Clean Harbors
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September 7, 2015

Attn: [redacted]
Pacific Steel & Recycling
1114 N Ralph Street
Spokane, WA, 99202

Subject: Suspected Chlorine Gas Release Clean Up Report Located in Spokane, WA

Dear [redacted]

Clean Harbors Environmental Services is pleased to present to you this report for the chemical vapor release emergency response and cleanup located at Pacific Steel & Recycling in Spokane, WA.

Pacific Steel & Recycling reported a chemical vapor release on Wednesday 8/12/2015 around 10:30 AM at their recycling facility located at 1114 N Ralph Street in Spokane, WA. Clean Harbors Environmental Services responded to the initial emergency response call. After the Spokane Fire Department completed the first response to the incident, Clean Harbors Environmental Services worked directly with Pacific Steel & Recycling over the following days to perform the cleanup and decontamination of the release site.

The following report is a summary and breakdown of the emergency response and subsequent cleanup and decontamination work performed by Clean Harbors Environmental Services for the incident.

Respectfully,

[redacted]

Field Service [redacted]
Clean Harbors Environmental Services, Inc.

Cc: [redacted] Field Services

Wednesday 8/12/105

On Wednesday (08/12/2015) at 1:30 PM Clean Harbors Environmental Services (CHES) received a call from (b) (6), (b) (7)(C) with Safety-Kleen (SK) regarding a chemical vapor release at SK customer Pacific Steel & Recycling (PSR) in Spokane, WA asking for emergency response assistance. CHES immediately dispatched local personnel to the scene. Due to the severity of the release, CHES also began immediate mobilization of regional response personnel from other locations in the surrounding Pacific Northwest area.

Local CHES personnel arrived on scene 2:45 PM and had a briefing at 3:00 PM with Lt. Hill from the Spokane Fire Department (SFD) regarding the release and current response plan. At this point in time the SFD advised CHES that the released chemical was suspected to be either chlorine gas or arsenic trichloride, and that they were in the process of performing air monitoring in the affected area. Over the next several hours the SFD performed multiple entries into the exclusion zone to perform air monitoring activities. The initial air sampling results were positive for chlorine, but by 6:00 PM the air sampling results were no longer showing positive results for chlorine.

By 7:00 PM the SFD had begun demobilization activities in preparation to turn the site custody over to CHES for cleanup and decontamination. (b) (6), (b) (7)(C) advised CHES personnel that the SFD believed the release to be chlorine gas from a large cylinder they found lying in the Metso shear. He requested that CHES implement an Incident Command System, complete an ICS 208 HM form, and arrange for 24 hour monitoring of the release site before custody of the location could be fully transferred to CHES. The SFD demobilized the majority of their personnel and equipment, but left behind a one engine security detail to oversee the area until the site custody was complete.

Regional CHES management arrived on scene at 8:00 PM, and met with (b) (6), (b) (7)(C) of PSR to discuss the current situation and response plan. PSR approved of the proposed response plan and agreed to have CHES proceed with the cleanup and decontamination of the spill site. Over the next two hours CHES personnel setup the Incident Command System, completed the ICS 208 HM form, and arranged for 24 hour monitoring of the location.

CHES completed all of the assigned tasks by 10:00 PM and met with the SFD at 10:30 PM. (b) (6), (b) (7)(C) approved the transfer of the release site to CHES custody. CHES personnel secured the site at 11:00 PM and left an attendant onsite for the night to maintain 24 hour monitoring of the incident location.

Thursday 8/13/2015

On Thursday (08/13/2015) CHES personnel arrived on site at 5:00 AM and met with PSR representatives to go over the initial response plan. CHES personnel performed the site setup for the response activities, and completed a hazardous work permit to allow entry into the exclusion zone. Additional CHES crew members from Seattle, WA arrived on scene at 8:00 AM, and all CHES personnel participated in a safety meeting and began preparations to make the initial entry into the exclusion zone.

At 9:15 AM CHES performed the initial entry into the exclusion zone with a three man crew in level B PPE to perform reconnaissance of the release area. The reconnaissance crew was able to identify a ruptured one ton cylinder laying in the Metso shear as the most likely source of the chemical release. The entry crew took pH spot readings at different locations within the release area and was able to determine an approximate area that was contaminated with low pH readings consistent with hydrochloric acid deposition expected from a chlorine gas release. The entry crew also conducted air monitoring for hazardous gases, but no hazardous gases were detected. Lastly, the entry crew was also able to photograph the entire area to document the scene.

At 10:00 AM CHES personnel debriefed the entry team and reviewed the results of the initial entry with PSR personnel, Washington Labor and Industries (WAL&I) representatives, and CHES Health & Safety management to determine an action plan. It was determined that next course of action was to perform sampling for arsenic metal. The initial report stated that the release may have been arsenic trichloride and testing needed to be done to rule out that chemical.

CHES prepared a sampling plan for testing for arsenic contamination via swipe samples. Once the sampling plan was approved CHES performed a second entry to the exclusion zone at 11:30 AM with a two man crew in level B PPE to collect the swipe samples from predetermined locations. The entry crew also repeated air monitoring for hazardous gases, but no hazardous gases were detected. Upon removal from the exclusion zone, the swipe samples were transported to Test America in Richland, WA for expedited analysis by an analytical laboratory using EPA method 6010C. Review of the air monitoring data confirmed that hazardous gases were no longer present in quantities sufficient to present an immediate danger to life and health and the PPE requirement for the site was downgraded to level C PPE.

At 1:00 PM CHES personnel began decontamination of personal items (wallet, keys, phones, etc…) that were removed from the exposed individuals during the initial response by the SFD. All of the items were decontaminated, catalogued, bagged individually, and turned over to PSR management.

CHES was also asked by PSR to retrieve personal items that were left behind in the spill area. At 1:45 PM CHES performed an entry into the exclusion zone with a two man crew in level C PPE to search for and retrieve personal items. All retrieved items were decontaminated, catalogued, bagged individually, and turned over to PSR management.

At 3:00 PM all work was called off due to high ambient temperatures exceeding the Washington State Heat Index. CHES management met with PSR and WL&I representatives to discuss the day's activities and to assess the next steps in the cleanup process. CHES personnel secured the site and left an attendant on site for the night to maintain 24 hour monitoring of the incident location. CHES management and Health & Safety worked throughout the evening to update the site Health & Safety Plan.

Friday 8/14/2015

On Friday (08/14/2014) CHES personnel arrived on site at 5:30 AM and conducted the morning safety meeting. CHES received the analytical results for the arsenic testing performed by Test America. The arsenic levels were within normal ranges. At this time, PSR representatives informed CHES that WAL&I requested that no further decontamination work be done to either the cylinder or surrounding structures until they could arrive on site. PSR also informed CHES of more personal belongings that were still in the release area and asked that they be retrieved while waiting for WAL&I.

At 8:30 AM CHES performed an entry into the exclusion zone with a two man crew in level C PPE to retrieve the additional personal articles that were left behind by workers at the time of the release. The retrieved items were decontaminated, catalogued, bagged individually, and turned over to Pacific Steel & Recycling management. During this entry CHES personnel also staged a decontamination area for the cylinder inside of the exclusion zone.

At 9:30 AM changes to the Health and Safety Plan were approved by CHES Health and Safety, and CHES conducted review of the Health and Safety plan with all crew members. CHES also met with PSR and WAL&I and were given the approval to proceed with decontamination work. Also, WAL&I specifically requested that CHES take another set of picture of the release area. At 10:40 AM CHES performed an entry into the exclusion zone with a two man crew in level C PPE and took additional pictures of the cylinder and release area as requested.

At 11:15 AM CHES performed an entry into the exclusion zone with a two man crew in level B PPE to remove the cylinder carcass from the Metso shear. The carcass was removed from the shear with the assistance of the excavator and grapple attachment in the area and placed onto a plastic containment pad. CHES personnel took additional pictures of the cylinder as requested by Washington Labor and Industries.

At 12:45 PM CHES management meet with the Washington Department of Ecology (WADOE) and Pacific Steel & Recycling representatives to assess the current decontamination progress as well as the plan to finish the cleanup. WADOE requested sampling and testing for chlorine in the oil from equipment in the area. WADOE also requested to have five catch basins and three oil water separators tested for pH value to determine if they were contaminated.

At 1:30 PM CHES performed an entry into the exclusion zone with a two man team in level B PPE and conducted air monitoring via colorimetric tubes around the cylinder carcass and surrounding area for chlorine gas. All tests were negative. CHES personnel also conducted pH spot testing on various areas of the cylinder; pH tests were positive for a low pH reading of 3. CHES took additional pictures of the cylinder at this time. These pictures were sent to Clean Harbors Cylinder Group in La Port, Texas. A 100% positive determination of the contents of the cylinder could not be made, but the CHES Cylinder Group did confirm that the cylinder in question could potentially have contained chlorine gas based upon of the valve configuration and general appearance of the cylinder.

At 2:30 PM CHES performed an entry into the exclusion zone with a two man team in level C PPE to begin decontamination of the contaminated areas. At 3:30 PM all work was called off due to high ambient temperatures exceeding the Washington State Heat Index. CHES personnel secured the site and left an attendant onsite for the night to maintain 24 hour monitoring of the incident location.

CHES management worked to prepare a sampling plan to test for chlorinated oil from the equipment via Chlor-D-Tect kits and to test for pH readings in the catch basins and sumps throughout the evening.

Saturday 8/15/2015

On Saturday (08/15/2015) CHES personnel arrived on site at 5:00 AM and conducted the morning safety meeting with all involved parties and outlined the day's objectives. CHES also submitted the sampling plan to the WADOE and PSR for approval. The WADOE and PSR gave approval to proceed with the sampling as outlined in the plan.

At 5:45 AM CHES performed an entry into the exclusion zone with a four man team in level C PPE to continue decontamination of the affected areas, structures, vehicles. CHES crews also took oil samples from the trucks and equipment in the release area in accordance with the sampling plan. All results from the testing were negative (<1000 ppm) for chlorine with the exception of the oil contaminating the bottom of the Metso shear (>1000 ppm).

At 9:15 AM CHES performed an entry into the exclusion zone with a two man crew in level C PPE to decontaminate and clean the oil contamination from the bottom of the Metso shear. The oil contamination was more widespread than initially thought and difficult to clean requiring additional personnel to make an entry to assist. CHES performed an entry in the exclusion zone with a four man crew in level C PPE at 10:15 to finish the cleanup and decontamination of the Metso shear. Sampling and re-testing after the cleanup were negative (<1000 ppm) for chlorine.

At 12:45 PM CHES performed and entry into the exclusion zone with a four man crew in level C PPE to finish decontamination and cleaning of the area, structures, and equipment. All decontamination work was completed with the exception of the cylinder carcass and the entry crew exited the exclusion zone.

At 3:00 PM CHES performed and entry into the exclusion zone with a three man crew in level B PPE to decontaminate the cylinder carcass. The carcass was placed into a sodium bicarbonate bath to neutralize any residual chlorine or hydrochloric acid. Initial pH readings of the bath water were at pH 9. A mild reaction was observed when the carcass was placed into bath. The carcass was rolled several times to ensure neutralization of all surfaces inside the cylinder. Upon cessation of the reaction the pH reading was 7. All decontamination was complete and all entrants exited the exclusion zone.

At 4:15 PM the PPE requirement was downgraded to level D PPE. CHES personnel removed the cylinder carcass from the bath, drained all liquids, and then moved the carcass to PSR's warehouse for storage. CHES personnel removed all air filters from all heavy equipment and replaced with new filters. CHES personnel then collected all containerized waste generated during the cleanup process and staged to ship off site for disposal.

At 5:00 PM CHES conducted a walkthrough of the location with PSR personnel and also received permission from (b) (6), (b) (7)(C) [redacted] with the SFD to turn the site back over to PSR for use.

At 7:00 PM CHES personnel pulled samples from all catch basins and sumps in accordance with the sampling plan and tested for pH level. All results showed a pH of 7 and no cleaning or decontamination was required. All CHES equipment was stowed and all CHES personnel left site by 8:00 PM.

Monday 8/17/2015

All containerized wastes were shipped off site for disposal by Safety-Kleen on manifest # 005018286SKS.

Thursday 9/3/2015

At the request of PSR CHES crews returned to wash and decontaminate CAST trucking tractor and flatbed trailer. Initial testing of these vehicles did not show any contamination, but a cleaning was requested to ensure no contamination prior to releasing the vehicles to CAST.

Other Documentation

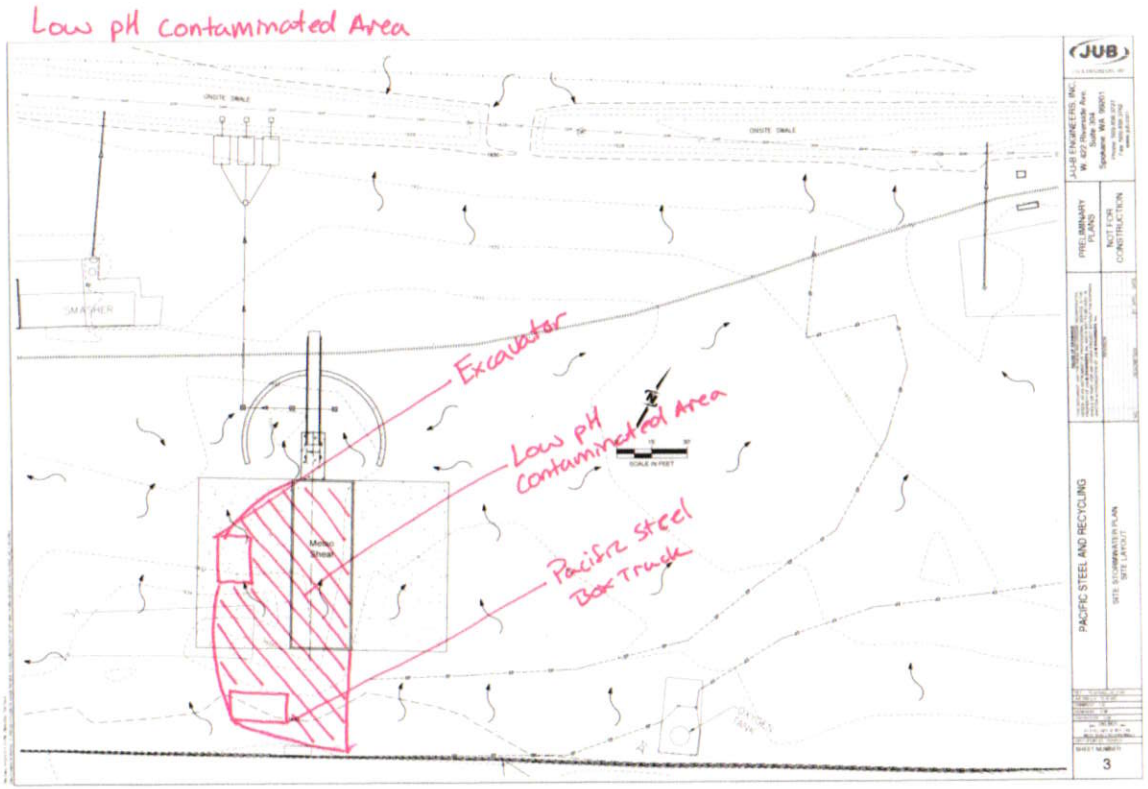
Sampling plans, sampling maps, and test results are contained in attached files to this Closure Report.

END OF REPORT

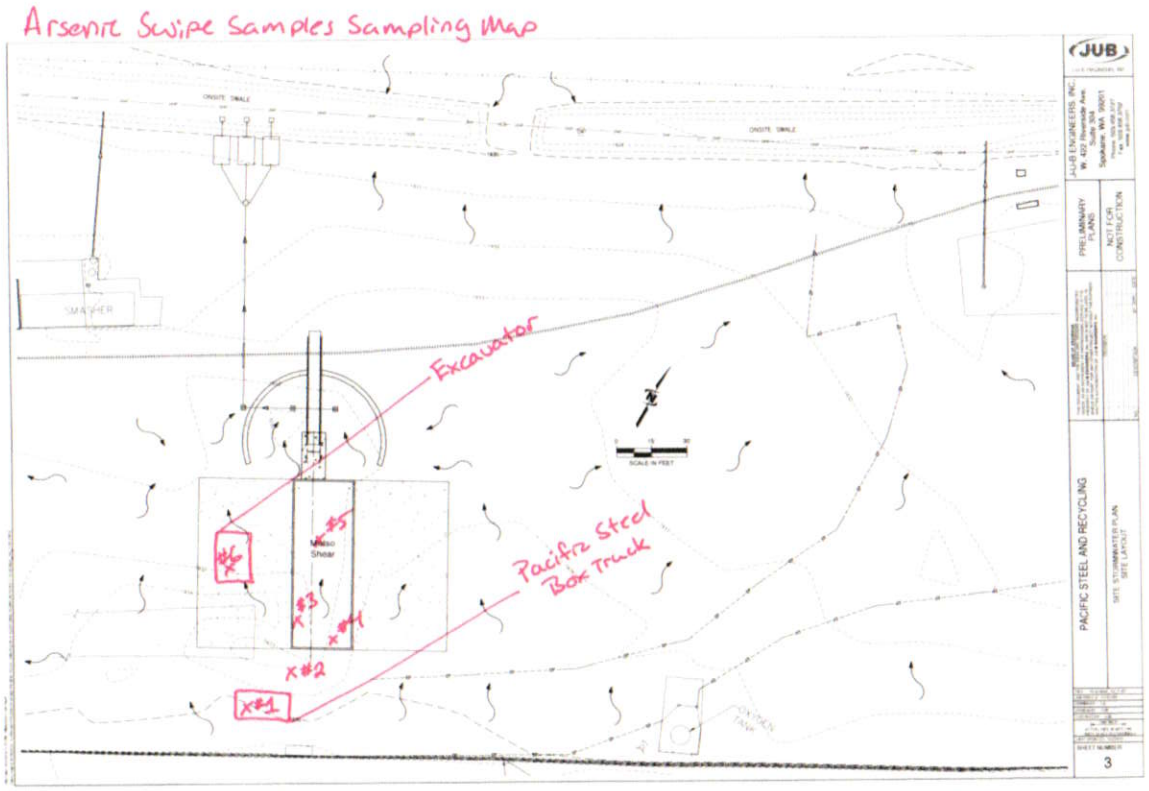
Pacific Steel and Recycling

Sampling and Contamination Maps

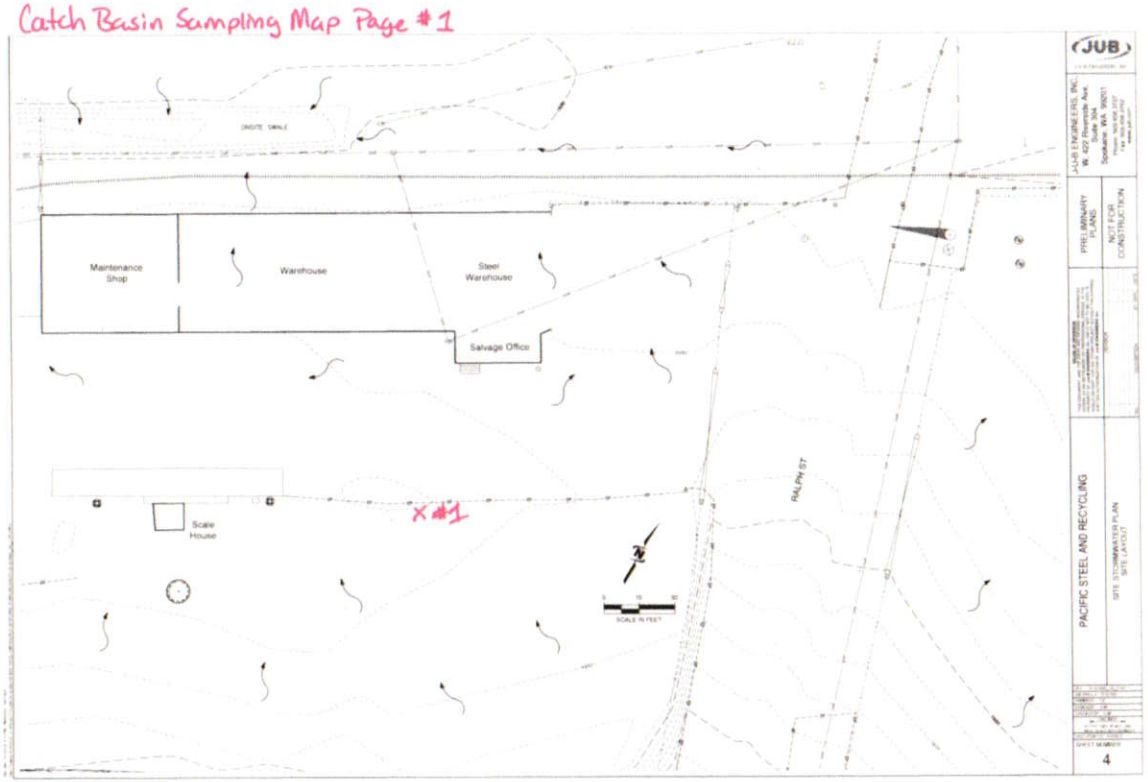
Low pH Contamination



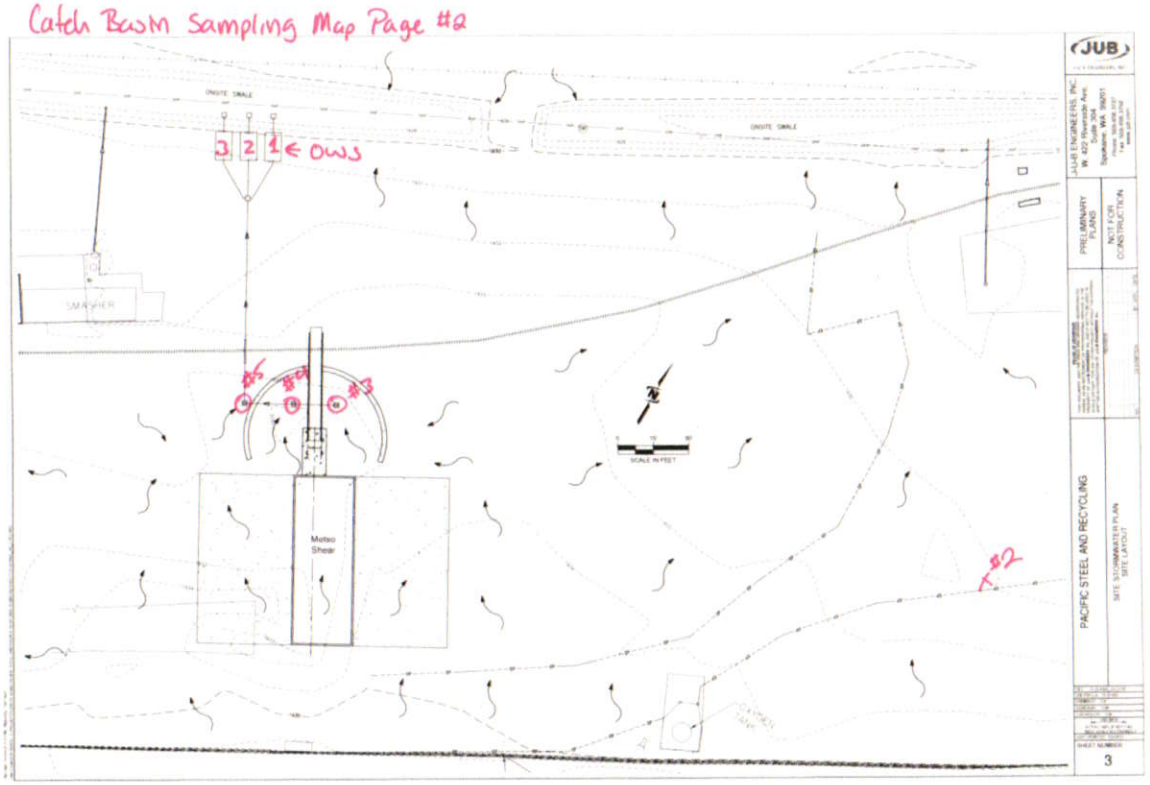
Arsenic Swipe Samples



Catch Basin/OWS Map Page 1



Catch Basin/OWS Map Page 2



Pacific Steel and Recycling

Sampling and Analytical Results

Arsenic Swipe Sample Results

Client Sample Results

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Client Sample ID: 81315-01
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-1
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 19:54	1

Client Sample ID: 81315-02
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-2
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 20:01	1

Client Sample ID: 81315-03
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-3
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3	J	10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 20:05	1

Client Sample ID: 81315-04
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-4
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3	J	10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 20:08	1

Client Sample ID: 81315-05
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-5
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4	J	10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 20:12	1

Client Sample ID: 81315-06
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-6
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 21:00	1

Catch Basin/OWS Results

Catch Basins – pH Test

Basin	pH Value
#1	7 - neutral
#2	7 - neutral
#3	7 - neutral
#4	7 - neutral
#5	7 - neutral
#6	7 - neutral

OWS – pH Test

OWS	pH Value
#1	7 - neutral
#2	7 - neutral
#3	7 - neutral

Clor-D-Tect Results

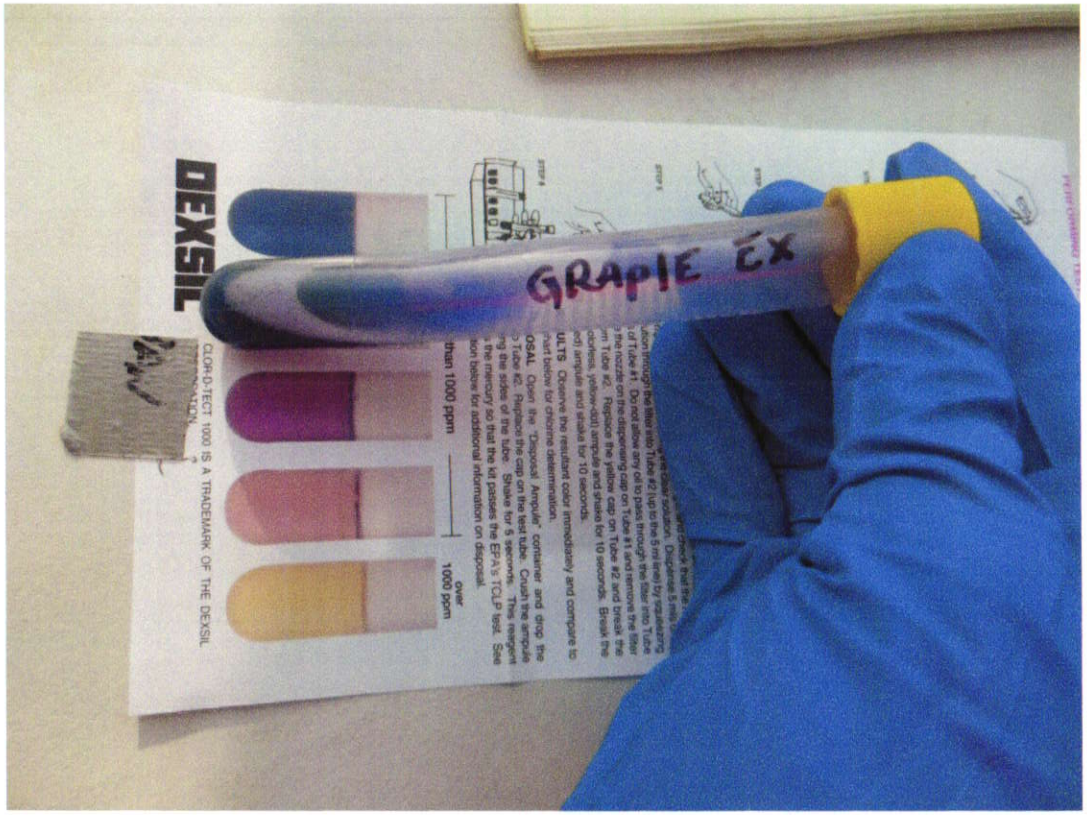
Pacific Steel Box Van

<1000 ppm Chlorine

Clor-D-Tect Results

Excavator with Grapple

<1000 ppm Chlorine



Clor-D-Tect Results

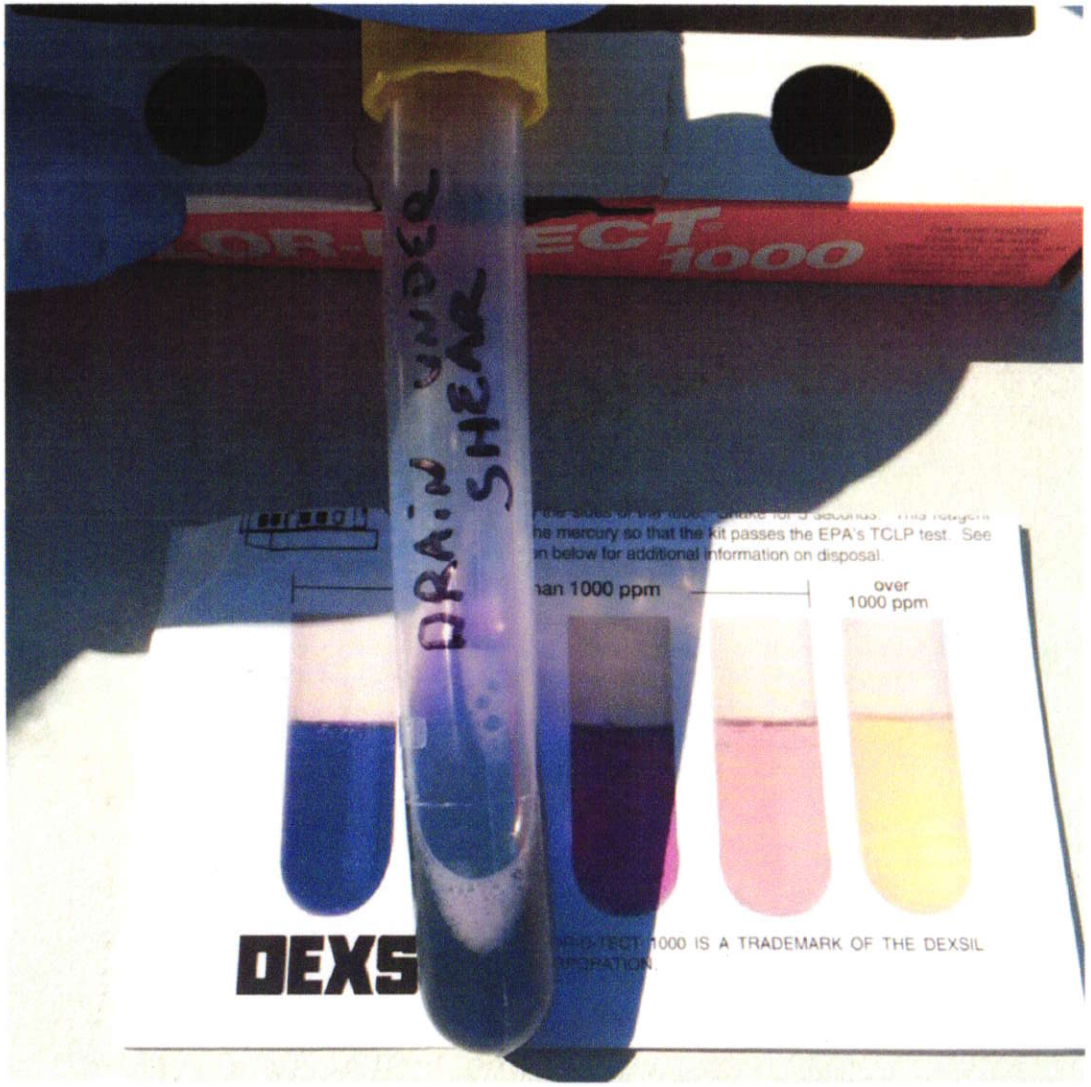
CAST Transportation Tractor

<1000 ppm Chlorine

Clor-D-Tect Results

Oil Drain Under Shear

<1000 ppm Chlorine



Clor-D-Tect Results

Oil from base of Metso Shear

>1000 ppm Chlorine

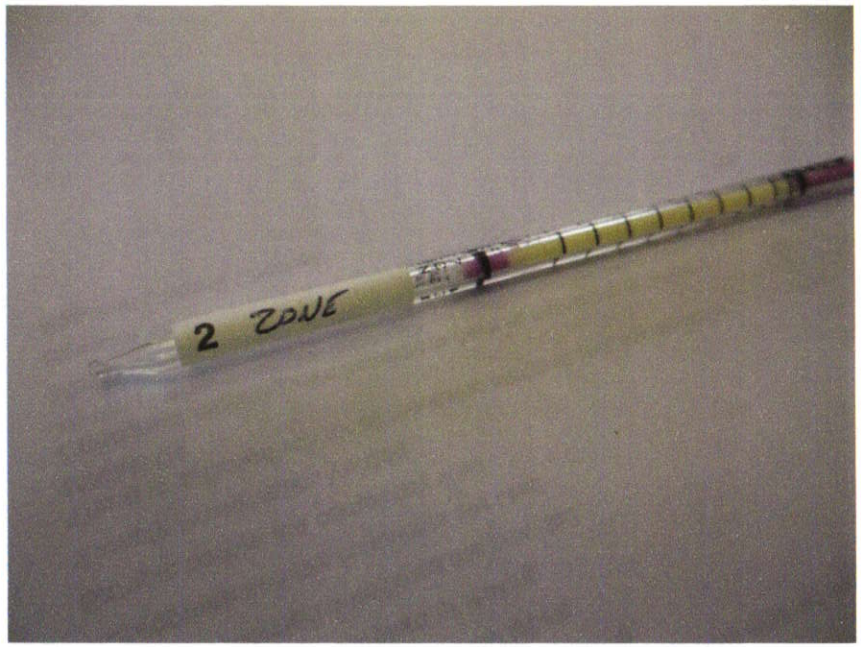
Clor-D-Tect Results

Base of Metos Shear post decontamination

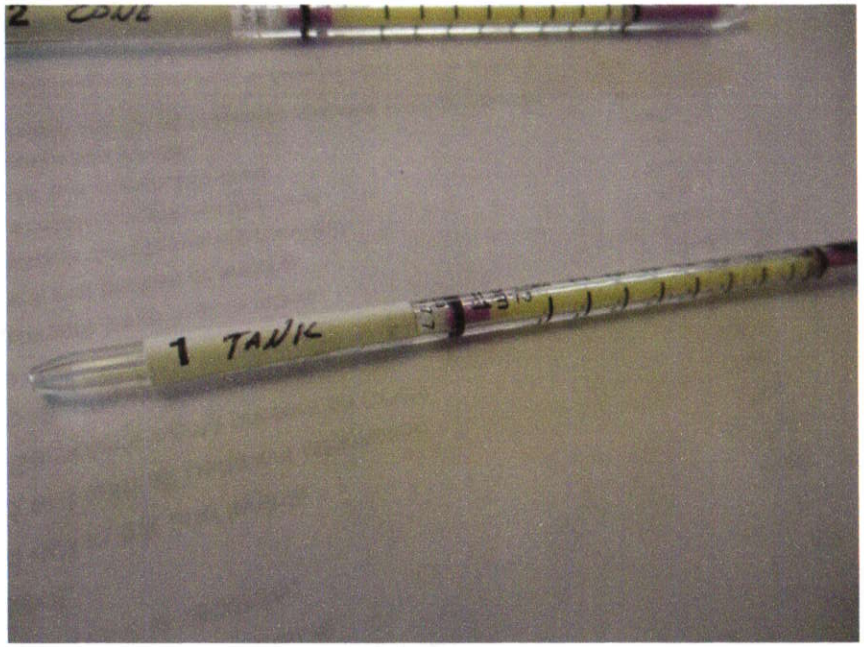
<1000 ppm Chlorine

Colormetric Chlorine Test

General Area – No Detection



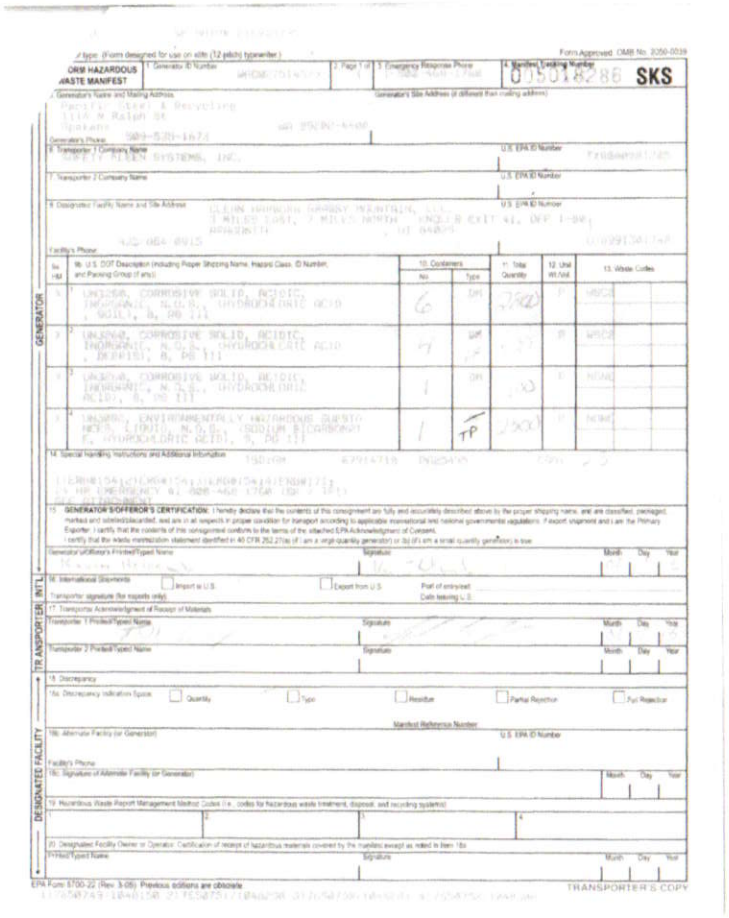
Cylinder – No Detection



Pacific Steel and Recycling

Waste Manifest

Waste Manifest # 005018286SKS



Form Approved. OMB No. 2050-0039

ORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number
2. Page 1 of
3. Emergency Response Phone
4. Manifest Tracking Number: 005018286 **SKS**

5. Generator's Name and Mailing Address
Generator's Site Address (if different than mailing address)
Generator's Phone: 509-535-1672

6. Transporter 1 Company Name: ALLIED SYSTEMS, INC.
U.S. EPA ID Number

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
U.S. EPA ID Number
Facility's Phone: 425-664-8915

No.	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
1	UN1760, CORROSIVE SOLID, ACIDIC INORGANIC, N.O.S., (HYDROXYACETIC ACID), SOLID, 8, PG III	6	DM	7500	P	W002
2	UN1760, CORROSIVE SOLID, ACIDIC INORGANIC, N.O.S., (HYDROXYACETIC ACID), SOLID, 8, PG III	7	DM	[illegible]	P	W002
3	UN1760, CORROSIVE SOLID, ACIDIC INORGANIC, N.O.S., (HYDROCHLORIC ACID), 8, PG III	1	DM	[illegible]	P	W002
4	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (SODIUM BICARBONATE, HYDROCHLORIC ACID), 9, PG III	1	TP	1500	P	W002

14. Special Handling Instructions and Additional Information
(EROR154)(CHEM15)(EROR10)(EROR7)(ENDW77)
24 HR EMERGENCY #: 888-462-1704 (DP / IT)
24 HR EMERGENCY

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.
Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.
Transporter signature (for exports only)

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name | Signature | Month | Day | Year
Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1 | 2 | 3 | 4

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name | Signature | Month | Day | Year

GENERATOR | TRANSPORTER | INTL | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.
TRANSPORTER'S COPY

Pacific Steel and Recycling

CAST Transportation Cleaning Certificate

CAST Cleaning Certificate

Certificate of Cleaning & Decontamination

CleanHarbors

On September 3rd 2015, Clean Harbors cleaned and decontaminated CAST Transportation's Peterbilt tractor VIN# 1XP-HD9X-X-BD121656 and the connected flatbed trailer at Pacific Steel and Recycling's facility located at 1114 N Ralph Street in Spokane Washington.

Clean Harbors employees cleaned and decontaminated the vehicles by using a neutralization solution to wipe all surfaces both inside and outside of the tractor as well as the connected trailer.

In addition, Clean Harbors removed and disposed of the cabin and engine air filters and decontaminated the inside ducting of both filter mounts.

Thank You,

Nathan Gregg

Clean Harbors Environmental Services
26328 79th Ave South
Kent, Washington 98032

Safety Starts with Me:
Live It 3-6-5

CleanHarbors®

PACIFIC
STEEL & RECYCLING™

Surface Wipe Sampling Plan and Procedures

Emergency Contacts

Event	Contact	Emergency Number
Clean Harbors Contact	(b) (6), (b) (7)(C) [redacted]	(b) (6), (b) (7)(C) [redacted]
Spill, Chemical Release		
Fire, Explosion	Fire Department	911
Injury	Ambulance	911
Customer Contact	(b) (6), (b) (7)(C) [redacted]	(b) (6), (b) (7)(C) [redacted]
On Site Medical First Responder	(b) [redacted]	

Emergency Medical and Hospital Information

It is the policy of CHES not to attempt to assess or treat, or provide private transport of seriously injured personnel except in immediate life threatening situations. Professional emergency personnel and conveyance should always conduct movement of an injured person. In all cases involving a serious injury, the CHES emergency response (contingency) plan is to be implemented and emergency services contacted as listed on the contact page of this plan.

Do not attempt to move or transport a seriously injured patient should the nature of injury relate to back, neck or head injury or signs of internal bleeding. All serious emergencies must call 911.

General Site Information

The Client location consists of a metal recycling plant. The complex possibly utilizes a variety of solid, liquid, and gaseous chemical substances including but not limited to corrosive liquids and gases, toxic chemical compounds and intermediates, compressed toxic gas and heavy metal compounds. Although well maintained, controlled, and monitored, the accidental release of one or more of these hazardous substances could present a significant threat to human health in the immediate vicinity of release.

Purpose and Scope

This document describes a field procedure for taking wipe samples of potentially contaminated surfaces.

The goal of the procedure is to provide a uniform methodology to collect representative samples of surface contamination of particulates or low volatility liquids. Using this method will ensure repeatability between various sampling personnel and between surface configurations.

General Scope of Work – Surface Wipe Samples

Work Plan Objectives

Inspect and assess surfaces for toxic characteristics.

Breakdown of Tasks

Project Preparation

1. Notify Pacific Recycling POC prior to entering work area.
2. Obtain equipment and materials to be used during inspection.

Pre-Work Set Up

1. Place a copy of the Work Plan in open visual area next to work area.
2. Perform pre-project H&S and work plan meeting with crew (and owner if necessary).
    a. At as minimum this meeting is intended to address:
        i. Anticipated chemical and physical hazards relating to work.
        ii. Review required safety practices
        iii. Discuss appropriate protective equipment necessary to promote the highest degree of safety for each worker.
        iv. Review specific personnel assignments.
        v. Point out and address all chemical and physical hazards located throughout the area to include piping, valves, pumps, switches and alarms.
        vi. Map out inspection route
        vii. Locate communication phone
        viii. Locate shower (if required) and eyewash
        ix. Plan evacuation routes for personnel in the event of an emergency.
3. Install Danger tape and warning signage
    a. Signage must indicate the work being performed, provide hazard identification and include a contact name and number.
    b. Signage must be placed in a visual area that can be detected by all personnel entering the area (on caution/danger tape, barricades, entry doors)
4. Un-pack equipment and materials for easy access.

Surface Sample Collection

NOTE: This operation requires a minimum of two participants to complete.

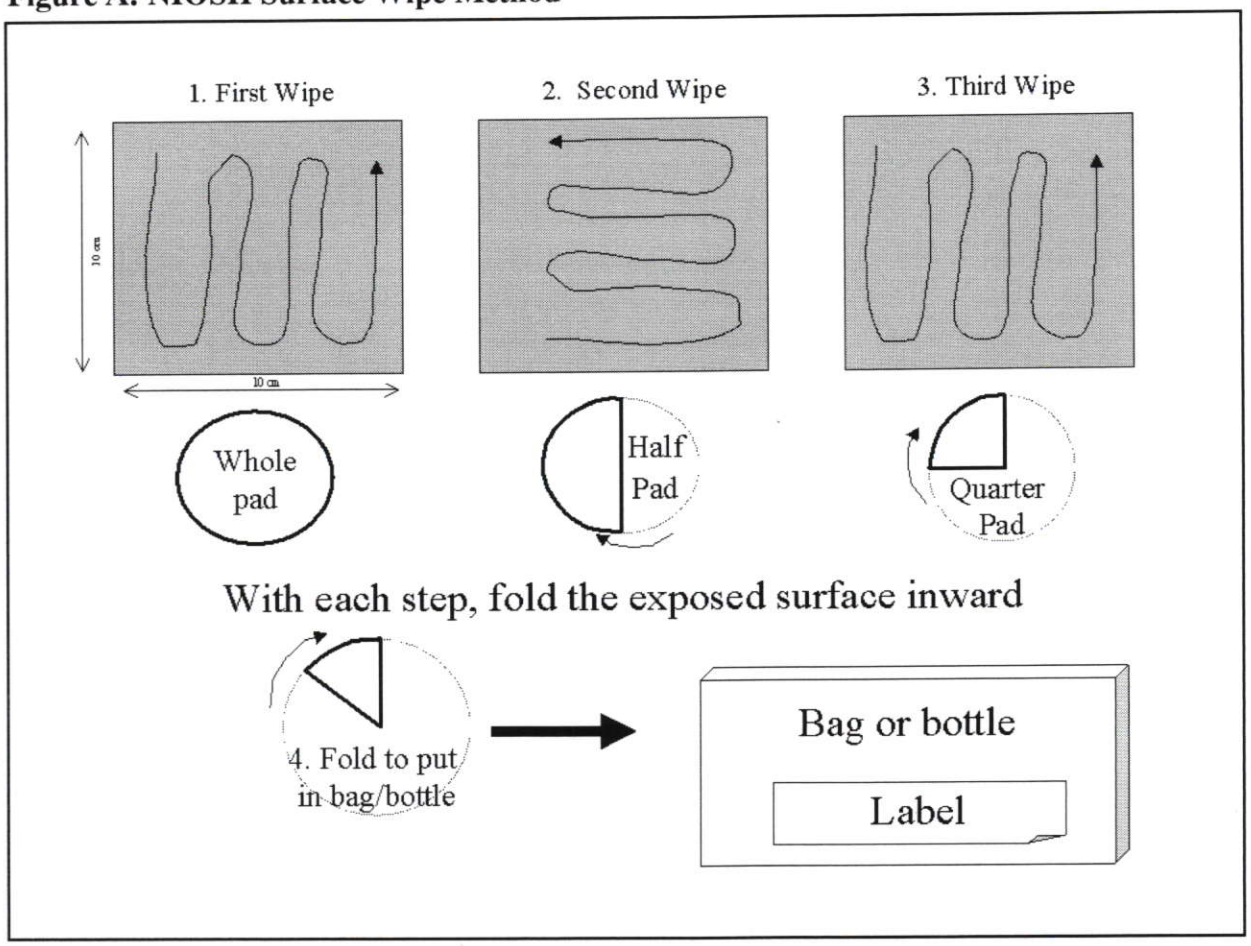
1. **Don Personal Protective Equipment**: Appropriate personal protective equipment to protect the person collecting the sample must be used when implementing this procedure.
    a. Hand: Sample collection in areas of known or suspected contamination requires the use of disposable gloves. Exam-style Acceptable materials are: Nitrile inner gloves and Neoprene/Nitrile outer gloves. The gloves must have sufficient impermeability to the surface contaminant used on the collection media to allow safe handling.
    b. Body: Because contact of the body with contaminated surfaces is anticipated, a disposable suit should be worn. Acceptable chemical protective suits include: Tychem SL. Disposable garments must be discarded as hazardous waste if contact with contamination has occurred.
    c. Foot: If contact of the feet is anticipated with contaminated surfaces, disposable shoe coverings, boots or booties should be used. Acceptable CPC material include: Tyvek Saranex or Rubber. Disposable booties must be discarded as hazardous waste if contact with contamination has occurred.
    d. Respiratory: If levels from contamination in the area exceed or are likely to exceed the OSHA, ACGIH, or DOE standards, respirators are required. A Full face APR respirator with appropriate GME P100 particulate cartridge will be utilized.
    e. Eye: If a Full Face APR will be worn.

2. **Sample Locations**

    a. Sample locations will be selected on a case by case bases depending on layout of the shredder. Each area will be evaluated and mapped. Once mapped a representative amount of samples will be collect from the floor and walls. All sample locations will then be plotted on the map.

3. **Procedure**
    a. **Equipment**
        i. Sample container; 4 – 8 oz. glass jar. Cloth: 2" x 2" laboratory prepared pre-moisten cloth.
            1. **NOTE:** When analyzing the sample media will consist of pre moistened laboratory prepared cloth.
        ii. Additive: ***Distilled water*** pre-moistened.
        iii. Template Plastic sheet or cardboard: 100cm2: 10 cm x 10 cm square
    b. **Wipe Technique:** CHES has selected the NIOSH method of collecting wipe samples. For uniformity, this method should be used for all sampling surface to be sampled (Visually depicted in Figure A)

Figure A: NIOSH Surface Wipe Method



i. Moisten the sample media with 1 to 2 ml of DI water. Apply only enough water to moisten approximately 80% of the area of the media. Avoid excess water on the filter or pad as it may cause drips and running on the surface thus diluting the sample.

ii. Place the template over the area to be sampled or measure out 100-cm2 surface area. If the surface does not allow the use of a template, carefully determine the dimensions that will equal 100 cm2.

iii. Wipe the surface with firm pressure, using S- strokes (edge to edge direction, covering the entire surface. Note: See Figure A for the pattern of an S-stroke used in this method. It may differ from the S-stroke pattern used in radiological sampling). Fold the exposed side of the pad or filter inward (i.e. fold in half). If the surface is very rough (such as concrete), a dabbing action may be substituted for the full contact pressure rubbing of the media across the surface. When dabbing, make sure to completely cover the same area as in the S-stroke wipe.

iv. Using the once-folded media, wipe the same area S-strokes (see Figure A), at right angles to the first wipe. Fold the exposed side of the pad or filter in.

v. Using the twice-folded media, wipe with S-strokes (see Figure A) in the original direction. Fold the exposed side of the pad or filter in.

vi. Place the media in the Jar. Seal the Jar. Record the sample identification on the Jar.

vii. Thoroughly clean reusable templates or discard paper templates in preparation of the next sample.

viii. Remove gloves and discard appropriately before handling the next filter or pad.

ix. Record the sample identification, surface area sampled, and description of the sample and surface.

x. Include 1 blank filter or pad (moisten and placed in bags or vials) with each set of samples (provide 1 blank per 6 samples).

3. **Testing Criteria**

   i. **All samples will be analyzed for Arsenic.**

Post sampling demobilization

1. All equipment and materials must be wiped down prior to removal from the control zone.
2. Prior to exiting the control zone entrant will remove donned PPE in the following manner.
   a. These items will be placed in double bags for disposal
   b. Entrant will then remove outer gloves and place in bags for disposal
   c. Using a sharpie all bags used for debris containment will be identified by writing the characteristic of the contaminant (corrosive, solvent, general trash, etc.) on the outside of the bag.
3. Remove all danger tape and related signage.
4. Package and remove all equipment and materials brought into the area.
5. Remove copies of Work Plans.

CleanHarbors®

PACIFIC
STEEL & RECYCLING™

Sampling
Plan and Procedures

Emergency Contacts

Event	Contact	Emergency Number
Clean Harbors Contact	(b) (6), (b) (7)(C) [redacted]	
Spill, Chemical Release		
Fire, Explosion	Fire Department	911
Injury	Ambulance	911
Customer Contact	(b) (6), (b) (7)(C) [redacted]	
On Site Medical First Responder		

Emergency Medical and Hospital Information

It is the policy of CHES not to attempt to assess or treat, or provide private transport of seriously injured personnel except in immediate life threatening situations. Professional emergency personnel and conveyance should always conduct movement of an injured person. In all cases involving a serious injury, the CHES emergency response (contingency) plan is to be implemented and emergency services contacted as listed on the contact page of this plan.

Do not attempt to move or transport a seriously injured patient should the nature of injury relate to back, neck or head injury or signs of internal bleeding. All serious emergencies must call 911.

General Site Information

The Client location consists of a metal recycling plant. The complex possibly utilizes a variety of hazardous solid, liquid, and gaseous chemical substances and compounds including but not limited to corrosive liquids, flammable materials, toxic materials, and compressed gases. Although well maintained, controlled, and monitored, the accidental release of one or more of these hazardous substances could present a significant threat to human health in the immediate vicinity of release.

Purpose and Scope

This document describes a field procedure for taking samples of potentially contaminated areas.

The goal of the procedure is to provide a uniform methodology to collect representative samples of potentially contaminated areas. Using this method will ensure uniformity between various sampling personnel and varied sample locations.

Work Plan Objectives

Inspect and Sample catch basins and oil water separators.

Breakdown of Tasks

Project Preparation

1. Notify Pacific Steel and Recycling POC prior to entering work area.
2. Obtain equipment and materials to be used during inspection.

Pre-Work Set Up

1. Place a copy of the Work Plan in open visual area next to work area.
2. Perform pre-project H&S and work plan meeting with crew (and owner if necessary).
    a. At as minimum this meeting is intended to address:
        i. Anticipated chemical and physical hazards relating to work.
        ii. Review required safety practices.
        iii. Discuss appropriate protective equipment necessary to promote the highest degree of safety for each worker.
        iv. Review specific personnel assignments.
        v. Point out and address all chemical and physical hazards located throughout the area to include piping, valves, pumps, switches and alarms.
        vi. Map out inspection route and sampling locations.
        vii. Locate communication phone.
        viii. Locate shower (if required) and eyewash.
        ix. Plan evacuation routes for personnel in the event of an emergency.
3. Install Danger tape and warning signage
    a. Signage must indicate the work being performed, provide hazard identification and include a contact name and number.
    b. Signage must be placed in a visual area that can be detected by all personnel entering the area (on caution/danger tape, barricades, entry doors)
4. Un-pack equipment and materials for easy access.

Inspect and Sample catch basins and oil water separators.

NOTE: This operation requires a minimum of two participants to complete.

General Scope of Work – Inspect and Sample catch basins and oil water separators.

1. **Don Personal Protective Equipment**: Appropriate personal protective equipment to protect the person collecting the sample must be used when implementing this procedure.

    a. Hand: Sample collection in areas of known or suspected contamination requires the use of disposable gloves. Exam-style Acceptable materials are: Nitrile inner gloves and Neoprene/Nitrile outer gloves. The gloves must have sufficient impermeability to the surface contaminant used on the collection media to allow safe handling.

    b. Body: Because contact of the body with contaminated surfaces is anticipated, a disposable suit should be worn. Acceptable chemical protective suits include: Tychem SL. Disposable garments must be discarded as hazardous waste if contact with contamination has occurred.

    c. Foot: If contact of the feet is anticipated with contaminated surfaces, disposable shoe coverings, boots or booties should be used. Acceptable CPC material include: Tyvek Saranex or Rubber. Disposable booties must be discarded as hazardous waste if contact with contamination has occurred.

    d. Respiratory: If levels from contamination in the area exceed or are likely to exceed the OSHA, ACGIH, or DOE standards, respirators are required. A Full face APR respirator with appropriate GME P100 particulate cartridge will be utilized.

    e. Eye: A Full Face APR will be worn.

2. **Sample Locations**

    a. Sample locations for catch basins 1 – 5 will be located from east to west and as diagramed in the site storm water plan site layout map. Sample locations for oil water separators 1 – 3 will be located from east to west and as diagramed in the site storm water plan site layout map. Each area will be evaluated and mapped. Once mapped a representative amount of sample will be collected from each catch basin and oil water separator. All sample locations will then be plotted on the map.

3. **Procedure**

   a. **Equipment**

      i. Sample container; 4 – 16 oz. glass jar.

      ii. Additive: ***Distilled water*** for soil samples only.

      iii. Telescoping pole.

      iv. pH paper.

   b. **Sampling Technique:**

      i. Remove grating from catch basin or cover from oil water separator.

      ii. Attach sample jar to telescoping pole.

      iii. Collect sample from catch basin or oil water separator with telescoping arm.

      iv. Solid samples will be diluted 50% with DI water.

      v. Place the media in the Jar. Seal the Jar. Record the sample identification on the Jar.

      vi. Replace grating or cover as appropriate.

      vii. Remove gloves and discard appropriately before handling the next sample.

      viii. Record the sample identification, location sampled, and description of the sample.

3. **Testing Criteria**

   i. **All samples will be analyzed for pH by use of pH test strips.**

Post sampling demobilization

1. All equipment and materials must be wiped down prior to removal from the control zone.
2. Prior to exiting the control zone entrant will remove donned PPE in the following manner.
   a. These items will be placed in double bags for disposal
   b. Entrant will then remove outer gloves and place in bags for disposal
   c. Using a sharpie all bags used for debris containment will be identified by writing the characteristic of the contaminant (corrosive, solvent, general trash, etc.) on the outside of the bag.
3. Remove all danger tape and related signage.
4. Package and remove all equipment and materials brought into the area.
5. Remove copies of Work Plans.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Richland
2800 George Washington Way
Richland, WA 99352
Tel: (509)375-3131

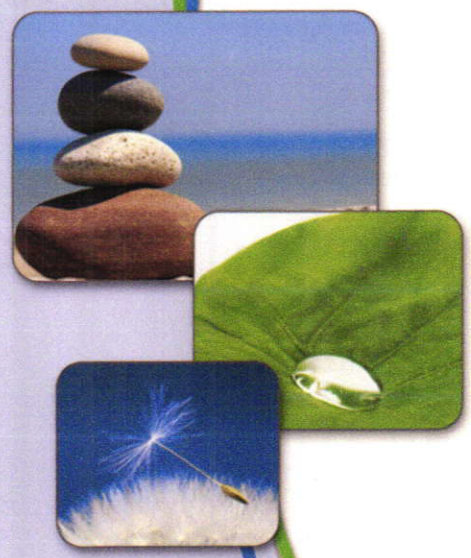
TestAmerica Job ID: 300-540-1
TestAmerica Sample Delivery Group: 50111
Client Project/Site: Clean Harbors - Emergency Arsenic Wipes

For:
Clean Harbors Environmental Services Inc
26328 79th Ave South
Kent, Washington 98032

Attn: [redacted]

[redacted]

Authorized for release by:
8/13/2015 10:14:24 PM
[redacted] Project Management
[redacted]@testamericainc.com



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 300-540-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative
300-540-1

Comments
No additional comments.

Receipt
The samples were received on 8/13/2015 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Client Sample ID: 81315-01 — Lab Sample ID: 300-540-1

No Detections.

Client Sample ID: 81315-02 — Lab Sample ID: 300-540-2

No Detections.

Client Sample ID: 81315-03 — Lab Sample ID: 300-540-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.3	J	10	2.0	ug/Wipe	1		6010C	Total/NA

Client Sample ID: 81315-04 — Lab Sample ID: 300-540-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.3	J	10	2.0	ug/Wipe	1		6010C	Total/NA

Client Sample ID: 81315-05 — Lab Sample ID: 300-540-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.4	J	10	2.0	ug/Wipe	1		6010C	Total/NA

Client Sample ID: 81315-06 — Lab Sample ID: 300-540-6

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Client Sample ID: 81315-01
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-1
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 19:54	1

Client Sample ID: 81315-02
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-2
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 20:01	1

Client Sample ID: 81315-03
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-3
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3	J	10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 20:05	1

Client Sample ID: 81315-04
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-4
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.3	J	10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 20:08	1

Client Sample ID: 81315-05
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-5
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4	J	10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 20:12	1

Client Sample ID: 81315-06
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-6
Matrix: Wipe

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 21:00	1

QC Sample Results

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 300-702/1-A
Matrix: Wipe
Analysis Batch: 704

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 702

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		10	2.0	ug/Wipe		08/13/15 15:17	08/13/15 19:36	1

Lab Sample ID: LCS 300-702/2-A
Matrix: Wipe
Analysis Batch: 704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 702

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	48.8		ug/Wipe		98	80 - 120

Lab Sample ID: LCSD 300-702/3-A
Matrix: Wipe
Analysis Batch: 704

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 702

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	50.0	49.4		ug/Wipe		99	80 - 120	1	20

QC Association Summary

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Metals

Prep Batch: 702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-540-1	81315-01	Total/NA	Wipe	7300	
300-540-2	81315-02	Total/NA	Wipe	7300	
300-540-3	81315-03	Total/NA	Wipe	7300	
300-540-4	81315-04	Total/NA	Wipe	7300	
300-540-5	81315-05	Total/NA	Wipe	7300	
300-540-6	81315-06	Total/NA	Wipe	7300	
LCS 300-702/2-A	Lab Control Sample	Total/NA	Wipe	7300	
LCSD 300-702/3-A	Lab Control Sample Dup	Total/NA	Wipe	7300	
MB 300-702/1-A	Method Blank	Total/NA	Wipe	7300	

Analysis Batch: 704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-540-1	81315-01	Total/NA	Wipe	6010C	702
300-540-2	81315-02	Total/NA	Wipe	6010C	702
300-540-3	81315-03	Total/NA	Wipe	6010C	702
300-540-4	81315-04	Total/NA	Wipe	6010C	702
300-540-5	81315-05	Total/NA	Wipe	6010C	702
300-540-6	81315-06	Total/NA	Wipe	6010C	702
LCS 300-702/2-A	Lab Control Sample	Total/NA	Wipe	6010C	702
LCSD 300-702/3-A	Lab Control Sample Dup	Total/NA	Wipe	6010C	702
MB 300-702/1-A	Method Blank	Total/NA	Wipe	6010C	702

Lab Chronicle

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Client Sample ID: 81315-01
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-1
Matrix: Wipe

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7300			1 Wipe	50 mL	702	08/13/15 15:17	BCR	TAL RCH
Total/NA	Analysis	6010C		1	1 Wipe	50 mL	704	08/13/15 19:54	VK	TAL RCH

Client Sample ID: 81315-02
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-2
Matrix: Wipe

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7300			1 Wipe	50 mL	702	08/13/15 15:17	BCR	TAL RCH
Total/NA	Analysis	6010C		1	1 Wipe	50 mL	704	08/13/15 20:01	VK	TAL RCH

Client Sample ID: 81315-03
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-3
Matrix: Wipe

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7300			1 Wipe	50 mL	702	08/13/15 15:17	BCR	TAL RCH
Total/NA	Analysis	6010C		1	1 Wipe	50 mL	704	08/13/15 20:05	VK	TAL RCH

Client Sample ID: 81315-04
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-4
Matrix: Wipe

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7300			1 Wipe	50 mL	702	08/13/15 15:17	BCR	TAL RCH
Total/NA	Analysis	6010C		1	1 Wipe	50 mL	704	08/13/15 20:08	VK	TAL RCH

Client Sample ID: 81315-05
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-5
Matrix: Wipe

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7300			1 Wipe	50 mL	702	08/13/15 15:17	BCR	TAL RCH
Total/NA	Analysis	6010C		1	1 Wipe	50 mL	704	08/13/15 20:12	VK	TAL RCH

Client Sample ID: 81315-06
Date Collected: 08/13/15 12:30
Date Received: 08/13/15 15:00

Lab Sample ID: 300-540-6
Matrix: Wipe

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7300			1 Wipe	50 mL	702	08/13/15 15:17	BCR	TAL RCH
Total/NA	Analysis	6010C		1	1 Wipe	50 mL	704	08/13/15 21:00	VK	TAL RCH

Lab Chronicle

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131

Certification Summary

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Laboratory: TestAmerica Richland

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		187436	11-01-15
Arizona	State Program	9	AZ0709	07-02-16
California	State Program	9	E87829	05-31-16
Colorado	State Program	8	N/A	09-30-15
Florida	NELAP	4	E87829	06-30-16
Hawaii	State Program	9	N/A	01-09-16
L-A-B	DoD ELAP		L2291	06-30-17
Michigan	State Program	5	N/A	08-13-15 *
Nevada	State Program	9	WA011162014	07-31-16
New Mexico	State Program	6	WA00023	01-09-16
Oregon	NELAP	10	WA100002	01-09-16
Pennsylvania	NELAP	3	68-04849	08-31-15
Tennessee	State Program	4	TN04011	01-09-16
Texas	NELAP	6	T104704493-10-1	12-31-15
USDA	Federal		P330-11-00043	03-06-17
Utah	NELAP	8	QUAN8	01-31-16
Virginia	State Program	3	00100	03-14-16
Washington	State Program	10	WA01116	08-13-15 *
Washington (CLIA)	State Program	10	50D0661626	06-30-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL RCH

Protocol References:

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

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131

Sample Summary

Client: Clean Harbors Environmental Services Inc
Project/Site: Clean Harbors - Emergency Arsenic Wipes

TestAmerica Job ID: 300-540-1
SDG: 50111

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-540-1	81315-01	Wipe	08/13/15 12:30	08/13/15 15:00
300-540-2	81315-02	Wipe	08/13/15 12:30	08/13/15 15:00
300-540-3	81315-03	Wipe	08/13/15 12:30	08/13/15 15:00
300-540-4	81315-04	Wipe	08/13/15 12:30	08/13/15 15:00
300-540-5	81315-05	Wipe	08/13/15 12:30	08/13/15 15:00
300-540-6	81315-06	Wipe	08/13/15 12:30	08/13/15 15:00

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

8/13/2015

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Clean Harbors

REPORT TO: ADDRESS: 26328 74th Ave S Kent wa 98032

PHONE: 253 617817 FAX: email davis.paul@cleanharbors.com

INVOICE TO:

P.O. NUMBER:

PROJECT NAME:

PROJECT NUMBER:

SAMPLED BY:

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 ~~<1~~

Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	Arsenic	pH	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	81315-01	8/13/15 12:30	X	X				
2	81315-02	8/13/15 12:30	X	X				
3	81315-03	8/13/15 12:30	X	X				
4	81315-04	8/13/15 12:30	X	X				
5	81315-05	8/13/15 12:30	X	X				
6	81315-06	8/13/15 12:30	X	X				
7								
8								
9								
10								

300-540 COC

RELEASED BY: [redacted] DATE: 8/13/15 RECEIVED BY: [redacted] DATE: 8/13/15
PRINT NAME: [redacted] TIME: 1230 pm PRINT NAME: [redacted] FIRM: CHES TIME:

RELEASED BY: [redacted] DATE: 8/13/15 RECEIVED BY: DATE: 8-13-15
PRINT NAME: [redacted] FIRM: CHES TIME: 15:00 PRINT NAME: [redacted] FIRM: [redacted] TIME: 1500

ADDITIONAL RE[redacted] TEMP: PAGE OF

TAL-1000 (0714)

Login Sample Receipt Checklist

Client: Clean Harbors Environmental Services Inc

Job Number: 300-540-1
SDG Number: 50111

Login Number: 540
List Number: 1
Creator: (b) (6), (b) (7)(C) [redacted]

List Source: TestAmerica Richland

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received 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	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	