Draft Technical Analysis Cleanup and Abatement Order R4-2009-018

Water Board policies, including State Water Board Resolution No. 68-16 (Statement of Policy with Respect to Maintaining High Quality of Waters in California) and Resolution No. 92-49 (Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304); and (5) relevant standards, criteria, and advisories adopted by other state and federal agencies

Basis for Finding No. 7

- California Water Code, Porter-Cologne Water Quality Control Act, with additions and amendments effective January 1, 2009.
- Water Quality Control Board for the Los Angeles Region (Adopted June 13, 1994), as amended.
- State Water Resources Control Board Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality of Waters in California.
- State Water Resources Control Board Resolution No. 92-49 (Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304)
- 8. Finding No. 8: CEQA EXEMPTION: "This enforcement action is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Section 15321 (Enforcement Actions by Regulatory Agencies), Chapter 3, Title 14 of the California Code of Regulations."

Basis for Finding No. 8

California Code of Regulations Section 15321(a) - Actions by regulatory agencies to enforce or revoke a lease, permit, license certificate, or other entitlement for use issued, adopted, or prescribed by the regulatory agency or enforcement of a law, general rule, standard, or objective, administered or adopted by the regulatory agency.

This concludes the Draft Technical Analysis Report.



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EAST MARIA STREET



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EXHIBIT 3

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CoxCastle Nicholson

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File No. 44375

April 9, 2009

VIA MESSENGER

Arthur Heath, Ph.D. Acting Assistant Executive Officer California Regional Water Quality Control Board-Los Angeles Region 320 W. 4th Street, Suite 200 Los Angeles, CA 90013

Re:

Response of Griffon Corporation, Clopay Corporation and Lightron Corporation to Draft Cleanup and Abatement Order No. R4-2009-018 - Former Clopay Facility at 2930 East Maria Street, Rancho Dominguez, California (SLIC NO. 458, Site ID 2048500)

Dear Dr. Heath:

On behalf of Griffon Corporation, Clopay Corporation, and the Lightron Corporation (collectively, the "Griffon Parties"), we offer the following Response (the "Response") to the Draft Cleanup and Abatement Order dated March 9, 2009 (the "Draft Order") issued by the Regional Water Quality Control Board ("Regional Board").

It is respectfully submitted that, as will be more fully discussed herein, by failing to identify and address material issues affecting liability, the Regional Board's preparation of the Draft Order and the conclusions it has reached therein, are fatally flawed. For example, in assessing responsibility, the Regional Board has failed to distinguish between the operations of Griffon and Lightron as compared to those of Clopay and O.B. Masco. The Regional Board further has failed to distinguish between Area 1 and Area 2, or, critically, between the plume existing under the property located at 2930 East Maria Street ("2930 East Maria Street Property") and the plume beneath 19200 South Reyes Street (the "American Racing Facility"). Indeed, the credibility of the process is undermined by the very existence of several significant facts which the Board either overlooked or intentionally ignored in its preparation of the Draft Order. It is submitted, therefore, that when these facts are considered and the issues they raise are fairly evaluated, the Board will be compelled to reconsider its original determination and rescind or revise appreciably the Draft Order accordingly.

1. Summary of Litigation.

In 2003, Griffon initiated litigation against JoL Enterprise (the former owner and operator of the 2930 East Maria Street Property), Laskey Weil (the current owner of the 2930 East

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Maria Street Property), Coy Industries dba ERC Company, C and C Partnership, and Engine & Equipment (the owner and operator of the property located at 2970 East Maria Street ("2970 East Maria Street Property")) in order to recover monetary contribution from each of these parties as a result of their involvement in the historic use and release of tetrachloroethylene ("PCE") at the Properties. The action was later amended to add American Racing Equipment after PCE contamination was discovered on the 19200 South Reyes Property.

In the past year, the Griffon Parties have entered into settlement agreements with JoL Enterprise, Laskey Weil, Coy Industries, C and C Partnership, and Engine & Equipment. In exchange for considerable monetary contribution from the other parties, the Griffon Parties volunteered to remediate the PCE contamination beneath the 2930 and 2970 East Maria Street Properties. This agreement was a result of a business decision made individually by all parties. Each settlement agreement specifically states that no party (including the Griffon Parties) is admitting to any wrongdoing or liability. As a result of these agreements, on October 1, 2008, the Griffon Parties resumed the remediation consisting of soil vapor extraction and air sparge system in the area referred to as Area 2 in the Draft Order.

A dispute continues to exist between the Griffon Parties and American Racing as to the responsibility for the contamination beneath the American Racing Property located at 19200 South Reyes Avenue. No trial date is currently set in this matter.

2. Summary of Ongoing Remediation and Investigation.

The Draft Order includes an order to reinstall and restart the soil vapor extraction ("SVE") system at the 2930 East Maria Street Property no later than April 30, 2009. This order is unnecessary as the Griffon Parties have already resumed the SVE system. This system was observed by Mr. Jeffrey Hu of the Regional Board, who inspected the 2930 East Maria Street Property in the weeks before issuing the Draft Order. As such, it is puzzling why the Regional Board is ordering the SVE to be resumed when it knows that the Griffon Parties have already voluntarily undertaken the action.

The Griffon Parties initially conducted remediation system operations at the site during the period of August 1998 through October 2000. The SVE system was renovated during Third Quarter 2008, including change-out of motor and carbon canisters, re-plumbing and wiring, new control equipment, and restoration of power feed to the compound.

The remediation system was restarted on October 1, 2008, as authorized by a South Coast Air Quality Management District Permit, and upon notification to Mr. Hu. The system operated through an initial monitoring period in accordance with the AQMD Permit, then continued in full-time operation. During Fourth Quarter 2008, the system removed approximately 1,323 pounds of volatile organic compounds ("VOCs"); through the end of March 2009, the cumulative total is approximately 1,550 pounds.

The system configuration includes four dual-completion SVE wells, and five air sparge ("AS") wells. The SVE wells are completed in a shallow interval (5 to 17 feet deep), and a

deeper interval (25 to 45 feet deep); the AS wells are installed to approximately 20 feet below the groundwater surface. The system extracts soil vapors, through a positive-displacement blower (vacuum) for treatment by granular activated carbon.

Groundwater monitoring and sampling was initiated in May 1997, and has continued on a quarterly basis during the years of 1997 to 2000, and from 2005 to the present. Currently, twelve monitoring wells (one dual-completed) are monitored on a quarterly basis, including one well installed in 2007 at Regional Boards' direction, to evaluate possible upgradient conditions.

3. Griffon and Lightron Never Conducted Operations at the 2930 East Maria Street Property.

The Draft Order is addressed to Griffon, Lightron and Clopay. However, of the three Griffon Parties, only Clopay conducted operations at the 2930 East Maria Street Property. Though they have had an ownership interest in both Clopay and O.B. Masco, neither Griffon nor Lightron have ever conducted operations at the 2930 East Maria Street Property. Their ownership interests in Clopay and O.B Masco do not give rise to liability for the operations of these separate and distinct entities.

O.B. Masco operated at the 2930 East Maria Street Property for almost twenty years. It is a separate and distinct entity from any of the Griffon Parties. Though Clopay operated the site for a short period of time – less than five years – the Regional Board fails to offer any evidence that a release of PCE took place during its operations.

The Regional Board is blurring the lines between the entities, and fails to distinguish the difference between the Griffon Parties, when issuing the Draft Order. <u>Though the distinction</u> <u>between these entities is conceded in the Draft Order, it is ignored without explanation</u>. There is absolutely no basis to include either Griffon or Lightron in the Draft Order. And, to the extent that Clopay did conduct operations at the 2930 East Maria Street Property, the Regional Board has failed to identify any release during its operations.

4. Area 1 Has Been Remediated.

The southwestern portion of the 2930 East Maria Street Property, designated as Area 1, formerly had two localized areas with elevated concentrations of PCE in shallow soils. In 1998, approximately 106 cubic yards of impacted soil were removed from Area 1 for offsite treatment. In 2004, Regional Board requested a Remedial Action Plan (RAP) for additional remediation of Area 1, with cleanup objectives to be site-specific Soil Screening Levels (SSLs) for groundwater resource protection.

In accordance with the RAP authorized by Regional Board, additional remediation of Area 1 was conducted in 2006, with removal of approximately 126 tons of impacted soil for offsite treatment. Soil removal was conducted to depths ranging from about 3 to 5 feet, downward to as much as 20 feet, and excavation limits confirmed by analytical results from 37 verification

samples. All final verification samples were Non-Detect for PCE, except one sidewall sample with a low PCE concentration (14 ug/kg; less than the site-specific SSL authorized by Regional Board). These sample results clearly indicate that the soil contamination in Area 1 has been adequately remediated.

The results of the remediation were presented to Regional Board (Report of Soil Corrective Action, June 1, 2006, attached as Exhibit A). The report documented the successful completion of soil remediation and mitigation of environmental concerns at the site, and recommended that the Area 1 portion of the site be designated for No Further Action and the case file closed by Regional Board.

There has been no response from Regional Board regarding the completion of cleanup at Area 1, nor to the recommendation for file closure of this portion of the site.

5. The 2930 East Maria Street Property Is Not the Source of the PCE in Soil and Groundwater at the American Racing Property.

a. American Racing Property is Upgradient from East Maria Street Properties.

Quarterly groundwater monitoring results over the last 4 years have consistently demonstrated that the American Racing site is upgradient of the 2930 East Maria Street Property. Groundwater elevations in wells on the American Racing Property are typically reported to be 1 to 3 feet higher than groundwater elevations in wells on the 2930 East Maria Street Property, and demonstrate a hydraulic gradient toward the 2930 East Maria Street Property.

Quarterly groundwater contour maps have consistently depicted a groundwater mound in the vicinity of the flood control channel south of 2930 and 2970 East Maria Street Properties, and also in the northwestern portion of the American Racing Property (exemplified by Figure 2 of Fourth Quarter 2008 report attached as Exhibit B). The contour maps show groundwater flow from the American Racing Property to be northwesterly, towards the 2930 East Maria Street Property. This northwesterly flow direction precludes groundwater impacts at the 2930 East Maria Street Property from flowing further south towards the American Racing Property; rather, the American Racing Property impacts can be shown to have a flow direction toward the 2930 and 2970 East Maria Street Properties.

To confirm that the higher groundwater elevations south of the flood control channel were real, and not due to errors in casing elevation surveys, the wells were resurveyed in 2007 at the direction of Mr. Hu of the Regional Board. All wellhead elevations on the 2930 and 2970 East Maria Street Properties, and wells on the northern margin of the American Racing Property, are tied to the same benchmark, verifying the quarterly groundwater elevation data. Throughout numerous quarters of monitoring, this gradient has never varied.

Quarterly analytical results also demonstrate that groundwater impacts at the 2930 East Maria Street Property are not migrating onto the American Racing Property. For example, the

PCE concentrations in well MW-7 (northern margin of the American Racing Property) along with other monitoring wells on the American Racing Property have dramatically declined since monitoring began in 2005, indicating no continuing migration of contaminants from a source north of the flood control channel, which might otherwise have caused concentrations in wells on the American Racing Property to increase. For comparison, PCE concentrations in the closest 2930 East Maria Street Property well (MW-3 at alleged source area in southeast corner of the 2930 East Maria Street Property) have remained generally consistent since 2005. (Historic groundwater data is included in the Fourth Quarter Groundwater Monitoring Report attached as Exhibit B.)

The conclusion reached by the Regional Board is not simply that low levels of PCE have traveled a short distance in a cross-gradient or upgradient direction. Instead, the Regional Board has concluded that the <u>heart</u> of the plume has traveled upwards over a long distance, and over a steep grade, to the American Racing Property. This is counter-intuitive and the Regional Board offers no explanation for how this could have happened.

b. PCE is Present In Shallow Soil on American Racing Property.

To date only minimal soil investigation has been conducted on the American Racing Property. However, the limited soil analytical results for borings and monitoring wells installed in the northern portion of the American Racing Property demonstrate shallow soil impacts by PCE at several locations in proximity to the former drum storage area and sewer trunk line north of the foundry building. For example, three American Racing borings in this area reported detectable PCE concentrations in the shallowest soil samples (5 feet) and throughout the soil column downward to the deepest samples collected at 35 to 40 feet. (Copies of sample data is attached as Exhibit C.) The presence of PCE in shallow soils at widely separated locations indicates multiple sites of releases, with sufficient fluid volume to migrate downward to the groundwater table.

The PCE in the shallow soil simply could not have originated on the 2930 East Maria Street Property. The 2930 East Maria Street Property is separated from the American Racing Property by a cement-line flood control channel. The drainage channel is approximately 10 feet deep, and is a physical barrier preventing the migration of PCE through shallow soil.

It is significant that the PCE impacts are detected in shallow soils in the northern portion of the American Racing Property; this was an area that was utilized for multiple purposes, such as storage of hazardous wastes and drums, cleaning, rinsing and other industrial processes associated with the foundry and metals fabrication. The pavement surface presently observed in these areas is cracked and degraded, conditions that typically enable downward penetration of released solvents to subsurface soils.

At the northern margin of this area is a thin planter strip (dirt surface), beyond which is the flood control channel. The concrete surface of the flood control channel wall is <u>extensively</u> <u>stained</u> along the northern margin of the American Racing Property, appearing to indicate drainage from the American Racing work areas, across the thin planter strip to the flood control channel. (Copies of photos of the stained wall of the flood control channel behind the American Racing Property are attached as Exhibit D.) It should be noted that well MW-7 is located in this area

adjacent to the flood control channel; soil samples from the well installation reported PCE impacts in the shallowest soils at 5 feet, and downward to the groundwater interface, and groundwater PCE concentrations are typically the highest, or second highest, of all wells monitored on a quarterly basis. (Soil sampling data is attached as Exhibit E and groundwater sampling data is included in Exhibit B).

Given the presence of PCE in shallow soil, it is indisputable that PCE was historically used and released at the American Racing Property. To date only minimal testing has been conducted by American Racing to find the potential source. Rather than explore these areas for a possible source (including the sewer lateral along the north edge of the American Racing Property), the Regional Board has simply assigned blame to the 2930 East Maria Street Property, a conclusion which requires the Regional Board to ignore the obvious groundwater gradient and PCE in shallow soil.

c. Adjacent Former American Racing Property Currently Being Investigated for VOCs.

It has come to our attention that the Regional Board is currently overseeing a Site Assessment on the adjacent property, formerly owned and operated by American Racing, located at 19070 South Reyes Avenue, Rancho Dominguez, CA. In a letter dated March 18, 2009, the Regional Board approved a site-wide investigation, focused on VOCs. (A copy of the March 18, 2009 letter is attached as Exhibit F). It does not appear that American Racing included the adjacent property in its limited investigation for a source of PCE contamination. Now, after the property has changed ownership, the new owner, ZZYYX, Inc., has been directed by the Regional Board to investigate the property for VOCs, and, specifically PCE. Obviously, there must be some recognition on the part of the Regional Board that American Racing likely experienced periodic releases of PCE on its neighboring properties or the Regional Board would not continue to direct that additional investigation be conducted on properties previously owned and operated by American Racing. Where, as here, the Regional Board still is actively investigating PCE on adjacent properties previously owned by American Racing, and otherwise apparently still considers that the operations of American Racing constitute a potential source of PCE, it is inexplicable how the Regional Board could reasonably or legitimately require the Griffon Parties at this time to remediate the groundwater beneath the adjacent American Racing Property.

6. Conclusion.

As set forth above, the Griffon Parties respectfully submit that the Draft Order is both unnecessary and in conflict with data previously provided to the Regional Board. With respect to the 2930 and 2970 East Maria Street Properties, it is unnecessary. The Griffon Parties have already remediated soil contamination in Area 1, and voluntarily resumed remediation of soil and groundwater contamination in Area 2 months ago. With respect to the American Racing Property, the Draft Order fails to consider the fact that the American Racing Property is significantly upgradient from the 2930 East Maria Street Property. In order to reach the conclusions set forth in the Draft Order, the Regional Board must suspend the law of physics and assume that water – and the heavier PCE – flowed upwards over a considerable distance to reach the American Racing

Property. Scientifically and otherwise this hypothesis is patently unsupportable. Moreover, because it is inconsistent with its ultimate determination, the Regional Board has simply chosen to ignore the fact that PCE has been discovered in shallow soil on the American Racing Property. Accordingly, the Griffon Parties respectfully request that the Regional Board reconsider, or significantly revise, the Draft Order.

Sincerely, Perry S. Hughes

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Mr. Jeffrey Hu (California RWQCB) (w/enc.) via messenger Mr. Michael Levy (State Water Resources Control Board) (w/enc.) via certified mail Edward Wactlar, Esq. via overnight mail (w/enc.)

EXHIBITS IN SUPPORT OF RESPONSE OF GRIFFON CORPORATION, CLOPAY CORPORATION AND LIGHTRON CORPORATION TO DRAFT CLEANUP AND ABATEMENT ORDER NO. (SLIC NO. 458, SITE ID 2048500)

	TITLE	EXHIBIT
1.	Report of Soil Corrective Action, dated June 1, 2006	A
2.	Fourth Quarter Combined Status Report, dated January 15, 2009	B
3.	Soil Sampling Data from American Racing Property	C
4.	Photos of Stained Concrete Wall behind American Racing Prope	ertyD
5.	Soil Sampling Data from Installation of Monitoring Well MW-7	Ε
6.	March 18, 2009 Letter Approving Corrective Action of Former American Racing Property	F

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EXHIBIT A

TRAK Environmental Group 3637 B Arundell Circle Ventura California 93003

Telephone 805 650 5333 Facsimile 805 650 7213



June 1, 2006

Mr. Jonathan Bishop, P.E. Executive Officer California Regional Water Quality Control Board Los Angeles Region 320 West Fourth Street, Suite 200 Los Angeles, California 90013

Report of Soil Corrective Action, Area 1 of Former Clopay Site, 2930 East Maria Street, Rancho Dominguez, California (SLIC NO. 458, SITE ID 2048500)

Dear Mr. Bishop:

On behalf of our client, TRAK Environmental Group, Inc. (TRAK) is submitting this *Report of Soil Corrective Action* for the Area 1 portion of the site at 2930 East Maria Street, Rancho Dominguez, California (Figure 1). This *Report* is submitted in response to the Regional Board letter dated February 28, 2005, which authorized the remediation, and also is in response to the follow-up Regional Board letter dated March 14, 2006

Soil remediation and site restoration, in accordance with the Regional Board requirements, was completed in April and May 2006. The completed corrective action included excavation of PCE-contaminated soils from areas with PCE concentrations that exceeded the site specific Soil Screening Levels, remaining in place after the 1998 remediation. In general, the site portions for additional mitigation included areas that were deepened within the initial 1998 excavation boundaries, and also areas at the edges of the 1998 excavations (Figure 2). Remedial action included verification sampling after excavation to confirm accordance with Regional Board cleanup criteria, transport of excavated soils offsite to a licensed disposal facility, backfill of the excavations, and paving.

This *Report* presents a brief background review and summary of the corrective action approach, followed by a description of the work scope required to mitigate the environmental concerns at the site, with results of verification sampling that demonstrate the remaining soils to be in compliance with Regional Board target cleanup concentrations. The *Report* is concluded with the recommendation that the Regional Board designate the Area 1 portion of the site for No Further Action.

BACKGROUND

Previous Investigations and Soil Excavation (Dames & Moore)

The portion of the former Clopay site designated as Area 1 is the southwestern corner of the property, as depicted in Figure 2. Investigations conducted prior to 1998 identified two localized areas in Area 1, which were noted for elevated concentrations of PCE; an eastern area of shallow soils with elevated PCE concentrations in boring B-1, and a western area of shallow soils with elevated PCE concentrations in boring B-3. These areas, including locations of

previous soil samples, are depicted in Figure 2 of Attachment A of this *Report*. Analytical results for the previous samples are also tabulated, and presented in Table 1 of Attachment A.

A Remedial Action Plan for mitigation of the PCE-impacted soils was prepared by Dames & Moore (November 1997), which included the development of soil remediation goals. Various risk-based screening levels were described, including the LARWQCB Soil Screening Levels, as described in the LARWQCB Interim Site Assessment & Cleanup Guidebook (May 1996). Using the Soil Screening Level (SSL) methodology, Dames & Moore calculated depth-specific SSLs-for PCE in the site's soils, which included:

Depth-Specific Soil Screening Levels (Dames & Moore, 1997)

Depth (ft bgs)	Concentration (ug/kg)		
05	23		
10	19		
15	16		
20	12		
25	08		
30	05		

Remedial action to remove the PCE-contaminated shallow soils in Area 1 was commenced by Dames & Moore in August 1998, with additional localized excavation conducted in November 1998. Remedial action consisted of removing soils with PCE concentrations of greater than 1 mg/kg, and was directed at three sub-areas, including:

- Eastern excavation (vicinity of boring B-1, B-4, and B-13) with approximate dimensions of 10 feet by 15 feet by 3 feet deep; subsequently extended to the east and south at depths of 1.5 feet bgs. Southern extension was limited by the location of a buried electrical line, and visibly impacted soil was left in place under the buried line. Verification samples with PCE concentrations greater than the calculated SSLs included E-SSS1.5-1.5, E-EE1-1.5, E-S3-3, E-S2-2, E-E3-3, E-W2-2 (see Figure 2 and Table 1 of Attachment A).
- 2. Southeastern excavation (vicinity of boring B-2, and B-11) with approximate dimensions of 18 feet by 28 feet by 2 to 3 feet deep. Eastern extension was limited by storage sheds located adjacent to the eastern sidewall, and northern extension was limited by the location of a buried electrical line; visibly impacted soil was left in place at the eastern sidewall and under the buried line. Verification samples with PCE concentrations greater than the calculated SSLs included E-SSS1-1, E-BC-3, E-N-2, E-E-1.5, E-SEB-2, E-SSW-2, E-WWW-2 (see Figure 2 and Table 1 of Attachment A).
- 3. Western excavation (vicinity of boring B-3, and B-12) with approximate dimensions of 10 feet by 10 feet by 3 feet deep; subsequently extended to the west at depths of 2.5 feet bgs, and deepened near the center to depths of 4.5 feet bgs. Verification samples with PCE concentrations greater than the calculated SSLs included W-NE-3, W-NS-3, W-NB-4.5, W-SB-2.5, W-W-2, W-NW-3, W-W1-1 (see Figure 2 and Table 1 of Attachment A).

In the three areas of excavation, a total volume of 106 cubic yards of PCE-contaminated soil was removed for transport under non-hazardous waste manifest to TPS Technologies, Inc. for thermal treatment. After soil removal and verification sampling, the excavations were backfilled with 2-sack slurry in November 1998.

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Remedial Action Plan (TRAK Environmental Group)

Subsequent to the 1998 soil excavation by Dames & Moore, Regional Board (October 25, 2004 letter) requested that a soil Remedial Action Plan (RAP) for complete soil cleanup in Area 1 be prepared and submitted. One of the specifications for soil cleanup was that the cleanup objectives be site-specific Soil Screening Levels (SSLs) for groundwater resource protection.

A RAP was prepared by TRAK and submitted to Regional Board on December 17, 2004. In accordance with the Regional Board specification for site-specific SSLs for PCE, the RAP recommended that the Dames & Moore (1997) calculations be used as guidance for the recommended soil cleanup work. These SSLs are tabulated in the previous section, and range from 23 ug/kg (soils at depths of 5 feet bgs) to 5 ug/kg (soils at depths of 30 feet bgs).

By evaluation of the PCE concentrations for soils remaining in place after the 1998 remediation, in comparison to the site specific SSLs, it was indicated that portions of Area 1 required additional mitigation. In general, the site portions for additional mitigation included areas to be deepened within the initial 1998 excavation boundaries, and also areas at the edges of the 1998 excavations. For purposes of the RAP, these Area 1 portions were designated by the alphabetic characters A through G, as shown in Figure 2 of Attachment A. These designations were used to differentiate the locations of previous soil sample results (Table 1 of Attachment A), and also were used to differentiate the planned mitigation extent of each sub-area (Table 2 of Attachment A). These Area 1 portions are delineated in Figure 3 of this *Report* (and also Figure 2 of Attachment A), and include:

- Area A (southern edge of 1998 eastern excavation, and northern edge of 1998 southeastern excavation).
- Area B (eastern extension of 1998 eastern and southeastern excavations, under the area of storage shed).
- Area C (southern edge of 1998 southeastern excavation).
- Area D (western edge of 1998 southeastern excavation).
- Area E (eastern edge, and deepening of 1998 western excavation).
- Area F (western edge and extension from 1998 western excavation).
- Area G (deepening and westerly extension of NW portion of 1998 eastern excavation).

The remediation strategy included excavation of PCE-contaminated soils from locations A through G, with transport of soils offsite to a licensed disposal facility, and backfill of the excavations. Locations of the RAP-designated excavation areas are depicted in Figure 2 (Attachment A); and the RAP-designated areal extent, depths, and nominal volume of soils to be excavated, are tabulated in Table 2 (Attachment A).

The RAP-designated area for remediation was estimated to be about 1,000 to 1,100 square feet (Figure 2 of Attachment A); with soil remediation conducted generally to depths of about 3 feet to 4 feet bgs in the peripheral areas of previous remediation, and significant deepening in area A (15 feet bgs), Area E (10 feet bgs) and Area G (20 feet bgs).

By letter dated February 25, 2005, Regional Board approved the RAP, authorizing soil remediation of the areas and depths described in the RAP, and the site-specific SSLs calculated for the various depths of excavation.

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Corrective action was conducted to complete the soil cleanup in Area 1, by excavation and removal of impacted soils remaining after the 1998 excavation by Dames & Moore. Figure 2 of this *Report* depicts the areas excavated by Dames & Moore in 1998, and shows the residual PCE concentrations at soil sample locations that remained in place after the 1998 Dames & Moore work. These soil samples were typically from areas either outside of Dames & Moore excavation boundaries, or from depths below Dames & Moore excavation base levels.

In general, most of the sample locations (1998 and prior) reported residual PCE at concentrations greater than the site-specific SSLs, and the present corrective action was planned to remove these lateral areas and depth intervals with non-compliant PCE concentrations. Figure 2 depicts the outlines of the present soil remediation areas, and it is demonstrated that the boundaries of the 2006 excavation were conducted to envelop all areas that formerly reported non-compliant PCE concentrations.

The excavation was conducted by backhoe, and required removal of the asphalt pavement, and also removal of the underlying slurry used to backfill the 1998 soil excavations. The project involved excavation under the area formerly occupied by a storage shed at the eastern edge of the excavation area, and relocation of the buried electrical line; features that prevented soil removal from these areas in 1998. Areas and depths of excavation are depicted in Figures 3 and 4 of this *Report*.

Each of the tasks completed during this corrective action project is described in greater detail in the following scope of work.

Scope of Work

- 1. Conducted operations in accordance with the RAP, as authorized by Regional Board. Prepared the appropriate permitting, and notified Underground Service Alert for underground clearance at least 48 hours prior to beginning excavation.
- Conducted operations in accordance with a site specific Health and Safety Plan, and in compliance with Standard Operating Procedures and Quality Assurance/Quality Control (included as Attachment B).
- 3. Secured site as necessary. Saw-cut, then broke out concrete and/or asphalt pavement, and removed pavement in the area planned for excavation of soil.
- 4. Excavated soils from RAP-designated Areas A through G, to depths depicted (Figure 3), utilizing backhoe, and loaded to a stockpile for offsite transport and disposal/recycling. Excavation required removal of previous backfill material emplaced by Dames & Moore (2-sack slurry backfill). Excavation also required removal of soils under a portion of the former storage shed pad at the eastern edge of the excavation area; and removal of the electrical line that transected the site.
- 5. Collected verification soil samples from the excavation base and sidewalls to verify that cleanup criteria had been achieved. Verification samples were collected at linear distances of about 10 feet along excavation sidewalls, and on 10-foot centers (or less) on the excavation base. Sample locations are depicted in Figure 4. Soil samples were capped,

sealed, labeled, and chilled prior to transportation to American Scientific Laboratories, LLC, a California state certified laboratory under chain-of-custody procedures. Chemical analysis was conducted for VOCs by EPA Method 8260B. Final excavation analytical results are tabulated in Table 1 of this *Report*, preliminary and follow-up sample results for three areas subsequently deepened and extended are tabulated in Table 2, and copies of laboratory analytical reports are included in Attachment D.

- After selection by the site owner of the appropriate disposal facility, loaded and transported excavated soils to Chemical Waste Management N Lancaster Landfill under Non-Hazardous Waste Manifests (copies included in Attachment C). Soil was loaded to end-dump trailers and transported from the site on April 14, 2006 (5 truckloads; 126.62 tons).
- 7. Backfilled excavation areas with clean fill and compacted in accordance with agency requirements. Re-paved asphalt pavement to match existing grade.
- 8. At cessation of field operations, demobilized equipment and materials from the site.

VERIFICATION SAMPLING SOIL ANALYTICAL RESULTS

Soil excavation removed all lateral areas and depth intervals that formerly reported residual PCE at concentrations greater than the site-specific SSLs. This is demonstrated by Figure 3, which depicts the 2006 soil excavation boundaries and depths in relation to the soil sample data from 1998 and earlier. The absence of 1998 (and earlier) PCE results within the 2006 excavation dimensions indicate these sample locations were removed by the current soil remediation. The remaining 1998 (and earlier) sample locations depicted in Figure 3 are those located outside of the 2006 excavation boundaries, and demonstrate that the residual PCE concentrations at these locations are less than the site-specific SSLs.

To confirm that cleanup criteria had been achieved within the 2006 soil excavation boundaries and depths, verification soil samples were collected from the excavation base and sidewalls. Verification samples were collected at linear distances of about 10 feet along excavation sidewalls, and on 10-foot centers (or less) on the excavation base. Sample locations are depicted in Figure 4. These include three locations (CS7-6, CS15-4, and CS17-4) at which additional excavation was conducted after initial results were reviewed; final samples for these locations after deepening are CS35-7, CS36-5, and CS37-5, respectively (all Non-Detect).

The final excavation dimensions required 37 samples (including the 3 preliminary samples) to be submitted to American Scientific Laboratories LLC, a California state certified laboratory under chain-of-custody procedures, for chemical analysis of VOCs by EPA Method 8260B. Final analytical results are tabulated in Table 1 of this *Report*, preliminary and follow-up analytical results of three samples in areas subsequently deepened and extended are tabulated in Table 2, and copies of laboratory analytical reports are included in Attachment D.

All final excavation sidewall and base samples are Non-Detect for PCE concentrations, except for one sidewall sample (CS12-4) with a low PCE concentration of 14 ug/kg, which is less than the site-specific SSL at 5 feet bgs (23 ug/L). These results verify that soils remaining in place are in accordance with site-specific SSLs authorized by Regional Board.

This project involved the excavation, transport and disposal of PCE-impacted soils from lateral areas and depth intervals not previously remediated by the 1998 Dames & Moore excavation. The corrective action was authorized by Regional Board, including areas and depths of soil removal, and the site-specific SSLs utilized for cleanup.

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The area of impacted soil was excavated downward to typical depths of about 3 to 5 feet bgs in the peripheral areas of previous remediation, with significant deepening in several areas to depths of 7 feet, 10 feet, 15 feet, and 20 feet bgs. Stockpiled soil was loaded to 5 transport trucks (126.62 tons) and transported to Chemical Waste Management N Lancaster Landfill under Non-Hazardous Waste Manifests. Excavation areas were backfilled with clean imported fill, and compacted in lifts, up to the base of the existing pavement grade. Asphalt-paved areas were paved with hot-mix asphalt.

Soil excavation removed all lateral areas and depth intervals that formerly reported residual PCE at concentrations greater than the site-specific SSLs. Final excavation sidewall and base samples are either Non-Detect for PCE concentrations, or in one case, less than the site-specific SSL; and the remaining 1998 (and earlier) sample locations outside of the 2006 excavation boundaries, are also less than the site-specific SSLs.

These results verify that Area 1 soils remaining in place are in accordance with site-specific SSLs authorized by Regional Board.

Due to the successful completion of soil remediation and mitigation of environmental concerns at the site, it is recommended that the Area 1 portion of the site be designated for No Further Action and the case file closed by Regional Board. We welcome your review of the project results and our conclusions, and are available to answer any questions you may have.

Sincerely, TRAK Environmental Group, Inc.

Robert Cashier, CPSS, REA II Director, Environmental Programs

Bradford S. Newman PG, CHG President



Attachments

FIGURES

- 1 Site Location Map
- 2 PCE Concentrations Remaining in Soil After 1998 Excavation

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- 3 2006 Excavation with Areas and Depths of Soil Removal
- 4 Confirmation Sample Results, April 12-14, 2006

TABLE

- 1 Excavation Final Verification Analytical Results
- 2 Preliminary and Follow-Up Excavation Analytical Results

7

ATTACHMENTS

- A RAP Excerpts (Figure 2, Tables 1 and 2)
- **B** Standard Operating Procedures
- C Non-Hazardous Waste Manifests
- D Laboratory Reports and Chains of Custody

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FIGURES

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TABLES

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Table 1 Excavation Final Verification Analytical Results, Area 1 2930 East Maria Street Rancho Dominguez, California

ample Location	Depth	Date	Volatile Organic Compounds (VOC) [1]				
	(ft)		PCE (µg/kg)	TCE (µg/kg)	1,1-DCE (µg/kg)	cis 1,2-DCE (µg/kg)	Other VOC (ug/kg)
Area A						-	
CS 13-15	15	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 14-15	15	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 16-4	4	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 36-5	5	04/14/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 37-5	5	04/14/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
<u>Area B</u>							
CS 8-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 9-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 10-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 11-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 12-4	4	04/12/06	14	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
Area C							
CS 6-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 18-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 19-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 30-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 31-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 35-7	7	04/14/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
Area D							
CS 4-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 5-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 20-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 28-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 29-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
<u>Area E</u>							
CS 21-4	4	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 22-4	4	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 23-5	5	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 24-10	10	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 27-3	3 -	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
<u>Area F</u>							• •
CS 1-2	2	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 2-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 3-3	3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 25-3	· 3	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
CS 26-2	2	04/12/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
Area G			•				
CS 32-3	3	04/12/06	ND (<2)	ND (<2)	ND (<2)	ND (<4)	ND (<5-50)
CS 33-5	5	04/12/06	ND (<2)	ND (<2)	ND (<2)	ND (<4)	ND (<5-50)
CS 34-20	20	04/12/06	ND (<2)	ND (<2)	ND (<2)	ND (<4)	ND (<2-50)
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analyte and concentration is identified; otherwise all are ND (<PQL)

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Table 2
Preliminary and Follow-Up Excavation Analytical Results, Area 1
2930 East Maria Street
Rancho Dominguez, California

	Depth (ft)	Date	Volatile Organic Compounds (VOC) [1]				
Sample Location			PCE (µg/kg)	TCE (µg/kg)	1,1-DCE (µg/kg)	cis 1,2-DCE (µg/kg)	Other VOC (ug/kg)
Area A			•		<u> </u>		
pre-deepen CS 15-4	4	04/12/06	55	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
post-deepen CS 36-5	.5	04/14/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
pre-deepen CS 17-4	4	04/12/06	24	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
post-deepen CS 37-5	5	04/14/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
Area C							•
pre-deepen CS 7-6	6	04/12/06	32	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)
post-deepen CS 35-7	7 ·	04/14/06	ND (<10)	ND (<10)	ND (<10)	ND (<10)	ND (<2-50)

Notes: [1] Analyzed by EPA Method 8260B for VOC. For analytes with detectable concentrations, analyte and concentration is identified; otherwise all are ND (<PQL)

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ATTACHMENT A RAP Excerpts (Figure 2, Tables 1 and 2)





Table 1Site Portions, With Previous Sample ResultsArea 1, Former Clopay Site2930 East Maria StreetRancho Dominguez, CA

Designated	Soil Sample	Concentration
Portion of	(Soil Boring or	of PCE in Soil
Area 1	1998 Verification)	(ug/kg)
A A A A A A A A deepen A deepen	E-SSS1-1 E-BC-3 E-N-2 E-SSS1.5-1.5 E-EE1-1.5 E-S3-3 E-S2-2 E-E3-3 B-1 B-1	17,000 59 46,000 73,000 400 25 130 26 180 (5') 120 (15')
B	E-SSS1.5-1.5	73,000
B	E-E-1.5	230,000
C	PH-2	42
C deepen	E-E-1.5	230,000
C deepen	E-SEB-2	120
C deepen	B-2	130 (5')
D	E-SSW-21	660
D	E-WW-2	16,000
D	E-WWW-2	100
D	PH-9	760
E E E E E E E deepen	W-NE-3 W-SB-2.5 W-NS-3 W-NB-4.5 W-W-2 W-NW-3 W-W1-1 B-3	38 49 39 72 60 47 380 63 (10')
F	PH-11	350
F	B-16	103 (1')
F deepen	W-W-2	60
F deepen	W-W1-1	380
G	E-W2-2	560
G deepen	B-4	80 (5')
G deepen	B-13	113 (10')
G deepen	B-13	420 (20')

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Table 2Site Portions, With Recommended Mitigation ExtentArea 1, Former Clopay Site2930 East Maria StreetRancho Dominguez, CA

Excavation Location	Excavation Area (ft ²)	Depth of Excavation (ft)	Nominal Volume (ft ³)	Nominal Volume (yd ³)
A	155	4	620	23
A deepen	10	15	150	6
Β.	110	3	330	12
C	80	2	160	6
C deepen	70	3	210	8
C deepen	. 15	6	90	3
D	190	3	570	21
E	185	4	740	27
E deepen	10	5	50	2
E deepen	10	10	100	4
F	60	2	120	. 4
F deepen	-75	· 3	225	8
G	· 35	. 4	140	5
G deepen	<u>15</u>	20	<u>300</u>	<u>11</u>
	1,020		3,805	141
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ATTACHMENT B Standard Operating Procedures

ATTACHMENT B STANDARD OPERATING PROCEDURES

FIELD SAMPLING AND DATA ACQUISITION ____√

TRAK Environmental Group, Inc. was founded to provide the highest quality and most costeffective services in the environmental engineering and consulting industry. This Quality Assurance/Quality Control (QA/QC) Plan has been developed to specify procedures and protocol, which are acceptable to clients and meet or exceed regulatory agency requirements.

The QA/QC procedures to be followed are designed to guarantee the quality and costeffectiveness of workmanship and to ensure the collection and analysis of data of sufficient quality and quantity to satisfy investigative and/or remedial objectives. All personnel are trained in and follow all QA/QC procedures. Further, we ensure that all contractors participating in the project shall also be required to follow QA/QC procedures.

The following QA/QC elements have been incorporated throughout the workplan:

Drilling and soil sampling procedures to preserve sample integrity and prevent cross contamination

Groundwater sampling procedures to preserve sample integrity

Chain-of-custody procedures to confirm and document sample identity

Equipment handling and calibration to validate precision and accuracy in measurement and analyses

Decontamination procedures to protect personnel and prevent cross contamination and spreading of contamination

DRILLING AND SOIL SAMPLING √

Drilling will be subcontracted to a licensed and insured drilling contractor. Drilling activities will be directed and supervised at all times by trained and experienced personnel. Boring and monitoring well locations are determined by our geologists and are indicated in the site specific scope of work. If drilling locations are specified by a client, the boring will be installed within three feet of specification. No well or boring shall be installed closer than five feet from any underground storage tank to prevent undermining of backfill material which could cause a tank rupture. To avoid damaging hidden obstacles such as product lines, conduits, water lines, etc., we will hand excavate to a depth of at least five feet prior to installing wells or borings. An area larger than the diameter of the boring will be investigated prior to drilling. Thereafter, a modified California split spoon sampler will be driven into the soil. Typically, the sampler will contain brass sampling tubes. The sampler will be driven eighteen inches into the ground at the bottom of the boring will be removed from the sampler and split in the field. One brass tube will be retained for soil classification and one will be sealed with Teflon lines caps for lab analyses. The samples will be leaded with the following information:

Company name Project name Date of collection Sample ID number

Samples which will be submitted for chemical analyses are placed in a cooler with ice until they are received by a state certified laboratory. Samples to be utilized for soils classification will be examined and classified in accordance with the Unified Soil Classification System. The selected sample will be screened for the presence of gasoline using visual examination and headspace vapor testing with an Organic Vapor Meter calibrated to isobutylene. A detailed boring log will be kept for each boring. Which includes the following information:

Project name and number Boring/well number Soil sample log PID/OVM readings Drill method Soil lithologic description Monitoring well construction details

GROUNDWATER MONITORING WELL CONSTRUCTION NA

The groundwater monitoring wells will be constructed in accordance with the guidelines of the lead agency. Prior to beginning work at the site, we will obtain well construction permits from the appropriate permitting agency.

A geologist from our staff will direct and observe the subcontractor in construction of the groundwater monitoring wells. The screened portion of the well will consist of machine slotted 0.020-inch slot width of a 2, 4, 6, 8, or 10-inch diameter. The casing will consist of schedule 40 PVC with 20 feet of screen installed below the groundwater table and 10 feet of screen installed above the groundwater table interface. The casing will be flush threaded at the joints. The bottom of each well casing will be fitted with a threaded PVC end plug and the top of each well will be fitted with a locking well cap.

The annular space of each well will be backfilled with No. 3 Monterey Sand to approximately two feet above the slotted casing. Approximately three to five feet of bentonite will be placed above the sand. The remaining annulus of each well will be backfilled with a cement bentonite grout or bentonite chips to grade. A flush-grade traffic box will be installed to protect the well casing.

GROUNDWATER WELL DEVELOPMENT NA

The groundwater monitoring well will be developed using a surge block provided by the drilling subcontractors to settle the sand pack prior to setting the seal. Purging to the well should result in the removal of approximately four well volumes of water unless the well goes dry. Development and purged water collected during development of the monitoring wells will be stored in DOT approved 55-gallon drums.

GROUNDWATER EVALUATION NA

The depth of groundwater relative to the monitoring well casing will be measured using a water level indicator or a product/groundwater interface probe. The elevations of the well casing will be surveyed by a surveyor to the nearest 0.01-foot relative to an established benchmark. Groundwater elevations will be calculated by subtracting the measured water table depth from the casing elevations.

GROUNDWATER SAMPLING __NA_

The proposed groundwater monitoring points will be purged prior to sample collection with a pump or by manual bailing. Approximately four well volumes of water will be removed from each well prior to sampling. Our personnel will collect groundwater samples from each well after groundwater in the well has recharged a minimum of 80 percent of its static level. A Teflon bailer will be used to collect groundwater samples. The groundwater samples will be transferred into laboratory cleaned sample bottle. The samples will be sealed with Teflon lined plastic caps, labeled, and placed on ice storage. The sampling equipment will be cleaned in a Liquinox solution and rinsed with distilled water before sampling each well. Purged water collected during sampling of the monitoring wells will be stored in a large tank on-site or in DOT approved 55-gallon drums.

SOIL CUTTINGS AND PURGED GROUNDWATER ____NA__

Soil cuttings generated during drilling will be placed in 55-gallon drums and will remain on-site pending review of laboratory analysis results. The soil and well water will be transported to an appropriate landfill or recycling facility for disposal.

CHAIN-OF-CUSTODY

A chain-of-custody form will be completed in the field to document sample possession. The chain-of-custody is intended to accompany samples on delivery to the laboratory and should include various information including:

Sample number and project name

Signature of collector

Date and time of collection

Site address

Laboratory analyses requested

Signatures of persons involved in the chain of possession Remarks concerning possession

Once the sample arrives at the laboratory for analysis, an authorized person (often referred to as the sample custodian) must receive the samples and chain-of-custody and must verify receipt of the sample by adding the following information to the record:

Signature and title of recipient Date sample arrived at laboratory Temperature of samples

EQUIPMENT CALIBRATION

pH meter Turbidity meter Organic vapor meter (OVM or PID) Dissolved oxygen (D.O.) meter

The pH meter, turbidity meter, OVM, and the D.O. meter will be calibrated prior to each work day in accordance with the procedures specified in the owner's manual for each piece of equipment. The results of calibrations and records of repair will be maintained in an equipment log. Calibration instructions for each piece of equipment will be available for guidance when equipment is in use.

Field personnel are responsible for ensuring equipment is functioning properly before use in the field. If equipment malfunction is suspected, the device will be removed from service and tagged to avoid inadvertent use. Faulty equipment will be repaired promptly if possible, recalibrated, and used or replaced with properly working equipment.

DECONTAMINATION

Washing facilities will be available to personnel for general decontamination at the work site. Temporary exit from a work area for breaks, lunch, etc., will require the following:

- 1. Gloves, protective suits and other personal protective clothing must be removed as appropriate.
- 2. Hands and face must be thoroughly washed.
- Protective clothing will be stored in such a manner to avoid contamination of inner surfaces and surroundings.

Exit from the site requires appropriate decontamination procedures as described below:

- 1. All personal protective equipment must be removed at the end of the workday prior to leaving the site.
- 2. Protective clothing shall either be stored in a manner to preclude contamination of inner surfaces or discarded in an appropriate manner.
- 3. Thorough washing of the entire body is required as soon as possible after doffing protective outer garments.

Equipment

All field sampling equipment (i.e., hand augers, probes, containers, drilling equipment) will be cleaned prior to and after each use. Decontamination will consist of combinations of steam cleaning and/or detergent wash, drinking quality water rinse, and distilled water rinse. Soil and groundwater sampling tools will be decontaminated by wiping off any visible moisture and/or particulate, washing with a laboratory grade detergent and clean potable water, and final rinsing with-deionized/distilled-water.—All-down-hole-groundwater-monitoring-and-sounding-equipment-will be decontaminated in like manner prior to use.

Drilling equipment used down hole (i.e., drill bits, auger flites, sampling tubes) will be steam cleaned prior to start of each borehole to prevent cross contamination.

All well servicing or production equipment used for purging, pumping, and development will be decontaminated prior to and following use in the same manner as down hole drilling equipment. Location of areas for wash down of vehicles and equipment will be determined in accordance with EPA regulations. Contaminated wash water will be disposed of in accordance with procedures outlined in the California State LUFT Program Reference Manual.

REMOVAL OPERATIONS

The area of contaminated soil excavation shall be designated and delineated as an exclusion zone, with operation of all equipment in this area conducted in accordance with proper decontamination protocols. Contaminated soils excavated from the exclusion zone may be temporarily stockpiled near the perimeter of the exclusion zone, and later staged out of the exclusion zone for transport loading.

Removal operations shall consist of excavation of soils from the exclusion zone, with temporary stockpiling of soils in a designated area, prior to loading for transport. Loading may take place concurrently with excavation operations or at later time, with access of loaders to the stockpile from outside of the exclusion zone. Staging of trucks shall be conducted in manner not to require trucks to enter the exclusion zone. Truck transport from the site shall be in accordance with Transportation Plan, if necessitated by local permitting authority.

Field operations shall follow the suggested operational guidelines to prevent cross-media transfer of contaminants, as specified in *Best Management Practices (BMPs) for Soils Treatment Technologies* (U.S. EPA 530-R-97-007). These guidelines include various control practices to prevent potential cross-media transfer of contaminants during cleanup activities; and general BMP options to control specific cross-media transfer of contaminants for different project stages are furnished in the following sections

SITE PREPARATION AND STAGING 1

Prior to movement of equipment on site various activities may be typically undertaken, including site inspections; surveying; boundary staking; sampling; demarcation of hot spots; and improvement of access roads, utility connections, and fencing installation.

Special attention and care should be taken during site preparation activities so that the contaminated media are not disturbed. In case of unavoidable circumstances, the contaminated media should be subjected to a very minimal disturbance/alteration during these activities. The following BMPs are generally recommended:

- Avoid entering the contaminated area. In unavoidable circumstances, designate a temporary decontamination area, which could be later used during cleanup activities. Any aboveground and underground source of contaminants should be identified and located prior to starting any treatment of contaminated media.
- Any soils and soil-gas sampling, field air permeability testing, demarcation of hot spot etc. activities should generally be followed by plugging/covering of any holes or depressions created during these activities to prevent intrusion of water. It would also be appropriate to install relevant signs at the same time so that repeated entry to the site is not called for.
- Any contaminated waste generated during site preparation or further site characterization activities should be managed as specified in the Workplan.



- Site investigation and operational plans should take into account the presence of permeable zones and account for potential pre-existing underground sewers and electrical conduits.
- Surface drainage and subsurface utility systems should be identified.
- Local watershed management goals and priorities should be incorporated into the surface water management plan for the cleanup activities.

EXCAVATION AND OFF-SITE DISPOSAL ACTIVITIES $__{}\sqrt{}$

When a site is remediated by excavation and off-site disposal, the contaminated material (typically a solid or semi-solid material such as soil or sludge) is excavated, then transported off-site for treatment and/or disposal. Key features of excavation and off-site disposal for the purpose of BMPs include:

- Excavation or collection of contaminated soil followed by piling or mixing of the soils.
- Containerization or temporary storage of the contaminated soils or solid media.
- Shipping of soils off-site for disposal.
- Field applications may involve installation of a temporary canopy, liner, or other physical barrier that minimizes movement of materials from the site by wind, water, or any other mechanism.

Excavation and off-site disposal primarily involve equipment that is widely used in the construction or non-hazardous solid waste disposal industries, such as excavators, earthmovers or backhoes, dump trucks, and containers of various shapes, sizes, and materials. However, in general, hazardous waste excavation and off-site disposal activities require significantly more attention to personal protection and safety, including provisions for worker protection (special clothing, decontamination techniques, etc.) and equipment decontamination.

CONCERNS AND BMPS FOR EXCAVATION AND OFF-SITE DISPOSAL

Concerns for excavation and off-site disposal center around the potential for cross-media transfer during materials handling and transportation activities. General BMPs to prevent potential cross-media transfer of contaminants during excavation and off-site disposal activities include:

- Entry to the active site should be limited to avoid unnecessary exposure and related transfer of contaminants, especially during site preparation and staging.
- Avoid entering the contaminated area. In unavoidable circumstances, build a temporary decontamination area, which could be later used during cleanup activities. Any aboveground and underground source of contaminants should be identified and located prior to starting excavation of the contaminated area.

- Fugitive dust emissions should be controlled during excavation by spraying water or other materials to keep the ground moist or covered. During wet weather or rainfall no water spraying would be needed.
- During transportation of contaminated soils or solid media, covers or liners should be used to prevent dust and VOC emissions. These temporary covers on trucks or other hauling equipment should be installed with care to minimize possibilities for the waste to come into contact with high winds during transport.
- Any offsite runoff should be prevented from entering and mixing with onsite contaminated media by building earthen berms or adopting similar other measures.
- Provisions should generally be made to capture on-site surface water runoff by diverting it to a controlled depression-area or lined pit.
- Covers, and if necessary, liners, should be used at all times when contaminated materials are being stored. Covers should be used on trucks that are moving materials around and from the site.
- Consideration of climatological extremes/high wind, etc. should be taken into account when conducting any of the treatment or associated activities. Real-time weather data could be used to monitor weather conditions and accordingly control treatment operations.
- During excavation and handling of contaminated soils, VOC emissions should be monitored and appropriate emission control measures undertaken.
- As an effective erosion control practice, scheduling of construction activities should be arranged to limit the time of exposure of disturbed segments of the site. This entails directing work to one area of a site.

TECHNOLOGIES FOR CONTROLLING CROSS-MEDIA TRANSFER OF CONTAMINANTS DURING MATERIALS HANDLING ACTIVITIES √

General Operational Controls

Those procedures or practices inherent to most site remediation projects that can be instituted to reduce VOC and particulate matter emissions. Initiate these controls, to the extent possible:

- Plan site remediation for times of year with relatively cooler temperatures and lower wind speeds to minimize volatilization and particulate matter emissions.
- Maintain lower speeds with all vehicles on unpaved roads.
- Control placement and shape of storage piles. Place piles in areas shielded from prevailing winds. Shape pile in a way that minimizes surface area exposed to wind.
- During excavation, use larger equipment to minimize surface area/volume ratio of material being excavated.

- During dumping, minimize soil drop height onto pile, and load/unload material on leeward side of pile.
- During transport, cover or enclose trucks transporting soils, increase freeboard requirements, and repair trucks exhibiting spillage due to leaks.
- Excavation Operational Controls
 - Utilize covers and physical barriers to physically isolate the contaminated media from the atmosphere. May include soils (topsoils or clays); organic solids such as mulch, wood chips, sawdust, or straw, typically anchored with a net; asphalt/concrete; gravel/slag with road carpet; synthetic covers (e.g., tarps).
 - Use wind screens if necessary, to provide an area of reduced velocity that allows settling of large particles and reduces particle movement from exposed surfaces on leeward side of screen. Also reduce soil moisture loss due to wind, resulting in decreased VOC and particulate emissions.
 - Water spray soil piles/excavated areas with light spray to agglomerate small particles with larger particles or with water droplets. Also, water added to the soil cools the surface soil and decreases air-filled soil porosity, both of which reduce VOC emissions.

Transportation Operational Controls

- Cover all loads being moved by truck, open piping, or other conveyance with tarps, roofs, or other structures that will eliminate or reduce the likelihood of particulate release into the atmosphere.
- Water spray soil loads with light spray to agglomerate small particles with larger particles or with water droplets. Also, water added to the soil cools the surface soil and decreases air-filled soil porosity, both of which reduce VOC emissions.

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ATTACHMENT C Non-Hazardous Waste Manifests



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	NON-HAZARDOUS WASTE MANIFEST	1. Generator's U	· •	Poternov N	g 2. Pag of	•1				
E	3. Generator's Name and Mailing Address Griffon Corporation – – 100 Jericho Quadrangle Jericho, NY 11753 4. Generator's Phone (516) 822–4820		ji,					••		
•	5. Transporter 1 Company Name B C C N V 1 A C H O N 6. US EPA ID Number					A. Transporter's Phone				
	Transporter 2 Company Name 8. US EPA 1D Number				B. Trar	B. Transporter's Phone				
μ	9. Designated Facility Name and Site Address 10. US EPA ID Number Lancaster Landfill				C. Fad	C. Facility's Phone				
	600 E. Ave F Lancaster, CA 93435-8412					661-945-5944				
ſ	11. Waste Shipping Name and Description			· · · ·	֥	12. Con No.	tainars Type	13. Total Quantity	U Wt	
	°Non-Hazardous Waste Solid	(Soil)				001	DT	00018	в	
╞	b.	:	· · ·			•••		••••	╀╴	
			•		·	• •		• • • •	+	
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	d.		· .							
D. Additional Descriptions for Materials Listed Above E. Handling Codes for Wastes Listed Above								•		
	Profile # LL041206		· · · · · ·	•	•					
	15. Special Handling Instructions and Additional	information			<u> </u>	•	<u> </u>	·		
ł	Site Address: 2930 E. Maria St., Rancho Dominguez, CA Wear Proper Personal Protective Equipment When Handling 24 Hour Emergency No. (CHEMITREC (800) 424-9300 Or Equivalent									
	16. GENERATOR'S CERTIFICATION: I certify the Privated/Typed Name	materials described a	bove on this manifest are Signature	not subject to federe	il regulations (or reporting	proper o	lisposal of Hazarda Month Day		
	Pairy Salmonsen	Gniffan	- Care	the Of	lm	<u> </u>		· · · · · · · · ·	78	
	17. Transporter 1 Acknowledgement of Receipt of Deinled/Typed Name TUAN COLONA J	6R HK	Signoster	<u>7</u> 4	12	<u> </u>		Manth Day	40	
	18. Transporter 2 Acknowledgement of Receipt of Printed/Typed Name	Materials	Signature		•.			Month Day	· · ·	
	19. Discrepancy Indication Space		· · · · · · · · · · · · · · · · · · ·	······································						
		· .					5	52		
	20. Facility Owner or Operator: Certification of re	scelpt of waste mat	erials covered by this r	manifest except as	noted in Item	n 19.			•	
					· 1					
	Printed/Typed Name		Signature	m	-14			Month Doy	116	

