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Alameda County
Environmental Health

# Executive Report for the Western Forge and Flange Company Closure at 540 Cleveland Ave Albany CA 94706

**June 2009** 



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#### i. Executive Summary

This report presents the details of the hazardous material facility closure Chemical Data Management Systems (CDMS) conducted on behalf of Western Forge and Flange Co. at 540 Cleveland Ave, Albany California.

Western Forge and Flange was in operation at the Albany site from 1944 until the company began relocating its manufacturing operation to their Texas facility in 2007. By early 2008, all of the equipment and materials used during the manufacturing operations, including hazardous materials, were moved to the Texas facility.

Since the relocation of the Western Forge and Flange Co. facility from Albany to Texas, there have been extensive decontamination/clean up activities. Clean up activities have included: cleaning the rafters using wire brushes, hot pressurized water, and industrial vacuums; sweeping the floors; triple rinsing the floors with hot pressurized water; triple rinsing the clarifier using hot pressurized water; removing back fill from the pits used to house the footings of the hammers and roller rings; removing all piping containing hazardous materials; removing some soil containing contaminants above the environmental screening levels; removing oil from the open exploratory excavation near the ring roller pit; and removing all hazardous waste.

In addition to the clean up activities, several sampling events also occurred under the direction of the Alameda County Department of Environmental Health (ACDEH), including, wipe sampling, soil sampling and water sampling. The analytical parameters used for the analysis of soil and water were: TPH-Diesel, TPH-Motor Oil, TPH-Carbon Range C19-C36, cadmium, chromium, nickel, lead, and zinc.

Sample analyses for all wipe samples were completed for: cadmium, chromium, nickel, lead and zinc. Wipe sampling results indicated elevated levels of metals in several locations, all of which are between 15-40 feet above ground level. One wipe sample, S-3, showed marginal elevated levels for nickel at a location of approximately 8 feet. As a result of the elevated levels of metals, the rafters were cleaned after each sampling event to remove trace contaminants. A total of three wipe sampling events and three aboveground cleaning events occurred.

Water sampling results indicated elevated levels of metals in several locations but not in others. Elevated levels of petroleum hydrocarbons were detected in soil samples from various sampling locations but not in others.

As a response to the elevated levels of petroleum hydrocarbons found in various soil-sampling locations, a soil cleanup plan was developed to remediate the areas in close proximity to these sample locations (sample locations 5, 6B, SB106, SB107).

Cleanup in sample locations 5, 6B, and SB 107 continued until all contaminated soil had been removed. During the cleanup of sample location SB106 (adjacent to the ring roller pit), oil began to seep from a point source in the wall of the trench closest to the ring roller pit at 2.5 feet below ground surface, and began to accumulate on top of a perched layer of water at the bottom of the pit.

Following this event, Consulting Geologist Fred Hoffman and CDMS representatives further evaluated the excavation and the decision was made to conduct subsurface investigations around of each of the other two pits on site. The purpose of this investigation was to confirm the presence or absence of oil in the area surrounding the pits. No contamination was observed during this subsurface investigation.

Currently, bio and chemical remediation has been implemented along with several oil-skimming events to assist in the removal of oil in the water and soil in the excavation at SB106, adjacent to the ring roller pit.

Case worker Susan Hugo and Sukla De of the ACDEH, have recommended that this case be transferred to the Alameda County Site Mitigation/Local Oversight Program for all subsurface issues and concerns.

Further evaluation of the aboveground issues and the transfer of this case to the Site Mitigation/Local Oversight Program for an evaluation of the subsurface issues are pending as of this writing.

# **CLOSURE PLAN**

FOR

# **Western Forge & Flange Co. - Albany**

540 Cleveland Avenue Albany, CA

April 2008

#### **CLOSURE PLAN**

#### Prepared for:

Western Forge & Flange Co. - Albany

To be submitted to:

Alameda County Department of Environmental Health

This Closure Plan is being submitted under the following conditions:

Facility is closing down

Sampling: Sampling will be based on the recommendations in this plan and

supplemented with the requirements outlined by the Alameda

County Department of Environmental Health

Inspection: Inspections will be scheduled after the submittal of the plan.

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#### I. FACILITY DESCRIPTION

#### A. LOCATION

Site Address

Business Name: Western Forge & Flange Co. - Albany

Business Address: 540 Cleveland Avenue

City, State, Zip: Albany, CA 94706

County: Alameda

Telephone Number: (281) 727-7001

Operator or Owner: Walter Pierce

**Mailing Address** 

Company: Western Forge & Flange Co.

Contact Name: Walter Pierce

Title: President

Street: 687 County Rd. 2201

City, State, Zip: Cleveland, TX 77327

Telephone Number: (281) 727-7001

Property Owner

Company: Western Forge & Flange Co.

Contact Name: Walter Pierce

Title: President

Street: 687 County Rd. 2201

City, State, Zip: Cleveland, TX 77327

Contact: Walter Pierce

Telephone: (281) 727-7001

#### B. SITE USE AND HISTORY

#### **Business Activity Description:**

Albany Western Forge & Flange manufactures flanges and forgings made from a variety of different materials including: titanium, aluminum, high nickel alloys, stainless steel, and alloy steels. Raw material stock is cut and then heated in furnaces. The flanges are then forged (hammered or pressed) into shape. The part is machined, if requested by the customer. Approximately 60% of all projects are machined. Flanges are then inspected and shipped to customers.

Date Business Started: 1944

**Facility Description:** 

Square Footage: 25,000 (approximate)

Buildings: 1 Building
Hazardous Materials Area: 10 Areas

#### **Containment Area Description:**

All hazardous material are in portable secondary container units.

#### **Adjacent Properties:**

North: Albany Street
South: Grace Bakery
East: Freeway I-80
West: Railroad tracks

#### C. BUILDING LAYOUT

Please refer to the facility drawings found in the Appendix.

#### II. HAZARDOUS MATERIALS

Western Forge and Flange has been relocating its manufacturing operation to their Texas facility of the course of one year (2007). During this process equipment and chemicals used at this facility were gradually moved to the Texas facility. All chemicals were shipped using hazardous material transporters. The equipment; the forges, were decommission at the Albany site and shipped to the Texas site. All the equipment and chemicals that were relocated to Texas were put into service at the location. Once the Texas facility was operational a decision was made to close the Albany, California facility.

All chemicals listed below were not on site when the decision was made to close the Albany facility. However, the list below was prepared to provided an indication were these chemicals were stored during the time when the Albany facility was operational. The numbers for the items listed below correspond to the numbers on the facility site drawing, which is in the Appendix.

#### A. TYPES AND USES OF HAZARDOUS MATERIALS.

- 1.) Canola Frying Shortening: Used to in the forging operation during die shaping to prevent melding shaped piece to the die
- 2.) Propane: Used as a fuel source to power onsite forklifts.
- 3.) Oxygen: Used during the welding process of melding flanges.
- 4.) Diesel fuel#2: Used to fuel onsite vehicles.
- 5.) Chevron ISO 32 Hydraulic Oil: Used during the forging operation for lubricating the hydraulics of the press and hammer.
- 6.) Cheveron ISO Cylinder Oil: Used during the forging operation to provide lubrication to the cylinders of the press and hammer.
- 7.) Universal Gear Oil 80/90 Weight: Used during the forging operation to provide lubrication to the gears of the press and hammer.
- 8.) Chevron Soluble Oil B: Used during the forging operation to cool the flanges after they had been but through the furnace.
- 9.) Carbon Dioxide/ Argon gas mixture: Used during the welding process of melding flanges.

- 10.) Chevron Quenching Oil 70: Used during the forging process to cool steel for steel hardening.
  - 11.) Chevron Black Pearl Grease: Used during the forging process to provide Lubricartion to the bearing surfaces of both the press and hammer.
  - 12.) Bolier Treat 6000: Used is in the boiler to help reduce scaling.
  - 13.) Acetylene: Used during the welding process of melding billets and flanges.
  - 14.) Oil and Water seperator (one tank): Used during the forging process in another process known as quenching, which involves the cooling off of forged parts.
  - 15.) Waste: Waste metals form the bi-product from the quenching process.

A copy of the Hazardous Materials Inventory has been included in Appendix, which will provide more detailed information on the hazardous material inventory.

#### III. HEALTH AND SAFETY PLAN

A. Employees working at the Albany facility have received 40 Hour Hazwoper training and are qualified to work with all hazardous material on site.

#### B. SAFETY AND HEALTH HAZARD ANALYSIS

The Albany site clean-up will involve the clean of the following hazardous materials/wastes:

Hazardous Material	Hazard Identified
Lubrication oil	Combustible
Metals (Traces)	None

#### C. EMPLOYEE TRAINING

In addtion to the 40-Hour training that the workers have been trained in the Supervisor ahs been trained in the following elements:

#### 1. Right to Know training

All employees have been trained in the contents of the Hazardous Materials Management Plan, OSHA Hazard Communication, and the Hazardous Material Emergency Response Plan and Procedures. Subjects included:

**MSDS** 

Hazardous Symbols

**Protective Equipment** 

Hazardous Materials/Handling

Proposition 65

**Basic Emergency Information** 

**Emergency Response Procedures** 

Notification Procedures - Internal/External Reporting

**Evacuation Procedures/Meeting Point** 

2. Hazardous Waste Training per Title 22 §66265.16

> All employees involved in the management of hazardous waste have been trained within six months of hire and will not manage hazardous wastes in unsupervised positions until they have been trained. This training consists of classroom instruction containing information regarding contingency plan implementation and in-house waste management policies. Employees have also received on-the-job training by Western Forge & Flange Co. - Albany. Subjects included:

Safe handling of hazardous wastes

**Emergency Response Procedures** 

Emergency equipment and systems, where applicable

Procedures for using, inspecting, repairing and replacing emergency and monitoring equipment

Operation of automatic waste-feed-cutoff systems

Use of communication and alarm systems

Response to fires and explosions

Response to groundwater contamination incidents

Procedures for shutting down operations

#### D. PERSONAL PROTECTIVE EQUIPMENT

- 1. Site workers will be provided with the following personal protective equipment for their personal protection:
  - Gloves
  - safety glasses
  - goggles
  - boots
  - Dust Masks in Shipping and Plant
  - Tivac suites
- 2. A safety shower/eyewash station and fresh running water are also available in the following locations:

- Refer to drawings. These are not plumbed, they are disposable bottles
- 3. A First Aid Kit is also available.

#### E. EMERGENCY RESPONSE PLAN

The emergency response/contingency plan is available onsite in the Hazardous Material Business and Management Plan and includes the following:

Basic Emergency Information and Emergency Response Procedures:

**Body Contact with Chemicals** 

Other Spill

Unplanned Release of Hazardous Materials or Waste

**Notification Procedures** 

**Evacuation Procedures** 

#### IV. CLOSURE PLAN

#### A. REMOVAL OF HAZARDOUS MATERIALS

1. Western Forge and Flange has been relocating its manufacturing operation to their Texas facility of the course of one year (2007). During this process chemicals used at this facility were gradually moved to the Texas facility. All chemicals were shipped using hazardous material transporters. All the chemicals that were relocated to Texas were put into service at that location. Once the Texas facility was operational a decision was made to close the Albany, California facility.

Remove all process chemicals from equipment and storage areas that have not been depleted during operation, shipped off-site, or returned to vendors will be pumped into 55 gallons drums and shipped as hazardous material.

2. All hazardous materials will be transported by a licensed hazardous material hauler to a proper disposal site.

#### B. REMOVAL OF EQUIPMENT

1. Western Forge and Flange has been relocating it's manufacturing operation to the Texas facility of the course of one year (2007). During the relocation process this facility gradually moved equipment to the Texas facility. The equipment; the forges, were decommission at the Albany site and shipped to the Texas site. All the equipment that were relocated to Texas were put into service at that location. Once the Texas facility was operational a decision was made to close the Albany, California facility. For a summary of all equipment removal refer to the despostion in the appendix.

#### C. DECONTAMINATION OF BUILDING MATERIALS

 Floors that are visibly stained, or otherwise suspected of being contaminated with oil and grease, will be triple-cleaned using a floor scrubber or hot water power washers. All cleaning liquids generated from the process will be collected in a containment tank and disposed of as hazardous waste.

- 2. The walls of the building that were exposed to hazardous materials or waste will be decontaminated by removing all hazardous waste and residues with industrial vacuums and scraping tools. All waste will be disposed of as hazardous waste.
- 3. The sumps will be power washed and cleaned to remove any debris and hazardous materials.
- 4. All pits around the forging hammers will have the anvils removed. The anvils are located in large pits (At least 10 feet deep by 10 foot by 10 foot sides) and may have some oils that have seeped into the pits and possibly into the ground. Sampling will be conducted at each of these locations.

All disposal, removal, and cleaning will be performed by Chemical Data Management Systems.

#### D. WASTEWATER TREATMENT AND WASTE DISPOSAL

#### 1. Waste Water

There is a waste waster permit with the East Bay MUD under permit number 10619471. The facility did discharge wastewater from the oil/water separator into a clarifier. The clarifier will be pumped out and pressure washed. All waste removed from the clarifier will be disposed of as hazardous waste.

#### 2. Hazard Waste

All hazardous waste will be disposed of in accordance with the rules and regulations of the Department of Health Services, Cal/EPA, the San Francisco Regional Water Quality Control Board, the Bay Area Air Quality Management District, U.S. EPA, and any other local, State, or Federal agency requirements. All receipts for the disposal of hazardous waste will be kept and made available for inspection.

#### E. FACILITY DESCRIPTION/EQUIPMENT LOCATIONS

The following are descriptions of the each of the areas at the site with a list of what may needed to be decontaminated or may represent contaminate areas.

Location	Description	Clean Up Actions
Facility Office	Main office	None
Shipping	Shipping floors	Hot power washing
Machine Shop	Machine Shop floors	Hot power washing and sampling. Waste oil to be removed
Plant Office & Storage Bldg	Non hazardous	None
Forge Building	Contaminated walls, associated beams, floors and waste oil	Hot power washing and sampling. Waste oil to be removed
Ceiling/Roof Scaffolding	Contaminated steel rafters and trusses.	Vacuum and scraping of debris from all scaffolding elements with scraping tools and industrial vacuum. Sampling will also be conducted.

#### F. STORMWATER SEWERS

All stormwater drains will be inspected for the presences of contamination. If there is the presence of any contamination the stormwater sewer lines, they will be cleaned out using industrial steam cleaning methods.

#### G. ASBESTOS

There is no known asbestos at this facility.

#### H. STORAGE TANKS

The oil/water separator was shipped to Texas and the Diesel Tank was returned to the vendor.

Please refer to disposition found in the Appendix.

#### I. AIR PERMITS

The facility has a BAAQMD permit for five sources. Each of these sources was for gas-fired furnaces used in the forging process. See the Appendix for a more detailed description of the permit and the sources.

#### J. REPORTING

- 1. Any additional recommendations by the Department of Toxic Substances Control or the lead agency will be promptly addressed.
- 2. The EPA will be contacted to deactivate the current Hazardous Waste Generators permit for the present site.
- 3. The Air Quality Management District will be contacted to deactivate any current permits.
- 4. The Eaast Bay MUD POTW will be contacted to deactivate the current permit.
- 5. A final Closure Report will be prepared and submitted with supporting documentation after all closure activities have been completed.

Please refer to the appendix for copies of the deactivation requests.

#### V.SAMPLING PLAN

#### A. PROPOSED SAMPLE LOCATIONS

- 1. Core sampling will be performed with attention to hazardous material storage areas, process areas, and areas where cracks or etching is found. Core sample locations will be identified using the EPA method of randomized sampling where sampling should be performed for oil and grease. Core sampling will also be performed in all the hammer/press pits using the guidlines of the EPA randomized sampling method. See the Appendix for proposed sampling locations. Additional sampling will be added to the sampling plan based on the inputs from the administrative ageny. Samples will be collected at 1 foot and 3 foot depths.
- 2. Ground water samples shall be collected in the areas were previous equipment or activities where located:
  - Oil Water Separator
  - Diesel Tank
  - Waste Storage
- 2. Bulk samples will be collected using the EPA method of randomized sampling from structural components located throughout the facility, such as wall, beams, rafters, etc.

#### B. SAMPLE COLLECTION AND PRESERVATION

- Core and bulk samples will be taken by Chemical Data Management Systems. Samplers' names will be so noted in the sample logbook. EPA QA/QC procedures are followed.
- 2. Sampling procedure:
  - a. Core samples
    - 1. Core samples will be taken with clean Teflon or brass sleeves
    - 2. The sleeves will be put into a clean plastic sample bag and placed into an ice chest; no preservation required

#### b. Bulk samples

- 1. Bulk samples will be collected in clean glass jars provided by Test America using a spatula; triple rinsed each time after sampling.
- The jars will be placed into a clean plastic sample bag and placed into. ice chest; no preservation required.
- c. The sample containers will be capped and labeled with the sample description, date and time of the collection.

A State registered geologist will oversee all sampling and will sign-off on all core and bulk samples.

#### C. CHAIN-OF-CUSTODY

This record includes the following:

- 1. Name of the company
- 2. Samplers' signatures
- 3. Receivers' signatures
- 4. Unique identification number
- 5. Sample location
- 6. Date and time of collection
- 7. Type of sample
- 8. Number of containers and particular container's sequence number
- 9. Analyses required

When custody of a sample is transferred, the person relinquishing the samples must sign the record. The person receiving the sample acknowledges receipt by signing the record also.

A sample chain-of-custody form is contained at the end of this section.

#### D. ANALYSIS

#### 1. Analysis Parameters

Core samples will use Method 8260

Ground water samples will use Method 8260

#### 2. Samples

Bulk sampling will use Method 6010B and conduct analysis for Cd, Cr, Pb, and Zn for the metals, and Method 9070 for oil and grease.

All waste generated during the sampling process will meet all Federal EPA and DTSC requirements.

#### E. CLEAN UP STANDARDS

The clean up standards that will be used to evaluate the sampling results will be based on the San Francisco Bay Regional Water Quality Control Boards Shallow Soil Screening Levels for Commercial / Industrial Land Use tables dated February 2005, and are listed below:

Chemical Parameter	Soil - ESL (mg/kg)	Groundwater (mg/kg)
Cadmium	7.4 E+00	NA
Chrome (Total)	5.8 E+01	NA
Lead	7.5 E+02	NA
Nickel	1.5 E+02	NA
Zinc	6.0 E+02	NA
TPH (Middle Distillates)	NA	1.0 E+02

#### F. PERSON RESPONSIBLE FOR SAMPLE COLLECTION

Name: Jamie Hernandez

Job title: Environmental Specialist

Firm: Chemical Data Management Systems

Address: 6515 Trinity Court, Suite 201, Dublin, CA 94568

Phone: (925) 551-7300

#### G. LABORATORY INFORMATION

Test America- San Francisco 1220 Quarry Lane Pleasanton, CA 94566 (925) 484-1919

#### H. AGENCY OVERSIGHT

All sampling activities will be coordinated with Alameda County Health Care Services.

# Western Forge & Flange Co. - Albany

#### **CHAIN OF CUSTODY RECORD**

	ERS (Signature			SAMPLE TYPE					
SAMPLE NUMBER	SAMPLE LOCATION	DATE	TIME	СОМР	GRAB	NO. OF CONTAINER S	ANALYSES REQUII		QUIREL
Relinquis	hed by: (Signature)		R	eceived by	<b>y:</b> (Signat	ure)		Date	Time
Relinquis	hed by: (Signature)		R	Received by: (Signature)			Time		
Relinguis	hed by: (Signature)		R	Received by: (Signature)			Time		
				Received for Laboratory by: (Signature)		Data	Time		
Relinquis	hed by: (Signature)		K	eceivea to	r Labora	atory by: (Signati	ire)	Date	Tille
Method	d of Shipment:								
Distributio	n: Original - Accompany	Samples							
1 copy - K	eep on File								

# VI. PROPOSED CLOSURE SCHEDULE

- A. DATE OF REMOVAL OF INVENTORY: FEBRUARY 2008
- B. DATE OF REMOVAL OF EQUIPMENT: FEBRUARY 2008
- C. DATE OF FACILITY DECONTAMINATION: MAY 2008
- D. DATE OF FACILITY SAMPLING: MAY 2008
- E. DATE OF CLOSURE OF THE FACILITY: JUNE 2008

#### VII. CONTRACTORS

Firm contracted to perform decontamination:

Chemical Data Management Systems
6515 Trinity Court, Suite #201, Dublin, CA 94568
James N. Carro
(925) 551-7300

Firm contacted to prepare the Closure Plan:

Chemical Data Management Systems
6515 Trinity Court, Suite #201, Dublin, CA 94568
James N. Carro
(925) 551-7300

Firm contracted to transport hazardous materials and equipment (will not transport any hazardous waste):

To be Determined

Destination of materials and equipment:

Please refer to the appendix for the dispostion.

#### VIII. COORDINATION WITH OTHER AGENCIES

#### A. LOCAL AGENCY WITH JURISDICTION

Western Forge and Flange will coordinate all closure activities through the Alameda County Department of Environmental Health, Hazardous Materials Division.

#### **B. BUILDING DEPARTMENT**

The Building Department requires property owner and/or demolishing contractor to obtain a building permit for the demolition.

#### C. OTHER AGENCIES

The following agencies will be notified of the closure by letter or other document as required:

Alameda County Department of Environmental Health Hazardous Material Division 1131 Harbor Bay Parkway, Room 250 Alameda, CA 94502

Easy Bay Municipal Utilities District P.O. Box 24055 Oakland, CA 94623 (510) 287-1409

City of Albany

Street Department - if the spill may affect storm drains.

US EPA Region 9
PRC-RCRA Notification Section
75 Hawthorne Street
WST-6 Tetra Tech

San Francisco, CA 94105 (415) 495-8895

Cal EPA Headquarters
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806
(916) 324-1826

Region 2
Department of Toxic Substances Control
Site Mitigation Branch
2151 Berkeley Way, Anx 9
Berkeley, CA 94704
(510) 540-2122

State Board of Equalization
Excise Tax Division
P.O. Box 942879
Sacramento, CA 94279-0001
MIC 57
(916) 299-6930

Bay Area Air Quality Management District 939 Ellis Street San Francisco, CA 94109 (415) 771-6000

Regional Water Quality Control Board (to close Storm Water permit) File Notice of Termination form	

### IX. CERTIFICATIONS

#### **Owner Certification**

I certify that no evidence of a release of hazardous waste or hazardous substances has been found and none of the signatories has any knowledge of any release of hazardous waste or hazardous constituents at the facility.

I declare under penalty of perjury that the above information is correct to the best of my knowledge. If there is any change, which would materially affect the above information, I will notify the Alameda County Department of Environmental Health.

Western Forge & Flange Co Albany	
Walter Pierce, President	Date
Registered Environmental Assessors Certific	ation
	April 25, 2008
James N. Carro, REA I-03698	Date

# X. NOTIFICATION LETTERS

Date:	

US EPA Region 9 PRC-RCRA Notification Section 75 Hawthorne Street WST-6 Tetra Tech San Francisco, CA 94105

Subject: Closure of Western Forge & Flange Co. - Albany

We hereby notify your agency that Western Forge & Flange Co. - Albany is ceasing operations at their current location effective October 1, 2007.

Their current location is:

Western Forge & Flange Co. - Albany 540 Cleveland Avenue Albany, CA 94706

Their EPA Identification Number is CAD 981 371 396.

Their State Board of Equalization Account Number is HAHQ 36-011944.

Please advise them of any additional forms or notification that need to be submitted.

Please return the enclosed letter as proof of receipt of this letter.

Sincerely,

Walter Pierce, President Western Forge & Flange Co.

Date:
Walter Pierce Western Forge & Flange Co.
687 County Road 2201 Cleveland, TX 77327
Dear Walter Pierce:
We are sending you this letter to verify that we have received your letter datedregarding the closure of:
Western Forge & Flange Co Albany
540 Cleveland Avenue
Albany, CA 94706
Sincerely,
Stamp or Name

US EPA Region 9 PRC-RCRA Notification Section 75 Hawthorne Street WST-6 Tetra Tech San Francisco, CA 94105

Cal EPA Headquarters Department of Toxic Substances Control P.O. Box 806 Sacramento, CA 95812-0806
Subject: Closure of Western Forge & Flange Co Albany
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Their State Board of Equalization Account Number is HAHQ 36-011944.
Please advise them of any additional forms or notification that need to be submitted.
Please return the enclosed letter as proof of receipt of this letter.
Sincerely,

Walter Pierce, President Western Forge & Flange Co. Date: \_\_\_\_\_

Date:
Walter Pierce Western Forge & Flange Co. 687 County Road 2201 Cleveland, TX 77327
Dear Walter Pierce:
We are sending you this letter to verify that we have received your letter dated
Western Forge & Flange Co Albany 540 Cleveland Avenue Albany, CA 94706
Sincerely,
Stamp or Name

Cal EPA Headquarters

Sacramento, CA 95812-0806

P.O. Box 806

Department of Toxic Substances Control

Date:
Region 2
Department of Toxic Substances Control
Site Mitigation Branch
2151 Berkeley Way, Anx 9
Berkeley, CA 94704
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Please advise them of any additional forms or notification that need to be submitted.
Please return the enclosed letter as proof of receipt of this letter.
Sincerely,
Walter Pierce, President

Western Forge & Flange Co.

Date:
Valter Pierce Vestern Forge & Flange Co. 87 County Road 2201 Eleveland, TX 77327
Dear Walter Pierce:
We are sending you this letter to verify that we have received your letter datedegarding the closure of:
Western Forge & Flange Co Albany 540 Cleveland Avenue Albany, CA 94706
incerely,
tamp or Name
degion 2
Department of Toxic Substances Control
ite Mitigation Branch
151 Berkeley Way, Anx 9
erkeley, CA 94704

Date:
State Board of Equalization Excise Tax Division P.O. Box 942879 Sacramento, CA 94279-0001 MIC 57
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Sincerely,

Walter Pierce, President Western Forge & Flange Co.

Date:	
Walter Pierce Western Forge & Flange Co. 687 County Road 2201 Cleveland, TX 77327	
Dear Walter Pierce:	
We are sending you this letter to verify that we have received your letter datedegarding the closure of:	
Western Forge & Flange Co Albany 540 Cleveland Avenue Albany, CA 94706	
Sincerely,	
Stamp or Name	

State Board of Equalization Excise Tax Division P.O. Box 942879 Sacramento, CA 94279-0001 MIC 57

Date:
East Bay Municipal Utilities District P.O. Box 24055 Oakland, CA 94623
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Please return the enclosed letter as proof of receipt of this letter.
Sincerely,
Walter Pierce, President Western Forge & Flange Co.

	Date:
Walter Pierce Western Forge & Flange Co 687 County Road 2201 Cleveland, TX 77327	
Dear Walter Pierce:	
We are sending you this lett regarding the closure of:	er to verify that we have received your letter dated
	Western Forge & Flange Co Albany 540 Cleveland Avenue Albany, CA 94706
Sincerely,	
Stamp or Name	
East Bay Municipal Utilities P.O. Box 24055 Oakland, CA 94623	s District

Date:
Alameda County Department of Environmental Health 1131 Harbor Bay Parkway Room 250 Alameda, CA 94502
Subject: Closure of Western Forge & Flange Co Albany
We hereby notify your agency that Western Forge & Flange Co Albany is ceasing operations at their current location effective October 1, 2007.
Their current location is:
Western Forge & Flange Co Albany 540 Cleveland Avenue Albany, CA 94706
Their EPA Identification Number is CAD 981 370 396.
Their State Board of Equalization Account Number is HAHQ 36-011944.
Please advise them of any additional forms or notification that need to be submitted.
Please return the enclosed letter as proof of receipt of this letter.
Sincerely,

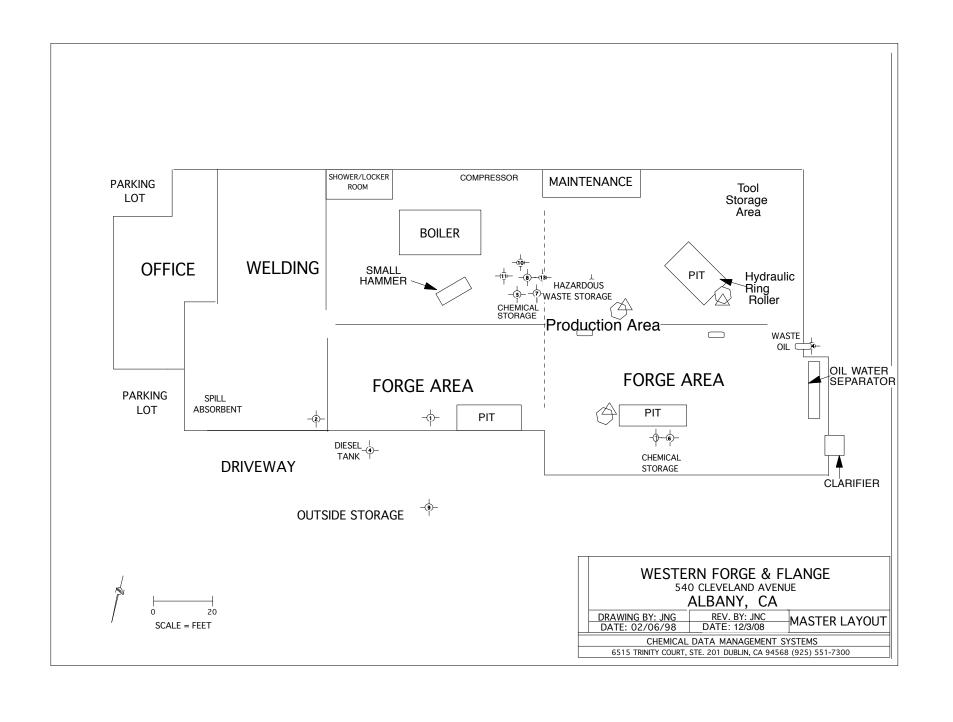
Walter Pierce, President Western Forge & Flange Co.

Date:
Walter Pierce Western Forge & Flange Co. 687 County Road 2201 Cleveland, TX 77327
Dear Walter Pierce:
We are sending you this letter to verify that we have received your letter dated regarding the closure of:
Western Forge & Flange Co Albany 540 Cleveland Avenue Albany, CA 94706
Sincerely,
Stamp or Name
Alameda County Department of Environmental Health 1131 Harbor Bay Parkway Room 250 Alameda, CA 94502

# **Appendix**

- I. Facility and Hazardous Material Storage Drawing & Sampling Areas
- II. Hazardous Material Inventory
- III. Proposed Sampling Drawing
- IV. Disposition of Materials and Equipment
- V. Closure Notification Form
- VI. Wipe Sampling Protocol
- VII. Protocol for Soil Boring Investigations and Groundwater Sampling

I. Facility and Hazardous Material Storage Drawing					



# **II. Hazardous Material Inventory**

Please refer to the following pages.

## UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

				e per material per building o	or area
□ ADD □ DELET	E □ REVISE		200	Page 1 of 15	
	I. FACILITY INF	ORMATION			
,	me as FACILITY NAME or DBA - Doing Business As)				
Western Forge & F. CHEMICAL LOCATION			EMICAL LOCATION CONFID	ENTIAL	20
Forge Area		MAP # (optional)	Yes No	GRID # (optional)	20
FACILITY ID# 0 7	7 0 0 0 7 7 1 3 3 6	Master Layout		O25	
	II. CHEMICAL INFOR	RMATION			
CHEMICAL NAME		205	TRADE SECRET	☐ Yes 🗷 No	20
Canola Frying Short COMMON NAME	ening	207	If subjec	t to EPCRA, refer to instructions	20
Canola Frying Short	rening	207	Regulated Substance	?	20
CAS #	g	209	*If Regulated Substance	e is "Yes", all amounts belo	w mu
Mixture FIRE CODE HAZARD	CLASSES: include physical & health characteristics (See appendix 6 of	of CUPA packet)	be in ibs.		21
CLASS III-A comb	1 0				21
HAZARDOUS MATER TYPE (Check one item	DIA PURE MEDIVILATURE DIC WASTE I	ADIOACTIVE	Yes <b>⊠</b> No	212 CURIES	21
PHYSICAL STATE (Check one item only)	□ a, SOLID <b>⊠</b> b, LIOUID □ c, GAS	ARGEST CONTAINER	<u> </u>	NA NA	21
FED HAZARD CATEO (Check all that apply)	•		EALTH 🗖 e. CHRONI	IC HEALTH	21
AVERAGE DAILY AMOUNT	217 MAXIMUM DAILY AMOUNT 218 A 110 165	NNUAL WASTE AMO	OUNT 21	9 STATE WASTE CODE NA	E 22
UNITS* (Check one item only)	■ a. GALLONS □ b. CUBIC FEET □ c. POUNDS	·	22	DAYS ON SITE 365	22
STORAGE CONTAINE	*If EHS amount must be in pounds.				22
STORAGE CONTAINE	□ a. ABOVEGROUND TANK □ c. PLASTIC/NONMETALLIC DRUM □ b. UNDERGROUND TANK □ f. CAN □ □ c. TANK INSIDE BUILDING □ g. CARBOY □	j. BAG	STIC BOTTLE 🗖 r. OTHER	AR .	
STORAGE PRESSURE	🛮 a. AMBIENT 🔲 b. ABOVE AMBIENT 🗆	c. BELOW AMBIE	NT		22
STORAGE TEMPERA	TURE 🛮 a. AMBIENT 🔲 b. ABOVE AMBIENT 🔲	c. BELOW AMBIE	NT d. CRYOGE	ENIC	22
%WT	HAZARDOUS COMPONENT (For mixture or wast	te only) Regula	nted Substance	CAS#	
1 <sub>100</sub> 226	Vegetable Fat	227 🔲 Y	es No 228	JA	22
2 230		231 🔲 Y	es No		23
3 234		235	es □ No 236		23
4 238		239	es □ No 240		24
5 242		243	es □ No 244		24
If more hazardous componen	ts are present at greater than $1\%$ by weight if non-carcinogenic, or $0.1\%$ by weight			the required information.	
ADDITIONAL LOCA	ALLY COLLECTED INFORMATION:				24
M	aximum Daily Amount in pounds: _			Lbs.	

## UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

						(One page pe	r material pe	r buildin	g or area
□ ADD □ DELET	E REVISE				200	I	Page 2	of1	15
		I. FACILITY IN	NFORMATI	ON					
· ·	me as FACILITY NAME or I	DBA - Doing Business As)							
Western Forge & F. CHEMICAL LOCATION	, ,				EMICAL LOCATIO	ON CONFIDENT	AL		20
Forklifts, Driveway			MAP # (optio	EPC	☐ 1 CS	No ORII	) # (optiona	7)	20
FACILITY ID# 0 7	7 0 0 0 7	7 1 3 3 6	Master La			99 P9	5 # (Optiona	9	
		II. CHEMICAL INFO	ORMATIO	1					
CHEMICAL NAME				205	TRADE SE	CRET	☐ Ye	s 🛮 No	20
Propane COMMON NAME				207		If subject to E	PCRA, refer to	nstructions	20
Propane				207	Regulated S	Substance?	☐ Yes ☐	No	20
CAS #				209	*If Regulated	Substance is	"Yes", all a	mounts b	elow mu
74-98-6	CI ASSES, include physical 8	t health characteristics (See appendix	( CCVDA 1 c)		be in lbs.				21
Flammable gas	CLASSES. Ilicitude physical o	t hearth characteristics (see appendix	x 6 of CUPA packet)						21
HAZARDOUS MATER		MIXTURE □ c. WASTE 211	RADIOACTIV	E D	Yes ⊠ No	212	CURIES		21
TYPE (Check one item PHYSICAL STATE	only)	214	LARGEST CO				NA		21
(Check one item only) FED HAZARD CATEO	CODIEC	LIQUID c. GAS	7.5						21
(Check all that apply)	a. FIRE 🔲 0. KI	EACTIVE 🛮 c. PRESSURE RE						amp 66	
AVERAGE DAILY AMOUNT	50 217 MAXI	MUM DAILY AMOUNT 218 75	ANNUAL WA	ASTE AMO	DUNT	219	STATE WA NA	STE CO	DDE 22
UNITS* (Check one item only)	■ a. GALLONS □ b. CU	JBIC FEET 🗖 c. POUNDS				221	DAYS ON 3 365	SITE	22
GTOD A GE CONTAIN		EHS amount must be in pounds.					303		22
STORAGE CONTAINE		☐ e. PLASTIC/NONMETALLIC DRUM	☐ i. FIBER DRUM	4 □ m GIA	SS BOTTI F	a PAII CAP			
	<ul><li>b. UNDERGROUND TANK</li><li>c. TANK INSIDE BUILDING</li></ul>	☐ f. CAN☐ g. CARBOY	☐ j. BAG ☐ k. BOX	n. PLAS	STIC BOTTLE   BIN	r. OTHER			
	d. STEEL DRUM	□ ĥ. SILO	■ 1. CYLINDER	p. TANI	K WAGON				
STORAGE PRESSURE	a. AMBIENT	☑ b. ABOVE AMBIENT	C. BELOV	V AMBIE	NT				22
STORAGE TEMPERA	TURE   ☑ a. AMBIENT	☐ b. ABOVE AMBIENT	□ c. BELOV	V AMBIE	NT 🗖 d. C	RYOGENI	С		22
%WT	HAZARDOUS CO	MPONENT (For mixture or w	aste only)	Regula	ted Substan	ce	CA	AS#	
1 92	Propane		227	☐ Ye	es 🛮 No	228 74-9	8-6		22
2 230	Propylene Or Propene Or	1-propene	231	☐ Ye	es 🛮 No	232	07-1		23
3 3 234	Butane		235	☐ Ye	es 🛮 No	236 106-	97-8		23
4 238			239	☐ Ye	es 🗌 No	240			24
5 242			243	☐ Ye	es 🗌 No	244			24
If more hazardous componen	nts are present at greater than 1% by v	veight if non-carcinogenic, or 0.1% by wei	ight if carcinogenic,			r capturing the I	equired inform	ation.	
ADDITIONAL LOCA	ALLY COLLECTED INFORM	IATION:							24
<b>7.</b> 17	ovimum Dail <del></del> A	mount in nounda.					I ka		
IVI	axiiiiuiii Daiiy A	mount in pounds:					Lbs.		

# UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

		(One j	page per mate	erial per buildi	ng or area
□ ADD □ DELETE □ REVISE		200	Page _	3 of	15
I. FACILITY INFORMA	TION				
BUSINESS NAME (Same as FACILITY NAME or DBA - Doing Business As)					
Western Forge & Flange Co. CHEMICAL LOCATION		EMICAL LOCATION CON	IFIDENTIAL		20
Welding 1 MAP # (o)		CRA ☐ Yes ☑ N	GRID # (o	ntional)	20
FACILITY ID# 0 7 0 0 0 7 7 1 3 3 6 Master		203	H9	pilonal)	
II. CHEMICAL INFORMATION	ON				
CHEMICAL NAME	205	TRADE SECRET		☐ Yes 🛮 No	o 20
Oxygen COMMON NAME	207	If su	ibject to EPCRA,	refer to instruction	20
Oxygen	207	Regulated Substa	nce?	Yes 🛮 No	20
CAS #	209	*If Regulated Subst	tance is "Yes'	', all amounts	below mu
7782-44-7 FIRE CODE HAZARD CLASSES: include physical & health characteristics (See appendix 6 of CUPA pac	ket)	be III Ibs.			21
Oxidizer Nonflammable Gas					21
HAZARDOUS MATERIAL	TIVE	Yes <b>⊠</b> No	212 CUR	IES	21
PHYSICAL STATE Check one item only)  □ a. SOLID □ b. LIQUID ☑ c. GAS  214 LARGEST (282)	CONTAINER	R	NA NA		21
ED HAZARD CATEGORIES	d. ACUTE H	EALTH 🗖 e. CHR	ONIC HEAL	TH	21
AVERAGE DAILY AMOUNT 423  217 MAXIMUM DAILY AMOUNT 218 ANNUAL 846  N		OUNT	219 STAT	TE WASTE CO	ODE 22
JNITS*			221 DAY	S ON SITE	22
*If EHS amount must be in pounds.				365	22
STORAGE CONTAINER					22
□ b. UNDERGROUND TANK □ f. CAN □ j. BAG	n. PLA	ASS BOTTLE	L CAR ER		
□ c. TANK INSIDE BUILDING □ g. CARBOY □ k. BOX □ d. STEEL DRUM □ h. SILO □ l. CYLINDE	ER p. TAN	E BIN K WAGON			
TORAGE PRESSURE ☐ a. AMBIENT ☐ b. ABOVE AMBIENT ☐ c. BELO	OW AMBIE	NT			22
STORAGE TEMPERATURE	OW AMBIE	NT □d. CRYC	GENIC		22
%WT HAZARDOUS COMPONENT (For mixture or waste only)	1	ated Substance		CAS#	
226	27	es <b>⊠</b> No 228	7792 44.5		22
100 Oxygen 230 22	31	232	7782-44-7	r	23
2 234 2.	35 P 35	236			23
238 22:	39	es No 240			24
- 242 2 <sub>0</sub>	43	es No 244			24
If were harmed as a property of greater than 166 by which if you will be in the control of the c	nia attaab additi		ning the	l informeti	
If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinoge  ADDITIONAL LOCALLY COLLECTED INFORMATION:	nic, attach additi	onai sneets of paper captu	ring the required	ı miormation.	24
ADDITIONAL LOCALLY COLLECTED INFORMATION:					24
Maximum Daily Amount in pounds:			L	bs.	

# UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

		(One	page per	material per building o	or area
□ ADD □ DELETE □ REVISE		200	Pa	ge <u>4</u> of <u>15</u>	
I. FACILITY INFORMA	ATION				
BUSINESS NAME (Same as FACILITY NAME or DBA - Doing Business As)					
Western Forge & Flange Co. CHEMICAL LOCATION	201 СН	EMICAL LOCATION CON	IFIDENTIA	L	20
Outside Storage		CRA ☐ Yes ☑ N		# ( anti au al )	20
FACILITY ID#   0   7       0   0   0         7   7	r Layout	203	Q13	# (optional)	20
II. CHEMICAL INFORMAT	ION				
CHEMICAL NAME	205	TRADE SECRET	ı	☐ Yes 🛮 No	20
Diesel Fuel #2 COMMON NAME	207	If so	ibject to EP	CRA, refer to instructions	20
Chevron LS Diesel 2	207	Regulated Substa	nce?	☐ Yes ☐ No	20
CAS #	209	*If Regulated Subs	tance is "	Yes", all amounts belo	ow mu
68476-34-6 TRE CODE HAZARD CLASSES: include physical & health characteristics (See appendix 6 of CUPA p.	acket)	be in ibs.			21
CLASS II combustible liquid Irritant liquid	uenet)				21
HAZARDOUS MATERIAL  1 a. PURE  1 b. MIXTURE  1 c. WASTE  211 RADIOAC	CTIVE	Yes ⊠ No		CURIES	21
PHYSICAL STATE Check one item only)  □ a. SOLID ■ b. LIQUID □ c. GAS  214 LARGEST 1000	T CONTAINER	₹		NA	21
FED HAZARD CATEGORIES Check all that apply)	d. ACUTE H	EALTH 🛮 e. CHR	ONIC HE	EALTH	21
AVERAGE DAILY 217 MAXIMUM DAILY AMOUNT 218 ANNUAL	L WASTE AM	OUNT	219 S	TATE WASTE CODI	E 22
JNITS*			221 E	DAYS ON SITE	22
*If EHS amount must be in pounds.				365	22
STORAGE CONTAINER					22
■ a. ABOVEGROUND TANK □ b. UNDERGROUND TANK □ c. PLASTIC/NONMETALLIC DRUM □ j. BAGR □ c. TANK INSIDE BUILDING □ g. CARBOY □ k. BOX	DRUM m. GLAn. PLA	ASS BOTTLE q. RAI STIC BOTTLE r. OTH	L CAR ER		
d. STEEL DRUM		K WAGON			
STORAGE PRESSURE ☑ a. AMBIENT ☐ b. ABOVE AMBIENT ☐ c. BEL	LOW AMBIE	ENT			22
STORAGE TEMPERATURE 🛛 a. AMBIENT 🔲 b. ABOVE AMBIENT 🔲 c. BEL	LOW AMBIE	NT □ d. CRYC	GENIC	;	22
%WT HAZARDOUS COMPONENT (For mixture or waste only)	Regula	ated Substance		CAS#	
NS Hds Distillate, Middle	227 🔲 Y	es No 228	64742	2-80-9	22
	231 🔲 Y	232	64741		23
	235 X	236	8008-2		23
	239	240	64742		24
5 242	243 Y	244			24
NS   Cat Cracked Distillate, Light  If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic.			64741		
ADDITIONAL LOCALLY COLLECTED INFORMATION:					24
				T 1	
Maximum Daily Amount in pounds:				Lbs.	

# UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

□ ADD □ DELETI	E □ PEVISE				200		er material per building Page5 of15	
_ ADD _ DELETI	L L REVISE	I. FACILITY II	NEODMATI	ION			age 01	
BUSINESS NAME (Sa	me as FACILITY NAM	ME or DBA - Doing Business As)	NFORMATI	ION				
Western Forge & F	lange Co.			201 0	THE LANGUE TO SERVICE OF THE SERVICE	VENDEN		20
Hydraulic/ Ring Rol				201 CHI EPC	EMICAL LOCATION CO CRA Yes 1		TAL	20
FACILITY ID# 0 7	0 0 0	7 7 1 3 3 6 1	MAP # (option  Master La	,	203	GRI I21	D # (optional)	20
		II. CHEMICAL INF	ORMATIO	N				
CHEMICAL NAME				205	TRADE SECRE	Γ	☐ Yes 🛮 No	20
Chevron Iso 32 Hyd	raulic Oil				If s	subject to I	EPCRA, refer to instructions	
COMMON NAME	11' - O'1			207	Regulated Subst	ance?	☐ Yes ☐ No	20
Chevron ISO 32 Hy CAS #	draulic Oli			209		stance is	s "Yes", all amounts bel	ow mu
Mixture	CI ASSES: include ph	ysical & health characteristics (See appendi	iv 6 of CUPA packet)	<u> </u>	be in lbs.			21
CLASS III-B combi	_	tant liquid	ix 0 of COFA packet)	,				21
HAZARDOUS MATER	DI A PURI	E ■ b. MIXTURE □ c. WASTE 211	RADIOACTIV	<sup>7E</sup> □'	Yes 🛮 No	212	CURIES NA	21
PHYSICAL STATE Check one item only)	a. SOLID	b. LIQUID □ c. GAS	LARGEST CO 55	NTAINER				21
FED HAZARD CATEG	GORIES 🛮 a. FIRE	□ b. REACTIVE □ c. PRESSURE RI		ACUTE H	EALTH 🗖 e. CHR	ONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	217 110	MAXIMUM DAILY AMOUNT 218 165	ANNUAL WA	ASTE AMO	OUNT	219	STATE WASTE COD NA	DE 22
JNITS* Check one item only)	a. GALLONS	□ b. CUBIC FEET □ c. POUNDS	•			221	DAYS ON SITE 365	22
	en e	*If EHS amount must be in pounds.					303	22
STORAGE CONTAINE		TANK	☐ i. FIBER DRUM	M □ m. GLA	.SS BOTTLE <b>q</b> . RA	IL CAR		
	<ul><li>b. UNDERGROUND</li></ul>		☐ j. BAG☐ k. BOX☐ l. CYLINDER		STIC BOTTLE <b>[</b> r. OTI E BIN			
TOP A GE PREGGUE	_	II. SILO	I. CTLINDER	■ p. TAIN	K WAGON			22
STORAGE PRESSURE	<sup>2</sup>	IENT	C. BELOV	V AMBIE	NT			
STORAGE TEMPERA	<sup>TURE</sup> ⊠ a. AMB	IENT  b. ABOVE AMBIENT	☐ c. BELOV	W AMBIE	NT d. CRY	OGEN	IC	22
%WT	HAZARDOU	S COMPONENT (For mixture or w	vaste only)	Regula	ited Substance		CAS#	
1 99 226	Base Oil		227	□ Y	es 🛮 No		41884	22
230	Additives		231	☐ Y	es 🛮 No	NA		23
3 234			235	□ Y	es 🗆 No			23
4 238			239		240	)		24
5 242			243		es No	ļ		24
If more hazardous componen	its are present at greater than	1% by weight if non-carcinogenic, or 0.1% by we	eight if carcinogenic,	, attach additi	onal sheets of paper capt	uring the	required information.	
ADDITIONAL LOCA	ALLY COLLECTED I	NFORMATION:						24
N.A	ovimum Doi	ly Amount in nounda	•				Lbs.	
IVI.	axiiiiuiii Dal	ly Amount in pounds:					Lus.	

# UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

□ ADD □ DELETI	E 🗖 REVISE				200		Page 6 of 15	laica
		I. FACILITY	Y INFORMAT	ION				
BUSINESS NAME (Sa	me as FACILITY NAM	ME or DBA - Doing Business As)		1011				
Western Forge & F								
CHEMICAL LOCATIO Forge Area	ON			201 CHI EPC	EMICAL LOCATION CO		TAL	20
FACILITY ID# 0 7	0 0 0	7 7 1 3 3 6	1 MAP # (option Master La	,	203	GRI O2	D # (optional) 5	20
		II. CHEMICAL I	NFORMATIO	N				
CHEMICAL NAME				205	TRADE SECRE	Γ	☐ Yes 🗷 No	20
Chevron Iso 460 Cy	linder Oil				If s	subject to I	EPCRA, refer to instructions	
COMMON NAME				207	Regulated Subst	ance?	☐ Yes ☐ No	20
Chevron ISO 460 C	ylinder Oil W				_			
CAS #				209	*If Regulated Subs be in lbs.	stance is	"Yes", all amounts belo	w mu
Mixture FIRE CODE HAZARD	CLASSES: include ph	ysical & health characteristics (See ap	ppendix 6 of CUPA packet	)	0 <b>0 III</b> 1001			21
CLASS III-A combi	•	itant liquid	ppendix o of Col 11 packet	,				21
HAZARDOUS MATER	II a. PUKI	E ■ b. MIXTURE □ c. WASTE	211 RADIOACTIV	/E 🗖 `	Yes ⊠ No	212	CURIES NA	21
PHYSICAL STATE Check one item only)	a. SOLID	D M b. LIQUID □ c. GAS	214 LARGEST CC 55	ONTAINER	1		•	21
FED HAZARD CATEG Check all that apply)	GORIES 🛮 a. FIRE	□ b. REACTIVE □ c. PRESSUR	E RELEASE 🛮 d.	ACUTE H	EALTH 🗖 e. CHR	ONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	30	MAXIMUM DAILY AMOUNT 55	218 ANNUAL W. NA	ASTE AMO	OUNT	219	STATE WASTE CODE NA	E 22
JNITS* Check one item only)	■ a. GALLONS	□ b. CUBIC FEET □ c. POUNDS  *If EHS amount must be in pounds.	S			221	DAYS ON SITE 365	22
STORAGE CONTAINE	FD	"Il Eris amount must be in pounds.						22
, rom to be continued.	a. ABOVEGROUND b. UNDERGROUND	TANK	RUM i. FIBER DRUI j. BAG k. BOX l. CYLINDER	n. PLAS	STIC BOTTLE 🗖 r. OTF	IL CAR HER		
STORAGE PRESSURE	∑ a. AMB	BIENT	NT 🔲 c. BELO\	N AMBIE	NT			22
STORAGE TEMPERA	<sup>TURE</sup> ⊠ a. AMB	BIENT	NT C. BELO	N AMBIE	NT d. CRY	OGEN	IC	22
%WT	HAZARDOU	S COMPONENT (For mixture	or waste only)	Regula	ated Substance		CAS#	
1 >90	Lubricating Base C	Dil	227	□ Y	es 🛮 No		11884	22
2 <10	Deasphalted Residu	um	231	□ Y	es 🛮 No 232	NA		23
3 234			235		es □ No 236	-		23
4 238			239		es  \[ \] No			24
5 242			243		es	1		24
If more hazardous componen	its are present at greater than	n 1% by weight if non-carcinogenic, or 0.1%	by weight if carcinogenic	!		uring the	required information.	
ADDITIONAL LOCA	ALLY COLLECTED I	NFORMATION:						24
<b>3</b> /		l A	J.,				The	
M	axımum Dai	ly Amount in pound	us:				Lbs.	

# UNIFIED PROGRAM CONSOLIDATED FORM

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# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

□ ADD □ DELETI	E 🗖 REVISE				200		Page 7 of 15	i aita
<u></u>		I. FACILITY	INEODMAT	ION	<u> </u>	-	97	
BUSINESS NAME (Sa	ume as FACILITY NAM	ME or DBA - Doing Business As)	INFORMAT	ION				
Western Forge & Fl	lange Co.	TE of BBT Boing Business 71s)						
CHEMICAL LOCATIO Hydraulic Ring Roll				201 CHI EPC	EMICAL LOCATION CO		IAL	20
FACILITY ID# 0 7		7 7 1 3 3 6	MAP # (option  Master La	,	203		D # (optional)	20
		II. CHEMICAL IN			<u> </u>	121		
CHEMICAL NAME				205	TRADE SECRE	Т	☐ Yes 🏿 No	20
Chevron Universal C	Gear Oil 80/90 Weig	ht					EPCRA, refer to instructions	
COMMON NAME	gear On 66/96 Weig	III.		207	Regulated Subst		☐ Yes ☐ No	20
Chevron Universal C	Gear Oil 80/90 Weig	ht						
CAS #				209	*If Regulated Sub be in lbs.	stance is	"Yes", all amounts belo	w mu
Mixture FIRE CODE HAZARD	CLASSES: include ph	ysical & health characteristics (See apper	ndix 6 of CUPA packet	)	0 <b>0 III</b> 1001			21
CLASS III-B combi	_	itant liquid	ian o or corri paener,	•				21
HAZARDOUS MATER	II a. PUKI	E ■ b. MIXTURE □ c. WASTE	1 RADIOACTIV	<sup>7E</sup> □ `	Yes ⊠ No	212	CURIES NA	21
PHYSICAL STATE Check one item only)		D M b. LIQUID □ c. GAS	4 LARGEST CC 55	NTAINER				21
FED HAZARD CATEG Check all that apply)	GORIES 🛮 a. FIRE	□ b. REACTIVE □ c. PRESSURE I	RELEASE 🛮 d.	ACUTE H	EALTH 🗖 e. CHF	RONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	217 110	MAXIMUM DAILY AMOUNT 21 165	18 ANNUAL WA	ASTE AMO	DUNT	219	STATE WASTE CODE NA	E 22
JNITS* Check one item only)	■ a. GALLONS	□ b. CUBIC FEET □ c. POUNDS  *If EHS amount must be in pounds.	•			221	DAYS ON SITE 365	22
STORAGE CONTAINE	ER	"Il Eris amount must be in pounds.					l .	22
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	a. ABOVEGROUND b. UNDERGROUND	TANK	M i. FIBER DRU! j. BAG k. BOX l. CYLINDER	m. GLA n. PLAS o. TOTI p. TAN	TIC BOTTLE <b>[</b> r. OT. E BIN	AIL CAR HER		
STORAGE PRESSURE	∑ a. AMB	IENT  b. ABOVE AMBIENT	c. BELOV	V AMBIE	NT			22
STORAGE TEMPERAT	TURE <b>⊠</b> a. AMB	IENT  b. ABOVE AMBIENT	c. BELOV	V AMBIE	NT d. CRY	OGENI	IC	22
%WT	HAZARDOU	S COMPONENT (For mixture or	waste only)	Regula	ted Substance		CAS#	
1 >90	Lubricating Base C	oil .	227	□ Y	es 🛮 No		11-88-4	22
2 <10	Additives		231	□ Y	es 🛮 No	2 NA		23
3 234			235	Пу	es 🗆 No	_		23
4 238			239		es $\square$ No	O		24
5 242			243		es No	4		24
If more hazardous componen	its are present at greater than	n 1% by weight if non-carcinogenic, or 0.1% by	weight if carcinogenic			turing the	required information.	
ADDITIONAL LOCA	ALLY COLLECTED I	NFORMATION:						24
3.7	<b>:</b>	I A					T 1	
M	axımum Daı	ly Amount in pounds	S:				Lbs.	

## UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

								er material per building o	r area
□ ADD □ DELETI	E □ REVISE					200	]	Page8 of15	
			I. FACILITY I	NFORMATI	ION				
BUSINESS NAME (Sa		ME or DBA - Doin	g Business As)						
Western Forge & FI					201 СНЕ	EMICAL LOCATION CO	NIEHDENIT	TAY	20
Storage Area	)N				EPC			IAL	20
FACILITY ID# 0 7	0 0 0	7 7 1	3 3 6	MAP # (option  Master La		203	GRI H1	D # (optional) 7	20
	'	II. C	HEMICAL INF	ORMATIO	N				
CHEMICAL NAME					205	TRADE SECRE	T	☐ Yes ☒ No	20
Chevron Soluble Oi	1 B					If	subject to I	EPCRA, refer to instructions	
COMMON NAME					207	Regulated Subs	tance?	☐ Yes ☐ No	20
Chevron Soluble Oi	1 B				200				
CAS#					209	*If Regulated Sub be in lbs.	stance is	s "Yes", all amounts belo	w mu
Mixture FIRE CODE HAZARD	CLASSES: include ph	ysical & health ch	aracteristics (See appendi	ix 6 of CUPA packet)	<u> </u>				21
CLASS III-B combi	ustible liquid Irr	itant							
HAZARDOUS MATER TYPE (Check one item		E 🛭 b. MIXTURE	c. WASTE	RADIOACTIV	Έ <b>□</b> Υ	Yes <b>⊠</b> No	212	CURIES NA	21
PHYSICAL STATE (Check one item only)	🗖 a. SOLII	D <b>⊠</b> b. LIQUID	□ c. GAS 214	LARGEST CO 55	NTAINER				21
FED HAZARD CATEG (Check all that apply)	GORIES 🛮 a. FIRE	☐ b. REACTIVE	□ c. PRESSURE RI	ELEASE 🛮 d.	ACUTE HI	EALTH 🗖 e. CHI	RONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	30	MAXIMUM DAI 55	LY AMOUNT 218	ANNUAL WA	ASTE AMO	OUNT	219	STATE WASTE CODE NA	E 22
UNITS* (Check one item only)	a. GALLONS	_	_				221	DAYS ON SITE 365	22
STORAGE CONTAINE	ED.	*If EHS amount n	nust be in pounds.					<u> </u>	22
STORAGE COMPANY	a. ABOVEGROUND b. UNDERGROUND c. TANK INSIDE BU	TANK 🗖 f. CAN	C/NONMETALLIC DRUM	☐ j. BAG ☐ k. BOX	n. PLAS o. TOTE	STIC BOTTLE	AIL CAR HER		
	☑ d. STEEL DRUM	☐ ĥ. SILO		☐ 1. CYLINDER	p. TANI	K WAGON			
STORAGE PRESSURE	🛮 🗖 a. AME	BIENT 🗆 b. A	BOVE AMBIENT	☐ c. BELOV	V AMBIE	NT			22
STORAGE TEMPERA	<sup>TURE</sup> ⊠ a. AME	BIENT 🗆 b. A	BOVE AMBIENT	C. BELOV	V AMBIE	NT d. CRY	OGEN	IC	22
%WT	HAZARDOU	S COMPONE	NT (For mixture or w	vaste only)	Regula	ted Substance		CAS#	
<sup>1</sup> >75	Lubricating Base C	)il		227	☐ Ye	es 🛮 No		12-52-5	22
<sup>2</sup> <25	Additives			231	☐ Ye	es No	2 NA		23
3 <2	2-butoxyethanol O	r Ethylene Glyco	ol Monobutyl Ether	235	☐ Ye	es 🛮 No	6	-76-2	23
4 238	Hexylene Glycol			239	☐ Ye	es 🛛 No		41-5	24
5 242				243	☐ Ye	es No	4		24
If more hazardous componen	its are present at greater tha	n 1% by weight if non-c	carcinogenic, or 0.1% by we	eight if carcinogenic,	, attach additio	onal sheets of paper cap	turing the	required information.	
ADDITIONAL LOCA	ALLY COLLECTED II	NFORMATION:							24
M	aximum Dai	ly Amoun	t in nounds:	•				Lbs.	
141	uamum Dal	ij zimoun	· III poulius.	·				17000	

# UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

					page pe	r material per building o	r area
□ ADD □ DELETI	∃ □ REVISE			200	I	Page 9 of 15	
	I. FACILITY INFO	ORMATIO	N				
,	me as FACILITY NAME or DBA - Doing Business As)						
Western Forge & FI	A -			MICAL LOCATION CO		IAL	20
Welding		MAP # (optiona	EPCI	203 Yes X N		D # (optional)	20
FACILITY ID# 0 7	7 0 0 0 7 7 1 3 3 6	Master Layo	,		Н9		
	II. CHEMICAL INFOR	RMATION					
CHEMICAL NAME			205	TRADE SECRET	ī	☐ Yes 🛮 No	20
Carbon Dioxide- Ar	gon Mixture		207			EPCRA, refer to instructions	20
Carbon Dioxide/ Ar	gon			Regulated Substa	ance?	☐ Yes ☐ No	
CAS#			209	*If Regulated Subs	tance is	"Yes", all amounts belo	w mu
Mixture FIRE CODE HAZARD	CLASSES: include physical & health characteristics (See appendix 6 o	of CUPA packet)					21
Nonflammable	Commpressed gas						
HAZARDOUS MATER ΓΥΡΕ (Check one item	DIA PUKE MED MIXIUKE DIC WASIE.	ADIOACTIVE	□ Y	les ⊠ No	212	CURIES NA	21
PHYSICAL STATE Check one item only)	Па. SOLID Пb. LIOUID 🗖 c. GAS — I	ARGEST CONT	ΓAINER			11/21	21
FED HAZARD CATEG Check all that apply)			CUTE HE	EALTH 🗖 e. CHR	ONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	217 MAXIMUM DAILY AMOUNT 218 A 250 380	NNUAL WAS NA	ТЕ АМС	DUNT	219	STATE WASTE CODE NA	E 22
JNITS* Check one item only)	□ a. GALLONS 🛛 b. CUBIC FEET 🔲 c. POUNDS				221	DAYS ON SITE	22
check one nem only,	*If EHS amount must be in pounds.					365	22
STORAGE CONTAINE			_ ~				
	□ b. UNDERGROUND TANK □ f. CAN □ c. TANK INSIDE BUILDING □ g. CARBOY □	j. BAG k. BOX	□ n. PLAS □ o. TOTE		IL CAR IER		
		1. CYLINDER	□ p. TANK	K WAGON			
STORAGE PRESSURE	a. AMBIENT 🛮 b. ABOVE AMBIENT 🗖	c. BELOW	AMBIEI	NT			22
STORAGE TEMPERA	TURE 🛮 a. AMBIENT 🔲 b. ABOVE AMBIENT 🔲	c. BELOW	AMBIEI	NT d. CRYC	OGENI	C	22
%WT	HAZARDOUS COMPONENT (For mixture or waste	e only)	Regula	ted Substance		CAS#	
1 <sub>75</sub> 226	Argon	227	☐ Ye	es <b>⊠</b> No 228		)-37-1	22
2 25 230	Carbon Dioxide	231	☐ Ye	232			23
3 234	Curson Bronde	235	☐ Ye	236		50 7	23
4 238		239		es □ No 240	,		24
5 242		243		es □ No 244			24
If more hazardous componen	ts are present at greater than $1\%$ by weight if non-carcinogenic, or $0.1\%$ by weight	if carcinogenic, att			ıring the	required information.	
ADDITIONAL LOCA	LLY COLLECTED INFORMATION:						24
<b>3</b> /						The	
M	aximum Daily Amount in pounds: _					Lbs.	

# UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

		(One j	page per mater	ial per buildir	ng or area
□ ADD □ DELETE □ REVISE		200	Page _	10 of	15
I. FACILITY INFORM	ATION				
BUSINESS NAME (Same as FACILITY NAME or DBA - Doing Business As)					
Western Forge & Flange Co. CHEMICAL LOCATION	201 Сн	EMICAL LOCATION CON	FIDENTIAL		20
Storage Area	EPC	CRA Yes N	o		
GACH TY ID# LO # / # # # O # O # O # # / # / # 1 # 3 # 3 # 6 # #	optional) r Layout	203	GRID # ( <i>op</i> . H17	tional)	20
II. CHEMICAL INFORMAT	TION				
CHEMICAL NAME	205	TRADE SECRET	1	☐ Yes 🛮 No	20
Chevron Quenching Oil 70 COMMON NAME	207	If su	ibject to EPCRA, re	efer to instructions	
	207	Regulated Substa	nce?	es 🛮 No	20
Chevron Quenching Oil 70 CAS #	209	*If Regulated Subs	ance is "Yes",	, all amounts l	below mu
Mixture		be in lbs.			
FIRE CODE HAZARD CLASSES: include physical & health characteristics (See appendix 6 of CUPA p CLASS III-B combustible liquid Irritant	acket)				21
AZARDOUS MATERIAL	CTIVE	V EN.	212 CURIE	ES	21
PHYSICAL STATE 214 LARGEST		Yes 🛮 No	NA		21
Check one item only)	CONTAINE				
FED HAZARD CATEGORIES  a. FIRE  b. REACTIVE  c. PRESSURE RELEASE  Check all that apply)	₫ d. ACUTE H	EALTH 🗖 e. CHR	ONIC HEALT	H.	21
AVERAGE DAILY 217 MAXIMUM DAILY AMOUNT 218 ANNUAL 55	L WASTE AMO NA	OUNT	219 STATI	E WASTE CO NA	ODE 22
JNITS* Magallons of Curic Feet of Polinds			221 DAYS	ON SITE	22
Check one item only)  *If EHS amount must be in pounds.			3	365	22
STORAGE CONTAINER					22
a. ABOVEGROUND TANK	n. PLA	STIC BOTTLE 🗖 r. OTH	CAR ER		
□ c. TANK INSIDE BUILDING □ g. CARBOY □ k. BOX □ d. STEEL DRUM □ h. SILO □ l. CYLINI	DER p. TAN	E BIN K WAGON			
STORAGE PRESSURE   ☑ a. AMBIENT ☐ b. ABOVE AMBIENT ☐ c. BEI	LOW AMBIE	NT			22
STORAGE TEMPERATURE	LOW AMBIE	NT d. CRYC	GENIC		22
%WT HAZARDOUS COMPONENT (For mixture or waste only)	Regula	ated Substance		CAS#	
1 >95 Lubricating Base Oil	227 D Y	es 🛮 No	64742-55-8	<del></del>	22
	231	232	04742-33-0	<u>,                                      </u>	23
3 234	235	es  \[ \sum \ No \] 236			23
4 238	239	240			24
5 242	243	es No			24
If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcino	genic, attach additi		ring the required	information.	
ADDITIONAL LOCALLY COLLECTED INFORMATION:	,	. r-ruptu			24
					_,
Maximum Daily Amount in pounds:			Lb	)S.	

# UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

		200		er material per building of	r area
□ ADD □ DELETE □ REVISE		200	]	Page11 of15_	
I. FACILITY INFORMATION	N				
BUSINESS NAME (Same as FACILITY NAME or DBA - Doing Business As)					
Western Forge & Flange Co. CHEMICAL LOCATION 20		MICAL LOCATION O	ONFIDENT	ΓIAL	20
Storage Area	EPCR	203		D # (optional)	20
FACILITY ID# 0 7 0 0 0 7 7 1 3 3 6 Master Layou		203	H1		
II. CHEMICAL INFORMATION					
CHEMICAL NAME	205	TRADE SECR	ET	☐ Yes 🏿 No	20
Chevron Black Pearl Grease			If subject to	EPCRA, refer to instructions	
COMMON NAME	207	Regulated Sub	stance?	☐ Yes ☐ No	20
Chevron Black Pearl Grease (Bearing grease) CAS #	209	*If Dogwlated Su	hatanaa i	s "Yes", all amounts belo	
Mixture		be in lbs.	ostance is	s Tes, an amounts belo	w mu
FIRE CODE HAZARD CLASSES: include physical & health characteristics (See appendix 6 of CUPA packet)	<u>l</u> _				21
Irritant					
HAZARDOUS MATERIAL   □ a. PURE □ b. MIXTURE □ c. WASTE   RADIOACTIVE   Check one item only)	□ Y	es 🛮 No	212	CURIES NA	21
PHYSICAL STATE (Check one item only)  a. SOLID  b. LIQUID c. GAS  214 LARGEST CONTA	AINER			•	21
FED HAZARD CATEGORIES ☐ a. FIRE ☐ b. REACTIVE ☐ c. PRESSURE RELEASE ☑ d. ACU (Check all that apply)	UTE HE	ALTH 🗖 e. CH	IRONIC I	HEALTH	21
AVERAGE DAILY 217 MAXIMUM DAILY AMOUNT 218 ANNUAL WAST 5 NA	E AMO	UNT	219	STATE WASTE CODE NA	E 22
UNITS* Check one item only)			221	DAYS ON SITE	22
*If EHS amount must be in pounds.				365	22
STORAGE CONTAINER	_	_			
	m. GLAS n. PLAST o. TOTE	TIC BOTTLE 🗖 r. C	THER		
	p. TANK				
STORAGE PRESSURE 🔲 a. AMBIENT 🔲 b. ABOVE AMBIENT 🗎 c. BELOW A	MBIEN	NT			22
STORAGE TEMPERATURE a. AMBIENT b. ABOVE AMBIENT c. BELOW A	MBIEN	NT d. CR	/OGEN	IC	22
%WT HAZARDOUS COMPONENT (For mixture or waste only) R	Regulat	ed Substance		CAS#	
1 >75 Lubricating Base Oil	☐ Ye	s 🛮 No	28 NA		22
2 <25 Additives 231			32 NA		23
3 234 235			36	5 62 0	23
1 Calcium Hydroxide 4 238			40	5-62-0	24
7 .2 Trimethyldihydroquinoline Polymer 5 242 243			144 NA		24
If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attac			nturing the	required information.	
ADDITIONAL LOCALLY COLLECTED INFORMATION:		Paper ea			24
Maximum Daily Amount in pounds:				Lbs.	

# UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

□ ADD □ DELETI	E □ REVISE				200	I	Page 12 of 15	
		I. FACILITY I	NFORMAT	ION				
BUSINESS NAME (Sa	me as FACILITY NAM	ME or DBA - Doing Business As)						
Western Forge & Fl				201 Сні	EMICAL LOCATION CO.	NEIDENT	TAI	20
Boiler Area	)			EPC			IAL	
FACILITY ID# 0 7	0 0 0	7 7 1 3 3 6	MAP # (option  Master La	,	203	GRII F1′	D # (optional) 7	20
		II. CHEMICAL INF	ORMATIO	N				
CHEMICAL NAME				205	TRADE SECRE	Γ	☐ Yes 🗷 No	20
Boiler Treat 6000					If s	subject to I	EPCRA, refer to instructions	
COMMON NAME				207	Regulated Subst	ance?	☐ Yes ☐ No	20
Boiler Treat 6000 CAS #				209	*If Deculeted Cube		"W-a" all amanusta bala	
Mixture				207	be in lbs.	stance is	s "Yes", all amounts belo	w mu:
TRE CODE HAZARD	CLASSES: include phy	ysical & health characteristics (See append	ix 6 of CUPA packet)	)				21
Corrosives								
HAZARDOUS MATER TYPE (Check one item		E ■ b. MIXTURE □ c. WASTE 211	RADIOACTIV	<sup>/E</sup> □	Yes ⊠ No	212	CURIES NA	21
PHYSICAL STATE Check one item only)	🛮 a. SOLID	b. LIQUID c. GAS	LARGEST CC 300	NTAINER				21
FED HAZARD CATEG Check all that apply)	GORIES a. FIRE	□ b. REACTIVE □ c. PRESSURE R	ELEASE 🛮 d.	ACUTE H	EALTH 🛮 e. CHR	ONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	200	MAXIMUM DAILY AMOUNT 218 300	ANNUAL W.	ASTE AMO	OUNT	219	STATE WASTE CODE NA	E 22
JNITS* Check one item only)	a. GALLONS	b. CUBIC FEET <b>⊠</b> c. POUNDS				221	DAYS ON SITE 365	22
STORAGE CONTAINE	7D	*If EHS amount must be in pounds.						22
TORAGE CONTAINE		TANK	i. FIBER DRUI	M □ m. GLA	SS BOTTLE	IL CAR		
	<ul><li>□ b. UNDERGROUND</li><li>□ c. TANK INSIDE BU</li></ul>	TANK ☐ f. CAN ILDING ☐ g. CARBOY	☐ j. BAG ☐ k. BOX	n. PLAS	STIC BOTTLE <b>[</b> r. OTF E BIN	HER		
	d. STEEL DRUM	h. SILO	■ 1. CYLINDER	p. TAN	K WAGON			
STORAGE PRESSURE	🛮 a. AMB	IENT ☐ b. ABOVE AMBIENT	☐ c. BELOV	W AMBIE	NT			22
STORAGE TEMPERAT	<sup>ΓURE</sup> <b>⊠</b> a. AMB	IENT	C. BELOV	W AMBIE	NT d. CRYC	OGENI	IC	22
%WT	HAZARDOU	S COMPONENT (For mixture or v	vaste only)	Regula	ited Substance		CAS#	
1 NA	Sodium Hydroxide	Or Caustic Soda	227	□ Y	es 🛮 No		)-73-2	22
2 NA 230	Proprietary Ingredi		231	□ Y	es 🛮 No			23
3 234	1 Topficial y Highedi	ents	235		es 🗆 No	-		23
1 238			239		es  \[ \] No			24
5 242			243		es No	1		24
If more hazardous componen	ts are present at greater than	n 1% by weight if non-carcinogenic, or 0.1% by we	eight if carcinogenic			uring the	required information.	
ADDITIONAL LOCA	LLY COLLECTED IN	NFORMATION:						24
_								
M	aximum Dai	ly Amount in pounds:	<b>:</b>				Lbs.	

# UNIFIED PROGRAM CONSOLIDATED FORM

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# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

					page pe	er material per building o	r area
☐ ADD ☐ DELETI	E 🗖 REVISE			200	J	Page 13 of 15	
	I. FACILITY IN	FORMATI	ION				
,	me as FACILITY NAME or DBA - Doing Business As)						
Western Forge & FI CHEMICAL LOCATIO	•		201 сня	EMICAL LOCATION CO	NFIDENT	TAL	20
Storage, Welding		MAD#/antic	EPC	☐ 1 cs 図 r		D#(optional)	20
FACILITY ID# 0 7	7 0 0 0 7 7 1 3 3 6	MAP # (option  Master Lay	,	203		), J18	20
	II. CHEMICAL INFO	ORMATION	N				
CHEMICAL NAME			205	TRADE SECRET	ſ	☐ Yes 🏻 No	20
Acetylene Or Ethyno	e		207	If s	ubject to I	EPCRA, refer to instructions	20
COMMON NAME			207	Regulated Substa	ance?	☐ Yes  ☑ No	20
Acetylene CAS #			209		stance is	s "Yes", all amounts belo	w mu
74-86-2	CV LOGGES : I I I I I I I I I I I I I I I I I I			be in lbs.			
Flammable gas (gas	CLASSES: include physical & health characteristics (See appendix eous)  CLASS 2 unstable gas (reactive)	6 of CUPA packet)					21
HAZARDOUS MATER		RADIOACTIV	E .	V N.	212	CURIES	21
TYPE (Check one item PHYSICAL STATE	only)	LARGEST CO		Yes 🛮 No		NA	21
Check one item only)	a. SOLID b. LIQUID 🗷 c. GAS	210	TAITAIL	`			
FED HAZARD CATEG Check all that apply)	GORIES 🛮 a. FIRE 🗖 b. REACTIVE 🗖 c. PRESSURE RE	LEASE d.	ACUTE H	EALTH 🗖 e. CHR	ONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	217 MAXIMUM DAILY AMOUNT 218 150 210	ANNUAL WA	ASTE AMO	OUNT	219	STATE WASTE CODE NA	E 22
JNITS*	□ a. GALLONS ☑ b. CUBIC FEET □ c. POUNDS	1,11			221	DAYS ON SITE	22
Check one item only)	*If EHS amount must be in pounds.					365	22
STORAGE CONTAINE	ER						22
	■ b. UNDERGROUND TANK ■ f. CAN	🗖 j. BAG	n. PLAS	SS BOTTLE q. RAI	L CAR IER		
	□ c. TANK INSIDE BUILDING □ g. CARBOY □ d. STEEL DRUM □ h. SILO	□ k. BOX ■ 1. CYLINDER	o. TOTI	E BIN K WAGON			
STORAGE PRESSURE	a. AMBIENT 🛮 b. ABOVE AMBIENT	☐ c. BELOV	V AMBIE	NT			22
STORAGE TEMPERA	TURE ☑ a. AMBIENT ☐ b. ABOVE AMBIENT	□c BELOV	V AMRIE	NT D4 CBYC	OGEN'	IC.	22
C/ N/T					T		
%WT	HAZARDOUS COMPONENT (For mixture or wa	aste only)		ted Substance	<del> </del>	CAS#	22
1 100	Acetylene Or Ethyne	231	☐ Y	es No 232	74-8	36-2	23
2		235	☐ Y	es 🗌 No			23
3 234			☐ Y				
4 238		239	☐ Y	es □No 240			24
5 242		243	☐ Ye	es □No 244			24
If more hazardous componen	ts are present at greater than $1\%$ by weight if non-carcinogenic, or $0.1\%$ by weight	ght if carcinogenic,	attach additi	onal sheets of paper captu	ıring the	required information.	_
ADDITIONAL LOCA	ALLY COLLECTED INFORMATION:						24
NЛ	aximum Daily Amount in pounds:					Lbs.	
IVI	azimum Dany Zimbum in pounds:					T/n2.	

## UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

					200		r material per building o	r area
ADD DELETI	E REVISE					I	Page 14 of 15	
		I. FACILITY	INFORMAT	ION				
BUSINESS NAME (Sa Western Forge & Fl		ME or DBA - Doing Business As)						
CHEMICAL LOCATION Forge Area				201 CHE EPC	EMICAL LOCATION CON		IAL	20
FACILITY ID# 0 7	0 0 0	7 7 1 3 3 6	MAP # (option  Master La		203		D # (optional)	20
		II. CHEMICAL INI				02	<u> </u>	
CHEMICAL NAME				205	TRADE SECRET		☐ Yes 🏿 No	20
Waste Oil					If su	ıbject to E	EPCRA, refer to instructions	
COMMON NAME				207	Regulated Substa	nce?	☐ Yes ☐ No	20
Waste Oil CAS #				209		tance is	"Yes", all amounts belo	w mu
Mixture	CI ASSES: include ph	ysical & health characteristics (See appen	div 6 of CUDA pookst	<b>.</b>	be in lbs.			21
CLASS III-B combi	•	itant	dix 0 oi COFA packet)	,				21
HAZARDOUS MATER TYPE (Check one item		E □ b. MIXTURE ☑ c. WASTE 21	1 RADIOACTIV	<sup>7E</sup> □ \	Yes <b>⊠</b> No	212	CURIES NA	21
PHYSICAL STATE (Check one item only)	a. SOLIE	D Ma b. LIQUID □ c. GAS	4 LARGEST CC 1000	NTAINER			11/1	21
FED HAZARD CATEG (Check all that apply)	GORIES 🛮 a. FIRE	□ b. REACTIVE □ c. PRESSURE F		ACUTE H	EALTH 🗖 e. CHR	ONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	400	MAXIMUM DAILY AMOUNT 21 700		ASTE AMO		219	STATE WASTE CODE 221	E 22
UNITS* (Check one item only)	a. GALLONS	□ b. CUBIC FEET □ c. POUNDS	·			221	DAYS ON SITE 365	22
STORAGE CONTAINE	ZD.	*If EHS amount must be in pounds.					303	22
STORAGE CONTAINE	a. ABOVEGROUND		M □ i. FIBER DRUM					
	□ b. UNDERGROUND □ c. TANK INSIDE BU □ d. STEEL DRUM	TANK	☐ j. BAG☐ k. BOX☐ l. CYLINDER	□ n. PLAS □ o. TOTE □ p. TANI		ER		
STORAGE PRESSURE								22
STORAGE TEMPERA	Z a. AIVIE	BIENT Db. ABOVE AMBIENT						22
STORAGE TEMPERA	a. AMB	BIENT Db. ABOVE AMBIENT	☐ c. BELOV	V AMBIE	NT d. CRYC	GENI	С	
%WT	HAZARDOU	S COMPONENT (For mixture or		Regula	ited Substance		CAS#	- 22
1 100	Waste Oil And Wa	ter	227	☐ Y	es 🛮 No	NA		22
2 230			231	☐ Y	es 🗆 No			23
3 234			235	☐ Y	es □ No 236			23
4 238			239	☐ Y	es 🗆 No			24
5 242			243	☐ Ye	es □No 244			24
If more hazardous componen	its are present at greater than	n 1% by weight if non-carcinogenic, or 0.1% by v	weight if carcinogenic	, attach additi	onal sheets of paper captu	ring the 1	required information.	
ADDITIONAL LOCA	ALLY COLLECTED II	NFORMATION:						24
M	aximum Dai	ly Amount in pounds	<b>:</b>				Lbs.	
		, === r						

## UNIFIED PROGRAM CONSOLIDATED FORM

**BUSINESS PLAN 2007** 

# HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION

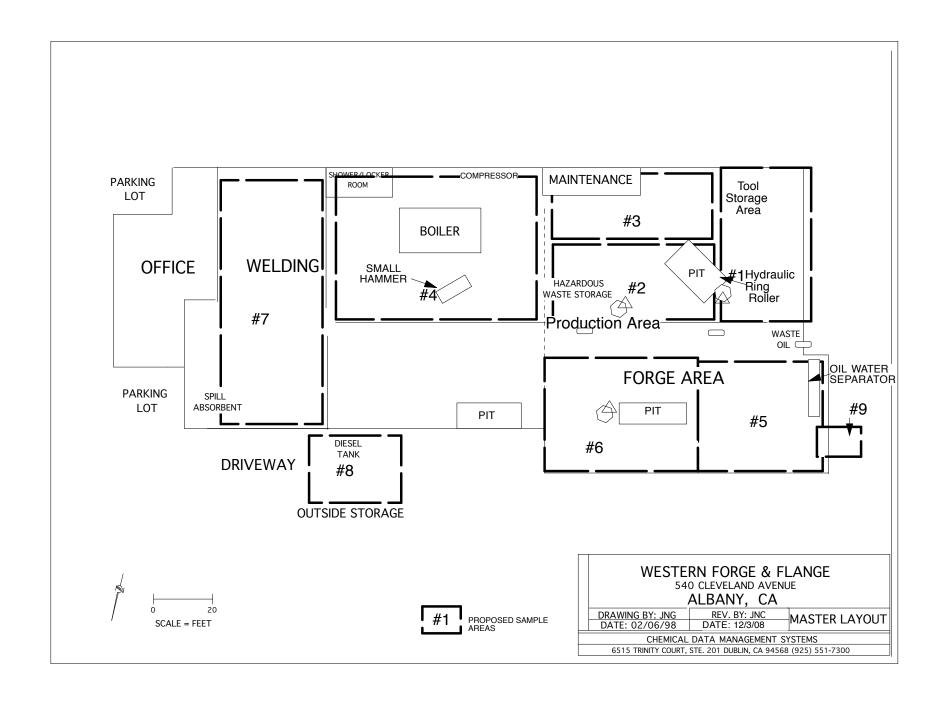
□ ADD □ DELETI	E 🗖 DEVISE					200		Page 15 of 15	r area
_ ADD _ DELET	E LI KEVISE							rage <u>13</u> 01	
DUGDIEGG NAME (G	EACH IEVANA		FACILITY IN	NFORMATI	ION				
BUSINESS NAME (Sa Western Forge & Fl		ME or DBA - Doing	g Business As)						
CHEMICAL LOCATION	N				201 CHE EPC	EMICAL LOCATION CO		TAL	20
Hydraulic Press Rin		7 7 1	2 2 6 1	MAP # (optio	onal)	203		D#(optional)	20
FACILITY ID# 0 7	0 0 0		3 3 6	Master La			I21		
		II. CI	HEMICAL INFO	ORMATIO	N				
CHEMICAL NAME					205	TRADE SECRE	T	☐ Yes 🗷 No	20
Non Rcra Hazardou: COMMON NAME	s Waste (sludge Wit	h Metals)			207	If	subject to l	EPCRA, refer to instructions	20
	Matala wan nana ham				207	Regulated Subs	tance?	☐ Yes ☐ No	20
Waste Sludge with M CAS #	vietais, non fera naza	ardous waste			209	*If Regulated Sub	stance is	s "Yes", all amounts belo	w mu
Mixture						be in lbs.			
FIRE CODE HAZARD  Toxic material	CLASSES: include ph	ysical & health char	racteristics (See appendix	x 6 of CUPA packet)					21
HAZARDOUS MATER	DI A PUKI	E <b>□</b> b. MIXTURE <b>⊠</b>	c. WASTE 211	RADIOACTIV	E DY	Yes <b>⊠</b> No	212	CURIES	21
TYPE (Check one item PHYSICAL STATE	•	D □ b. LIQUID □	c. GAS 214	LARGEST CO				NA	21
(Check one item only) FED HAZARD CATEO (Check all that apply)	GORIES a. FIRE	□ b. REACTIVE	□ c. PRESSURE RE	20,000 ELEASE □ d.	ACUTE HI	EALTH 🛛 e. CH	RONIC I	HEALTH	21
AVERAGE DAILY AMOUNT	6.000	MAXIMUM DAII 13,500	LY AMOUNT 218	ANNUAL WA		DUNT	219	STATE WASTE CODE	E 22
UNITS* (Check one item only)	,	□ b. CUBIC FEET	☑ c. POUNDS	20,0			221	DAYS ON SITE 365	22
		*If EHS amount mu	ust be in pounds.					303	22
STORAGE CONTAINE		TANK DI MACTIC	NAVONIMETA I I IC DRUM	T: EIDED DDIA	, <b>–</b> GLA	CC DOTTLE   D	ATI CAD		
	b. UNDERGROUND	TANK G. PLASTIC TANK f. CAN JILDING g. CARBOY	C/NONMETALLIC DRUM	j. BAG  k. BOX	n. PLAS	STIC BOTTLE 🗖 r. O	THER		
	d. STEEL DRUM	☐ h. SILO		☐ 1. CYLINDER	□ p. TANI	K WAGON			
STORAGE PRESSURE	🛮 a. AME	BIENT 🗖 b. AB	OVE AMBIENT	C. BELOV	V AMBIE	NT			22
STORAGE TEMPERA	<sup>TURE</sup> ⊠ a. AME	BIENT 🗆 b. AB	OVE AMBIENT	□ c. BELOV	V AMBIE	NT d. CRY	OGEN	IC	22
%WT	HAZARDOU	IS COMPONEN	T (For mixture or w	aste only)	Regula	ted Substance		CAS#	
1 99 226	Sandy Grit/ Soil			227	☐ Ye	es 🛮 No	8 NA		22
2 230	Oil			231	☐ Ye	es 🛮 No	2 NA		23
3 234	- 011			235		es 🗆 No	_		23
4 238				239		es $\square$ No	0		24
5 242				243		es $\square$ No	4		24
If more hazardous componen	ts are present at greater tha	n 1% by weight if non-ca	arcinogenic, or 0.1% by we	ight if carcinogenic,			turing the	required information.	
ADDITIONAL LOCA	ALLY COLLECTED II	NFORMATION:							24
3.4	<b>:</b>	31 A · · · 4	· • I					T 1	
M	aximum Dai	ny Amount	in pounds:					Lbs.	

# III. DISPOSITION

Chemical	Disposal/Removal
Canola Frying Shortening	Depleted during operation
Propane	Empty tanks shipped to new facility for
	reuse.
Oxygen	Returned to vendor
Chevron LS Diesel 2	Depleted During Operation
Chevron ISO 460 Hydraulic Oil	Depleted During Operation
Chevron ISO 460 Cylinder Oil	Depleted During Operation
Chevron Universal Gear Oil 80/90 Wt.	Depleted During Operation
Chevron Soluble Oil B	Small Balanced Shipped to Santa Clara
Carbon Dioxide / Argon	Depleted During Operation
Chevron Quenching Oil 70	Depleted During Operation
Chevron Black Pearl Grease	No Longer Used
Boiler Treat 6000	No Longer Used
Acetylene	Returned Cylinders to Vendors
Waste Oil	Sent to TSDF
Waste Sludge w/ Metals	Sent to TSDF

Equipment	Disposal/Removal
Diesel Tank	Returned to Vendor
Oil/Water Separator	Shipped to Texas Facility
1,500 ton Hydraulic Press	Shipped to Texas Facility
3,000 lbs. Hydraulic Hammer	Shipped to Texas Facility
12,000 lbs. Hydraulic Hammer	Shipped to Texas Facility
14,000 lbs. Hydraulic Hammer	Shipped to Texas facility
Hydraulic Ring Roller	Shipped to Texas Facility
Forge Furnaces	Shipped to Texas Facility
Industrial Boiler	To Be Sold

# IV. Proposed Sampling Drawing



# **V. Closure Notification Form**

# ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH A Certified Unified Program Agency

# **FACILITY CLOSURE NOTIFICATION FORM**

Facilit	y Name: Western Forge	e and Flange	•	
	cility Address: 540 Cleveland Ave, Albany, CA 94706			
	Mailing Address: 687 County Road 2201, Cleveland, TX 77327			
	~ 12) · 120		act person/Title: Walter Pierce, President	
No haz Form	ardous or potentially hazardous ite and/or a Closure Plan has (have) be	ms are to be reen submitted a	emoved from the site until the Closure Notification and approved.	
Check	all boxes relating to the facility Limited closure (only a portion of the	y to be closed ne business ope	d: ration) Describe Area:	
(%)		s Closure - Describe square footage used for hazardous materials: The facility previously contained		
43	hazardous materials. It is	approximat	ely 24K sqft. See Closure Plan for add'l details.	
(x) Full Site Closure (buildings to be demolished/redevelopment of property) Describe site, size, no. of				
	buildings and nazardous materials a	reas:		
()	Generated hazardous waste	()	Underground tanks #	
()	Tiered permit unit (e.g., PBR, CE, e	tc.) (x)	Aboveground tanks # 2	
()	Waste treatment system	()	Vehicle or engine maintenance	
(x)	Discharges to sanitary sewer	()	Parts washer	
(x)	HMBP on file	()	Degreaser unit	
()	Dry cleaner	$\mathcal{O}$	CFC or HCFC appliances present	
()	Photo developer One piece of equipment only		Plating shop	
()	Subject to Federal ARP or CAL AR	()	Semiconductor fab	
$\Theta$	BAAQMD permit	P ()	Dispensing of flammable or combustible liquids sandblasting or metals deposition	
(x)	Compressed gas cylinder(s)	(x)	Barrel/drum storage	
$\tilde{(}$	Scrubbers/fume hoods/ducting	(x)	Trenches/containment areas	
(x)	Sumps, hoists	()	Chemical storage cabinets	
()	Radioactive materials		More than one building	
()	Biohazards	· ()	Other:	
A clos	are plan approved by Alameda Co	unty Departm	ent of Environmental Health is required for	
facilitie	es that are to be closed or for any s	storage/use/ha	indling/processing area(s) that are to be closed	
Facility Closure Plans and Notifications are to be submitted no less than 30 days prior to the intended date of closure.				
This document must be signed by the Facility Manager, an Officer of the Company, property owner, or other responsible party (not the consultant or contractor).				
	NOTIFICATION is true and correct.	I recognize the inspection to de	formation contained in this FACILITY CLOSURE are CUPA has full right-of-entry to my complete facility emonstrate compliance with this Application and	
Authoriz Signatur	zed e/Date:			
Printed 1 Title:	Name/			

Facility Closure Form 12-03-03 N:LOP-CUPA-TEAM\CUPA\HMBP Forms

## **HAZMAT STORAGE FACILITY CLOSURE GUIDELINES**

## Closure Plan summary

The information in the Facility Closure Notification and Closure Plan must be consistent with information presented in the Hazardous Materials Inventory Statement (HMIS) on file with the Alameda County Department of Environmental Health (ACDEH). A Closure Plan approved by the ACDEH is required if any Hazardous Materials Facility, or any storage area therein, is to be closed. The facility manager or owner, or the property owner shall submit the plan.

The Closure Plan must be submitted to ACDEH no less than 30 days prior to the termination of the storage of hazardous materials at the storage facility for currently operating facilities. The information in the closure plan shall describe procedures for terminating the storage of hazardous materials in each storage facility in a manner that:

- 1. Demonstrates that the hazardous materials used or stored at the facility will be removed, disposed of, or reused in an appropriate manner; and
- 2. Threat to public health or safety or to the environment from residual hazardous materials in the storage facility is eliminated or minimized to the extent; and
- 3. Eliminates or minimizes the need for further maintenance or monitoring.

Hazardous or potentially hazardous materials including, but not limited to, chemicals, tanks, vats, and process equipment, are NOT to be removed from the site until the closure plan has been submitted and approved, or ACDEH has approved limited removal of equipment for sale or transfer purposes. All equipment shall be identified and inspected prior to removal.

# **Additional Permits and Approvals**

If underground storage tanks (UST) are being closed, a separate UST closure plan must also be submitted and approved, and a permit issued before this work may commence. Local building department permits are likely required for some types of demolition work. Closure of groundwater or vadose wells will also require a permit from the local well-permitting agency.

## Closure Plan elements

- 1. A completed Closure Notification form.
- 2. General site and facility maps/diagrams.
- 3. A site history describing all past and current chemical usage and/or storage of hazardous materials/wastes. A diagram must be provided showing past uses for each room/building/area and listing all chemicals which have at some time been located in each area.
- 4. A history of all soils and/or groundwater sampling which has been performed at the site.
- 5. A summary of all facilities to be closed including (as applicable):
  - a. Identification of fixed equipment and buildings

# VI – Wipe Sampling Protocol

## Equipment

- 1. Appropriate filter media to wipe down surfaces
- 2. A plastic, reusable template (with a 100 cm<sup>2</sup>, or 1 ft<sup>2</sup>) space within it to allow the filter to be wiped across the template
- 3. Distilled water and sterile cloths to clean the area template between samples
- 4. Appropriately sized vials to contain sampling filters or media
- 5. Tweezers (with rounded ends)
- 6. Plastic surgical gloves (or equivalent)
- 7. Carrying case to carry sampling supplies and sample vials
- 8. Blank Wipe Sampling Form
- 9. Blank Chain of Custody/Sample Request Form
- 10. Sample number labels and plastic bags
- Marking pen
- 12. Safety glasses.

## **Procedure**

When performing wipe sampling onsite, identify and document all areas to be sampled. Use building maps or an equally detailed description of the area, including the room number, surface location, and surface texture area. Also, if allowed, photographs are useful for documenting sampling site.

Put on disposable gloves to minimize contamination of the wipe by metal or other materials on the fingers or hands. Be aware that additional personal protective equipment may be required. In some cases rounded-end tweezers may be needed to collect the sample.

While using safety glasses, remove the wipe filter from the vial and, after wetting it with distilled de-ionized water or solvent, place two (wetted) blank wipes in individual vials and label the vials with a marking pen.

Begin sampling in an area with the least likelihood of contamination and proceed to other areas in order of increasing likelihood of greater contamination (this also determines the extent of the contamination).

Place the wipe flat on the measured or templated surface (100 cm<sup>2</sup>) to be sampled. Using consistent speed and even pressure with fingertips move the wipe in an X pattern being sure to wipe along the perimeter of the area sampled.

**NOTE:** Do not scrub the surface with the wipe.

Use a continuous motion so the material is collected on the wipe in one direction.

Fold the filter again and, using rounded-end tweezers, place the filter into the labeled vial.

Mark the vial with field sample number and identify where the sample was taken on form.

Change surgical gloves to minimize cross-contamination of samples or the sampling area. Repeat the procedure until adequate representation of the sampling site is achieved.

# VI - PROTOCOL FOR SOIL BORING INVESTIGATIONS & GROUNDWATER SAMPLING

This protocol presents standard field methods for drilling and sampling soil borings and collecting grab groundwater samples. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

#### **LOCATION OF SAMPLES**

The samples will be located in the general areas as outlined in the January 2008 Closure Plan and as requested by the Alameda County Health Services Agency in their letter dated March 11, 2008. Approximately 4 borings will be advanced to 3 feet below grade (fbg) to collect soil samples. Soil samples will be collected at approximately one and 3 fbg. Samples will be analyzed for the recommended analyses as shown in the "Recommended Minimum Verification Analyses for Underground Tank Leaks" document that follows this protocol. In addition, one boring will be advanced to groundwater in the area of the former diesel UST. A soil sample will also be collected and analyzed from just above the groundwater table.

## **SOIL BORINGS**

### **Objectives**

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Professional Geologist (PG).

# **Soil Boring and Sampling**

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. All soil borings will be drilled under supervision of a C-57 drilling contractor licensed by the State of California. Soil samples will be collected at one and three feet to characterize the subsurface sediments and for chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

## Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4° C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

## Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

## Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected by inserting temporary slotted casing into the boring and collecting the water using a bailer, pump, or tubing affixed with a check valve. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves as required, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

## Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with bentonite-cement grout poured or pumped through a tremie pipe.

# RECOMMENDED MINIMUM VERIFICATION ANALYSES FOR UNDERGROUND TANK LEAKS

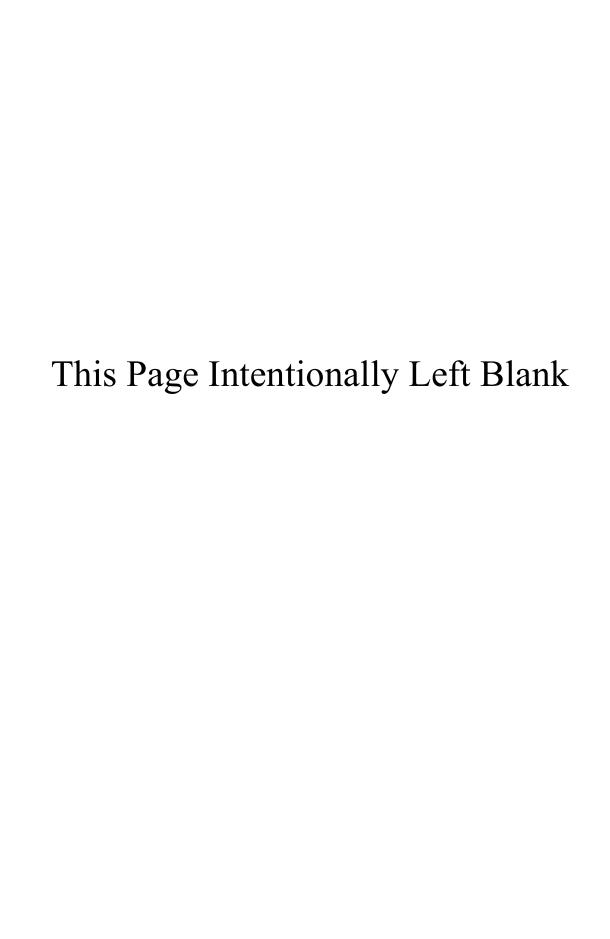
For Use by Unidocs Member Agencies or where approved by your Local Jurisdiction

# TABLE #2 REVISED 1 MARCH 1999

HYDROCARBON LEAK	SOIL ANALYS		WATER ANALYSIS			
	(SW-846 MET)	HOD)	(Water/Waste	Water Method)		
Gasoline	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)		
(Leaded and Unleaded)	BTEX	8260	BTEX	524.2/624 (8260)		
Deaded and Onicaded)	EDB and EDC	8260	EDB and EDC			
				524.2/624 (8260) 524.2/624 (8260) for water		
	TOTAL LEAD	AA	TOTAL LEAD			
	TOTAL LEAD	Optional	TOTAL LEAD	AA		
	Organic Lead	DHS-LUFT	O	DUGLIET		
	Organic Lead	DHS-LUFT	Organic Lead	DHS-LUFT		
Unknown Fuel	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)		
	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)		
	BTEX	8260	BTEX	524.2/624 (8260)		
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)		
	MTBE, TAME,	ETBE, DIPE, and TBA	A by 8260 for soil and	524.2/624 (8260) for water		
	TOTAL LEAD	AA	TOTAL LEAD			
*		Optional				
	Organic Lead	DHS-LUFT	Organic Lead	DHS-LUFT		
Diesel, Jet Fuel, Kerosene,	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)		
and Fuel/Heating Oil	BTEX	8260	BTEX	524.2/624 (8260)		
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)		
				524.2/624 (8260) for water		
Chlorinated Solvents	CL HC	8260	CL HC	524.2/624 (8260)		
	BTEX	8260 or 8021	BTEX	524.2/624 (8260) or		
			8	502.2/602 (8021)		
Nonchlorinated Solvents	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)		
	BTEX	8260 or 8021	BTEX	524.2/624 (8260) or		
		0200 01 0021	2,21	502.2/602 (8021)		
	Marcoll .	200000000000000000000000000000000000000				
Waste, Used, or Unknown Oil	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)		
	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)		
	O&G	9070	O&G	418.1		
	BTEX	8260	BTEX	524.2/624 (8260)		
	CL HC	8260	CL HC	524.2/624 (8260)		
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)		
				524.2/624 (8260) for water		
		Cr, Pb, Ni, Zn) by ICAI				
	PCB*, PCP*, PN	A, CREOSOTE by 827	70 for soil and 524/62:	5 (8270) for water		
			for dibenzofurans (PC)			

#### NOTES:

- 8021 replaces old methods 8020 and 8010
   8260 replaces old method 8240
   Reference: Table B-1 in Appendix B of "Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators" (EPA 510-B-97-001).



# **CLOSURE REPORT**

FOR

# **Western Forge & Flange Co. - Albany**

540 Cleveland Avenue Albany, CA

> June 2009 (Amended)

#### **CLOSURE REPORT**

Prepared for:

Western Forge & Flange Co. - Albany

To be submitted to:

Alameda County Department of Environmental Health

This Closure Report is being submitted under the following conditions:

- Facility Decommissioning to be verified by aboveground sampling
- Subsurface investigations, cleanup, and sampling to be assessed by the Alameda County Department of Environmental Health Site mitigation/Local Oversight Program
- ❖ Facility closure activities meet the requirements set by the Alameda County Department of Environmental Health as described in the approved closure plan

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l	Facilit	y Description							
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	В	Site Use and History							
	С	Building Layout							
II	Closu	Closure Procedures							
	Α	Production Area							
	В	Rafters, Control Panels, and Structural Elements							
	С	Welding/Shipping Area							
Ш	Samp	Sampling and Analysis							
	Α	Sampling Event, October 3, 2008							
	В	Wipe Sampling Event October 3, 2008							
	С	Wipe Sampling Event October 28, 2008							
	D	Sampling Event November 14, 2008							
	Е	Sampling Event November 21, 2008							
	F	Wipe Sampling Event March 18, 2009							
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V	Concl	usion							
VI	Apper	Appendix							
	Α	Hazardous Waste Manifest							
VII	Analyt	ical Reports							
	Α	October 10, 2008 (Sampling Event October 3, 2008)							
	В	October 16, 2008 (Sampling Event October 3, 2008)							
	С	November 4, 2008 (Sampling Event October 28, 2008)							
	D	November 24, 2008 (Sampling Event November 14, 2008)							
	Е	December 2, 2008 (Sampling Event November 21, 2008)							
	F.	March 26, 2009 (Sampling Event March 18, 2009)							
VIII	Refere	ences							

Brown and Caldwell Report. 1984.

Fred Hoffman Geological Evaluation. 2008.

A B

#### I. FACILITY DESCRIPTION

#### A. SITE INFORMATION

Business Name: Western Forge & Flange Co. - Albany

Site Address: 540 Cleveland Ave

City, State, Zip: Albany, CA 94706

County: Alameda

**Mailing Address** 

Company: Western Forge & Flange Co.

Contact Name: Walter Pierce

Title: President

Street: 687 County Rd. 2201

City, State, Zip: Cleveland, TX 77327

Telephone Number: (281) 727-7001

**Property Owner** 

Company: Western Forge & Flange Co.

Contact Name: Walter Pierce

Title: President

Street: 687 County Rd. 2201

City, State, Zip: Cleveland, TX 77327

Contact: Walter Pierce

Telephone: (281) 727-7001

#### B. SITE USE AND HISTORY

#### **Business Activity Description:**

Albany Western Forge & Flange manufactures flanges and forgings made from a variety of different materials including: titanium, aluminum, high nickel alloys, stainless steel, and alloy steels. Raw material stock is cut and then heated in furnaces. The flanges are then forged (hammered or pressed) into shape. The part is machined, if requested by the customer. Approximately 60% of all projects are machined. Flanges are then inspected and shipped to customers.

Date Business Started: 1944

**Facility Description:** 

Square Footage: 25,000 (approximate)

Buildings: 1 Building

Hazardous Materials Area(s): Production Area

### **Containment Area Description:**

All hazardous material are in portable secondary container units.

**Adjacent Properties:** 

North: Albany Steel
South: Grace Bakery
East: Freeway I-80
West: Railroad tracks

#### C. BUILDING LAYOUT

Refer to the facility drawing in Figure 1(Section III).

## D. GEOLOGIC SETTING

The site is underlain by a low permeability clay saturated above a dry dense clay above a poorly cemented sand. The clay contains a thin perched ground water zone between 6 to 12 feet below the ground surface, which rose to within a foot below ground surface during the 2008-2009 wet season.

#### II. CLOSURE PROCEDURES-ABOVEGROUND

Western Forge and Flange relocated its manufacturing operation to their Texas facility during the course of one year (2007-2008). During this process, equipment and chemicals used at this facility were gradually moved to the Texas facility. All chemicals were shipped using hazardous material transporters. The equipment; the forges and hammers, were decommissioned at the Albany site and shipped to the Texas site. All the equipment and chemicals that were relocated to Texas were put into service at that location. Once the Texas facility was operational, the decision was made to close the Albany, California facility.

This section describes the procedures used to achieve closure. Closure activities were only implemented in the areas where hazardous materials were used and/or stored. All equipment and floor surfaces were decontaminated by triple rinsing with hot pressurized water. The wash water was then collected using industrial grade vacuums and transferred into a sealed 6500 gallon Baker tank. The wash water was then profiled and hauled off-site by a licensed waste hauler to an approved hazardous waste treatment site.

#### A. Production Area

Facility closure procedures in this area included the following:

- 1. All hazardous materials and equipment were removed and transported to the Texas facility by licensed hazardous material haulers during the operation of the Albany facility and prior to the facility closure.
- 2. Floors in this area were swept using a ride-on sweeper to eliminate the release of contaminated dust to the air during pressure washing. Sweepings were placed into 55-gallon drums and hauled off-site as Non-RCRA Hazardous Waste by a licensed waste hauler.
- 3. Floors in this area were triple rinsed with hot pressurized water. Wash water was collected using industrial grade vacuums and transferred into a sealed 6500 gallon Baker tank and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site
- 4. All wash water was contained using absorbent socks and temporary berms during the cleaning process to prevent releases
- 5. Loose soil and gravel in all the pits was removed using a backhoe and placed into 40 yd bins and hauled off-site as Non-RCRA Hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site The pits were the result of equipment removal (presses and hammers) anchored below the floor surface.
- 6. The pit housing the hydraulic ring roller was triple rinsed with hot pressurized water. The wash water was collected using industrial grade vacuums and transferred to a 6500 gallon Baker tank and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.
- 7. The oil/water separator tank was triple rinsed with hot pressurized water. The wash water was collected using industrial grade vacuums and transferred to a 6500 gallon Baker tank and hauled off-site as Non-RCRA Hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.
- 8. All piping containing oil previously connected to the oil/water separator has been removed and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.

#### B. Rafters, Control Panels, and Structural Elements

Facility closure procedures in this area included the following:

- 1. All loose residues that accumulated on the rafters and structural elements during the facilities operation were collected and removed using industrial grade vacuums and transferred and sealed into 55-gallon drums. The drums were then hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.
- 2. All rafters and structural elements were scraped with stainless steel spatulas and wire brushes following the removal of the loose residue to further remove any contamination. The dust and debris that resulted from this action was collected using industrial grade vacuums and transferred and sealed into 55-gallon drums. The drums were then hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.
- 3. Following actions 1 and 2 described above, the rafters and structural elements were triple rinsed using hot pressurized water. The wash water was collected using industrial grade vacuums and transferred into a sealed 6500 gallon Baker tank and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.
- 4. All wash water was contained using absorbent socks and temporary berms during the cleaning process to prevent releases.

### C. Welding/Shipping Area

This area of the Facility closure procedures included the following:

- 1. All hazardous materials and equipment was removed and transported to the Texas facility by licensed hazardous material haulers during the operation of the Albany facility and prior to the facility closure.
- 2. Floors in this area were swept using a ride-on sweeper to eliminate the release of contaminated dust to the air during pressure washing. Sweepings were placed into 55-gallon drums and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler.
- 3. Floors in this area were triple rinsed with hot pressurized water in an attempt to remove hazardous materials and residues. Wash water was collected by industrial vacuums and placed in a sealed Baker tank and hauled off-site as Non-RCRA hazardous waste by a licensed waste hauler to an approved hazardous waste treatment site.
- 4. All wash water was contained using absorbent socks and temporary berms during the cleaning process to prevent releases from the cleanup area.

During the facility closure, Chemical Data Management Systems (CDMS) on behalf of Western Forge and Flange Co. conducted several sampling events.

Sample locations were established jointly by a representative of Alameda County Environmental Health Department (ACDEH) and CDMS, and at additional locations selected by CDMS based upon surface staining and the locations of other operations. Four-inch holes were sawn through the 6 – 9 inches of concrete, and the samples were collected using a hydropunch rig. Core tubes were lined with clear liners and were advanced three feet at a time. At water sampling locations, slotted PVC well screens were inserted into the borehole, and water samples were taken with a bailer. Cement grout was tremied through the well screens to seal the holes upon completion. Figure 1.

The additional samples collected by CDMS, which were not approved by the County are identified as sample locations W101, W103, W107, W108, SB103, SB106, SB107, SB108, and SB110. These were collected to provide an additional source of data to evaluate potential contamination at suspect areas.

Parameters for the analysis of all samples were selected under the direction of Sukla De and Susan Hugo, representatives for ACDEH. ACDEH has adopted the San Francisco Regional Water Quality Control Board (SFRWQCB) Environmental Screening Levels (ESL) for soil and groundwater, and the Department of Energy's clean-up standards for all wipe samples.

ESLs for soil and groundwater are included in Table 1A. These ESLs are representative of areas considered a potential source of drinking water. Additional ESLs from the Regional Water Quality Control Board are found in Table 1B. The ESLs in Table 1B were referenced as an additional source for clean-up levels. Clean-up levels for wipe sampling is included in Table 1C.

Table 1A. SFRWQCB ESLs for TPH and Metals for areas considered a potential source of drinking water

	TPH	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
Soil (mg/kg)	2500	7.4	2500	150	750
Groundwater (ug/L)	100 ug/l	.25 ug/l	50 ug/l	8.2 ug/l	2.5 ug/l

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Table 1B. ESLs for Gross Contamination (RWQCB)

	TPH	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
Soil (mg/kg)	2500	2500	2500	2500	2500
Groundwater (ug/L)	1,000	5	50,000	50,000	50,000

Table 1C. DOE Clean-up standards for wipe sampling.

	Cd	Cr	Ni	Pb	Zn	O&G
	(ug/100cm <sup>2</sup> )	(mg/100cm)				
Wipes	0.2	3.3	10	4.3	Unestablished	Unestablished

Three types of sampling occurred during the facility closure; wipe, soil, and groundwater sampling. All sampling was limited to the production area and the dirt area behind the oil/water separator in the rear of the building.

Tables for all the sample results are summarized below in each subsection as they occurred. Values found in bold in the tables below represent values that have exceeded the ESLs or Clean-up Levels for the sampling locations of each event. (Figure 1). Note that the Total Petroleum Hydrocarbon (TPH) analysis found in the following tables include TPH Diesel (TPH (D)), TPH Motor Oil (TPH(MO)), and TPH Carbon Ranges C19 - C36 (TPH (TPH (CR)) respectively.

The following subsections will chronicle the sampling events as they occurred. Refer to Figure 1 for a description of all sampling locations.

PARKING LOT MAINTENANCE TOTAL P -108--<sub>107</sub>-BOILER OFFICE WELDING X 106 X OIL WATER SEPARATOR 8 FORGE AREA X PARKING PIT 102 X 101 DIESEL DRIVEWAY LEGEND OUTSIDE STORAGE WESTERN FORGE & FLANGE ALBANY, CA MASTER LAYOUT

Figure 1. Locations of Subsurface Sampling Events for Soil and Groundwater

#### A. Sampling Event, October 3, 2008

On October 3, 2008 the first round of soil and groundwater sampling occurred in the production area, wielding area and in the area immediately behind the oil/water separator on the outside of the building. This sampling event includes sampling locations initially proposed by the ACDEH. Oversight was provided by ACDEH.

Due to the number of samples required for both soil and groundwater samples, this event was extended to other sampling events as described in the following subsections.

The ESLs from Table 1C were used during the analysis of the results for Sampling Event October 3, 2008. Table 2A includes the results from the soil samples collected during the October 3, 2008 sampling event. Results for this sampling event indicated that sampling locations #5-6"-12", #5-3', and #6B exceeded the ESLs for TPH. Additional subsurface investigations and remediation occurred in these locations and is discussed in detail in Section IV.

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Groundwater sampling results for this sampling event are included in Table 2B. These results exceeded the ESLs for cadmium, chromium, nickel, lead, and zinc, and are pending further evaluation by ACDEH Site Mitigation/Local Oversight Program.

Table 2A. Sampling Event October 3, 2008. Soil Sampling

Sample ID	Depth (ft.)	TPH (mg/kg)	Cd (mg/kg)	Cr (mg/kg)	Ni (mg/kg)	Pb (mg/kg)	Zn (mg/kg)
U	(11.)	(IIIg/kg)	(IIIg/kg)	(IIIg/kg)	(IIIg/kg)	(IIIg/kg)	(IIIg/kg)
#5-6"-12"	6"-12"	6500	ND	51	140	30	73
#5-3'	3' 10"	4900	ND	16	20	81	110
#6A-2.5'-3'	2.5'-3'	ND	ND	54	67	110	140
#6A-3'-4'	3'-4'	ND	ND	14	8.3	7.1	16
#6B	1'10"-2'4"	3700	ND	52	83	7.9	81
1'10"-2'4"							
#6B	3.5"-3'9"	780	ND	15	9.2	56	76
3'-3.5"-3' 9.5"							
#8-1'-1.5"	1'-1.5"	880	ND	18	14	180	130
#8-3'-4"	3'-4"	1500	ND	73	180	140	90
#9-9"-15"	9"-15"	ND	ND	15	14	23	56
#9-3'-3'10"	3'-3'10"	ND	ND	20	24	15	29

<sup>\*</sup>Values in bold print represent those that exceed the ESL as determined by ACDEH

Table 2B. Sampling Event October 3, 2008. Groundwater Sampling

Sample	Depth	TPH	Cd	Cr	Ni	Pb	Zn
ID	(ft.)	(ug/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
1-6	1'-6"	ND	0.019	1.1	5.8	1.1	1.9

<sup>\*</sup>Values in bold print represent those that exceed the ESL as determined by ACDEH

#### B. Wipe Sampling Event October 3, 2008

As part of the closure requirements, the ceiling rafters, electrical boxes and structural elements were decontaminated by the methods described in Section II B. Verification wipe samples were taken in the production area, specifically on the electrical boxes, rafters and structural elements. These samples served to verify the removal of hazardous particulates (materials) on those structures. Results from Wipe Sampling Event October 3, 2008 are included in Table 3.

Results from all samples collected during this sampling event exceeded the clean-up levels for chromium, nickel, and lead which prompted further decontamination efforts of the ceiling and structural elements.

Table 3. Results from Wipe Sampling Event October 3, 2008

Sample	Cd	Cr	Ni	Pb	Zn
ID	(mg/wipe)	(mg/wipe)	(mg/wipe)	(mg/wipe)	(mg/wipe)
#1 Hoist A	ND	0.29	1.6	0.22	0.64
#2 Electrical Box A	ND	0.46	7.6	0.054	1
#3 Ring Roller A	ND	0.39	2.3	0.28	0.48

<sup>\*</sup>Values in bold print represent those that exceed the clean-up level as determined by ACDEH

# C. Wipe Sampling Event October 28, 2008

Following the completion of a second round of decontamination, verification wipe samples were collected on October 28, 2008 <u>without</u> oversight from ACDEH. Results from Sampling Event October 28, 2008 indicate elevated levels of chromium, nickel and lead at those sample locations and are included in Table 4.

The findings from Sampling Event October 28, 2008 prompted further decontamination efforts on the rafters and adjacent structural elements.

Table 4. Results from Wipe Sampling October 28, 2008.

Sample	Cd	Cr	Ni	Pb	Zn
ID	(mg/wipe)	(mg/wipe)	(mg/wipe)	(mg/wipe)	(mg/wipe)
Electrical Box A	0.0052	0.16	2.2	0.052	5.2
Hoist A	ND	0.36	2.3	0.51	1.8
Ring Roller A	ND	0.29	3.0	0.27	0.6

<sup>\*</sup>Values in bold print represent those that exceed the clean-up level as determined by ACDEH

#### D. Sampling Event November 14, 2008

This sampling event is a continuation of the subsurface sampling events that occurred on October 3, 2008. The sample locations identified below are the initial sampling locations proposed by ACDEH. Oversight was provided by ACDEH during this sampling event

Table 5A includes the results from the soil samples collected during Sampling Event November 14, 2008. No soil samples during this sampling event exceeded the ESLs for TPH or metals.

The results from the groundwater samples collected during this sampling event are included in Table 5B. These results show elevated levels of nickel for all samples collected during this sampling event. Elevated levels of lead were found in sample locations W102 and W 103.

Table 5A. Sampling Event November 14, 2008. Soil Sampling

Sample	Depth	TPH (D)	TPH (MO)	TPH (CR)	Cd	Cr	Ni	Pb	Zn
ID	(ft.)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB-101 3'-4'	3'-4'	85	58	150	ND	17	22	12	26
SB 101 7'-8'	7'-8'	ND	ND	ND	ND	14	8.2	5.2	9.4
SB 101 11'-12'	11'-12'	ND	ND	ND	ND	8.8	10	3.7	14
SB 101 15'-16'	15'-16'	ND	ND	ND	ND	16	20	6.2	23Q
SB 102 3'-4'	3'-4'	ND	ND	ND	ND	45	60	15	33
SB 102 7'-8'	7'-8'	13	ND	52	ND	16	7.8	110	70
SB 102 11'-12'	11'-12'	ND	ND	ND	ND	13	9.4	5	13
SB 102 15'-16'	15'-16'	4.9	ND	ND	ND	11	15	7.1	26
SB 103 3'-4'	3'-4'	46	180	210	ND	67	85	11	52
SB 103 7'-8'	7'-8'	23	94	110	ND	18	9.7	150	110
SB 103 11'-12'	11'-12'	ND	ND	ND	ND	18	23	3.7	12
SB 103 15'-16'	15'-16'	ND	ND	ND	ND	18	23	3.9	12
SB 111 0'-1'	0'-1'	68	310	360	ND	37	180	19	Χ
SB 111 3'-4'	3'-4'	8.6	55	60	ND	50	69	6.6	44
SB 111 5'-6'	5'-6'	3.6	ND	ND	ND	26	21	29	62
SB 111 7'-8'	7'-8'	23	70	87	ND	15	12	49	50
SB 111 9'-10'	9'-10'	ND	ND	ND	ND	14	8.8	10	13
SB 112 3'-4'	3'-4'	16	51	63	ND	13	26	13	29
SB 112 7'-8'	7'-8'	58	ND	ND	ND	70	86	7.7	42

<sup>(</sup>D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36

<sup>\*</sup>Values in bold print represent those that exceed the clean-up level as determined by ACDEH

Table 5B. Sampling Event November 14, 2008. Groundwater Sampling

Sample	Depth	TPH	TPH	TPH (CR)	Cd	Cr	Ni	Pb	Zn
ID	(ft.)	(D) (ug/L)	(MO) (ug/L)	(UG/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
W 101		58	ND	ND	ND	ND	0.12	0.0065	0.056
W 102		54	ND	ND	ND	0.014	0.14	0.77	1.2
W 103		74	ND	ND	ND	0.026	0.38	0.061	1.4
W 111		91	ND	ND	ND	ND	0.42	ND	8.4

(D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36

## E. Sampling Event November 21, 2008

This sampling event was conducted without agency oversight to collect the remaining samples from all proposed subsurface sample locations. Tables 6A includes the results from this sampling event for soil.

Table 6A. November 21, 2008. Soil Sampling

Sample	Depth	TPH (D)	TPH (MO)	TPH (CR)	Cd	Cr	Ni	Pb	Zn
ID	(ft.)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
SB 104	1'-2'	2.2	ND	ND	ND	32	35	10	34
SB 104	3'-4'	6.1	ND	ND	ND	16	11	75	120
SB 104	7'-8'	ND	ND	ND	ND	12	8.3	13	17
SB 105	1'-2'	ND	ND	ND	ND	70	82	9	62
SB 105	3'-4'	3.4	ND	ND	ND	17	12	44	62
SB 105	7'-8'	ND	ND	ND	ND	14	10	17	35
SB 106	1'6"-2'6"	ND	ND	ND	ND	53	64	11	46
SB 106	4'-5'	1100	1900	2800	ND	54	79	31	67
SB 106	7'-8'	2.8	ND	ND	ND	12	24	210	200
SB 107	1'-2'	5500	11000	15000	1.3	72	72	260	580
SB 107	4'-5'	230	520	700	ND	14	10	23	49
SB 107	7'-8'	ND	ND	ND	ND	14	11	5.2	12
SB 108	1'-2'	2.6	ND	ND	ND	52	59	12	41
SB 108	4'-5'	49	110	150	ND	25	24	65	100
SB 108	7'-8'	ND	ND	ND	ND	14	10	4.8	9.3
SB 109	1'-2'	7.6	ND	ND	ND	14	12	160	210
SB109	4'-5'	8.4	ND	ND	ND	19	14	120	200
SB 109	7'-8'	ND	ND	ND	ND	13	10	4.8	10
SB 110	1'-2'	1.5	ND	ND	ND	25	19	87	290
SB 110	4'-5'	ND	ND	ND	ND	17	11	10	26
SB 110	7'-8'	ND	ND	ND	ND	13	8.4	5.3	7.8

(D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36 . \*Values in bold print represent those that exceed the clean-up level as determined by ACDEH

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<sup>\*</sup>Values in bold print represent those that exceed the clean-up level as determined by ACDEH

Groundwater results indicated that sample location W105 exceeded the ESLs for nickel, and sample locations W107 and W108 exceeded the ESLs for lead. Groundwater results for this event are included in Table 6B.

Table 6B. Sampling Event November 21, 2008. Groundwater Sampling

Sample	Depth	TPH (D)	TPH (MO)	TPH (CR)	Cd	Cr	Ni	Pb	Zn
ID	(ft.)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
W 105		52	ND	ND	ND	ND	0.052	0.0094	0.93
W 107		62	ND	ND	0.0031	0.022	0.48	0.12	1.3
W 108		58	ND	ND	0.0022	0.025	0.076	5.6	0.97
W 109		ND	ND	ND	ND	ND	ND	ND	0.018

<sup>(</sup>D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36

## F. Wipe Sampling Event March 18, 2009

Following another round of cleanup on the rafters and adjacent structural elements, wipe Sampling Event March 18, 2009 occurred. This event was proposed for verification sampling with oversight provided by ACDEH.

Results from Wipe Sampling Event March 18, 2008 indicated that sample locations S-1 and S-2 exceeded the clean-up levels for chromium, nickel, and lead. Following this finding, another round of clean up was required. Wipe Sampling Event March 18, 2009 followed the last round of clean up. Table 7. includes the results from this sampling event.

Table 7. Results from Wipe Sampling Event March 18, 2009

	Cd	Cr	Ni	Pb	Zn	O&G
	(mg/100	cm²) (mg/100	cm²) (mg/100c	m <sup>2</sup> ) (mg/100c	m <sup>2</sup> ) (mg/100c	m <sup>2</sup> ) (mg/100cm)
S-1	ND	0.3	3.4	0.24	0.68	ND
S-2	2 ND	0.1	0.76	0.033	0.15	ND
S-3	ND	ND	0.011	ND	0.12	ND

<sup>\*</sup>Values in bold print represent those that exceed the clean-up level as determined by ACDEH

Table 8 summarizes the sample locations that were above the ESLs.

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<sup>\*</sup>Values in bold print represent those that exceed the clean-up level as determined by ACDEH

Table 8. Summary of Results Above ESLs

Sample	Depth	O&G	TPH Total	TPH (D)	TPH (MO)	TPH (CR)	Cd	Cr	Ni	Pb	Zn
ID	(ft.)			( )	( - /	(- )					
#5-6"-12"	6"-12"	-	6500 (mg/kg)	-	-	-	-	-	-	-	-
#5-3'	3'10"	-	4900 (mg/kg)	-	-	-	-	-	-	-	-
#6B	1'10-2'4"	-	3700 (mg/kg)	-	-	-	-	-	-	-	-
SB106	4'-5'	-	(mg/kg) -	1100 (mg/kg)	1900 (mg/kg)	2800 (mg/kg)	-	-	-	-	-
SB107	1'-2'	-	-	5500 (mg/kg)	11000 (mg/kg)	15000 (mg/kg)	-	-	-	-	-
1-6	1'-6"	-	-	-	-	-	0.019	1.1	5.8	1.1	1.9
W 105	-	-	-	-	-	-	(mg/L) -	(mg/L) -	(mg/L) 0.052 (mg/L)	(mg/L) 0.0094 (mg/L)	(mg/L) 0.93 (mg/L)
W 107	-	-	-	-	-	-	0.0031	0.022	0.48	0.12	1.3
W 400							(mg/L) 0.0022	(mg/L) 0.025	(mg/L) 0.076	(mg/L) 5.6	(mg/L) 0.97
W 108	-	•	-	-	-	•	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
W 109	-	-	-	-	-	-	-	-	-	-	0.018 (mg/L)
W101	-	-	-	-	-	-	-	-	0.12 (mg/L)	-	-
W102	-	-	-	-	-	-	-	-	0.14	0.77	-
W103	-	-	-	-	-	-	-	-	(mg/L) 0.38	(mg/L) 0.061	
W111									(mg/L) 0.42	(mg/L) -	_
									(mg/L)		
#1 Hoist A	-	-	-	-	-	-	-	0.29 (mg/wipe)	1.6	0.22 (mg/wipe)	-
#2	_	_	_	_	_	_	_	(mg/wipe) 0.46	(mg/wipe) 7.6	(mg/wipe) 0.054	_
#2 Electrical								(mg/wipe)	(mg/wipe)	(mg/wipe)	
Box											
#3 Ring Roller	-	-	-	-	-	-	-	0.39 (mg/wipe)	2.3 (mg/wipe)	0.28 (mg/wipe)	-
Electrical	-	-	-	-	-	-	-	0.16	2.2	0.052	-
Box A											
Hoist A	-	-	-	-	-	-	-	0.36 (mg/wipe)	2.3 (mg/wipe)	0.51 (mg/wipe)	-
Ring Roller A	-	-	-	-	-	-	-	0.29 (mg/wipe)	3.0 (mg/wipe)	0.27 (mg/wipe)	
S-1	-	-	-	-	-	-	-	0.35 (mg/wipe)	3.4 (mg/wipe)	0.24 (mg/wipe)	-
S-2	-	-	-	-	-	-	-	0.1 (mg/wipe)	0.76 (mg/wipe)	0.033 (mg/wipe)	-
S-3	-	-	-	-	-	-	-	-	0.011 (mg/wipe)	-	-
(D)- Diocol (N	MO) - Moto	r Oil (CD)	- Carbon E	ango C10	C26				,gp)		

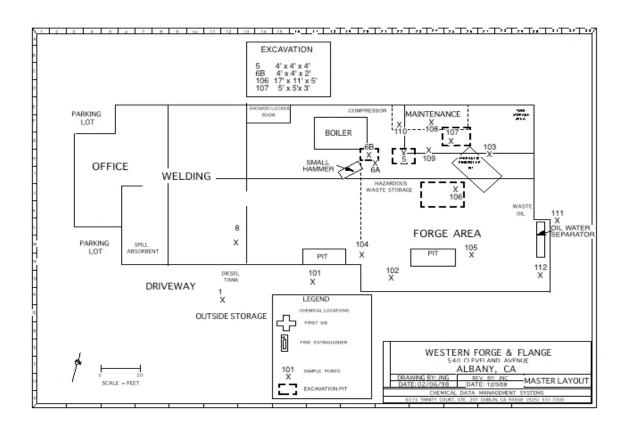
(D)= Diesel, (MO)= Motor Oil, (CR)= Carbon Range C19-C36

#### A. Subsurface Soil Exploration

Chemical analytical reports from the soil sampling events described in Section III indicated elevated levels of hydrocarbons (described as HEM and TPH in the analytical reports) at sample locations 5, 6B, SB106, SB107. Based on these findings, a soil cleanup plan was developed to remediate the proximity of these sample locations. A CDMS Environmental Specialist led all excavations and subsurface investigations. Consulting Geologist Fredric Hoffman provided additional guidance and support throughout the investigations. Refer to Table 9 for the excavation size and depth. Figure 2 identifies the excavation locations.

All contaminated soil that was removed during the excavations was placed into 40-yard bins and hauled offsite as hazardous waste by a licensed waste hauler. Wastewater pumped put from the pit and used absorbents were drummed and hauled offsite as hazardous waste by a licensed hauler.

Figure 2. Excavation Locations



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Table 9. Excavation Location, Size and Depth

Sample Loc	Width (in ft)	Length (in ft)	Depth (in ft)
5	4	4	5
6B	4	4	3
106	17	11	5
107	5	5	3

Clean up began on January 21, 2009. In all three of the initial excavations, at locations 5, 6B, and 107 the dark gray clay began at 18" below the ground surface (bgs) and was present throughout the excavations. The excavations at Sample locations 107 and 6B were terminated at three feet in moist clay. The excavation at sample location 5 was terminated at five feet and water began to accumulate in the bottom of the trench.

After breaking up the concrete for the large excavation at sample location 106, a large steel foundation was uncovered, and the decision was made to limit the excavation to a 5' wide and 11" long trench that encompassed the sample location and extended parallel to the hydraulic ring roller pit.

The excavation was in the dark gray clay and ground water was encountered at 5' bgs. Approaching the 10' to 11' limit of the planned trench, oil began to seep from a point source in the wall of the trench closest to the pit at 2.5 feet below ground surface, and began to accumulate on the water in the bottom of the pit.

In order to discover the source of the oil, additional concrete was removed and a new trench was excavated on the north side of the roller pit. At 2.5 feet below ground surface oil began seeping into the new excavation from the pit side of the trench, but not from the outside face of the trench. Trenching continued around the north and west side of the roller pit following the oil seeps.

On the following morning, January 22, 2009, the oil and water had risen in the trench to 3.5' bgs. Excavation continued along the west side of the roller pit until no more oil was observed seeping into the excavation. Oil and water was then pumped out of the excavations into 2 - 55 gallon drums, and the excavators began to excavate the sediments right up to the edge of the cement sides of the roller pit. A layer of gravel was discovered in the trench against the walls of the pit and was removed by the excavators.

Following these events Fredric Hoffman, Geologist with CDMS evaluated the site and concluded that the oil that was released into the subsurface next to the hydraulic roller press, was held in the gravel backfill around the roller pit and had not appreciably penetrated the surrounding clay. When the excavator nicked a corner of the gravel, the oil was released into the excavation. The excavator then released the remainder of the oil into the trench when the oil-contaminated gravel was removed.

After investigations around the roller pit had ceased, further subsurface investigations were conducted around Pit 1 and Pit 2 in the northwest side of the building and near the rear wall at the west side of the building. Figure 2.

The purpose of this investigation was to determine whether or not these areas had the same issues as the roller pit area and were contaminated with oil. Excavators removed 4'x4' pieces of concrete at each location. During the excavation, soil was removed from each site, until the soil was moist, indicating a short interval between the soil and the water table. After about 15 minutes water slowly began to seep into these excavations. At that point excavation ceased.

At the pits, excavation occurred adjacent to the steel lining of the pits. If oil were present in this area, it would be found between the soil and the steel lining of the pit; as was the case with the roller pit. No indications of contamination were observed during or after excavation at these sites.

At the west side of the building, excavation occurred near the wall where etching was visible and where waste oil was once stored. Water was found immediately below the concrete, at which point the excavations ceased. No indications of contamination were observed during or after excavation at these sites.

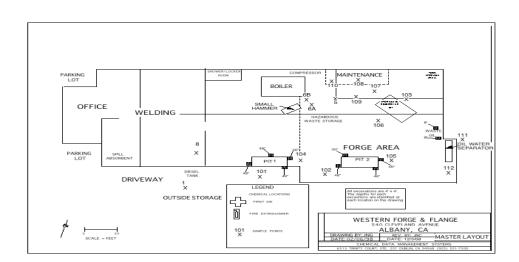


Figure 2. Additional Subsurface Investigations

### B. Subsurface Investigation-Ground Water

In early February 2009, Jim Carro, Fredric Hoffman, and Jamie Hernandez of CDMS evaluated the site. The focus of this site evaluation was the excavation pit near the ring roller. A thin film of oil was observed on the surface of the water in the excavation pit near the ring roller. After discussing possible alternatives to remedy the oil film on the water surface, the CDMS representatives decided to skim the surface of the water to remove the oil followed by the removal of the standing water by a vacuum tanker truck.

The removal of the oil from the water surface involved the use of oil absorbent pads, oil absorbent socks, and oil-only sorbent skimmers. After several rounds of skimming, approximately 3/4 of the water volume was then removed using a vacuum tanker truck. These procedures have significantly reduced the amount of oil on the surface of the water.

Currently, Most of the discharged oil has been removed from the water surface in the pit near the ring roller. A consulting Geologist Fredric Hoffman believes that the remaining oil is contained in the disturbed sediments of the excavation. It is Mr. Hoffman's recommendation to inoculate the excavation near the ring roller pit with a chemical reagent designed to treat organic contaminants in an effort to address this area of concern. Addtional subsurface investigations and remedial activities are pending in this area, identified as sample location SB106, following Mr. Hoffman's recommendation.

#### Conclusion ٧.

Since the relocation of the Western Forge and Flange Co. facility in Albany to Texas, there have been extensive clean up activities in the effort to decommission the facility and achieve closure.

Subsurface sampling occurred during several sampling events. The results from these sampling events indicated elevated levels of metals at various sample locations for groundwater when using the criteria provided by ACDEH. (Table 2B, Table 5B, and Table 6B). When comparing the results of Table 2B, 5B, and Table 6B to the criteria in Table 1C, all groundwater results were found below the ESLs.

Results also indicated elevated levels of oil and grease (shown as TPH in the analytical report) and TPH (residual fuel) for soil samples at sample locations 5, 6B, SB106, and SB107. (Table 2A and Table 6A). Further investigation occurred at those locations, and the contaminated soil was ultimately removed during several soil cleanup excavations. As a result of the soil cleanup excavations, TPH (residual fuel) contamination has been eliminated at soil sampling locations 5, 6B, and SB107.

In addition, oil was discovered during the soil cleanup excavation of soil sample location SB106 and several oil cleanup efforts have been conducted. Currently, this sample location is pending further remedial activities.

Based on the findings of the subsurface samples, ACDEH has made the decision to transfer all subsurface concerns and investigations to ACDEH Site Mitigation/Local Oversight Program (LOP). Western Forge and Flange Co. is currently anticipating a meeting with ACDEH LOP to address all subsurface issues.

In addition, several phases of cleaning occurred on the rafters and structural elements before and in between wipe sampling events to further remove trace contaminants. The results from initial wipe sampling events indicated elevated levels of metals. Similarly, final wipe sampling results also indicated elevated levels of metals when compared to the standards set by ACDEH.

At this time CDMS believes that due diligence has been served in decontaminating the above ground portions of the facility to the fullest extent possible at the Western Forge and Flange Co. facility in Albany, with the guidance of ACDEH. Further work in remediating the subsurface at soil sample location SB106 at the site is pending.

Conclusion

# VI. APPENDICES

# A. HAZARDOUS WASTE MANIFESTS

(Please refer to the hard copy of this report)

#### VII. ANALYTICAL REPORTS

TestAmerica. 2008a. Analytical Report, Job Number 720-16304-1, Job Description: Western Forge. October 10, 2008.

TestAmerica. 2008b. Analytical Report, Job Number 720-16328-1, Job Description: Western Forge, Albany. October 16, 2008.

TestAmerica. 2008c. Analytical Report, Job Number 720-16651-1, Job Description: Western Forge. November 04, 2008.

TestAmerica. 2008d. Analytical Report, Job Number 720-16931-1, Job Description: Western Forge, Albany. November 24, 2008.

TestAmerica. 2008e. Analytical Report, Job Number 720-17028-1, Job Description: Western Forge, Albany. December 02, 2008.

TestAmerica. 2009f. Analytical Report, Job Number 720-18578-1, Job Description: Western Forge, Albany. March 26, 2009.



# **ANALYTICAL REPORT**

Job Number: 720-16304-1

Job Description: Western Forge

For:

Chemical Data Management 6515 Trinity Court Suite 201 Dublin, CA 94568-2665

Attention: Mr. James Carro



Designee for
Melissa Brewer
Project Manager I
melissa.brewer@testamericainc.com
10/10/2008

# Job Narrative 720-J16304-1

#### Comments

No additional comments.

#### Receipt

Did not receive containers to do water analyses for metals or oil and grease.

All other samples were received in good condition within temperature requirements.

#### GC Semi VOA

No analytical or quality issues were noted.

#### Metals

Method(s) 3010A: Sample were preserved with HCL. A deviation from the Standard Operating Procedure (SOP) occurred.

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 42268 were outside control limits. The associated laboratory control standard (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

#### **Organic Prep**

Method(s) 9071B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 42554 were outside control limits. The associated laboratory control standard (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

#### **EXECUTIVE SUMMARY - Detections**

Client: Chemical Data Management Job Number: 720-16304-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method	
720-16304-1	1-6					
Cadmium		0.019	0.0020	mg/L	6010B	
Chromium		1.1	0.0050	mg/L	6010B	
Nickel		5.8	0.0050	mg/L	6010B	
Lead		1.1	0.0050	mg/L	6010B	
Zinc		1.9	0.010	mg/L	6010B	
720-16304-2	#5-6"-12"					
Chromium		51	1.0	mg/Kg	6010B	
Nickel		140	1.0	mg/Kg	6010B	
Lead		30	1.0	mg/Kg	6010B	
Zinc		73	1.0	mg/Kg	6010B	
HEM		6500	100	mg/Kg	9071B	
720-16304-3	<b>#5-3'-3' 10"</b>					
	#0 0 10	16	1.0	ma/l/a	6010B	
Chromium		20	1.0	mg/Kg mg/Kg		
Nickel Lead		81	1.0	mg/Kg	6010B 6010B	
Zinc		110	1.0	mg/Kg	6010B	
HEM		4900	100	mg/Kg	9071B	
720-16304-4	#6A-2.5'-3'					
	#0A-2.5 -3		0.04	".	0040D	
Chromium		54	0.94	mg/Kg	6010B	
Nickel		67 110	0.94 0.94	mg/Kg	6010B	
Lead Zinc		140	0.94	mg/Kg mg/Kg	6010B 6010B	
				0 0		
720-16304-5	#6A-3'-4'					
Chromium		14	1.0	mg/Kg	6010B	
Nickel		8.3	1.0	mg/Kg	6010B	
Lead		7.1	1.0	mg/Kg	6010B	
Zinc		16	1.0	mg/Kg	6010B	
720-16304-6	#6B-1' 10"-2' 4"					
Chromium		52	0.95	mg/Kg	6010B	
Nickel		83	0.95	mg/Kg	6010B	
Lead		7.9	0.95	mg/Kg	6010B	
Zinc		81	0.95	mg/Kg	6010B	
HEM		3700	100	mg/Kg	9071B	
			. 30		- <del></del>	

#### **EXECUTIVE SUMMARY - Detections**

Client: Chemical Data Management Job Number: 720-16304-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16304-7	#6B-3' 3.5"-3' 9.5"				
Chromium		15	1.1	mg/Kg	6010B
Nickel		9.2	1.1	mg/Kg	6010B
Lead		56	1.1	mg/Kg	6010B
Zinc		76	1.1	mg/Kg	6010B
HEM		780	100	mg/Kg	9071B
720-16304-8	#8-1'-1.5'				
Chromium		18	0.98	mg/Kg	6010B
Nickel		14	0.98	mg/Kg	6010B
Lead		180	0.98	mg/Kg	6010B
Zinc		130	0.98	mg/Kg	6010B
HEM		880	100	mg/Kg	9071B
720-16304-9	#8-3'-4'				
Chromium		73	0.99	mg/Kg	6010B
Nickel		180	0.99	mg/Kg	6010B
Lead		140	0.99	mg/Kg	6010B
Zinc		90	0.99	mg/Kg	6010B
HEM		1500	100	mg/Kg	9071B
720-16304-10	#9-9"-15 <b>"</b>				
Chromium		15	0.96	mg/Kg	6010B
Nickel		14	0.96	mg/Kg	6010B
Lead		23	0.96	mg/Kg	6010B
Zinc		56	0.96	mg/Kg	6010B
720-16304-11	#9-3'-3' 10"				
Chromium		20	0.98	mg/Kg	6010B
Nickel		24	0.98	mg/Kg	6010B
Lead		15	0.98	mg/Kg	6010B
Zinc		29	0.98	mg/Kg	6010B
21110		29	0.50	mg/rvg	00100

#### **METHOD SUMMARY**

Client: Chemical Data Management Job Number: 720-16304-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
HEM	TAL SF	SW846 9071B	
HEM	TAL SF		SW846 9071B
Matrix: Water			
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Microextraction of Organic Compounds	TAL SF		SW846 3511
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Total Metals	TAL SF		SW846 3010A

#### Lab References:

TAL SF = TestAmerica San Francisco

#### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### **SAMPLE SUMMARY**

Client: Chemical Data Management Job Number: 720-16304-1

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
720-16304-1	1-6	Water	10/03/2008 1415	10/03/2008 1625
720-16304-2	#5-6"-12"	Solid	10/03/2008 1145	10/03/2008 1625
720-16304-3	#5-3'-3' 10"	Solid	10/03/2008 1145	10/03/2008 1625
720-16304-4	#6A-2.5'-3'	Solid	10/03/2008 1130	10/03/2008 1625
720-16304-5	#6A-3'-4'	Solid	10/03/2008 1130	10/03/2008 1625
720-16304-6	#6B-1' 10"-2' 4"	Solid	10/03/2008 1210	10/03/2008 1625
720-16304-7	#6B-3' 3.5"-3' 9.5"	Solid	10/03/2008 1210	10/03/2008 1625
720-16304-8	#8-1'-1.5'	Solid	10/03/2008 1105	10/03/2008 1625
720-16304-9	#8-3'-4'	Solid	10/03/2008 1105	10/03/2008 1625
720-16304-10	#9-9"-15"	Solid	10/03/2008 1320	10/03/2008 1625
720-16304-11	#9-3'-3' 10"	Solid	10/03/2008 1320	10/03/2008 1625

### **Analytical Data**

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: 1-6

Lab Sample ID: 720-16304-1 Date Sampled: 10/03/2008 1415 10/03/2008 1625 Client Matrix: Water Date Received:

8015B Diesel Range Organics (DRO) (GC)

Method: 8015B Analysis Batch: 720-42366 Instrument ID: Varian DRO2

Preparation: 3511 Prep Batch: 720-42208 Lab File ID: N/A

Dilution: Initial Weight/Volume: 1.0

35 mL 10/10/2008 1337 Final Weight/Volume: Date Analyzed: 2 mL

Date Prepared: 10/08/2008 1124 Injection Volume: Column ID: **PRIMARY** 

Qualifier Analyte Result (ug/L) RL

Diesel Range Organics [C10-C28] ND 50

Surrogate %Rec Acceptance Limits p-Terphenyl 95 50 - 130

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: 1-6

Lab Sample ID: 720-16304-1 Date Sampled: 10/03/2008 1415 Water Client Matrix: Date Received: 10/03/2008 1625

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42350 Instrument ID: Varian ICP Preparation: 3010A Prep Batch: 720-42267 Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 30 mL Date Analyzed: 10/10/2008 1139 Final Weight/Volume: 30 mL Date Prepared: 10/09/2008 0912

Analyte Result (mg/L) Qualifier RLCadmium 0.019 0.0020 Chromium 1.1 0.0050 Nickel 5.8 0.0050 Lead 1.1 0.0050 Zinc 1.9 0.010

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #5-6"-12"

 Lab Sample ID:
 720-16304-2
 Date Sampled:
 10/03/2008 1145

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Preparation:3050BPrep Batch: 720-42261Lab File ID:N/ADilution:1.0Initial Weight/Volume:0.99 gDate Analyzed:10/10/2008 1201Final Weight/Volume:50 mL

Date Analyzed: 10/10/2008 1201 Date Prepared: 10/09/2008 0808

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.51 Chromium 51 1.0 140 Nickel 1.0 30 Lead 1.0 Zinc 73 1.0

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #5-3'-3' 10"

 Lab Sample ID:
 720-16304-3
 Date Sampled:
 10/03/2008 1145

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

 Preparation:
 3050B
 Prep Batch: 720-42261
 Lab File ID:
 N/A

 Dilution:
 1.0
 Initial Weight/Volume:
 1.00 g

 Date Analyzed:
 10/10/2008 1205
 Final Weight/Volume:
 50 mL

Date Prepared: 10/09/2008 0808

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		16		1.0
Nickel		20		1.0
Lead		81		1.0
Zinc		110		1.0

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #6A-2.5'-3'

 Lab Sample ID:
 720-16304-4
 Date Sampled:
 10/03/2008 1130

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

 Preparation:
 3050B
 Prep Batch: 720-42261
 Lab File ID:
 N/A

 Dilution:
 1.0
 Initial Weight/Volume:
 1.06 g

 Date Analyzed:
 10/10/2008 1208
 Final Weight/Volume:
 50 mL

Date Prepared: 10/09/2008 0808

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.47 Chromium 54 0.94 67 0.94 Nickel 110 0.94 Lead Zinc 140 0.94

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #6A-3'-4'

 Lab Sample ID:
 720-16304-5
 Date Sampled:
 10/03/2008 1130

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Preparation:3050BPrep Batch: 720-42261Lab File ID:N/ADilution:1.0Initial Weight/Volume:0.97 gDate Analyzed:10/10/2008 1211Final Weight/Volume:50 mL

Date Prepared: 10/09/2008 0808

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.52 Chromium 14 1.0 8.3 Nickel 1.0 Lead 7.1 1.0 Zinc 16 1.0

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #6B-1' 10"-2' 4"

 Lab Sample ID:
 720-16304-6
 Date Sampled:
 10/03/2008 1210

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

 Preparation:
 3050B
 Prep Batch: 720-42261
 Lab File ID:
 N/A

 Dilution:
 1.0
 Initial Weight/Volume:
 1.05 g

 Date Analyzed:
 10/10/2008 1215
 Final Weight/Volume:
 50 mL

Date Prepared: 10/09/2008 0808

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.48 Chromium 52 0.95 83 0.95 Nickel 7.9 0.95 Lead Zinc 81 0.95

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #6B-3' 3.5"-3' 9.5"

 Lab Sample ID:
 720-16304-7
 Date Sampled:
 10/03/2008 1210

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Preparation:3050BPrep Batch: 720-42261Lab File ID:N/ADilution:1.0Initial Weight/Volume:0.95 gDate Analyzed:10/10/2008 1225Final Weight/Volume:50 mL

Date Prepared: 10/09/2008 0808

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.53 Chromium 15 1.1 9.2 Nickel 1.1 56 Lead 1.1 Zinc 76 1.1

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #8-1'-1.5'

 Lab Sample ID:
 720-16304-8
 Date Sampled:
 10/03/2008 1105

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Preparation:3050BPrep Batch: 720-42261Lab File ID:N/ADilution:1.0Initial Weight/Volume:1.02 gDate Analyzed:10/10/2008 1229Final Weight/Volume:50 mL

Date Prepared: 10/09/2008 0808

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.49
Chromium		18		0.98
Nickel		14		0.98
Lead		180		0.98
Zinc		130		0.98

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #8-3'-4'

 Lab Sample ID:
 720-16304-9
 Date Sampled:
 10/03/2008 1105

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method:6010BAnalysis Batch: 720-42325Instrument ID:Varian ICPPreparation:3050BPrep Batch: 720-42268Lab File ID:N/A

Dilution: 1.0 Initial Weight/Volume: 1.01 g
Date Analyzed: 10/09/2008 1943 Final Weight/Volume: 50 mL

Date Analyzed: 10/09/2008 1943 Date Prepared: 10/09/2008 0918

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.50 Chromium 73 0.99 180 0.99 Nickel 140 0.99 Lead Zinc 90 0.99

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #9-9"-15"

 Lab Sample ID:
 720-16304-10
 Date Sampled:
 10/03/2008 1320

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method:6010BAnalysis Batch: 720-42325Instrument ID:Varian ICPPreparation:3050BPrep Batch: 720-42268Lab File ID:N/A

 Dilution:
 1.0
 Initial Weight/Volume:
 1.04 g

 Date Analyzed:
 10/09/2008 1947
 Final Weight/Volume:
 50 mL

 Date Prepared:
 10/09/2008 0918

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.48 Chromium 15 0.96 14 0.96 Nickel 23 Lead 0.96 Zinc 56 0.96

Client: Chemical Data Management Job Number: 720-16304-1

Client Sample ID: #9-3'-3' 10"

 Lab Sample ID:
 720-16304-11
 Date Sampled:
 10/03/2008 1320

 Client Matrix:
 Solid
 Date Received:
 10/03/2008 1625

6010B Metals (ICP)

Method:6010BAnalysis Batch: 720-42325Instrument ID:Varian ICPPreparation:3050BPrep Batch: 720-42268Lab File ID:N/A

Dilution: 1.0 Initial Weight/Volume: 1.02 g
Date Analyzed: 10/09/2008 1951 Final Weight/Volume: 50 mL

Date Analyzed: 10/09/2008 1951 Date Prepared: 10/09/2008 0918

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.49 Chromium 20 0.98 24 0.98 Nickel 15 0.98 Lead Zinc 29 0.98

General Chemistry						
Client Sample ID:	#5-6"-12"					
Lab Sample ID: Client Matrix:	720-16304-2 Solid		Date Sampled: Date Received:	10/03/2008 1145 10/03/2008 1625		
Analyte	Result	Qual Units	RL	Dil Method		
HEM	6500 Anly Batch: 720-42254 Prep Batch: 720-42211	mg/Kg  Date Analyzed 10/08/2008 1759  Date Prepared: 10/08/2008 1134	100	1.0 9071B DryWt Corrected: N		
Client Sample ID:	#5-3'-3' 10"					
Lab Sample ID: Client Matrix:	720-16304-3 Solid		Date Sampled: Date Received:	10/03/2008 1145 10/03/2008 1625		
Analyte	Result	Qual Units	RL	Dil Method		
HEM	4900 Anly Batch: 720-42254 Prep Batch: 720-42211	mg/Kg  Date Analyzed 10/08/2008 1759  Date Prepared: 10/08/2008 1134	100	1.0 9071B DryWt Corrected: N		
Client Sample ID:	#6A-2.5'-3'					
Lab Sample ID: Client Matrix:	720-16304-4 Solid		Date Sampled: Date Received:	10/03/2008 1130 10/03/2008 1625		
Analyte	Result	Qual Units	RL	Dil Method		
HEM	ND Anly Batch: 720-42254 Prep Batch: 720-42211	mg/Kg  Date Analyzed 10/08/2008 1759  Date Prepared: 10/08/2008 1134	100	1.0 9071B DryWt Corrected: N		
Client Sample ID:	#6A-3'-4'					
Lab Sample ID: Client Matrix:	720-16304-5 Solid		Date Sampled: Date Received:	10/03/2008 1130 10/03/2008 1625		
Analyte	Result	Qual Units	RL	Dil Method		
HEM	ND Anly Batch: 720-42254 Prep Batch: 720-42211	mg/Kg  Date Analyzed 10/08/2008 1759  Date Prepared: 10/08/2008 1134	100	1.0 9071B DryWt Corrected: N		
Client Sample ID:	#6B-1' 10"-2' 4"					
_ab Sample ID: Client Matrix:	720-16304-6 Solid		Date Sampled: Date Received:	10/03/2008 1210 10/03/2008 1625		
Analyte	Result	Qual Units	RL	Dil Method		
HEM	3700 Anly Batch: 720-42254 Prep Batch: 720-42211	mg/Kg  Date Analyzed 10/08/2008 1759  Date Prepared: 10/08/2008 1134	100	1.0 9071B DryWt Corrected: N		

		General Chemistry		
Client Sample ID:	#6B-3' 3.5"-3' 9.5"			
Lab Sample ID:	720-16304-7		Date Sampled:	10/03/2008 1210
Client Matrix:	Solid		Date Received:	10/03/2008 1625
Analyte	Result	Qual Units	RL	Dil Method
HEM	780	mg/Kg	100	1.0 9071B
	Anly Batch: 720-42254	Date Analyzed 10/08/2008 1759		DryWt Corrected: N
	Prep Batch: 720-42211	Date Prepared: 10/08/2008 1134		
Client Sample ID:	#8-1'-1.5'			
Lab Sample ID:	720-16304-8		Date Sampled:	10/03/2008 1105
Client Matrix:	Solid		Date Received:	10/03/2008 1625
Analyte	Result	Qual Units	RL	Dil Method
HEM	880	mg/Kg	100	1.0 9071B
	Anly Batch: 720-42254	Date Analyzed 10/08/2008 1759		DryWt Corrected: N
	Prep Batch: 720-42211	Date Prepared: 10/08/2008 1134		,
Client Sample ID:	#8-3'-4'			
Lab Sample ID:	720-16304-9		Date Sampled:	10/03/2008 1105
Client Matrix:	Solid		Date Received:	10/03/2008 1625
Analyte	Result	Qual Units	RL	Dil Method
HEM	1500	mg/Kg	100	1.0 9071B
	Anly Batch: 720-42254	Date Analyzed 10/08/2008 1759		DryWt Corrected: N
	Prep Batch: 720-42211	Date Prepared: 10/08/2008 1134		
Client Sample ID:	#9-9"-15"			
Lab Sample ID:	720-16304-10		Date Sampled:	10/03/2008 1320
Client Matrix:	Solid		Date Received:	10/03/2008 1625
Analyte	Result	Qual Units	RL	Dil Method
HEM	ND	mg/Kg	100	1.0 9071B
	Anly Batch: 720-42254	Date Analyzed 10/08/2008 1759		DryWt Corrected: N
	Prep Batch: 720-42211	Date Prepared: 10/08/2008 1134		
Client Sample ID:	#9-3'-3' 10"			
Lab Sample ID:	720-16304-11		Date Sampled:	10/03/2008 1320
Client Matrix:	Solid		Date Received:	10/03/2008 1625
Analyte	Result	Qual Units	RL	Dil Method
HEM	ND	mg/Kg	100	1.0 9071B
	Anly Batch: 720-42254	Date Analyzed 10/08/2008 1759		DryWt Corrected: N

# **DATA REPORTING QUALIFIERS**

Client: Chemical Data Management Job Number: 720-16304-1

Lab Section	Qualifier	Description
General Chemistry		
	4	MS, MSD: The analyte present in the original sample is 4 times
	•	greater than the matrix spike concentration; therefore, control
		limits are not applicable.

#### **QC Association Summary**

Report Basis **Client Matrix** Lab Sample ID Client Sample ID Method Prep Batch GC Semi VOA Prep Batch: 720-42208 LCS 720-42208/2-A Lab Control Spike Т Water 3511 Т LCSD 720-42208/3-A Lab Control Spike Duplicate Water 3511 Т MB 720-42208/1-A Method Blank Water 3511 720-16304-1 1-6 Т Water 3511 Analysis Batch:720-42366 Lab Control Spike Т Water 8015B LCS 720-42208/2-A 720-42208 LCSD 720-42208/3-A Lab Control Spike Duplicate Т Water 8015B 720-42208 MB 720-42208/1-A Method Blank Т Water 8015B 720-42208 720-16304-1 1-6 Т Water 8015B 720-42208

Report Basis

T = Total

# **QC Association Summary**

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals	·				·
Prep Batch: 720-42261					
LCS 720-42261/2-A	Lab Control Spike	Т	Solid	3050B	
LCSD 720-42261/3-A	Lab Control Spike Duplicate	Т	Solid	3050B	
LCSSRM 720-42261/25-A	LCS-Standard Reference Material	Т	Solid	3050B	
MB 720-42261/1-A	Method Blank	Т	Solid	3050B	
720-16292-G-7-A MS	Matrix Spike	Т	Solid	3050B	
720-16292-G-7-B MSD	Matrix Spike Duplicate	Т	Solid	3050B	
720-16304-2	#5-6"-12"	Т	Solid	3050B	
720-16304-3	<b>#5-3'-3' 10"</b>	Т	Solid	3050B	
720-16304-4	#6A-2.5'-3'	Т	Solid	3050B	
720-16304-5	#6A-3'-4'	Т	Solid	3050B	
720-16304-6	#6B-1' 10"-2' 4"	Т	Solid	3050B	
720-16304-7	#6B-3' 3.5"-3' 9.5"	Т	Solid	3050B	
720-16304-8	#8-1'-1.5'	T	Solid	3050B	
Prep Batch: 720-42267					
LCS 720-42267/2-A	Lab Control Spike	Т	Water	3010A	
_CSD 720-42267/3-A	Lab Control Spike Duplicate	T	Water	3010A	
MB 720-42267/1-A	Method Blank	T.	Water	3010A	
720-16296-F-8-A MS	Matrix Spike	T	Water	3010A	
720-16296-F-8-B MSD	Matrix Spike Duplicate	T	Water	3010A	
720-16304-1	1-6	T	Water	3010A	
Prep Batch: 720-42268					
LCS 720-42268/2-A	Lab Control Spike	Т	Solid	3050B	
_CSD 720-42268/3-A	Lab Control Spike Duplicate	T	Solid	3050B	
LCSSRM 720-42268/25-A	LCS-Standard Reference Material	T	Solid	3050B	
MB 720-42268/1-A	Method Blank	T T	Solid	3050B	
720-16304-9	#8-3'-4'	T	Solid	3050B	
720-16304-10	#9-9"-15"	T T	Solid	3050B	
720-16304-11	#9-3'-3' 10"	T	Solid	3050B	
720-16370-A-4-E MS	Matrix Spike	T	Solid	3050B	
720-16370-A-4-F MSD	Matrix Spike Duplicate	T	Solid	3050B	
Analysis Batch:720-42325					
LCS 720-42268/2-A	Lab Control Spike	Т	Solid	6010B	720-42268
LCS 720-42268/2-A LCSD 720-42268/3-A	Lab Control Spike  Lab Control Spike Duplicate	T	Solid	6010B	720-42268
_CSSRM 720-42268/25-A	LCS-Standard Reference Material	T T	Solid	6010B	720-42268
MB 720-42268/1-A	Method Blank	T	Solid	6010B	720-42268
720-16304-9	#8-3'-4'	T T	Solid	6010B	720-42268
720-16304-9 720-16304-10	#6-3 - <del>4</del> #9-9"-15"	T	Solid	6010B	720-42268
720-16304-10 720-16304-11	#9-9 - 13 #9-3'-3' 10"	T T	Solid	6010B	720-42268
720-16304-11 720-16370-A-4-E MS		T	Solid		720-42268 720-42268
	Matrix Spike	T		6010B	
720-16370-A-4-F MSD	Matrix Spike Duplicate	ı	Solid	6010B	720-42268

#### **QC Association Summary**

Report **Basis Client Sample ID Client Matrix** Lab Sample ID Method **Prep Batch** Metals Analysis Batch:720-42348 LCS 720-42261/2-A Т 6010B 720-42261 Lab Control Spike Solid Т LCSD 720-42261/3-A Lab Control Spike Duplicate Solid 6010B 720-42261 Т LCSSRM 720-42261/25-A LCS-Standard Reference Material Solid 6010B 720-42261 MB 720-42261/1-A Method Blank Τ Solid 6010B 720-42261 Т Solid 720-16292-G-7-A MS Matrix Spike 6010B 720-42261 720-16292-G-7-B MSD Т Solid Matrix Spike Duplicate 6010B 720-42261 Т 720-16304-2 #5-6"-12" Solid 6010B 720-42261 Т 720-16304-3 #5-3'-3' 10" Solid 6010B 720-42261 Т 720-16304-4 #6A-2.5'-3' Solid 6010B 720-42261 720-16304-5 #6A-3'-4' Т Solid 6010B 720-42261 Т 720-16304-6 #6B-1' 10"-2' 4" Solid 6010B 720-42261 Т Solid 720-16304-7 #6B-3' 3.5"-3' 9.5" 6010B 720-42261 720-16304-8 Т Solid 6010B 720-42261 #8-1'-1.5' Analysis Batch:720-42350 Т LCS 720-42267/2-A Lab Control Spike Water 6010B 720-42267 LCSD 720-42267/3-A Lab Control Spike Duplicate Т Water 6010B 720-42267 MB 720-42267/1-A Method Blank Т Water 6010B 720-42267 720-16296-F-8-A MS Matrix Spike Т Water 6010B 720-42267 720-16296-F-8-B MSD Matrix Spike Duplicate Т Water 6010B 720-42267 Т Water 6010B 720-16304-1 1-6 720-42267

#### Report Basis

T = Total

# **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 720-42211					
LCS 720-42211/2-A	Lab Control Spike	Т	Solid	9071B	
LCSD 720-42211/3-A	Lab Control Spike Duplicate	T	Solid	9071B	
MB 720-42211/1-A	Method Blank	T	Solid	9071B	
720-16304-2	#5-6"-12"	T	Solid	9071B	
720-16304-3	<b>#</b> 5-3'-3' 10"	T	Solid	9071B	
720-16304-4	#6A-2.5'-3'	T	Solid	9071B	
720-16304-5	#6A-3'-4'	T	Solid	9071B	
720-16304-6	#6B-1' 10"-2' 4"	Т	Solid	9071B	
720-16304-6MS	Matrix Spike	Т	Solid	9071B	
720-16304-6MSD	Matrix Spike Duplicate	T	Solid	9071B	
720-16304-7	#6B-3' 3.5"-3' 9.5"	Т	Solid	9071B	
720-16304-8	#8-1'-1.5'	Т	Solid	9071B	
720-16304-9	#8-3'-4'	Т	Solid	9071B	
720-16304-10	#9-9"-15"	Т	Solid	9071B	
720-16304-11	#9-3'-3' 10"	T	Solid	9071B	
Analysis Batch:720-4225	4				
LCS 720-42211/2-A	Lab Control Spike	Т	Solid	9071B	720-42211
LCSD 720-42211/3-A	Lab Control Spike Duplicate	Т	Solid	9071B	720-42211
MB 720-42211/1-A	Method Blank	Т	Solid	9071B	720-42211
720-16304-2	#5-6"-12"	Т	Solid	9071B	720-42211
720-16304-3	<b>#</b> 5-3'-3' 10"	Т	Solid	9071B	720-42211
720-16304-4	#6A-2.5'-3'	Т	Solid	9071B	720-42211
720-16304-5	#6A-3'-4'	Т	Solid	9071B	720-42211
720-16304-6	#6B-1' 10"-2' 4"	Т	Solid	9071B	720-42211
720-16304-6MS	Matrix Spike	Т	Solid	9071B	720-42211
720-16304-6MSD	Matrix Spike Duplicate	Т	Solid	9071B	720-42211
720-16304-7	#6B-3' 3.5"-3' 9.5"	Т	Solid	9071B	720-42211
720-16304-8	#8-1'-1.5'	Т	Solid	9071B	720-42211
720-16304-9	#8-3'-4'	Т	Solid	9071B	720-42211
720-16304-10	#9-9"-15"	Т	Solid	9071B	720-42211
720-16304-11	#9-3'-3' 10"	Ť	Solid	9071B	720-42211

#### Report Basis

T = Total

35 mL

50 - 130

Client: Chemical Data Management Job Number: 720-16304-1

Method Blank - Batch: 720-42208 Method: 8015B
Preparation: 3511

r reputation. 30

Lab Sample ID: MB 720-42208/1-A Analysis Batch: 720-42366 Instrument ID: Varian DRO2 Client Matrix: Water Prep Batch: 720-42208 Lab File ID: N/A

Client Matrix: Water Prep Batch: 720-42208 Lab File ID: N/A
Dilution: 1.0 Units: ug/L Initial Weight/Volume:

Date Analyzed: 10/10/2008 1311 Final Weight/Volume: 2 mL

Date Prepared: 10/08/2008 1124 Injection Volume: Column ID: PRIMARY

Analyte Result Qual RL

Diesel Range Organics [C10-C28] ND 50

Surrogate % Rec Acceptance Limits

p-Terphenyl 97 50 - 130

Lab Control Spike/ Method: 8015B
Lab Control Spike Duplicate Recovery Report - Batch: 720-42208 Preparation: 3511

LCS Lab Sample ID: LCS 720-42208/2-A Analysis Batch: 720-42366 Instrument ID: Varian DRO2

Client Matrix: Water Prep Batch: 720-42208 Lab File ID: N/A

Dilution: 1.0 Units: ug/L Initial Weight/Volume: 35 mL

Date Analyzed: 10/10/2008 1220 Final Weight/Volume: 2 mL

Date Prepared: 10/08/2008 1124 Injection Volume:

Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-42208/3-A Analysis Batch: 720-42366 Instrument ID: Varian DRO2

Client Matrix: Water Prep Batch: 720-42208 Lab File ID: N/A

Dilution: 1.0 Units: ug/L Initial Weight/Volume: 35 mL Date Analyzed: 10/10/2008 1245 Final Weight/Volume: 2 mL

Date Prepared: 10/08/2008 1124 Injection Volume:

Column ID: PRIMARY

% Rec.

Analyte LCS LCSD Limit RPD RPD Limit LCS Qual LCSD Qual

 Diesel Range Organics [C10-C28]
 85
 91
 40 - 130
 7
 25

 Surrogate
 LCS % Rec
 LCSD % Rec
 Acceptance Limits

103

97

p-Terphenyl

Client: Chemical Data Management Job Number: 720-16304-1

Method Blank - Batch: 720-42261

Method: 6010B Preparation: 3050B

Lab Sample ID: MB 720-42261/1-A Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-42261 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 0.96 g

Date Analyzed: 10/10/2008 1044 Final Weight/Volume: 50 mL

Date Prepared: 10/09/2008 0808

Analyte	Result	Qual	RL
Cadmium	ND		0.52
Chromium	ND		1.0
Nickel	ND		1.0
Lead	ND		1.0
Zinc	ND		1.0

LCS-Standard Reference Material - Batch: 720-42261 Method: 6010B Preparation: 3050B

Lab Sample ID: LCSSRM 720-42261/25-A Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-42261 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 0.

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 0.97 g
Date Analyzed: 10/10/2008 1232 Final Weight/Volume: 50 mL

Date Prepared: 10/09/2008 0808

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cadmium	43.5	41.4	95	67 - 118	
Chromium	254	241	95	67 - 121	
Nickel	99.8	95.2	95	65 - 117	
Lead	45.5	42.1	93	62 - 113	
Zinc	45.4	41.5	92	62 - 110	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management Job Number: 720-16304-1

Lab Control Spike/ Method: 6010B
Lab Control Spike Duplicate Recovery Report - Batch: 720-42261 Preparation: 3050B

LCS Lab Sample ID: LCS 720-42261/2-A Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-42261 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 1.02 g

 Date Analyzed:
 10/10/2008 1048
 Final Weight/Volume:
 50 mL

 Date Prepared:
 10/09/2008 0808

LCSD Lab Sample ID: LCSD 720-42261/3-A Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-42261 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 1.04 g
Date Analyzed: 10/10/2008 1100 Final Weight/Volume: 50 mL

% Rec. **RPD** Analyte LCS LCSD Limit RPD Limit LCS Qual LCSD Qual Cadmium 97 80 - 120 20 99 4 Chromium 99 94 80 - 120 7 20 Nickel 100 98 80 - 120 4 20 Lead 99 98 80 - 120 4 20 Zinc 99 97 80 - 120 4 20

Date Prepared:

10/09/2008 0808

Client: Chemical Data Management Job Number: 720-16304-1

Matrix Spike/ Method: 6010B

Matrix Spike Duplicate Recovery Report - Batch: 720-42261 Preparation: 3050B

MS Lab Sample ID: 720-16292-G-7-A MS Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-42261 Lab File ID: N/A

Date Prepared:

10/09/2008 0808

Dilution: 1.0 Initial Weight/Volume: 1.00 g
Date Analyzed: 10/10/2008 1104 Final Weight/Volume: 50 mL

MSD Lab Sample ID: 720-16292-G-7-B MSD Analysis Batch: 720-42348 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-42261 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 1.04 g

Date Analyzed: 10/10/2008 1107 Final Weight/Volume: 50 mL

Date Prepared: 10/09/2008 0808

% Rec. RPD Analyte MS MSD Limit **RPD Limit** MS Qual MSD Qual 75 - 125 Cadmium 86 20 90 8 Chromium 88 85 75 - 125 7 20 Nickel 87 75 - 125 9 20 91 Lead 89 85 75 - 125 8 20 Zinc 94 85 75 - 125 11 20

Client: Chemical Data Management Job Number: 720-16304-1

Method Blank - Batch: 720-42267 Method: 6010B Preparation: 3010A

Lab Sample ID: MB 720-42267/1-A Analysis Batch: 720-42350 Instrument ID: Varian ICP

Client Matrix: Prep Batch: 720-42267 Lab File ID: N/A Water

Dilution: 1.0 Units: mg/L Initial Weight/Volume: 50 mL 10/10/2008 1102 Date Analyzed: Final Weight/Volume: 50 mL Date Prepared: 10/09/2008 0912

Analyte Result Qual RL 0.0020 Cadmium ND Chromium ND 0.0050 Nickel ND 0.0050 Lead ND 0.0050 Zinc ND 0.010

Lab Control Spike/ Method: 6010B Lab Control Spike Duplicate Recovery Report - Batch: 720-42267 Preparation: 3010A

Analysis Batch: 720-42350 LCS Lab Sample ID: LCS 720-42267/2-A Instrument ID: Varian ICP

Client Matrix: Water Prep Batch: 720-42267 Lab File ID: N/A

Dilution: 1.0 Units: mg/L Initial Weight/Volume: 50 mL 10/10/2008 1105 Date Analyzed: Final Weight/Volume: 50 mL

10/09/2008 0912 Date Prepared:

LCSD Lab Sample ID: LCSD 720-42267/3-A Analysis Batch: 720-42350 Instrument ID: Varian ICP

Client Matrix: Water Prep Batch: 720-42267 Lab File ID: N/A

Dilution: Units: mg/L Initial Weight/Volume: 50 mL 10/10/2008 1109 Date Analyzed: 50 mL

Final Weight/Volume: 10/09/2008 0912 Date Prepared:

% Rec. Analyte LCS LCSD Limit **RPD** RPD Limit LCS Qual LCSD Qual Cadmium 99 101 80 - 120 2 20 Chromium 100 103 80 - 120 2 20 80 - 120 Nickel 99 101 3 20 3 20 Lead 100 102 80 - 120 Zinc 98 100 80 - 120 3 20

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management Job Number: 720-16304-1

Matrix Spike/ Method: 6010B

Matrix Spike Duplicate Recovery Report - Batch: 720-42267 Preparation: 3010A

MS Lab Sample ID: 720-16296-F-8-A MS Analysis Batch: 720-42350 Instrument ID: Varian ICP Client Matrix: Water Prep Batch: 720-42267 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 50 mL

 Date Analyzed:
 10/10/2008 1113
 Final Weight/Volume:
 50 mL

 Date Prepared:
 10/09/2008 0912

MSD Lab Sample ID: 720-16296-F-8-B MSD Analysis Batch: 720-42350 Instrument ID: Varian ICP

Client Matrix: Water Prep Batch: 720-42267 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 50 mL

Date Analyzed: 10/10/2008 1117 Final Weight/Volume: 50 mL Date Prepared: 10/09/2008 0912

% Rec. RPD Analyte MS MSD Limit **RPD Limit** MS Qual MSD Qual 75 - 125 Cadmium 1 25 93 93 Chromium 97 99 75 - 125 2 25 Nickel 91 93 75 - 125 2 25 Lead 91 92 75 - 125 1 25 Zinc 89 91 75 - 125 2 25

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management Job Number: 720-16304-1

Method Blank - Batch: 720-42268 Method: 6010B

Preparation: 3050B

Lab Sample ID: MB 720-42268/1-A Analysis Batch: 720-42325 Instrument ID: Varian ICP

Client Matrix: Solid Prep Batch: 720-42268 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 0.96 g
Date Analyzed: 10/09/2008 1828 Final Weight/Volume: 50 mL

Date Analyzed: 10/09/2008 1828 Final Weight/Volume: 50 mL

Date Prepared: 10/09/2008 0918

Analyte	Result	Qual	RL
Cadmium	ND		0.52
Chromium	ND		1.0
Nickel	ND		1.0
Lead	ND		1.0
Zinc	ND		1.0

LCS-Standard Reference Material - Batch: 720-42268 Method: 6010B Preparation: 3050B

44.0

Lab Sample ID: LCSSRM 720-42268/25-A Analysis Batch: 720-42325 Instrument ID: Varian ICP

Client Matrix: Solid Prep Batch: 720-42268 Lab File ID: N/A

 Dilution:
 1.0
 Units:
 mg/Kg
 Initial Weight/Volume:
 1.00
 g

 Date Analyzed:
 10/09/2008
 2018
 Final Weight/Volume:
 50
 mL

 Date Prepared:
 10/09/2008
 0918
 50
 mL

Analyte Spike Amount Result % Rec. Limit Qual Cadmium 42.2 40.0 67 - 118 95 Chromium 246 236 67 - 121 96 Nickel 96.8 90.6 94 65 - 117 Lead 44.1 40.4 92 62 - 113

38.8

88

62 - 110

Calculations are performed before rounding to avoid round-off errors in calculated results.

Zinc

Client: Chemical Data Management Job Number: 720-16304-1

Lab Control Spike/ Method: 6010B
Lab Control Spike Duplicate Recovery Report - Batch: 720-42268 Preparation: 3050B

LCS Lab Sample ID: LCS 720-42268/2-A Analysis Batch: 720-42325 Instrument ID: Varian ICP

Client Matrix: Solid Prep Batch: 720-42268 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 0.96 g

 Date Analyzed:
 10/09/2008 1831
 Final Weight/Volume:
 50 mL

 Date Prepared:
 10/09/2008 0918

LCSD Lab Sample ID: LCSD 720-42268/3-A Analysis Batch: 720-42325 Instrument ID: Varian ICP

Client Matrix: Solid Prep Batch: 720-42268 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 1.02 g

Date Analyzed: 10/09/2008 1836 Final Weight/Volume: 50 mL Date Prepared: 10/09/2008 0918

% Rec. **RPD** Analyte LCS LCSD Limit RPD Limit LCS Qual LCSD Qual Cadmium 99 80 - 120 7 20 100 Chromium 102 100 80 - 120 7 20 Nickel 100 99 80 - 120 7 20 Lead 100 98 80 - 120 7 20 Zinc 99 98 80 - 120 8 20

Client: Chemical Data Management Job Number: 720-16304-1

Matrix Spike/ Method: 6010B

Matrix Spike Duplicate Recovery Report - Batch: 720-42268 Preparation: 3050B

MS Lab Sample ID: 720-16370-A-4-E MS Analysis Batch: 720-42325 Instrument ID: Varian ICP Client Matrix: Solid Prep Batch: 720-42268 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 1.00 g

 Date Analyzed:
 10/09/2008
 1840
 Final Weight/Volume:
 50 mL

 Date Prepared:
 10/09/2008
 0918
 50 mL

MSD Lab Sample ID: 720-16370-A-4-F MSD Analysis Batch: 720-42325 Instrument ID: Varian ICP

Client Matrix: Solid Prep Batch: 720-42268 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 0.98

 Dilution:
 1.0
 Initial Weight/Volume:
 0.98 g

 Date Analyzed:
 10/09/2008 1845
 Final Weight/Volume:
 50 mL

 Date Prepared:
 10/09/2008 0918

% Rec. RPD Analyte MS MSD Limit **RPD Limit** MS Qual MSD Qual 75 - 125 Cadmium 85 20 84 3 Chromium 80 81 75 - 125 2 20 Nickel 82 83 75 - 125 2 20 Lead 83 83 75 - 125 2 20 Zinc 81 79 75 - 125 0 20

10.01 g

Client: Chemical Data Management Job Number: 720-16304-1

Method Blank - Batch: 720-42211 Method: 9071B

Preparation: 9071B

Lab Sample ID: MB 720-42211/1-A Analysis Batch: 720-42254 Instrument ID: No Equipment Assigned

Client Matrix: Solid Prep Batch: 720-42211 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume:

Date Analyzed: 10/08/2008 1759 Final Weight/Volume: 10.01 mL

Date Prepared: 10/08/2008 1134

Analyte Result Qual RL

HEM ND 100

Lab Control Spike/ Method: 9071B
Lab Control Spike Duplicate Recovery Report - Batch: 720-42211 Preparation: 9071B

LCS Lab Sample ID: LCS 720-42211/2-A Analysis Batch: 720-42254 Instrument ID: No Equipment Assigned

Client Matrix: Solid Prep Batch: 720-42211 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 10.01 g

Date Analyzed: 10/08/2008 1759 Final Weight/Volume: 10.01 mL

Date Prepared: 10/08/2008 1134

LCSD Lab Sample ID: LCSD 720-42211/3-A Analysis Batch: 720-42254 Instrument ID: No Equipment Assigned

Client Matrix: Solid Prep Batch: 720-42211 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 10.01 g

Date Analyzed: 10/08/2008 1759 Final Weight/Volume: 10.01 mL Date Prepared: 10/08/2008 1134

% Rec.

Analyte LCS LCSD Limit RPD RPD Limit LCS Qual LCSD Qual

HEM 86 84 79 - 120 3 18

Client: Chemical Data Management Job Number: 720-16304-1

Matrix Spike/ Method: 9071B Matrix Spike Duplicate Recovery Report - Batch: 720-42211 Preparation: 9071B

MS Lab Sample ID: 720-16304-6 Analysis Batch: 720-42254 Instrument ID: No Equipment Assigned

Client Matrix: Solid Prep Batch: 720-42211 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume:

10.07 g 10/08/2008 1759 Final Weight/Volume: Date Analyzed: 10.07 mL

Date Prepared: 10/08/2008 1134

MSD Lab Sample ID: 720-16304-6 Instrument ID: No Equipment Assigned Analysis Batch: 720-42254

Client Matrix: Solid Prep Batch: 720-42211 Lab File ID:

Dilution: 1.0 Initial Weight/Volume: 10.03 g

Date Analyzed: 10/08/2008 1759 Final Weight/Volume: 10.03 mL 10/08/2008 1134 Date Prepared:

% Rec. Analyte MS MSD Limit RPD **RPD Limit** MS Qual MSD Qual HEM 79 - 120 24 -165 48 20 4

# Login Sample Receipt Check List

Client: Chemical Data Management Job Number: 720-16304-1

Login Number: 16304 List Source: TestAmerica San Francisco

Creator: Mullen, Joan List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	See Narrative
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

B. October 16, 2008 (Sampling Event October 3, 2008)



# **ANALYTICAL REPORT**

Job Number: 720-16328-1

Job Description: Western Forge, Albany

For:

Chemical Data Management 6515 Trinity Court Suite 201 Dublin, CA 94568-2665

Attention: Mr. James Carro

milissa Bruver

Approved for release. Melissa Brewer Project Manager I 10/16/2008 11:20 AM

Melissa Brewer Project Manager I melissa.brewer@testamericainc.com 10/16/2008

# Job Narrative 720-J16328-1

#### Comments

No additional comments.

#### Receipt

Insufficient sample volume was provided for all of the samples. Received one wipe per sample for both Metals and Oil & Grease analyses. Per Jim Carro split wipe sample in half.

Total Oil and Grease needed per phone call to Jim.

All three samples were received at the laboratory outside the required temperature criteria for Oil & Grease.

All other samples were received in good condition within temperature requirements.

#### Metals

Method 3050B: A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: Used only half of the wipe sample instead of a full wipe. Batch 42445

No other analytical or quality issues were noted.

#### **Organic Prep**

No analytical or quality issues were noted.

## **EXECUTIVE SUMMARY - Detections**

Client: Chemical Data Management Job Number: 720-16328-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16328-1	#1, HOIST				
Chromium Nickel Lead Zinc		0.29 1.6 0.22 0.64	0.0050 0.0050 0.0050 0.0050	mg/wipe mg/wipe mg/wipe mg/wipe	6010B 6010B 6010B 6010B
720-16328-2	#2, ELECTRIC BOX				
Chromium Nickel Lead Zinc		0.46 7.6 0.054 1.0	0.0050 0.050 0.0050 0.0050	mg/wipe mg/wipe mg/wipe mg/wipe	6010B 6010B 6010B 6010B
720-16328-3	#3, RING ROLLER				
Chromium Nickel Lead Zinc		0.39 2.3 0.28 0.48	0.0050 0.0050 0.0050 0.0050	mg/wipe mg/wipe mg/wipe mg/wipe	6010B 6010B 6010B 6010B

#### **METHOD SUMMARY**

Client: Chemical Data Management Job Number: 720-16328-1

Description	Lab Location	Method	Preparation Method
Matrix: Wipe			
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
HEM	TAL SF	SW846 9071B	
HEM	TAL SF		SW846 9071B

#### Lab References:

TAL SF = TestAmerica San Francisco

#### **Method References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### **SAMPLE SUMMARY**

Client: Chemical Data Management Job Number: 720-16328-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-16328-1	#1, HOIST	Wipe	10/03/2008 1015	10/06/2008 1424
720-16328-2	#2, ELECTRIC BOX	Wipe	10/03/2008 1017	10/06/2008 1424
720-16328-3	#3, RING ROLLER	Wipe	10/03/2008 1020	10/06/2008 1424

Client: Chemical Data Management Job Number: 720-16328-1

Client Sample ID: #1, HOIST

Lab Sample ID: 720-16328-1 Date Sampled: 10/03/2008 1015 Client Matrix: Wipe Date Received: 10/06/2008 1424

6010B Metals (ICP)

Analysis Batch: 720-42530 Method: 6010B Instrument ID: Varian ICP Prep Batch: 720-42445 Preparation: 3050B Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume:

1 Wipe Final Weight/Volume: Date Analyzed: 10/15/2008 0659 50 mL Date Prepared: 10/13/2008 1432

Analyte	Result (mg/wipe) Qualifier	RL
Cadmium	ND	0.0050
Chromium	0.29	0.0050
Nickel	1.6	0.0050
Lead	0.22	0.0050
Zinc	0.64	0.0050

Client: Chemical Data Management Job Number: 720-16328-1

Client Sample ID: #2, ELECTRIC BOX

 Lab Sample ID:
 720-16328-2
 Date Sampled:
 10/03/2008 1017

 Client Matrix:
 Wipe
 Date Received:
 10/06/2008 1424

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42530 Instrument ID: Varian ICP Preparation: 3050B Prep Batch: 720-42445 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 1 Wipe
Date Analyzed: 10/15/2008 0703 Final Weight/Volume: 50 mL
Date Prepared: 10/13/2008 1432

Analyte Result (mg/wipe) Qualifier RLCadmium ND 0.0050 Chromium 0.46 0.0050 0.054 0.0050 Lead Zinc 1.0 0.0050 Method: 6010B Analysis Batch: 720-42530 Instrument ID: Varian ICP Prep Batch: 720-42445 Preparation: 3050B Lab File ID: N/A Dilution: 10 Initial Weight/Volume: 1 Wipe Final Weight/Volume: Date Analyzed: 10/15/2008 0731 50 mL Date Prepared: 10/13/2008 1432

Analyte Result (mg/wipe) Qualifier RL

Nickel 7.6 0.050

Client: Chemical Data Management Job Number: 720-16328-1

Client Sample ID: #3, RING ROLLER

Date Analyzed:

Date Prepared:

Lab Sample ID: 720-16328-3 Date Sampled: 10/03/2008 1020 Client Matrix: Wipe Date Received: 10/06/2008 1424

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-42530 Preparation: 3050B Prep Batch: 720-42445 Dilution: 1.0

10/15/2008 0707

10/13/2008 1432

Varian ICP Lab File ID: N/A Initial Weight/Volume: 1 Wipe Final Weight/Volume: 50 mL

Instrument ID:

Analyte	Result (mg/wipe) Qualifier	RL
Cadmium	ND	0.0050
Chromium	0.39	0.0050
Nickel	2.3	0.0050
Lead	0.28	0.0050
Zinc	0.48	0.0050

Client: Chemical Data Management Job Number: 720-16328-1

		General Chemistry	
Client Sample ID:	#1, HOIST		
Lab Sample ID:	720-16328-1		Date Sampled: 10/03/2008 101
Client Matrix:	Wipe		Date Received: 10/06/2008 1424
Analyte	Result	Qual Units	RL Dil Method
HEM	ND	mg/wipe	5.0 1.0 9071B
	Anly Batch: 720-42457	Date Analyzed 10/13/2008 1611	
	Prep Batch: 720-42435	Date Prepared: 10/13/2008 1333	
Client Sample ID:	#2, ELECTRIC BOX		
Lab Sample ID:	720-16328-2		Date Sampled: 10/03/2008 101
Client Matrix:	Wipe		Date Received: 10/06/2008 1424
Analyte	Result	Qual Units	RL Dil Method
HEM	ND	mg/wipe	5.0 1.0 9071B
	Anly Batch: 720-42457	Date Analyzed 10/13/2008 1611	
	Prep Batch: 720-42435	Date Prepared: 10/13/2008 1333	
Client Sample ID:	#3, RING ROLLER		
Lab Sample ID:	720-16328-3		Date Sampled: 10/03/2008 1020
Client Matrix:	Wipe		Date Received: 10/06/2008 1424
Analyte	Result	Qual Units	RL Dil Method
HEM	ND	mg/wipe	5.0 1.0 9071B
	Anly Batch: 720-42457	Date Analyzed 10/13/2008 1611	
	Prep Batch: 720-42435	Date Prepared: 10/13/2008 1333	

# **DATA REPORTING QUALIFIERS**

Lab Section Qualifier Description

Job Number: 720-16328-1 Client: Chemical Data Management

# **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-42445					
LCS 720-42445/2-A	Lab Control Spike	Т	Wipe	3050B	
LCSD 720-42445/3-A	Lab Control Spike Duplicate	T	Wipe	3050B	
MB 720-42445/1-A	Method Blank	Т	Wipe	3050B	
720-16328-1	#1, HOIST	Т	Wipe	3050B	
720-16328-2	#2, ELECTRIC BOX	Т	Wipe	3050B	
720-16328-3	#3, RING ROLLER	Т	Wipe	3050B	
Analysis Batch:720-425	530				
LCS 720-42445/2-A	Lab Control Spike	Т	Wipe	6010B	720-42445
LCSD 720-42445/3-A	Lab Control Spike Duplicate	Т	Wipe	6010B	720-42445
MB 720-42445/1-A	Method Blank	Т	Wipe	6010B	720-42445
720-16328-1	#1, HOIST	Т	Wipe	6010B	720-42445
720-16328-2	#2, ELECTRIC BOX	Т	Wipe	6010B	720-42445
720-16328-3	#3, RING ROLLER	Т	Wipe	6010B	720-42445
Report Basis T = Total					
General Chemistry					
Prep Batch: 720-42435		<b>-</b>	NAC .	00745	
LCS 720-42435/2-A	Lab Control Spike	T T	Wipe	9071B	
LCSD 720-42435/3-A	Lab Control Spike Duplicate	T T	Wipe	9071B	
MB 720-42435/1-A	Method Blank	T	Wipe	9071B	
720-16328-1	#1, HOIST	T	Wipe	9071B	
720-16328-2	#2, ELECTRIC BOX	T	Wipe	9071B	
720-16328-3	#3, RING ROLLER	Т	Wipe	9071B	
Analysis Batch:720-424					
LCS 720-42435/2-A	Lab Control Spike	Т	Wipe	9071B	720-42435
<b>Analysis Batch:720-424</b> LCS 720-42435/2-A LCSD 720-42435/3-A		T T	Wipe Wipe	9071B 9071B	720-42435
LCS 720-42435/2-A LCSD 720-42435/3-A	Lab Control Spike	T T			
LCS 720-42435/2-A	Lab Control Spike Lab Control Spike Duplicate	Т	Wipe	9071B	720-42435
LCS 720-42435/2-A LCSD 720-42435/3-A MB 720-42435/1-A	Lab Control Spike Lab Control Spike Duplicate Method Blank	T T	Wipe Wipe	9071B 9071B	720-42435 720-42435

# Report Basis T = Total

#### **Quality Control Results**

Job Number: 720-16328-1 Client: Chemical Data Management

Method Blank - Batch: 720-42445 Method: 6010B Preparation: 3050B

Lab Sample ID: MB 720-42445/1-A Analysis Batch: 720-42530 Instrument ID: Varian ICP

Client Matrix: Prep Batch: 720-42445 Wipe Lab File ID: N/A

Units: mg/wipe Initial Weight/Volume: 1 Wipe Dilution: 1.0

Date Analyzed: 10/15/2008 0644 Final Weight/Volume: 50 mL Date Prepared: 10/13/2008 1432

Analyte	Result	Qual	RL
Cadmium	ND		0.0050
Chromium	ND		0.0050
Nickel	ND		0.0050
Lead	ND		0.0050
Zinc	ND		0.0050

Lab Control Spike/ Method: 6010B Lab Control Spike Duplicate Recovery Report - Batch: 720-42445 Preparation: 3050B

LCS Lab Sample ID: LCS 720-42445/2-A Analysis Batch: 720-42530 Instrument ID: Varian ICP

Lab File ID: N/A Client Matrix: Prep Batch: 720-42445 Wipe

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 Wipe

Date Analyzed: 10/15/2008 0652 Final Weight/Volume: 50 mL Date Prepared: 10/13/2008 1432

LCSD Lab Sample ID: LCSD 720-42445/3-A Analysis Batch: 720-42530 Instrument ID: Varian ICP

Client Matrix: Wipe Prep Batch: 720-42445 Lab File ID: N/A

Initial Weight/Volume: 1 Wipe Dilution: Units: mg/wipe 1.0 Date Analyzed: 10/15/2008 0656

Final Weight/Volume: 50 mL Date Prepared: 10/13/2008 1432

	<u>%</u>	Rec.			
Analyte	LCS	LCSD	Limit	RPD	RPD Limit LCS Qual LCSD Qual
Cadmium	96	95	80 - 120	1	20
Chromium	97	96	80 - 120	1	20
Nickel	95	94	80 - 120	1	20
Lead	96	95	80 - 120	1	20
Zinc	95	94	80 - 120	1	20

Calculations are performed before rounding to avoid round-off errors in calculated results.

#### **Quality Control Results**

5.0

N/A

Client: Chemical Data Management Job Number: 720-16328-1

Method Blank - Batch: 720-42435 Method: 9071B Preparation: 9071B

Lab Sample ID: MB 720-42435/1-A

Analysis Batch: 720-42457

Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-42435 Lab File ID:

Date Prepared: 10/13/2008 1333

HEM

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 g
Date Analyzed: 10/13/2008 1611 Final Weight/Volume: 1 mL

Analyte Result Qual RL

ND

Lab Control Spike/ Method: 9071B
Lab Control Spike Duplicate Recovery Report - Batch: 720-42435 Preparation: 9071B

LCS Lab Sample ID: LCS 720-42435/2-A Analysis Batch: 720-42457 Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-42435 Lab File ID: N/A

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 g

Date Analyzed: 10/13/2008 1611 Final Weight/Volume: 1 mL

Date Prepared: 10/13/2008 1333

LCSD Lab Sample ID: LCSD 720-42435/3-A Analysis Batch: 720-42457 Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-42435 Lab File ID: N/A
Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 g

Date Analyzed: 10/13/2008 1611 Final Weight/Volume: 1 mL

Date Prepared: 10/13/2008 1333

 
 Analyte
 % Rec. LCS
 LCSD
 Limit
 RPD
 RPD Limit
 LCS Qual
 LCSD Qual

 HEM
 95
 94
 70 - 120
 1
 25
 25

Calculations are performed before rounding to avoid round-off errors in calculated results.

#### Brewer, Melissa

From: Jim Carro [jim@cdms.com]

Sent: Tuesday, October 14, 2008 8:57 AM

To: Brewer, Melissa

Subject: Re: Files from 720-16328-1 Western Forge, Albany

Melissa,

This email give you permission to split the above mention samples in half.

On Oct 13, 2008, at 4:46PM, Brewer, Melissa wrote:

Our QA Manager requested that we receive an email in writing that you'd like us to split the wipes in half for analysis. Could you send me an email regarding the above?

Thank you in advance.

#### **MELISSA BREWER**

#### TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484,1919 www.testamericainc.com

Reference: [033075] Attachments: 1

Confidentiality Notice: The information contained in this message is intended only for the use of the addressee, and may be confidential and/or privileged. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately. <16328.pdf>

Jim Carro

15

720-16328 Date 13/6/8 Page Lot 1

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Chemical Data Management Systems Chain of Custody 6515 Trinity Cl Suite 201 Dublin, CA I4568 (925) 551-7300

# **Login Sample Receipt Check List**

Client: Chemical Data Management Job Number: 720-16328-1

Login Number: 16328 List Source: TestAmerica San Francisco

Creator: Bullock, Tracy List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	See Narrative
Cooler Temperature is acceptable.	False	See Narrative
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	See Narrative
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	See Narrative
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
f necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

C. November 4, 2008 (Sampling Event October 28, 2008)



# **ANALYTICAL REPORT**

Job Number: 720-16651-1

Job Description: Western Forge Flange

For:

Chemical Data Management 6515 Trinity Court Suite 201 Dublin, CA 94568-2665

Attention: Mr. James Carro

milissa Bruver

Approved for release Melissa Brewer Project Manager I 11/4/2008 12:47 PM

Melissa Brewer
Project Manager I
melissa.brewer@testamericainc.com
11/04/2008

#### **Job Narrative** 720-J16651-1

#### Comments

No additional comments.

#### Receipt

All samples were received in good condition within temperature requirements.

#### Metals

No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Client: Chemical Data Management Job Number: 720-16651-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16651-1	ELECTRICAL BOX A	<b>A</b>			
Cadmium Chromium Nickel Lead Zinc		0.0052 0.16 2.2 0.052 5.2	0.0050 0.0050 0.0050 0.0050 0.050	mg/wipe mg/wipe mg/wipe mg/wipe mg/wipe	6010B 6010B 6010B 6010B 6010B
720-16651-3	HOIST A				
Chromium Nickel Lead Zinc		0.36 2.3 0.51 1.8	0.0050 0.0050 0.0050 0.0050	mg/wipe mg/wipe mg/wipe mg/wipe	6010B 6010B 6010B 6010B
720-16651-5	RING ROLLER A				
Chromium Nickel Lead Zinc		0.29 3.0 0.27 0.60	0.0050 0.050 0.0050 0.0050	mg/wipe mg/wipe mg/wipe mg/wipe	6010B 6010B 6010B 6010B

#### **METHOD SUMMARY**

Client: Chemical Data Management Job Number: 720-16651-1

Description	Lab Location	Method	Preparation Method
Matrix: Wipe			
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
HEM	TAL SF	SW846 9071B	
HEM	TAL SF		SW846 9071B

#### Lab References:

TAL SF = TestAmerica San Francisco

#### **Method References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### **SAMPLE SUMMARY**

Client: Chemical Data Management Job Number: 720-16651-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-16651-1	ELECTRICAL BOX A	Wipe	10/28/2008 1430	10/28/2008 1600
720-16651-2	ELECTRICAL BOX B	Wipe	10/28/2008 1430	10/28/2008 1600
720-16651-3	HOIST A	Wipe	10/28/2008 1435	10/28/2008 1600
720-16651-4	HOIST B	Wipe	10/28/2008 1435	10/28/2008 1600
720-16651-5	RING ROLLER A	Wipe	10/28/2008 1445	10/28/2008 1600
720-16651-6	RING ROLLER B	Wipe	10/28/2008 1445	10/28/2008 1600
720-16651-7	BLANK SAMPLE	Wipe	10/28/2008 0000	10/28/2008 1600
720-16651-8	BLANK SAMPLE	Wipe	10/28/2008 0000	10/28/2008 1600

Client: Chemical Data Management Job Number: 720-16651-1

Client Sample ID: ELECTRICAL BOX A

 Lab Sample ID:
 720-16651-1
 Date Sampled:
 10/28/2008 1430

 Client Matrix:
 Wipe
 Date Received:
 10/28/2008 1600

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-43345 Instrument ID: Varian ICP

Preparation: 3050B Prep Batch: 720-43295 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1 Wipe

Dilution: 1.0 Initial Weight/Volume: 1 Wipe Date Analyzed: 11/04/2008 0951 Final Weight/Volume: 50 mL Date Prepared: 11/03/2008 1105

Qualifier RLAnalyte Result (mg/wipe) Cadmium 0.0052 0.0050 Chromium 0.0050 0.16 2.2 0.0050 Nickel Lead 0.052 0.0050

Method:6010BAnalysis Batch: 720-43345Instrument ID:Varian ICPPreparation:3050BPrep Batch: 720-43295Lab File ID:N/A

Dilution: 10 Initial Weight/Volume: 1 Wipe

Date Analyzed: 11/04/2008 1032 Final Weight/Volume: 50 mL

Date Prepared: 11/03/2008 1105

Analyte Result (mg/wipe) Qualifier RL

Zinc 5.2 0.050

Client: Chemical Data Management Job Number: 720-16651-1

Client Sample ID: HOIST A

 Lab Sample ID:
 720-16651-3
 Date Sampled:
 10/28/2008 1435

 Client Matrix:
 Wipe
 Date Received:
 10/28/2008 1600

6010B Metals (ICP)

Method:6010BAnalysis Batch: 720-43345Instrument ID:Varian ICPPreparation:3050BPrep Batch: 720-43295Lab File ID:N/ADilution:1.0Initial Weight/Volume:1 Wipe

Dilution: 1.0 Initial Weight/Volume: 1 Wipe
Date Analyzed: 11/04/2008 0955 Final Weight/Volume: 50 mL
Date Prepared: 11/03/2008 1105

Analyte Result (mg/wipe) Qualifier RLCadmium ND 0.0050 Chromium 0.36 0.0050 Nickel 2.3 0.0050 0.51 0.0050 Lead 0.0050 Zinc 1.8

Client: Chemical Data Management Job Number: 720-16651-1

Client Sample ID: RING ROLLER A

 Lab Sample ID:
 720-16651-5
 Date Sampled:
 10/28/2008 1445

 Client Matrix:
 Wipe
 Date Received:
 10/28/2008 1600

6010B Metals (ICP)

Method:6010BAnalysis Batch: 720-43345Instrument ID:Varian ICPPreparation:3050BPrep Batch: 720-43295Lab File ID:N/ADilution:1.0Initial Weight/Volume:1 Wipe

Dilution: 1.0 Initial Weight/Volume: 1 Wipe
Date Analyzed: 11/04/2008 0959 Final Weight/Volume: 50 mL
Date Prepared: 11/03/2008 1105

Analyte Result (mg/wipe) Qualifier RLCadmium ND 0.0050 Chromium 0.29 0.0050 0.0050 Lead 0.27 Zinc 0.60 0.0050 Method: 6010B Analysis Batch: 720-43345 Instrument ID: Varian ICP Prep Batch: 720-43295 Preparation: 3050B Lab File ID: N/A Dilution: 10 Initial Weight/Volume: 1 Wipe Final Weight/Volume: Date Analyzed: 11/04/2008 1036 50 mL Date Prepared: 11/03/2008 1105

 Analyte
 Result (mg/wipe)
 Qualifier
 RL

 Nickel
 3.0
 0.050

Client: Chemical Data Management Job Number: 720-16651-1

Client Sample ID: BLANK SAMPLE

 Lab Sample ID:
 720-16651-8
 Date Sampled:
 10/28/2008 0000

 Client Matrix:
 Wipe
 Date Received:
 10/28/2008 1600

6010B Metals (ICP)

Method:6010BAnalysis Batch: 720-43345Instrument ID:Varian ICPPreparation:3050BPrep Batch: 720-43295Lab File ID:N/ADilution:1.0Initial Weight/Volume:1 Wipe

Dilution: 1.0 Initial Weight/Volume: 1 Wipe Date Analyzed: 11/04/2008 1002 Final Weight/Volume: 50 mL Date Prepared: 11/03/2008 1105

Analyte Result (mg/wipe) Qualifier RLCadmium ND 0.0050 Chromium ND 0.0050 Nickel ND 0.0050 ND 0.0050 Lead 0.0050 Zinc ND

Client: Chemical Data Management Job Number: 720-16651-1

		General Chemistry	
Client Sample ID:	ELECTRICAL BOX B		
Lab Sample ID: Client Matrix:	720-16651-2 Wipe		Date Sampled: 10/28/2008 1430 Date Received: 10/28/2008 1600
Analyte	Result	Qual Units	RL Dil Method
HEM	ND Anly Batch: 720-43202 Prep Batch: 720-43194	mg/wipe Date Analyzed 10/30/2008 1447 Date Prepared: 10/30/2008 1412	5.0 1.0 9071B
Client Sample ID:	HOIST B		
Lab Sample ID: Client Matrix:	720-16651-4 Wipe		Date Sampled: 10/28/2008 1435 Date Received: 10/28/2008 1600
Analyte	Result	Qual Units	RL Dil Method
HEM Client Sample ID:	ND Anly Batch: 720-43202 Prep Batch: 720-43194 RING ROLLER B	mg/wipe Date Analyzed 10/30/2008 1447 Date Prepared: 10/30/2008 1412	5.0 1.0 9071B
-			
Lab Sample ID: Client Matrix:	720-16651-6 Wipe		Date Sampled: 10/28/2008 1445 Date Received: 10/28/2008 1600
Analyte	Result	Qual Units	RL Dil Method
HEM	ND Anly Batch: 720-43202 Prep Batch: 720-43194	mg/wipe Date Analyzed 10/30/2008 1447 Date Prepared: 10/30/2008 1412	5.0 1.0 9071B
Client Sample ID:	BLANK SAMPLE		
Lab Sample ID: Client Matrix:	720-16651-7 Wipe		Date Sampled: 10/28/2008 0000 Date Received: 10/28/2008 1600
Analyte	Result	Qual Units	RL Dil Method
HEM	ND Anly Batch: 720-43202 Prep Batch: 720-43194	mg/wipe Date Analyzed 10/30/2008 1447 Date Prepared: 10/30/2008 1412	5.0 1.0 9071B

# **DATA REPORTING QUALIFIERS**

Lab Section Qualifier Description

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Client: Chemical Data Management Job Number: 720-16651-1

# **QC Association Summary**

	-	Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-43295					
LCS 720-43295/2-A	Lab Control Spike	Т	Wipe	3050B	
LCSD 720-43295/3-A	Lab Control Spike Duplicate	Т	Wipe	3050B	
MB 720-43295/1-A	Method Blank	Т	Wipe	3050B	
720-16651-1	ELECTRICAL BOX A	Т	Wipe	3050B	
720-16651-3	HOIST A	Т	Wipe	3050B	
720-16651-5	RING ROLLER A	Т	Wipe	3050B	
720-16651-8	BLANK SAMPLE	T	Wipe	3050B	
Analysis Batch:720-4334	45				
LCS 720-43295/2-A	Lab Control Spike	Т	Wipe	6010B	720-43295
LCSD 720-43295/3-A	Lab Control Spike Duplicate	Т	Wipe	6010B	720-43295
MB 720-43295/1-A	Method Blank	Т	Wipe	6010B	720-43295
720-16651-1	ELECTRICAL BOX A	Т	Wipe	6010B	720-43295
720-16651-3	HOIST A	Т	Wipe	6010B	720-43295
720-16651-5	RING ROLLER A	Т	Wipe	6010B	720-43295
720-16651-8	BLANK SAMPLE	Т	Wipe	6010B	720-43295
Report Basis T = Total					
General Chemistry					
Prep Batch: 720-43194	Lab Control Spike	Т	Wipe	9071B	
LCS 720-43194/2-A LCSD 720-43194/3-A	Lab Control Spike Lab Control Spike Duplicate	T T	Wipe	9071B 9071B	
MB 720-43194/1-A	Method Blank	T T	Wipe	9071B 9071B	
720-16651-2	ELECTRICAL BOX B	T T	Wipe	9071B 9071B	
720-16651-4	HOIST B	T T	Wipe	9071B 9071B	
720-16651-4 720-16651-6	RING ROLLER B	T T	Wipe	9071B 9071B	
720-16651-7	BLANK SAMPLE	, T	Wipe	9071B 9071B	
720-10031-7	DEANIX GAINII EE	'	vvipe	907115	
Analysis Batch:720-4320		_	<b>14</b> 0	00745	700 40404
LCS 720-43194/2-A	Lab Control Spike	T	Wipe	9071B	720-43194
LCSD 720-43194/3-A	Lab Control Spike Duplicate	T	Wipe	9071B	720-43194
MB 720-43194/1-A	Method Blank	T	Wipe	9071B	720-43194
720-16651-2	ELECTRICAL BOX B	T	Wipe	9071B	720-43194
720-16651-4	HOIST B	T	Wipe	9071B	720-43194
720-16651-6	RING ROLLER B	T	Wipe	9071B	720-43194
720-16651-7	BLANK SAMPLE	Т	Wipe	9071B	720-43194

### Report Basis

T = Total

#### **TestAmerica San Francisco**

11/04/2008

#### **Quality Control Results**

0.0050

1 Wipe

Job Number: 720-16651-1 Client: Chemical Data Management

Method Blank - Batch: 720-43295 Method: 6010B Preparation: 3050B

Lab Sample ID: MB 720-43295/1-A Analysis Batch: 720-43345 Instrument ID: Varian ICP

Client Matrix: Wipe Prep Batch: 720-43295 Lab File ID: N/A

Date Prepared: 11/03/2008 1105

Zinc

Units: mg/wipe Initial Weight/Volume: 1 Wipe Dilution: 1.0 Date Analyzed: 11/04/2008 0940 Final Weight/Volume: 50 mL

Result Qual RL Analyte Cadmium ND 0.0050 Chromium ND 0.0050 Nickel ND 0.0050 Lead ND 0.0050

Lab Control Spike/ Method: 6010B Lab Control Spike Duplicate Recovery Report - Batch: 720-43295 Preparation: 3050B

ND

LCS Lab Sample ID: LCS 720-43295/2-A Analysis Batch: 720-43345 Instrument ID: Varian ICP

Client Matrix: Lab File ID: N/A Prep Batch: 720-43295 Wipe

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume:

Date Analyzed: 11/04/2008 0943 Final Weight/Volume: 50 mL Date Prepared: 11/03/2008 1105

LCSD Lab Sample ID: LCSD 720-43295/3-A Analysis Batch: 720-43345 Instrument ID: Varian ICP

Client Matrix: Wipe Prep Batch: 720-43295 Lab File ID: N/A

Initial Weight/Volume: 1 Wipe Dilution: Units: mg/wipe 1.0 Date Analyzed: 11/04/2008 0947 Final Weight/Volume: 50 mL

Date Prepared: 11/03/2008 1105

	<u>%</u>	Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cadmium	98	98	80 - 120	0	20		
Chromium	100	100	80 - 120	0	20		
Nickel	98	98	80 - 120	0	20		
Lead	99	99	80 - 120	0	20		
Zinc	94	94	80 - 120	0	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

# **Quality Control Results**

Client: Chemical Data Management Job Number: 720-16651-1

Method Blank - Batch: 720-43194 Method: 9071B Preparation: 9071B

Lab Sample ID: MB 720-43194/1-A Analysis Batch: 720-43202 Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-43194 Lab File ID: N/A

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 g
Date Analyzed: 10/30/2008 1447 Final Weight/Volume: 1 mL

Date Analyzed: 10/30/2008 1447 Final Weight/Volume: 1 mL Date Prepared: 10/30/2008 1412

Analyte Result Qual RL
HEM ND 5.0

Lab Control Spike/ Method: 9071B
Lab Control Spike Duplicate Recovery Report - Batch: 720-43194 Preparation: 9071B

LCS Lab Sample ID: LCS 720-43194/2-A Analysis Batch: 720-43202 Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-43194 Lab File ID: N/A

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 g

Date Analyzed: 10/30/2008 1447 Final Weight/Volume: 1 mL

Date Prepared: 10/30/2008 1412

LCSD Lab Sample ID: LCSD 720-43194/3-A Analysis Batch: 720-43202 Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-43194 Lab File ID: N/A
Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 g

Date Analyzed: 10/30/2008 1447 Final Weight/Volume: 1 mL
Date Prepared: 10/30/2008 1412

94

Analyte \frac{\lambda \text{Rec.}}{\text{LCSD}} \text{Limit} \text{RPD} \text{RPD Limit} \text{LCS Qual LCSD Qual}

70 - 120

0

Calculations are performed before rounding to avoid round-off errors in calculated results.

94

HEM

#### **Login Sample Receipt Check List**

Client: Chemical Data Management Job Number: 720-16651-1

List Source: TestAmerica San Francisco

Login Number: 16651 Creator: Bullock, Tracy

List Number: 1

Question T / F/ NA Comment Radioactivity either was not measured or, if measured, is at or below N/A background The cooler's custody seal, if present, is intact. N/A The cooler or samples do not appear to have been compromised or True tampered with. Samples were received on ice. True True Cooler Temperature is acceptable. Cooler Temperature is recorded. True COC is present. True COC is filled out in ink and legible. True COC is filled out with all pertinent information. True There are no discrepancies between the sample IDs on the containers and True the COC. Samples are received within Holding Time. True Sample containers have legible labels. True Containers are not broken or leaking. True Sample collection date/times are provided. True Appropriate sample containers are used. True Sample bottles are completely filled. True There is sufficient vol. for all requested analyses, incl. any requested True MS/MSDs VOA sample vials do not have headspace or bubble is <6mm (1/4") in True diameter. If necessary, staff have been informed of any short hold time or quick TAT True needs Multiphasic samples are not present. True Samples do not require splitting or compositing. True

D. November 24, 2008 (Sampling Event November 14, 2008)



# **ANALYTICAL REPORT**

Job Number: 720-16931-1

Job Description: Western Forge, Albany

For:

Chemical Data Management 6515 Trinity Court Suite 201 Dublin, CA 94568-2665

Attention: Mr. James Carro

milissa Bruver

Approved for release Melissa Brewer Project Manager I 11/24/2008 9:19 AM

Melissa Brewer
Project Manager I
melissa.brewer@testamericainc.com
11/24/2008

# Job Narrative 720-J16931-1

#### Comments

C19-C36 = Hydraulic Oil

No additional comments.

#### Receipt

Hold analysis until Monday for client confirmation regarding Silica Gel Cleanup. Felicia confirmed that Silica Gel cleanup required on 11/17/08.

Water samples were logged in for Dissolved Metals and Dissolved TEPH, although the samples were received preserved with acid.

All other samples were received in good condition within temperature requirements.

#### GC Semi VOA

Method 8015B: Surrogate recovery for the following sample was outside control limits: W-101 (720-16931-19). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **Organic Prep**

No analytical or quality issues were noted.

Client: Chemical Data Management Job Number: 720-16931-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16931-1	SB-101 3'-4'				
Chromium		17	0.95	mg/Kg	6010B
Nickel		22	0.95	mg/Kg	6010B
Lead		12 26	0.95	mg/Kg	6010B
Zinc		20	0.95	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Orga		85	1.0	mg/Kg	8015B
Motor Oil Range O	rganics [C24-C36]	58	50	mg/Kg	8015B
C19-C36		150	50	mg/Kg	8015B
720-16931-2	SB-101 7'-8'				
Chromium		14	0.98	mg/Kg	6010B
Nickel		8.2	0.98	mg/Kg	6010B
Lead		5.2	0.98	mg/Kg	6010B
Zinc		9.4	0.98	mg/Kg	6010B
720-16931-3	SB-101 11'-12'				
Chromium	<b>0</b> 2 . <b>0</b> 1 . 1 . 1 . 2	8.8	0.95	mg/Kg	6010B
Nickel		10	0.95	mg/Kg	6010B
Lead		3.7	0.95	mg/Kg	6010B
Zinc		14	0.95	mg/Kg	6010B
720-16931-4	SB-101 15'-16'				
Chromium		16	1.0	mg/Kg	6010B
Nickel		20	1.0	mg/Kg	6010B
Lead		6.2	1.0	mg/Kg	6010B
Zinc		23	1.0	mg/Kg	6010B
720-16931-5	SB-102 3'-4'				
	· · ·	AE	1.0	ma /// ~	60400
Chromium		45	1.0	mg/Kg	6010B
Nickel		60 15	1.0 1.0	mg/Kg	6010B 6010B
Lead Zinc		33	1.0	mg/Kg	6010B
ZIIIC		33	1.0	mg/Kg	UUTUD

Client: Chemical Data Management Job Number: 720-16931-1

		Result / Qualifier	Reporting Limit	Units	Method
720-16931-6	SB-102 7'-8'				
Chromium		16	1.0	mg/Kg	6010B
Nickel		7.8	1.0	mg/Kg	6010B
Lead		110	1.0	mg/Kg	6010B
Zinc		70	1.0	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organ	ics [C10-C28]	13	1.0	mg/Kg	8015B
C19-C36		52	50	mg/Kg	8015B
720-16931-7	SB-102 11'-12'				
Chromium		13	1.0	mg/Kg	6010B
Nickel		9.4	1.0	mg/Kg	6010B
Lead		5.0	1.0	mg/Kg	6010B
Zinc		13	1.0	mg/Kg	6010B
720-16931-8	SB-102 15'-16'				
Chromium		11	0.96	mg/Kg	6010B
Nickel		15	0.96	mg/Kg	6010B
Lead		7.1	0.96	mg/Kg	6010B
Zinc		26	0.96	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organ	ics [C10-C28]	4.9	0.99	mg/Kg	8015B
	[				
720-16931-9	SB-103 3'-4'				
Chromium		67	1.1	mg/Kg	6010B
Nickel		85	1.1	mg/Kg	6010B
Lead		11	1.1	mg/Kg	6010B
Zinc		52	1.1	mg/Kg	6010B
Silica Gel Cleanup					
Diesel Range Organ	ics [C10-C28]	46	2.0	mg/Kg	8015B
Motor Oil Range Org		180	99	mg/Kg	8015B
C19-C36	· •	210	99	mg/Kg	8015B

Client: Chemical Data Management Job Number: 720-16931-1

T20-16931-10   SB-103 7'-8'   SB-103 11'-12'   SB-103 15'-16'   SB-103 15'-16'   SB-103 1-13   SB-111 0'-1'   SB	Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
Nickel 9.7 1.0 mg/Kg 6010B Lead 150 1.0 mg/Kg 6010B Clinc 110 1.0 mg/Kg 6010B Clinc	720-16931-10	SB-103 7'-8'				
Lead     150     1.0     mg/Kg     6010B       Zinc     110     1.0     mg/Kg     6010B       Silica Gel Cleanup       Diesel Range Organics [C10-C28]     23     1.0     mg/Kg     8015B       Motor Oil Range Organics [C24-C36]     94     50     mg/Kg     8015B       C19-C36     110     50     mg/Kg     8015B       720-16931-11     SB-103 11'-12'       Chromium     18     0.96     mg/Kg     6010B       Nickel     23     0.96     mg/Kg     6010B       Zinc     12     0.96     mg/Kg     6010B       720-16931-12     SB-103 15'-16'       Chromium     18     1.0     mg/Kg     6010B       Nickel     23     1.0     mg/Kg     6010B       Lead     3.9     1.0     mg/Kg     6010B       Zinc     12     1.0     mg/Kg     6010B       720-16931-13     SB-111 0'-1'     SB-111 0'-1'     0     mg/Kg     6010B       720-16931-13     SB-111 0'-1'     0     mg/Kg     6010B       720-16931-13     SB-111 0'-1'     0     mg/Kg     6010B       720-16931-13 <td< td=""><td>Chromium</td><td></td><td>18</td><td>1.0</td><td>mg/Kg</td><td>6010B</td></td<>	Chromium		18	1.0	mg/Kg	6010B
Zinc   110   1.0   mg/Kg   6010B	Nickel		9.7	1.0	mg/Kg	6010B
Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       94       50       mg/Kg       8015B         C19-C36       110       50       mg/Kg       8015B         720-16931-11       SB-103 11'-12'       Chromium       18       0.96       mg/Kg       6010B         Nickel       23       0.96       mg/Kg       6010B         Lead       3.7       0.96       mg/Kg       6010B         720-16931-12       SB-103 15'-16'       Chromium       18       1.0       mg/Kg       6010B         Nickel       23       1.0       mg/Kg       6010B         Lead       3.9       1.0       mg/Kg       6010B         Zinc       12       1.0       mg/Kg       6010B         720-16931-13       SB-111 0'-1'       Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Lica       19       1.0       mg/Kg       6010B	Lead		150	1.0	mg/Kg	6010B
Diesel Range Organics [C10-C28]   23	Zinc		110	1.0	mg/Kg	6010B
Motor Oil Range Organics [C24-C36]         94         50         mg/Kg         8015B           720-16931-11         SB-103 11'-12'                 Chromium              18              0.96              mg/Kg              6010B                 Nickel               23              0.96              mg/Kg              6010B                 Lead               3.7              0.96              mg/Kg              6010B                 Zinc               12              0.96              mg/Kg              6010B                 T20-16931-12               SB-103 15'-16'	Silica Gel Cleanu	p				
C19-C36	Diesel Range Orga	anics [C10-C28]	23	1.0	mg/Kg	8015B
720-16931-11 SB-103 11'-12'  Chromium	Motor Oil Range O	rganics [C24-C36]	94	50	mg/Kg	8015B
Chromium       18       0.96       mg/Kg       6010B         Nickel       23       0.96       mg/Kg       6010B         Lead       3.7       0.96       mg/Kg       6010B         Zinc       12       0.96       mg/Kg       6010B         720-16931-12       SB-103 15'-16'         Chromium       18       1.0       mg/Kg       6010B         Nickel       23       1.0       mg/Kg       6010B         Lead       3.9       1.0       mg/Kg       6010B         Zinc       12       1.0       mg/Kg       6010B         720-16931-13       SB-111 0'-1'       SB-111 0'-1'       The state of the state o	C19-C36		110	50	mg/Kg	8015B
Chromium       18       0.96       mg/Kg       6010B         Nickel       23       0.96       mg/Kg       6010B         Lead       3.7       0.96       mg/Kg       6010B         Zinc       12       0.96       mg/Kg       6010B         720-16931-12       SB-103 15'-16'         Chromium       18       1.0       mg/Kg       6010B         Nickel       23       1.0       mg/Kg       6010B         Lead       3.9       1.0       mg/Kg       6010B         Zinc       12       1.0       mg/Kg       6010B         720-16931-13       SB-111 0'-1'       SB-111 0'-1'       The state of the state o	720-16931-11	SB-103 11'-12'				
Nickel       23       0.96       mg/Kg       6010B         Lead       3.7       0.96       mg/Kg       6010B         Zinc       12       0.96       mg/Kg       6010B         720-16931-12       SB-103 15'-16'         Chromium       18       1.0       mg/Kg       6010B         Nickel       23       1.0       mg/Kg       6010B         Lead       3.9       1.0       mg/Kg       6010B         Zinc       12       1.0       mg/Kg       6010B         720-16931-13       SB-111 0'-1'         Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B		35-100 11-12	10	0.06	ma/Ka	6010P
Lead     3.7     0.96     mg/Kg     6010B       Zinc     12     0.96     mg/Kg     6010B       720-16931-12 SB-103 15'-16'       Chromium     18     1.0     mg/Kg     6010B       Nickel     23     1.0     mg/Kg     6010B       Lead     3.9     1.0     mg/Kg     6010B       Zinc     12     1.0     mg/Kg     6010B       720-16931-13 SB-111 0'-1'       Chromium     37     1.0     mg/Kg     6010B       Nickel     180     1.0     mg/Kg     6010B       Lead     19     1.0     mg/Kg     6010B       Zinc     920     10     mg/Kg     6010B       Silica Gel Cleanup       Diesel Range Organics [C10-C28]     68     0.99     mg/Kg     8015B       Motor Oil Range Organics [C24-C36]     310     49     mg/Kg     8015B						
Zinc     12     0.96     mg/Kg     6010B       720-16931-12     SB-103 15'-16'     SB-103 15'-16'       Chromium     18     1.0     mg/Kg     6010B       Nickel     23     1.0     mg/Kg     6010B       Lead     3.9     1.0     mg/Kg     6010B       Zinc     12     1.0     mg/Kg     6010B       720-16931-13     SB-111 0'-1'       Chromium     37     1.0     mg/Kg     6010B       Nickel     180     1.0     mg/Kg     6010B       Lead     19     1.0     mg/Kg     6010B       Zinc     920     10     mg/Kg     6010B       Silica Gel Cleanup       Diesel Range Organics [C10-C28]     68     0.99     mg/Kg     8015B       Motor Oil Range Organics [C24-C36]     310     49     mg/Kg     8015B						
720-16931-12 SB-103 15'-16'  Chromium 18 1.0 mg/Kg 6010B Nickel 23 1.0 mg/Kg 6010B Lead 3.9 1.0 mg/Kg 6010B Zinc 12 1.0 mg/Kg 6010B  720-16931-13 SB-111 0'-1'  Chromium 37 1.0 mg/Kg 6010B Nickel 180 1.0 mg/Kg 6010B Lead 19 1.0 mg/Kg 6010B Lead 19 1.0 mg/Kg 6010B  Zinc 920 10 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 68 0.99 mg/Kg 8015B Motor Oil Range Organics [C24-C36] 310 49 mg/Kg 8015B						
Chromium       18       1.0       mg/Kg       6010B         Nickel       23       1.0       mg/Kg       6010B         Lead       3.9       1.0       mg/Kg       6010B         720-16931-13       SB-111 0'-1'         Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B				0.00	97.19	00102
Nickel       23       1.0       mg/Kg       6010B         Lead       3.9       1.0       mg/Kg       6010B         Zinc       12       1.0       mg/Kg       6010B         720-16931-13 SB-111 0'-1'         Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B	720-16931-12	SB-103 15'-16'				
Nickel       23       1.0       mg/Kg       6010B         Lead       3.9       1.0       mg/Kg       6010B         Zinc       12       1.0       mg/Kg       6010B         720-16931-13 SB-111 0'-1'         Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B	Chromium		18	1.0	mg/Kg	6010B
Lead       3.9       1.0       mg/Kg       6010B         Zinc       12       1.0       mg/Kg       6010B         720-16931-13 SB-111 0'-1'         Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B	Nickel		23	1.0		6010B
720-16931-13 SB-111 0'-1'         Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B	Lead		3.9	1.0		6010B
Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B	Zinc		12	1.0	mg/Kg	6010B
Chromium       37       1.0       mg/Kg       6010B         Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B	720-16931-13	SB-111 0'-1'				
Nickel       180       1.0       mg/Kg       6010B         Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B		<b>33</b> -111 <b>V</b> -1	27	1.0	malla	6010P
Lead       19       1.0       mg/Kg       6010B         Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B						
Zinc       920       10       mg/Kg       6010B         Silica Gel Cleanup       0.99       mg/Kg       8015B         Diesel Range Organics [C10-C28]       68       0.99       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       310       49       mg/Kg       8015B						
Diesel Range Organics [C10-C28]         68         0.99         mg/Kg         8015B           Motor Oil Range Organics [C24-C36]         310         49         mg/Kg         8015B						
Diesel Range Organics [C10-C28]         68         0.99         mg/Kg         8015B           Motor Oil Range Organics [C24-C36]         310         49         mg/Kg         8015B	Silica Gel Cleanu	D				
Motor Oil Range Organics [C24-C36] 310 49 mg/Kg 8015B	-	•	68	0.99	ma/Ka	8015B
	C19-C36	.3	360	49	mg/Kg	8015B

#### **EXECUTIVE SUMMARY - Detections**

720-16931-14 SB-111 3'-4'  Chromium 50 0.999 mg/Kg 6010B Nickel 69 0.999 mg/Kg 6010B Lead 6.6 0.999 mg/Kg 6010B Zinc 44 0.999 mg/Kg 6010B Zinc 44 0.999 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 8.6 0.98 mg/Kg 8015B Motor Oil Range Organics [C24-C36] 55 49 mg/Kg 8015B C19-C36 60 49 mg/Kg 8015B  720-16931-15 SB-111 5'-6'  Chromium 26 0.97 mg/Kg 6010B Nickel 21 0.97 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 8015B  720-16931-16 SB-111 7'-8'  Chromium 15 1.0 mg/Kg 6010B Nickel 12 1.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.999 mg/Kg 8015B  720-16931-16 SB-111 7'-8'  Chromium 15 1.0 mg/Kg 6010B Nickel 12 1.0 mg/Kg 6010B Nickel 14 1.0 mg/Kg 6010B Nickel 15 1.0 mg/Kg 6010B Nickel 16 1.0 mg/Kg 6010B Nickel 18 8.8 1.0 mg/Kg 6010B Nickel 19 10 mg/Kg 6010B	Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method	
Nickel 69 0.99 mg/Kg 6010B Lead 6.6 0.99 mg/Kg 6010B Zinc 44 0.99 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 8.6 0.98 mg/Kg 8015B Motor Oil Range Organics [C24-C36] 55 49 mg/Kg 8015B  C19-C36 0 0.97 mg/Kg 6010B  Nickel 21 0.97 mg/Kg 6010B Lead 29 0.97 mg/Kg 6010B Zinc 62 0.97 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 8015B  Chromium 15 1.0 mg/Kg 6010B Nickel 12 1.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.0 mg/Kg 8015B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.0 mg/Kg 8015B  C19-C36 87 50 mg/Kg 8015B  C19-C36 87 50 mg/Kg 8015B  C10 mg/Kg 6010B Lead 1.0 mg/Kg 6010B Lead 1.0 mg/Kg 6010B Lead 1.0 mg/Kg 6010B	720-16931-14	SB-111 3'-4'					
Nickel 69 0.99 mg/Kg 6010B Lead 6.6 0.99 mg/Kg 6010B Zinc 44 0.99 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 8.6 0.98 mg/Kg 8015B Motor Oil Range Organics [C24-C36] 55 49 mg/Kg 8015B  C19-C36 0 0.97 mg/Kg 6010B  Nickel 21 0.97 mg/Kg 6010B Lead 29 0.97 mg/Kg 6010B Zinc 62 0.97 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 8015B  Chromium 15 1.0 mg/Kg 6010B Nickel 12 1.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.0 mg/Kg 8015B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.0 mg/Kg 8015B  C19-C36 87 50 mg/Kg 8015B  C19-C36 87 50 mg/Kg 8015B  C10 mg/Kg 6010B Lead 1.0 mg/Kg 6010B Lead 1.0 mg/Kg 6010B Lead 1.0 mg/Kg 6010B	Chromium		50	0.99	ma/Ka	6010B	
Lead 6.6 0.99 mg/Kg 6010B  Zinc 44 0.99 mg/Kg 6010B  Zinc 64 Cleanup  Diesel Range Organics [C10-C28] 8.6 0.98 mg/Kg 8015B  Motor Oil Range Organics [C24-C36] 55 49 mg/Kg 8015B  C19-C36 60 49 mg/Kg 8015B  T20-16931-15 SB-111 5'-6'  Chromium 26 0.97 mg/Kg 6010B  Nickel 21 0.97 mg/Kg 6010B  Zinc 62 0.97 mg/Kg 6010B  Silica Gel Cleanup  Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 6010B  Nickel 12 1.0 mg/Kg 6010B  Nickel 12 1.0 mg/Kg 6010B  Nickel 12 1.0 mg/Kg 6010B  Silica Gel Cleanup  Diesel Range Organics [C10-C28] 3.6 1.0 mg/Kg 6010B  Silica Gel Cleanup  Diesel Range Organics [C24-C36] 70 50 mg/Kg 8015B  T20-16931-17 SB-111 9'-10'  Chromium 14 1.0 mg/Kg 6010B  Nickel 8.8 1.0 mg/Kg 6010B  Nickel 8.8 1.0 mg/Kg 6010B  Lead 10 mg/Kg 6010B							
Zinc   44   0.99   mg/Kg   6010B							
Diesel Range Organics [C10-C28]       8.6       0.98       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       55       49       mg/Kg       8015B         720-16931-15       SB-111 5'-6'       Chromium       26       0.97       mg/Kg       6010B         Nickel       21       0.97       mg/Kg       6010B         Lead       29       0.97       mg/Kg       6010B         Zinc       62       0.97       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       3.6       0.99       mg/Kg       6010B         Y20-16931-16       SB-111 7'-8'       Chromium       15       1.0       mg/Kg       6010B         Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup       Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       6010B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         720-16931-17       SB-111 9'-10' <td colspa<="" td=""><td>Zinc</td><td></td><td></td><td></td><td></td><td></td></td>	<td>Zinc</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Zinc					
Diesel Range Organics [C10-C28]       8.6       0.98       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       55       49       mg/Kg       8015B         720-16931-15       SB-111 5'-6'       Chromium       26       0.97       mg/Kg       6010B         Nickel       21       0.97       mg/Kg       6010B         Lead       29       0.97       mg/Kg       6010B         Zinc       62       0.97       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       3.6       0.99       mg/Kg       6010B         Y20-16931-16       SB-111 7'-8'       Chromium       15       1.0       mg/Kg       6010B         Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup       Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       6010B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         720-16931-17       SB-111 9'-10' <td colspa<="" td=""><td>Silica Gel Cleanui</td><td>7</td><td></td><td></td><td></td><td></td></td>	<td>Silica Gel Cleanui</td> <td>7</td> <td></td> <td></td> <td></td> <td></td>	Silica Gel Cleanui	7				
Motor Oil Range Organics [C24-C36]     55     49     mg/Kg     8015B       720-16931-15     SB-111 5'-6'       Chromium     26     0.97     mg/Kg     6010B       Nickel     21     0.97     mg/Kg     6010B       Lead     29     0.97     mg/Kg     6010B       Zinc     62     0.97     mg/Kg     6010B       Silica Gel Cleanup     Diesel Range Organics [C10-C28]     3.6     0.99     mg/Kg     8015B       720-16931-16     SB-111 7'-8'     Chromium     15     1.0     mg/Kg     6010B       Nickel     12     1.0     mg/Kg     6010B       Lead     49     1.0     mg/Kg     6010B       Zinc     50     1.0     mg/Kg     6010B       Silica Gel Cleanup     Diesel Range Organics [C10-C28]     23     1.0     mg/Kg     8015B       Diesel Range Organics [C24-C36]     70     50     mg/Kg     8015B       720-16931-17     SB-111 9'-10'     50     mg/Kg     6010B       Chromium     14     1.0     mg/Kg     6010B       Nickel     8.8     1.0     mg/Kg     6010B       Lead     10     1.0     mg/Kg     6010B			8.6	0.98	ma/Ka	8015B	
C19-C36 60 49 mg/Kg 8015B  720-16931-15 SB-111 5'-6'  Chromium 26 0.97 mg/Kg 6010B Nickel 21 0.97 mg/Kg 6010B Lead 29 0.97 mg/Kg 6010B Zinc 62 0.97 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 8015B  720-16931-16 SB-111 7'-8'  Chromium 15 1.0 mg/Kg 6010B Nickel 12 1.0 mg/Kg 6010B Lead 49 1.0 mg/Kg 6010B Zinc 50 1.0 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 8015B  720-16931-16 SB-111 7'-8'  Chromium 15 1.0 mg/Kg 6010B Nickel 12 1.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 3 1.0 mg/Kg 8010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3 1.0 mg/Kg 8015B Motor Oil Range Organics [C24-C36] 70 50 mg/Kg 8015B C19-C36 87 50 mg/Kg 8015B  720-16931-17 SB-111 9'-10'  Chromium 14 1.0 mg/Kg 6010B Nickel 8.8 1.0 mg/Kg 6010B Nickel 8.8 1.0 mg/Kg 6010B Lead 10 1.0 mg/Kg 6010B							
Chromium       26       0.97       mg/Kg       6010B         Nickel       21       0.97       mg/Kg       6010B         Lead       29       0.97       mg/Kg       6010B         Zinc       62       0.97       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       3.6       0.99       mg/Kg       8015B         720-16931-16       SB-111 7'-8'         Chromium       15       1.0       mg/Kg       6010B         Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Notor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         720-16931-17       SB-111 9'-10'       SB-111 9'-10'       Tomag/Kg       6010B         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg </td <td></td> <td>.ga</td> <td></td> <td></td> <td></td> <td></td>		.ga					
Chromium       26       0.97       mg/Kg       6010B         Nickel       21       0.97       mg/Kg       6010B         Lead       29       0.97       mg/Kg       6010B         Zinc       62       0.97       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       3.6       0.99       mg/Kg       8015B         720-16931-16       SB-111 7'-8'         Chromium       15       1.0       mg/Kg       6010B         Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Notor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         720-16931-17       SB-111 9'-10'       SB-111 9'-10'       Tomag/Kg       6010B         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg </td <td>720-16931-15</td> <td>SB-111 5'-6'</td> <td></td> <td></td> <td></td> <td></td>	720-16931-15	SB-111 5'-6'					
Nickel 21 0.97 mg/Kg 6010B Lead 29 0.97 mg/Kg 6010B Zinc 62 0.97 mg/Kg 6010B Zinc 62 0.97 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 8015B  720-16931-16 SB-111 7'-8'  Chromium 15 1.0 mg/Kg 6010B Nickel 12 1.0 mg/Kg 6010B Zinc 50 1.0 mg/Kg 6010B Zinc 50 1.0 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 23 1.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C10-C28] 23 1.0 mg/Kg 8015B Motor Oil Range Organics [C24-C36] 70 50 mg/Kg 8015B C19-C36 87 50 mg/Kg 8015B  720-16931-17 SB-111 9'-10'  Chromium 14 1.0 mg/Kg 6010B Nickel 8.8 1.0 mg/Kg 6010B Lead 10 1.0 mg/Kg 6010B		23 0	26	0.07	ma/Ka	6010B	
Lead       29       0.97       mg/Kg       6010B         Zinc       62       0.97       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       3.6       0.99       mg/Kg       8015B         720-16931-16       SB-111 7'-8'         Chromium       15       1.0       mg/Kg       6010B         Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         720-16931-17       SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B							
Zinc 62 0.97 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 3.6 0.99 mg/Kg 8015B  720-16931-16 SB-111 7'-8'  Chromium 15 1.0 mg/Kg 6010B Nickel 12 1.0 mg/Kg 6010B Lead 49 1.0 mg/Kg 6010B Zinc 50 1.0 mg/Kg 6010B  Silica Gel Cleanup Diesel Range Organics [C10-C28] 23 1.0 mg/Kg 6010B Silica Gel Cleanup Diesel Range Organics [C24-C36] 70 mg/Kg 8015B Motor Oil Range Organics [C24-C36] 70 50 mg/Kg 8015B  720-16931-17 SB-111 9'-10'  Chromium 14 1.0 mg/Kg 6010B Nickel 8.8 1.0 mg/Kg 6010B Nickel 8.8 1.0 mg/Kg 6010B Lead 10 mg/Kg 6010B							
Silica Gel Cleanup         Diesel Range Organics [C10-C28]       3.6       0.99       mg/Kg       8015B         720-16931-16 SB-111 7'-8'         Chromium       15       1.0       mg/Kg       6010B         Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         720-16931-17 SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B							
Diesel Range Organics [C10-C28]       3.6       0.99       mg/Kg       8015B         720-16931-16 SB-111 7'-8'         Chromium       15       1.0       mg/Kg       6010B         Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         C19-C36       87       50       mg/Kg       8015B         720-16931-17 SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B			0 <b>2</b>	0.01	mg/rtg	00100	
720-16931-16 SB-111 7'-8'       Chromium     15     1.0     mg/Kg     6010B       Nickel     12     1.0     mg/Kg     6010B       Lead     49     1.0     mg/Kg     6010B       Zinc     50     1.0     mg/Kg     6010B       Silica Gel Cleanup       Diesel Range Organics [C10-C28]     23     1.0     mg/Kg     8015B       Motor Oil Range Organics [C24-C36]     70     50     mg/Kg     8015B       C19-C36     87     50     mg/Kg     8015B       720-16931-17 SB-111 9'-10'       Chromium     14     1.0     mg/Kg     6010B       Nickel     8.8     1.0     mg/Kg     6010B       Lead     10     1.0     mg/Kg     6010B							
Chromium       15       1.0       mg/Kg       6010B         Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         C19-C36       87       50       mg/Kg       8015B         720-16931-17       SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B	Diesel Range Orga	ınics [C10-C28]	3.6	0.99	mg/Kg	8015B	
Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         C19-C36       87       50       mg/Kg       8015B         720-16931-17 SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B	720-16931-16	SB-111 7'-8'					
Nickel       12       1.0       mg/Kg       6010B         Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         C19-C36       87       50       mg/Kg       8015B         720-16931-17 SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B	Chromium		15	1.0	ma/Ka	6010B	
Lead       49       1.0       mg/Kg       6010B         Zinc       50       1.0       mg/Kg       6010B         Silica Gel Cleanup         Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         C19-C36       87       50       mg/Kg       8015B         720-16931-17 SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B							
Zinc     50     1.0     mg/Kg     6010B       Silica Gel Cleanup       Diesel Range Organics [C10-C28]     23     1.0     mg/Kg     8015B       Motor Oil Range Organics [C24-C36]     70     50     mg/Kg     8015B       C19-C36     87     50     mg/Kg     8015B       720-16931-17     SB-111 9'-10'       Chromium     14     1.0     mg/Kg     6010B       Nickel     8.8     1.0     mg/Kg     6010B       Lead     10     1.0     mg/Kg     6010B							
Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         C19-C36       87       50       mg/Kg       8015B         720-16931-17 SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B	Zinc		50			6010B	
Diesel Range Organics [C10-C28]       23       1.0       mg/Kg       8015B         Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         C19-C36       87       50       mg/Kg       8015B         720-16931-17 SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B	Silica Gel Cleanui	9					
Motor Oil Range Organics [C24-C36]       70       50       mg/Kg       8015B         C19-C36       87       50       mg/Kg       8015B         720-16931-17 SB-111 9'-10'         Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B			23	1.0	ma/Ka	8015B	
C19-C36 87 50 mg/Kg 8015B  720-16931-17 SB-111 9'-10'  Chromium 14 1.0 mg/Kg 6010B  Nickel 8.8 1.0 mg/Kg 6010B  Lead 10 1.0 mg/Kg 6010B			_				
Chromium       14       1.0       mg/Kg       6010B         Nickel       8.8       1.0       mg/Kg       6010B         Lead       10       1.0       mg/Kg       6010B		0[]					
Nickel         8.8         1.0         mg/Kg         6010B           Lead         10         1.0         mg/Kg         6010B	720-16931-17	SB-111 9'-10'					
Nickel         8.8         1.0         mg/Kg         6010B           Lead         10         1.0         mg/Kg         6010B	Chromium		14	1.0	ma/Ka	6010B	
Lead 10 1.0 mg/Kg 6010B							
	Zinc		13	1.0	mg/Kg	6010B	

#### **EXECUTIVE SUMMARY - Detections**

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-16931-18	SB-112 3'-4'				
Chromium		13	0.99	mg/Kg	6010B
Nickel		26	0.99	mg/Kg	6010B
Lead		13	0.99	mg/Kg	6010B
Zinc		29	0.99	mg/Kg	6010B
Silica Gel Cleanu	p				
Diesel Range Orga		16	0.99	mg/Kg	8015B
Motor Oil Range O		51	50	mg/Kg	8015B
C19-C36		63	50	mg/Kg	8015B
720-16931-19	W-101				
Dissolved					
Diesel Range Orga	anics [C10-C28]	58	50	ug/L	8015B
Nickel		0.12	0.0050	mg/L	6010B
Lead		0.0065	0.0050	mg/L	6010B
Zinc		0.056	0.010	mg/L	6010B
<b>700</b> 40004 00	W 400				
720-16931-20	W-102				
Dissolved					
Diesel Range Orga	anics [C10-C28]	54	50	ug/L	8015B
Chromium		0.014	0.0050	mg/L	6010B
Nickel		0.14	0.0050	mg/L	6010B
Lead		0.77	0.0050	mg/L	6010B
Zinc		1.2	0.010	mg/L	6010B
720-16931-21	W-103				
Dissolved					
Diesel Range Orga	anics [C10-C28]	74	50	ug/L	8015B
Chromium	A11100 [O 10 O20]	0.026	0.0050	mg/L	6010B
Nickel		0.38	0.0050	mg/L	6010B
Lead		0.061	0.0050	mg/L	6010B
Zinc		1.4	0.010	mg/L	6010B
720 46024 22	W 444				
720-16931-22	W-111				
Dissolved		0.4		,,	00450
Diesel Range Orga	anics [C10-C28]	91	50	ug/L	8015B
Nickel		0.42	0.0050	mg/L	6010B
Zinc		8.4	0.010	mg/L	6010B

#### **EXECUTIVE SUMMARY - Detections**

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method	
720-16931-23	SB-112 7'-8'					
Chromium		70	0.96	mg/Kg	6010B	
Nickel		86	0.96	mg/Kg	6010B	
Lead		7.7	0.96	mg/Kg	6010B	
Zinc		42	0.96	mg/Kg	6010B	
Silica Gel Cleanu	ŋ					
Diesel Range Orga		2.2	1.0	mg/Kg	8015B	

#### **METHOD SUMMARY**

Client: Chemical Data Management

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Ultrasonic Extraction	TAL SF		SW846 3550B
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
Matrix: Water			
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Sample Filtration	TAL SF		FILTRATION
Liquid-Liquid Extraction (Separatory Funnel)	TAL SF		SW846 3510C SGC
Metals (ICP)	TAL SF	SW846 6010B	
Sample Filtration	TAL SF		FILTRATION
Preparation, Soluble	TAL SF		Soluble Metals

#### Lab References:

TAL SF = TestAmerica San Francisco

#### **Method References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Job Number: 720-16931-1

# **SAMPLE SUMMARY**

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-16931-1	SB-101 3'-4'	Solid	11/14/2008 1200	11/14/2008 1735
720-16931-2	SB-101 7'-8'	Solid	11/14/2008 1200	11/14/2008 1735
720-16931-3	SB-101 11'-12'	Solid	11/14/2008 1200	11/14/2008 1735
720-16931-4	SB-101 15'-16'	Solid	11/14/2008 1200	11/14/2008 1735
720-16931-5	SB-102 3'-4'	Solid	11/14/2008 1250	11/14/2008 1735
720-16931-6	SB-102 7'-8'	Solid	11/14/2008 1250	11/14/2008 1735
720-16931-7	SB-102 11'-12'	Solid	11/14/2008 1250	11/14/2008 1735
720-16931-8	SB-102 15'-16'	Solid	11/14/2008 1250	11/14/2008 1735
720-16931-9	SB-103 3'-4'	Solid	11/14/2008 1400	11/14/2008 1735
720-16931-10	SB-103 7'-8'	Solid	11/14/2008 1400	11/14/2008 1735
720-16931-11	SB-103 11'-12'	Solid	11/14/2008 1400	11/14/2008 1735
720-16931-12	SB-103 15'-16'	Solid	11/14/2008 1400	11/14/2008 1735
720-16931-13	SB-111 0'-1'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-14	SB-111 3'-4'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-15	SB-111 5'-6'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-16	SB-111 7'-8'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-17	SB-111 9'-10'	Solid	11/14/2008 1510	11/14/2008 1735
720-16931-18	SB-112 3'-4'	Solid	11/14/2008 1555	11/14/2008 1735
720-16931-19	W-101	Water	11/14/2008 1200	11/14/2008 1735
720-16931-20	W-102	Water	11/14/2008 1250	11/14/2008 1735
720-16931-21	W-103	Water	11/14/2008 1445	11/14/2008 1735
720-16931-22	W-111	Water	11/14/2008 1545	11/14/2008 1735
720-16931-23	SB-112 7'-8'	Solid	11/14/2008 1555	11/14/2008 1735

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-101 3'-4'

 Lab Sample ID:
 720-16931-1
 Date Sampled:
 11/14/2008 1200

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.03 g
Date Analyzed: 11/19/2008 1113 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	85		1.0
Motor Oil Range Organics [C24-C3	36] 58		50
C19-C36	150		50
Surrogate	%Rec		Acceptance Limits
Commin Anial (Crum)	1		Λ Ε

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-101 7'-8'

 Lab Sample ID:
 720-16931-2
 Date Sampled:
 11/14/2008 1200

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.41 g
Date Analyzed: 11/19/2008 1139 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RL

Diesel Range Organics [C10-C28] ND 0.99

Motor Oil Range Organics [C24-C36] ND 49

C19-C36 ND 49

 Surrogate
 %Rec
 Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 77
 41 - 105

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-101 11'-12'

 Lab Sample ID:
 720-16931-3
 Date Sampled:
 11/14/2008 1200

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.12 g
Date Analyzed: 11/19/2008 1206 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28	] ND		1.0
Motor Oil Range Organics [C24-C	:36] ND		50
C19-C36	ND		50

Surrogate	%Rec	Acceptance Limits
Capric Acid (Surr)	0	0 - 5
p-Terphenyl	83	41 - 105

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-101 15'-16'

 Lab Sample ID:
 720-16931-4
 Date Sampled:
 11/14/2008 1200

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.08 g
Date Analyzed: 11/19/2008 1233 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

DryWt Corrected: N Result (mg/Kg) Qualifier Analyte RL Diesel Range Organics [C10-C28] ND 1.0 Motor Oil Range Organics [C24-C36] ND 50 C19-C36 ND 50 Surrogate %Rec Acceptance Limits

 Surrogate
 %Rec
 Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 86
 41 - 105

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-102 3'-4'

 Lab Sample ID:
 720-16931-5
 Date Sampled:
 11/14/2008 1250

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.07 g
Date Analyzed: 11/19/2008 1300 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Commin Anial (Cross)	0		^ <i>F</i>

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-102 7'-8'

p-Terphenyl

 Lab Sample ID:
 720-16931-6
 Date Sampled:
 11/14/2008 1250

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.02 g
Date Analyzed: 11/19/2008 1327 Final Weight/Volume: 5 mL

79

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	13		1.0
Motor Oil Range Organics [C24-C	36] ND		50
C19-C36	52		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-102 11'-12'

p-Terphenyl

 Lab Sample ID:
 720-16931-7
 Date Sampled:
 11/14/2008 1250

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Ratch: 720-43962 Lab File ID: N/A

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.24 g
Date Analyzed: 11/19/2008 1354 Final Weight/Volume: 5 mL

85

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28	] ND		0.99
Motor Oil Range Organics [C24-C	C36] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-102 15'-16'

Lab Sample ID: 720-16931-8 Date Sampled: 11/14/2008 1250 Client Matrix: Solid Date Received: 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: Analysis Batch: 720-44103 Instrument ID: HP DRO5 8015B

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.39 g Date Analyzed: 11/19/2008 2038 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: **PRIMARY** 

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	4.9		0.99
Motor Oil Range Organics [C24-C3	36] ND		49
C19-C36	ND		49
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5
p-Terphenyl	88		41 - 105

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-103 3'-4'

 Lab Sample ID:
 720-16931-9
 Date Sampled:
 11/14/2008 1400

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 2.0 Initial Weight/Volume: 30.43 g
Date Analyzed: 11/19/2008 0925 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	46		2.0
Motor Oil Range Organics [C24-C3	36] 180		99
C19-C36	210		99
Surrogate	%Rec		Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 73
 41 - 105

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-103 7'-8'

 Lab Sample ID:
 720-16931-10
 Date Sampled:
 11/14/2008
 1400

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.11 g
Date Analyzed: 11/19/2008 1728 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte D	OryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	23		1.0
Motor Oil Range Organics [C24-C36]	94		50
C19-C36	110		50
Surrogate	%Rec		Acceptance Limits

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-103 11'-12'

p-Terphenyl

 Lab Sample ID:
 720-16931-11
 Date Sampled:
 11/14/2008 1400

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume:

Dilution: 1.0 Initial Weight/Volume: 30.27 g
Date Analyzed: 11/19/2008 2105 Final Weight/Volume: 5 mL

80

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		0.99
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-103 15'-16'

Lab Sample ID: 720-16931-12 Date Sampled: 11/14/2008 1400 Client Matrix: Solid Date Received: 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: Analysis Batch: 720-44103 Instrument ID: HP DRO5 8015B

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.22 g Date Analyzed: 11/19/2008 2132 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: **PRIMARY** 

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		0.99
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5
p-Terphenyl	86		41 - 105

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 0'-1'

p-Terphenyl

 Lab Sample ID:
 720-16931-13
 Date Sampled:
 11/14/2008 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.42 g
Date Analyzed: 11/19/2008 1635 Final Weight/Volume: 5 mL

77

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	68		0.99
Motor Oil Range Organics [C24-C3	310		49
C19-C36	360		49
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	1		0 - 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 3'-4'

p-Terphenyl

 Lab Sample ID:
 720-16931-14
 Date Sampled:
 11/14/2008 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.48 g
Date Analyzed: 11/19/2008 1755 Final Weight/Volume: 5 mL

81

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	8.6		0.98
Motor Oil Range Organics [C24-C3	B6] 55		49
C19-C36	60		49
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 5'-6'

p-Terphenyl

 Lab Sample ID:
 720-16931-15
 Date Sampled:
 11/14/2008 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.44 g
Date Analyzed: 11/19/2008 1822 Final Weight/Volume: 5 mL

78

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	3.6		0.99
Motor Oil Range Organics [C24-C	36] ND		49
C19-C36	ND		49
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 7'-8'

 Lab Sample ID:
 720-16931-16
 Date Sampled:
 11/14/2008 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Ratch: 720-43962 Lab File ID: N/A

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.05 g
Date Analyzed: 11/19/2008 1849 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	23		1.0
Motor Oil Range Organics [C24-C	36] 70		50
C19-C36	87		50
Surrogate	%Rec		Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 84
 41 - 105

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 9'-10'

 Lab Sample ID:
 720-16931-17
 Date Sampled:
 11/14/2008 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.39 g
Date Analyzed: 11/19/2008 2159 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		0.99
Motor Oil Range Organics [C24-C3	66] ND		49
C19-C36	ND		49
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	Λ		0 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-112 3'-4'

p-Terphenyl

 Lab Sample ID:
 720-16931-18
 Date Sampled:
 11/14/2008 1555

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.24 g
Date Analyzed: 11/19/2008 1916 Final Weight/Volume: 5 mL

69

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	16		0.99
Motor Oil Range Organics [C24-C3	36] 51		50
C19-C36	63		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: W-101

 Lab Sample ID:
 720-16931-19
 Date Sampled:
 11/14/2008 1200

 Client Matrix:
 Water
 Date Received:
 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B Analysis Batch: 720-44141 Instrument ID: HP DRO5

Preparation: 3510C SCC Prep Batch: 720-43948 Lab File ID: N/A

Preparation: 3510C SGC Prep Batch: 720-43948 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 250 mL

Date Analyzed: 11/20/2008 1921 Final Weight/Volume: 1 mL

Date Prepared: 11/17/2008 1744 Injection Volume:

Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	58		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5
p-Terphenyl	44	Χ	46 - 114

46 - 114

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: W-102

p-Terphenyl

Lab Sample ID: 720-16931-20 Date Sampled: 11/14/2008 1250 Client Matrix: Water Date Received: 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B Analysis Batch: 720-44141 HP DRO5 Instrument ID: Preparation: 3510C SGC Prep Batch: 720-43948 Lab File ID: N/A

1.0

Dilution: Initial Weight/Volume: 250 mL Date Analyzed: 11/20/2008 1948 Final Weight/Volume: 1 mL

Date Prepared: 11/17/2008 1744 Injection Volume:

Column ID: **PRIMARY** 

63

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	54		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: W-103

 Lab Sample ID:
 720-16931-21
 Date Sampled:
 11/14/2008
 1445

 Client Matrix:
 Water
 Date Received:
 11/14/2008
 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B Analysis Batch: 720-44141 Instrument ID: HP DRO5

Preparation: 3510C SCC Prep Batch: 720-43948 Lab File ID: N/A

Preparation: 3510C SGC Prep Batch: 720-43948 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 250 mL

Date Analyzed: 11/20/2008 2015 Final Weight/Volume: 1 mL

Date Prepared: 11/17/2008 1744 Injection Volume:

Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	74		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500
	2/ 5		
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5
p-Terphenyl	47		46 - 114

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: W-111

Lab Sample ID: 720-16931-22 Date Sampled: 11/14/2008 1545 Client Matrix: Water Date Received: 11/14/2008 1735

#### 8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B Analysis Batch: 720-44141 HP DRO5 Instrument ID: Preparation:

3510C SGC Prep Batch: 720-43948 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 250 mL Date Analyzed: 11/20/2008 2042 Final Weight/Volume: 1 mL

Date Prepared: 11/17/2008 1744 Injection Volume:

Column ID: **PRIMARY** 

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	91		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5
p-Terphenyl	50		46 - 114

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-112 7'-8'

 Lab Sample ID:
 720-16931-23
 Date Sampled:
 11/14/2008 1555

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44103 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.04 g
Date Analyzed: 11/19/2008 1943 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RL

Diesel Range Organics [C10-C28] 2.2 1.0

Motor Oil Range Organics [C24-C36] ND 50

C19-C36 ND 50

 Surrogate
 %Rec
 Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 79
 41 - 105

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-101 3'-4'

 Lab Sample ID:
 720-16931-1
 Date Sampled:
 11/14/2008 1200

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.05 g

Date Analyzed: 11/19/2008 1330 Final Weight/Volume: 50 mL
Date Prepared: 11/18/2008 0922

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.48 Chromium 17 0.95 Nickel 22 0.95 Lead 12 0.95 Zinc 26 0.95

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-101 7'-8'

 Lab Sample ID:
 720-16931-2
 Date Sampled:
 11/14/2008
 1200

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.02 g

Date Analyzed: 11/19/2008 1333 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.49
Chromium		14		0.98
Nickel		8.2		0.98
Lead		5.2		0.98
Zinc		9.4		0.98

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-101 11'-12'

 Lab Sample ID:
 720-16931-3
 Date Sampled:
 11/14/2008
 1200

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.05 g

Date Analyzed: 11/19/2008 1337 Final Weight/Volume: 50 mL Date Prepared: 11/18/2008 0922

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RL

Allalyte	Dryvit Corrected. IV	rtesuit (mg/rtg)	Qualifier	IXL
Cadmium		ND		0.48
Chromium		8.8		0.95
Nickel		10		0.95
Lead		3.7		0.95
Zinc		14		0.95

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-101 15'-16'

 Lab Sample ID:
 720-16931-4
 Date Sampled:
 11/14/2008
 1200

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: .97 g

Date Analyzed: 11/19/2008 1340 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		16		1.0
Nickel		20		1.0
Lead		6.2		1.0
Zinc		23		1.0

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-102 3'-4'

 Lab Sample ID:
 720-16931-5
 Date Sampled:
 11/14/2008 1250

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: .99 g

Date Analyzed: 11/19/2008 1343 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.51
Chromium		45		1.0
Nickel		60		1.0
Lead		15		1.0
Zinc		33		1.0

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-102 7'-8'

 Lab Sample ID:
 720-16931-6
 Date Sampled:
 11/14/2008
 1250

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.00 g

Date Analyzed: 11/19/2008 1347 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		16		1.0
Nickel		7.8		1.0
Lead		110		1.0
Zinc		70		1.0

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-102 11'-12'

 Lab Sample ID:
 720-16931-7
 Date Sampled:
 11/14/2008 1250

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.00 g

Date Analyzed: 11/19/2008 1351 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		13		1.0
Nickel		9.4		1.0
Lead		5.0		1.0
Zinc		13		1.0

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-102 15'-16'

 Lab Sample ID:
 720-16931-8
 Date Sampled:
 11/14/2008
 1250

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.04 g

Date Analyzed: 11/19/2008 1354 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		11		0.96
Nickel		15		0.96
Lead		7.1		0.96
Zinc		26		0.96

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-103 3'-4'

 Lab Sample ID:
 720-16931-9
 Date Sampled:
 11/14/2008
 1400

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: .95 g

Date Analyzed: 11/19/2008 1357 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.53
Chromium		67		1.1
Nickel		85		1.1
Lead		11		1.1
Zinc		52		1.1

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-103 7'-8'

 Lab Sample ID:
 720-16931-10
 Date Sampled:
 11/14/2008
 1400

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: .96 g

Date Analyzed: 11/19/2008 1412 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		18		1.0
Nickel		9.7		1.0
Lead		150		1.0
Zinc		110		1.0

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-103 11'-12'

 Lab Sample ID:
 720-16931-11
 Date Sampled:
 11/14/2008
 1400

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.04 g

Date Analyzed: 11/19/2008 1415 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		18		0.96
Nickel		23		0.96
Lead		3.7		0.96
Zinc		12		0.96

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-103 15'-16'

 Lab Sample ID:
 720-16931-12
 Date Sampled:
 11/14/2008
 1400

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.00 g

Date Analyzed: 11/19/2008 1419 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		18		1.0
Nickel		23		1.0
Lead		3.9		1.0
Zinc		12		1.0

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 0'-1'

 Lab Sample ID:
 720-16931-13
 Date Sampled:
 11/14/2008 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: .96 g

Date Analyzed: 11/19/2008 1422 Final Weight/Volume: 50 mL

Date Prepared: 11/18/2008 0922

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RLCadmium ND 0.52 Chromium 37 1.0 180 Nickel 1.0 Lead 19 1.0 Method: 6010B Analysis Batch: 720-44130 Instrument ID: Thermo 6500 ICP Prep Batch: 720-43961 Preparation: 3050B Lab File ID: N/A Dilution: 10 Initial Weight/Volume: .96 g Final Weight/Volume: Date Analyzed: 11/21/2008 0921 50 mL Date Prepared: 11/18/2008 0922

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Zinc		920		10

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 3'-4'

 Lab Sample ID:
 720-16931-14
 Date Sampled:
 11/14/2008
 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.01 g

Date Analyzed: 11/19/2008 1426 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		50		0.99
Nickel		69		0.99
Lead		6.6		0.99
Zinc		44		0.99

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 5'-6'

 Lab Sample ID:
 720-16931-15
 Date Sampled:
 11/14/2008
 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.03 g

Date Analyzed: 11/19/2008 1432 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.49
Chromium		26		0.97
Nickel		21		0.97
Lead		29		0.97
Zinc		62		0.97

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 7'-8'

 Lab Sample ID:
 720-16931-16
 Date Sampled:
 11/14/2008
 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: .96 g

Date Analyzed: 11/19/2008 1436 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		15		1.0
Nickel		12		1.0
Lead		49		1.0
Zinc		50		1.0

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-111 9'-10'

 Lab Sample ID:
 720-16931-17
 Date Sampled:
 11/14/2008
 1510

 Client Matrix:
 Solid
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: .96 g

Date Analyzed: 11/19/2008 1439 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		14		1.0
Nickel		8.8		1.0
Lead		10		1.0
Zinc		13		1.0

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-112 3'-4'

 Lab Sample ID:
 720-16931-18
 Date Sampled:
 11/14/2008 1555

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.01 g

Date Analyzed: 11/19/2008 1443 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		13		0.99
Nickel		26		0.99
Lead		13		0.99
Zinc		29		0.99

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: W-101

 Lab Sample ID:
 720-16931-19
 Date Sampled:
 11/14/2008
 1200

 Client Matrix:
 Water
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)-Dissolved

Method: 6010B Analysis Batch: 720-44094 Instrument ID: Varian ICP

Preparation: Soluble Metals Prep Batch: 720-44081 Lab File ID: N/A

Dilution: 1.07 Initial Weight/Volume:

Date Analyzed: 11/20/2008 1153 Final Weight/Volume: 1.0 mL Date Prepared: 11/20/2008 1034

Analyte Result (mg/L) Qualifier RLCadmium ND 0.0020 Chromium ND 0.0050 Nickel 0.12 0.0050 0.0065 0.0050 Lead 0.056 Zinc 0.010

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: W-102

 Lab Sample ID:
 720-16931-20
 Date Sampled:
 11/14/2008
 1250

 Client Matrix:
 Water
 Date Received:
 11/14/2008
 1735

6010B Metals (ICP)-Dissolved

Method: 6010B Analysis Batch: 720-44094 Instrument ID: Varian ICP

Preparation: Soluble Metals Prep Batch: 720-44081 Lab File ID: N/A

Dilution: 1.07 Initial Weight/Volume:

Date Analyzed: 11/20/2008 1157 Final Weight/Volume: 1.0 mL Date Prepared: 11/20/2008 1034

Analyte Result (mg/L) Qualifier RLCadmium ND 0.0020 Chromium 0.014 0.0050 Nickel 0.14 0.0050 0.77 0.0050 Lead Zinc 1.2 0.010

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: W-103

Lab Sample ID: 720-16931-21 Date Sampled: 11/14/2008 1445 Client Matrix: Water Date Received: 11/14/2008 1735

6010B Metals (ICP)-Dissolved

Method: 6010B Analysis Batch: 720-44094 Instrument ID: Varian ICP

Soluble Metals Preparation: Prep Batch: 720-44081 N/A Lab File ID:

Dilution: 1.07 Initial Weight/Volume:

Date Analyzed: 11/20/2008 1201 Final Weight/Volume: 1.0 mL

Date Prepared: 11/20/2008 1034

Analyte	Result (mg/L)	Qualifier	RL
Cadmium	ND		0.0020
Chromium	0.026		0.0050
Nickel	0.38		0.0050
Lead	0.061		0.0050
Zinc	1.4		0.010

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: W-111

 Lab Sample ID:
 720-16931-22
 Date Sampled:
 11/14/2008 1545

 Client Matrix:
 Water
 Date Received:
 11/14/2008 1735

6010B Metals (ICP)-Dissolved

Method: 6010B Analysis Batch: 720-44094 Instrument ID: Varian ICP

Preparation: Soluble Metals Prep Batch: 720-44081 Lab File ID: N/A

Dilution: 1.07 Initial Weight/Volume:

Date Analyzed: 11/20/2008 1204 Final Weight/Volume: 1.0 mL Date Prepared: 11/20/2008 1034

Analyte Result (mg/L) Qualifier RLCadmium ND 0.0020 Chromium ND 0.0050 Nickel 0.42 0.0050 ND 0.0050 Lead Zinc 8.4 0.010

Client: Chemical Data Management Job Number: 720-16931-1

Client Sample ID: SB-112 7'-8'

 Lab Sample ID:
 720-16931-23
 Date Sampled:
 11/14/2008 1555

 Client Matrix:
 Solid
 Date Received:
 11/14/2008 1735

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-43961 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.04 g

Date Analyzed: 11/19/2008 1446 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		70		0.96
Nickel		86		0.96
Lead		7.7		0.96
Zinc		42		0.96

## **DATA REPORTING QUALIFIERS**

Client: Chemical Data Management Job Number: 720-16931-1

Lab Section	Qualifier	Description
GC Semi VOA		
	X	Surrogate exceeds the control limits

Client: Chemical Data Management Job Number: 720-16931-1

#### **QC Association Summary**

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA	·				-
Prep Batch: 720-43948					
LCS 720-43947/2-B	Lab Control Spike	D	Water	3510C SGC	
LCSD 720-43947/3-B	Lab Control Spike Duplicate	D	Water	3510C SGC	
MB 720-43947/1-B	Method Blank	D	Water	3510C SGC	
720-16931-19	W-101	D	Water	3510C SGC	
720-16931-20	W-102	D	Water	3510C SGC	
720-16931-21	W-103	D	Water	3510C SGC	
720-16931-22	W-111	D	Water	3510C SGC	
Prep Batch: 720-43962					
MB 720-43962/1-A	Method Blank	Α	Solid	3550B	
720-16931-1	SB-101 3'-4'	Α	Solid	3550B	
720-16931-2	SB-101 7'-8'	Α	Solid	3550B	
720-16931-3	SB-101 11'-12'	Α	Solid	3550B	
720-16931-3MS	Matrix Spike	Α	Solid	3550B	
720-16931-3MSD	Matrix Spike Duplicate	Α	Solid	3550B	
720-16931-4	SB-101 15'-16'	Α	Solid	3550B	
720-16931-5	SB-102 3'-4'	Α	Solid	3550B	
720-16931-6	SB-102 7'-8'	Α	Solid	3550B	
720-16931-7	SB-102 11'-12'	Α	Solid	3550B	
720-16931-8	SB-102 15'-16'	Α	Solid	3550B	
720-16931-9	SB-103 3'-4'	Α	Solid	3550B	
720-16931-10	SB-103 7'-8'	Α	Solid	3550B	
720-16931-11	SB-103 11'-12'	Α	Solid	3550B	
720-16931-12	SB-103 15'-16'	Α	Solid	3550B	
720-16931-13	SB-111 0'-1'	Α	Solid	3550B	
720-16931-14	SB-111 3'-4'	Α	Solid	3550B	
720-16931-15	SB-111 5'-6'	Α	Solid	3550B	
720-16931-16	SB-111 7'-8'	Α	Solid	3550B	
720-16931-17	SB-111 9'-10'	Α	Solid	3550B	
720-16931-18	SB-112 3'-4'	A	Solid	3550B	
720-16931-23	SB-112 7'-8'	Α	Solid	3550B	

Client: Chemical Data Management Job Number: 720-16931-1

# **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:720-44	4103				
MB 720-43962/1-A	Method Blank	Α	Solid	8015B	720-43962
720-16931-1	SB-101 3'-4'	Α	Solid	8015B	720-43962
720-16931-2	SB-101 7'-8'	Α	Solid	8015B	720-43962
720-16931-3	SB-101 11'-12'	Α	Solid	8015B	720-43962
720-16931-3MS	Matrix Spike	Α	Solid	8015B	720-43962
720-16931-3MSD	Matrix Spike Duplicate	Α	Solid	8015B	720-43962
720-16931-4	SB-101 15'-16'	Α	Solid	8015B	720-43962
720-16931-5	SB-102 3'-4'	Α	Solid	8015B	720-43962
720-16931-6	SB-102 7'-8'	Α	Solid	8015B	720-43962
720-16931-7	SB-102 11'-12'	Α	Solid	8015B	720-43962
720-16931-8	SB-102 15'-16'	Α	Solid	8015B	720-43962
720-16931-9	SB-103 3'-4'	Α	Solid	8015B	720-43962
720-16931-10	SB-103 7'-8'	Α	Solid	8015B	720-43962
720-16931-11	SB-103 11'-12'	Α	Solid	8015B	720-43962
720-16931-12	SB-103 15'-16'	Α	Solid	8015B	720-43962
720-16931-13	SB-111 0'-1'	Α	Solid	8015B	720-43962
720-16931-14	SB-111 3'-4'	Α	Solid	8015B	720-43962
720-16931-15	SB-111 5'-6'	Α	Solid	8015B	720-43962
720-16931-16	SB-111 7'-8'	Α	Solid	8015B	720-43962
720-16931-17	SB-111 9'-10'	Α	Solid	8015B	720-43962
720-16931-18	SB-112 3'-4'	Α	Solid	8015B	720-43962
720-16931-23	SB-112 7'-8'	Α	Solid	8015B	720-43962
Analysis Batch:720-44	4141				
LCS 720-43947/2-B	Lab Control Spike	D	Water	8015B	720-43948
LCSD 720-43947/3-B	Lab Control Spike Duplicate	D	Water	8015B	720-43948
MB 720-43947/1-B	Method Blank	D	Water	8015B	720-43948
720-16931-19	W-101	D	Water	8015B	720-43948
720-16931-20	W-102	D	Water	8015B	720-43948
720-16931-21	W-103	D	Water	8015B	720-43948
720-16931-22	W-111	D	Water	8015B	720-43948

#### Report Basis

D = Dissolved

A = Silica Gel Cleanup

Client: Chemical Data Management Job Number: 720-16931-1

#### **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-43961					
LCS 720-43961/2-A	Lab Control Spike	Т	Solid	3050B	
LCSD 720-43961/3-A	Lab Control Spike Duplicate	Т	Solid	3050B	
LCSSRM 720-43961/26-A	LCS-Standard Reference Material	T	Solid	3050B	
MB 720-43961/1-A	Method Blank	Т	Solid	3050B	
720-16931-1	SB-101 3'-4'	Т	Solid	3050B	
720-16931-2	SB-101 7'-8'	Т	Solid	3050B	
720-16931-3	SB-101 11'-12'	Т	Solid	3050B	
720-16931-4	SB-101 15'-16'	Т	Solid	3050B	
720-16931-5	SB-102 3'-4'	Т	Solid	3050B	
720-16931-6	SB-102 7'-8'	Т	Solid	3050B	
720-16931-7	SB-102 11'-12'	Т	Solid	3050B	
720-16931-8	SB-102 15'-16'	Т	Solid	3050B	
720-16931-9	SB-103 3'-4'	Т	Solid	3050B	
720-16931-10	SB-103 7'-8'	Т	Solid	3050B	
720-16931-11	SB-103 11'-12'	T	Solid	3050B	
720-16931-12	SB-103 15'-16'	Т	Solid	3050B	
720-16931-13	SB-111 0'-1'	T	Solid	3050B	
720-16931-14	SB-111 3'-4'	T	Solid	3050B	
720-16931-15	SB-111 5'-6'	T	Solid	3050B	
720-16931-16	SB-111 7'-8'	T	Solid	3050B	
720-16931-17	SB-111 9'-10'	T	Solid	3050B	
720-16931-18	SB-112 3'-4'	T	Solid	3050B	
720-16931-23	SB-112 7'-8'	T	Solid	3050B	

Client: Chemical Data Management Job Number: 720-16931-1

# **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:720-44062	1				
LCS 720-43961/2-A	Lab Control Spike	T	Solid	6010B	720-43961
LCSD 720-43961/3-A	Lab Control Spike Duplicate	T	Solid	6010B	720-43961
LCSSRM 720-43961/26-A	LCS-Standard Reference Material	T	Solid	6010B	720-43961
MB 720-43961/1-A	Method Blank	Т	Solid	6010B	720-43961
720-16931-1	SB-101 3'-4'	T	Solid	6010B	720-43961
720-16931-2	SB-101 7'-8'	T	Solid	6010B	720-43961
720-16931-3	SB-101 11'-12'	T	Solid	6010B	720-43961
720-16931-4	SB-101 15'-16'	T	Solid	6010B	720-43961
720-16931-5	SB-102 3'-4'	Т	Solid	6010B	720-43961
720-16931-6	SB-102 7'-8'	T	Solid	6010B	720-43961
720-16931-7	SB-102 11'-12'	Т	Solid	6010B	720-43961
720-16931-8	SB-102 15'-16'	Т	Solid	6010B	720-43961
720-16931-9	SB-103 3'-4'	Т	Solid	6010B	720-43961
720-16931-10	SB-103 7'-8'	T	Solid	6010B	720-43961
720-16931-11	SB-103 11'-12'	T	Solid	6010B	720-43961
720-16931-12	SB-103 15'-16'	Ť	Solid	6010B	720-43961
720-16931-13	SB-111 0'-1'	T	Solid	6010B	720-43961
720-16931-14	SB-111 3'-4'	Ť	Solid	6010B	720-43961
720-16931-15	SB-111 5'-6'	T	Solid	6010B	720-43961
720-16931-16	SB-111 7'-8'	Ť	Solid	6010B	720-43961
720-16931-17	SB-111 9'-10'	T	Solid	6010B	720-43961
720-16931-18	SB-112 3'-4'	Ť	Solid	6010B	720-43961
720-16931-23	SB-112 7'-8'	T	Solid	6010B	720-43961
Dran Batala 720 44094					
Prep Batch: 720-44081 LCS 720-44081/2-A	Lab Control Cnika	C	Water	Soluble Metals	
	Lab Control Spike	S			
LCSD 720-44081/3-A	Lab Control Spike Duplicate Method Blank	S D	Water	Soluble Metals Soluble Metals	
MB 720-43953/1-B			Water		
720-16931-19 720-16931-19	W-101	D	Water	Soluble Metals	
720-16931-19MS	Matrix Spike	D	Water	Soluble Metals	
720-16931-19MSD	Matrix Spike Duplicate	D	Water	Soluble Metals	
720-16931-20	W-102	D	Water	Soluble Metals	
720-16931-21	W-103	D	Water	Soluble Metals	
720-16931-22	W-111	D	Water	Soluble Metals	
Analysis Batch:720-44094					
LCS 720-44081/2-A	Lab Control Spike	S	Water	6010B	720-44081
LCSD 720-44081/3-A	Lab Control Spike Duplicate	S	Water	6010B	720-44081
MB 720-43953/1-B	Method Blank	D	Water	6010B	720-44081
720-16931-19	W-101	D	Water	6010B	720-44081
720-16931-19MS	Matrix Spike	D	Water	6010B	720-44081
720-16931-19MSD	Matrix Spike Duplicate	D	Water	6010B	720-44081
720-16931-20	W-102	D	Water	6010B	720-44081
720-16931-21	W-103	D	Water	6010B	720-44081
720-16931-22	W-111	D	Water	6010B	720-44081

Client: Chemical Data Management Job Number: 720-16931-1

## **QC Association Summary**

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:720-720-16931-13	<b>-44130</b> SB-111 0'-1'	Т	Solid	6010B	720-43961

#### Report Basis

D = Dissolved

S = Soluble

T = Total

Job Number: 720-16931-1 Client: Chemical Data Management

Method Blank - Batch: 720-43948 Method: 8015B

Preparation: 3510C SGC

Dissolved

Lab Sample ID: MB 720-43947/1-B

Client Matrix: Water Dilution: 1.0

Date Analyzed: 11/20/2008 1853 Date Prepared: 11/17/2008 1744 Analysis Batch: 720-44141 Prep Batch: 720-43948

Units: ug/L

Instrument ID: HP DRO5 Lab File ID: N/A

Initial Weight/Volume: 250 mL Final Weight/Volume: 1 mL

Injection Volume:

Column ID: **PRIMARY** 

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500
Surrogate	% Rec	Acceptance Limits	
Capric Acid (Surr)	0	0 - 5	
p-Terphenyl	68	46 - 114	

Lab Control Spike/ Method: 8015B

Lab Control Spike Duplicate Recovery Report - Batch: 720-43948 Preparation: 3510C SGC

**Dissolved** 

LCS Lab Sample ID: LCS 720-43947/2-B Analysis Batch: 720-44141 Instrument ID: HP DRO5

Client Matrix: Water Prep Batch: 720-43948 Lab File ID: N/A

Dilution: Units: ug/L Initial Weight/Volume: 1.0 250 mL Date Analyzed: 11/20/2008 1759 Final Weight/Volume: 1 mL

Injection Volume: Date Prepared: 11/17/2008 1744

Column ID: **PRIMARY** 

Analysis Batch: 720-44141 Instrument ID: LCSD Lab Sample ID: LCSD 720-43947/3-B HP DRO5

Client Matrix: Prep Batch: 720-43948 Water Lab File ID: N/A Dilution:

1.0 Units: ug/L Initial Weight/Volume: 250 mL Date Analyzed: 11/20/2008 1826 Final Weight/Volume: 1 mL

Date Prepared: 11/17/2008 1744 Injection Volume:

Column ID: **PRIMARY** 

% Rec. **RPD** RPD Limit LCS Qual LCSD Qual Analyte LCS **LCSD** Limit Diesel Range Organics [C10-C28] 71 71 41 - 103 0 30 Surrogate LCS % Rec LCSD % Rec Acceptance Limits p-Terphenyl 81 80 46 - 114

Client: Chemical Data Management Job Number: 720-16931-1

Method Blank - Batch: 720-43962 Method: 8015B
Preparation: 3550B
Silica Gel Cleanup

Lab Sample ID: MB 720-43962/1-A Analysis Batch: 720-44103 Instrument ID: HP DRO5 Client Matrix: Solid Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 30.26 g

Date Analyzed: 11/19/2008 1046 Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 Injection Volume:

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

 Analyte
 Result
 Qual
 RL

 Diesel Range Organics [C10-C28]
 ND
 0.99

 Motor Oil Range Organics [C24-C36]
 ND
 50

 C19-C36
 ND
 50

 Surrogate
 % Rec
 Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 95
 41 - 105

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-43962
Method: 8015B
Preparation: 3550B
Silica Gel Cleanup

MS Lab Sample ID: 720-16931-3 Analysis Batch: 720-44103 Instrument ID: HP DRO5

Client Matrix: Solid Prep Batch: 720-43962 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.15 g
Date Analyzed: 11/19/2008 2226 Final Weight/Volume: 5 mL

Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID:

**PRIMARY** 

MSD Lab Sample ID: 720-16931-3 Analysis Batch: 720-44103 Instrument ID: HP DRO5

Client Matrix: Solid Prep Batch: 720-43962 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 30

Dilution: 1.0 Initial Weight/Volume: 30.27 g
Date Analyzed: 11/19/2008 2253 Final Weight/Volume: 5 mL
Date Prepared: 11/18/2008 1212 Injection Volume:

Column ID: PRIMARY

<u>% Rec.</u>

MS **RPD** Analyte **MSD** Limit **RPD Limit** MS Qual MSD Qual Diesel Range Organics [C10-C28] 75 79 50 - 130 30 MS % Rec Surrogate MSD % Rec Acceptance Limits 41 - 105 p-Terphenyl 89 90

Lab File ID:

N/A

Client: Chemical Data Management Job Number: 720-16931-1

Method Blank - Batch: 720-43961 Method: 6010B Preparation: 3050B

Lab Sample ID: MB 720-43961/1-A Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-43961 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 1.01 g

Date Analyzed: 11/19/2008 1557 Final Weight/Volume: 50 mL Date Prepared: 11/18/2008 0922

Analyte	Result	Qual	RL
Cadmium	ND		0.50
Chromium	ND		0.99
Nickel	ND		0.99
Lead	ND		0.99
Zinc	ND		0.99

LCS-Standard Reference Material - Batch: 720-43961 Method: 6010B Preparation: 3050B

Lab Sample ID: LCSSRM 720-43961/26-A Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-43961
Dilution: 1.0 Units: mg/Kg

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 1.02 g
Date Analyzed: 11/19/2008 1537 Final Weight/Volume: 50 mL

Date Analyzed: 11/19/2008 1537 Final Weight/Volume: 50 mL Date Prepared: 11/18/2008 0922

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cadmium	42.2	37.7	89	67 - 118	
Chromium	246	220	89	67 - 121	
Nickel	96.8	84.8	88	65 - 117	
Lead	44.1	36.9	84	62 - 113	
Zinc	44.0	37.3	85	62 - 110	

Client: Chemical Data Management Job Number: 720-16931-1

Lab Control Spike/ Method: 6010B
Lab Control Spike Duplicate Recovery Report - Batch: 720-43961 Preparation: 3050B

LCS Lab Sample ID: LCS 720-43961/2-A

Client Matrix: Solid Dilution: 1.0

Date Analyzed: 11/19/2008 1601 Date Prepared: 11/18/2008 0922 Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Prep Batch: 720-43961 Lab File ID: N/A

Units: mg/Kg Initial Weight/Volume: .99 g Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-43961/3-A

Client Matrix: Solid Dilution: 1.0

Date Analyzed: 11/19/2008 1604 Date Prepared: 11/18/2008 0922 Analysis Batch: 720-44062 Instrument ID: Thermo 6500 ICP

Prep Batch: 720-43961 Lab File ID: N/A

Units: mg/Kg Initial Weight/Volume: 1.04 g Final Weight/Volume: 50 mL

	<u>%</u>	Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cadmium	93	95	80 - 120	3	20		
Chromium	98	100	80 - 120	3	20		
Nickel	95	96	80 - 120	3	20		
Lead	94	95	80 - 120	3	20		
Zinc	95	96	80 - 120	4	20		

Client: Chemical Data Management Job Number: 720-16931-1

Method Blank - Batch: 720-44081 Method: 6010B

**Preparation: Soluble Metals** 

**Dissolved** 

Lab Sample ID: MB 720-43953/1-B

Client Matrix: Water Dilution: 1.07

Date Analyzed: 11/20/2008 1211 Date Prepared: 11/20/2008 1034 Analysis Batch: 720-44094 Prep Batch: 720-44081

Units: mg/L

Instrument ID: Varian ICP Lab File ID: N/A Initial Weight/Volume:

Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL
Cadmium	ND		0.0020
Chromium	ND		0.0050
Nickel	ND		0.0050
Lead	ND		0.0050
Zinc	ND		0.010

Lab Control Spike/

Lab Control Spike Duplicate Recovery Report - Batch: 720-44081

Method: 6010B

**Preparation: Soluble Metals** 

Soluble

LCS Lab Sample ID: LCS 720-44081/2-A

Client Matrix: Water Dilution: 1.07

Date Analyzed: 11/20/2008 1138 Date Prepared: 11/20/2008 1034 Analysis Batch: 720-44094 Prep Batch: 720-44081

Units: mg/L

Instrument ID: Varian ICP

Lab File ID: N/A Initial Weight/Volume:

Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 720-44081/3-A

Client Matrix: Water Dilution: 1.07

Date Analyzed: 11/20/2008 1142 Date Prepared: 11/20/2008 1034 Analysis Batch: 720-44094

Prep Batch: 720-44081

Units: mg/L

Instrument ID: Varian ICP

Lab File ID: N/A Initial Weight/Volume:

Final Weight/Volume: 1.0 mL

Analyte	LCS	<u>6 Rec.</u> LCSD	Limit	RPD	RPD Limit LCS Qual LCSD Qual
Cadmium	97	98	80 - 120	1	20
Chromium	100	101	80 - 120	1	20
Nickel	98	99	80 - 120	1	20
Lead	99	100	80 - 120	1	20
Zinc	96	97	80 - 120	1	20

Job Number: 720-16931-1 Client: Chemical Data Management

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 720-44081

Method: 6010B

**Preparation: Soluble Metals** 

Dissolved

MS Lab Sample ID: Client Matrix:

720-16931-19 Water

Analysis Batch: 720-44094

Instrument ID: Varian ICP Lab File ID: N/A

Dilution:

1.07

Prep Batch: 720-44081

Initial Weight/Volume:

Date Analyzed: Date Prepared: 11/20/2008 1145 11/20/2008 1034

Final Weight/Volume: 1.0 mL

MSD Lab Sample ID: 720-16931-19

Analysis Batch: 720-44094

Instrument ID: Varian ICP

Client Matrix:

Water

Lab File ID: N/A Initial Weight/Volume:

Dilution:

1.07 11/20/2008 1149 Prep Batch: 720-44081

Final Weight/Volume: 1.0 mL

Date Analyzed: Date Prepared:

Lead

Zinc

11/20/2008 1034

% Rec. MS MSD RPD **RPD Limit** MS Qual MSD Qual Analyte Limit 75 - 125 Cadmium 92 92 1 20 Chromium 98 99 75 - 125 1 20 Nickel 93 94 75 - 125 1 20 75 - 125 93 94 1 20 75 - 125 3 20 88 90

#### Brewer, Melissa

From: Felicia Aristakumara [felicia@cdms.com]

Sent: Monday, November 17, 2008 1:27 PM

To: Brewer, Melissa

Cc: Jim Carro

Subject: Re: Silica gel cleanup

Importance: High

Hi Melissa,

Yes, I think we would like to go ahead and filter anyway, for both TEPH and Metals. Thanks for confirming.

Felicia-

On Nov 17, 2008, at 1:15 PM, Brewer, Melissa wrote:

I'm glad you mentioned the filtering. Our normal Sample Control employee is gone and the person who logged it in didn't notice your note. I didn't notice it either! I understand that Surinder mentioned that we don't normally filter if the sample is preserved. I assume that you decided to go ahead and filter it anyway?? Surinder is not here right now, so I can't ask her about the conversation.

Also, I assume that you want the Metals bottle filtered as well. The woman in Sample Control thought it was only the Diesel bottles, but I think she might have misunderstood. Our computer will report it as "Dissolved Metals" or "Dissolved TEPH" although it is not really dissolved since the acid could have dissolved something that might normally be filterable.

#### **MELISSA BREWER**

**Project Manager** 

(new email address melissa.brewer@testamericainc.com)

#### Test America

THE LEADER IN ENVIRONMENTAL TESTING

1220 Quarry Lane Pleasanton, Ca 94566 Tel 925.484.1919 | Fax 925.600.3002 www.testamericainc.com

----Original Message----

From: Felicia Aristakumara [mailto:felicia@cdms.com]

Sent: Monday, November 17, 2008 1:00 PM

To: Brewer, Melissa

Subject: Silica gel cleanup

Hi Melissa,

# TestAmerica TESTAMERICA San Francisco Chain of Custody 1220 Quarry Lane • Pleasanton CA 94506 4750

1.234567690

Reference #:	113411	

TestA	7	16	r	ic	C	at K	122	MER 0 Qua	ICA arry L	San I	Franc Plea	isco santo	Cha n CA	in <b>of</b> 9456	Cust 66-475	ody 6	R	efere	nce #	: _/	13	41,	/	11/24/2008
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See Terms and Conditions on revers *TestAmerica SF reports 8015M C10*C28		s-C <sub>24</sub> (indi	stry no	irm). De	fault for l	3015B is	Com	pany	AL	- )			Co	mpany						Company	у			- Carrier

# TestAmerica TESTAMERICA San Francisco Chain of Custody 1220 Quarry Lane • Pleasester 2010

Cro-Con

Reference #:	113411
전하하다 생물을 위하는 생각하다 중에 모든	

Company

1/24/2008 Phone: (925) 484-1919 • Fax: (925) 600-3002 Date 11/14/08 Page 2 of 3 THE LEADER IN ENVIRONMENTAL TESTING 3.0 Report To Analysis Request CAPPO 808 Fuel Tests EPA 8260B: CI Gas CI BTEX CI Five Oxyenates CI BCA, EDB CI Ethonel Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: 200.8/6020 Company: ☐ 8015/8021 ☐ 82608 ☐ BTEX ☐ MTBE O Hexavalent Chromium pH (24h hold time for H<sub>2</sub>O) TEPH EPA 8015M\* D. Silica S. Diesel B. Motor Oil G. Other 8310 NO. Address: EPA 8081 EPA 8082 Low Level Metals by EPA. (ICP-MS): GC/MS CAM17 Metats EPA 6010/7470/7471) Phone: Email: SOL W.E.T (STLC) TCLP Bill To: Spec Cond. TSS Sampled By: Oil and Grease (EPA 1664.) EPA 8270 可商 Purgeable A BTEX EPA Pesticides PCBs Àq. Attn: Phone: Sample ID Date Time DD 00 X 3:10 3:10 3:10 3:10 X 3:10 X -112 31-47 3:51 × 3:51 Project Info. Sample Receipt 1) Relinguished by: 2) Relinquished by: 3) Relinquished by: Project Name: 5:35PM # of Containers: Western Force Signature Signature Time Signature Project#: Time. Head Space: 11/14/08 ELICIA AFISTAKUHANA PO#: Printed Name Temp: Printed Name Date Printed Name Date CPMS Credit Card#: Conforms to record: Company Company Company 1) Received by 5 2) Received by: 3) Received by: 72h 48h 24h Other: Day Report: □ Routine □ Level 3 □ Level 4 □ EDD □ State Tank Fund EDF Signature Time Signature Time Special Instructions / Comments: ☐ Global ID Morday (confirm on silica Printed Name Date Printed Name Date See Terms and Conditions on reverse \*TestAmerica SF reports 8015M from C<sub>9</sub>-C<sub>24</sub> (industry norm). Default for 8015B is Company

Company

# TestAmerica TESTAMERICA San Francisco Chain of Custody 1220 Quarry Lane • Pleasanton CA 04500 (1975)

1220 Quarry Lane • Pleasanton CA 94566-4756 Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #:

THE LEADER IN ENVIRONMENTAL TESTING

20. 21, 22

2 11/11/12

Report To		1		-			-9	0									L	Date I	1191	00	_ Page	3_3	_ of <u>≤</u>	1
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Bill To:		Sampled	Ву:	7	-D 8015/8021 D 8260B	Purgeable Aromatics BTEX EPA - □ 8021 □ 82608	TEPH EPA 8015M* O Silica Gei	Fuel Tests &PA 82808: □ Gas □ 8TEX □ Five Oxygnates □ D.CA, EDB □	Purgeable Halocarbons (HVOCs) EPA 8021 by 8250B	Volatile Organics GC/MS (VOCs)	Semivolatiles GC/MS	0.0	□ EPA 8081 □ □ EPA 8082 □	D 8270 D 8310	CAM17 Motals (EPA 6010/7470/7471)	Metals: © Lead O LUFT © RCRA	Low Level Metals by EPA 200.85020 (ICP-MS):	W.E.T (STLC) TCLP	Hoxavalent Chromium pH (24h hold time for H <sub>2</sub> O)	Spec Cond. C	0.0			
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* Please files  * Hold to Mon See Terms and Conditions on revers  TestAmerica SF reports 8015N	aay (	Confi	M D	n Tille	age	()	TA1-52													Printed Name Date				
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																								500011

# **Login Sample Receipt Check List**

Client: Chemical Data Management Job Number: 720-16931-1

List Source: TestAmerica San Francisco

Login Number: 16931 Creator: Bullock, Tracy

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	SEE NARRATIVE
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

E. December 2, 2008 (Sampling Event November 21, 2008)



## **ANALYTICAL REPORT**

Job Number: 720-17028-1

Job Description: Western Forge, Albany

For:

Chemical Data Management 6515 Trinity Court Suite 201 Dublin, CA 94568-2665

Attention: Mr. James Carro

milissa Bruver

Approved for releas Melissa Brewer Project Manager I 12/2/2008 9:43 AM

Melissa Brewer
Project Manager I
melissa.brewer@testamericainc.com
12/02/2008

# Job Narrative 720-J17028-1

#### **Comments**

No additional comments.

#### Receipt

The following samples were collected in an improper preserved containers: W-107,W-108,W-09 and W-105. Client requested samples be filtered even though they were collected in preserved containers.

All other samples were received in good condition within temperature requirements.

#### GC Semi VOA

Method 8015B: Surrogate recovery for the following sample was outside control limits: SB-108 4'-5' (720-17028-17). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

#### Metals

No analytical or quality issues were noted.

#### **Organic Prep**

No analytical or quality issues were noted.

#### **EXECUTIVE SUMMARY - Detections**

Client: Chemical Data Management Job Number: 720-17028-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-17028-1	SB-104 1'-2'				
Chromium		32	1.0	mg/Kg	6010B
Nickel		35	1.0	mg/Kg	6010B
Lead		10	1.0	mg/Kg	6010B
Zinc		34	1.0	mg/Kg	6010B
Silica Gel Cleanup	)				
Diesel Range Orga		2.2	1.0	mg/Kg	8015B
720-17028-2	SB-104 3'-4'				
Chromium		16	0.98	mg/Kg	6010B
Nickel		11	0.98	mg/Kg	6010B
Lead		75	0.98	mg/Kg	6010B
Zinc		120	0.98	mg/Kg	6010B
Silica Gel Cleanup	)				
Diesel Range Orga		6.1	1.0	mg/Kg	8015B
720-17028-3	SB-104 7'-8'				
Chromium		12	1.0	mg/Kg	6010B
Nickel		8.3	1.0	mg/Kg	6010B
Lead		13	1.0	mg/Kg	6010B
Zinc		17	1.0	mg/Kg	6010B
720-17028-4	SB-105 1'-2'				
Chromium		70	1.0	mg/Kg	6010B
Nickel		82	1.0	mg/Kg	6010B
Lead		9.0	1.0	mg/Kg	6010B
Zinc		62	1.0	mg/Kg	6010B
720-17028-5	SB-105 3'-4'				
Chromium		17	0.96	mg/Kg	6010B
Nickel		12	0.96	mg/Kg	6010B
Lead		44	0.96	mg/Kg	6010B
Zinc		62	0.96	mg/Kg	6010B
Silica Gel Cleanup	1				
Diesel Range Orga		3.4	1.0	mg/Kg	8015B
	[]	-	-	5 - 5	

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-17028-6	SB-105 7'-8'				
Chromium		14	0.98	mg/Kg	6010B
Nickel		10	0.98	mg/Kg	6010B
Lead		17	0.98	mg/Kg	6010B
Zinc		35	0.98	mg/Kg	6010B
720-17028-7	SB-106 1'6"-2'6"				
Chromium		53	1.1	mg/Kg	6010B
Nickel		64	1.1	mg/Kg	6010B
Lead		11	1.1	mg/Kg	6010B
Zinc		46	1.1	mg/Kg	6010B
720-17028-8	SB-106 4'-5'				
Chromium		54	1.0	mg/Kg	6010B
Nickel		79	1.0	mg/Kg	6010B
Lead		31	1.0	mg/Kg	6010B
Zinc		67	1.0	mg/Kg	6010B
Silica Gel Cleanup	)				
Diesel Range Orga		1100	10	mg/Kg	8015B
Motor Oil Range Oi		1900	500	mg/Kg	8015B
C19-C36		2800	500	mg/Kg	8015B
720-17028-9	SB-106 7'-8'				
Chromium		12	0.97	mg/Kg	6010B
Nickel		24	0.97	mg/Kg	6010B
Lead		210	0.97	mg/Kg	6010B
Zinc		200	0.97	mg/Kg	6010B
Silica Gel Cleanup	)				
Diesel Range Orga	nics [C10-C28]	2.8	1.0	mg/Kg	8015B
720-17028-10	SB-109 1'-2'				
Chromium		14	0.96	mg/Kg	6010B
Nickel		12	0.96	mg/Kg	6010B
Lead		160	0.96	mg/Kg	6010B
Zinc		210	0.96	mg/Kg	6010B
Silica Gel Cleanup	)				
Diesel Range Orga		7.6	1.0	mg/Kg	8015B

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-17028-11	SB-109 4'-5'				
Chromium		19	0.95	mg/Kg	6010B
Nickel		14	0.95	mg/Kg	6010B
Lead		120	0.95	mg/Kg	6010B
Zinc		200	0.95	mg/Kg	6010B
Silica Gel Cleanup	,				
Diesel Range Orga	inics [C10-C28]	8.4	1.0	mg/Kg	8015B
720-17028-12	SB-109 7'-8'				
Chromium		13	0.95	mg/Kg	6010B
Nickel		10	0.95	mg/Kg	6010B
Lead		4.8	0.95	mg/Kg	6010B
Zinc		10	0.95	mg/Kg	6010B
720-17028-13	SB-110 1'-2'				
Chromium		25	0.98	mg/Kg	6010B
Nickel		19	0.98	mg/Kg	6010B
Lead		87	0.98	mg/Kg	6010B
Zinc		290	0.98	mg/Kg	6010B
Silica Gel Cleanup	9				
Diesel Range Orga	inics [C10-C28]	1.5	1.0	mg/Kg	8015B
720-17028-14	SB-110 4'-5'				
Chromium	-	17	0.98	mg/Kg	6010B
Nickel		11	0.98	mg/Kg	6010B
Lead		10	0.98	mg/Kg	6010B
Zinc		26	0.98	mg/Kg	6010B
720-17028-15	SB-110 7'-8'				
Chromium	···· ·	13	0.96	ma/Ka	6010B
		13 8.4	0.96 0.96	mg/Kg	
Nickel Lead		8.4 5.3	0.96 0.96	mg/Kg mg/Kg	6010B 6010B
Zinc		5.3 7.8	0.96		6010B
ZIIIC		1.0	0.90	mg/Kg	00100

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-17028-16	SB-108 1'-2'				
Chromium		52	0.96	mg/Kg	6010B
Nickel		59	0.96	mg/Kg	6010B
Lead		12	0.96	mg/Kg	6010B
Zinc		41	0.96	mg/Kg	6010B
Silica Gel Cleanu	)				
Diesel Range Orga		2.6	1.0	mg/Kg	8015B
720-17028-17	SB-108 4'-5'				
Chromium		25	0.95	mg/Kg	6010B
Nickel		24	0.95	mg/Kg	6010B
Lead		65	0.95	mg/Kg	6010B
Zinc		100	0.95	mg/Kg	6010B
Silica Gel Cleanu	7				
Diesel Range Orga		49	1.0	mg/Kg	8015B
Motor Oil Range O		110	50	mg/Kg	8015B
C19-C36		150	50	mg/Kg	8015B
720-17028-18	SB-108 7'-8'				
Chromium		14	0.99	mg/Kg	6010B
Nickel		10	0.99	mg/Kg	6010B
Lead		4.8	0.99	mg/Kg	6010B
Zinc		9.3	0.99	mg/Kg	6010B
720-17028-19	SB-107 1'-2'				
Cadmium		1.3	0.52	mg/Kg	6010B
Chromium		72	1.0	mg/Kg	6010B
Nickel		72	1.0	mg/Kg	6010B
Lead		260	1.0	mg/Kg	6010B
Zinc		580	1.0	mg/Kg	6010B
Silica Gel Cleanu	7				
Diesel Range Orga		5500	50	mg/Kg	8015B
Motor Oil Range O		11000	2500	mg/Kg	8015B
C19-C36		15000	2500	mg/Kg	8015B

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-17028-20	SB-107 3'-4'				
Chromium Nickel Lead Zinc		14 10 23 49	1.0 1.0 1.0 1.0	mg/Kg mg/Kg mg/Kg mg/Kg	6010B 6010B 6010B 6010B
Silica Gel Cleanup					
Diesel Range Orga Motor Oil Range O C19-C36		230 520 700	5.0 250 250	mg/Kg mg/Kg mg/Kg	8015B 8015B 8015B
720-17028-21	SB-107 7'-8'				
Chromium Nickel Lead Zinc		14 11 5.2 12	0.95 0.95 0.95 0.95	mg/Kg mg/Kg mg/Kg mg/Kg	6010B 6010B 6010B 6010B
720-17028-22	W-107				
Dissolved Diesel Range Orga Cadmium Chromium Nickel Lead Zinc	inics [C10-C28]	62 0.0031 0.022 0.48 0.12 1.3	50 0.0020 0.0050 0.0050 0.0050 0.010	ug/L mg/L mg/L mg/L mg/L mg/L	8015B 6010B 6010B 6010B 6010B 6010B
720-17028-23	W-108				
Dissolved Diesel Range Orga Cadmium Chromium Nickel Lead Zinc	nnics [C10-C28]	58 0.0022 0.025 0.076 5.6 0.97	50 0.0020 0.0050 0.0050 0.0050 0.010	ug/L mg/L mg/L mg/L mg/L mg/L	8015B 6010B 6010B 6010B 6010B
720-17028-24	W-109				
<b>Dissolved</b> Zinc		0.018	0.010	mg/L	6010B

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method	
720-17028-25	W-105					
Dissolved						
Diesel Range Orga	nics [C10-C28]	52	50	ug/L	8015B	
Nickel		0.052	0.0050	mg/L	6010B	
Lead		0.0094	0.0050	mg/L	6010B	
Zinc		0.93	0.010	mg/L	6010B	

#### **METHOD SUMMARY**

Client: Chemical Data Management

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Diesel Range Organics (DRO) (GC) Ultrasonic Extraction	TAL SF TAL SF	SW846 8015B	SW846 3550B
Metals (ICP) Preparation, Metals	TAL SF TAL SF	SW846 6010B	SW846 3050B
Matrix: Water			
Diesel Range Organics (DRO) (GC) Sample Filtration Liquid-Liquid Extraction (Separatory Funnel)	TAL SF TAL SF TAL SF	SW846 8015B	FILTRATION SW846 3510C SGC
Metals (ICP) Sample Filtration Preparation, Soluble	TAL SF TAL SF TAL SF	SW846 6010B	FILTRATION Soluble Metals

#### Lab References:

TAL SF = TestAmerica San Francisco

#### **Method References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Job Number: 720-17028-1

# **SAMPLE SUMMARY**

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
	•		•	
720-17028-1	SB-104 1'-2'	Solid	11/21/2008 1030	11/21/2008 1520
720-17028-2	SB-104 3'-4'	Solid	11/21/2008 1030	11/21/2008 1520
720-17028-3	SB-104 7'-8'	Solid	11/21/2008 1030	11/21/2008 1520
720-17028-4	SB-105 1'-2'	Solid	11/21/2008 1025	11/21/2008 1520
720-17028-5	SB-105 3'-4'	Solid	11/21/2008 1025	11/21/2008 1520
720-17028-6	SB-105 7'-8'	Solid	11/21/2008 1025	11/21/2008 1520
720-17028-7	SB-106 1'6"-2'6"	Solid	11/21/2008 0945	11/21/2008 1520
720-17028-8	SB-106 4'-5'	Solid	11/21/2008 0945	11/21/2008 1520
720-17028-9	SB-106 7'-8'	Solid	11/21/2008 0945	11/21/2008 1520
720-17028-10	SB-109 1'-2'	Solid	11/21/2008 0930	11/21/2008 1520
720-17028-11	SB-109 4'-5'	Solid	11/21/2008 0930	11/21/2008 1520
720-17028-12	SB-109 7'-8'	Solid	11/21/2008 0930	11/21/2008 1520
720-17028-13	SB-110 1'-2'	Solid	11/21/2008 0915	11/21/2008 1520
720-17028-14	SB-110 4'-5'	Solid	11/21/2008 0915	11/21/2008 1520
720-17028-15	SB-110 7'-8'	Solid	11/21/2008 0915	11/21/2008 1520
720-17028-16	SB-108 1'-2'	Solid	11/21/2008 0900	11/21/2008 1520
720-17028-17	SB-108 4'-5'	Solid	11/21/2008 0900	11/21/2008 1520
720-17028-18	SB-108 7'-8'	Solid	11/21/2008 0900	11/21/2008 1520
720-17028-19	SB-107 1'-2'	Solid	11/21/2008 0830	11/21/2008 1520
720-17028-20	SB-107 3'-4'	Solid	11/21/2008 0830	11/21/2008 1520
720-17028-21	SB-107 7'-8'	Solid	11/21/2008 0830	11/21/2008 1520
720-17028-22	W-107	Water	11/21/2008 0945	11/21/2008 1520
720-17028-23	W-108	Water	11/21/2008 1000	11/21/2008 1520
720-17028-24	W-109	Water	11/21/2008 1010	11/21/2008 1520
720-17028-25	W-105	Water	11/21/2008 1145	11/21/2008 1520

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-104 1'-2'

 Lab Sample ID:
 720-17028-1
 Date Sampled:
 11/21/2008 1030

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.04 g
Date Analyzed: 11/28/2008 2114 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	2.2		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		Λ Ε

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-104 3'-4'

 Lab Sample ID:
 720-17028-2
 Date Sampled:
 11/21/2008 1030

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.08 g
Date Analyzed: 11/29/2008 0141 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	6.1		1.0
Motor Oil Range Organics [C24-C3	66] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Commin Anial (Cumm)	^		^ F

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-104 7'-8'

 Lab Sample ID:
 720-17028-3
 Date Sampled:
 11/21/2008 1030

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.01 g
Date Analyzed: 11/29/2008 0540 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Surrogate	%Rec		Acceptance Limits
C19-C36	ND		50
Motor Oil Range Organics [C24-C3	86] ND		50
Diesel Range Organics [C10-C28]	ND		1.0
Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-105 1'-2'

 Lab Sample ID:
 720-17028-4
 Date Sampled:
 11/21/2008 1025

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.01 g
Date Analyzed: 11/29/2008 0607 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
O A 1 / O A	^		^ -

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-105 3'-4'

p-Terphenyl

 Lab Sample ID:
 720-17028-5
 Date Sampled:
 11/21/2008 1025

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.06 g
Date Analyzed: 11/29/2008 0207 Final Weight/Volume: 5 mL

79

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

41 - 105

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	3.4		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-105 7'-8'

Lab Sample ID: 720-17028-6 Date Sampled: 11/21/2008 1025 Client Matrix: Solid Date Received: 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Analysis Batch: 720-44490 Instrument ID: HP DRO5 Method: 8015B

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.08 g Date Analyzed: 11/29/2008 0633 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	Λ		0 - 5

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-106 1'6"-2'6"

 Lab Sample ID:
 720-17028-7
 Date Sampled:
 11/21/2008 0945

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.05 g
Date Analyzed: 11/29/2008 0700 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Commin Anial (Cross)	0		^ <i>F</i>

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-106 4'-5'

 Lab Sample ID:
 720-17028-8
 Date Sampled:
 11/21/2008 0945

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 10 Initial Weight/Volume: 30.03 g
Date Analyzed: 12/01/2008 1436 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	1100		10
Motor Oil Range Organics [C24-C3	36] 1900		500
C19-C36	2800		500
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5
p-Terphenyl	0	D	41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-106 7'-8'

 Lab Sample ID:
 720-17028-9
 Date Sampled:
 11/21/2008 0945

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.07 g
Date Analyzed: 12/01/2008 1221 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	2.8		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
	2/5		
Surrogate	%Rec		Acceptance Limits

 Surrogate
 %Rec
 Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 58
 41 - 105

41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-109 1'-2'

p-Terphenyl

 Lab Sample ID:
 720-17028-10
 Date Sampled:
 11/21/2008 0930

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Ratch: 720-44391 Lab File ID: N/A

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.08 g
Date Analyzed: 12/01/2008 1315 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

57

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	7.6		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
	2/ 5		
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-109 4'-5'

p-Terphenyl

 Lab Sample ID:
 720-17028-11
 Date Sampled:
 11/21/2008 0930

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.10 g
Date Analyzed: 11/29/2008 0354 Final Weight/Volume: 5 mL

74

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	8.4		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-109 7'-8'

 Lab Sample ID:
 720-17028-12
 Date Sampled:
 11/21/2008 0930

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.05 g
Date Analyzed: 11/29/2008 0726 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 94
 41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-110 1'-2'

 Lab Sample ID:
 720-17028-13
 Date Sampled:
 11/21/2008 0915

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.03 g
Date Analyzed: 11/29/2008 0753 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	1.5		1.0
Motor Oil Range Organics [C24-C3	66] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 5

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-110 4'-5'

 Lab Sample ID:
 720-17028-14
 Date Sampled:
 11/21/2008 0915

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.01 g
Date Analyzed: 11/29/2008 0820 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		1.0
Motor Oil Range Organics [C24-C	36] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 94
 41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-110 7'-8'

 Lab Sample ID:
 720-17028-15
 Date Sampled:
 11/21/2008 0915

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Ratch: 720-44391 Lab File ID: N/A

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.04 g
Date Analyzed: 11/29/2008 0847 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-108 1'-2'

p-Terphenyl

 Lab Sample ID:
 720-17028-16
 Date Sampled:
 11/21/2008 0900

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Ratch: 720-44391 Lab File ID: N/A

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.07 g
Date Analyzed: 11/29/2008 1129 Final Weight/Volume: 5 mL

62

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

41 - 105

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL	
Diesel Range Organics [C10-C28	] 2.6		1.0	
Motor Oil Range Organics [C24-C	C36] ND		50	
C19-C36	ND		50	
Surrogate	%Rec		Acceptance Limits	
Capric Acid (Surr)	0		0 - 5	

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-108 4'-5'

p-Terphenyl

Lab Sample ID: 720-17028-17 Date Sampled: 11/21/2008 0900 Client Matrix: Solid Date Received: 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: Analysis Batch: 720-44490 Instrument ID: HP DRO5 8015B

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.04 g Date Analyzed: 12/01/2008 1342 Final Weight/Volume: 5 mL

39

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: **PRIMARY** 

41 - 105

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	49		1.0
Motor Oil Range Organics [C24-C3	36] 110		50
C19-C36	150		50
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	0		0 - 5

Χ

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-108 7'-8'

 Lab Sample ID:
 720-17028-18
 Date Sampled:
 11/21/2008 0900

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.05 g
Date Analyzed: 11/29/2008 1156 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	ND		1.0
Motor Oil Range Organics [C24-C3	86] ND		50
C19-C36	ND		50
Surrogate	%Rec		Acceptance Limits

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-107 1'-2'

 Lab Sample ID:
 720-17028-19
 Date Sampled:
 11/21/2008 0830

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 50 Initial Weight/Volume: 30.08 g
Date Analyzed: 12/01/2008 1503 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		5500		50
Motor Oil Range Organics [C24-C3	36]	11000		2500
C19-C36		15000		2500

 Surrogate
 %Rec
 Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 0
 D
 41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-107 3'-4'

 Lab Sample ID:
 720-17028-20
 Date Sampled:
 11/21/2008 0830

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44490 Instrument ID: HP DRO5

Preparation: 3550B Prep Ratch: 720-44391 Lab File ID: N/A

Preparation: 3550B Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 5.0 Initial Weight/Volume: 30.02 g
Date Analyzed: 12/01/2008 1409 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]	230		5.0
Motor Oil Range Organics [C24-C3	36] 520		250
C19-C36	700		250
Surrogate	%Rec		Acceptance Limits

 Surrogate
 %Rec
 Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 0
 D
 41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-107 7'-8'

 Lab Sample ID:
 720-17028-21
 Date Sampled:
 11/21/2008 0830

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Silica Gel Cleanup

Method: 8015B Analysis Batch: 720-44448 Instrument ID: HP DRO5

Preparation: 3550B Prep Batch: 720-44354 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.06 g
Date Analyzed: 11/29/2008 0207 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 2006 Injection Volume:

Column ID: PRIMARY

Analyte	DryWt Corrected: N Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28	] ND		1.0
Motor Oil Range Organics [C24-C	36] ND		50
C19-C36	ND		50

 Surrogate
 %Rec
 Acceptance Limits

 Capric Acid (Surr)
 0
 0 - 5

 p-Terphenyl
 88
 41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: W-107

 Lab Sample ID:
 720-17028-22
 Date Sampled:
 11/21/2008 0945

 Client Matrix:
 Water
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B Analysis Batch: 720-44424 Instrument ID: HP DRO5

Preparation: 3510C SGC Prep Batch: 720-44226 Lab File ID: N/A

Preparation: 3510C SGC Prep Batch: 720-44226 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 250 mL Date Analyzed: 11/26/2008 2044 Final Weight/Volume: 1 mL

Date Prepared: 11/24/2008 1910 Injection Volume:

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	62		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	2		0 - 5
p-Terphenyl	51		46 - 114

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: W-108

 Lab Sample ID:
 720-17028-23
 Date Sampled:
 11/21/2008 1000

 Client Matrix:
 Water
 Date Received:
 11/21/2008 1520

8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B Analysis Batch: 720-44424 Instrument ID: HP DRO5

Preparation: 3510C SGC Prep Batch: 720-44226 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 250 mL

Date Analyzed: 11/26/2008 2112 Final Weight/Volume: 1 mL

Date Prepared: 11/24/2008 1910 Injection Volume:

Column ID: PRIMARY

Analyte Result (ug/L) Qualifier RLDiesel Range Organics [C10-C28] 58 50 Motor Oil Range Organics [C24-C36] ND 500 C19-C36 ND 500 Surrogate %Rec Acceptance Limits

 Capric Acid (Surr)
 2
 0 - 5

 p-Terphenyl
 47
 46 - 114

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: W-109

 Lab Sample ID:
 720-17028-24
 Date Sampled:
 11/21/2008 1010

 Client Matrix:
 Water
 Date Received:
 11/21/2008 1520

8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B Analysis Batch: 720-44424 Instrument ID: HP DRO5
Preparation: 3510C SGC Prep Batch: 720-44226 Lab File ID: N/A

reparation: 3510C SGC Prep Batch: 720-44226 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 250 mL

Date Analyzed: 11/26/2008 2138 Final Weight/Volume: 1 mL

Date Prepared: 11/24/2008 1910 Injection Volume:

Column ID: PRIMARY

 Analyte
 Result (ug/L)
 Qualifier
 RL

 Diesel Range Organics [C10-C28]
 ND
 50

 Motor Oil Range Organics [C24-C36]
 ND
 500

 C19-C36
 ND
 500

Surrogate%RecAcceptance LimitsCapric Acid (Surr)00 - 5p-Terphenyl4946 - 114

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: W-105

 Lab Sample ID:
 720-17028-25
 Date Sampled:
 11/21/2008 1145

 Client Matrix:
 Water
 Date Received:
 11/21/2008 1520

#### 8015B Diesel Range Organics (DRO) (GC)-Dissolved

Method: 8015B Analysis Batch: 720-44424 Instrument ID: HP DRO5

Preparation: 3510C SGC Prep Batch: 720-44226 Lab File ID: N/A

Preparation: 3510C SGC Prep Batch: 720-44226 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 250 mL

Date Analyzed: 11/26/2008 2206 Final Weight/Volume: 1 mL

Date Prepared: 11/24/2008 1910 Injection Volume:

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	52		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500
Surrogate	%Rec		Acceptance Limits
Capric Acid (Surr)	1		0 - 5
p-Terphenyl	60		46 - 114

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-104 1'-2'

 Lab Sample ID:
 720-17028-1
 Date Sampled:
 11/21/2008 1030

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 0.98 g

Date Analyzed: 11/26/2008 1128 Final Weight/Volume: 50 mL Date Prepared: 11/25/2008 1303

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.51
Chromium		32		1.0
Nickel		35		1.0
Lead		10		1.0
Zinc		34		1.0

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-104 3'-4'

 Lab Sample ID:
 720-17028-2
 Date Sampled:
 11/21/2008 1030

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.02 g

Date Analyzed: 11/26/2008 1131 Final Weight/Volume: 50 mL Date Prepared: 11/25/2008 1303

Analyte DryWt Corrected: N Result (mg/Kg) Qualifier RL

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-104 7'-8'

 Lab Sample ID:
 720-17028-3
 Date Sampled:
 11/21/2008 1030

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 0.97 g

Date Analyzed: 11/26/2008 1142 Final Weight/Volume: 50 mL

Date Prepared: 11/25/2008 1303

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		12		1.0
Nickel		8.3		1.0
Lead		13		1.0
Zinc		17		1.0

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-105 1'-2'

 Lab Sample ID:
 720-17028-4
 Date Sampled:
 11/21/2008 1025

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 0.98 g

Date Analyzed: 11/26/2008 1146 Final Weight/Volume: 50 mL

Date Prepared: 11/25/2008 1303

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.51
Chromium		70		1.0
Nickel		82		1.0
Lead		9.0		1.0
Zinc		62		1.0

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-105 3'-4'

 Lab Sample ID:
 720-17028-5
 Date Sampled:
 11/21/2008 1025

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.04 g

Date Analyzed: 11/26/2008 1149 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		17		0.96
Nickel		12		0.96
Lead		44		0.96
Zinc		62		0.96

0.98

0.98

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-105 7'-8'

Lead

Zinc

 Lab Sample ID:
 720-17028-6
 Date Sampled:
 11/21/2008 1025

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.02 g

17

35

Date Analyzed: 11/26/2008 1153 Final Weight/Volume: 50 mL Date Prepared: 11/25/2008 1303

 Analyte
 DryWt Corrected: N
 Result (mg/Kg)
 Qualifier
 RL

 Cadmium
 ND
 0.49

 Chromium
 14
 0.98

 Nickel
 10
 0.98

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-106 1'6"-2'6"

 Lab Sample ID:
 720-17028-7
 Date Sampled:
 11/21/2008 0945

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 0.95 g

Date Analyzed: 11/26/2008 1156 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.53
Chromium		53		1.1
Nickel		64		1.1
Lead		11		1.1
Zinc		46		1.1

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-106 4'-5'

 Lab Sample ID:
 720-17028-8
 Date Sampled:
 11/21/2008 0945

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 0.97 g

Date Analyzed: 11/26/2008 1200 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.52
Chromium		54		1.0
Nickel		79		1.0
Lead		31		1.0
Zinc		67		1.0

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-106 7'-8'

 Lab Sample ID:
 720-17028-9
 Date Sampled:
 11/21/2008 0945

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.03 g

Date Analyzed: 11/26/2008 1204 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.49
Chromium		12		0.97
Nickel		24		0.97
Lead		210		0.97
Zinc		200		0.97

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-109 1'-2'

 Lab Sample ID:
 720-17028-10
 Date Sampled:
 11/21/2008 0930

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.04 g

Date Analyzed: 11/26/2008 1207 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		14		0.96
Nickel		12		0.96
Lead		160		0.96
Zinc		210		0.96

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-109 4'-5'

 Lab Sample ID:
 720-17028-11
 Date Sampled:
 11/21/2008 0930

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.05 g

Date Analyzed: 11/26/2008 1211 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		19		0.95
Nickel		14		0.95
Lead		120		0.95
Zinc		200		0.95

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-109 7'-8'

 Lab Sample ID:
 720-17028-12
 Date Sampled:
 11/21/2008 0930

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.05 g

Date Analyzed: 11/26/2008 1215 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		13		0.95
Nickel		10		0.95
Lead		4.8		0.95
Zinc		10		0.95

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-110 1'-2'

 Lab Sample ID:
 720-17028-13
 Date Sampled:
 11/21/2008 0915

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.02 g

Date Analyzed: 11/26/2008 1225 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.49
Chromium		25		0.98
Nickel		19		0.98
Lead		87		0.98
Zinc		290		0.98

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-110 4'-5'

 Lab Sample ID:
 720-17028-14
 Date Sampled:
 11/21/2008 0915

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44282 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.02 g

Date Analyzed: 11/26/2008 1229 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.49
Chromium		17		0.98
Nickel		11		0.98
Lead		10		0.98
Zinc		26		0.98

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-110 7'-8'

 Lab Sample ID:
 720-17028-15
 Date Sampled:
 11/21/2008 0915

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44334 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.04 g

Date Analyzed: 11/26/2008 1706 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		13		0.96
Nickel		8.4		0.96
Lead		5.3		0.96
Zinc		7.8		0.96

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-108 1'-2'

 Lab Sample ID:
 720-17028-16
 Date Sampled:
 11/21/2008 0900

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44334 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.04 g

Date Analyzed: 11/26/2008 1709 Final Weight/Volume: 1.04 g

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		52		0.96
Nickel		59		0.96
Lead		12		0.96
Zinc		41		0.96

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-108 4'-5'

 Lab Sample ID:
 720-17028-17
 Date Sampled:
 11/21/2008 0900

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44334 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.05 g

Date Analyzed: 11/26/2008 1713 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		25		0.95
Nickel		24		0.95
Lead		65		0.95
Zinc		100		0.95

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-108 7'-8'

 Lab Sample ID:
 720-17028-18
 Date Sampled:
 11/21/2008 0900

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44334 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.01 g

Date Analyzed: 11/26/2008 1717 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.50
Chromium		14		0.99
Nickel		10		0.99
Lead		4.8		0.99
Zinc		9.3		0.99

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-107 1'-2'

 Lab Sample ID:
 720-17028-19
 Date Sampled:
 11/21/2008 0830

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44334 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 0.96 g

Date Analyzed: 11/26/2008 1720 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		1.3		0.52
Chromium		72		1.0
Nickel		72		1.0
Lead		260		1.0
Zinc		580		1.0

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-107 3'-4'

 Lab Sample ID:
 720-17028-20
 Date Sampled:
 11/21/2008 0830

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44334 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 0.98 g

Date Analyzed: 11/26/2008 1724 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.51
Chromium		14		1.0
Nickel		10		1.0
Lead		23		1.0
Zinc		49		1.0

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: SB-107 7'-8'

 Lab Sample ID:
 720-17028-21
 Date Sampled:
 11/21/2008 0830

 Client Matrix:
 Solid
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Preparation: 3050B Prep Batch: 720-44334 Lab File ID: N/A
Dilution: 1.0 Initial Weight/Volume: 1.05 g

Date Analyzed: 11/26/2008 1727 Final Weight/Volume: 50 mL

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Cadmium		ND		0.48
Chromium		14		0.95
Nickel		11		0.95
Lead		5.2		0.95
Zinc		12		0.95

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: W-107

 Lab Sample ID:
 720-17028-22
 Date Sampled:
 11/21/2008 0945

 Client Matrix:
 Water
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)-Dissolved

Method: 6010B Analysis Batch: 720-44410 Instrument ID: Varian ICP Preparation: Soluble Metals Prep Batch: 720-44395 Lab File ID: N/A

Preparation: Soluble Metals Prep Batch: 720-44395 Lab File ID: N/Dilution: 1.07 Initial Weight/Volume:

Date Analyzed: 11/28/2008 1015 Final Weight/Volume: 1.0 mL

Date Prepared: 11/28/2008 0528

Analyte Result (mg/L) Qualifier RLCadmium 0.0031 0.0020 Chromium 0.022 0.0050 Nickel 0.48 0.0050 0.12 0.0050 Lead Zinc 1.3 0.010

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: W-108

Lab Sample ID: 720-17028-23 Date Sampled: 11/21/2008 1000 Client Matrix: Date Received: Water 11/21/2008 1520

6010B Metals (ICP)-Dissolved

Method: 6010B Analysis Batch: 720-44410 Instrument ID: Varian ICP N/A

Prep Batch: 720-44395 Preparation: Soluble Metals Lab File ID:

Dilution: 1.07 Initial Weight/Volume:

Date Analyzed: 11/28/2008 1019 Final Weight/Volume: 1.0 mL Date Prepared: 11/28/2008 0528

Analyte Result (mg/L) Qualifier RLCadmium 0.0022 0.0020 Chromium 0.025 0.0050 Nickel 0.076 0.0050 0.0050 Lead 5.6 0.97 Zinc 0.010

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: W-109

 Lab Sample ID:
 720-17028-24
 Date Sampled:
 11/21/2008 1010

 Client Matrix:
 Water
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)-Dissolved

Method: 6010B Analysis Batch: 720-44410 Instrument ID: Varian ICP

Preparation: Soluble Metals Prep Batch: 720-44395 Lab File ID: N/A

Dilution: 1.07 Initial Weight/Volume:

Date Analyzed: 11/28/2008 1023 Final Weight/Volume: 1.0 mL Date Prepared: 11/28/2008 0528

Analyte Result (mg/L) Qualifier RLCadmium ND 0.0020 Chromium ND 0.0050 Nickel ND 0.0050 ND 0.0050 Lead 0.018 Zinc 0.010

Client: Chemical Data Management Job Number: 720-17028-1

Client Sample ID: W-105

 Lab Sample ID:
 720-17028-25
 Date Sampled:
 11/21/2008 1145

 Client Matrix:
 Water
 Date Received:
 11/21/2008 1520

6010B Metals (ICP)-Dissolved

Method: 6010B Analysis Batch: 720-44410 Instrument ID: Varian ICP

Preparation: Soluble Metals Prep Batch: 720-44395 Lab File ID: N/A

Dilution: 1.07 Initial Weight/Volume:

Date Analyzed: 11/28/2008 1027 Final Weight/Volume: 1.0 mL

Date Prepared: 11/28/2008 0528

Analyte Result (mg/L) Qualifier RLCadmium ND 0.0020 Chromium ND 0.0050 Nickel 0.052 0.0050 0.0094 0.0050 Lead 0.93 Zinc 0.010

# **DATA REPORTING QUALIFIERS**

Client: Chemical Data Management Job Number: 720-17028-1

Lab Section	Qualifier	Description
GC Semi VOA		
	X	Surrogate exceeds the control limits
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

# **QC Association Summary**

	-	Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 720-44226					
LCS 720-44218/2-B	Lab Control Spike	D	Water	3510C SGC	
LCSD 720-44218/3-B	Lab Control Spike Duplicate	D	Water	3510C SGC	
MB 720-44218/1-B	Method Blank	D	Water	3510C SGC	
720-17028-22	W-107	D	Water	3510C SGC	
720-17028-23	W-108	D	Water	3510C SGC	
720-17028-24	W-109	D	Water	3510C SGC	
720-17028-25	W-105	D	Water	3510C SGC	
Prep Batch: 720-44354					
LCS 720-44354/2-A	Lab Control Spike	Α	Solid	3550B	
LCSD 720-44354/3-A	Lab Control Spike Duplicate	A	Solid	3550B	
MB 720-44354/1-A	Method Blank	Α	Solid	3550B	
720-17028-21	SB-107 7'-8'	Α	Solid	3550B	
Drop Botoby 720 44204					
<b>Prep Batch: 720-44391</b> LCS 720-44391/2-A	Lab Control Spike	Α	Solid	3550B	
LCS 720-44391/2-A LCSD 720-44391/3-A		A	Solid	3550B 3550B	
MB 720-44391/1-A	Lab Control Spike Duplicate Method Blank	A	Solid	3550B	
720-17028-1	SB-104 1'-2'	A	Solid	3550B 3550B	
720-17028-1 720-17028-1MS		A	Solid	3550B	
720-17028-1MSD	Matrix Spike Matrix Spike Duplicate	A	Solid	3550B 3550B	
720-17028-1W3D 720-17028-2	SB-104 3'-4'	A	Solid	3550B	
720-17028-2 720-17028-3	SB-104 3-4 SB-104 7'-8'	A	Solid	3550B	
720-17028-3 720-17028-4	SB-104 7 -6 SB-105 1'-2'	A	Solid	3550B 3550B	
720-17028- <del>4</del> 720-17028-5	SB-105 1-2 SB-105 3'-4'	A	Solid	3550B 3550B	
720-17028-6	SB-105 3-4 SB-105 7'-8'	A	Solid	3550B 3550B	
720-17028-7 720-17028-7	SB-105 7 -6 SB-106 1'6"-2'6"	A	Solid	3550B 3550B	
720-17028-7 720-17028-8	SB-100 10 -2 0 SB-106 4'-5'	A	Solid	3550B 3550B	
720-17028-9	SB-100 4-3 SB-106 7'-8'	A	Solid	3550B 3550B	
720-17028-10 720-17028-10	SB-100 / -0 SB-109 1'-2'	A	Solid	3550B 3550B	
720-17028-10 720-17028-11	SB-109 1-2 SB-109 4'-5'	A	Solid	3550B	
720-17028-11 720-17028-12	SB-109 4-3 SB-109 7'-8'	A	Solid	3550B 3550B	
720-17028-12 720-17028-13	SB-110 1'-2'	A	Solid	3550B	
720-17028-14 720-17028-15	SB-110 4'-5'	A A	Solid Solid	3550B	
	SB-110 7'-8'	A	Solid	3550B	
720-17028-16 720-17028-17	SB-108 1'-2'	A		3550B	
720-17028-17 720-17028-19	SB-108 4'-5'		Solid	3550B	
720-17028-18 720-17028-10	SB-108 7'-8'	A	Solid	3550B	
720-17028-19	SB-107 1'-2'	A	Solid	3550B	
720-17028-20	SB-107 3'-4'	Α	Solid	3550B	

# **QC Association Summary**

•	•	Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:720-44	424				
LCS 720-44218/2-B	Lab Control Spike	D	Water	8015B	720-44226
LCSD 720-44218/3-B	Lab Control Spike Duplicate	D	Water	8015B	720-44226
MB 720-44218/1-B	Method Blank	D	Water	8015B	720-44226
720-17028-22	W-107	D	Water	8015B	720-44226
720-17028-23	W-108	D	Water	8015B	720-44226
720-17028-24	W-109	D	Water	8015B	720-44226
720-17028-25	W-105	D	Water	8015B	720-44226
Analysis Batch:720-44	448				
_CS 720-44354/2-A	Lab Control Spike	Α	Solid	8015B	720-44354
_CSD 720-44354/3-A	Lab Control Spike Duplicate	A	Solid	8015B	720-44354
MB 720-44354/1-A	Method Blank	A	Solid	8015B	720-44354
720-17028-21	SB-107 7'-8'	A	Solid	8015B	720-44354
Analysis Batch:720-44	400				
LCS 720-44391/2-A	Lab Control Spike	Α	Solid	8015B	720-44391
LCSD 720-44391/3-A	Lab Control Spike Duplicate	A	Solid	8015B	720-44391
MB 720-44391/1-A	Method Blank	A	Solid	8015B	720-44391
720-17028-1	SB-104 1'-2'	A	Solid	8015B	720-44391
720-17028-1MS	Matrix Spike	A	Solid	8015B	720-44391
720-17028-1MS 720-17028-1MSD	Matrix Spike Duplicate	A	Solid	8015B	720-44391
720-17028-1103D 720-17028-2	SB-104 3'-4'	A	Solid	8015B	720-44391
720-17028-2 720-17028-3	SB-104 7'-8'	A	Solid	8015B	720-44391
720-17028-3 720-17028-4	SB-104 7 -6 SB-105 1'-2'	A	Solid	8015B	720-44391
720-17028- <del>4</del> 720-17028-5	SB-105 1'-2 SB-105 3'-4'	A	Solid	8015B	720-44391
720-17028-6	SB-105 5'-4'	A	Solid	8015B	720-44391
720-17028-7 720-17028-7	SB-103 7 -8 SB-106 1'6"-2'6"	A	Solid	8015B	720-44391
720-17028-8	SB-106 4'-5'	A	Solid	8015B	720-44391
720-17028-9	SB-100 4-3 SB-106 7'-8'	Ā	Solid	8015B	720-44391
720-17028-9 720-17028-10	SB-100 7-8 SB-109 1'-2'	A	Solid	8015B	720-44391
720-17028-10 720-17028-11	SB-109 1'-2 SB-109 4'-5'	A	Solid	8015B	720-44391
720-17028-11	SB-109 4-3 SB-109 7'-8'	A	Solid	8015B	720-44391
720-17028-12 720-17028-13	SB-109 7 -6 SB-110 1'-2'	A	Solid	8015B	720-44391
720-17028-14 720-17028-15	SB-110 4'-5'	A A	Solid Solid	8015B	720-44391
720-17028-15 720-17028-16	SB-110 7'-8'	A	Solid	8015B	720-44391
720-17028-16 720-17028-17	SB-108 1'-2'			8015B	720-44391
720-17028-17	SB-108 4'-5'	A	Solid	8015B	720-44391
720-17028-18	SB-108 7'-8'	A	Solid	8015B	720-44391
720-17028-19	SB-107 1'-2'	A	Solid	8015B	720-44391
720-17028-20	SB-107 3'-4'	Α	Solid	8015B	720-44391

#### Report Basis

D = Dissolved

A = Silica Gel Cleanup

#### **TestAmerica San Francisco**

# **QC Association Summary**

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals	·				•
Prep Batch: 720-44282					
LCS 720-44282/2-A	Lab Control Spike	Т	Solid	3050B	
LCSD 720-44282/3-A	Lab Control Spike Duplicate	Т	Solid	3050B	
LCSSRM 720-44282/25-A		Т	Solid	3050B	
MB 720-44282/1-A	Method Blank	T	Solid	3050B	
720-17028-1	SB-104 1'-2'	T	Solid	3050B	
720-17028-2	SB-104 3'-4'	Т	Solid	3050B	
720-17028-3	SB-104 7'-8'	T	Solid	3050B	
720-17028-4	SB-105 1'-2'	Т	Solid	3050B	
720-17028-5	SB-105 3'-4'	Т	Solid	3050B	
720-17028-6	SB-105 7'-8'	Т	Solid	3050B	
720-17028-7	SB-106 1'6"-2'6"	Т	Solid	3050B	
720-17028-8	SB-106 4'-5'	T	Solid	3050B	
720-17028-9	SB-106 7'-8'	Т	Solid	3050B	
720-17028-10	SB-109 1'-2'	Т	Solid	3050B	
720-17028-11	SB-109 4'-5'	Т	Solid	3050B	
720-17028-12	SB-109 7'-8'	Т	Solid	3050B	
720-17028-13	SB-110 1'-2'	Т	Solid	3050B	
720-17028-14	SB-110 4'-5'	T	Solid	3050B	
Prep Batch: 720-44334					
LCS 720-44334/2-A	Lab Control Spike	T	Solid	3050B	
LCSD 720-44334/3-A	Lab Control Spike Duplicate	T	Solid	3050B	
LCSSRM 720-44334/25-A	LCS-Standard Reference Material	T	Solid	3050B	
MB 720-44334/1-A	Method Blank	T	Solid	3050B	
720-17028-15	SB-110 7'-8'	T	Solid	3050B	
720-17028-16	SB-108 1'-2'	T	Solid	3050B	
720-17028-17	SB-108 4'-5'	T	Solid	3050B	
720-17028-18	SB-108 7'-8'	T	Solid	3050B	
720-17028-19	SB-107 1'-2'	T	Solid	3050B	
720-17028-20	SB-107 3'-4'	T	Solid	3050B	
720-17028-21	SB-107 7'-8'	T	Solid	3050B	

# **QC Association Summary**

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:720-4435	53				
LCS 720-44282/2-A	Lab Control Spike	T	Solid	6010B	720-44282
LCSD 720-44282/3-A	Lab Control Spike Duplicate	T	Solid	6010B	720-44282
LCSSRM 720-44282/25-A	LCS-Standard Reference Material	T	Solid	6010B	720-44282
MB 720-44282/1-A	Method Blank	T	Solid	6010B	720-44282
720-17028-1	SB-104 1'-2'	T	Solid	6010B	720-44282
720-17028-2	SB-104 3'-4'	T	Solid	6010B	720-44282
720-17028-3	SB-104 7'-8'	T	Solid	6010B	720-44282
720-17028-4	SB-105 1'-2'	T	Solid	6010B	720-44282
720-17028-5	SB-105 3'-4'	T	Solid	6010B	720-44282
720-17028-6	SB-105 7'-8'	T	Solid	6010B	720-44282
720-17028-7	SB-106 1'6"-2'6"	T	Solid	6010B	720-44282
720-17028-8	SB-106 4'-5'	T	Solid	6010B	720-44282
720-17028-9	SB-106 7'-8'	T	Solid	6010B	720-44282
720-17028-10	SB-109 1'-2'	T	Solid	6010B	720-44282
720-17028-11	SB-109 4'-5'	T	Solid	6010B	720-44282
720-17028-12	SB-109 7'-8'	T	Solid	6010B	720-44282
720-17028-13	SB-110 1'-2'	T	Solid	6010B	720-44282
720-17028-14	SB-110 4'-5'	Т	Solid	6010B	720-44282
Analysis Batch:720-4439	02				
LCS 720-44334/2-A	Lab Control Spike	T	Solid	6010B	720-44334
LCSD 720-44334/3-A	Lab Control Spike Duplicate	T	Solid	6010B	720-44334
LCSSRM 720-44334/25-A	LCS-Standard Reference Material	T	Solid	6010B	720-44334
MB 720-44334/1-A	Method Blank	T	Solid	6010B	720-44334
720-17028-15	SB-110 7'-8'	T	Solid	6010B	720-44334
720-17028-16	SB-108 1'-2'	T	Solid	6010B	720-44334
720-17028-17	SB-108 4'-5'	T	Solid	6010B	720-44334
720-17028-18	SB-108 7'-8'	T	Solid	6010B	720-44334
720-17028-19	SB-107 1'-2'	T	Solid	6010B	720-44334
720-17028-20	SB-107 3'-4'	T	Solid	6010B	720-44334
720-17028-21	SB-107 7'-8'	Т	Solid	6010B	720-44334
Prep Batch: 720-44395					
LCS 720-44395/2-A	Lab Control Spike	S	Water	Soluble Metals	
LCSD 720-44395/3-A	Lab Control Spike Duplicate	S	Water	Soluble Metals	
MB 720-44326/1-C	Method Blank	D	Water	Soluble Metals	
720-17028-22	W-107	D	Water	Soluble Metals	
720-17028-22MS	Matrix Spike	D	Water	Soluble Metals	
720-17028-22MSD	Matrix Spike Duplicate	D	Water	Soluble Metals	
720-17028-23	W-108	D	Water	Soluble Metals	
720-17028-24	W-109	D	Water	Soluble Metals	
720-17028-25	W-105	D	Water	Soluble Metals	

Client: Chemical Data Management Job Number: 720-17028-1

# **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:720-44	410				
LCS 720-44395/2-A	Lab Control Spike	S	Water	6010B	720-44395
LCSD 720-44395/3-A	Lab Control Spike Duplicate	S	Water	6010B	720-44395
MB 720-44326/1-C	Method Blank	D	Water	6010B	720-44395
720-17028-22	W-107	D	Water	6010B	720-44395
720-17028-22MS	Matrix Spike	D	Water	6010B	720-44395
720-17028-22MSD	Matrix Spike Duplicate	D	Water	6010B	720-44395
720-17028-23	W-108	D	Water	6010B	720-44395
720-17028-24	W-109	D	Water	6010B	720-44395
720-17028-25	W-105	D	Water	6010B	720-44395

#### Report Basis

D = Dissolved

S = Soluble

T = Total

**PRIMARY** 

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Client: Chemical Data Management Job Number: 720-17028-1

Method Blank - Batch: 720-44226 Method: 8015B

Preparation: 3510C SGC

**Dissolved** 

Lab Sample ID: MB 720-44218/1-B

Client Matrix: Water Dilution: 1.0

p-Terphenyl

Date Analyzed: 11/26/2008 1707 Date Prepared: 11/24/2008 1549 Analysis Batch: 720-44424 Prep Batch: 720-44226

Units: ug/L

Instrument ID: HP DRO5 Lab File ID: N/A

Initial Weight/Volume: 250 mL Final Weight/Volume: 1 mL

Injection Volume:

Column ID: PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		50
Motor Oil Range Organics [C24-C36]	ND		500
C19-C36	ND		500
Surrogate	% Rec	Acceptance Limits	
Capric Acid (Surr)	0	0 - 5	
p-Terphenyl	76	46 - 114	

Lab Control Spike/ Method: 8015B

Lab Control Spike Duplicate Recovery Report - Batch: 720-44226 Preparation: 3510C SGC

**Dissolved** 

LCS Lab Sample ID: LCS 720-44218/2-B Analysis Batch: 720-44424 Instrument ID: HP DRO5

Client Matrix: Water Prep Batch: 720-44226 Lab File ID: N/A

Dilution: 1.0 Units: ug/L Initial Weight/Volume: 250 mL Date Analyzed: 11/26/2008 1613 Final Weight/Volume: 1 mL

Date Prepared: 11/24/2008 1549 Injection Volume: Column ID:

LCSD Lab Sample ID: LCSD 720-44218/3-B Analysis Batch: 720-44424 Instrument ID: HP DRO5 Client Matrix: Water Prep Batch: 720-44226 Lab File ID: N/A

Dilution: 1.0 Units: ug/L Initial Weight/Volume: 250 mL

Date Analyzed: 11/26/2008 1640 Final Weight/Volume: 1 mL
Date Prepared: 11/24/2008 1549 Injection Volume:

Column ID: PRIMARY

% Rec. **RPD** RPD Limit LCS Qual LCSD Qual Analyte LCS **LCSD** Limit Diesel Range Organics [C10-C28] 59 53 41 - 103 11 30 Surrogate LCS % Rec LCSD % Rec Acceptance Limits

67

Calculations are performed before rounding to avoid round-off errors in calculated results.

64

**PRIMARY** 

Column ID:

Client: Chemical Data Management Job Number: 720-17028-1

Method Blank - Batch: 720-44354 Method: 8015B
Preparation: 3550B
Silica Gel Cleanup

Lab Sample ID: MB 720-44354/1-A Analysis Batch: 720-44448 Instrument ID: HP DRO5 Client Matrix: Solid Prep Batch: 720-44354 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 30.09 g

Date Analyzed: 11/27/2008 0546 Final Weight/Volume: 5 mL Date Prepared: 11/26/2008 1252 Injection Volume:

Qual RLAnalyte Result Diesel Range Organics [C10-C28] ND 1.0 Motor Oil Range Organics [C24-C36] ND 50 C19-C36 ND 50 % Rec Surrogate Acceptance Limits 0 0 - 5Capric Acid (Surr)

p-Terphenyl 94 41 - 105

Lab Control Spike/ Method: 8015B

Lab Control Spike Duplicate Recovery Report - Batch: 720-44354 Preparation: 3550B Silica Gel Cleanup

LCS Lab Sample ID: LCS 720-44354/2-A Analysis Batch: 720-44448 Instrument ID: HP DRO5 Client Matrix: Solid Prep Batch: 720-44354 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 30.08 g

 Date Analyzed:
 11/27/2008 0452
 Final Weight/Volume:
 5 mL

 Date Prepared:
 11/26/2008 1252
 Injection Volume:

Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-44354/3-A Analysis Batch: 720-44448 Instrument ID: HP DRO5

Client Matrix: Solid Prep Batch: 720-44354 Lab File ID: N/A
Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 30.09 g

Date Analyzed: 11/27/2008 0519 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1252 Injection Volume: Column ID: PRIMARY

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% Rec. Analyte LCS **LCSD** Limit **RPD** RPD Limit LCS Qual LCSD Qual Diesel Range Organics [C10-C28] 77 74 50 - 130 30 LCS % Rec LCSD % Rec Surrogate Acceptance Limits p-Terphenyl 89 89 41 - 105

Calculations are performed before rounding to avoid round-off errors in calculated results.

41 - 105

Client: Chemical Data Management Job Number: 720-17028-1

Method Blank - Batch: 720-44391 Method: 8015B
Preparation: 3550B
Silica Gel Cleanup

Lab Sample ID: MB 720-44391/1-A Analysis Batch: 720-44490 Instrument ID: HP DRO5 Client Matrix: Solid Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 30.02 g
Date Analyzed: 11/28/2008 2354 Final Weight/Volume: 5 mL

Date Analyzed: 11/28/2008 2354 Final Weight/Volume: 5 r
Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

Qual RLAnalyte Result Diesel Range Organics [C10-C28] ND 1.0 Motor Oil Range Organics [C24-C36] ND 50 C19-C36 ND 50 Surrogate % Rec Acceptance Limits 0 0 - 5Capric Acid (Surr)

90

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-44391

Method: 8015B
Preparation: 3550B
Silica Gel Cleanup

p-Terphenyl

LCS Lab Sample ID: LCS 720-44391/2-A Analysis Batch: 720-44490 Instrument ID: HP DRO5 Client Matrix: Solid Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 30.04 g

Date Analyzed: 11/28/2008 2301 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume: Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-44391/3-A Analysis Batch: 720-44490 Instrument ID: HP DRO5

Client Matrix: Solid Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 30.03 g
Date Analyzed: 11/28/2008 2327 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

% Rec. Analyte LCS **LCSD** Limit **RPD** RPD Limit LCS Qual LCSD Qual Diesel Range Organics [C10-C28] 80 74 50 - 130 7 30 LCS % Rec LCSD % Rec Surrogate Acceptance Limits p-Terphenyl 83 78 41 - 105

Calculations are performed before rounding to avoid round-off errors in calculated results.

**PRIMARY** 

41 - 105

Column ID:

Client: Chemical Data Management Job Number: 720-17028-1

Matrix Spike/ Method: 8015B
Matrix Spike Duplicate Recovery Report - Batch: 720-44391 Preparation: 3550B
Silica Gel Cleanup

Sinoa Soi Sicana

MS Lab Sample ID: 720-17028-1 Analysis Batch: 720-44490 Instrument ID: HP DRO5 Client Matrix: Solid Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.01 g

Date Analyzed: 11/28/2008 2140 Final Weight/Volume: 5 mL
Date Prepared: 11/26/2008 1826 Injection Volume:

MSD Lab Sample ID: 720-17028-1 Analysis Batch: 720-44490 Instrument ID: HP DRO5

MSD Lab Sample ID: 720-17028-1 Analysis Batch: 720-44490 Instrument ID: HP DRO5

Client Matrix: Solid Prep Batch: 720-44391 Lab File ID: N/A

Dilution: 1.0 Initial Weight/Volume: 30.07 g
Date Analyzed: 11/28/2008 2207 Final Weight/Volume: 5 mL

Date Prepared: 11/26/2008 1826 Injection Volume:

Column ID: PRIMARY

82

p-Terphenyl

% Rec. MS MSD **RPD** MS Qual MSD Qual Analyte Limit **RPD Limit** Diesel Range Organics [C10-C28] 50 - 130 70 58 17 30 Surrogate MS % Rec MSD % Rec Acceptance Limits

70

Lab File ID:

N/A

Job Number: 720-17028-1 Client: Chemical Data Management

Method Blank - Batch: 720-44282 Method: 6010B Preparation: 3050B

Lab Sample ID: MB 720-44282/1-A Analysis Batch: 720-44353 Instrument ID: Thermo 6500 ICP

Client Matrix: Prep Batch: 720-44282 Solid Lab File ID: N/A

Units: mg/Kg Initial Weight/Volume: 0.96 g Dilution: 1.0

Date Analyzed: 11/26/2008 1042 Final Weight/Volume: 50 mL Date Prepared: 11/25/2008 1303

Analyte	Result	Qual	RL
Cadmium	ND		0.52
Chromium	ND		1.0
Nickel	ND		1.0
Lead	ND		1.0
Zinc	ND		1.0

LCS-Standard Reference Material - Batch: 720-44282 Method: 6010B Preparation: 3050B

Instrument ID: Thermo 6500 ICP Lab Sample ID: LCSSRM 720-44282/25-A Analysis Batch: 720-44353

Client Matrix: Solid Prep Batch: 720-44282

Initial Weight/Volume: 1.01 g Dilution: 1.0 Units: mg/Kg

Date Analyzed: 11/26/2008 1232 Final Weight/Volume: 50 mL Date Prepared: 11/25/2008 1304

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cadmium	42.2	39.5	94	67 - 118	
Chromium	246	227	92	67 - 121	
Nickel	96.8	90.7	94	65 - 117	
Lead	44.1	40.0	91	62 - 113	
Zinc	44.0	39.0	89	62 - 110	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Chemical Data Management Job Number: 720-17028-1

Lab Control Spike/ Method: 6010B
Lab Control Spike Duplicate Recovery Report - Batch: 720-44282 Preparation: 3050B

LCS Lab Sample ID: LCS 720-44282/2-A

Client Matrix: Solid Dilution: 1.0

Date Analyzed: 11/26/2008 1046 Date Prepared: 11/25/2008 1303 Analysis Batch: 720-44353 Prep Batch: 720-44282

Units: mg/Kg

Instrument ID: Thermo 6500 ICP

Lab File ID: N/A

Initial Weight/Volume: 0.95 g Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-44282/3-A

Client Matrix: Solid Dilution: 1.0

Date Analyzed: 11/26/2008 1058 Date Prepared: 11/25/2008 1303 Analysis Batch: 720-44353

Prep Batch: 720-44282

Units: mg/Kg

Instrument ID: Thermo 6500 ICP

Lab File ID: N/A

Initial Weight/Volume: 1.00 g Final Weight/Volume: 50 mL

	<u>%</u>	Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cadmium	96	95	80 - 120	6	20		
Chromium	96	95	80 - 120	6	20		
Nickel	97	96	80 - 120	6	20		
Lead	96	96	80 - 120	6	20		
Zinc	97	96	80 - 120	7	20		

Client: Chemical Data Management Job Number: 720-17028-1

Method Blank - Batch: 720-44334 Method: 6010B Preparation: 3050B

Lab Sample ID: MB 720-44334/1-A Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-44334 Lab File ID: N/A

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 1.04 g

Date Prepared: 11/26/2008 0855

Zinc

Date Analyzed: 11/26/2008 1618 Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Cadmium	ND		0.48
Chromium	ND		0.96
Nickel	ND		0.96
Lead	ND		0.96
Zinc	ND		0.96

LCS-Standard Reference Material - Batch: 720-44334 Method: 6010B Preparation: 3050B

Lab Sample ID: LCSSRM 720-44334/25-A Analysis Batch: 720-44392 Instrument ID: Thermo 6500 ICP

Client Matrix: Solid Prep Batch: 720-44334 Lab File ID: N/A

44.0

Dilution: 1.0 Units: mg/Kg Initial Weight/Volume: 1.00 g
Date Analyzed: 11/26/2008 1800 Final Weight/Volume: 50 mL
Date Prepared: 11/26/2008 0855

% Rec. Analyte Spike Amount Result Limit Qual Cadmium 42.2 40.1 95 67 - 118 Chromium 246 248 101 67 - 121 Nickel 96.8 91.5 95 65 - 117 Lead 44.1 41.4 94 62 - 113

38.6

88

62 - 110

Calculations are performed before rounding to avoid round-off errors in calculated results.

Job Number: 720-17028-1 Client: Chemical Data Management

Lab Control Spike/ Method: 6010B Lab Control Spike Duplicate Recovery Report - Batch: 720-44334 Preparation: 3050B

LCS Lab Sample ID: LCS 720-44334/2-A

Client Matrix: Solid Dilution: 1.0

Date Analyzed: 11/26/2008 1621 Date Prepared: 11/26/2008 0855 Analysis Batch: 720-44392

Prep Batch: 720-44334

Units: mg/Kg

Instrument ID: Thermo 6500 ICP

Lab File ID: N/A

Initial Weight/Volume: 1.04 g Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-44334/3-A

Client Matrix: Solid Dilution: 1.0

Date Analyzed: 11/26/2008 1625 Date Prepared: 11/26/2008 0855 Analysis Batch: 720-44392

Prep Batch: 720-44334

Units: mg/Kg

Instrument ID: Thermo 6500 ICP

Lab File ID: N/A

Initial Weight/Volume: 0.97 g Final Weight/Volume: 50 mL

	9	<u> Rec.</u>					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cadmium	90	92	80 - 120	9	20		
Chromium	91	95	80 - 120	11	20		
Nickel	91	93	80 - 120	8	20		
Lead	90	92	80 - 120	9	20		
Zinc	91	92	80 - 120	8	20		

Job Number: 720-17028-1 Client: Chemical Data Management

Method Blank - Batch: 720-44395 Method: 6010B

**Preparation: Soluble Metals** 

Dissolved

Lab Sample ID: MB 720-44326/1-C

Client Matrix: Water Dilution: 1.07

Date Analyzed: 11/28/2008 0952 Date Prepared: 11/28/2008 0528

Analysis Batch: 720-44410 Prep Batch: 720-44395

Units: mg/L

Instrument ID: Varian ICP Lab File ID: N/A Initial Weight/Volume:

Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL
Cadmium	ND		0.0020
Chromium	ND		0.0050
Nickel	ND		0.0050
Lead	ND		0.0050
Zinc	ND		0.010

Lab Control Spike/

Lab Control Spike Duplicate Recovery Report - Batch: 720-44395

Method: 6010B

**Preparation: Soluble Metals** 

Soluble

LCS Lab Sample ID: LCS 720-44395/2-A

Water Client Matrix: Dilution: 1.07

Date Analyzed: 11/28/2008 1000 Date Prepared: 11/28/2008 0528 Analysis Batch: 720-44410 Prep Batch: 720-44395

Units: mg/L

Instrument ID: Varian ICP

Lab File ID: N/A Initial Weight/Volume:

Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 720-44395/3-A

Client Matrix: Water Dilution: 1.07

Date Analyzed: 11/28/2008 1004 Date Prepared: 11/28/2008 0528 Analysis Batch: 720-44410

Prep Batch: 720-44395

Units: mg/L

Instrument ID: Varian ICP

Lab File ID: N/A Initial Weight/Volume:

Final Weight/Volume: 1.0 mL

	<u>%</u>	<u>6 Rec.</u>			
Analyte	LCS	LCSD	Limit	RPD	RPD Limit LCS Qual LCSD Qual
Cadmium	98	98	80 - 120	0	20
Chromium	100	100	80 - 120	0	20
Nickel	97	97	80 - 120	0	20
Lead	99	99	80 - 120	0	20
Zinc	98	98	80 - 120	0	20

Calculations are performed before rounding to avoid round-off errors in calculated results.

Job Number: 720-17028-1 Client: Chemical Data Management

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 720-44395

Method: 6010B

**Preparation: Soluble Metals** 

**Dissolved** 

MS Lab Sample ID: Client Matrix:

720-17028-22 Water

Analysis Batch: 720-44410 Prep Batch: 720-44395

Instrument ID: Varian ICP N/A

Dilution:

1.07

Lab File ID: Initial Weight/Volume:

Date Analyzed: Date Prepared:

11/28/2008 1008

11/28/2008 0528

Final Weight/Volume: 1.0 mL

MSD Lab Sample ID: 720-17028-22

Client Matrix:

Water

Analysis Batch: 720-44410 Prep Batch: 720-44395

Instrument ID: Varian ICP

Dilution:

1.07

Lab File ID: N/A Initial Weight/Volume:

Date Analyzed: Date Prepared: 11/28/2008 1012

11/28/2008 0528

Final Weight/Volume: 1.0 mL

	<u>% F</u>	<u>Rec.</u>				
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual MSD Qual
Cadmium	90	90	75 - 125	0	20	
Chromium	95	95	75 - 125	0	20	
Nickel	88	88	75 - 125	0	20	
Lead	90	90	75 - 125	0	20	
Zinc	85	85	75 - 125	0	20	

## **Login Sample Receipt Check List**

Client: Chemical Data Management Job Number: 720-17028-1

Login Number: 17028 List Source: TestAmerica San Francisco Creator: Caparas, Criselda

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	See Narrative
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



## **ANALYTICAL REPORT**

Job Number: 720-18578-1

Job Description: Western Forge, Albany

For:

Chemical Data Management 6515 Trinity Court Suite 201 Dublin, CA 94568-2665

Attention: Mr. Jamie Hernandez

Approved for release Dimple Sharma Project Manager I 3/26/2009 4:36 PM

Dimple Sharma Project Manager I dimple.sharma@testamericainc.com 03/26/2009

## Job Narrative 720-J18578-1

#### Comments

No additional comments.

#### Receipt

All samples were received in good condition within temperature requirements.

#### Metals

Method(s) 6010B: The laboratory control sample (LCS) for batch 47899 recovered outside acceptance limits for all analytes. There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported. The data reported is estimated based on EPA guidelines.

No other analytical or quality issues were noted.

#### **Organic Prep**

No analytical or quality issues were noted.

## **EXECUTIVE SUMMARY - Detections**

Client: Chemical Data Management Job Number: 720-18578-1

Lab Sample ID Analyte	Client Sample ID	Result / 0	Qualifier	Reporting Limit	Units	Method	
720-18578-1	S-1						
Chromium		0.35	*	0.0050	mg/wipe	6010B	
Nickel		3.4	*	0.050	mg/wipe	6010B	
Lead		0.24	*	0.0050	mg/wipe	6010B	
Zinc		0.68	*	0.0050	mg/wipe	6010B	
720-18578-2	S-2						
Chromium		0.10	*	0.0050	mg/wipe	6010B	
Nickel		0.76	*	0.0050	mg/wipe	6010B	
Lead		0.033	*	0.0050	mg/wipe	6010B	
Zinc		0.15	*	0.0050	mg/wipe	6010B	
720-18578-3	S-3						
Nickel		0.011	*	0.0050	mg/wipe	6010B	
Zinc		0.12	*	0.0050	mg/wipe	6010B	

#### **METHOD SUMMARY**

Client: Chemical Data Management Job Number: 720-18578-1

Description	Lab Location	Method	Preparation Method
Matrix: Wipe			
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
HEM	TAL SF	SW846 9071B	
HEM	TAL SF		SW846 9071B

#### Lab References:

TAL SF = TestAmerica San Francisco

#### **Method References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## **SAMPLE SUMMARY**

Client: Chemical Data Management Job Number: 720-18578-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-18578-1	S-1	Wipe	03/18/2009 1124	03/18/2009 1500
720-18578-2	S-2	Wipe	03/18/2009 1135	03/18/2009 1500
720-18578-3	S-3	Wipe	03/18/2009 1147	03/18/2009 1500
720-18578-4	BLANK	Wipe	03/18/2009 0000	03/18/2009 1500

Client: Chemical Data Management Job Number: 720-18578-1

Client Sample ID: S-1

Lab Sample ID: 720-18578-1 Date Sampled: 03/18/2009 1124

Client Matrix: Wipe Date Received: 03/18/2009 1500

6010B Metals (ICP)

Method: 6010B Analysis Batch: 720-47990 Instrument ID: Varian ICP

Preparation: 3050B Dilution: 1.0

Date Analyzed: 03/24/2009 1835 Date Prepared: 03/23/2009 0958 Prep Batch: 720-47899 Lab File ID: N/A 1 Wipe Initial Weight/Volume: Final Weight/Volume: 50 mL

Qualifier Analyte Result (mg/wipe) RL

Cadmium ND 0.0050 Chromium 0.35 0.0050 0.24 0.0050 Lead Zinc 0.68 0.0050

Analysis Batch: 720-48003 Instrument ID: Varian ICP Method: 6010B Preparation: 3050B Prep Batch: 720-47899 Lab File ID: N/A

Dilution: 10

Date Analyzed: 03/25/2009 1420

Date Prepared: 03/23/2009 0958 Initial Weight/Volume: 1 Wipe Final Weight/Volume: 50 mL

Analyte Result (mg/wipe) Qualifier RL

Nickel 3.4 0.050

Varian ICP

Client: Chemical Data Management Job Number: 720-18578-1

Client Sample ID: S-2

Lab Sample ID: 720-18578-2 Date Sampled: 03/18/2009 1135 Client Matrix: Wipe Date Received: 03/18/2009 1500

6010B Metals (ICP)

Method: 6010B Preparation: 3050B 1.0

Dilution:

Date Analyzed: 03/24/2009 1839 Date Prepared: 03/23/2009 0958 Analysis Batch: 720-47990 Instrument ID: Prep Batch: 720-47899 Lab File ID:

N/A Initial Weight/Volume: 1 Wipe Final Weight/Volume: 50 mL

Analyte	Result (mg/wipe)	Qualifier	RL
Cadmium	ND	*	0.0050
Chromium	0.10	*	0.0050
Nickel	0.76	*	0.0050
Lead	0.033	*	0.0050
Zinc	0.15	*	0.0050

Varian ICP

Client: Chemical Data Management Job Number: 720-18578-1

Client Sample ID: S-3

Lab Sample ID: Date Sampled: 720-18578-3 03/18/2009 1147 Client Matrix: Wipe Date Received: 03/18/2009 1500

6010B Metals (ICP)

Method: 6010B Preparation: 3050B Dilution: 1.0

Date Analyzed: 03/24/2009 1842 Date Prepared: 03/23/2009 0958 Prep Batch: 720-47899

Analysis Batch: 720-47990 Instrument ID: Lab File ID:

N/A Initial Weight/Volume: 1 Wipe Final Weight/Volume: 50 mL

Analyte	Result (mg/wipe)	Qualifier	RL
Cadmium	ND	*	0.0050
Chromium	ND	*	0.0050
Nickel	0.011	*	0.0050
Lead	ND	*	0.0050
Zinc	0.12	*	0.0050

Client: Chemical Data Management Job Number: 720-18578-1

Client Sample ID: BLANK

 Lab Sample ID:
 720-18578-4
 Date Sampled:
 03/18/2009 0000

 Client Matrix:
 Wipe
 Date Received:
 03/18/2009 1500

6010B Metals (ICP)

Method: 6010B
Preparation: 3050B
Dilution: 1.0

Date Analyzed: 03/24/2009 1846 Date Prepared: 03/23/2009 0958

DB Prep Batch: 720-

Analysis Batch: 720-47990 Prep Batch: 720-47899 Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 1 Wipe
Final Weight/Volume: 50 mL

Analyte	Result (mg/wipe)	Qualifier	RL
Cadmium	ND	*	0.0050
Chromium	ND	*	0.0050
Nickel	ND	*	0.0050
Lead	ND	*	0.0050
Zinc	ND	*	0.0050

Client: Chemical Data Management Job Number: 720-18578-1

		General Chemistry	
Client Sample ID:	S-1		
Lab Sample ID:	720-18578-1		Date Sampled: 03/18/2009 1124
Client Matrix:	Wipe		Date Received: 03/18/2009 1500
Analyte	Result	Qual Units	RL Dil Method
HEM	ND	mg/wipe	5.0 1.0 9071B
	Anly Batch: 720-47909	Date Analyzed 03/23/2009 1145	
	Prep Batch: 720-47906	Date Prepared: 03/23/2009 1134	
Client Sample ID:	S-2		
Lab Sample ID:	720-18578-2		Date Sampled: 03/18/2009 1135
Client Matrix:	Wipe		Date Received: 03/18/2009 1500
Analyte	Result	Qual Units	RL Dil Method
HEM	ND	mg/wipe	5.0 1.0 9071B
	Anly Batch: 720-47909	Date Analyzed 03/23/2009 1145	
	Prep Batch: 720-47906	Date Prepared: 03/23/2009 1134	
Client Sample ID:	S-3		
Lab Sample ID:	720-18578-3		Date Sampled: 03/18/2009 1147
Client Matrix:	Wipe		Date Received: 03/18/2009 1500
Analyte	Result	Qual Units	RL Dil Method
HEM	ND	mg/wipe	5.0 1.0 9071B
	Anly Batch: 720-47909	Date Analyzed 03/23/2009 1145	
	Prep Batch: 720-47906	Date Prepared: 03/23/2009 1134	
Client Sample ID:	BLANK		
Lab Sample ID:	720-18578-4		Date Sampled: 03/18/2009 0000
Client Matrix:	Wipe		Date Received: 03/18/2009 1500
A nalvte	Result	Qual Units	RL Dil Method
Analyte HEM	ND		5.0 1.0 9071B
I I⊏IVI	Anly Batch: 720-47909	mg/wipe Date Analyzed 03/23/2009 1145	5.0 1.0 907 IB
	-	,	
	Prep Batch: 720-47906	Date Prepared: 03/23/2009 1134	

## **DATA REPORTING QUALIFIERS**

Client: Chemical Data Management Job Number: 720-18578-1

Lab Section	Qualifier	Description
Metals		
	*	LCS or LCSD exceeds the control limits

Job Number: 720-18578-1 Client: Chemical Data Management

## **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-47899					
LCS 720-47899/2-A	Lab Control Spike	T	Wipe	3050B	
LCSD 720-47899/3-A	Lab Control Spike Duplicate	T	Wipe	3050B	
MB 720-47899/1-A	Method Blank	T	Wipe	3050B	
720-18578-1	S-1	Т	Wipe	3050B	
720-18578-2	S-2	Т	Wipe	3050B	
720-18578-3	S-3	Т	Wipe	3050B	
720-18578-4	BLANK	T	Wipe	3050B	
Analysis Batch:720-4799	0				
LCS 720-47899/2-A	Lab Control Spike	Т	Wipe	6010B	720-47899
LCSD 720-47899/3-A	Lab Control Spike Duplicate	Т	Wipe	6010B	720-47899
MB 720-47899/1-A	Method Blank	Т	Wipe	6010B	720-47899
720-18578-1	S-1	Т	Wipe	6010B	720-47899
720-18578-2	S-2	Т	Wipe	6010B	720-47899
720-18578-3	S-3	T	Wipe	6010B	720-47899
720-18578-4	BLANK	Т	Wipe	6010B	720-47899
Analysis Batch:720-4800	13				
720-18578-1	S-1	T	Wipe	6010B	720-47899

Report Basis T = Total

Job Number: 720-18578-1 Client: Chemical Data Management

## **QC Association Summary**

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 720-47906					
LCS 720-47906/2-A	Lab Control Spike	T	Wipe	9071B	
LCSD 720-47906/3-A	Lab Control Spike Duplicate	Т	Wipe	9071B	
MB 720-47906/1-A	Method Blank	Т	Wipe	9071B	
720-18578-1	S-1	Т	Wipe	9071B	
720-18578-2	S-2	Т	Wipe	9071B	
720-18578-3	S-3	Т	Wipe	9071B	
720-18578-4	BLANK	Т	Wipe	9071B	
Analysis Batch:720-479	909				
LCS 720-47906/2-A	Lab Control Spike	Т	Wipe	9071B	720-47906
LCSD 720-47906/3-A	Lab Control Spike Duplicate	Т	Wipe	9071B	720-47906
MB 720-47906/1-A	Method Blank	Т	Wipe	9071B	720-47906
720-18578-1	S-1	Т	Wipe	9071B	720-47906
720-18578-2	S-2	Т	Wipe	9071B	720-47906
720-18578-3	S-3	Т	Wipe	9071B	720-47906
720-18578-4	BLANK	Т	Wipe	9071B	720-47906

# Report Basis T = Total

Job Number: 720-18578-1 Client: Chemical Data Management

Method Blank - Batch: 720-47899 Method: 6010B Preparation: 3050B

Lab Sample ID: MB 720-47899/1-A Analysis Batch: 720-47990 Instrument ID: Varian ICP

Client Matrix: Wipe Prep Batch: 720-47899 Lab File ID: N/A

Units: mg/wipe Dilution: 1.0 Initial Weight/Volume: 1 Wipe Final Weight/Volume: 50 mL Date Analyzed: 03/24/2009 1824

Qual RL Analyte Result Cadmium ND 0.0050 Chromium ND 0.0050 Nickel ND 0.0050 Lead ND 0.0050 Zinc ND 0.0050

Lab Control Spike/ Method: 6010B Lab Control Spike Duplicate Recovery Report - Batch: 720-47899 Preparation: 3050B

LCS Lab Sample ID: LCS 720-47899/2-A Analysis Batch: 720-47990 Instrument ID: Varian ICP

Prep Batch: 720-47899 Lab File ID: N/A Client Matrix: Wipe

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 Wipe

Date Analyzed: Final Weight/Volume: 03/24/2009 1827 50 mL Date Prepared: 03/23/2009 0958

LCSD Lab Sample ID: LCSD 720-47899/3-A Analysis Batch: 720-47990 Instrument ID: Varian ICP

Client Matrix: Wipe Prep Batch: 720-47899 Lab File ID: N/A

Initial Weight/Volume: 1 Wipe Dilution: 1.0 Units: mg/wipe Date Analyzed: 03/24/2009 1831

Final Weight/Volume: 50 mL Date Prepared: 03/23/2009 0958

Analyte	LCS	Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Cadmium	74	83	80 - 120	12	20	*	
Chromium	76	86	80 - 120	12	20	*	
Nickel	74	83	80 - 120	11	20	*	
Lead	73	82	80 - 120	12	20	*	
Zinc	74	83	80 - 120	12	20	*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Date Prepared: 03/23/2009 0958

Job Number: 720-18578-1 Client: Chemical Data Management

Method Blank - Batch: 720-47906 Method: 9071B Preparation: 9071B

Lab Sample ID: MB 720-47906/1-A Analysis Batch: 720-47909 Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-47906 Lab File ID: N/A

Units: mg/wipe Dilution: 1.0 Initial Weight/Volume: 1 Wipe

Final Weight/Volume: 1 Wipe Date Analyzed: 03/23/2009 1145 Date Prepared: 03/23/2009 1134

Qual RL Analyte Result HEM ND 5.0

Lab Control Spike/ Method: 9071B

Lab Control Spike Duplicate Recovery Report - Batch: 720-47906 Preparation: 9071B

LCS Lab Sample ID: LCS 720-47906/2-A Analysis Batch: 720-47909 Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-47906 Lab File ID: N/A

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 Wipe

Final Weight/Volume: Date Analyzed: 03/23/2009 1145 Wipe Date Prepared: 03/23/2009 1134

LCSD Lab Sample ID: LCSD 720-47906/3-A Analysis Batch: 720-47909 Instrument ID: No Equipment Assigned

Client Matrix: Wipe Prep Batch: 720-47906 Lab File ID: N/A

Dilution: 1.0 Units: mg/wipe Initial Weight/Volume: 1 Wipe Date Analyzed: 03/23/2009 1145 Final Weight/Volume: 1 Wipe

Date Prepared: 03/23/2009 1134

% Rec. Analyte LCS LCSD Limit **RPD** RPD Limit LCS Qual LCSD Qual HEM 96 96 70 - 120 0

Calculations are performed before rounding to avoid round-off errors in calculated results.

# TestAmerica 720-18578 TestAmerica TestAmerica San Francisco Chain of Custody

THE LEADER IN ENVIRONMENTAL TESTING

1220 Quarry Lane • Pleasanton CA 94566-4756 Phone: (925) 484-1919 • Fax: (925) 600-3002 Reference #: \_/15080

Report To				1900		1 3					11	. 1	Analys	sis Re	eques										ini
Attn: Junie Herv Company: CDMS Address: 6515 Triu Phone: 425-551-7300 Bill To: CDMS Attn: Pascrelle Sample ID	ity (	Zawie Zawie ampled vawlie none:	Mat	Pres	TPH EPA - 0.80158021 0.83608 D Gas w/ D BTEX D MTBE	Purgeable Aromatics BTEX EPA - □ 9321 □ 82608	TEPH EPA 8015M*   Silica Gel  Diesel  Motor Oil  Oiher	Fuel Tests EPA 82608: □ Gas □ BTEX □ Five Oxyenstes □ DCA, EDB □	Purgeable Halocarbons (HVOCs) EPA 8021 by 8260B	Volatile Organics GCMS (VOCs)	Semivolatilas GC/MS	Olf and Grease D Petroleum (EPA 1864) W-Total	Pesticides © EPA 5081 © 508 PCBs © EPA 8082 © 808	PNAs by C 8270 C 8310	CAM17 Metals (EPA 6010/7471)	Metals: N Lead D LUFT D RCRA N Other: N Cd, AU; Cq, Zn.	Low Level Metals by EPA 200,8/6020 (ICP-MS):	U W.E.T (STLC)	☐ Hexavalent Chromium ☐ pH (24h hold time for H <sub>2</sub> O)	☐ Spec Cond. ☐ Alkalinity ☐ TDS ☐ TDS ☐	Anions : CI CI CI SO, CI NO, CI F				Number of Containers
5-1	3/18/19	11:24	BW	+								X				X								Z	Z
5-2	1	11:35		-								X				X									Z
S-3 Blank	4	(1:47	&w	-								X				X							_		2
Blank	*		AW					-	-			7				1						-	-		2
								-				3 =										-		-	$\vdash$
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Project Name: WFF- Albany Project#: /OZ730 PO#:		# 01 0	3 Bai	95 (u	viles)	Ē	ignatur		1		Time	11.1	Signat	ure			Time	,	Sig	nature			Time	8	
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## **Login Sample Receipt Check List**

Client: Chemical Data Management Job Number: 720-18578-1

Login Number: 18578 List Source: TestAmerica San Francisco

Creator: Mullen, Joan

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

## VIII. References

Brown and Caldwell. 1984. Western Forge and flange, Albany Facility – Problem Definition Report. Submitted to Western Forge and Flange on July 10, 1984

Hoffman. 2008. Data Evaluation of Materials Related to the Subsurface Environmental Closure of Western Forge & Flange, 540 Cleveland Ave., Albany CA. Prepared for Chemical Data Management Systems, Inc., Dublin, CA (CDMS). December 18, 2008

A. Brown and Caldwell Re	eport. 1984.
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B.	Fred	Hoffman	Geological	<b>Evaluation.</b>	2008.
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# Data Evaluation of Materials Related to the Subsurface Environmental Closure of Western Forge & Flange, 540 Cleveland Ave., Albany CA

Prepared for Chemical Data Management Systems, Inc., Dublin, CA (CDMS)

December 18, 2008

Fredric Hoffman

CA Professional Geologist No. 3929

CA Certified Hydrogeologist No. 83

This evaluation is based on the review of documentation of a 1985 investigation and cleanup of the Western Forge and Flange (WFF) facility in Albany, CA found on the California Department of Toxic Substances Control (CADTSC) Envirostor Website, a Brown and Caldwell report from 1984, and on the geologic and chemical information from 17 hydropunch borings performed in October and November 2008.

#### **Executive Summary**

In the early 1980s Western Forge and Flange process cooling water and storm water runoff containing metals and oils contaminated the shallow subsurface and was discharging to a nearby storm drain. In response and in consort with the environmental regulatory agencies, WFF sampled and removed 200 cubic yards of contaminated sediment from inside and outside the facility and instituted engineering controls at the surface and on their roof to prevent a reoccurrence. (CADOHS. 1987) Verification sampling in January 1985 demonstrated that remaining contaminants in the sediments were below residential standards. (CADTSC. 2002).

In October and November of 2008, CDMS sampled the shallow subsurface both inside and outside the building at 17 locations approved by the Alameda County Environmental Health Department. This investigation found that there is a shallow perched water bearing clay zone beginning between 4 and 6 feet below ground surface (bgs) perched on a dense clay at 10 to 12 feet bgs. This clay is underlain by a dry poorly cemented sand at approximately15 feet bgs. Samples of soil and the perched water were analyzed for metals and total petroleum hydrocarbons (residual fuels) and were found to be very similar to the verification levels found in 1985. There is one relatively small shallow area in the southwestern portion of the building where single samples in two borings exceed the SFRWQCB Environmental Screening Levels in soil for TPH and is a candidate for additional cleanup.

#### 1983 Environmental Release

In September 1983, a Department of Fish and Game Pollution Warden reported oil on the ground at WFF and in water discharging to a storm drain. The CA Department of Health Services (CADOHS), the predecessor of the CADTSC, began an enforcement action and Western Forge contracted with Brown and Caldwell to conduct their investigation. Sampling at the site revealed elevated concentrations of lead, nickel, copper, zinc, and oil and grease in soils outside the building and on the floor of the interior. WFF was fined for the discharge, agreed to cleanup the site, and agreed to a corrective action plan that included cleanup and engineering controls on its process. (CADOHS, 1987).

The Brown and Caldwell subsurface investigation found that the local stratigraphy beneath the site consists of a sandstone that slopes from the east to the west and is overlain by a one foot thick clay bed east of the site and thickening to 14 feet to the west. Water levels, beneath the western part of the facility, were at 5 to 6 feet below ground surface. (Brown and Caldwell. 1984).

Cleanup consisted of the sampling, excavation, and removal of 200 cubic yards of contaminated sediments. Engineering controls included surface and roof collection of contaminated process water and berms and gutters to segregate clean storm runoff from process water. A steam trap and condenser was mounted on the roof, condensate was directed to a separator, and waste oil was collected for disposal. (CADOHS. 1987)

Following the cleanup, sediment verification sampling was conducted in January 1985. The results of this sampling are included in Table 1, which was extracted from (CADOHS. 1987).

Table 1	Western Forge & Flange Albany Site Verification Sample Results,
	Concentration in Milligrams per Kilogram

Sample number	Samnle denth, inches	Conper	Lead	Nickel	Oil and Grease
Inside soils			1		
VI	18 - 24	20	17	15	<50
V 2	6 - 12	66	240	48	240
V3	12 - 18	62	14	95	<50
V4	6 - 12	75	38	88	380
V5	6 - 12	42	64	51	2,180
V8	12 - 13	470	100	320	3,510
V9	16 - 22	140	97	350	1,290
V13	24 - 30	-	-	-	170
V6	6 - 12	110	150	130	640
V7	6 - 12	240	99	560	<50
V10	10 - 16	320	. 87	210	120
V11	10 - 16	2,000	82	2,100	10,700
V15	10 - 24	150	37	460	240
V12	10 - 16	580	50	190	<50
V14	10 - 16	380	180	250	240
V16	18 - 24	27	<13	100	120
V17	6 - 12	110	18	1,900	2,470 /
Outside soils			-		
SV1	12 - 18	8.7	13	32	270
SV2	12 - 18	22	23	63	94
SV3	17 - 23	32	22	210	<50
SV4	6 - 12	29	40	58	<50
SV5	24 - 30	26	15	62	133
TLCa		2,500	1,000	2,000	_
Cleanup levelb	1	1,250	500	1,000	1.000

aTotal threshold limit concentration in millionans per kilogram 22 CAC 66699 January 11, 1985.

Note: Underline indicates concentration exceeding cleanup level.

On August 16, 1985, upon review of the verification sampling report, the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) expressed their satisfaction with the soil cleanup activities. In addition, their review of ground water data

DApproved by State.

from up and down-gradient monitor wells concluded that WFF had not had a significant impact on the underlying shallow aquifer and therefore no further ground water monitoring was needed. In the same letter, the Regional Board also commended WFF for its plan to prevent future releases of waste oil and other contaminants. (CADOHS. 1987)

In a letter dated January 15, 1986, to WFF, the SFRWQCB reiterated their conclusion that the shallow perched groundwater at the site is too saline to be of beneficial use, that the low permeability of the clays containing the ground water would limit the spread of any pollutants, that the pollution problem has been adequately mitigated, and that the site does not pose a significant threat to the beneficial uses of the waters of the State. (SFRWQCB. 1984). In 1987, the CADOHS also concluded that no further removal/remedial action is necessary. (CADOHS. 1987).

Finally, in 2002, in what appears to be a review of the cleanup and ongoing operations by WFF, CADTSC specified the cleanup levels for the site at that time as 1250 ppm for copper, 500 ppm for lead, 1000 ppm for nickel, 2500 ppm for zinc, and 1000ppm for oil and grease. They also indicated that these cleanup levels were below residential standards. This report also indicated that the site then generated waste oil and sludge with metals and was regularly inspected by the Alameda County Environmental Health Department. (CADTSC. 2002).

#### **Current (2008) Investigation**

Within the past year, WFF suspended its operations at its Albany facility and removed all of its equipment from the building and the site. The Alameda County Environmental Health Department is currently overseeing the investigation of the site to determine is suitability for sale.

WFF has contracted with CDMS to manage the environmental investigation, mange any necessary cleanup, and to shepherd the site through the environmental certification process. At the time of this writing, CDMS has conducted some cleaning of the building and has completed the subsurface investigation.

The sampling locations were established in collaboration with representatives of the Alameda County Environmental Health Department (Figure 1). There are several concrete and steel lined pits at the facility that extend to 10 feet below the ground surface, and served as foundations for large hydraulic metal working hammers, rollers, and presses. The County was concerned that the pits could be a source of release of hydraulic fluids. Sample locations were established around each of the pits jointly by a representative of Alameda County Environmental Health Department and CDMS, and at additional locations selected by CDMS based upon surface staining and the locations of other operations. Four inch holes were sawn through the 6-9 inches of concrete, and the samples were taken with a hydropunch rig. Core tubes were lined with clear liners and were advanced three feet at a time. At water sampling locations, slotted PVC well screens were inserted into the borehole, and water samples were taken with a bailer. Cement grout was tremied through the well screens to seal the holes upon completion.

The first two borings were made around the pit on the north side of the building (SB101 & SB102). The initial intent was to advance the borings to below the bottom of the pits. After penetrating the initial 6 -9 inches of concrete, the cone penetrometer moved through unsaturated sediment and encountered ground water in a dark gray plastic clay 4-6 feet below ground surface (bgs). At 12 to 14 bgs a dense dry clay marked the

bottom of the perched water zone. The clay was underlain at 14 to 16 feet by a dry poorly cemented tan-colored sand. The third boring was pushed in the southwest corner of the building (SB103) and the same materials were encountered at about the same depths. Water samples were bailed from these three borings and in each case, water level recovery was very slow indicating that the saturated clay has a low hydraulic conductivity.

From the data from these three borings and the information from the Brown and Caldwell investigation (Brown and Caldwell. 1984), it is clear that the site is underlain by a low permeability clay saturated above a dry dense clay above a poorly cemented sand. The clay contains a thin perched ground water zone between 6 to 12 feet below the ground surface in the southwestern portion of the facility. Since the concrete and steel lined pits are all dry, extend well below the perched water bearing zone, and no water is seeping into the pits, it is also reasonable to conclude that no liquid contaminants would have seeped out of the pits to the subsurface environment.

The remaining borings were advanced only to nine feet bgs to avoid any further penetration of the dry clay responsible for the perched water zone and for the protection of the deeper aquifer.

Soil sample analyses are included in Table 2A and water sample analyses are in Table 2B. (TestAmerica. 2008a, 2008b, and 2008c).

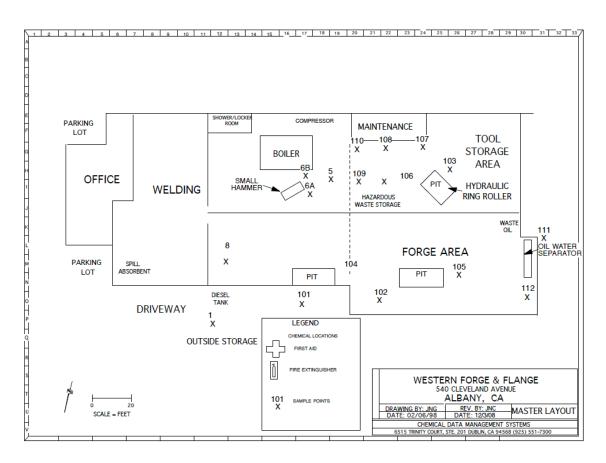


Figure 1. Location of 2008 subsurface sampling events.

Table 2A	WFF Data	Soil in mg/kg				
Boring #	Depth (Center) ft	Cr	Ni	Pb	Zn	TPH (Residual Fuels)
SB101	3.5	17	22	12	26	150
30101	7.5	14	8.2	5.2	9.4	ND
	11.5	8.8	10	3.7	14	ND
	15.5	16	20	6.2	23	ND
SB102	3.5	45	60	15	33	ND
	7.5	16	7.8	110	70	52
	11.5	13	9.4	5.0	13	ND
	15.5	11	15	7.1	26	ND
SB103	3.5	67	85	11	52	210
	7.5	18	9.7	150	110	110
	11.5	18	23	3.7	12	ND
	15.5	18	23	3.9	12	ND
SB104	1.5	32	35	10	34	ND
	3.5	16	11	75	120	ND
	7.5	12	8.3	13	17	ND
SB105	1.5	70	82	9.0	62	ND
	3.5	17	12	44	62	ND
	7.5	14	10	17	35	ND
SB106	2	53	64	11	46	ND
	4.5	54	79	31	67	2800
	7.5	12	24	210	200	ND
SB107	1.5	72	72	260	580	15000
	3.5	14	10	23	49	700
	7.8	14	11	5.2	12	ND
SB108	1.5	52	59	12	41	ND
	4.5	25	24	65	100	150
	7.5	14	10	4.8	9.3	ND
SB109	1.5	14	12	160	210	ND
	4.5	19	14	120	200	ND
	7.5	13	10	4.8	10	ND
SB110	1.5	25	19	87	290	ND
	4.5	17	11	10	26	ND
	7.5	13	8.4	5.3	7.8	ND
SB111	0.5	37	180	19	920	360
	3.5	50	69	6.6	44	60
	5.5	26	21	29	62	ND
	7.5	15	12	49	50	87
	9.5	14	8.8	10	13	ND
SB112	3.5	13	26	13	29	63
	7.5	70	86	7.7	42	ND
#5	0.75	51	140	30	73	
	3.5	16	20	81	110	

Table 2A (c	ont)					
WFF Data	Soil in mg/kg					
Boring #	Depth (Center) ft	Cr	Ni	Pb	Zn	TPH (Residual Fuels)
#6A	2.75	54	67	110	140	
	3.5	14	8.3	7.1	16	
#6B	2	5.2	83	7.9	81	
	3.75	15	9.2	56	76	
#8	1.25	18	14	180	130	_
	3.5	73	180	140	90	
#9	1	15	14	23	56	
	3.5	20	24	15	29	

Table 2B WFF Perched Water Data ug/L					
Boring #	Cr	Ni	Pb	Zn	TPH (Residual Fuels)
SB101	ND	120	6.5	56	ND
SB102	14	140	770	1200	ND
SB103	26	380	61	1400	ND
SB105	ND	52	9.4	930	ND
SB107	22	480	120	1300	ND
SB108	25	76	5600	970	ND
SB109	ND	ND	ND	18	ND
SB111	ND	420	ND	8400	ND
1-6 (unfiltered)	1100	5800	1100	1900	

#### **Interpretation of Chemical Data**

With the exception of the two shallow soil samples in SB106 and SB107 all of the soil samples are very similar and in most cases lower than the concentrations that were certified as being below residential standards in 1985. This would indicate that the engineering controls WFF installed in 1985 were successful in preventing any further releases of contaminants to the ground. While there is no information as to the origin of the contaminants in the soil in the small area of the southwest corner of the building where SB106 and SB107 are located, this area is a candidate for some additional contaminated soil removal.

In addition to comparing the 2008 analytical results to the 1985 verification results and cleanup standards, the results were also compared to the 2008 Environmental Screening Levels (ESL) established by the SFRWQCB and accepted by the California State Water Resources Control Board. To select the appropriate ESL, the land use was considered Commercial or Industrial, the Depth to Impacted Soil was Shallow Soil, and the Groundwater use of the regional Aquifer was considered a Drinking Water Resource. Because the exterior soil had been replaced with clean soil in 1985 and the interior of the building has 6 to 9 inches of concrete over the soil, there is an assumption of no direct exposure, and no terrestrial ecological impacts. Given these assumptions the appropriate Soil Tier 1 ESL is the Gross Contamination ESL. For water, the contaminants are in a shallow perched zone, are not in the regional shallow aquifer, and there are no impacts to aquatic organisms. For Groundwater Tier 1 the Gross Contamination is the appropriate ESL. The selected appropriate ESLs for the contaminants of concern are shown in Table 3. (SFRWQCB. 2008).

**Table 3** Environmental Screening Levels for Gross Contamination

	Soil mg/kg	Water ug/L
Cr (Total)	2,500	50,000
Ni	2,500	50,000
Pb	2,500	50,000
Zn	2,500	5,000
TPH (Residual Fuels)	2,500	1,000

#### **Conclusions**

With the exception of the two shallow soil samples taken from SB106 and SB107 in the southwest portion of the building, all soil and water samples taken in the 2008 subsurface investigation are below the SFRWQCB's 2008 Environmental Screening Levels and below the more stringent cleanup levels prescribed in 1985. The soil concentrations are also very similar to the concentrations that caused the regulatory agencies to declare the pollution at the site adequately mitigated in the mid 1980s. Upon cleanup of the area including the SB106 and SB107 locations and verification sampling, the WFF Albany site will be ready for certification as meeting the appropriate environmental conditions for no further cleanup action.

#### **Documents Reviewed and/or Cited**

Brown and Caldwell. 1984. Western Forge and flange, Albany Facility – Problem Definition Report. Submitted to Western Forge and Flange on July 10, 1984.

California Department of Toxic Substances Control (CADTSC). September 2002. Site Screening Form. Available on the DTSC Envirostor Website: <a href="http://www.envirostor.dtsc.ca.gov/regulators/deliverable\_documents/5681241691/western%20forge%20site%20screening.pdf">http://www.envirostor.dtsc.ca.gov/regulators/deliverable\_documents/5681241691/western%20forge%20site%20screening.pdf</a>

California Department of Health Services (CADOHS). March 1987. Remedial Action Certification Form. Contains: Ltr from the SFRWQCB. August 16, 1985; Brown and Caldwell. May 10, 1985. Correction documentation Report for the Western Forge & Flange Company, Albany, California; California Department of Health Services. November 25, 1985. Memorandum: SPRL Deletion recommendation for Western Forge and Flange.

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http://www.envirostor.dtsc.ca.gov/regulators/deliverable\_documents/8748310685/cert.pdf

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SFRWQCB. 2008. Environmental Screening Levels Surfer. EXCEL Spreadsheet for access to screening level guidance. May 2008.

TestAmerica. 2008a. Analytical Report, Job Number 720-16304-1, Job Description: Western Forge. October 10, 2008.

TestAmerica. 2008b. Analytical Report, Job Number 720-16931-1, Job Description: Western Forge, Albany. November 21, 2008.

TestAmerica. 2008b. Analytical Report, Job Number 720-17028-1, Job Description: Western Forge, Albany. December 2, 2008.



Fredric Hoffman

CA Professional Geologist No. 3929

CA Certified Hydrogeologist No. 83

#### iii. Recommendations/Conclusions

Since the relocation of the Western Forge and Flange Co. facility from Albany to Texas, extensive activities have occurred at this site to achieve closure and remediate any contamination that resulted from past manufacturing processes.

#### **Above Ground**

Multiple rounds of aggressive decontamination of the rafters, control panels and structural elements, most of which are between 15 and 45 feet above ground level, have reduced the concentrations of residual contaminants on those surfaces. Verification sampling has shown fluctuating levels of contaminants between sampling locations, most of which are located between 15 and 45- feet above ground level. Results have shown however, that some of these locations continue to exceed the ESLs for the majority of the analytes (metals) even after multiple cleanings.

Wipe sample S-3, at approximately 8 feet above ground level, tested non-detect for all of the analytes, except for nickel. The value of S-3 is 11ug/100cm<sup>3</sup> for nickel. The guidelines suggest an environmental screening level of 10 ug/100cm<sup>3</sup>. S-3 in this respects shows a slight deviation to the ESL for nickel.

The floors of the production area, shipping and welding area have been swept multiple times and triple rinsed using hot pressurized water. All hazardous waste generated from the closure activities has been hauled off site by a licensed hazardous waste hauler to an approved waste treament facility. Hazardous materials used during the manufacturing processes were relocated to the Texas facility prior to the start of the closure activities.

All of the items identified in the closure plan and required by the Alameda County Department of Environmental Health (ACDEH) have been addressed. At this time CDMS believes that due diligence has been served in decontaminating the above ground portions of the facility to the fullest extent possible at the Western Forge and Flange Co. facility in Albany, with the guidance of ACDEH. A final walkthrough with ACDEH is scheduled for July 1<sup>st</sup>, 2009. The purpose of this final walkthrough is to confirm all the items as recommended and required by ACDEH have been addressed.

Western Forge and Flange Co. is currently in the process of selling their property at 540 Cleveland Ave, Albany CA. ACDEH has recommended disclosing the current above ground contamination at the site to any potential buyer prior to selling the property. ACDEH has also decided to transfer this case over to the Alameda County Site Mitigation/Local Oversight Program for the evaluation of the subsurface issues.

#### Subsurface

The site is underlain by a low permeability clay saturated above a dry dense clay above a poorly cemented sand. The clay contains a thin perched ground water zone between 6 to 12 feet below the ground surface, which rose to within a foot below ground surface during the 2008-2009 wet season.

Several subsurface investigations and sampling events occurred during the hazardous material closure in an effort to evaluate the presence or absence of contamination at the site. Subsurface investigations led to excavations of contaminated soil in several locations (5, 6B, SB106, SB107). Excavation also occurred in suspect areas around Pit 1, Pit 2, and in two other locations near the northwest walls where etching was visible. No indication of contamination was observed at these locations. (Fig. 2, Closure Report).

Subsurface sampling results indicated elevated levels of metals at various sample locations for groundwater when using the criteria provided by ACDEH. (Table 2B, Table 5B, and Table 6B).

Additional results also indicated elevated levels of oil and grease (shown as TPH in the analytical report) and TPH (residual fuel) for soil samples at sample locations 5, 6B, SB106, and SB107. (Table 2A and Table 6A). Further investigation occurred at those locations, and the contaminated soil was ultimately removed during several soil cleanup excavations. As a result of the soil cleanup excavations, TPH (residual fuel) contamination has been eliminated at soil sampling locations 5, 6B, and SB107.

In addition, oil was discovered during the soil cleanup excavation of soil sample location SB106 and several oil cleanup efforts have been conducted. During the soil cleanup excavation of soil sample location SB106, perched water was encountered, and eventually the oil and water mixed together. Several efforts to removal the oil from the surface of the water at soil sample location SB 106 have have greatly reduced the amount of oil in the excavation.

Most recently, remediation efforts included the introduction of RegenOx®, an advanced chemical oxidation designed to treat organic contaminants, that destroys petroleum contaminants, enhances subsequent bioremediation, and avoids detrimental impact to groundwater aquifers.

The introduction of this chemical to the soil sample location SB 106 has been followed with continuous skimming of the water surface to further remove oil The goal of this remediation practice is to reduce the concentration of petroleum hydrocarbons from this excavation below that of the ESL.

Currently, the remedial activities at WFF-Albany have come to a halt, pending an evaluation by the Alameda County Site Mitigation/Local Oversight Program.

As mentioned above, this case is being transferred to the Alameda County Site Mitigation/Local Oversight Program to address the subsurface issues and concerns of this closure.