



DRAFT STATEMENT OF BASIS
Prepared by
California Department of Toxic Substances Control



For
ECOLOGY CONTROL INDUSTRIES, INC.
RICHMOND FACILITY
Richmond, California
July 26, 2010

Facility/Unit Type:	Storage and treatment – fuel storage tanks
Contaminants:	Petroleum hydrocarbons
Media:	Soil and groundwater
Remedy:	Soil – excavation and off-site disposal; Groundwater – no action (natural attenuation)



Newly constructed secondary containment pad (Tank Staging Area)

1. INTRODUCTION

This draft Statement of Basis has been prepared by the Department of Toxic Substances Control (DTSC) to document corrective action activities for releases of hazardous waste or hazardous waste constituents at the Ecology Control Industries, Inc. (ECI) Richmond Facility (hereinafter "ECI Facility"). The ECI Facility is located at 255 Parr Boulevard, Richmond, California (site).

Document Organization

This draft Statement of Basis is divided into nine (9) sections as follows:

1. INTRODUCTION
2. FACILITY DESCRIPTION
3. CONCEPTUAL SITE MODEL
4. CONTAMINATED MEDIA
5. CORRECTIVE MEASURES
6. PROPOSED ACTION
7. INNOVATIVE TECHNOLOGIES CONSIDERED
8. CALIFORNIA ENVIRONMENTAL QUALITY ACT
9. NEXT STEPS

List of Acronyms

bgs	below ground surface
CEQA	California Environmental Quality Act
CMS	Corrective Measures Study
CSM	Conceptual Site Model
DTSC	Department of Toxic Substances Control
ECI	Ecology Control Industries, Inc.
ESL	Environmental Screening Level
ft	feet
kg	kilogram
L	liter
MCL	maximum contaminant level
mg	milligram
MTBE	Methyl tertiary-butyl ether
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SFRWQCB	San Francisco Regional Water Quality Control Board
SWMU	solid waste management unit
TBA	Tertiary-butyl alcohol
TPH	total petroleum hydrocarbons
TRPH	total recoverable petroleum hydrocarbons
ug	microgram
U.S. EPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

2. FACILITY DESCRIPTION

The authority to compel corrective action at the ECI Facility is found in California Health and Safety Code, Chapter 6.5, Sections 25200.10 and 25187. On February 21, 2007, DTSC and ECI entered into a Corrective Action Consent Agreement (Consent Agreement) that provides a framework for completing corrective action by establishing roles and responsibilities.

ECI is subject to the corrective action requirements of the Health and Safety Code because they have a permit to operate a hazardous waste facility at the site. In 2005, during an inspection relating to the permit renewal, DTSC staff observed cracking and deterioration in a portion of the Tank Staging Area. DTSC directed ECI to sample soil below the damaged area which confirmed the presence of petroleum hydrocarbons. The current Hazardous Waste Facility Permit (Permit) is dated February 26, 2007, and includes a condition requiring ECI to complete corrective action.

The Permit authorized activities at eight (8) Hazardous Waste Management Units (HWMUs) described as follows:

1. Tank Staging Area
2. Tank Rinse Pad
3. Rinsate Tanks
4. Flammable Drum Storage Area
5. 55-Gallon Drum Storage Area
6. Bin Storage Area 1
7. Bin Storage Area 2
8. Bin Storage Area 3 (proposed unit – not constructed)

In addition to the permitted activities, ECI uses the facility as a base for transportation activities and a roll-off bin service. The nine (9) acre ECI Facility site is zoned P-1 (Planned Unit Development) and the General Plan Land Use Designation is Heavy Industrial. Surrounding parcels are zoned for commercial, industrial and residential purposes.

The findings of the investigation of HWMUs were documented in a RCRA¹ Facility Investigation (RFI) Report dated May 6, 2010. The RFI Report documents the investigation and cleanup efforts including replacement of the Tank Staging Area pad. The RFI Report was approved by DTSC in a letter dated June 22, 2010.

¹ The ECI Facility does not have a Resource Conservation and Recovery Act (RCRA) equivalent permit however the corrective action process used at the site followed guidance established by U.S. EPA for RCRA sites.

3. CONCEPTUAL SITE MODEL

The following section provides information on the conceptual site model (CSM) for the site. The CSM is a tool used to gather together relevant information about a hazardous waste release and is helpful to direct the investigation and cleanup effort in an efficient manner. The key elements of the CSM for the ECI Facility are described as follows:

- Used underground fuel storage tanks (USTs) are drained, rendered gas free, and transported to the ECI Facility as non-RCRA waste.
- The USTs are unloaded onto the Tank Staging Area pad and petroleum derivatives are inadvertently released.
- Due to deterioration of the Tank Staging Area pad, the petroleum derivatives migrated through the pad to the underlying soil and ultimately leached to groundwater.
- Natural dispersion and biodegradation processes cause the contaminants to spread out and possibly begin naturally decay.
- The shallow site geology consists of bay mud overlain by approximately one (1) to two (2) feet of gravel or imported fill material.
- Shallow groundwater is present at the site under confined conditions. Groundwater is first encountered at approximately 15 feet below ground surface (ft bgs) and equalizes to a static water level of approximately 5 ft bgs.
- The site hydrogeology may be influenced by San Pablo Bay located approximately 0.5 miles northwest of the facility and San Pablo Creek located approximately 500 feet south of the facility.
- Two former operational USTs (one diesel and one gasoline) were located immediately south of the Tank Staging Area. The USTs were removed in the 1990's under the oversight of the San Francisco Regional Water Quality Control Board (SFRWQCB). The SFRWQCB granted UST closure with residual concentrations of Total Petroleum Hydrocarbons (TPH) in the diesel range present in both soil and groundwater.

The CSM had the following impacts on the investigation and remediation:

- Consistent with the CSM, petroleum derivatives including TPH-gasoline, diesel and motor oil; Benzene, Toluene, Ethylbenzene and Xylene (BTEX); and fuel oxygenates (e.g. MTBE) were identified as contaminants of potential concern.
- Based on the CSM, soil and groundwater were identified as media of interest. Soil gas was not identified as a media of interest due to the contaminant characteristics (low volatile fraction) and the absence of volatile organic compounds (VOCs) in preliminary soil and groundwater sampling.

4. CONTAMINATED MEDIA

The following table summarizes the maximum concentrations of select contaminants in both soil and groundwater both prior to and following remediation:

Media	Contaminant	Maximum Concentration (Prior to Remediation)	Maximum Concentration (Following Remediation)
Soil [mg/kg]	TRPH - Total	7,700	NA (Note 1.)
	TPH - Gasoline	450	50
	TPH - Diesel	4,700	310
	TPH – Motor Oil	6,000	310
	Benzene	ND	NA (Note 2.)
	Toluene	0.19	NA
	Ethylbenzene	0.021	NA
	Xylene	1.0	NA
Groundwater [ug/L]	TPH - Gasoline	ND	No Remediation Required
	TPH - Diesel	2,600	
	TPH – Motor Oil	ND	
	Benzene	ND	
	Toluene	ND	
	Ethylbenzene	ND	
	Xylene	1.5	
	MTBE	1.6	
TBA	7.9		

Notes:

NA = not analyzed.

ND = not detected. Reporting limits set at or below conservative levels of concern.

1. The confirmation soil samples collected from the limits of the excavation were analyzed for the speciated fractions TPH-gasoline, diesel and motor oil only.

2. The confirmation soil samples were not analyzed for BTEX constituents because contaminant concentrations prior to remediation were not of concern.

5. CORRECTIVE MEASURES

Remedy Selection Process

ECl did not complete a formal evaluation of remedy options for soil through the Corrective Measures Study process. In its place, an evaluation of remedy options was conducted prior to issuance of the Permit and the decision to proceed with excavation of soil and replacement of the Tank Staging Area pad was made and public noticed during the permit renewal process.

The nature and extent of groundwater contamination had not been established prior to issuance of the Permit so a formal evaluation of remedial options was necessary. It warrants noting that no constituents were found in groundwater at levels exceeding the primary maximum contaminant levels (MCLs). However, degradation of the groundwater by petroleum derivatives has resulted in a condition that may effect the water esthetics e.g. taste and odor concerns. The SFRWQCB has established Environmental Screening Levels (ESLs) for groundwater (potential drinking water source) of 100 ug/L for each of TPH-gasoline, diesel and motor oil. The ESLs are not enforceable standards and the primary application of the ESLs is to rapidly screen contaminated sites for further evaluation.

Decision Factors and Corrective Action Standards

The corrective measure alternatives that have been implemented for soil and that are proposed for groundwater will be evaluated against the corrective action standards and decision factors. The following four (4) corrective action standards are applicable:

- Protect human health and the environment
- Attain corrective action objectives including media cleanup standards
- Comply with any applicable standards for management of wastes
- Control the source of release to prevent further threat to human health or environment

In addition, the following five (5) decision factors are available:

- Short and long term effectiveness
- Reduction of toxicity, mobility and/or volume
- Long term reliability
- Implementability of corrective measure alternatives
- Preliminary cost estimates

Discussion of Corrective Action Remedy for Soil

Excavation and Off-site Disposal

The remedy for soils at the site was excavation and off-site disposal. A total of 161 cubic yards of contaminated soil was removed. Cleanup goals were determined by evaluating the contaminant characteristics and available guidance documents. Confirmation soil samples were collected from the limits of the excavation to confirm that cleanup goals were met. The maximum concentrations of contaminants remaining at the site, as determined by analysis of confirmation samples, are presented in Section 4.0 (Contaminated Media) of this draft Statement of Basis. The majority of the confirmation samples were non-detect for the contaminants of concern and the average concentration of remaining contaminants is well below cleanup levels established for the site.

The remedy for soil is protective of human health and the environment because soil with elevated levels of petroleum hydrocarbons has been excavated, removed from the site, and disposed at an authorized disposal facility. Residual contamination in soils remaining at the site is below cleanup goals.

Replacement of the Tank Staging Area

The Tank Staging Area was demolished and reconstructed to meet mandated secondary containment requirements as defined in California Code of Regulations, title 22, Section 66264.175. The reconstruction was completed in early 2008. The new Tank Staging Area should prevent future releases of hazardous waste.

Discussion of Corrective Action Remedy for Groundwater

The results of the groundwater investigation documented in the RFI report confirm the presence of TPH-D at concentrations ranging from below laboratory reporting limits to 2,600 ug/L. Other VOCs and fuel oxygenates were present at levels below their respective MCLs. The contaminant plume has been fully delineated and the plume is confined to the ECI Facility. The "hot-spot" where elevated TPH-D was noted is limited in extent and confined to the northeast corner of the Tank Staging Area. This "hot-spot" is consistent with the area of the old Tank Staging Area pad where cracking and deterioration was noted. Soil remediation has occurred in this area which has removed the continuing source. The Tank Staging Area pad has been replaced which should prevent new releases.

Based on these results, DTSC concludes that no action is an appropriate remedy for groundwater. While it is likely that much of the contamination results from releases from the Tank Staging Area, it is also possible there is a contribution from the residual contamination left in place at UST closure. Consistent with the finding from the SFRWQCB at the time of the UST closure, DTSC considers the probability that groundwater will be used as a drinking water supply as low and contamination concentrations are expected to reduce with time due to natural attenuation (dispersion and biodegradation) processes. The proposal to proceed with no action for groundwater meets each of the four (4) corrective action standards previously outlined.

6. PROPOSED ACTION

Based on the forgoing analysis, DTSC recommends no action for groundwater. Contaminant concentrations are expected to reduce with time due to natural attenuation (dispersion and biodegradation) processes. Based on the work already completed, DTSC plans to issue a decision of corrective action complete. A permit modification is required to update the Permit to reflect construction of the new Tank Staging Area pad.

7. INNOVATIVE TECHNOLOGIES CONSIDERED

The groundwater contaminant characteristics did not warrant a rigorous evaluation of active cleanup alternatives.

8. CALIFORNIA ENVIRONMENTAL QUALITY ACT

In compliance with the California Environmental Quality Act (CEQA), DTSC considered the impacts of this remedy selection decision on the environment and determined that a general rule exemption was appropriate. Consistent with this finding, DTSC has prepared a draft Notice of Exemption that will be finalized and filed concurrently with the final remedy decision. The key basis for the decision to proceed with a Notice of Exemption was the fact that no further action is proposed based on the activities that have already been completed.

9. NEXT STEPS

DTSC encourages public comments and feedback on the proposed remedy for the ECI Facility. Comments can be submitted to the DTSC staff listed below any time before the close of the public comment period on September 10, 2010. At this time, a public meeting to discuss the selected remedy has not been scheduled; however, if DTSC receives sufficient interest, DTSC will consider holding a public meeting. To request a public meeting please contact DTSC staff.

For additional information regarding the public comment period, including the locations of information repositories, please refer to the fact sheet available on DTSC's website <http://www.dtsc.ca.gov/>. Alternatively, you may contact the DTSC staff listed on this draft Statement of Basis.

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