SAMPLING ALL WELLS USING PID (1), MAGNAHELIC & RKI EAGLE
3:15 PM	PERFORM ENCLOSURE MONITORING
3:45 PM	TAKE LAB SAMPLES FROM SUE/IBT SYSTEM
4:00 PM	INSTALL O_2 SENSORS SENT BACK FROM MANUFACTURER FOR REPAIR * SEEM TO WORK PROPERLY ONCE INSTALLED
4:50	DEPART FROM SITE

Prepared by: IAN YUSKO Signed: Ian Yusko

Monitoring of cluster (") and pressure perfomance wells (') during short term operations

Monitored by: SEAMUS Mc GEOUGH
Date: 6-28-07
Weather:

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
A	-0.05	20.9	0	0	0
B	-0.05	18.0	0	4.8	0
C	-0.05	16.8	0	6	0
D	-0.05	20.9	0	0	0
E	-0.05	17.5	0	4.2	0
F	-0.1	17.5	0	3.8	0
G	-0.05	18.5	0	2.2	0
H	-0.025	17.5	0	3.6	0
I	[redacted]0.5	[redacted]17.4	[redacted] 0	[redacted] 2.2	[redacted] 0
J	-0.05	17.7	0	3	0
K	-0.05	18.4	0	2	0
L	-0.05	15.4	0	5.2	0
A'	-0.8	20.0	0	0	0
B'	-0.05	14.5	0	7.8	6
C'	-0.66	6.5	27.5 [redacted]	12.2	1.2
D'	-0.25	19.7	0	0.6	3300
E'	-0.05	8.6	11	7.6	12.2
F'	-0.2	20.9	0	0	1462
G'	-0.1	3.6	3	13	22
H'	-0.15	11.9	0	6.6	262
I'	-0.1	4.9	27 [redacted]	5.6	0.6
J'	0	20.9	0	0	1240
K'	-0.15	20.9	0	0	46.8
L'	-0.175	20.6	0	0.2	1
M'	-0.05	7	15 [redacted]	12	27.7
N'	-0.1	20	7	1	739
A"-1	-0.05	19.2	0	1.8	106
A"-2	-0.05	20.9	0	0	0
A"-3	-0.1	20.9	0	0	0
B"-1	0.5	14.8	[redacted] 43.5	9.2	0
B"-2	0	20.4	0	0.4	8000
B"-3	0.2	14.8	5	8	102
C"-1	-0.4	20.9	0	0	1480
C"-2	0.35	11.6	30.5	16	23
C"-3	-0.25	20.9	0	0	3250
D"-1	-0.5	15.8	0	3.2	510
D"-2	-0.25	20.9	0	0	90.1
D"-3	-0.45	20.4	0	0.2	75.4
E"-1	-0.05	20.9	0	0	4.3
E"-2	-0.05	19.8	0	1.2	0
E"-3	-0.05	20.9	0	0	0
F"-1	-0.05	20.1	0	0.2	0
F"-2	-0.05	18	0	10	10.2
F"-3	-0.025	20.9	0	0	0.2
G"-1	-0.1	20.1	0	0.6	4.5
G"-2	-0.05	18.7	0	1.2	0

Monitored by: _____
Date: _____
Weather: _____

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
G"-3	-0.05	5.3	0	14.4	0
H"-1	0	20.9	0	0	0.6
H"-2	-0.05	20.9	0	0	0
H"-3	-0.1	7.7	0	10	0
I"-1	-0.05	18.3	0.05	1.4	192
I"-2	-0.05	18.2	0.1	1.4	50.4
I"-3	-0.05	20.9	0	0	0.8
J"-1	-0.1	20.9	0	0	1.5
J"-2	-0.1	0.7	8.5 [redacted]	20.8	720
J"-3	-0.1	14.1	0	5.2	1.5
K"-1	-0.05	20.0	0	1	0.5
K"-2	-0.15	7.9	9.5 [redacted] V	14.2	8406
K"-3	-0.06	20.9	0	0	9.9
L"-1	0.26	3.9	43.5 V	16.8	9999
L"-2	1.25	11.4	32	10	3375
L"-3	0	20.7	0	0	198
M"-1	-0.15	9.8	22	9.2	3020
M"-2	-0.15	5.7	5	13.6	790
M"-3	-0.05	20.7	0	0	80.[redacted]

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	06/20/07	3:30	-23	69.5	51	9999	25 V	104	12.0	13	9.6
DILUTION Post Ambient Air	"	3:24		15 / 91.5	37 / 91	4102	28	104 / 32	19.1	NA / 20%	1.8
C1 (Outlet of Primary Vessel)	"	3:20		NA	NA	45.1	1	Ø	20.2	NA	1.0
EFFLUENT	"	3:15		102	NA	5.6	Ø	0.1 PID	19.2	19%	1.8

Monitoring of SVE/IBT Wells during short term operations

Monitored by: IY/IBT
Date: 6/28/07
Weather: HOT

PURGE ✓ ✓

Well ID	Flow (scfm)	P (in. H20)	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
1	46	[redacted] 3	10.4	19.5 ✓	9.0	9350
2	30	8	13.9	24 V	11.0	5002
3	28	6	11.5	25 V	9.2	7904
4	26	11	12.0	28 V	9.4	9999
5	28	8	14.4	24.5 V	6.4	7920
6	19	62	6.4	34.5 V	10.2	9999
7	27	18	14.0	14	5.4	1700
8	26	6	12.5	24.5 V	9.2	9017
9	26	4	12.2	26 V	9.8	9999
10	[redacted] 20	[redacted] 48	7.6	38.5 V	11.4	4010
11	28	12	11.6	25.5 V	10.0	7609
12	20	46	17.2	85	3.2	8146
13	—	8	3.3	20 V	1.8	5151
14	—	10	1.2	16	16.8	1568
15A	—	10	0.3	26	14.8	3209
15B	—	10	0.6	5	17.6	750
16	—	10	0.5	32	12.0	2958
17	✓	✓	✓	✓	✓	✓
18	—	8	6.9	1	12.0	[redacted] 146
19	—	6	0.4	5	15.4	462
20A	24	12	0.9	24	15.4	1418
20B	—	20	0.4	75	16.2	1640
21	—	24	5.3	15	13.4	782

— = 2:30 min. purge time

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS — PAGE 1 OF 3

PROJECT NUMBER: 97-101 — DATE: 07/05/07

WEATHER: Temperature 81° Winds: SLIGHT — Precipitation: NONE

DESCRIPTION OF THE WORK: MANIFOLD FLOW READJUSTMENT, ENCLOSURE MONITORING

10:00	ARRIVE ON-SITE W/ SM & MA TURN ON SPRINKLER SYSTEM
10:15	READJUST FLOWS FOR EACH SVE WELL AT THE BACK OF MANIFOLD * SEE ATTACHED RESULTS FOR MEASUREMENTS
11:30	PERFORM ENCLOSURE MONITORING OF STATIONS #1-4 USING PUMP LUNG, PID (1) & VELOCICALC. * SEE ATTACHED RESULTS
12:00 PM	TURN ON ANOTHER SET OF SPRINKLERS BREAK FOR LUNCH
1:00 PM	ARRIVE BACK ON-SITE TURN OFF SPRINKLERS
1:15 PM	LOCK UP SITE & DEPART FROM SITE

Prepared by: IAN YUSKO — Signed: Ian Yusko

Monitoring of Perimeter Wells during long term operations

Monitored by: IY / MA
Date: 07/05/07
Weather: SUNNY

Well ID	Flow - 1st	Flow - 2nd
1	-4.5	Moisture / NA
2	-18.8	-7.45
3	+10.1	+12.4
4	+9.95	+12.2
5	-24.1	-7.7
6	-8.0	Moisture / NA
7	-5.9	Moisture / NA
8	+11.4	+11.9
9	+15.9	+12.8
10	-11.0	-7.5
11	-15.6	-7.25
12	Moisture / NA	Moisture / NA
20A	-2.8	-3.5

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	7/05/07	11:40	NA	40.5	50	9999	23 V	104	10.7	12	9.8
DIVERSION Post Ambient Air	" "	11:45	NA	10.7 / 79	33 / 90	702	3	31	20.9	19	0.6
C1 (Outlet of Primary Vessel)	" "	11:50	NA	NA	NA	75	Ø	1	20.9	18	Ø
EFFLUENT	" "	11:55	NA	96	NA	0.1	Ø	0.1	20.7	N/A	1.2

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS — PAGE 1 OF 3

PROJECT NUMBER: 97-101 — DATE: 07/19/07

WEATHER: Temperature 89°F Winds: NONE — Precipitation: NONE

DESCRIPTION OF THE WORK: GCTS MONITORING, SVE/IBT MONITORING, DOWNLOAD PLC DATA

9:00 AM	ARRIVE ON-SITE W/ SM & MA
9:15 AM	TURN ON FIRST RUN OF SPRINKLERS
9:30 AM	PREPARE INSTRUMENTS W/ CALIBRATION PROCEDURES
10:00 AM	TAKE ALL TRASH FROM TRAILER TO DUMPSTER FOR PICK-UP
10:30 AM	BEGIN DOWNLOADING ALL PAST SURVEILANCE DATA ONTO EXTERNAL HARD DRIVE FROM COMPUTER INSIDE TRAILER
11:00 AM	BEGIN CONDUCTING GCTS MONITORING
11:45 AM	COMPLETE GCTS & BEGIN SVE/IBT MONITORING
12:15 PM	COMPLETE SVE/IBT MONITORING & TURN-ON 2nd RUN OF SPRINKLERS TURN-OFF 1st RUN
12:30 PM	BREAK FOR LUNCH
1:30 PM	BACK ON-SITE
1:45 PM	FIELD TECH. DELIVERABLES MEETING ON-SITE
2:15 PM	TURN-ON 3rd & FINAL RUN / TURN OFF 2nd RUN
2:30 PM	FINISH DOWNLOADING SURVEILANCE DATA & GO TO ENCLOSURE W/ EXTERNAL HARD DRIVE & HOOK INTO PLC COMPUTER
3:00 PM	BEGIN DOWNLOADING PLC DATA ONTO HARD DRIVE
3:30 PM	COMPLETE DOWNLOADING PLC DATA CLEAN-UP TOOLS USED & SITE / TURN OFF 3rd RUN
4:15 PM	DEPART FROM SITE

Prepared by: IAN YUSKO — Signed: Ian Yusko

FIEL[illegible]RM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	7/19/07	11:45	30	40.6	38	9999	21.5 V	104	17.2	17	9.0
Post Ambient Air	"	11:35	NA	88.5	100	1378	6	11	20.9	21	0.8
C1 (Outlet of Primary Vessel)	"	11:25	NA	NA	NA	826	4	8	20.9	NA	0.4
EFFLUENT	"	11:15	NA	92	NA	1.6	Ø	0.2 ppm	20.9	20	0.6

C2 REM

FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF 2

PROJECT NUMBER: 97-101 DATE: 7/24/07

WEATHER: Temperature 90° Winds: NONE Precipitation: NONE

DESCRIPTION OF THE WORK: PERIMETER MONITORING, IRRIGATE SITE

10:00 AM	ARRIVE ON-SITE W/ MA
	PREPARE FOR PERIMETER MONITORING BY
	PREPARING RKI & PID (1) & MAGNAHELIC
	TURN ON SPRINKLERS
10:30 AM	CONDUCT PERIMETER MONITORING
12:00 PM	FINISH WELLS A-H ON THE PITS SIDE
	HEAD OVER TO THE PARK SIDE TO COMPLETE I-L WELLS
12:45 PM	COMPLETE PERIMETER MONITORING
1:00 PM	TURN ON NEW SET OF SPRINKLERS
	BREAK FOR LUNCH
	GO TO GRAINGER TO ORDER EXTRA BOLTS FOR
	WELL LIDS TO TIGHTEN DOWN SECURELY
2:30 PM	RETURN BACK ON-SITE
	TURN OFF SPRINKLERS
2:45 PM	LOCK-UP & LEAVE SITE

Prepared by: IAN YUSKO Signed: Ian Yusko

Monitoring of Perimeter Wells during long term operations

Monitored by: MA / IV
Date: 7/24/07
Weather: SUNNY 90°F

Well ID	P (ins H20)	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
A	-0.02	20.9	Ø	0.4	0.1
B	-0.05	18.0	Ø	3.6	0.2
C	-0.05	15.6	Ø	6.0	Ø
D	-0.06	18.5	Ø	2.4	Ø
E	-0.02	17.3	Ø	4.2	Ø
F	-0.02	17.3	Ø	3.8	Ø
G	-0.02	18.7	Ø	2.2	Ø
H	-0.02	17.4	Ø	3.8	Ø
I	-0.01	20.9	Ø	Ø	Ø
J	-0.04	17.6	Ø	3.2	Ø
K	-0.02	17.5	Ø	2.8	Ø
L	-0.02	14.7	Ø	6.0	0.1

C2 REM

FIELD DAILY REPORT

PROJECT NAME: 97-101 PAGE 1 OF 3

PROJECT NUMBER: DEL AMO PITS DATE: 7-26-07

WEATHER: Temperature 87° Winds: Precipitation:

DESCRIPTION OF THE WORK: Site maintenance & Enclosure Monitoring & Lab Sampl

9.45am MA & SM onSite. Turn on Sprinklers. Replace bolts in all well heads. SEARCHED for MISSING LIDS but did NOT find any.

Changed Sprinklers to irrigate other Sections of the cap.

11AM BUG MAN & LANDSCAPING CREW ONSITE.

2pm STARTED ENCLOSURE MONITORING TOOK LAB SAMPLES.

TURNED off Water for irrigation.

3.30pm off Sete (SM & MA).

pared by: Seamus Mc Geough Signed: Seamus McGeough

FIELD . ORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
	7-26	2pm									
SYSTEM INLET	11	2.15	30.0	41.7	38	9999	26.5V	104	17.6	18	9.6
Post Ambient Air	11	2.20	34.0	83.5	11	1742	8	44	20.7	18	0.6
C1 (Outlet of Primary Vessel)	11	2.20	54.0	N/A.	N/A	1111	5	9	20.9	20	0.0
EFFLUENT	11	2.25	+4.0	80.5	N/A.	3.4.	0	0.1	20.9	~~20.9~~	0.8

7-26

C2 REM
FIELD DAILY REPORT

PROJECT NAME: 97-101 PAGE 1 OF 2

PROJECT NUMBER: Del Amo Waste Pits DATE: 8/9/07

WEATHER: Temperature 83°F Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT Monitoring

10:00 AM	ARRIVE ON-SITE W/ SM & DR
	TURN ON SITE IRRIGATION VALVES
10:15 AM	PREPARE EQUIPMENT FOR ENCLOSURE MONITORING
10:30 AM	CONDUCT ENCLOSURE MONITORING
	SM GOES TO SWITCH IRRIGATION VALVES ON & OFF
10:00 AM	COMPLETE ENCLOSURE MONITORING
	* SEE ATTACHED RESULTS
	SM GOES TO SWITCH IRRIGATION VALVES AGAIN
11:15 AM	LOAD UP EQUIPMENT & TOOLS
11:30 AM	TURN OFF ALL IRRIGATION VALVES & LOCK-UP SITE
11:45 AM	DEPART FROM SITE

Prepared by: IAN YUSKO Signed: Ian Yusko

Seamus McCullough Seamus McCullough

FIELD . .RM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	8/9/07	11:11	30	42	39	9999	27v	104	11.4	12	10.4
Post Ambient Air	"	1125		91	92	2513	12	8	19.6	21	1.0
C1 (Outlet of Primary Vessel)				NA	NA	425	2	NW	20.2	20	0.2
EFFLUENT		1129		99	NA	0	0	0.2	20.2	20	0.8

Diversion 1127 20.6

	% V
SYS INLET	27
POST AMBIENT	0.6
C1	0.1
Effluent	0

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Waste Pits PAGE 1 OF 3

PROJECT NUMBER: 97-101 DATE: 8/16/07

WEATHER: Temperature 86 °F Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: INSTALL ADD. IRRIGATION, GCTS & SVE/IBT MONITORING

12:45 PM	ARRIVE ON-SITE W/ SM PREPARE EQUIPMENT & INSTRUMENTATION FOR MONITORING
1:10 PM	CONDUCT GCTS MONITORING * SEE ATTACHED RESULTS
1:40 PM	COMPLETE GCTS & CONDUCT SVE/IBT MONITORING * SEE ATTACHED RESULTS
2:10 PM	COMPLETE SVE/IBT MONITORING BEGIN INSTALLING ADDITIONAL PVC PIPE RUNS FOR MORE SPRINKLER HEADS TO PROVIDE MORE COVERAGE OF IRRIGATED LAND
4:20 PM	LOAD EQUIPMENT & INSTRUMENTATION IN WORK VEHICLE LOCK-UP SITE
4:30 PM	DEPART FROM SITE

Prepared by: IAN YUSKO Signed: Ian Yusko

SEAMUS MCCOUGH Seamus McCough

FIELD ... M 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	08/16/07	1:40	29	42.5	37	9999	21.5 V	14	16.4	14	8.4
Post Ambient Air	"	1:33	N/A	92.5	103	2306	0	21	20.9	21	0.8
C1 (Outlet of Primary Vessel)	"	1:27	N/A	N/A	N/A	7.5	0	N/A	20.9	20	0
EFFLUENT	"	1:21	N/A	82.5	N/A	0.1	0	0.2	20.9	20	0.4

RH = 48%

Weather Stn = 48%

	% Volume
SYSTEM INLET	21.5
~~POST AMBIENT~~ AMBIENT	0.4
C1	0
Effluent	0

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Waste Pit PAGE 1 OF 3

PROJECT NUMBER: 97-101 DATE: 8/23/07

WEATHER: Temperature 87 °F Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT MONITORING, IRRIGATE LAND, PERIMETER MONITORING

11:00 AM	ARRIVE ON-SITE W/ SM & MA AVENUE 2 ALREADY ON-SITE [redacted] PERFORMING LANDSCAPING MAINTENANCE & CUTTING VEGETATION GROWTH ON CAP FOUND THAT AVENUE 2 HAD RAN OVER WELL WITH LAWNMOWER HAD TO REPAIR PIPE CONFIGURATION W/ 2" PVC PIPE, CONNECTORS, & UNION AS WELL AS PIPE CUTTERS, ETC.
11:45	AVENUE 2 FINISHED UP AT PITS & MOVED OVER TO PARK PROPERTY
12:00	TURN ON IRRIGATION VALVES FOR SITE
12:15	PERFORM SITE MAINTENANCE SUCH AS [redacted] CLEANING UP SEATRAIN A LITTLE AND CHECKING FLOW OF REPAIRED WELL AND DUMPING TRASH & CLEANING TRAILER
1:00 PM	PERFORM PERIMETER MONITORING AFTER PREPARING INSTRUMENTATION
3:00 PM	COMPLETE PERIMETER MONITORING * SEE ATTACHED SHEET FOR RESULTS
3:15 PM	PREPARE & CONDUCT SVE/IBT MONITORING ALSO COLLECT LAB SAMPLES FROM INLET, POST-AMBIENT, C1, & OUTLET * SEE ATTACHED SHEET FOR FIELD RESULTS
4:00	COMPLETE MONITORING, PUT INSTRUMENTATION AWAY TURN OFF IRRIGATION VALVES & LOCK-UP SITE
4:15	DEPART FROM SITE

Prepared by: IAN YUSKO Signed: Ian Yusko

Seamus McJeapt. Seamus McJeapt

Monitoring of Perimeter Wells during long term operations

Monitored by: SM/IJ/TT
Date: 8-23-07
Weather: 84° overcast

Well ID	P (in. H20)	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
A	0.05	20.9	0	0.2	0.1
B	0.05	15.7	0	5.4	0.1
C	0.025	14.4	0	6.0	0.0
D	0.05	20.4	0	0.6	0
E	0.05	15.9	0	4.2	0
F	0.05	15.0	0	3.8	0
G	0.025	18.9	0	2.2	0
H	0.025	18.0	0	3.6	0
I	0	20.9	0	0	0
J	0.05	14.2	0	3.2	0
K	0.05	17.7	0	3.0	0
L	0.05	12.2	0	6.2	0.1

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	Methane RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
	8-23-07	3:20									
SYSTEM INLET				41.1	42	9999.	24.5 V	104	17.1	15	9.2
Post Ambient Air				94	95	1401	7	6%	20.9	22	0.6
C1 (Outlet of Primary Vessel)				N/A	N/A	21.6	0	2	20.9	20.0	0.4
EFFLUENT				88.0	N/A.	0.0.	0	20	20.7	20	0.6

RH - 56%
Dilu - 4.7 scfm.

	% Volume
SYS INLET	24.5
POST AMBIE	0.35
C1	0
Effl	0

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Waste Pits | PAGE 1 OF 3

PROJECT NUMBER: 97-101 | DATE: 8/31/07

WEATHER: Temperature 90 °F Winds: Slight | Precipitation: None

DESCRIPTION OF THE WORK: IRRIGATE CAP, SVE/IBT MONITORING & GCTS MONITORING

9:00 AM	ARRIVE ON-SITE WITH SM & TT TURN ON IRRIGATION SYSTEM TO WATER LAND
9:30 AM	CLEAN TRAILER FOR SITE VISIT FROM CLIENT
10:00 AM	HOSE & SWEEP OUT ENCLOSURE
10:30 AM	SWITCH IRRIGATION VALVES ON PROPERTY
10:45 AM	SITE WALK W/ JK, FB, & client George Landreth
11:45 AM	TAKE LUNCH & SM DEPARTS FROM SITE
12:20 PM	RETURN FROM LUNCH
12:30 PM	SWITCH IRRIGATION VALVES AGAIN
12:45 PM	PREPARE INSTRUMENTATION FOR MONITORING PERFORM GCTS MONITORING ↳ SEE ATTACHED RESULTS
1:20 PM	COMPLETE GCTS MONITORING PERFORM SVE/IBT MONITORING
1:50 PM	COMPLETE SVE/IBT MONITORING ↳ SEE ATTACHED RESULTS
2:00 PM	DEPART FROM SITE

Prepared by: IAN YUSICO
SEAMUS MCGEOUGH

Signed: Ian Yusico
Seamus McGeough

FIELD . .M 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	8/31/07		NR	43.1	39	9999	25 V	104	18.1	NA	9.2
Post Ambient Air	8/31/07		NR	88.5	105	1559	7	13%	20.9	21.0%	0.6
C1 (Outlet of Primary Vessel)	8/31/07		NR	NA	NA	11.4	ϕ	1	20.9	[redacted] 20%	0
EFFLUENT	8/31/07		NR	87.5	NA	0.4	ϕ	0.2	20.9	20%	0.6

O_2 ANALYZER FOR O_2 GENERATOR — 96.5 %

[redacted] DIVERSION — 5.5 scf

%V RKI	
25	SYS INLET
0.35	POST Ambient
0	C_1
0	EFFLUENT

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WATE PITS | PAGE 1 of 1

PROJECT NUMBER: 97-101 | DATE: 9/6/2007

WEATHER: Temperature 88 F Winds: _____ Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT [redacted] Monitoring from Inlet, Outlet, Carbon 1, Post Ambient / [redacted]

	Time Line
	SVE/IBT
8:00 AM	load tools + equipments for [redacted] monitoring on to the truck
	Driving to the site
9:00 AM	TT, IY, JK Arrive at Site
	Unload equipments from the truck
	Conduct Safety Pocudure for enclose area entry (using RKI to check for IDLD present)
10:00 AM	Turn on water system for soil irrigation
	Routine check water's values, pipes for crack
	SVE/IBT
11:00 AM	[redacted] monitoring (collect gas sample from Inlet, Outlet, Carbon 1, Post Ambient)
	JK departure from site
	Measure VOCs concentration, pressure, Oxygen, CO2 from gas sample
12:00 PM	Complete monitoring
	Redirect water for different soil intergration area
1:00 PM	Trouble Shoot the O2 Sensor from the SVE/IBT system
2:00 PM	Trouble Shoot the O2 Sensor from the SVE/IBT system
	Detach the O2 sensor for Manufactor fixing
3:00 PM	Switch off the Irrigation system and close up the encloser area
	Clean and close the the site entry
	Departure the site at 3 :15 pm
4:00 PM	
5:00 PM	
	Special Notes

Prepared by: TRI TRAN
IAN YUSKO

Signed: TRAN

FIELD . ..RM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	9/6/07	10:45	-32	46.0	40	>10000	25	104	19.2	NA	9.6
Post Ambient Air	9/6/07	10:35	-34	90.0	87	1363 ~~166~~	7	13	21	21	0.6
C1 (Outlet of Primary Vessel)	9/6/07	10:35	-52	NA	NA	NA	NA	8	NA	20	NA
EFFLUENT	9/6/07	10:15	+4	85.5	NA	0	0	0.1	21	20	0.6

DIVERSION - 8.1 scf

	% of Volume
SYS INLET	25
POST AMBIENT	0.35
C_1	NA
Effluent	0

C_2 REM

FIELD DAILY REPORT

OJECT NAME: Del Amo Waste Pits Superfund Site PAGE 1 of 1

..OJECT NUMBER: 97-101 DATE: 9/13/2007

WEATHER: Temperature: 88 Winds: Precipitation: None

DESCRIPTION OF THE WORK: Using PID, Pump Lung, Velocical to conduct GCTS, SVE/IBT monitoring

Time Line	
8:00 AM	
9:00 AM	
10:00 AM	
11:00 AM	IY- TT arrive at site
	Turn on First run water sprinkler
	checking fences and equiments for routine maintaining site
12:00 PM	Fixing the water's vault on the sprinkler system
	intergrating the soil
	Leaving For Lunch 12:30
1:00 PM	
	Coming Back at site at 1:30
	Switch and turn on the second sprinkler system
2:00 PM	Initiate GCTS and SVE/IBT monitoring, Checking for IDLH
	Enter the enclose area and conduct the monitoring using the VelociCal to measure flow rates,
	PID to measure VOCs concentration, Presusre, Pump Lung to obtain 1 liter air sample bag
3:00 PM	TT- IY depart the site at 3:00
4:00 PM	
5:00 PM	
Special Notes	

pared by: TRI TRAN

IAN YUSKO

Signed:

FIELD 11.0
SVE/IBT ENCLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	9/13/07	1:00	-30	45.5	39	>9999	25 V	104	19.5	18	9.0
Post Ambient Air	9/13/07	1:15	-34	88	99	1547	7 [0.4]	12	20.9	22	0.6
C1 (Outlet of Primary Vessel)	9/13/07	1:30	-52	NA	NA	877	3 0.15	9	20.9	20	0.2
EFFLUENT	9/13/07	1:45	+5	87.5	~~X~~NA	0.1	0	0.1 ppm	20.9	20	0.6

C_2 REM
FIELD DAILY REPORT

JECT NAME: DEL AMO WASTE PITS — PAGE 1 of 1

PROJECT NUMBER: 97-101 — DATE: 9/20/2007

WEATHER: Temperature: 87 Winds: Precipitation: NONE

DESCRIPTION OF THE WORK: ____ SVE/ IBT Monitoring, Irrigation The land above the cap

	Time Line	
	8:00 AM	Leaving to site from office
		TT / SM / IYarrive at site at 8:40
		Site primeter check up
	9:00 AM	SM turn on water irrigating system
		TT / IY proccees SVE/ IBT monitoring
		SM fix the water valve at the sprinkler
	10:00 AM	Collecting Data Sample for SVE/IBT system
		Using RKI and PID to direct measure Flow, VOCs, Oxygen, and Carbon Dioxide level
	11:00 AM	Finish SVE/IBT monitoring
		Shut of water irrigating system
		pick up tools and equipments from the trailer
	12:00 PM	Close the gate at 12:15
		TT/SM/IY start leaving 97-101and heading to McColl
	1:00 PM	
	2:00 PM	
	3:00 PM	
	4:00 PM	
	5:00 PM	
	Special Notes	

Prepared by: _____ Tri Tran, Seamus McGeough, Ian Yusko — Signed:

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. In H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	9/20/07	10:45	-31.0	47.1	40	79999	25.0V	104	16.5	15	9.6
Post Ambient Air	9/20/07	10:57	-32.0	95.5	82	1060	4	13	20.9	21	0.4
C1 (Outlet of Primary Vessel)	9/20/07	11:06	-54.0	NA	NA	451	1	6	20.9	20	∅
EFFLUENT	9/20/07	11:19	+4.0	74.5	NA	∅	∅	0.1 ppm	20.9	20	0.4

Diversion Flow = 1.6 scf

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Waste Pits PAGE 1 OF 2
PROJECT NUMBER: 97-101 DATE: 9/27/07
WEATHER: Temperature 80°F Winds: Slight Precipitation: None
DESCRIPTION OF THE WORK: Irrigate Land, SVE/IBT MONITORING, Site GCTS Monitoring

11:00 AM	ARRIVE ONSITE TURN ON SPRINKLERS
11:30 AM	CHECK SYSTEM OPS FOR BOTH SYSTEMS BOTH SYSTEMS OPERATING AS DESIGNED
11:50 AM	PURGE DIRTY TEDLAR BAGS FOR SITE AND LABEL FOR REUSE
12:15 PM	TURN ON NEW SET OF SPRINKLERS ORGANIZE SEATRAIN & TRAILER A BIT (TAKE OUT TRASH)
1:00 PM	PREPARE INSTRUMENTS FOR MONITORING CONDUCT GCTS MONITORING w/ PUMP LUNG, PID, & VELOCICALC * SEE ATTACHED RESULTS TURN ON LAST SET OF SPRINKLERS
1:45 PM	COMPLETE GCTS & BEGIN SVE/IBT MONITORING USE PUMP LUNG, PID, VELOCICALC, & MAGNAHELIC, & RKI * SEE ATTACHED FIELD RESULTS ALSO PULL 1 LTR. TEDLAR BAG SAMPLES FOR LAB ANALYSIS FROM THE INLET, POST AMBIENT, C1, & OUTLET
2:45 PM	COMPLETE SVE/IBT MONITORING PACK-UP EQUIPMENT & LOCK-UP SITE TURN OFF ALL SPRINKLERS
3:00 PM	DEPART SITE & DROP-OFF LAB SAMPLES @ DEL MAR

Prepared by: IAN YUSICO Signed: Ian Yusico

FIELD ... 11.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO_2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	9/27/07	2:20	-29	45.2	39	79999	25.5V	104	16.1	16	9.4
Post Ambient Air	9/27/07	2:30	-34	83	99	19	Ø	Ø	20.9	22	Ø
C1 (Outlet of Primary Vessel)	9/27/07	2:42	-51	NA	NA	957	5	8	20.9	20	Ø
EFFLUENT	9/27/07	2:51	+3	84	NA	2.3	Ø	3.0 ppm	20.9	20	Ø

Humidity Level = 57 %
weather station = 88 %

Diversion Flow = 1.6
(Velocicalc Reading)

[redacted] =

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits. PAGE 1 OF 1

PROJECT NUMBER: DATE: 10/04/2007

WEATHER: Temperature ~68° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Enclosure Monitoring

11:30. SM/SA arrive on site.

Prepare for enclosure monitoring.

12:00 Conduct enclosure monitoring.

Flow, LEL, VOCs, O2 monitored from inline sensors.

Samples are taken from 4 stations, inlet, post ambient air C1 and effluent, and monitored for VOCs, O2, CO2 LEL, with RKI Eagle and MiniRae 2000 PID.

Pressures monitored at inlet and effluent.

Flows monitored with velocicalc at inlet, post ambient air, and effluent

Purged tedlar bags and checked well lids.

1:30 PM. OFF-site.

Prepared by: Shinta Aizala
SEAMUS M. CROUGHT

Signed: Shinta Aizala
Seamus M. Crought

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
		12.00									
SYSTEM INLET	10/4/07	12.10	~~32~~	37 6	38	OVER.	24.5V	104	14.2	14	9.6.
Post Ambient Air	10/4/07	12.12	NA	84.5	91	1120 ~~1120~~	5	9	20.9	21	0.4.
C1 (Outlet of Primary Vessel)	10/4/07	12.	NA	NA	NA	1145	0	NA.	20.9	NA	0.2
EFFLUENT	10/4/07	12.01	68	86.5	NA	0.1.	0 ~~0.2 ppm~~	0% LEL 0,2 ppm	20.0	20	0.4

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits **PAGE** 1 of 1

PROJECT NUMBER: 97-101 **DATE:** 10/11/2007

WEATHER: Temperature: 65 **Winds:** none **Precipitation:** none

DESCRIPTION OF THE WORK: 3rd Quarterly Full Sale Monitoring, Enclosure GCTS Monitoring

	Time Line	
	7:50 AM	IY, SM, TT, SA arrive onsite
		Prepare purge systems and monitoring devices
	8:15	Turn on the system, SM/SA conduct enclosure monitoring, IY/TT start monitoring pressures at perimeter, cluster and vacuum performance wells
		SM/SA start monitoring pressure at SVE wells
		IY/TT conduct GCTS monitoring
	11:20 AM	Turn off the system,
		IY/SM and TT/SA start monitoring LEL, O2, CO2, VOCs at perimeter, cluster, and vacuum performance wells
	1:00 PM	CH2M HILL arrive onsite, IY explain all updates
	1:45 PM	CH2M HILL off site
	2:00 PM	Lunch
	2:30 PM	IY/SM prepare purge system for SVE wells, TT/SA continue monitoring wells.
	3:00 PM	IY/SM start purging SVE wells, TT/SA start monitoring SVE wells for LEL, O2, CO2, VOCs
	5:00 PM	Finishi monitoring
	5:15 PM	Offsite
	Special Notes	

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

FIELD ,M 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
	10/11	8.55									
SYSTEM INLET	"		34	43.2	38	over ~~2000~~	26.5 V	104	12	13	10.8
Post Ambient Air	"		36	103.5	71	1220 ~~1222~~	5	7	20.9	21	0.4
C1 (Outlet of Primary Vessel)	"		58	NA	NA	72.2.	1	NA	20.9	NA	0.2
EFFLUENT	"		~~16~~	93.0	NA	0.1.	~~0~~	1	20.9	20	0

0.1 ppm

Diversion (flow scf) – 3.5

Monitoring of SVE/IBT Wells during short term operations

Monitored by: IY/SM/TT/SA
Date: 10/11/2007
Weather: Sunny, 265°

Well ID	Flow (scfm)	P (in. H20)	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
1	18	-30	13.6	20.5V	8.2	over
2	24	-2.5	13.8	31.5V	11, ~~10.0~~	over
3	22	+3.5	11.0	28.5V	10.0 ~~9.8~~	over
4	24	+4.5	11.8	28.5V	9.8 ~~11.2~~	over
5	21	-3	11.2	52 V	11.2 ~~8.6~~	over
6	28	-20	4.8	36 V	8.6 ~~11~~	over
7	22	-0.1	14.3	10 V	11 ~~9.6~~	over
8	21	~~+4.5~~	12.0	27.5V	9.6 ~~9.8~~	over
9	25	+4.5	7.8	28 V	9.8 ~~10.6~~	over
10	18	-16	7.1	42 V	10.6 ~~10.4~~	over
11	26	-3.0	8.5	30 V	10.4 ~~7.4~~	over
12	18	-26	5.6	18 V	7.4 ~~1.8~~	over
13	NA	-0.1	2.1	22 V	1.8 ~~19.4~~	over.
14	NA	-0.1	1.2	12	19.4 ~~15.6~~	1826
15A	NA	-0.1	Ø	27	15.6 ~~18.6~~	4369
15B	NA	-0.4	1.7	2	18.6 ~~13.6~~	367
16	NA	0.1	Ø	33	13.6	4220
17	NA	NA ~~0.1~~	NA	NA	NA	NA
18	NA	+0.06	7.2	Ø	13.2	~~Ø~~ 10
19	NA	-0.1	Ø	5	17.2	515
20A	27	-0.7	Ø	22	18.0	1816
20B	NA	-0.1	Ø	6	17.8	2925
21	NA	-0.1	3.1	12 V	15.6	758

Monitoring of cluster (") and pressure perfomance wells (') during short term operations

Monitored by: IY/SM/TT/SA.
Date: 10/11/2007
Weather: Sunny, ~65°

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
A	Ø	20.9	Ø	Ø	Ø
B	-0.03	14.7	Ø	6.8	0.4
C	-0.02	12.1	Ø	7.6	Ø
D	-0.02	20.9	Ø	Ø	Ø
E	-0.01	17.6	Ø	4.8	Ø
F	-0.03	17.5	Ø	2.58	Ø
G	-0.02	18.6	Ø	1.54	Ø
H	-0.05	17.5	Ø	3.28	Ø
I	Ø	20.9	Ø	0.02	Ø
J	Ø	17.8	Ø	2.24	0.1
K	Ø	19.9	Ø	0.74	Ø
L	Ø	15	Ø	4.42	0.1
A'	-0.7	20.2	Ø	1.6	3.6
B'	-0.03	8.4	Ø	18.6	Ø
C'	+0.4	8.8	52 V	12.4	over.
D'	-0.2	Ø	51 V	15.6	over.
E'	-0.06	20.9	Ø	Ø	8.7
F'	-0.15	20.9	Ø	Ø	~~8.7~~ Ø
G'	-0.1	2.0	1	15.8	6.6
H'	-0.05	12.4	Ø	7.8	2.7
I'	-0.03	2.0	47	2.2	2385
J'	-0.05	20.9	Ø	Ø	0.2
K'	-0.05	20.9	Ø	0.02	1.6
L'	-0.15	20.9	Ø	0.1	16.5
M'	Ø	~~19.9~~ 14.6	6.0 V	6.4	71
N'	-0.08	16.5	38.0 V	7.8	3258
A"-1	-0.05	19.9	3	0.70	0.2
A"-2	-0.1	20.9	3	0.80	Ø
A"-3	-0.2	20.9	3	0.06	0.1
B"-1	+0.5	11.9	44 V	10.2	over
B"-2	+0.12	13.9	37.5 V	9.2	over
B"-3	+0.24	14.9	35 V	9.6	over
C"-1	+0.05	20.7	5	0.1	0.3
C"-2	+0.4	11.9	38 V	10.6	over.
C"-3	-0.18	20.9	4	0	1.4
D"-1	-0.45	~~11.9~~ 6.8	41.5 V	18.8	over.
D"-2	-0.4	14.4	15	4.0	331
D"-3	0	10.0	36	13.4	9074
E"-1	-0.1	20.9	Ø	~~1.36~~ Ø	0.2
E"-2	-0.02	19.6	Ø	0.56	Ø
E"-3	-0.01	20.9	Ø	~~0.56~~ Ø	0.1
F"-1	-0.05	20.9	Ø	0	Ø
F"-2	-0.05	20.2	Ø	0.4	7.8
F"-3	Ø	20.9	Ø	0.08	Ø
G"-1	-0.05	14.4	Ø	3.9	Ø
G"-2	-0.02	18.8	Ø	0.6	Ø

Monitored by: IY/SM/TT/SA
Date: 10/11/2007
Weather: Sunny ~ 65°.

Well ID	P	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
G"-3	−0,02	6,7	Ø	15,4	0,2
H"-1	−0,05	20,9	Ø	Ø	Ø
H"-2	−0,05	20,9	Ø	0,04	Ø
H"-3	−0,08	8,7	Ø	10,0	2,7
I"-1	−0,05	Ø	67	16,8	3105
I"-2	−0,06	Ø	33	17,4	528
I"-3	−0,03	20,9	Ø	0,02	0,1
J"-1	−0,01	20,9	Ø	Ø	0,1
J"-2	−0,01	0,4	7,5V	22,2	860
J"-3	−0,08	13,0	Ø	6,0	36
K"-1	−0,05	20,9	Ø	0,4	5,0
K"-2	−0,1	10,9	51	13,2	over.
K"-3	−0,01	20,9	Ø	0,06	0,5
L"-1	+0,15	8,3	37,5V	13,2	over
L"-2	+0,9	11,7	29,0V	10,0	over.
L"-3	0	20,9	1	0,02	971
M"-1	−0,15	6,0	6	6,2	1139
M"-2	−0,2	Ø	Ø	12,8	118
M"-3	Ø	20,9	Ø	0,04	Ø

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO
PAGE _____ OF _____
PROJECT NUMBER: 97-101
DATE: 10-18-2007
WEATHER: Temperature _____ Winds: _____ Precipitation: 0
DESCRIPTION OF THE WORK: Weekly monitoring

9AM TT & SM arrive on Site.

Turn on Irrigation System.

9.30 Calibrate instruments
Begin monitoring.

10.30 TROUBLE SHOOT the Surveilance System.
Get System Working again.

11.45 Down load data from PLC System.

12.45 TT & SM off Site.

Prepared by: SEAMUS Mc GEOUGH
TRI TRAN

Signed: Seamus Mc Geough

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	10/18/07		32	42.5	38	OVER.	22.0 ✓	10H %	15.1	~~5~~ 5.0	8.8.
Post Ambient Air	10/18/07		36.	99.5	84	1630	4	notes	20.7	15	0.4
C1 (Outlet of Primary Vessel)	10/18/07		60	N/A	N/A	36.6.	0	1 %	20.3	20	0
EFFLUENT	10/18/07	10:00	+4	92.0	~~39~~	0.7	0	0	20.5	20% ~~4~~ 0	0.4

NA
FT2
82

note:
LEL = -24 (blanking)

C2 REM

FIELD DAILY REPORT

PROJECT NAME: DELAMO PITS PAGE _____ OF _____

PROJECT NUMBER: 97-101 DATE: 10-25-07

WEATHER: Temperature _____ Winds: _____ Precipitation: _____

DESCRIPTION OF THE WORK: WEEKLY & BI WEEKLY MONITORING / MONTHLY LAB SAMPLE

9AM TT & SM arrive on Site.

Start irrigating the cap.

9.30 Begin Monitoring GCTS System. (PID, & Velocicalc & Temp Gauges).

10 AM Monitor the SVE / IRT System.

10.45 Take LAB SAMPLES.

11.30 TT & SM offsite. / Turn off IRRIGATION.

Prepared by: SEAMUS Mc GEOUGH TRI TRAN

Signed: Seamus Mc Geough

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline (% lel)	RKI	Inline	RKI
SYSTEM INLET	10/25/07	11:15	28.5	42.9	39	OVER	23.0V	104%	12.7	13%	8.8
Post Ambient Air	10/25/07	11:26	28.9	86.5	100	1020	4	~~A~~8%	20.5	21~~A~~%	0.4
C1 (Outlet of Primary Vessel)	10/25/07	11:20	46.0	NA	NA	185	0	5%	20.4	20%	0
EFFLUENT	10/25/07	11:17	3.5	83.5	NA	0.3	0	0.2 ppm	20.5	20%	0.4

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits | PAGE 1 of 1

PROJECT NUMBER: 97-101 | DATE: 11/1/2007

WEATHER: Temperature: 62 Winds: none Precipitation: none

DESCRIPTION OF THE WORK: SVE/IBT Enclosure monitoring, Testing inline flow sensors, and irrigation the land

Time Line	
1:30 PM	IY, SA arrive onsite
	Prepare monitoring devices
1:50 PM	Conducted Enclosure Monitoring, Turn on irrigation system
	Flows, LEL, VOCs, O2 were monitored from inline sensors
	Samples were taken from 4 stations (inlet, post ambient air, carbon 1, and effluent) usisng pump/lung system and 1L of tedlar bags.
	Samples were analyzed for VOCs, O2, CO2, LEL, with MiniRae 2000 PID and RKI Eagle.
	Pressures reading were taken from each station with magnehelic
	Flows were monitored with velocicalcat inlet, post ambient air, effluent and diverted flow.
	Testing inline flow sensors
	Swap flow sensor FT4 for FT5 (FT4 is now at point of extraction)
	Normal Operation --> FT4 (extraction rate) = 40~43 (Velocicalc=43~45)
	Swap FT2 for FT1
	Normal Operation --> FT2 (treatment rate) = 5~6 (velocicalc=3~4)
	Velocical Readings for normal operation
	treatment rate=3~4, recycle rate=38~40, extraction rate=46~48
16:20	Turn off irrigation system and offsite
Special Notes	

Prepared by: Shinta Aizawa
IAN YUSKO

Signed: Shinta Aizawa
Ian Yusko

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (%volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline	RKI	Inline	RKI
					FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	11/01/07	1:50	-31	46.5	39	OVER	21.5V	104	15.6	13 15 (VAC)	9.0
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	11/01/07	1:50	-34	77	76	413	2	9	20.9	21	0.2
								AT3A (LEL%)		AT3B	
C1 (Outlet of Primary Vessel)	11/01/07 ~~11/7/07~~	1:50	-58	NA	NA	30	Ø	5	20.9	NA	Ø
								AT06 (Benzene)		AT3B	
EFFLUENT	~~11/07~~ ~~11/7/07~~ 11/01/07	1:50	+2	99	NA	0.1	Ø	0.1 ppm	20.9	20	0.4

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene

FT01 = 5.
SA 18.5 (Velocicalc).
Iy 11.5
FT4 = 44
40-42 (velocicalc)

Tip Exposed.
FT01. 3-4.
FT04. 38-40
FT05 46-48

FT04 —moved→ FT05
40 ~ 43 (velocicalc = 43~45).

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS PAGE 1 of 1

PROJECT NUMBER: 97-101 DATE: 11/8/2007

WEATHER: Temperature: 79 Winds: Light Precipitation: None

DESCRIPTION OF THE WORK: :SVE/IBT and GCTS monitoring, remove FT1 and FT5 flow sensor

Time Line	
8:00 AM	
9:00 AM	TT, IY arrived at 9:00
	Conducted SVE/IBT and bi-monthly GCTS monitoring
10:00 AM	
	Irrigated land
11:00 AM	
	Replaced O2 sensor head at AT4B
12:00 PM	
1:00 PM	
	Removed FT 1 & FT5 to send back to manufacturer
2:00 PM	
3:00 PM	
	Left site at 3:30
4:00 PM	
5:00 PM	
Special Notes	Shut the system down, took off FT1 and FT5 to send back to manufacture, turn the system back on before left

Prepared by: TRI TRAN

Signed: TRAN

Seamus McGrath

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline	RKI	Inline	RKI
					FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	11/8/07		32.5	42.2	37	OVER	22.0V	104%	16.8	16%	9.0
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	11/8/07		34	86.0	67	808	4	8%	20.9	21%	0.4
								AT3A (LEL%)		AT3B	
C1 (Outlet of Primary Vessel)	11/8/07		60	NA	NA	315	1	7%	20.9	20%	0.7
								AT06 (Benzene)		AT3B	
EFFLUENT	11/8/07		3	92.5	NA	0	0	0.1 ppm	20.9	20%	0.4

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene

DIVERGENT : 34 SCFM
FLOW

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: 97-101 PAGE 1 of 1

PROJECT NUMBER: DATE: 11/15/2007

WEATHER: Temperature: ~70° Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT Enclosure Monitoring

	Time Line	
	10:30 AM	TT, SA arrive on-site
		Prepared monitoring equipments
		Conducted SVE/IBT Enclosure Monitoring
	11:00 AM	Flows, LEL, VOCs, O2 were monitored from inline sensors
		Samples were taken from inlet, post ambient air, carbon 1, and effluent usisng 1l of tedlar bags and pump/lung system
		Samples wereanalyzed for VOCs, O2, CO2, and LEL with MIniRae 200 PID and RKI Eagle
		Pressures were taken with Magnehelic
		Flows were monitored with velocicalc at inlet, post ambient air, divergent flow and effluent
		Trouble shooting Inline O2 sensors
		AT4B was malfunctioning, rewired connectors, and the problem solved.
	1:00 PM	Off-site
	Special Notes	

Prepared by: Shinta Azawa Signed: Shinta Azawa

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline	RKI	Inline	RKI
					FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	11/15/07	10:40	-30	50,5	NA	over	22.5V	104	1.8	16	8.0
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	11/15/07	10:40	-33	79,0	93	547-554	3	12	20,6	22	0,2
								AT3A (LEL%)		AT3B	
G1 (Outlet of Primary Vessel)	11/15/07	10:40	-62	NA	NA	1000-1497	5	11	20,6	NA	0,2
								AT06 (Benzene)		AT3B	
EFFLUENT	11/15/07	10:40	-12	56/58	NA	0	0	0.1	20,6	20	0,2

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene

C_2 REM
FIELD DAILY REPORT

OJECT NAME: DEL AMO WASTE PITS PAGE 1 of 1

PROJECT NUMBER: 97-101 DATE: 11/21/07

WEATHER: Temperature: 80 Winds: NONE Precipitation: NONE

DESCRIPTION OF THE WORK: GCTS, SVE/IBT monitoring

Time Line	
8:00 AM	
9:00 AM	
	Arrived at Site at 9:30
	Conducted SVE/IBT monitoring
10:00 AM	Finished SVE/IBT monitoring and started GCTS monitoring
	Finished GCTS monitoring at 11:00
	Checked flow meters #1 and #5
11:00 AM	Checked needed parts / equipments for reinstallation flow meters
	Opened flow meter package and placed them in locked trailer
	Closed and left the site at 11:30
12:00 PM	
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	
5:00 PM	
Special Notes	

oared by: TRI TRAN
JAN YUSKO

Signed:

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline	RKI	Inline	RKI
					FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	11/21/07	10:54	-32	44	NA	OVER	22.5 V	104	17.1	17	8.6
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	11/21/07	10:55	-34	78	80	502	3	10	20.8	21	0.2
								AT3A (LEL%)		AT3B	
C1 (Outlet of Primary Vessel)	11/21/07	10:50	-56	NA	NA	400 [redacted]	∅	5	20.9	20	∅
								AT06 (Benzene)		AT3B	
EFFLUENT	11/21/07	10:40	+4	85	NA	0.1	∅	0.2	20.8	20	∅

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene 1205

100% LEL = 5% V

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: 97-101 PAGE 1 of 1

PROJECT NUMBER: DATE: 11/29/2007

WEATHER: Temperature: ~70° Winds: Slight Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT Enclosure&Perimeter Monitoring, Calibration of inline O2/LEL sensors

	Time Line	
	10:15 AM	IY, SM, TT, SA arrive on-site
		Prepared monitoring equipments
	10:30 AM	SM, TT conducted Perimeter Monitoring
		IY, SA Conducted SVE/IBT Enclosure Monitoring
	10:45 AM	Flows, LEL, VOCs, O2 were monitored from inline sensors
		Samples were taken from inlet, post ambient air, carbon 1, and effluent usisng 1l of tedlar bags and pump/lung system
		Samples wereanalyzed for VOCs, O2, CO2, and LEL with MIniRae 200 PID and RKI Eagle
		Pressures were taken with Magnehelic
		Flows were monitored with velocicalc at inlet, post ambient air, divergent flow and effluent
	11:30 PM	IY, SA conducted calibration of Inline O2/LEL sensors
		IY, SM Off-site
		TT, SA continued calibration
		AT3B O2: Zero gas --> 164. Span gas -->302
		AT2B O2: Zero gas --> 168. Span gas -->323
		AT5B O2: asked span gas first, initial -->3134. Tried again
		2nd Try--> Again span gas first, initial -->3088 --> gas applied --> fluctuated +/-15 and slowly increased to 3150. Zero gas --> fluctuated +/-10 --> slowly decreased to 1632
		AT4B O2: Span gas first, initial --> 6420, gas appplied, final --> 6421. Sero gas --> 6445, then "calibration Error" on the display.
		AT5A and AT4A do not have adjusting knob PT1 and PT2, Calibration was done, adjusting PT3 only. Calibration of AT1A could not be completed, need recalibration.
	5:15 PM	offsite
	Special Notes	

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline	RKI	Inline	RKI
					FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	11/29/07	10:45	-30	38.5	25-47	>9999	21(V)	104	~~17~~ 18.0	17	8.2
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	11/29/07	10:45	-32	65.5	82	20.9	0	5	20.9	22	Ø
								AT3A (LEL%)		AT3B	
C1 (Outlet of Primary Vessel)	11/29/07	10:45	-58	NA	NA	520	2	4	20.9	NA	Ø
								AT06 (Benzene)		AT3B	
EFFLUENT	11/29/07	10:45	+4 /-76	~~XXX~~ 75	NA	0.1	Ø	0.2 ppm	20.9	20	Ø

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene

Monitoring of Perimeter Wells during long term operations

Monitored by: TT + SM
Date: 11-29-07
Weather: overcast 70°.

Well ID	P (in. H20)	O2 (%)	LEL methane (%)	CO2 (%)	VOCs (ppm)
A	0	20.9	0	0	0.5
B	0	13.6	0	7.6	0.5
C	0	10.8	0	7.8	0.2
D	0.05	20.9	0	0	0.4
E	0.05	17.8	0	4.4	0.1
F	0.02	18.2	0	4	0
G	0.01	19.3	0	2.4	0
I	0.01	20.3	0	2.2	0
H	0.08	18.1	0	4.2	0
J	0	18.8	0	2.8	0
K	0.05	20.8	0	1.2	0
L	0	16.9	0	4.8	0

C_2 REM
FIELD DAILY REPORT

JECT NAME: DEL AMO WASTE PITS PAGE 1 of 1

PROJECT NUMBER: 97-101 DATE: 12/6/2007

WEATHER: Temperature: 68 F Winds: None Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT, GCTS, NORMAL ROUTINE SITE MAINTAIN PROCEDURE

Time Line	
8:00 AM	
9:00 AM	
10:00 AM	
11:00 AM	
12:00 PM	TT / SM arrived at site at 12:00
	Proceeded normal routine check up
1:00 PM	Unloaded tools and equipments down from the truck
	conducted SVE/IBT monitoring at 1:30
2:00 PM	
	conducted GCTS monitoring at 2:30
	Checked gate and fence for sign of vandalized
3:00 PM	
	Loaded tools and equipment back to truck and ready for take off
	Left site at 3:30
4:00 PM	
5:00 PM	
Special Notes	

Prepared by: TRI TRAN
SEAMUS Mc GEOUGH

Signed: [signature]

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (Scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline	RKI	Inline	RKI
	12-6	1:50			FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	"	"	30	36.5	25	over	6.5 Vol	92	17.9	17	4.2
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	"	"	30.5	~~56.5~~ 61.0	69	16.5	0	4	20.9	22	0
								AT3A (LEL%)		AT3B	
C1 (Outlet of Primary Vessel)	"	"	62	NA	NA	415	0	8	20.9	21	0
								AT06 (Benzene)		AT3B	
EFFLUENT	"	"	2.0	56.0	NA	0.0	0	0.2	20.9	21	0

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene

DIVERGENCE: 4.65 SCFM

Moisture @ Post Amb.

RH = 70%

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: 97-101 **PAGE** 1 of 2

PROJECT NUMBER: **DATE:** 12/13/2007

WEATHER: Temperature: ~60° **Winds:** Slight **Precipitation:** None

DESCRIPTION OF THE WORK: **SVE/IBT Enclosure & Adustments of blower in the system and manifold.**

	Time Line	
	10:30 AM	IY, TT, SA arrive on-site
		Prepared monitoring equipments
		Conducted SVE/IBT Enclosure Monitoring
	10:45 AM	Flows, LEL, VOCs, O2 were monitored from inline sensors
		Samples were taken from inlet, post ambient air, carbon 1, and effluent usisng 1l of tedlar bags and pump/lung system
		Samples were analyzed for VOCs, O2, CO2, and LEL with MIniRae 200 PID and RKI Eagle
		Pressures were taken with Magnehelic
		Flows were monitored with velocicalc at inlet, post ambient air, divergent flow and effluent
		Lab samples were taken from inlet, post ambient air, carbon 1, and effluent
	11:45 PM	Conducted adjustment of the Blower B, ( ) = field device (velocicalc or PID), FT3 = 0 for all tests
		Blowe B = 30%, Blower A = 100%, V1, V2= V3 = 100%,
		F1 = 25~30 (7.5), FT2 = 101~103 (81), FT4 = 25~26, FT5 = 45~50 (15), AT2A = 4% (PID = 130)
		10 min later, FT5 --> 13~17
		Blowe B = 30%, Blower A = 100%, V2 = 55%, V1 = V3 = 100%
		F1 = 28~30 (13), FT2 = 58 (75), FT4 = 12~13, FT5 = 18~22 (22~25),
		Blowe B = 40%, Blower A = 100%, V2 = 40%, V1 = V3 = 100%
		F1 = 80~90 (35), FT2 = 37~38 (73), FT4 = 9~10, FT5 = 19~22 (27~30), AT2A = 71% (PID >9999)
		30 min later
		F1 = 46~54 (22~24), FT2 = 41~42 (68~70), FT4 = 11, FT5 = 20~24 (30~33), AT2A = 52% (PID >9999)
		Blowe B = 50%, Blower A = 100%, V2 = 40%, V1 = V3 = 100%
		F1 = 7~15 (6~9), FT2 = 46 (54~55), FT4 = 33~35 , FT5 = 44~45 (42~47), AT2A = 26%
		Blowe B = 60%, Blower A = 100%, V2 = 37%, V1 = V3 = 100%
		F1 = 2~3 (2~3), FT2 = 51 (54~57), FT4 = 38~40 , FT5 = 48~52 (41~43), AT2A = 7%

Prepared by: Shinta Aizawa Signed:

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo I | PAGE 2 of 2

PROJECT NUMBER: 97-101 | DATE: 12/13/2007

WEATHER: Temperature: | Winds: Slight | Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT Enclosure & Adustments of blower in the system and manifold.

	Time Line	
		Adjustment of flows at manifold
		SVE 20A = 3.9~4.1
		SVE 6 = NA, reduced valve --> 6.25
		SVE 7 = NA, reduced valve -->7.5
		SVE 12= NA, reduced valve --> 6.5
		SVE 10 = ~6, reduced valve --> 9.0 Valve can't be moved well
		SVE 1 = NA, reduced valve -->7.5
		SVE 2 = 7.5~9.0
		SVE 11 = 6.0~7.0
		SVE 5 = NA, reduced valve --> ~8.5 Valve can't be moved well
		NA: moisture present, velocicalc reading is "Over"
		Blower B = 65%, Blower A = 100%, V2 = 40%, V1 = V3 = 100%,
		F1 = 12~16, FT4 =41, FT5 = 21~26 (33), AT2A = 4%
		Veloci calc reading and inline sensor reading do not match most of time, The position of FT1 might influence velocicalc reading, so FT1 is taken out of the system and flow was monitored with velocicalc, --> no effect observed
	5:15 PM	Offsite

Prepared by: Shinta Arawa

Signed: Shinta Arawa

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		Vacuum (inch H2O)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline	RKI	Inline	RKI
					FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	12/13/07	10:10	-29	35	26	Over.	7.5 V	92	16.5	13.8 16(UNC)	7.0
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	12/13/07	10:40	-32	61	51	0.2	Ø	4	20.9	22	Ø
								AT3A (LEL%)		AT3B	
C1 (Outlet of Primary Vessel)	12/13/07	10:40	-70	NA	NA	140	Ø	7	20.9	~~21~~ NA	Ø
								AT06 (Benzene)		AT3B	
EFFLUENT	12/13/07	10:40	-78 +2	72	NA	Ø	Ø	0.2	20.9	21	Ø

Diversion -15 6

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS PAGE 1 of 1

PROJECT NUMBER: 97-101 DATE: 12/19/2007

WEATHER: Temperature: 70 Winds: Light Precipitation: None

DESCRIPTION OF THE WORK: Fix enclosure' roof , SVE/IBT and GCTS monitoring, Lap Sample, Calibrate LEL

Time Line	
8:00 AM	
	TT, SA arrived at 8:40
	Checked perimeter fence, SVE/IBT, GCTS system for sign of vandalizing (no problem found)
9:00 AM	Fixed the roof of enclosure area
10:00 AM	Fixed the roof of enclosure area
11:00 AM	
12:00 PM	
	Conducted SVE/IBT and GCTS monitoring
1:00 PM	
2:00 PM	
	Took lab sample
	Shut down SVE/IBT system to calibrate LEL
3:00 PM	Problem found with the inline sensor AT1A (knob PT2 is broken)
	Fixed and calibrate the inline sensor using PT1 and PT3 knob
4:00 PM	
5:00 PM	
	left site at 5:30
Special Notes	

Prepared by: TRI TRAN
Shinta Aizawa

Signed:

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	RKI (% lel)	Inline	RKI	Inline	RKI
					FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	12/19/07	11:45	-58	31.5	25	over	~~165~~ ~~+17~~	92	~~13.4~~ ~~19.4~~	15 (VNC) 12.3 (Displ)	~~8.4~~ ~~1.2~~
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	12/19/07	11:45	-16	40	30	2993	16	25	19.9	20.3	1.2
								AT3A (LEL%)		~~AT3B~~	
C1 (Outlet of Primary Vessel)	12/19/07	11:45	-17	NA	NA	372	1	8	20.1	NA	1.2
								AT06 (Benzene)		AT3B	
EFFLUENT	12/19/07	11:45	-80 +0.5	31	NA	0	0	0.3	20.1	20.2	1.2

FT1 5.5 5~25

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS **PAGE** 1 of 1

PROJECT NUMBER: 97-101 **DATE:** 12/20/2007

WEATHER: Temperature: 65 **Winds:** Light **Precipitation:** None

DESCRIPTION OF THE WORK: 4th Full Scale Monitoring

Time Line	
	TT, SM, IY, SA arrived at 7:40
8:00 AM	Prepared tools and equipment for full-scale monitoring
	Opened all the well lid and checked for spider, bug
	Cleaned out all the monitoring ports
9:00 AM	Checked the fence, gate and perimeter for sign of vandalizing (gate had been remove)
	(need to be repair)
	Taking pressure for all the well (88 port total)
10:00 AM	SK visited the sited for meeting with CH2MILL
	CH2MILL's staff arrived at site
	SVE/IBT system shut down at 10:50
11:00 AM	Continued to monitor
	Field staffs stopped and had lunch for 0.5 hours then continued with monitor's procedure
	Continued to monitor
12:00 PM	
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	
5:00 PM	Closed up and Left the site at 5:00

Special Notes

Prepared by: TRI TRAN
Seamus Mc Leavy
Shinta Aizawa

Signed:
Seamus McLeavy

Date: 12/20/2007

SVE/IBT
Full Scale Monitoring Form
Del Amo Pits

Location ID	VOCs (ppm)	LEL Methane (%)	Oxygen (% Volume)	Carbon Dioxide (% Volume)	Pressure (in. H_2O)	Note
G"1	0	0	15.1	6.2	-0.1	
G"2	0	0	19.7	0.8	-0.05	
G"3	0.1	0	6.8	17.3	-0.15	
H"1	19.0	0	20.9	0	-0.02	
H"2	22.3	0	20.9	0	-0.02	
H"3	2.3	0	8.6	12.2	-0.04	
I"1	920	66	0	18.0	-0.08	
I"2	225	31	0	18.5	-0.12	
I"3	115	2	6.2	11.9	-0.02	
J"1	3.5	0	20.9	0	0	
J"2	657	7.0	1.3	22.8	-0.02	
J"3	2.9	0	13.8	6.6	-0.02	
K"1	18.1	0	19.6	2.3	-0.04	
K"2	3228	26	10.0	15.6	-0.06	
K"3	380	0	20.9	0	-0.02	
L"1	over	34.0V	8.2	12.8	0.14	
L"2	over	20.0V	12.4	8.4	0.5	
L"3	3255	5	20.9	0	0.06	
M"1	2486	14	12.0	7.8	-0.1	
M"2	250	2	8.1	13.0	-0.14	
M"3	122	0	20.9	0	-0.04	
1	over	20.0V	12.8	9.2	-16	
2	OVER	30.5V	15.2V	9.8	-2.0	
3	over	21.5V	12.6	9.0	1.5	
4	over	22.5V	12.4	9.2	3.0	
5	OVER	45.5V	15.2	10.2	-1.5	
6	OVER	32 V	10.6	9.0	-11.0	
7	OVER	49.5V	10.9	13.0	-3.5	
8	OVER	20.0V	12.9	8.6	3.5	
9	OVER	21.5V	12.6	9.0	1.0	
10	OVER	48.5V	9.2	16.9	-5.5	
11	OVER	27.5V	12.9	7.0	-1.5	
12	OVER	17.0 V	13.9	7.6	-9	
13	OVER	18.5	3.0	2.0	-0.18	
14	1610	9	0.4	21.6	0.05	
15A	3890	24	0	16.0	-0.05	
15B	321	1	1.2	20.0	0	
16	4203	31	0	14.2	0	
17	NA	NA	NA	NA	NA	
18	6.0	0	8.1	14.9	-0.05	
19	432	2	0	20.0	-0.05	
20A	1650	19	0	18.6	-1.5	
20B	2529	62	0.4	18.2	-0.1	
21	212	4	9.0	12.5	0	

Date: 12/20/2007

SVE/IBT
Full Scale Monitoring Form
Del Amo Pits

Location ID	VOCs (ppm)	LEL Methane (%)	Oxygen (% Volume)	Carbon Dioxide (% Volume)	Pressure (in. H_2O)	Note
A	0.0	0	20.5	1.02	0	
B	0.4	0	12.7	9.2	-0.05	
C	0.1	0	9.5	9.3	0	
D	0.1	0	20.9	0	0	
E	0	0	17.3	4.5	-0.05	
F	0.1	0	17.6	4.1	0	
G	0.1	0	18.8	2.3	0	
H	1.9	0	17.8	4.6	0	
I	0	0	20.1	1.8	0	
J	0.2	0	18.1	3.4	-0.05	
K	0	0	18.5	3.0	-0.07	
L	0.1	0	16.3	5.9	-0.05	
A'	>over	27V	11.1	17.2	-0.5	
B'	0.1	0	5.4	20.0	-0.02	
C'	>over	54V	7.5	12.6	0.24	
D'	>over	57	0	19.0	-0.16	
E'	31.5	0	15.1	4.3	0	
F'	80.0	0	20.9	0.2	0	
G'	3.4	0	1.8	18.0	-0.01	
H'	6.6	0	12	11.3	-0.1	
I'	2044	33	6.9	2.6	0	
J'	13.1	0	10.5	7.6	-0.04	
K'	4.2	0	5.7	13.0	-0.04	
L'	4.6	0	20.9	0	-0.06	
M'	4732	20.5V	8.1	14.0	-0.02	
N'	85.0	55.5V	17.1	10.0	0.02	
A"1	0.1	0	19.7	1.0	0	
A"2	0.2	0	20.9	0	-0.14	
A"3	0.1	0	20.9	0	0	
B"1	3500	35.0V	17.5	7.8	0	
B"2	over	35.5V	18.1	9.2	0	
B"3	over	33.0V	16.3	8.2	0	
C"1	2.0	0	20.9	0	0	
C"2	over	55.5V	12.8	7.6	0.2	
C"3	36.3	0	20.9	0	0	
D"1	over	41.5V	6.2	19.4	-0.4	
D"2	201	8	17.7	2.0	-0.12	
D"3	over	84	5.4	13.4	-0.16	
E"1	0.1	0	20.9	0	-0.05	
E"2	0	0	19.4	1.02	-0.05	
E"3	0.1	0	20.9	0	-0.2	
F"1	14.4	0	9.8	11.8	-0.1	
F"2	149	0	20.9	0.4	-0.1	
F"3	141	0	20.9	0	-0.1	

C_2 REM
FIELD DAILY REPORT

OJECT NAME: DEL AMO WASTE PITS PAGE 1 of 1

PROJECT NUMBER: 97-101 DATE: 12/28/2007

WEATHER: Temperature: 75 Winds: Light Precipitation: None

DESCRIPTION OF THE WORK: SVE Monitoring, measure with Qrae, PID, Pump Lung

Time Line	
8:00 AM	
	TT, SM arrived at 8:40
9:00 AM	
	Check perimeter fence, SVE/IBT, GCTS system for sign of vandalizing (no problem found)
10:00 AM	Clean Tedlar bag with Nitrogen
	Bought tubing from Home Depot
11:00 AM	Conducted monitor procedure
	Took reading at Post Ambient 3 times (1.4, 104, 19.3)
12:00 PM	Left site at 12:00
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	
5:00 PM	
Special Notes	

epared by: SEAMUS Mc GEOUGH

TRI TRAN

Signed:

FIELD FORM 1.0
SVE/IBT ENLOSURE DATA
DEL AMO WASTE PITS

				Flow (scfm)		VOCs (ppm)			Oxygen (% volume)		CO2 (% vol)
LOCATION	DATE	TIME	Pressure (inch. in H20)	Velocicalc	Inline	PID (ppm)	~~RKI~~ (% lel) QRae	Inline	~~RKI~~ QRAE	Inline	RKI
	12/28/07	10-45			FT5			AT5A (LEL%)		AT5B	
SYSTEM INLET	"	"	58	29.6.	N/A	over	69	92	12.2.	14	N/A.
					FT2			AT2A (LEL%)		AT2B	
Post Ambient Air	"	"	36	52.5	29	104 9.4 ~~10~~.	0	3	20.9	22	N/A
								AT3A (LEL%)		AT3B	
C1 (Outlet of Primary Vessel)	"	"	59	NA	NA	87.3.	0	5	20.9	21	N/A
								AT06 (Benzene)		AT3B	
EFFLUENT	"	"	~~0~~ N/A.	46.5	NA	0.0	0	0.2	20.9	21	NA

Notes: 100% benzene = 12000 ppm, Effluent VOC Inline (lel) = Benzene

DIVERGENCE : 3.39

RH = 38%

Used QRae Sn O_2 Remain Post Amb So_2 O_3

ATTACHMENT B

LABORATORY DATA
(VIA CD ROM)

ATTACHMENT C

INLINE SENSOR DATA
(VIA CD ROM)

APPENDIX D

FIELD DAILY REPORTS/COMPLETED MAINTENANCE FORMS

C2 REM
FIELD DAILY REPORT

OJECT NAME: VAPOR TREATMENT PAGE 1 OF 1

PROJECT NUMBER: 99-106 DATE: 1/9/2007

WEATHER: Temperature ~80°F Winds: — Precipitation: —

DESCRIPTION OF THE WORK: AUTOMATED SENSOR CALIBRATION

8:30 A.M. ARRIVE ONSITE WITH IAN YUSKO AND SHINTA AIZAWA

- JACK KEENER ARRIVES ONSITE

- PREPARE FOR CALIBRATION: ALL MATERIALS GATHERED, AMMETER SET UP ON LEL SENSOR AT-01

- SETUP FOR CALIBRATION IS AS FOLLOWS:
  - DISCONNECT J1-2 FROM CONTROLLER (BLACK WIRE)
  - ATTACH DISCONNECTED SIGNAL WIRE (BLACK WIRE) TO ONE END OF THE AMMETER
  - OBTAIN A LOOSE PIECE OF BLACK JUMPER WIRE AND ATTACH IT TO THE J1-2 EMPTY SLOT
  - ATTACH THE LOOSE END OF THE JUMPER WIRE TO THE OTHER END OF THE AMMETER, COMPLETING THE CIRCUIT
- APPLIED ZERO GAS TO LEL METER AT-01
  - LEL METER DID NOT RESPOND (WILL SEND METER BACK TO CONSPEC FOR MAINTENANCE)
- SET UP CALIBRATION @ AT-02
- APPLIED ZERO GAS TO LEL METER AT-02
  - ADJUSTED PT-1 SCREW ON CONTROLLER UNTIL AMMETER READ CLOSE TO 4.000 mA
- APPLIED SPAN GAS TO LEL METER AT-02
  - ADJUSTED PT-2 SCREW UNTIL AMMETER READ 13.8 mA
- CALIBRATED ALL LEL METERS THIS WAY
- USED AUTOMATIC CALIBRATION OF O_2 SENSORS
  - SENDING BACK 3 O_2 SENSORS AND 2 LEL SENSORS

1:15 P.M. OFFSITE

pared by: RYAN TEOKON Signed: [signature]

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE ____ OF ____

PROJECT NUMBER: DATE: 02/20/2007

WEATHER: Temperature ~65° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Troubleshooting sensors / Pressure Test

10:00 IY/SA arrive onsite

Prepare materials, equipments.

[Pressure Test Conveyence system from manifold For leaks]

- Valves at wellheads of SVE wells were closed.
- Valves at manifold were closed.
- purged system enclosure.
- using a compressor and pressure gauge, Air is introduced up to 5 PSI.
- Loss of PSI was monitored for each manifold.
- No substantial loss was observed.
- some valves can't be 100% closed (due to contaminants?)
- Large amount of water seem to exist in the manifold.
- when valves were opened after each test, Large amount of water run in the pipes.
- At the end, valves at wellhead were opened, and water is running in the pipes at 20A, and 12.

[Sensors Troubleshooting]

12:30 meet with [redacted] Delic from SC Control/Conspec
12:35 meet with Jack keener.

- Test Amp outlet and no problem was found.
- Adjust alarm levels
  - Alarm level 1 → 100 (originally 200)
  - " 2 → 110 (" 180)
- Error flashing light was cleared.

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits. PAGE ____ OF ____

PROJECT NUMBER: 97-101. DATE: 3/19/2007

WEATHER: Temperature ~75° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Site walk / [redacted]

9:45 RT/SM/SA arrive on site, meet with JK/IY.

- Discussed purging method at SVE wells and other maintenance issue.

[SVE wells]
- will install PVC Tees and male camlocks after ball valves.
- will purchase small generator to run the pump on site

[Conveyor System Manifold]
- will reconstruct manifold
- will construct water collection system.

- RT/SM erased the graffiti on the trailer and painted.
- still need to erase the graffiti on the "sea-train".
- IY/SA conducted inventory for construction, organized sea-train.

12:30 OFFSITE

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

IAN YUSKO Ian Yusko

RYAN TEOKON

SEAMUS McGEOUGH Seamus McGeough

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 03/21/07

WEATHER: Temperature 65° F Winds: Slight Precipitation: Slight

DESCRIPTION OF THE WORK: CHECK STATUS OF SITE AFTER RECENT VANDALISM

9:10 A.M. ARRIVE ON-SITE (RT, IY)

DISCOVER THAT C-TRAIN HAS BEEN TAGGED ON ONCE AGAIN BY RESIDENTS AFTER THE GRAFFITI WAS PAINTED OVER ON MONDAY MORNING OF THE 19th.

PROFANITY IS INCLUDED ON THE TRAILER:
"CAN'T STOP US BITCHES"
"MOTHER FU**ERS"

9:20 AM TAKE PHOTOS OF THE VANDALISM

9:30 AM CHECK SITE INTEGRITY AND SAFETY PROTOCOLS
ENSURE SYSTEM IS STILL IN GOOD STANDING
VISUAL CHECK CONFIRMS EVERYTHING'S GOOD

9:40 AM DEPART FROM SITE

Prepared by: IAN YUSKO
RYAN TEOXON

Signed: Ian Yusko
RT

C2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 2

PROJECT NUMBER: 97-101 DATE: 03/28/07

WEATHER: Temperature 69°F Winds: 10 mph Precipitation: None

DESCRIPTION OF THE WORK: SVE/IBT MONITORING, EXTERMINATOR QUOTE

9:20 AM - ARRIVE ON-SITE WITH RT

9:30 AM - PREPARE INSTRUMENTS AND MATERIALS
- VISUALLY CHECK SYSTEM: LOOKS TO BE OPERATING PROPERLY

10:00 AM - PERFORM SVE/IBT ENCLOSURE MONITORING
- PULL BAG SAMPLES W/ PUMP LOAD FROM INLET, POST AMBIENT, C_1, & EFFLUENT.
- TAKE READINGS FROM BAGS USING PID (1) & RKI EAGLE FOR VOCs, LEL, O_2, & CO_2.
- TAKE FLOW READINGS USING VELOCICALC
- RECORD ANY CORRESPONDING DATA FROM PLC DISPLAY FOR COMPARATIVE ANALYSIS

11:00 AM - COMPLETE SVE/IBT ENCLOSURE MONITORING
- PACK-UP EQUIPMENT & ORGANIZE SITE
- PURGE TEDLAR BAGS WITH NITROGEN

11:30 AM MEET WITH THE BUGMAN EXTERMINATOR
DISCUSS OPTIONS & WALK SITE FOR MEASUREMENTS
IDENTIFY CAP AREA & AREAS WHERE GOPHERS HAVE BURROWED

12:00 AM DEPART SITE WITH RT

Prepared by: IAN YUSKO
RYAN TEOXON

Signed: RT

C2 REM
FIELD DAILY REPORT

OJECT NAME: C2 VAPOR TREATMENT PAGE 1 OF 1

PROJECT NUMBER: 99-106 DATE: APRIL 2, 2006

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: SITE VISIT / WELL HEAD ADJUSTMENT

10:15 ARRIVE ONSITE W/ DANE ROBINSON

- CHECK TRAILER FOR SIGNS OF VANDALISM / GRAFFITI
  - NO NEW SIGNS
- OPEN ENCLOSURE AND PLC CASING
- OXYGEN PIPE VALVES @ THE ENCLOSURE WERE IN THE "OFF" POSITION
  - TURNED THEM ALL TO THE "ON" POSITION
- OXYGEN INJECTION VALVES @ THE WELLHEADS WERE ALSO IN THE "OFF" POSITION
  - TURNED THEM ALL "ON"
- WENT BACK INTO THE ENCLOSURE
- TURNED OXYGEN GENERATOR FROM THE "OFF" POSITION TO THE "AUTO" POSITION
- FROM THE PLC PANEL, OPENED AUTOMATED VALVE 4 (V 4) TO 100%

10:45 - OXYGEN GENERATOR IS TURNED ON

TAKE O_2 READINGS @ INLET (7% DISPLAY, 1.9% SENSOR)

11:00 OFFSITE

ared by: RYAN TEOXON Signed: BE

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 04/09/07

WEATHER: Temperature 79°F Winds: NONE Precipitation: NONE

DESCRIPTION OF THE WORK: SITE MAINTENANCE

12:30 PM	ARRIVE ON-SITE W/ RT, + SM AFTER PICKING UP SOME PARTS FOR REPAIRS + MAINTENANCE
12:45 PM	BEGIN RETROFITTING WELLHEADS FOR FUTURE PURGING + MONITORING EVENTS
	USE 2 BALL VALVES, 1 2" TEE W/ FEMALE ADAPTER + CAP, AND 3 SHORT NIPPLES WITH A 2" FEMALE UNION TO CONNECT PIPE FROM WELLHEAD TO PIPE RUNNING TO MANIFOLD
3:30 PM	FINISH 7 WELLHEADS WITH NEW CONFIGURATION
3:35 PM	CLEAN-UP SITE, PROPERLY STORE EXCESS PIPE IN DRUMS FOR LATER DISPOSAL
4:00 PM	LOCK-UP + DEPART FROM SITE

Prepared by: IAN YUSKO
RYAN TEOXON
SEAMUS MC GEOUGH

Signed: Ian Yusko
RT
Seamus McGeough

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 4/10/2007

WEATHER: Temperature ~75° Winds: ~ Precipitation: ~

DESCRIPTION OF THE WORK: CONSTRUCTION OF PURGING MECHANISMS/ CLEAN GRAFFITI / M EE

12:30 ARRIVE ONSITE AFTER PURCHASING NEEDED ITEMS AT HOME DEPOT WITH SHINTA AIZAWA, IAN YUSKO, AND SEAMUS McGEOUGH

- IAN AND I CONTINUE WORKING ON WELL HEADS
- SEAMUS AND SHINTA START SPRAYPAINTING OVER THE GRAFFITI AT THE TRAILER

- SVE/IBT WELLS 8, 9, 11, 10, 2, AND 1 STILL NEEDED TO BE WORKED ON
- USED NEW "BLUE-HANDLE" BALL VALVES FOR ALL WELL-HEAD CONNECTION MODIFICATIONS PERFORMED TODAY
- PREVIOUSLY WAS USING OLDER "RED-HANDLE" BALL VALVES

13:00 SEAMUS AND SHINTA FINISH SPRAYPAINTING THE TRAILER
- THEY JOIN US IN MODIFYING THE WELL HEAD CONNECTIONS

14:00 - BUGMAN ARRIVES ONSITE
- HE TELLS ME THAT HE SEES A LOT OF GOPHER HOLES AT THE WEST SIDE OF THE SITE ON TOP OF THE CAP AND ALSO ON THE SLOPE LEADING UP TO THE CAP
- HE MENTIONS THAT HE WILL BE BACK ONSITE ON FRIDAY AFTER THE SITE WALK

15:30 FINISH WELL HEAD MODIFICATIONS

16:00 OFFSITE

Prepared by: RYAN TEOXON Signed: [signature]

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 05/01/2007

WEATHER: Temperature ~70° Winds: — Precipitation: —

DESCRIPTION OF THE WORK: Oversight All Pro Fence, Troubleshoot security cameras

9:00 SA arrive on site.

9:45 All Pro Fence arrive onsite. to paint the trailer.

SA start troubleshooting security cameras.
- unplug wires and reconnected them.
- the camera got connected and got remote access, too.

3:30 All Pro Fence finish their work.

3:45 offsite.

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

C_2 REM

FIELD DAILY REPORT

PROJECT NAME: Del Amo Pits. PAGE 1 OF 1

PROJECT NUMBER: 97-101 DATE: 05/02/2007

WEATHER: Temperature ~70° Winds: - Precipitation: -

DESCRIPTION OF THE WORK: Oversight All Pro Fence, Backup data of security cameras, PLC data

9:00AM SA arrive onsite.

9:20AM All Pro Fence arrive onsite.

SA start taking PLC Data, and backup of the security cameras.

11:30 offsite.

Prepared by: Shinta Aizawa Signed: Shinta Aizawa

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS | PAGE 1 OF 1

PROJECT NUMBER: 97-101 | DATE: 6/6/2007

WEATHER: Temperature ~70° Winds: — | Precipitation: —

DESCRIPTION OF THE WORK: SITE VISIT

9:15 ARRIVE ON SITE

- WALK SITE TO CHECK FOR ANY MAINTENANCE ISSUES THAT NEEDED TO BE ADDRESSED
  - NONE WERE FOUND, ALTHOUGH ON THE PARK SIDE, IT SEEMED AS IF A BIGGER, MORE ROBUST BACK STOP HAD BEEN PUT UP TO REPLACE THE OLD ONE

- ENTER TRAILER AT SITE TO CHECK ANY MAINTENANCE ISSUES
  - NONE WERE FOUND

- ENTER "SEA TRAIN" TO PICK UP 2" TUBING W/ CAMLOCK ATTACHMENTS AT EITHER END

- LOCKED UP SITE

10:00 OFF SITE

Prepared by: RYAN TEOXON Signed: RT

C2 REM

FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS PAGE _____ OF _____

PROJECT NUMBER: 97-101 DATE: 7-2-07

WEATHER: Temperature 90° Winds: _____ Precipitation: 0

DESCRIPTION OF THE WORK: MONITORING + ADJUSTMENT of IRRIGATION

12.45pm ARRIVE at Site.

MONITORED PRESSURE AT WELLS that WERE NOT TAKEN DURING the QUARTERLY FULL SCALE EVENT.

Installed 2 MORE SPRINKLERS + ADJUSTED ALL SO AT the ROTATE 360°

SPRINKLERS at the EAST END of the SITE ARE Not as Efficient as those at the WEST END DUE TO LACK of WATER PRESSURE.

3.10pm. off SITE

Prepared by: SEAMUS Mc GEOUGH. Signed: Seamus Mc Geough

MARK AUSTIN.

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO Pits
PROJECT NUMBER: 97-101
PAGE _____ OF _____
DATE: 7-10-07
WEATHER: Temperature 80° Winds: LIGHT Precipitation: NONE.
DESCRIPTION OF THE WORK: Replce Water Pressure Regulator, Put LIDS ON WELLS

8.30 am SM & MA MEET with JK at the Site.

Replaced Water Pressure Regulator No Leaks.
Adjusted Sprinklers by Replacing Nozzles with finer Spray. THIS Resulted in More Coverage from the Sprinkler Heads.

10 AM Changed watering pattern so that each area was watered for about 45 mins.

10.30 am. Started Replacing the lids on the perimeter ~~stack~~ MONITORING wells. 4 wells missing lids

11.45 SM MA off Site for lunch.

12.45 SM MA Back on Site, finished Replacing LIDS, SOME BOLTS STILL NEEDED. ALSO 3 MONITORING PORTS too high to PUT LID ON.

2 pm SM MA off Site.

Prepared by: SEAMUS Mc GEOUGH Signed: Seamus McGeough

C2 REM

FIELD DAILY REPORT

PROJECT NAME: Del Amo Waste Pits

PROJECT NUMBER: 97-10

PAGE 1 OF 1

DATE: 7/23/97

WEATHER: Temperature 90° Winds: 5 mph

Precipitation: None

DESCRIPTION OF THE WORK:

- Cleaned out Sea Tram
- Took inventory of Major tools/devices Stored in the Sea Tram
- Ran the Migration System 10AM - 4pm

Prepared by: Mark Austin
Seamus McGeough

Signed: Mark Austin

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL ANO Waste PitS PAGE _____ OF _____

PROJECT NUMBER: 97-101 DATE: 7-30-2007

WEATHER: Temperature 87 Winds: _____ Precipitation: _____

DESCRIPTION OF THE WORK: Install Relative Humidity Meter / Irrigation

8.30 AM SM/MA ON Site.

8.45 AM JK on Site. to Install Humidity Meter.
Meter Installed however Display needed to be changed to accomodate New meter.

10.30 JK off Site.
SM/MA. adjust + Increase Water Coverage. Install extra piping to extend irrigation segment at the front of the property.

2 PM SM/MA off Site.

Prepared by: SEAMUS Mc GEOUGH Signed: Seamus McGeough

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS PAGE _____ OF _____

OJECT NUMBER: 97-101 DATE: 7-30-2007

WEATHER: Temperature 80° Winds: 0 Precipitation: 0

DESCRIPTION OF THE WORK: Install Humicleity meter / Irrigate Cap.

8.30 SM + MA arrived on Site. Started irrigating the cap.

9.00 JK arrived onsite. Humicleity Meter was installed However we need Pump systems to set up display Reading for Humicleity on the PLC UNIT.

10.30 JK off Site.

11.00 We extended the irrigation Run at the Del AMO bldg end of the property to get more Coverage

12.00 Lunch.

1 pm Continue to adjust Sprinklers but water pressure too Low to Run all of the units.

2pm OFF Site (SM + MA).

Prepared by: SEAMUS Mc Geough. Signed: Seamus McGeough.

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO PAGE _____ OF _____

OJECT NUMBER: 97-101 DATE: 8-1-07.

WEATHER: Temperature 87° Winds: 0 Precipitation: _____

DESCRIPTION OF THE WORK: Irrigate the Cap.

8.30. Arrived on Site

8.45 MA ARRIVED ONSITE.

ASSEMBLED Valve connections for Sprinklers & Reinstalled Sprinkler heads.

Irrigated the Cap for about 2 hours.

11 AM MA & SM offsite.

Prepared by: Seamus McGough Signed: Seamus McGough.

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO
PROJECT NUMBER: 97-101
PAGE 1 OF 1
DATE: 8-2-07
WEATHER: Temperature 90° Winds: 0 Precipitation: 0
DESCRIPTION OF THE WORK: Site Visit

8.30 am DR & SM ON Site, MA already there.
System not running.
Calibrate PID & Entered Enclosure.
Called ADINS to Solve VNC Problems
IJ able to restart System from the office. System Running, VNC up & operating Normally.
MA Instigated the CAP.

10.15 am DR, SM, MA off Site.

Prepared by: SEAMUS McGEOUGH Signed: Seamus McGeough
Daniel Rc

C2 REM
FIELD DAILY REPORT

PROJECT NAME: DEL AMO WASTE PITS PAGE _____ OF _____

PROJECT NUMBER: 97-101 DATE: 8-14-2007

WEATHER: Temperature 86° Winds: MODERATE Precipitation: 0

DESCRIPTION OF THE WORK: Irrigate CAP, EXTEND SYSTEM, WRITE DOWNLOAD PROTOCOLS

12.30 IJ + SM arrive on Site.

STARTED Irrigation System at the Entrance.

STARTED Mobile Sprinkler at the Center of the Site.

Extended System for more coverage in sub AREAS I + II.

Which Reduce coverage in Some areas + Help on Other areas.

Download data from Surveillance System, Write down PROTOCOL.

Write Down PROTOCOL for PLC Down Load

4.45 SM + IJ offsite.

Prepared by: SEAMUS Mc GEOUGH
IAN YUSKO

Signed: Seamus Mc Geough
Ian Yusko

C2 REM

FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS

PROJECT NUMBER: 97-101

PAGE 1 OF 1

DATE: 8-30-07

WEATHER: Temperature 90° Winds: _____ Precipitation: 0

DESCRIPTION OF THE WORK: Clean Enclosure & Irrigate.

2.30. SK & SM arrive on Site.

2.35. Turn on Sprinklers at the front gate.

2.40 Sweep & Wash out Enclosure.

3.00. Turn all Sprinklers on in Sequence to water all areas a little.

3.30. SK & SM off Site.

Prepared by: S. McCOUGH

Signed: Seamus McGough.

C2 REM

FIELD DAILY REPORT

PROJECT NAME: DEL AMO PITS · PAGE _____ OF _____

OJECT NUMBER: 97-101 DATE: 9-20-07

WEATHER: Temperature 85° Winds: 0 Precipitation: 0

DESCRIPTION OF THE WORK: Weekly Monitoring / Irrigate the Cap.

9.00 am Arrive on Site (TT, IJ SM).

Started Irrigating the Cap.

Weekly monitoring

11.30 am TT, IJ, SM off Site.

Prepared by: Seamus Mc Credden TRI TRAN

Signed: Seamus McFadden

C2 REM

FIELD DAILY REPORT

PROJECT NAME: ~~99~~-Del AMO PIT 5 PAGE _____ OF _____

OJECT NUMBER: 97-101 DATE: 9-25-07

WEATHER: Temperature 85° Winds: 0 Precipitation: 0

DESCRIPTION OF THE WORK: Turn on Oxygen Generator.

8:45 TT & SM arrive on Site.

Turn on O2 Generator.

9:15 TT & SM off Site.

Prepared by: Seamus McGeough
TRI TRAN

Signed: Seamus McGeough

C_2 REM
FIELD DAILY REPORT

OJECT NAME: Del Amo Pits **PAGE** 1 of 1

PROJECT NUMBER: 97-101 **DATE:** 10/30/2007

WEATHER: Temperature: 63 **Winds:** none **Precipitation:** none

DESCRIPTION OF THE WORK: Testing inline flow sensors

10:00 AM	IY, JS, SA, TT arrive onsite
	Recirculate all flow, V1=0%, V3=100%, ( )=velocicalc readings
	Blower=30% --> FT5 = 23~24, FT4=23~24
	Blower=40% --> FT5 = 29~31, FT4=31~32, TT5A=62, TT4A=101, P5= -15 in H_2O, P4=4.5 in H_2O
	Blower=50% --> FT5 = 36~38, FT4=41~42, TT5A=62, TT4A=99, P5= -26 in H_2O, P4=7.5 in H_2O
	Blower=55% --> FT5 = 32~42 (44~45), FT4=44~46 (38~41), TT5A=62, TT4A=105, P5= -32 in H_2O, P4=7.8 in H_2O,
	Blower=65% --> FT5 = 55 FT4=45,
	Recirculate all flow, V1=0%, V3=100% (velocicalc readings) with ambient air from the manifold
	Blower 75% --> FT5=62~63, FT4=74~76, TT%A=66, TT5B=94
	Close ambient air from manifold
	Blower 75% --> FT5=225, FT4=66, sensor malfunctioning, probably moisure?
	Swap seonsors FT4 for FT5 (FT4 is now at point of extraction and FT5 is at point of recycle), ( )=velocicalc readings
	Blower=30% --> Extraction rate FT4=22 (20.1), Recycle rate FT5=25(21~25)
	Blower=40% --> Extraction rate FT4=31 (29.1), Recycle rate FT5=34 , TT5A=71, TT4A=82, P4= -5, P5=14.5
	Blower=50% --> Extraction rate FT4=39 (39.1), Recycle rate FT5=39~42 , TT5A=70, TT4A=90, P4= -8.5, P5=24
	Blower=55% --> Extraction rate FT4=43, Recycle rate FT5=41 , TT5A=70, TT4A=96, P4= -10, P5=30
	Blower=65% --> Extraction rate FT4=52 (73), Recycle rate FT5=37~59 , TT5A=67, TT4A=99, P5=40
	Swap sensors FT1 for FT5 (FT1 is now at point of extraction), ( )= velocicalc readings,
	Blower=40% --> Extraction rate FT1=102 (40.3)
	Blower=30% --> Extraction rate FT1=60 (20.9),
	Blower=55% --> Extraction rate FT1=173 (45.1),
Special Notes	
	some liquid accumulation is suspected in the system, and flow sensors can't read properly when the blower increases enough to vacuume liquid

Prepared by: Shinta Arzawa
IAN Yusko
TRI TRAN

Signed:

C2 REM
FIELD DAILY REPORT

PROJECT NAME:

PAGE 1 OF 1

PROJECT NUMBER:

DATE: 12/11/07

WEATHER: Temperature 65° Winds: Precipitation:

DESCRIPTION OF THE WORK: Site Visit / Troubleshoot In-line Sensors

1:00 pm: arrive on-site w/ Bill, Shunta, Tri to troubleshoot sensors

Initial Flow Sensor Readings:

FT05 25-28 scfm
FT04 44-46 scfm
FT01 15-17 scfm

- Switch location of sensors:

	Reading	Velocicel
remove FT05 sensor and place in FT04 location:	35-40 scfm	41-46 scfm
" FT04 " " " " FT05 location:	30-32 scfm	36.5 scfm
FT01 in original/correct position		6-23 scfm
remove FT05 sensor and place in FT01 location:	9 scfm	8-10 scfm
" FT01 " " " " FT05 location:	106 scfm	32-35 scfm
FT04 in correct place	44-46 scfm	46 scfm

- Collect Tedlar Bags from ~~the~~ Post-dilution location and observed that Concentration was between 20-30 ppm. (much lower than typically is)

Need to continue to troubleshoot sensors / will return tomorrow

Prepared by: Signed:

C_2 REM
FIELD DAILY REPORT

PROJECT NAME: Undeveloped Parcel **PAGE** 1 of 1

PROJECT NUMBER: 99-110 **DATE:** 12/27/2007

WEATHER: Temperature: 72 **Winds:** None **Precipitation:** None

DESCRIPTION OF THE WORK: Fixed the gate

Time Line	
8:00 AM	
9:00 AM	TT/SM Arrived at 9:00
	Checked for vandalize sign
	Fixed the gate
10:00 AM	
11:00 AM	
12:00 PM	Left the site at 12:00
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	
5:00 PM	
Special Notes	

Prepared by: TRI TRAN

Signed: