

**Final Work Plan for
Demolition Activities and
Post-Cleanup Sampling**

**Williams B Lease
Tank Battery Facility
Cat Canyon Oilfield,
Santa Barbara County, California**

**021-10201-00/027
July 18, 2008**

Prepared for:
Greka Oil & Gas, Inc.
6527 Dominion Road
Santa Maria, CA 93454

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1.0 INTRODUCTION AND BACKGROUND

The Williams B Lease is located in the Gato Ridge Area of the Cat Canyon Oil Field, to the southeast of Santa Maria in unincorporated Santa Barbara County, California. A former tank battery, known as the Williams B Lease Tank Battery, is located on this lease; the tank battery is located approximately 600 feet southwest of Cat Canyon Road, about 0.8 miles west of the intersection with Long Canyon Road (the “Site”; Figures 1 and 2). The Williams B Tank Battery facility was most recently operated by Greka Oil & Gas, Inc. (Greka).

On March 19, 2008, the US Environmental Protection Agency Region IX (US EPA) issued an “Order for Removal, Mitigation or Prevention of a Substantial Threat of Oil Discharge (“the Order”) and amendment dated March 20, 2008, pertaining to the release of crude oil from the Williams B Tank Battery facility. The Order included a requirement (Sections 17a and 17b) for a Work Plan to describe measures to be used to clean up, remove, and properly dispose of all oil and petroleum contamination from the Site, and a Sampling Plan to describe post-removal confirmation sampling.

LFR Inc. (LFR) submitted an initial combined Work Plan and post-cleanup Sampling Plan on May 1, 2008. The initial Work Plan and Sampling Plan focused on the features of concern that were identified in the Order and in a subsequent site visit conducted on April 11, 2008, with LFR staff and Mr. Robert Wise, the Federal On-Scene Coordinator (OSC).

As stated by US EPA in their letter to Greka dated April 18, 2008, Mr. Wise has been replaced by Mr. Jason Musante as OSC. LFR discussed changes to the initial Work Plan during a site visit with Mr. Musante on May 13, 2008. Comments were also provided by the Santa Barbara County Fire Prevention Division (FPD) on May 15, 2008 and June 27, 2008. This revised Work Plan and Sampling Plan has been prepared to address and incorporate these changes.

Because the Site will continue to operate as an industrial facility following implementation of the scope of work presented herein, Greka is not pursuing full-scale decommissioning of the Site thru the Santa Barbara County Petroleum Office and FPD at this time.

1.1 Site Conditions

LFR conducted field inspections at the Site on April 11 and May 13, 2008. The principal features of concern (Figure 2) include the following:

- **Existing Stock Tanks.** Six aboveground stock tanks are located on the side of a hill to the south of the Main Facility Road. For purposes of this Work Plan,

the six existing tanks have been designated as “Tank A to Tank F” on Figure 3, with corresponding two-letter abbreviations of “TA” to “TF”.

LFR understands that four of the stock tanks were originally numbered as TK 9783, TK 9862, TK9801, and TK 9803 by Greka; the two remaining stock tanks were apparently unnumbered. The stock tanks are cylindrical, with design capacities of approximately 1,000 barrels (bbl).

A header system and compressor pump are located to the west of the stock tanks. These features have been assigned the two-letter abbreviations of “HS” and “CP” on Figure 3.

- **Possible Historic Stock Tank Locations.** There are two possible historic stock tank locations in the southeast part of the Tank Battery. These features have been designated as “Tank G” and “Tank H” on Figure 3, with corresponding two-letter abbreviations of “TG” and “TH”.
- **Heater-Treaters.** A horizontal heater-treater and a cylindrical vertical heater-treater are located on the northern side of the Main Facility Road. These features have been assigned the three-letter abbreviations of “HHT” and “VHT” on Figure 3. These features will remain in operation following completion of the scope of work presented herein.
- **Baker Tanks.** Two portable rectangular tanks (“baker tanks”) are located on the northern side of the Main Facility Road. For purposes of this Work Plan, the western tank has been designated as “Baker Tank A”, and the eastern tank has been designated as “Baker Tank B”. These features have been assigned the two-letter abbreviations of “BA” and “BB” on Figure 3.
- **Discarded Tanks.** There are two discarded cylindrical tanks resting on their sides on the northern side of the Main Facility Road. These tanks are not shown on Figure 3. If soil sampling is warranted beneath these features, they will be designated as “Discarded Tank A” and “Discarded Tank B”, and assigned the two-letter abbreviations “DA” and “DB”.

The Order stated that there was crude oil, water, and sludge visible in several of the tanks; that the tanks had no secondary containment and were not structurally sound; and that several of the tanks were actively leaking to the ground. Preliminary estimates of the volumes of material currently remaining in the tanks and vessels are included in Section 3.2 below.

The Site area also includes two active production wells, designated as “Williams B” 3 and “Williams B” 4, numerous aboveground pipelines, and possibly subsurface pipelines. LFR understands that the Order does not require abandonment of these features, although the wells must be repaired if they pose a threat of discharge. This Work Plan therefore focuses primarily on the tank features described above.

1.2 Soil Conditions

Two soil types have been mapped in the site area (NRCS 2008). The boundary approximately corresponds to the Main Facility Road, which separates the topographically higher (southern) and lower (northern) parts of the Site:

- To the south, including the area occupied by the stock tanks, the soil type has been mapped as “San Andreas-Tierras Complex, 15 to 30% Slopes.” This soil type is derived from weathered sandstone bedrock; the underlying bedrock typically occurs at relatively shallow depths, of 28 to 32 inches. The bedrock in this area has been mapped as the Careaga Sandstone (Dibblee 1994).
- To the north, the soil type has been mapped as “Elder Sandy Loam, 2 to 9% slopes, eroded”. This soil type forms on alluvium derived from sandstone and shale; the typical depth to bedrock is greater than 72 inches.

2.0 OBJECTIVES

The objectives of this Work Plan, as per the requirements of the Order, are to present the proposed protocol and methodology to:

- **Conduct pre-demolition permitting and characterization**, in accordance with FPD requirements (Section 3.1).
- **Clean the tanks and vessels** described above, including the six stock tanks, the baker tanks, the discarded tanks, and any other miscellaneous drums and support equipment (Section 3.2)
- **Demolish, transport and dispose of the tanks**, as recyclable materials, salvageable materials, or trash as appropriate (Section 3.2)
- **Excavate affected soil** beneath the tanks and in other parts of the Site, and backfill the completed excavations with clean imported soil (Section 3.3)
- **Transport and dispose of the solids and fluids** derived during the cleaning and overexcavation of these tanks and vessels (Section 3.4)
- **Conduct post-removal sampling** to confirm the cleanup of affected areas, including sampling in unaffected areas to establish background conditions (Section 3.5)
- **Evaluate the two onsite production wells** to determine if they pose a threat of discharge, and to make repairs as necessary (Section 3.6)

As stated in the Order, “contaminants of concern” include the full range of Total Petroleum Hydrocarbons (TPH), volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), semivolatile organic compounds (SVOCs), and metals. The full California Title 22 suite, which includes additional analyses, will be used as necessary to characterize materials for disposal.

LFR understands that 15 samples of tank wrap, tank seal, and pipe materials, including at least two samples from each of the six stock tanks, have previously been evaluated for possible asbestos-containing materials. Asbestos (as 15% chrysotile) was reported in only one of the samples, associated with a pipe adjacent to the northeastern tank. The length of the affected pipe was estimated at 3 linear feet (Appendix A).

Seven samples of the tank wrap material surrounding the stock tanks were analyzed for possible asbestos-containing materials. No asbestos was detected in the samples (Appendix A). The tank wrap material did contain 85 - 90 % “cellulose”, which apparently accounts for its fibrous appearance. Based on these results, asbestos is not considered a general contaminant of concern at the Site, except in the vicinity of the pipe noted above.

According to the 1st Response site specific Health and Safety Plan (1st Response 2008): “Each bulk oil tank is partially covered with insulation panels composed of cellulose material. This material will be hand removed and stacked on plastic sheeting in an isolated part of the Support Zone. This material will then be separated into clean materials and those panels that are heavily soaked with tar. These will be segregated for proper disposal. Asbestos was not detected associated with tank wrap insulation. However, a site survey conducted before January 25, 2002 reported the presence of approximately three (3) linear feet of asbestos covered pipe. (Note, the Laboratory received the samples on January 25, 2002, but the actual sample dates are unknown.) Upon receipt of sampling results, the operator submitted an APCD demolition application on February 4, 2003, with the demolition scheduled between February 21, 2003 and March 31, 2003. A Fee of \$91.38 appears to have been paid for Asbestos Demolition and Renovation under APCD Rule 210, Schedule E.

While there appears no evidence that the removal of the pipe in question was ever completed and signed off, the Demolition form and fee (APCD Rule 210, schedule E.) states that there was, as of February 4, 2003, no asbestos present at demolition site. Currently, six and half (6.5) years since that original survey, there is nothing that resembles the three (3) linear feet of pipe, or the pipe covering in the report. There also appears to be no asbestos debris nor any indication of that material mentioned in the laboratory report. Due to the time of original report, it is assumed that the material in question was removed and transported off site safely and correctly.”

3.0 PROPOSED SCOPE OF WORK

3.1 Pre-Demolition Permitting and Characterization

An “Application to Permanently Close An Aboveground Hazardous Materials Storage Tank” was approved by FPD’s Certified Unified Program (CUPA) Unit on June 25, 2008 (Permit #ATN-4528). Appropriate permits will also be obtained as necessary from the Santa Barbara County Air Pollution Control District (APCD), the Santa Barbara County Planning & Development Department, and the California Division of Occupational Safety & Health (CalOSHA).

A site specific Health & Safety plan was prepared and submitted to the FPD CUPA Unit (1st Response 2008). The Health & Safety plan documents the training of the onsite Greka, Demcon, and 1st Response personnel that will be involved in the demolition project.

The material remaining within the tanks will be sampled and characterized for disposal purposes, as required by the FPD CUPA Unit. At least one sample from each feature of concern will be analyzed for the complete California Title 22 characterization suite. Sampling activities will be completed by 1st Response and laboratory analyses will be conducted by a Zalco Laboratories, Inc., a state certified laboratory. Title 22 characterization sampling activities will be witnessed by FPD CUPA.

3.2 Tank Cleaning and Demolition

The tanks and vessels at the Site were described above in Section 1.1; individual tank designations and abbreviations are shown on Figure 3. It is anticipated that the tanks and vessels at the Site may contain petroleum-affected water, petroleum fluids, or residual solids. The combined volume of materials currently in the tanks/vessels at the Site may be preliminarily estimated at approximately 44,500 gallons. This volume estimate includes the following:

- **Existing Stock tanks (TA through TF):** Two of the tanks appear to contain approximately 3 feet of material; two of the tanks appear approximately 1 foot of material; and the two remaining tanks appear to be nearly empty. Based on an estimated stock tank diameter of 22 feet, this represents a total volume of approximately 22,500 gallons.
- **Heater-treaters (HHT and VHT):** estimated volume of approximately 8,500 gallons of fluids.
- **Baker tanks (BA and BB):** one tank appears to be full of very viscous material; the other appears to have only about one foot of product. The estimated total volume in both tanks is approximately 13,500 gallons.

These material volume estimates have been presented for planning purposes, but should be considered preliminary, since the tanks and vessels are not fully accessible for inspection and measurement. More accurate measurements and volume estimates will be conducted as part of the pre-demolition sampling and characterization effort (Section 3.1).

The largest volume of material is in the stock tanks. After it has been verified that the stock tanks are safe for demolition, the roof and upper portions of the sidewalls will be removed, using equipment located outside the tanks. The residual material inside the tanks will then be excavated and removed, using equipment located outside the tanks.

Material will be removed using outside equipment to the extent possible. If necessary, appropriately qualified and equipped personnel may be sent into the tank areas after the roof and upper sidewalls have been removed, to remove material manually.

After the residual material within the stock tanks has been removed, the remaining sidewalls and floors of the stock tanks will be removed, using equipment located outside the tanks.

The fluids in the heater-treaters and baker tanks should be less viscous and easier to remove than the residual material in the stock tanks, and will be drained into vacuum trucks.

After the tanks and vessels have been sufficiently rinsed and cleaned, they will be demolished and transported offsite for salvage, recycling, or trash as appropriate. The heater-treaters will remain onsite and will be employed for future Greka operations on the Site. Discarded tanks and drums at the Site will be addressed as well.

3.3 Soil Excavation and Backfill

Hydrocarbon-affected soils beneath the stock tanks will be excavated using a track-mounted excavator. For planning purposes, it has been assumed that the area under the six stock tanks will be excavated to a depth of approximately 3 feet below ground surface (bgs). Given a stock tank area of approximately 200 feet by 75 feet, this represents a total excavated volume of approximately 1,667 cubic yards, or approximately 2,500 tons.

The assumed excavation area defined above is substantially larger than the area occupied by the six existing stock tanks (which are only about 22 feet in diameter each). For planning purposes, it has been assumed that the excavation area will be large enough to include the two possible former stock tank locations (TG and TH on Figure 3), and the compressor pump and header system (CP and HS on Figure

3), as well as the six existing stock tanks (TA to TF on Figure 3). The exact area of the excavation will be based on field evidence for hydrocarbons in soil.

The excavations may be locally shallower or deeper, depending on field evidence for hydrocarbons in soil. The excavations will continue until there is no obvious field evidence of affected soil in the base or sidewalls. The excavations in the stock tank area may be affected by the presence of shallow sandstone bedrock, at depths of approximately 28 to 32 inches (Section 1.2).

It is likely that the greatest volume of affected soil will be associated with the stock tanks. However, additional excavations may also be conducted under the locations of the other tanks/vessels, if necessary. Any surficial hydrocarbon-affected soils in other parts of the Site will be excavated and consolidated as well.

After the confirmation sampling has confirmed that cleanup objectives have been attained (Section 3.6), the excavations will be backfilled using clean imported fill material. Fill material will be tested and certified as clean based on the sampling and analytical protocols provided in the California Department of Toxic Substances Control (DTSC) *Information Advisory, Clean Imported Fill Material* (dated October 2001). A letter report summarizing the fill material source location, sampling frequency and protocol, and laboratory analytical results will be provided to EPA and FPD prior to backfilling the excavation.

For planning purposes, the amount of excavated soil has been estimated at approximately 1,667 cubic yards, or approximately 2,500 tons. However, the vertical and lateral extent of hydrocarbon-affected soil has not been assessed. The actual amount of excavated soil could vary, depending on the field evidence for hydrocarbon-affected soil and the depth of excavation necessary to remove it.

3.4 Disposal Plan

The material within the tanks and vessels at the Site will be sampled and characterized prior to demolition (Section 3.1), in accordance with US EPA and FPD CUPA Unit requirements. The stockpiled soil from the excavations (Section 3.3) will also be sampled for profiling purposes. Disposal methods will be determined based upon the results of the characterization sampling.

Treatment, reuse and/or disposal options will be evaluated pending evaluation of analytical results pursuant to Section 18c of the Order. Since the primary compound of environmental concern is crude oil, it is likely that much of the material will be classified as non-hazardous for disposal purposes. Possible options include the following:

- **Salvage/Recycling of Metal Equipment:** The tanks and vessels will be inspected for possible salvage or recycling value after they have been suitably cleaned. Some equipment, such as the baker tanks, may be suitable for further

use after cleaning and refurbishment; other equipment, such as the stock tanks, may be suitable for demolition and offsite metal recycling.

- **Petroleum-Affected Soils:** Excavated soils affected by petroleum hydrocarbons, if shown to be non-hazardous, may be transported to the Santa Maria Sanitary Landfill (SMSL) for disposal under the SMSL's Non-hazardous Hydrocarbon Impacted Soils (NHIS) program.
- **Petroleum-Affected Fluids:** Recovered fluids affected by petroleum hydrocarbons may be transported by vacuum truck to adjacent Greka facilities. Recovered production water may be reinjected at permitted injection wells. Recovered petroleum product may be placed through phase-separation systems for processing and recovery. If the recovered fluids prove unsuitable for these uses, then they may be transported to an appropriately permitted offsite facility for treatment, recycling, or disposal.
- **Solid Residues:** Residual solids from the tanks or vessels will be tested and transported to an appropriately permitted offsite facility for treatment, recycling, or disposal.
- **Hazardous Materials.** If any materials are found to be hazardous, they will be transported to an appropriately permitted Class I facility in accordance with the US EPA Off-Site Rule, and subject to US EPA and FPD CUPA approval.

3.5 Confirmation Sampling and Analyses

3.5.1 Sampling Locations

After the hydrocarbon-affected soil beneath the tanks/vessels has been excavated, confirmatory sampling and analyses will be conducted by LFR. Since the environmental concerns at this Site are associated with specific features (primarily the tanks), the confirmation samples will be associated with these specific features, rather than located randomly. Confirmation sampling activities will be witnessed by FPD CUPA.

Confirmation samples will be collected in association with the existing tanks and other features at the Site, as follows (Figure 3):

- **Stock tanks:** A minimum of four confirmation samples will be collected in each cardinal direction beneath the footprint of each of the six existing stock tanks. This represents a minimum of 24 samples total.
- **Possible former stock tank locations:** There are presently six stock tanks at the Site, in two rows: the northern row has four tanks, while the southern row has only two. There is visual evidence that there may have been one or two

additional tanks in the southern row (possibly including the discarded tanks located elsewhere on the Site).

A minimum of four confirmation samples will be collected in each cardinal direction beneath the assumed footprints of the two possible former stock tank locations. This represents a minimum of eight samples total.

- **Header system/compressor pump:** A minimum of two confirmation samples will be collected in the area of the header system and compressor pump, to the west of the stock tanks.
- **Baker tanks:** A minimum of two confirmation samples will be collected beneath the footprint of each baker tank. This represents a minimum of four samples total.
- **Contingency samples:** Additional confirmation sampling may be conducted depending on field conditions observed during the remedial excavations, or under the direction of US EPA or FPD staff. Conditions warranting additional sampling could include:
 - **Unusually significant impacts** from one of the features of concern described above
 - **Other previously unknown features of potential concern** observed during the remedial activities
 - **Additional sampling as required by FPD** to meet the separate FPD closure requirements
 - **Areas of surficial hydrocarbon-affected soil**, from possible historic spills, that are excavated during remedial activities

For planning purposes, it has been assumed that 16 contingency samples will be collected. However, the actual number of contingency samples could be larger or smaller, depending on field conditions.

Each confirmation sample will contain a two-letter code designating the associated feature of concern (Figure 3), as well as an individual number.

- **Background conditions:** Background samples previously collected by US EPA at the Bell Lease will be used to characterize background conditions, as per the suggestion of US EPA. If those data are unavailable or do not adequately characterize background conditions for the Site, up to five background samples will be collected from the Site area. The background samples will be collected from within the lease property boundaries in areas visibly unaffected by the

oilfield operations and with soil properties similar to the tank battery area as determined by an LFR geologist.

The sampling effort described above includes a total of 38 confirmation samples associated with the known features of concern, plus an estimated 16 additional contingency samples.

3.5.2 Cleanup Criteria

The Order specified cleanup levels of 1,000 milligrams per kilogram (mg/kg) plus background for TPH (full-range), and cleanup levels for other analytes should be based on US EPA's Preliminary Remediation Goals for Industrial Soil, plus background. The results for TPH and other analytes will be evaluated relative to local background and to the criteria in the Order.

3.5.3 Follow-Up Sampling

The analytical results from the initial phase of sampling will be reviewed after they are received from the analytical laboratory, and will be discussed with US EPA and FPD.

If the initial results show that elevated contaminant concentrations remain at the Site, then additional remedial excavation will be conducted at the affected locations, and another round of confirmatory sampling will be conducted. Further rounds of excavation and sampling will be repeated until the cleanup goals are achieved.

3.6 Evaluation of Production Wells

The two onsite production wells will be inspected by qualified personnel. Maintenance will be conducted as necessary.

Based on field observations, there appear to be only relatively minor volumes of hydrocarbon-affected soil associated with the two production wells. It will probably not be feasible to conduct extensive excavation activities in the vicinity of these operating production wells, since this would pose a risk of damage to the well, the associated aboveground equipment, and the associated underground pipelines and utilities. If warranted, limited excavation of soil may be conducted around the wellheads, using hand tools.

4.0 FIELD AND ANALYTICAL METHODS

4.1 General Procedures

US EPA and FPD will be notified at least 72 hours in advance of the proposed cleaning, demolition, excavation, and sampling activities.

Each soil sampling location will be staked or marked with a pin flag in the field after it has been drilled and sampled. The name of the sampling location will be clearly marked on the stake or pin flag. Sampling locations will be mapped using a GPS receiver.

Collected samples will be labeled and stored in a chilled cooler (at 4 degrees Celsius) pending delivery to the analytical laboratory. Strict chain-of-custody protocol will be followed throughout all phases of the sample handling process. Maximum hold times for the proposed analyses are listed in Section 4.3 below.

4.2 Confirmation Sampling Procedures

Excavation confirmation samples will be obtained with hand tools. During the sampling process, LFR will screen the soil with a photoionization detector (PID) and inspect the soil for evidence of hydrocarbons. The samples will be collected directly from the hand tool and transferred into laboratory-supplied glass jars. The jar threads will be cleaned by hand (nitrile-gloved), and the jars will be capped, sealed and labeled.

The confirmation soil samples will be collected with single-use disposable trowels, or with multi-use trowels that are decontaminated between sampling locations. Any investigation-derived disposable sampling equipment or decontamination water will be stored and disposed of following regulatory procedures.

Since crude oil is not particularly mobile, and since the stock tank area may be underlain by relatively impermeable sandstone bedrock at relatively shallow depths (Section 1.2), it is likely that the remedial excavations will be shallow. A three foot excavation depth has been assumed for planning purposes (Section 3.4). In this case, it should be possible for field personnel to safely enter the remedial excavations to collect confirmation samples. If the excavations cannot be entered safely, then confirmation samples will be obtained from the bucket of an excavator.

4.3 Analytical Program

Soil samples will be analyzed for the following constituents, as specified in the Order:

- **TPH-gas** by EPA Method 8015 Modified (C₄-C₁₂) or EPA Method 8260, using a gasoline standard (maximum hold time of 14 days)
- **Extractable TPH** by EPA Method 8015 Modified (C₁₃-C₂₂) using diesel and motor oil (C₂₃-C₄₀) standards (maximum hold time of 14 days)
- **VOCs** by EPA Method 8260B (maximum hold time of 14 days)
- **PAHs** by EPA Method 8270-SIM (maximum hold time of 14 days)
- **SVOCs** by EPA Method 8270 (maximum hold time of 14 days)
- **Metals** by EPA 6000/7000 series (maximum hold time of 180 days; except Hg maximum hold time of 28 days)

Confirmation samples laboratory analyses will be conducted by a Oilfield Environmental and Compliance, a California-certified environmental testing laboratory.

5.0 SCHEDULE AND REPORTING

5.1 Proposed Schedule

LFR tentatively estimates the following schedule and proposes the following contractors and organizations to perform the work:

- **Pre-Demolition Permitting and Characterization** (Section 3.1): Up to 10 business days, given the need to sample the material in the tanks and vessels and to receive and review laboratory results. Activities to be conducted by Greka/1st Response.
- **Field Mobilization**: Up to 7 business days, given the need to provide specialized equipment and specially trained personnel to address the cleaning, demolition, and health and safety issues involved with this project. Activities to be conducted by Greka/Demcon.
- **Tank Cleaning and Demolition** (Section 3.2): approximately 30 to 40 business days. Activities to be conducted by Greka/Demcon under the direction of 1st Response. The transportation company and the recycling or disposal facilities will be determined pending the results of the pre-demolition characterization analyses.
- **Soil Excavation and Backfill** (Sections 3.3): approximately 5-10 business days depending on the volume of affected material. Excavation and backfill activities to be performed by Greka/Demcon under the direction of 1st Response. The backfill source has yet to be determined.

- **Confirmation Soil Sampling and Analysis** (Section 3.3): approximately 1 to 2 days will be required to conduct confirmation soil sampling. Laboratory analysis will be conducted under standard turnaround time (10 days). LFR will conduct confirmatory sampling activities.
- **Profiling and Treatment, Reuse, or Disposal of Solids and Fluids** (Section 3.4): approximately 3 to 4 weeks will be required for profiling of solids and fluids. Profiling activities to be conducted by Greka/Demcon under the direction of 1st Response. The decision to implement treatment, reuse, or disposal option will require approximately 1 week. The treatment, reuse or disposal timeframe will depend upon the selected option.
- **Evaluation of Production Wells** (Section 3.5): approximately 1 day will be required. Evaluation will be performed by LFR/Greka.

LFR assumes that profiling and disposal of solids and fluids (Section 3.4) and evaluation of the onsite wells (Section 3.5) can be conducted concurrently with the other activities listed above.

If the initial laboratory results indicate that additional remediation is warranted, then additional time for remobilization, further excavation, and further laboratory analyses would be required.

A final schedule with exact dates will be submitted after receipt of US EPA approval for this Work Plan.

5.2 Reporting

An assessment report will be prepared outlining the results of the soil sampling. The report will include laboratory data sheets, chain-of-custody documentation, summary tables of analytical data, a figure showing sampling locations.

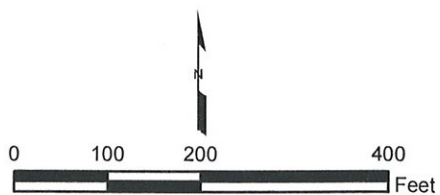
The report will evaluate the analytical results relative to the cleanup action levels specified in the Order and relative to local background levels.

The final report will be submitted within 30 days after completion of cleanup activities. The final report will be signed and stamped by an LFR California-licensed Professional Geologist or Professional Civil Engineer.

6.0 REFERENCES

- Dibblee, T.W. Jr. 1994. Geologic Map of the Sisquoc Quadrangle. Dibblee Geological Foundation, Map DF-53. December.
- 1st Response. 2008. Health and Safety Plan for Demolition Activities at Williams B Lease, Stock Tank Battery Facility. 6959 Cat Canyon Road. Santa Maria, California. June 24.
- National Resource Conservation Service (NRCS). 2008. Web Soil Survey. Accessed April 28. <http://websoilsurvey.nrcs.usda.gov/app/>
- U.S. Environmental Protection Agency, Region IX (US EPA). 2008. Order for Removal, Mitigation or Prevention of a Substantial Threat of Oil Discharge. U.S. EPA Docket No. OPA 311-09-2008-0004. March 19.

H:\Client Files\G-I\Greka\Williams B\Figures\GIS\Figure 1 Site Vicinity Map.mxd - 5/1/2008 @ 4:27:48 PM



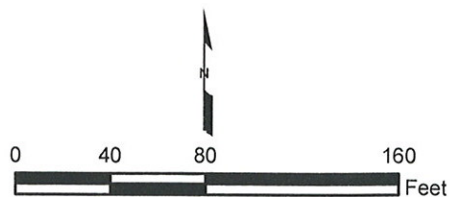
Site Vicinity Map

Greka / Williams B



Figure 1

H:\Client Files\G-I\Greka\Williams B\Figures\GIS\Figure 2 Site Map.mxd - 7/17/2008 @ 10:06:41 AM

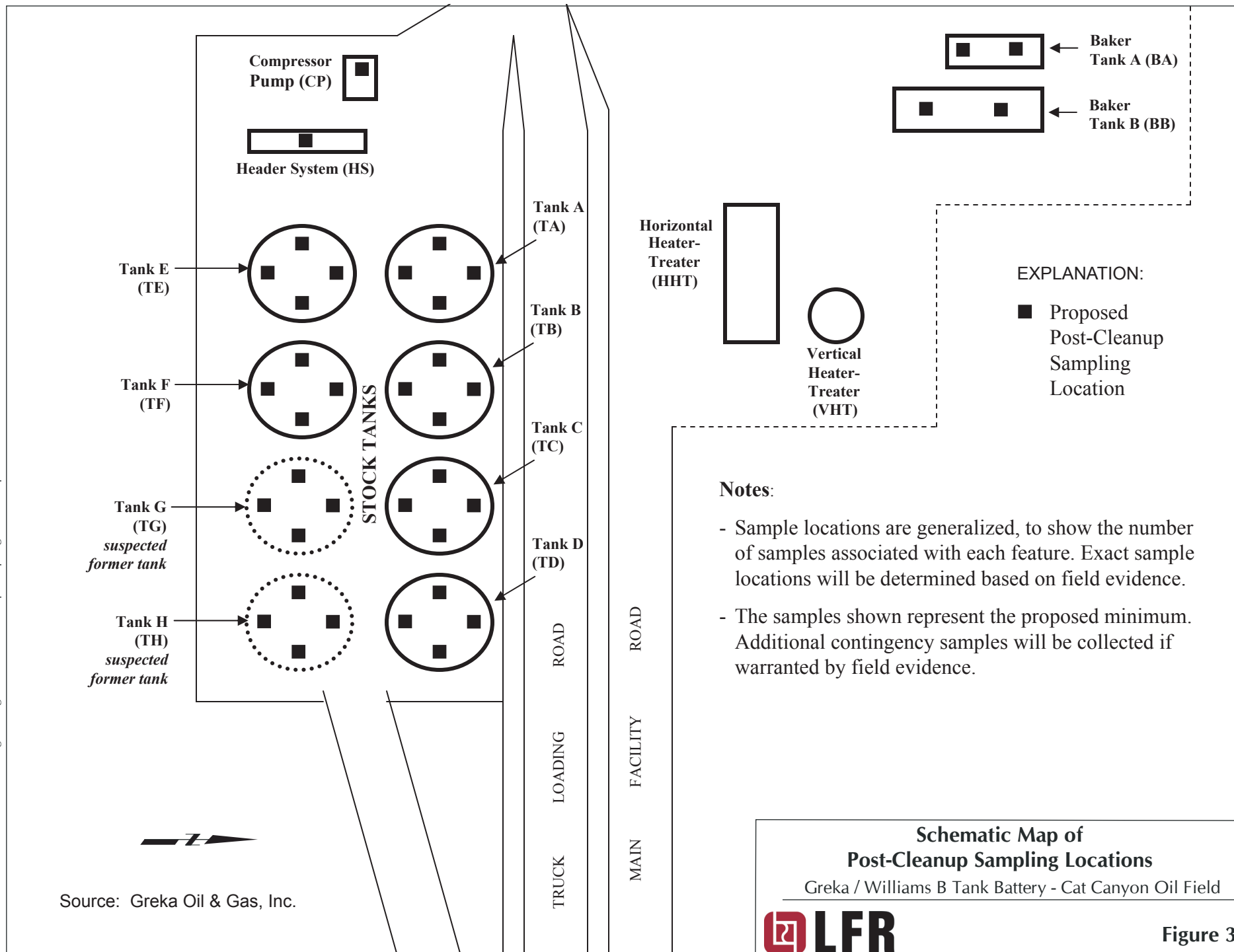


Site Map

Greka / Williams B



Figure 2



Appendix A

Asbestos Sampling Information

Santa Barbara County
AIR POLLUTION CONTROL DISTRICT
 Notification for Renovation and Demolition (USEPA Approved)

Please read instructions before completing this form

Instructions on page four

Section I. Notification

MAIL TO: _____

Santa Barbara APCD
 Post Office Box 8120
 Goleta, CA 93118-8120
 (805) 961-8800

PROJECT #: _____

TODAY'S DATE: 3/4/03 _____

APCD Identification Number: _____

Asbestos Abatement Dates:

*Start Date: _____

Finish Date: _____

Demolition Dates:

*Start Date: 3/21/03 _____

Finish Date: 4/31/03 _____

Demolition Only (D) _____

Renovation Only (R) _____

Emergency (E) _____

See Definition of Emergency

Prior Approval Needed

APCD USE ONLY

Date Rec _____

Pstmrk _____

Check# _____

Amount _____

ORIG X _____ REV 1 2 3 4 (CIRCLE) CANCL _____

Fees for Asbestos Demolition and Renovation (APCD Rule 210, schedule E)

*Please check box and submit proper amount

Demolition of Regulated Structure: (demolitions require a stand-alone notification, see attached definitions).
 Each Building \$91.36 ☒
(attach survey and/or declaration of abatement)

Asbestos Removal Renovations:

260 linear or 160 square feet but		
Less than 500 linear or square feet.....	\$ 365.42	<input type="checkbox"/>
500 or greater but less than 1000	\$ 517.69	<input type="checkbox"/>
1000 or greater but less than 2500	\$ 694.31	<input type="checkbox"/>
2500 or greater but less than 5000	\$ 858.74	<input type="checkbox"/>
5000 or greater but less than 10,000	\$1,004.92	<input type="checkbox"/>
10,000 or greater.....	\$1,187.62	<input type="checkbox"/>

Section II. Addresses

Asbestos Contractor:

Company Name: _____

Contact Name: _____

Address: _____

City: _____

State/Zip: _____

Phone: () _____

Fax: () _____

Owner Address: _____

Address: _____

City: _____

State/Zip: _____

Phone: () _____

General Contractor (if applicable):

Company Name: _____

Contact Name: _____

Street Ad: _____

City: _____

State/Zip: _____

Phone: () _____

Facility: Williams "B" Holding Tank Battery Age: 20+

Description: Decommissioned oil tank battery

Street Ad: Williams "B" Holding Lease, Cat Canyon

City: Santa Maria

State/Zip: _____

Phone: () _____

* you must start on this date or revise this notification via facsimile or hand delivery

Section III. Project Specifications

Is this for a Renovation (removal) or a Demolition (final)? (circle one)

Are Asbestos Containing Materials (ACM) present? (Yes / NO) (Attach Survey)

Type of Asbestos: (circle) Amosite Amphibole Chrysotile Other: _____

Percent of asbestos: % _____

Amount of Asbestos to be Removed

1. Regulated ACM Removing 2. Category I ACM Not Removed 3. Category II ACM Not Removed	Total RACM To Be Removed	Nonfriable Asbestos Material Not to Be Removed		Indicate Unit of Measurement Below	
		Category I	Category II	Unit	
Pipes/Linear Feet	3			X	Linear Feet
Surface Area/ Square Feet					Square Feet

Describe method(s) of removal: The small quantity of Asbestos found was removed, placed in plastic bags, and stored in a steel drum. _____

Section IV. Procedures - Procedure used to detect the presence of Asbestos Containing Materials (ACM):
(circle) visual Bulk sampling PLM PCM TEM

Plan of removal procedure(s) used to comply with 40 CFR Part 61: No Asbestos on site to be removed. _____

Description of work practices and engineering controls to be used to prevent emissions of Asbestos at the renovation and/or demolition site: No Asbestos on site to be removed. _____

Section V. Disposal

Waste Transporter #1: Name: N/A _____ Tel.#: () _____

Address: _____

City: _____ State: _____ Zip Code: _____

Waste Disposal Site: Name: N/A _____ Tel.#: () _____

Location: _____

City: _____ State: _____ Zip Code: _____

Section VI. Governmental Ordered Demolition -Attach Order**Section VII. Emergency Renovations-Call for Approval****Section VIII. Unexpected Discovery of Asbestos**

Description of procedures to be followed in the event that unexpected Asbestos is found or previously non-friable Asbestos material becomes crumbled, pulverized, or reduced to powder:

Greka would enlist the services of qualified contractors. _____

Section IX Trained Individual On-Site

I certify that a trained individual in the provisions of the NESHAP regulation will be on-site during the renovation or demolition and evidence that the required training has been accomplished by this person will be available for inspection during project hours.

No such individual will be present on site due to the non presence of Asbestos material.

Type/Print Name of On-site Trained Supervisor (s)

cell ph # or/onsite ph #/ pager #

Certification #

Training Provider

Exp Date

Section X. Statement

I certify that all the information contained in this notification is correct:

Thomas G. Dahlgren 3-5-03
(Signature of Owner/Operator) (Date)

Tom Dahlgren

Type/Print Name

934-2915

Telephone Number

310-6144 cell

Telephone Number

Additional Comments:

INSTRUCTIONS FOR NOTIFICATION*

Section I. Notification

- A. A copy of this notification should be sent to the Santa Barbara APCD (for projects being performed in Santa Barbara County).
- B. Asbestos notification requirements are as follows:
 - 1. Notification of all Renovations and Demolitions are to be 10 working days in advance, unless it is an Emergency Renovation (see definition). Emergencies are defined in the NESHAP regulation.
 - 2. Please state whether the Notification of the Project is an Original, Revision, or Cancellation in the space provided.
 - 3. Please check appropriate box for fee submittal. Amount submitted should correspond with fee schedule.
 - 4. If a revision to a notification is needed, please write the assigned APCD Identification Number (call for number) in the top right-hand corner (space provided) and submit before start of work.
- C. All demolitions of a facility (definition below) are regulated by NESHAPS and require written notification. A Demolition means the taking out of any load-supporting part or the intentional burning.

Section II. Addresses

- A. Please complete all areas that are applicable. If sections are the same Name and Address (for e.g., Owner and Facility), "same" is acceptable.
- B. "Contractor" means General Contractor or company employed by the owner to complete the project.
- C. "Facility" means name and actual street location of project. Facility is defined as being any institutional, commercial, or industrial structure, installation, or building. Residential homes do not need to submit a notification.

Section III. Emergency Renovations

- A. **Emergency Renovation, as defined by 40 CFR §61.141, means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by non-routine failures of equipment.**

Please note that verbal or facsimile notifications will not be accepted. Original notifications must be in writing, either by mail or by hand delivery. Notifications must be accompanied by payment. Only revisions can be faxed.

If you have any questions on completing this form, please contact the APCD General Source Division (GSD) at (805) 961-8800.

ASBESTOS DEMOLITION AND RENOVATION COMPLIANCE CHECKLIST

Read the following, and sign indicating your project is **EXEMPT** or **NOT EXEMPT**. Refer to list below for definitions of underlined terms. Note: definitions may differ from Building Department usage.

This document covers demolition and renovation projects of regulated structures (as defined below).

- Non-regulated structures are **EXEMPT** from reporting to Santa Barbara County Air Pollution Control District (APCD). If project does not involve a regulated structure, it is **EXEMPT**. **Stop** and sign below.
- Renovation Survey: if a survey shows no Asbestos Containing Material (ACM) your project is **EXEMPT** unless you are demolishing the structure (see demolition definition).
- Survey: if your survey shows friable ACM (see below) **AND** the material to be removed is more than 160 square feet or 260 linear feet **AND** the removal is from a regulated structure, your project is **NOT EXEMPT** and you must notify APCD. If a survey shows non-friable ACM, **AND** that material can be removed in that condition, the project is **EXEMPT** from APCD notification requirements for that removal. Note: ACM removal is regulated by other agencies. The State of California requires that contractors removing, surveying, or consulting on ACM that is more than 100 square feet be specially licensed.
- Demolition: If you are demolishing (see demolition definition) a regulated structure you must notify the APCD. Note: notifications are required even if your survey shows no ACM.

I have read the above and declare the following (sign one of the indicated places):

My project is **EXEMPT** from APCD notification.

SIGNED: _____

My project is **NOT EXEMPT** from APCD notification.

SIGNED:  _____

Note to Applicant and Building Department: please copy this signed form to the permit file.

Definitions

Asbestos containing material (ACM): material that has been surveyed and found to have more than 1% asbestos.

Asbestos renovation: the removal of more than 160 square feet or 260 linear feet of ACM.

Friable ACM: any ACM that can be reduced to powder by normal hand pressure.

Non-friable ACM: any ACM that **cannot** be reduced to powder by normal hand pressure.

Category I non-friable ACM: ACM packings, gaskets, floor tile and asphalt roofing products.

Category II non-friable ACM: any other ACM. Note: linoleum is considered Category II ACM and is always friable.

Demolition: the wrecking or taking out of any load-supporting member of a facility together with any related handling operations or intentional burning of any facility. Note: this definition may differ from Building Department usage.

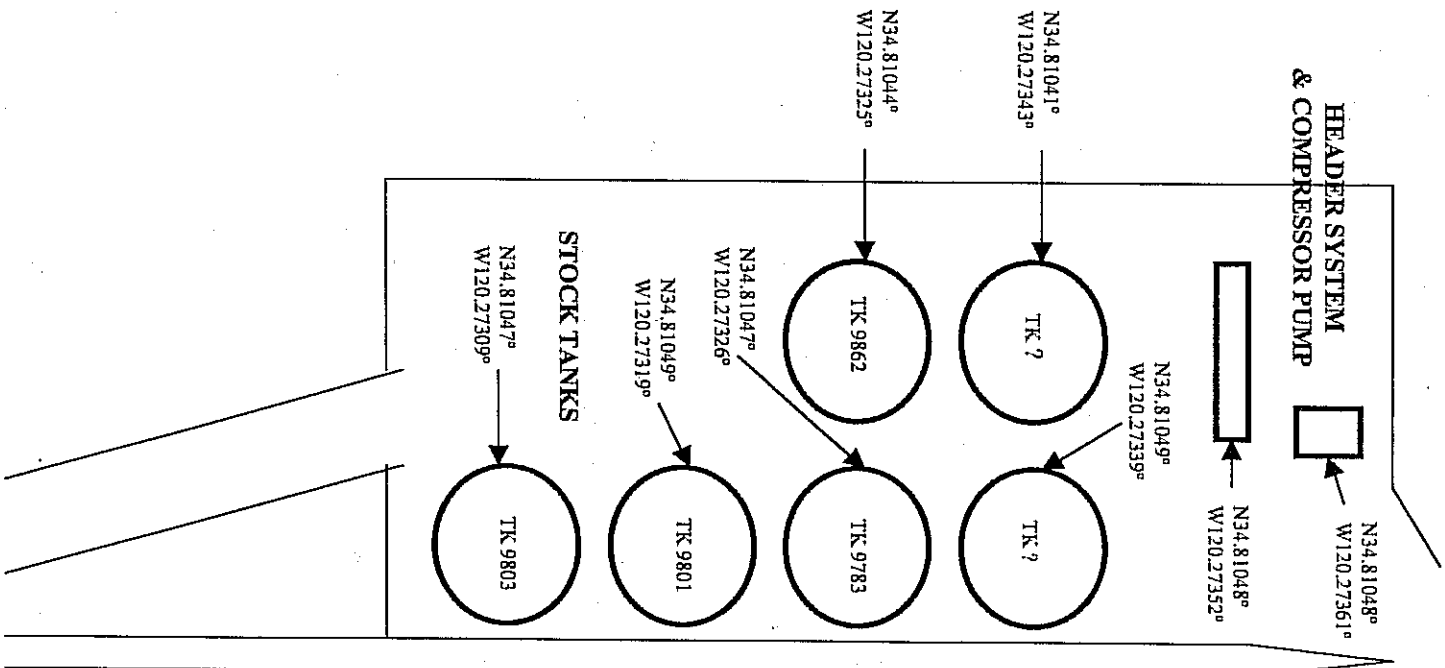
Regulated ACM: any friable ACM that will be removed during a renovation of a regulated structure. ACM that will become friable due to the removal technique is also regulated.

Regulated structure: any commercial structure (past or present), apartment complex, five or more adjacent residential buildings, government building, building to be demolished by fire training, urban renewal, or ordered building demolition.

Survey: a thorough inspection of the facility to determine the presence of asbestos. State and federal regulations require that surveys be done by qualified licensed personnel.

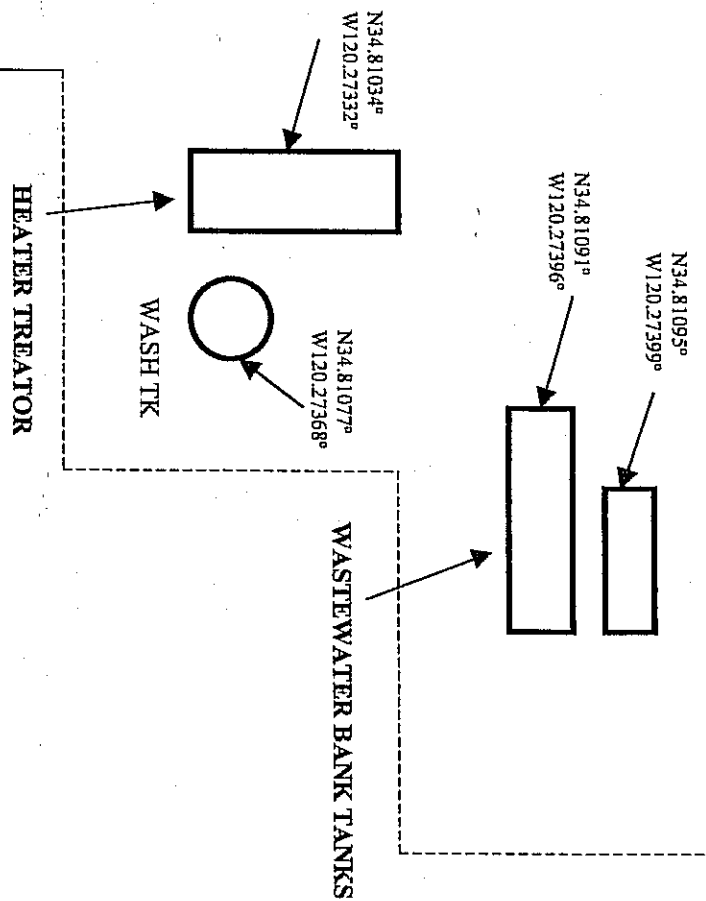
QUESTIONS? CALL APCD at 805-961-8800. Ask for the asbestos coordinator.

A detailed Policy & Procedure is available upon request.

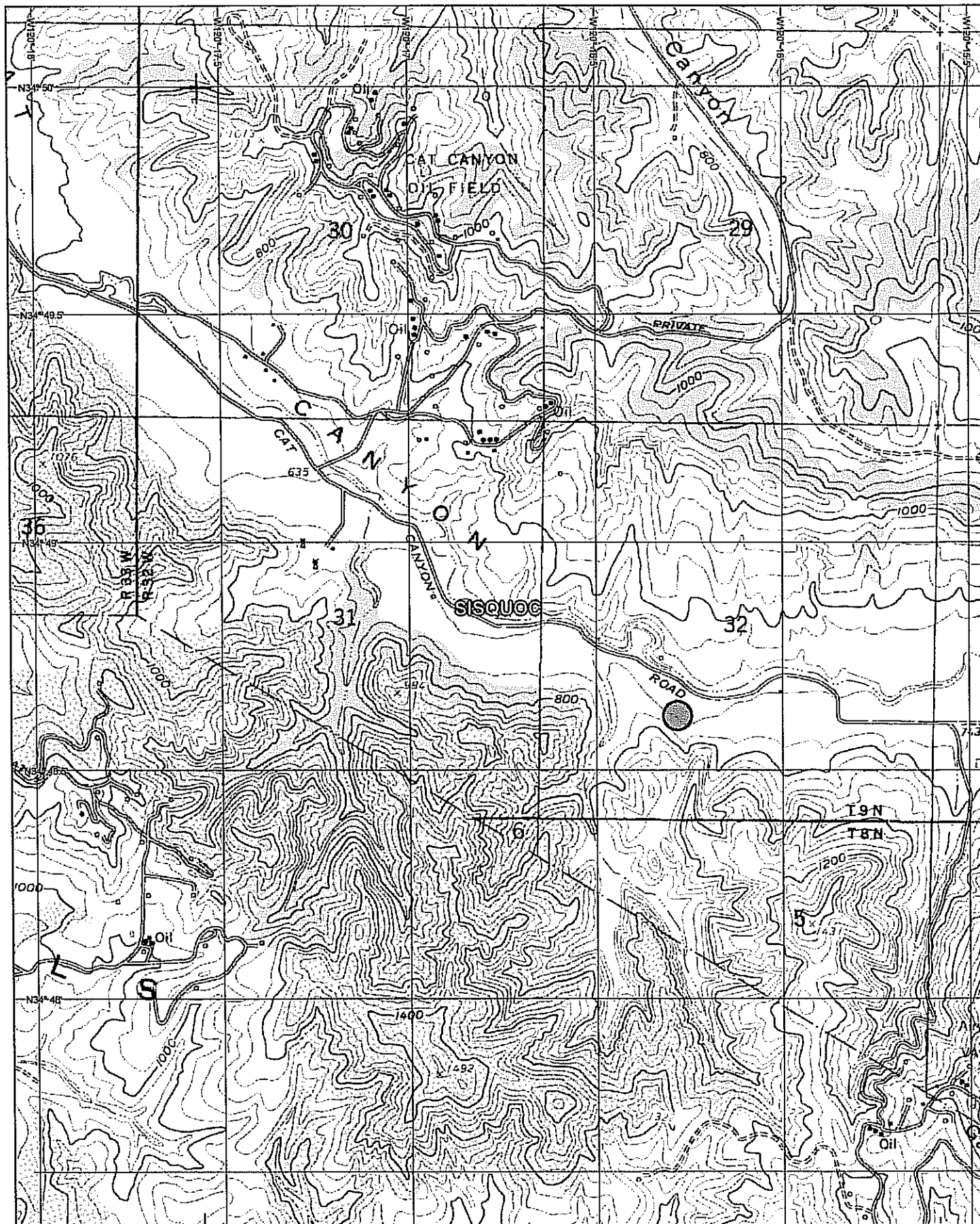


TRUCK LOADING ROAD

MAIN FACILITY ROAD



GREKA ENERGY
 (FORMER CAT CYN OIL COMPANY)
 WILLIAMS HOLDING TANK BATTERY
 GATO RIDGE AREA





CHANNEL COAST CORPORATION
CONSULTANTS • PLANNERS • CONTRACTORS

Fax

To: Brady Danilels

From: Dan Delanoy

Company: Greko

Fax: 347-1072

Date: February 1, 2002

Phone:

Pages: 5 (including this one)

Re: Tank Battery Asbestos Testing

CC:

☐ Urgent ☒ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

•Comments:

Attached please find the results of the asbestos testing on the samples that you sent in. As you can see, only one sample came back positive. We retained your numbering system so that reading the sample results would be easily interpreted. If you have any questions or additional request, please do not hesitate to call me or one of my associates at the number listed below.

Sincerely,

Dan Delanoy

Shop Coordinator

1/30/02

ENVIRONMENTAL MANAGEMENT CONSULTANTS
BULK MATERIAL REPORT

Page 1 of 4

REPORT Laboratory Analysis: BULK MATERIAL

Client: CHANNEL COAST CORPORATION

Reported to: DAN DELANOY

Sampled from: TANK BATTERY DEMOLITION

Shipped via: FEDERAL EXPRESS

LAB: 81284

Methodology: EPA 600/M4-82-020

P/O#: GREKA ENGERY C

Proj:

By: Client

Received: 1/25/02

Reported: 1/30/02

SAMPLE	IDENTIFICATION	PARAMETER	TEST RESULTS
01	01 pipe, line white TANK 3	Asbestos	Positive. This sample contains approx. 15% Chrysotile, 30% Mineral Wool, 55% CaCO ₃ , CaSO ₄ , Mica, Binder, Diatoms
02	02 tank wrap brown TANKS OUTER WRAP	Asbestos	None detected. This sample contains approx. 90% Cellulose, 10% Binder
03	03 tank, seal black TANK 3	Asbestos	None detected. This sample contains approx. 40% Cellulose, 60% Quartz, Binder
04	04 tank wrap brown TANK 2	Asbestos	None detected. This sample contains approx. 90% Cellulose, 10% Binder

THE REPORT APPLIES TO THE STANDARDS OR PROCEDURES IDENTIFIED AND TO THE SAMPLE(S) TESTED. THE TEST RESULTS ARE NOT NECESSARILY INDICATIVE OR REPRESENTATIVE OF THE QUALITIES OF THE LOT FROM WHICH THE SAMPLE WAS TAKEN OR OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS, NOR DO THEY REPRESENT AN ONGOING QUALITY ASSURANCE PROGRAM UNLESS SO NOTED. THESE REPORTS ARE FOR THE EXCLUSIVE USE OF THE ADDRESSED CLIENT AND ARE RENDERED UPON THE CONDITION THAT THEY WILL NOT BE REPRODUCED WHOLLY OR IN PART FOR ADVERTISING OR OTHER PURPOSES OVER OUR SIGNATURE OR IN CONNECTION WITH OUR NAME WITHOUT SPECIAL WRITTEN PERMISSION. SAMPLES NOT DESTROYED IN TESTING ARE RETAINED A MAXIMUM OF THIRTY DAYS.

ACCREDITED BY THE NATIONAL INSTITUTE OF STANDARDS TECHNOLOGY, VOLUNTARY LABORATORY ACCREDITATION PROGRAM FOR SELECTED TEST METHOD FOR ASBESTOS. THE ACCREDITATION OR ANY REPORTS GENERATED BY THIS LABORATORY IN NO WAY CONSTITUTES OR IMPLIES PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY. ALL ANALYSES ARE DERIVED FROM CALIBRATED VISUAL ESTIMATE UNLESS OTHERWISE NOTED. POLARIZED-LIGHT IS NOT CONSISTENTLY RELIABLE IN DETECTING ASBESTOS IN FLOOR COVERINGS AND SIMILAR NON-FRIABLE ORGANICALLY BOUND MATERIALS. QUANTITATIVE TRANSMISSION ELECTRON MICROSCOPY IS CURRENTLY THE ONLY METHOD THAT CAN BE USED TO DETERMINE IF THIS MATERIAL CAN BE CONSIDERED OR TREATED AS NON-ASBESTOS-CONTAINING.



Analyst: Paul D. Hofer



By: Kurt Kettler

NVLAP Accreditation #1926, CA ELAP #1913, TX DOH #30-0094

7342 EAST THOMAS ROAD SCOTTSDALE, ARIZONA 85251-7216 (480) 990-2069 FAX: (480) 990-8468

1/30/02

ENVIRONMENTAL MANAGEMENT CONSULTANTS
BULK MATERIAL REPORT

Page 2 of 4

REPORT Laboratory Analysis: BULK MATERIAL

Client: CHANNEL COAST CORPORATION

Reported to: DAN DELANOY

Sampled from: TANK BATTERY DEMOLITION

Shipped via: FEDERAL EXPRESS

LAB: 81284

Methodology: EPA 600/M4-82-020

P/O#: GREKA ENGERY C

Proj:

By: Client

Received: 1/25/02

Reported: 1/30/02

SAMPLE	IDENTIFICATION	PARAMETER	TEST RESULTS
05	05 tank, seal black TANK 2	Asbestos	None detected. This sample contains approx. 40% Cellulose, 60% Quartz, Binder
06	06 tank wrap, outer brown TANK 7	Asbestos	None detected. This sample contains approx. 85% Cellulose, 15% CaSO, Binder
07	07 tank, seal black, brown TANK 7	Asbestos	None detected. This sample contains approx. 5% Cellulose, 95% Quartz, CaSO, Binder
08	08 tank wrap, outer brown, black TANK 4	Asbestos	None detected. This sample contains approx. 85% Cellulose, 15% CaSO, Binder

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1/30/02

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Page 3 of 4

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Reported to: DAN DELANOY

Sampled from: TANK BATTERY DEMOLITION

Shipped via: FEDERAL EXPRESS

LAB: 81284

Methodology: EPA 600/M4-82-020

P/O#: GREKA ENGERY C

Proj:

By: Client

Received: 1/25/02

Reported: 1/30/02

SAMPLE	IDENTIFICATION	PARAMETER	TEST RESULTS
09	09 tank wrap, seal black, brown TANK 4	Asbestos	None detected. This sample contains approx. 40% Cellulose, 60% Quartz , Binder
10	10 tank wrap, outer brown TANK 5	Asbestos	None detected. This sample contains approx. 85% Cellulose, 15% CaSO , Binder
11	11 tank, seal black TANK 5	Asbestos	None detected. This sample contains approx. 40% Cellulose, 60% Quartz , CaSO , Binder
12	12 tank wrap, outer brown TANK 6	Asbestos	None detected. This sample contains approx. 85% Cellulose, 15% CaSO , Binder

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1/30/02

ENVIRONMENTAL MANAGEMENT CONSULTANTS
BULK MATERIAL REPORT

Page 4 of 4

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Client: CHANNEL COAST CORPORATION

Reported to: DAN DELANOY

Sampled from: TANK BATTERY DEMOLITION

Shipped via: FEDERAL EXPRESS

LAB: 81284

Methodology: EPA 600/M4-82-020

P/O#: GREKA ENGERY C

Proj:

By: Client

Received: 1/25/02

Reported: 1/30/02

SAMPLE	IDENTIFICATION	PARAMETER	TEST RESULTS
13A	13 tank, seal, 1st layer black TANK 6	Asbestos	None detected. This sample contains approx. 40% Cellulose, 60% Quartz, CaSO, Binder
13B	13 tank, seal, 2nd layer black TANK 6	Asbestos	None detected. This sample contains approx. 2% Cellulose, 98% Quartz, CaSO, Binder
14	14 tank wrap, outer brown TANK 8	Asbestos	None detected. This sample contains approx. 85% Cellulose, 15% CaSO, Binder
15	15 tank, seal black TANK 8	Asbestos	None detected. This sample contains approx. 40% Cellulose, 60% Quartz, CaSO, Binder

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CITY OF SANTA MARIA

Disposal Site

"ASBESTOS HANDLING PROCEDURES"

Asbestos is defined as a non-burning grayish mineral that occurs in fibrous form and is used as a fireproof. The proper disposal and handling of such materials is as follows:

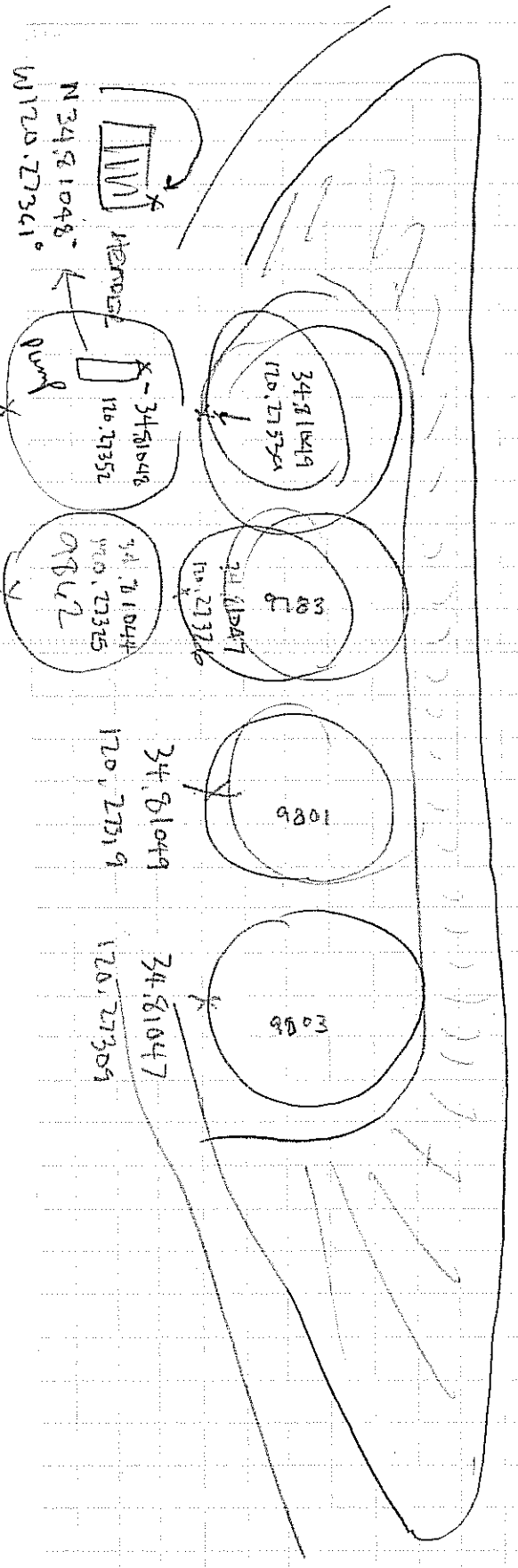
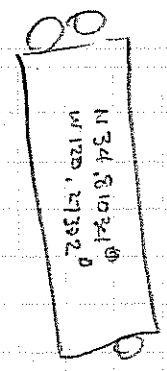
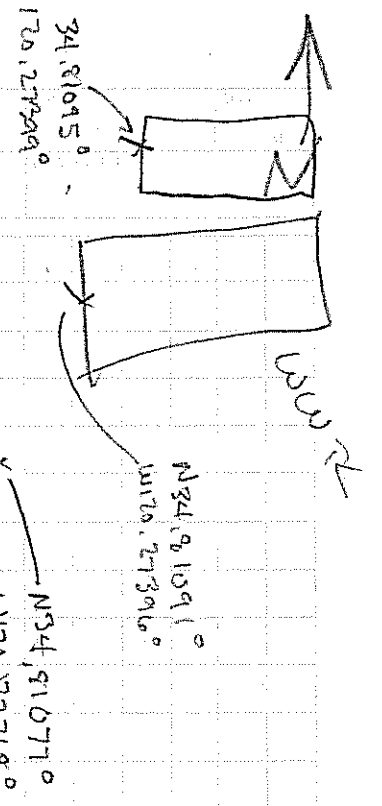
A. Prior to Bringing to Disposal Site:

- 1) Hauler must have written verification, signed and dated, from a State Certified Laboratory or a Cal/OSHA Certified Asbestos Consultant, indicating classification of the material as "non-friable, as defined by EPA definitions (40 CFR, Part 61, Subpart M), and meets both the requirements of the Regional Water Quality Control Board's (RWQCB) Waste Discharge Requirements (WDR), Order No. 94-63, and the local enforcement agency (Santa Barbara County Environmental Health), for disposal into the Santa Maria Class III Landfill."
- 2) All written verification papers must be approved by the Solid Waste Division Superintendent prior to disposal at the landfill.
- 3) Hauler to notify supervisor of disposal site one (1) week prior to when materials are to be disposed. At this time an appointment must be made for disposal.
- 4) Loads should be brought to the landfill during the early part of the day due to the need for a cover of dirt by the end of the working day.
- 5) A minimum of two men should accompany the material to unload properly.
- 6) All bundles should be ready for burial at the arrival time at the landfill or the load will be rejected.
- 7) Asbestos material shall be adequately wetted, wrapped securely in 6 mil, double thickness plastic. Materials should be strapped or banded to the pallets for extra security. While being unloaded, some bundles become unstable.
- 8) Labels on the bundles should be inside the plastic cover or placed inside a plastic insert cover for future reading. The labels should be legible at all times.
- 9) Label the bundles as follows:
 - "Contains asbestos fibers."
 - "Avoid creating dust."
 - "Breathing asbestos dust may cause serious bodily harm."

Post-It™ brand fax transmittal memo 7671		# of pages ▶ 1
To <u>Gary Lawry</u>	From <u>Public Works</u>	
Co.	Co.	
Dept.	Phone #	
Fax # <u>925-7462</u>	Fax # <u>925-6632</u>	

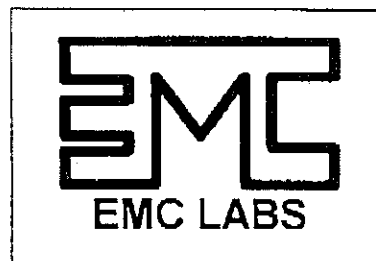
Solid Waste section
925-0951 x130

DATE: 10/10/2018



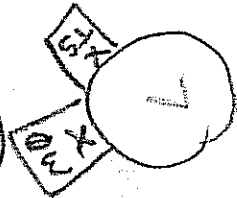
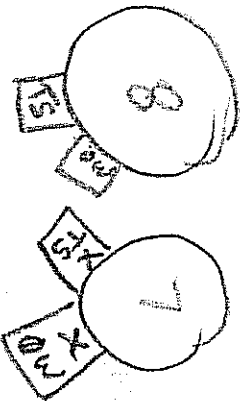
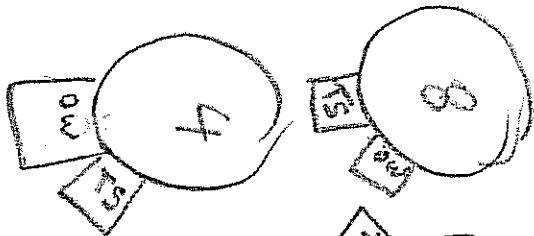
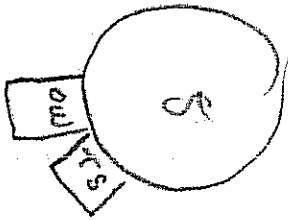
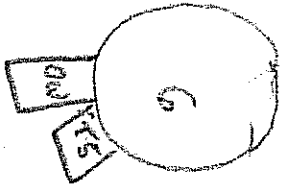
EMC Labs
9830 S. 51st Street Suite B-109 Phoenix, AZ 85044-5677
Telephone: 480-940-5294, Facsimile: 480-893-1726

This fax and any attachments contain strictly confidential information and are intended solely for the person(s) it is addressed to. Any other dissemination is strictly prohibited. If this fax is received by anyone other than to whom it is addressed, please call EMC.

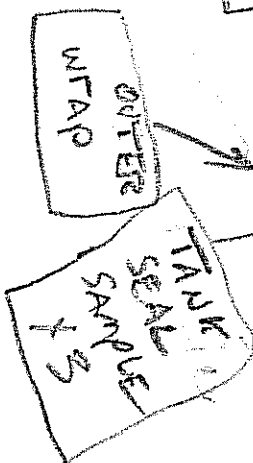


Fax

To: Tom Dahlgren From: Diana
Fax: 805-347-1072 Pages: 5, including this cover sheet
Phone: 805-347-8700 x1205 Date: 1/30/03
Re: Lab # 81284 CC:
☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

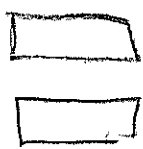


TANK SEAL



SAMPLE PIPE

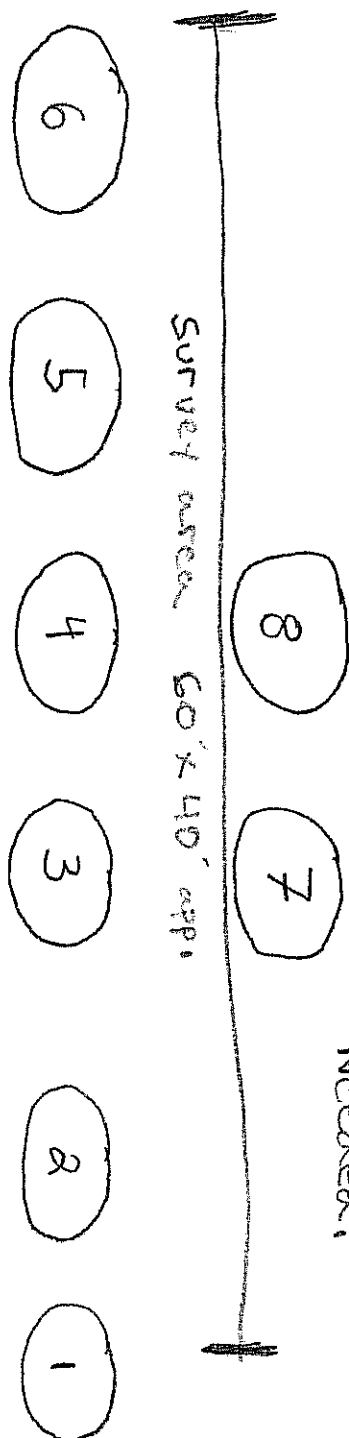
HEATER



TANK SEAL = TS
OUTER WTAP = OW

* Tank Battery 1-8 scheduled for Demolition

* Asbestos Demolition Compliance Checklist Needed.



* Tank seals & Outer wrap needs to be tested for Asbestos.

