

Emerald Services Airport Way South Facility May 17, 2012 Diesel Release Summary

PREPARED FOR: Emerald Services, Inc.

PREPARED BY: Mario Lopez/CH2M HILL
Rachel Chang/CH2M HILL

COPIES: Sheila Smith/Emerald Services, Inc.

DATE: July 19, 2012

Emerald Services, Inc. (Emerald) owns and operates a used oil and petroleum-contaminated wastewater treatment facility located at 1500 Airport Way South, Seattle, Wa. A vicinity map is provided as **Figure 1**. On May 17, 2012, a diesel release occurred near the south entrance of the facility adjacent to the planting strip. Subsequent cleanup activities were conducted between May 17 and June 26 to remediate the impacted soil and sewer line. This technical memorandum summarizes the incident reporting, initial response activities, subsequent soil excavation, and confirmation sampling activities conducted by Emerald to remediate the impacts of the diesel release.

Incident Reporting

On Thursday, May 17, 2012 around 12:00 p.m., during a fuel transfer at the Emerald's South Tank Farm, a truck driver incorrectly opened valves to fill the truck, rather than off-load. While the truck was physically within the Emerald facility containment area, the truck's vent accumulated sufficient pressure to direct the diesel fuel outside of the facility boundary, and onto the adjacent sidewalk along Airport Way South. It was estimated that approximately 100 to 200 gallons of fuel were released prior to shutting off the equipment. Of the total released fuel, approximately 20 gallons reached the sanitary sewer line along Airport Way South through a manhole. It was also estimated that less than 20 gallons reached a planting strip located on the sidewalk at the intersection of Airport Way South and South Massachusetts Street.

The initial spill was reported to the National Response Center (NRC, Case #10011833), the Washington State Department of Ecology (Ecology, Environmental Report Tracking #633938), King County Wastewater Treatment Division (King County), and the City of Seattle on May 17, 2012. The Environmental Compliance Inspector with the Seattle Public Utilities visited the site on the same day. A written 5-day report of the accidental spill was submitted to King County on May 22, 2012. A copy of these notification reports is located in Attachment A. In addition, follow up voice messages were left with Ecology on May 23 and 30, 2012.

Initial Response Activities

On-site personnel responded to this release immediately with on-site spill equipment to prevent further migration of the diesel. A vacuum truck was used to remove free diesel from the street, planting strip, and sanitary sewer line from the manhole just outside the entrance to the facility to the catch basin in front of Seattle Injector. The sanitary sewer line was jetted cleaned as per instructions from the City of Seattle inspector. Approximately 14,406 gallons of water and 80 gallons of solids were removed from the sanitary sewer and disposed of through Emerald's onsite wastewater treatment system. Residual fuel on the sidewalk and roadway was removed using floor dry clay based absorbent. Copies of the bill of lading and gallonage tickets are located in Attachment B.

The top layer of exposed soil in the planting strip was removed by Emerald personnel using hand tools such as shovels and picks. Additional staining found in the soil suggested that heavier excavation equipment was necessary to completely remove the contaminated soil.

Planting Strip Soil Excavation Activities

The first round of soil excavation of the planting strip using heavy equipment began on May 18, 2012 and was completed by May 22, 2012. A Street Use Permit was issued by the Seattle Department of Transportation (SDOT) for the excavation activities (see Attachment A). The entire planting strip (2 feet wide by 90 feet long) was excavated to a depth of 1- 1.5 feet depending on the presence of diesel staining (see Attachment C Photographs). The west side of the trench is adjacent to the sidewalk curb, which drops to approximately 0.80 feet in depth. The bill of lading dated May 22 indicated that 28,360 pounds of soil was removed during this initial excavation.

On May 24, 2012 CH2M HILL personnel collected confirmation samples to determine if residual impacted soil remains. Soil samples were collected from four sidewalls and from the bottom of the trench. Both North and South wall samples were collected as grab samples while the East, West, and Bottom samples were collected as composites from random locations on each wall and bottom of trenching. Samples were hand delivered to Pace Analytical in Seattle for total petroleum hydrocarbon (TPH) diesel and heavy oil analysis using NWTPH-Diesel Extended. Laboratory results from this initial sampling confirmation and associated Photoionization Detector (PID) readings are presented in Table 1. Attachment D contains the laboratory reports. Field notes are included as Attachment E.

TABLE 1

Diesel Release Confirmation Soil Sampling Results
Emerald Services Airport Way South Facility

Sample ID	Sample Date	Diesel (mg/kg)	Motor Oil (mg/kg)	PID Reading (ppm)
MTCA Method A Industrial Cleanup Levels				
		2,000	2,000	
Confirmation Samples after First Excavation				
NWES-WEST-052412	05/24/2012	7960	977	115-120
NWES-BOTTOM-052512	05/24/2012	1950	526	80-89
NWES-DUP1-052412	05/24/2012	1860	498	
NWES-SOUTH-052412	05/24/2012	2210	405	150-159
NWES-NORTH-052412	05/24/2012	1880	545	89-92
NWES-EAST-052412	05/24/2012	1950	339	200-220
Confirmation Samples after Second Excavation				
South Wall	06/08/2012	N/A	N/A	230-240
West Wall-1	06/08/2012	560	240	30-32
West Wall-2	06/08/2012	1840	701	28-30
West Wall-3	06/08/2012	11300	1650	60-75
West Wall-4	06/08/2012	331	525	0.8-1.2
Confirmation Samples after Third Excavation				
South WALL-062612	06/26/2012	180	ND	35-50
WEST WALL-062612	06/26/2012	4540	687	150-175

Notes:

N/A - sample not analyzed

ND - non detected

11300

Bold indicates interim confirmation sample exceeding MTCA Method A Cleanup standard

4540

Bold and Shaded indicate final confirmation sample exceeding MTCA Method A Cleanup Standard

The May 24, 2012 laboratory results showed that the South and West wall samples exceeded the MTCA Method A cleanup level of 2,000 mg/kg. Additional soil removal was recommended.

Between May 30 and June 6, 2012 Emerald conducted additional soil removal by extending soil excavation at the south end by 2 feet southward and downward by 1 foot to a total depth of 2.5 feet.

On June 8, 2012, CH2M HILL personnel collected grab samples on the South Wall and at four different locations on the West wall to better locate the areas requiring additional soil removal. These samples were screened using a PID. The samples were submitted to Pace Analytical for analysis, however the South Wall sample was not analyzed due to the high PID reading (see field notes in Attachment E) which indicated that it may not meet MTCA cleanup standard.

After receiving the second set of confirmation results from June 8, 2012 that showed MTCA exceedance at West Wall-3, Emerald conducted another round of soil removal from the areas where the highest lab results or PID readings were encountered (West Wall-3 and South Wall). This included removal of concrete pavement and excavated soil 10 feet to the south and down to 3 feet total depth. Due to the presence of the curb on the west wall, utility lines (sewer and fiber optic cables), and the right-of-way beyond, the additional excavation was conducted vertically in the vicinity of West Wall-3 (5 feet north and 5 feet south of West Wall-3) to where utility lines were encountered at about 3 feet. Further excavation laterally to the west was not practicable because it would have undermined the integrity of the roadway structure at the intersection of Airport Way South and South Massachusetts Street (which was recently paved) and risk damage to the utility lines. Lane closure on Airport Way South will also be necessary which would impact traffic on a major arterial. At the time of excavation completion, no stained soil or free product were noted. See photographs of the excavated areas in Attachment C.

Following this excavation, two additional confirmation samples were collected on June 26, 2012 from the west and south walls. Results are summarized on Table 1. Based on the results, the soils in the south end are reported to be below the MTCA Method A cleanup standard. At 4,540 mg/kg, the soil sample collected along the west wall of the excavation was reported at slightly more than two times the corresponding MTCA Method A cleanup level for TPH-diesel (see Figure 2). This result suggests that one area along the west wall (around sample West Wall 3 located at the intersection of Airport Way South and South Massachusetts Street) may contain soils above the MTCA Method A cleanup level. The volume of the remaining impacted soil is estimated to be 3.7 cubic yards (25 feet long by 1 foot wide by 4 feet deep).

In total, 41,820 pounds of soil was removed from the planting strip and the concrete slab to the south. The excavated soil was transported by Emerald to Allied Waste's Transfer Station on 3rd Avenue South and Lander Street, Seattle, Washington. The Bill of Lading for the soil disposal is included in Attachment B.

Conclusions

Emerald has completed incident response and remedial activities which addressed the May 17, 2012 diesel release. Emerald jet cleaned the sanitary sewer pipe leading from the area of spill to the catch basin in front of the Seattle Injector. Emerald also removed 41,820 pounds (approximately 22 cubic yards) of impacted soils from the planting strip area to the extent possible without undermining the right-of-way at Airport Way South and the utility lines. No free product or stained soil was observed at the completion of excavation activities.

The remaining diesel impacted soil is not expected to pose a threat to human health or the environment for the following reasons:

1. A limited quantity of diesel released (less than 20 gallons) was released to the soils in the planting strip. The majority of the spilled product was removed through the excavation and disposal of the impacted soil. The remaining impacted soil (less than 4 cubic yards) showed a relatively low level of TPH-diesel, i.e., slightly over two times the corresponding MTCA Method A cleanup level.
2. The westward movement of the diesel is expected to be extremely limited due to the trajectory of the release (primarily to the south) and the nature of the soil (mostly clay). In addition, the utility lines in the area are encased in compacted granular fill and therefore are not expected to act as a conduit for movement of diesel.

3. The remaining impacted soil is located at a relatively shallow depth of 3-5 feet which is above the groundwater table. Therefore no groundwater impact is expected.
4. The remaining impacted soil will be covered under concrete and therefore no exposure to precipitation or infiltration is expected.

Considering the high potential costs including the risk of damaging the utility lines including fiber optic cables, the traffic impacts on a major arterial during construction activities, the high expense to repair and restore a recently completed section of the Airport Way South, and the relatively small benefit of removing a small amount of low level TPH impacted soil, Emerald believes that additional soil removal is not warranted. Furthermore, the small amount of remaining impacted soil is not expected to pose a threat to human health or the environment.

Based on these factors, Emerald considers that it has completed the necessary corrective actions to address the May 17, 2012 diesel spill. Emerald respectfully requests a no-further-action determination from Ecology with respect to this spill. With Ecology and the City of Seattle's concurrence, Emerald will proceed to backfill the excavation area with clean fill and repair the concrete pavement to its pre-spill conditions.

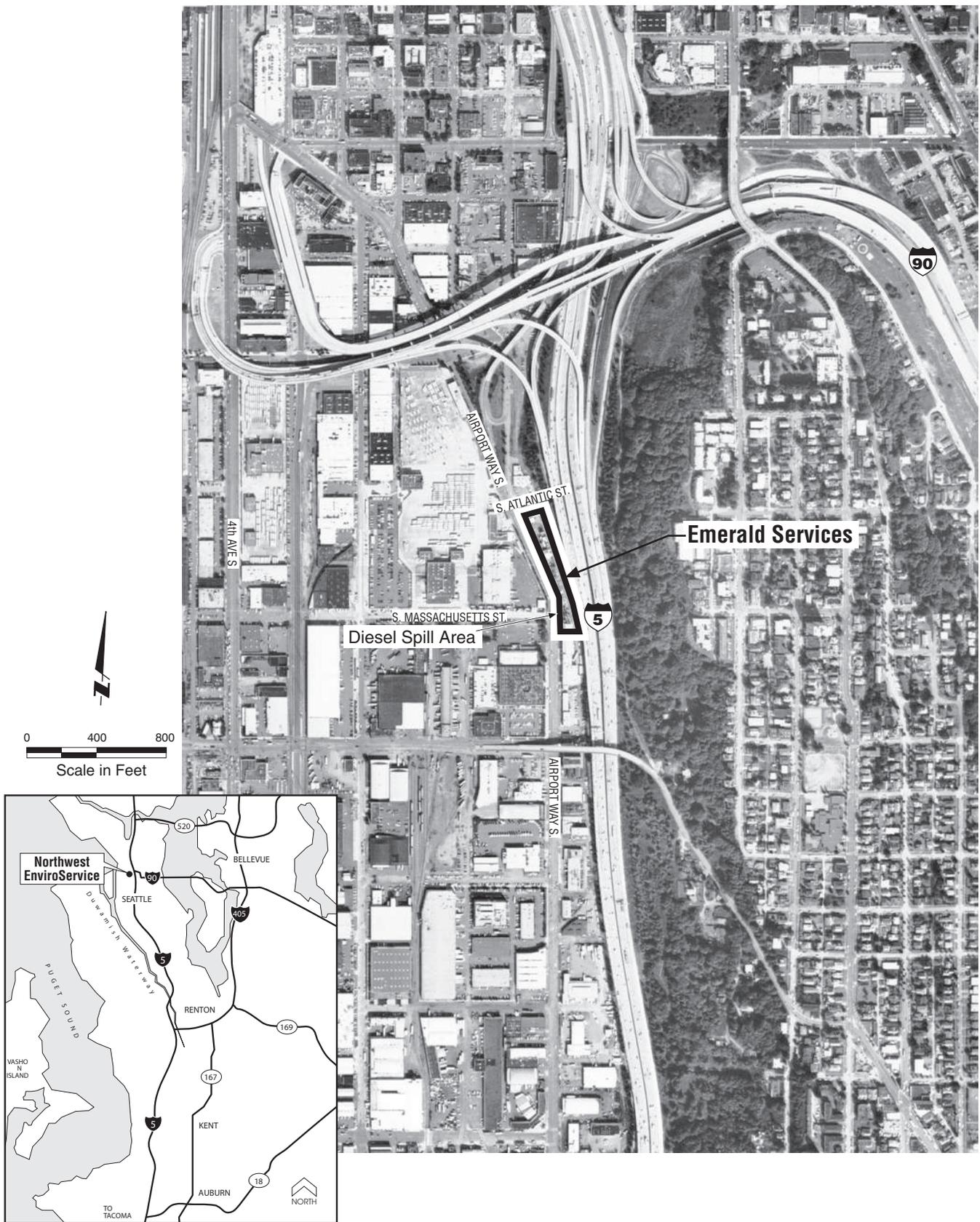


Figure 1
Site Vicinity Map

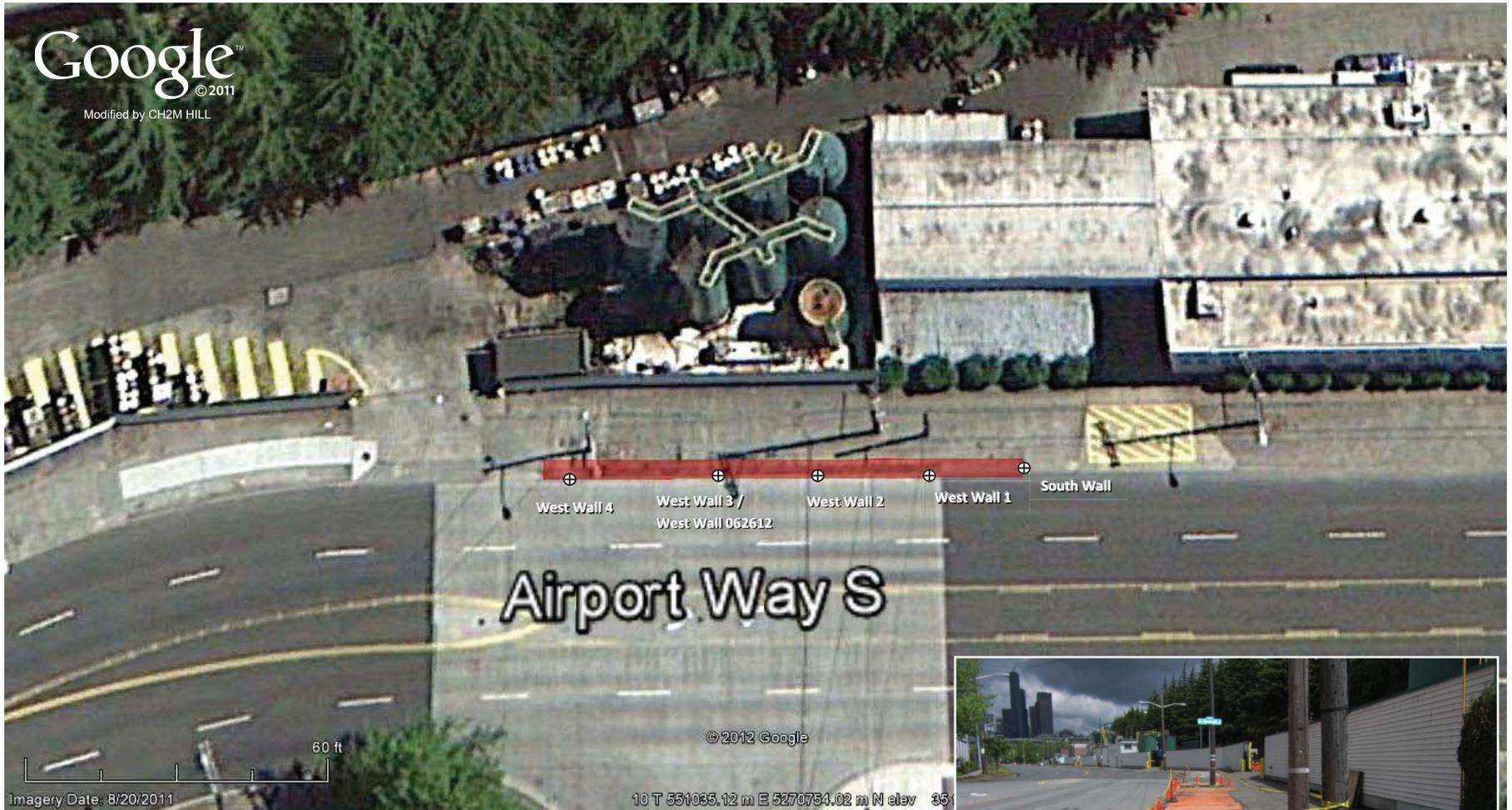


Figure 2
Excavation Area

Attachment A
Spill Notification



INCIDENT/SPILL REPORTING FORM

Date of Spill: 5/17/12 Time of Spill: 12:00pm Time of Notification to EC: 12:25pm

Emergency Coordinator: HARRY UMBINETTI / BILL DENJUE

Location/Address of Spill: 1500 AIRPORT WAY SOUTH - ADJ SY TANK FARM

Responsible Party(s): EMERALD RECYCLING

Type of incident (i.e., fire, explosion, system upset, spill, etc.): SPILL

Type of material spilled: DIESEL

Quantity and duration of spill: ~~100 GALS.~~ 100-200 GAL 2-3 MINUTES

Quantity of recovered material that resulted from the incident: STILL CLEANING

Did spill reach ground, surface water or storm drains? GROUND + SEWER (20 GALS.)

Description of Incident (use back of form if necessary): DURING THE OFFLOAD OF DIESEL FROM TRUCK 770, ^{TO} DRIVER PUT VALVES OPEN TO FILL TRUCK INSTEAD OF OFF-LOAD RESULTING IN OVERFILL OF TRUCK + CAME OUT OF VENT. DRIVER ERROR

Spill Supplies Replenished? Yes No Indicate date of re-supply: _____

Signature of Responsible Party or EC _____

Date Signed _____

Risk to Human Health or Environment: Low Moderate High _____

Corrective Action: NEED

Agencies Contacted: KING COUNTY / ECOLOGY Report #: _____

Agency Representative/Name: _____

Action Required by Agency: _____



May 22, 2012

King County Wastewater Treatment Division
Department of Natural Resources and Parks
IHW-NR-0200
130 Nickerson St., Suite 200
Seattle WA 98109-1658
Attn: Jim Sifford

RE: 5-Day Report of Accidental Spill and Slug Discharge
Diesel to Sanitary Sewer
Emerald Recycling Permit #7690-05

Dear Mr. Sifford;

As required by the Emerald Recycling (Emerald) Industrial Waste Discharge Permit #7690-05 (Permit), Section S6, Emerald is providing this 5-day report in response to a spill to sanitary sewer.

The spill occurred at approximately 12:00 p.m. (noon) on Thursday, May 17, 2012. The cause of the spill was driver error during transfer of fuel at Emerald's south tank farm. The driver was scheduled to off-load diesel from his truck to one of the storage tanks at the Emerald facility. The driver incorrectly opened valves to fill the truck, rather than off-load. While the truck was physically within the Emerald facility containment area, the truck's vent had sufficient pressure to direct the diesel fuel outside of the facility boundary, and onto Airport Way S. An estimated 100 to 200 gallons of fuel was released prior to equipment shut-off.

The diesel fuel migrated to Airport Way S. It is estimated that approximately 20 gallons reached the sanitary sewer lines along Airport Way S. It is estimated that less than 20 gallons reached the open area (ground) next to the sidewalk adjacent to the south tank farm.

Emerald on-site personnel responded quickly with on-site spill equipment to prevent further migration of the diesel fuel. Additional equipment from Emerald's tank cleaning division was dispatched to the spill site shortly thereafter.

Your Partner for Recycling and Environmental Services

A vacuum truck was used to remove free diesel fuel from the street, and also for removal of contaminated water from the sanitary sewer line from the catch basin in front of Evergreen Treatment to the catch basin in front of Seattle Injector. At the direction of the City of Seattle, Emerald also snaked and flushed the sanitary sewer line. Floor dry was used to absorb any residual fuel from the roadway that was not removed by the vacuum truck.

Emerald removed the top layer of the soil that came into contact with the diesel fuel from the spill. However, staining was still visible in the soil on the day after the spill. Further digging with shovels suggested that heavy equipment would be needed to sufficiently remove the contaminated soil. Emerald has since conducted a utility locate of the area, and is proceeding with removal of any visibly contaminated soil. Due to periods of rain since the spill, a cover has been in place over the contaminated area during periods when clean-up was not actively being conducted. Emerald will be utilizing the services of CH2MHILL to assist with ensuring all contamination has been removed.

Any necessary disciplinary action will be addressed by the employee's supervisor. Emerald will also look into options for conducting fuel transfers further within the facility boundary. If you have any questions or need additional information, please contact me at sheilas@emeraldnw.com or at the numbers below.

Sincerely,



Sheila Smith, Environmental Coordinator
Emerald Services, Inc.

(206) 832-3204 (Office); (253) 370-7912 (Cell); (206) 832-3220 (fax)

Cc: Eric Autry – City of Seattle
Facility Operating Record

PERMITTEE

Inspector: Kevin Miller

Inspection District: SOUTH DOWNTOWN

LOCATION

Address: 1500 AIRPORT WAY S
Details:

Application Date: 5/23/12 9:54 am
Issue Date: 5/23/12 10:04 am

PARTIES (* Primary Applicant)

Role	Name	Address	Phone	From	To
*24 Hour Contact	JOHNSON, TERRY	7343 E. MARGINAL WAY S.,SEA,WA,98108	(206)832-3000		
Permittee	EMERALD SERVICES INC.	7343 E. MARGINAL WAY S.,SEA,WA,98108-	(206)832-3000		

PERMITTED USES

Right of Way:	DPD #:	To Be Restored By:					
ARTERIAL							
Use	Space	Start Date	Duration	Max Allowed Date	Sq. Ft.	Issued Date	Intended Vacate Date
49	A	5/21/12	10	5/30/12	135	5/23/12	5/30/12
Use Space	Description	Conditions					
49 A	Street opening for miscellaneous purposes	Excavate the planting strip area behind curb line to remove contaminated soil from fuel spill. Approx. 1.5' wide by 90' in length at this time. Public to be protected at all times. See add'l. endoresments for further details.					

CONDITIONS OF USE

ADDITIONAL CONDITIONS :
Additional Notes: Contractor to make open ditch safe to public. Waiting for soils test results before any further work can be done. If test results show that there is further excavation needed the contractor must apply for an approved traffic and pedestrian control plan and must submit a field review application providing a plan showing future excavation and details. Also must provide documents showing site has been cleaned up before any restoration is to take place. Needs sign off from S.P.U. and D.O.E.

E1.15 :
 MULCHING AND MATTING - Apply mulch to protect exposed soils and promote plant establishment.

E1.40 :
 PERMANENT SEEDING AND PLANTING - Install temporary surface runoff control measures prior to seeding or planting to protect the surface from erosion until the vegetation is established. Establish permanent vegetation (e.g., grasses, legumes, trees, and shrubs) as rapidly as possible to prevent soil erosion by wind or water.

E1.45 :
 SODDING - Establish permanent turf for immediate erosion protection or to stabilize drainage pathways where concentrated overland flow will occur.

E1.50 :
 TOPSOILING - Preserve and use topsoil to enhance final site stabilization with vegetation and to provide a suitable growth medium for final site stabilization with vegetation.

E3.25 :
 STORM DRAIN INLET PROTECTION - Install storm drain covers on stormwater structures less than 12 inches deep during construction. Install catch basin filter socks in stormwater structures greater than 12 inches deep. Place the storm drain or catch basin grate on top of the catch basin filter sock to hold it in place.

C1.20 :
 USE OF CHEMICALS DURING CONSTRUCTION - Use only the recommended amounts of chemical materials and apply them in a proper manner. Neutralize the pH of concrete wash water from concrete mixers, if necessary.

C1.35 :
 SAWCUTTING AND PAVING POLLUTION PREVENTION - Vacuum slurry and cuttings during the activity to prevent migration offsite and do not leave slurry and cuttings on permanent concrete or asphalt paving overnight. Dispose of collected slurry and cuttings, waste material, and demolition debris in a manner that does not violate groundwater or surface water quality standards. Implement preventative measures such as berms, barriers, secondary containment, and vactor trucks if observations indicate that a violation of water quality standards could occur.

C1.45 :
 SOLID WASTE HANDLING AND DISPOSAL - Remove and dispose of accumulated solid waste at authorized disposal areas. Label waste containers and place them in a covered area with closed lids. Salvage and recycle any useful materials.

BMP5 :



SPILL PREVENTION AND CLEANUP-Keep a spill cleanup kit in a nearby vehicle or next to the work site so that it is easily accessible. Make sure the contents of the spill kit are appropriate for the types and quantities of materials used for this work task. Refill spill kit materials before beginning work.

BMP16 :
CONCRETE POURING, CONCRETE/ASPHALT CUTTING, AND ASPHALT APPLICATION - Sweep or shovel loose aggregate chunks and dust for recycling or proper disposal. Place storm drain covers or similarly effective containment devices over all storm drains located downslope or adjacent to the work area. Shovel or vacuum all slurry and remove from the site. Perform cleaning of concrete application and mixing equipment or concrete-delivery vehicles in a designated area where the rinse water is controlled.

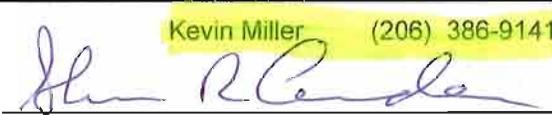
BMP20 :
LANDSCAPING AND LAWN VEGETATION MANAGEMENT - Use proper fertilizer and herbicide application techniques to minimize nutrient pollution of stormwater. Implement proper landscaping and mulching techniques to prevent plant material and excess mulch from entering the separate storm drainage system. Do not dispose of collected vegetation in separate storm drainage systems, waterways, water bodies or greenbelt areas.

FEES

Description	Date	Amount
ISSUANCE FEE - USE 49	05/23/2012	\$146.00
USE FEE - USE 49 - SPACE A	05/23/2012	\$13.50
Totals:		\$159.50

STREET USE INSPECTOR

Permittee 

Director Per  Kevin Miller (206) 386-9141

GENERAL REQUIREMENTS

- Nature of permit.** This permit is issued pursuant to the Seattle Municipal Code (SMC), Chapter 15.04, for use and/or occupancy of the public right-of-way consistent with the terms and conditions set forth herein. This permit is wholly of a temporary nature, vests no permanent rights whatsoever, and is revocable pursuant to SMC 15.04.070.
- Acceptance of terms, conditions, and requirements.** Permittee accepts the terms, conditions, and requirements of this permit and agrees to comply with them to the satisfaction of the Seattle Department of Transportation, Street Use Division, or such other agency as may be designated by the City of Seattle. Permittee further agrees to comply with all applicable city ordinances, including but not limited to Title 15 SMC, and all applicable requirements of state and federal law.
- Copy of permit.** A copy of the issued permit and approved plans must be on site and available at all times
- Expiration of permit.** This permit shall remain valid until revoked pursuant to SMC 15.04.070; provided that, the permit shall expire automatically if the authorized work does not begin within six months from the date the permit is issued.
- Superiority of Street Improvement Permit.** When a Street Improvement Permit exists, the rights acquired under the Street Improvement Permit supersedes those acquired under any other Street Use or Utility Permits.
- Compliance with technical requirements and standards.** All work within the public right-of-way shall be performed and completed in accordance with requirements set forth in the following technical documents published by the City of Seattle, as now or hereafter amended: Right-of-Way Improvements Manual; Standard Specifications for Road, Bridge, and Municipal Construction; Standard Plans for Municipal Construction; Street and Sidewalk Pavement Opening and Restoration Rule; and Traffic Control Manual for In-Street Work.
- Scope of Work.** The Permittee shall construct the improvements reflected in, and in accordance with, this permit and the City approved construction plans. Any and all revisions, omissions and / or additions to the scope of work shall be reviewed and approved by the City prior to implementation.
- Street Use Notification.** Construction work may be completed in several phases: site preparation (setting up traffic control, sawcutting, etc), ground breaking, and restoration. Before beginning any phase of work in the public right-of-way, the Permittee shall notify Street Use of each start date. Permittee shall be responsible for notifying Street Use Job Start at (206) 684-5270 or SDOTJobStart@Seattle.gov a minimum of 2 business days prior to the start of work and provide the following information:
 - Permit Number
 - Job Site Address
 - Start Date - Please specify if Job Start date is the same as the Excavation date. If the dates are different, please provide both dates.
 - Brief Work Description
 - Job Site Contact Name and Phone Number

Failure to do so shall result in a penalty of \$300 or such other amount as may be established pursuant to SMC 15.04.074.

For Street Improvement Permits and Major Utility Permits, a preconstruction meeting is required prior to the start of construction, and the assigned inspector shall be notified a minimum of 2 business days prior to required inspections.

- Utility notification prior to ground disturbance.** The Permittee shall call Utility Underground Locator Center (1-800-424-5555) a minimum of 48 hours prior to ground disturbance.
- Public notification.** Permittee shall notify all potentially affected residents and businesses, at least one week prior to starting work within the public right-of-way.
- Coordination of work.** In performing work authorized by this permit, the Permittee shall coordinate with other contractors working in the public right-of-way to minimize the impact to the public.



12. **Hours of work.** Work performed within the public right-of-way shall occur only during hours authorized under all applicable codes, regulations, rules and permits.
13. **Off-Hour Work.** Work outside of normal working hours (8:00 am -5:00 pm Monday through Friday) requires a minimum of 3 business days advanced notice to the SDOT Street Use Inspection Supervisor prior to the off hours work. Work outside of normal working hours may also require a separate approved traffic control plan. A minimum of 2 hours of inspection time will be charged for inspection outside of normal working hours at the premium rate. A Stop Work order and/or a Citation may be issued for failure to notify a minimum of 3 business days in advance.
14. **Inspection fees.** Permittee shall pay for City inspections of work authorized under this permit per the current fee schedule as established pursuant to SMC 15.04.074, and to cover all other associated costs.
15. **Billing.** All fees and costs billed pursuant to this permit shall be paid to the City of Seattle within 30 days from the date of the invoice. Past due invoices may be subject to interest charges and / or sent to collections.
16. **Deposits, Charges, and Future Billings.** The Permittee is responsible for all permit charges. If a deposit was made for estimated future street use services, any unused portion of the deposit shall be refunded to the Permittee. Any charges in excess of the deposit shall be billed to the Permittee.
17. **Corrective Work.** The Permittee is responsible for any additional costs incurred by the City resulting from temporary or corrective measures required to bring the work area in compliance with standards that apply, including, but not limited to, temporary traffic control, requirements for temporary structures, temporary stabilization and temporary restoration when the Permittee is not on site.
18. **Indemnification.** The Permittee agrees to defend, indemnify, and hold harmless the City of Seattle, its officials, officers, employees, and agents against: (1) any liability, claims, causes of action, judgments, or expenses, including reasonable attorney fees, resulting directly or indirectly from any act or omission of the Permittee, its contractors, subcontractors, anyone directly or indirectly employed by them, and anyone for whose acts or omissions they may be liable, arising out of the Permittee's use or occupancy of the public right-of-way; and (2) all loss by the failure of the Permittee to fully or adequately perform, in any respect, all authorizations or obligations under this Permit.

EXISTING IMPROVEMENTS

1. **Costs of damage to City property and improvements.** Permittee shall be responsible for the costs of repairing any damage to city property or improvements resulting from work performed by or on behalf of the Permittee within the public right-of-way.
2. **Utility protection.** The Permittee shall be responsible for checking locations and providing adequate protection for all utilities in the work area.
3. **Utility relocation.** The Permittee shall be responsible for notifying affected utilities and requesting any necessary relocation.
4. **Survey monuments.** Prior to removing, destroying, disturbing, or covering a survey monument, such that the survey point is no longer visible or readily accessible, Permittee shall obtain a permit from the Department of Natural Resources pursuant to Washington Administrative Code, Chapter 332-120.

ENVIRONMENTAL PROTECTION

1. **Best management practices required.** The Permittee shall be responsible for the control of surface runoff, erosion and sediment at the construction site, as required by: the Stormwater Code (Title 22 Subtitle VIII SMC), the Standard Specifications for Road, Bridge, and Municipal Construction and Department of Planning and Development Director's Rule 16-2000, as now or hereafter amended. The site and the surrounding area shall generally be kept clean and free of construction debris or other material, including but not limited to mud, dust, rock, asphalt, and concrete. Waste materials shall be collected and disposed of at an appropriate disposal site. These materials shall be prevented from entering any part of the public sewer and storm drain system, and any surface waters.

TRAFFIC CONTROL REQUIREMENTS

1. **Compliance with the Traffic Control Manual for In-Street Work.** In order to provide safe and effective work areas and to ward, control, protect, and expedite vehicular and pedestrian traffic, signage for all construction within the public right-of-way shall comply with the City of Seattle Traffic Control Manual for In-Street Work, as now or hereafter amended. When required, the conditions on the traffic control plan shall supercede any conflicting provisions or requirements in the City of Seattle Manual for In Street Work. A copy of the current City of Seattle Traffic Control Manual for In-Street Work, and approved traffic control plan, when required, shall be on site at all times.
2. **Lanes to remain open during peak hours.** Traffic lanes shall not be closed during the following peak hours: 6:00 am-9:00 am and 3:00 pm-7:00 pm in the Central Business District, and 7:00 am-9:00 am and 4:00 pm-6:00 pm for arterials elsewhere in the City, unless specifically noted on the approved traffic control plan.
3. **Maintain access.** Access shall be maintained or accommodated during construction.
4. **Width of temporary traffic lanes.** Temporary traffic lanes created during the permitted work shall be a minimum of 11 feet in width, unless otherwise approved on the traffic control plan.
5. **Working within restricted curb spaces.** When the project impacts a restricted curb space, such as parking stalls, meters, pay stations, and related signage, the Permittee shall obtain permission from SDOT Traffic Management prior to the start of work. Contact the SDOT Traffic Engineers at (206) 684-5086 prior to the start of work.
6. **Temporary No Parking signs and easels.** In areas without parking pay stations or parking meters, establishing a Temporary No Parking Zone requires placement of type T-38 or T-39 easels, and completion of an online verification form in conformance with the Traffic Control Manual for In-street Work. The Permittee shall contact SDOT's Traffic Permit Counter when working in pay-to-park areas (meters or pay station controlled).
7. **Nighttime Illumination.** Four or more Type B warning lights of sufficient brilliance to be seen from 500 feet, must be maintained at all times during the hours of darkness at the points of obstruction or excavation of any right-of-way.



Seattle Dept of Transportation
Street Use Permits, 23rd Floor
700 Fifth Ave, Suite 2300
P O Box 34996
Seattle, WA 98124-4996

STREET USE PERMIT

Permit No.: 177966



Seattle Department of Transportation | Street Use Division

700 Fifth Avenue, Suite 2300 | PO Box 34996

Seattle, Washington 98124-4996

(206) 684-5253 | SDOTPermits@Seattle.gov

Permit Number

177966

(Official Use)

STREET USE PERMIT APPLICATION (SMC 15.04)

PROJECT SUMMARY

PROJECT ADDRESS: 1500 Airport Way S
CLASSIFICATION: [] ARTERIAL [] NON-ARTERIAL [] UNDERWATER STREET
JOB/WORK ORDER NO: PERMIT NO. IF STARTED ONLINE (NA if none, do not leave blank):

CONTACT INFORMATION

EMERALD Service INC
Applicant / Permittee (Individual or Company)
7343 E Marginal Way S
Address
Seattle WA 98108
City, State Zip Code
206 832 3000
Phone
206 832 3030
Fax
Terryj @ emeraldNW.com
Email
SDOT Customer ID AC 89189
Contact Name (if different than above)
206 832 3000
24 Hour/Job Site Phone

Terry Johnson
Authorized Agent (If other than Applicant / Permittee)

WORK DESCRIPTION

Table with 4 columns: ROW USE FOR CONSTRUCTION, AREA OF USE (SF), START DATE, DURATION (DAYS). Includes checkboxes for Curb Crossing, General Construction Use, Mobile Crane, etc.

PROPOSED CONSTRUCTION

- Asphalt Driveway (25), Landscaping (1), Green Factor in the ROW (38)
Awning, Marquis, Canopy (27), Paving (40)
Bus Shelter Installation (41), Public Art Installation (15)
Clear and Grub (35), Seasonal Lighting (52C)
Fence, Rockery, Wall (29), Sidewalk Repair (55, 55A)
Grade and Rock - Temporary (34), Tree - Prune/Plant/Remove (1A, 43), Other

CONSTRUCTION VEHICLES

- Contractor Vehicle (33A) #
Utility Agency Vehicle (33B) #
Other

AREA OF USE (SF) START DATE DURATION (DAYS)

WORK DESCRIPTION (continued)

DETAILED DESCRIPTION (Please provide a detailed description of the work proposed in the space below)

Excavate contaminated Soil for Disposal

IMPACTED INFRASTRUCTURE (Check all that apply)

- Alley
- Asphalt Street
- Concrete Street
- Curb and Gutter
- Curb Ramp
- Paved Shoulder
- Planting Strip
- Sidewalk
- Traffic Circle
- Trees
- Unimproved ROW
- Unpaved Shoulder
- Utility Structures
- No Impact
- Other ROW Between Curb & Sidewalk
- Other ROW

MOBILITY IMPACT (Check all that apply)

- Alley Closed
- Alley Partially Blocked
- Bike Lane Closed
- Bike Lane Partially Blocked
- Multi-Travel Lanes Closed
- Parking Lane Closed
- Sidewalk Closed
- Sidewalk Partially Blocked
- Street Closed
- Travel Lane Closed
- No Impact

TERMS

Indemnification

The Permittee agrees to defend, indemnify, and hold harmless the City of Seattle, its officials, officers, employees, and agents against: (1) any liability, claims, causes of action, judgments, or expenses, including reasonable attorney fees, resulting directly or indirectly from any act or omission of the Permittee, its subcontractors, anyone directly or indirectly employed by them, and anyone for whose acts or omissions they may be liable, arising out of the Permittee's use or occupancy of the public right-of-way; and (2) all loss by the failure of the Permittee to fully or adequately perform, in any respect, all authorizations or obligations under the Permit.

Acceptance of terms, conditions, and requirements

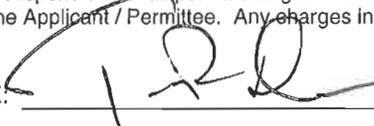
Permittee shall accept the terms, conditions, and requirements of the permit and agree to comply with them to the satisfaction of the Seattle Department of Transportation, Street Use Division. Permittee further agrees to comply with all applicable city ordinances, including but not limited to Title 15 SMC, and all applicable requirements of state and federal law. Work shall begin within six months from the date of approval unless other arrangements are made, otherwise the application shall be void.

Applicant / Permittee or Authorized Agent Statement

I declare under penalty of perjury under the laws of the State of Washington that: I am the Applicant / Permittee OR the authorized agent of the Applicant / Permittee, that the information provided is correct and complete; and that I have the authority to bind the Applicant / Permittee to this application.

Deposits, Charges, and Future Billings

The Permittee is responsible for all permit charges. If a deposit was made for estimated future Street Use services, any unused portion of the deposit will be refunded to the Applicant / Permittee. Any charges in excess of the deposit will be billed to the Applicant / Permittee.

SIGNATURE: 

DATE: 5/23/12

(Official Use)

REQUIRED AT APPLICATION

REQUIRED PRIOR TO ISSUANCE

- | | | | |
|---|---|--|---|
| <input type="checkbox"/> Site Plan | <input type="checkbox"/> Annual Permit | <input type="checkbox"/> Holiday Moratorium Waiver | <input type="checkbox"/> Pavement Moratorium Wvr. |
| <input type="checkbox"/> Restoration Plan | <input type="checkbox"/> BIA Approval | <input type="checkbox"/> Indemnity Agreement | <input type="checkbox"/> Proof of Insurance |
| <input type="checkbox"/> Traffic Control Plan | <input type="checkbox"/> Bond | <input type="checkbox"/> Noise Exemption | <input type="checkbox"/> SEPA Review |
| <input type="checkbox"/> Deposit: \$ _____ | <input type="checkbox"/> Historic District Approval | <input type="checkbox"/> PACT Waiver | |

COMMENTS:

APPLICATION ACCEPTED BY: _____

DATE: _____

APPLICATION APPROVED BY: _____

DATE: _____

Attachment B
Disposal Records



7343 E. MARGINAL WAY SOUTH
 SEATTLE, WASHINGTON 98108
 PH. (206) 832-3000
 FAX (206) 832-3030
 24 HOUR EMERGENCY PHONE 1-888-832-3008

61700

BILL OF LADING AND GALLONAGE TICKET

APW Spill

SHIPPER/GENERATOR <u>ERS</u>		CONTACT	JOB # <u>D-65417</u>
ADDRESS <u>1500 Airport way S</u>		PHONE#	LOAD # <u>3</u>
CITY, STATE, ZIP <u>Seattle, WA</u>			DATE <u>5-17-12</u>
CARRIER <u>ESI</u>		PHONE#	DOCUMENT # <u>61700</u>
CONSIGNEE <u>ERS</u>		CONTACT	TRUCK # <u>7014</u>
ADDRESS <u>1500 Airport way S</u>		PHONE#	PRODUCT TYPE <u>Liquid</u>
CITY, STATE, ZIP <u>Seattle, WA</u>			EST. GALLONS <u>3000</u>

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	<u>Non Regulated Liquid by DOT</u>	<u>1</u>	<u>IT</u>	<u>3000 GAL</u>
	B				
	C				
	D	<u>APW Spill</u>			

A. WPQ # 600501 DISP CODE: _____ C. WPQ # _____ DISP CODE: _____
 B. WPQ # _____ DISP CODE: _____ D. WPQ # _____ DISP CODE: _____

DISPOSAL

DUMP DELAY TIME _____

WASH OUT YES () NO () TIME IN _____ TIME OUT _____

E. WATER 3000-2950 GALLONS LOCATION W-10 TEST OC P481 DISP CODE WTR-A

F. SOLIDS 50 GALLONS LOCATION F PIT TEST OC DISP CODE NBS

_____ % SUSPENDED SOLIDS BY CENTRIFUGE + 50 GALS SEDIMENT

G. OIL/DIESEL/GAS _____ GALLONS LOCATION _____ TEST _____ DISP CODE _____

HOC'S _____ PCB'S _____ B.S.&W _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR Part 261 or 40 CFR Part 761.

X David Hagard X David Hagard DATE: 05/17/12
 SHIPPER (PRINT NAME) SIGNATURE DATE: 5-17-12
 X David Hagard X David Hagard DATE: _____
 CARRIER - DRIVER 1 (PRINT NAME) SIGNATURE DATE: _____
 X _____ X _____ DATE: 05/17/12
 CARRIER - DRIVER 2 (PRINT NAME) SIGNATURE DATE: _____
 X _____ X _____ DATE: _____
 CONSIGNEE (PRINT NAME) SIGNATURE DATE: _____



7343 E. MARGINAL WAY SOUTH
 SEATTLE, WASHINGTON 98108
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 FAX (206) 832-3030
 24 HOUR EMERGENCY PHONE: 1-888-832-3008

61699

BILL OF LADING AND GALLONAGE TICKET

APW Spill

SHIPPER/GENERATOR <i>ERS</i>		CONTACT	JOB # <i>30-65917</i>
ADDRESS <i>1500 Airport way S</i>		PHONE#	LOAD # <i>2</i>
CITY, STATE, ZIP <i>Seattle, WA</i>			DATE <i>5-17-12</i>
CARRIER <i>ESI</i>		PHONE#	DOCUMENT # <i>61699</i>
CONSIGNEE <i>ERS</i>		CONTACT	TRUCK # <i>7014</i>
ADDRESS <i>1500 Airport way S</i>		PHONE#	PRODUCT TYPE <i>Liquid</i>
CITY, STATE, ZIP <i>Seattle, WA</i>			EST. GALLONS <i>3000</i>

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	<i>Now Regulated Liquid by DOT</i>	<i>1</i>	<i>IT</i>	<i>3000 gal</i>
	B				
	C				
	D	<i>APW Spill</i>			

A. WPQ # *600501* DISP CODE: _____ C. WPQ # _____ DISP CODE: _____
 B. WPQ # _____ DISP CODE: _____ D. WPQ # _____ DISP CODE: _____

DISPOSAL

DUMP DELAY TIME _____
 WASH OUT: YES () NO ()
 TIME IN _____ TIME OUT _____
 E. WATER *3000* GALLONS LOCATION *W-10* TEST *DE P98.1* DISP CODE *WIP-A*
 F. SOLIDS _____ GALLONS LOCATION _____ TEST _____ DISP CODE _____
 _____ % SUSPENDED SOLIDS BY CENTRIFUGE + _____ GALS SEDIMENT
 G. OIL/DIESEL/GAS _____ GALLONS LOCATION _____ TEST _____ DISP CODE _____
 HOC'S _____ PCB'S _____ B.S.&W _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR Part 261 or 40 CFR Part 761.

X *David Haggard* SHIPPER (PRINT NAME) X _____ SIGNATURE DATE: *05/17/12*
 X *David Haggard* CARRIER - DRIVER 1 (PRINT NAME) X *David Haggard* SIGNATURE DATE: *5-17-12*
 X _____ CARRIER - DRIVER 2 (PRINT NAME) X _____ SIGNATURE DATE: _____
 X *David Haggard* CONSIGNEE (PRINT NAME) X _____ SIGNATURE DATE: *05/17/12*



7343 E. MARGINAL WAY SOUTH
 SEATTLE, WASHINGTON 98108
 PH. (206) 832-3000
 FAX (206) 832-3030
 24 HOUR EMERGENCY PHONE: 1-888-832-3008

61698

APW Spill

BILL OF LADING AND GALLONAGE TICKET

SHIPPER/GENERATOR <u>Emerald Recycling</u>		CONTACT	JOB # <u>30-65417</u>
ADDRESS <u>1500 Airportway S</u>		PHONE#	LOAD # <u>1</u>
CITY, STATE, ZIP <u>Seattle WA</u>			DATE <u>5-17-12</u>
CARRIER <u>Emerald Service Inc</u>		PHONE#	DOCUMENT # <u>61698</u>
CONSIGNEE <u>ER</u>		CONTACT	TRUCK # <u>7014</u>
ADDRESS <u>1500 Airportway S</u>		PHONE#	PRODUCT TYPE <u>liqui</u>
CITY, STATE, ZIP <u>Seattle WA</u>			EST. GALLONS <u>3000gal</u>

HM	ITEM #	U S. DOT DESCRIPTION	#	TYPE	QTY.
	A	<u>Non regulated liquid by D.O.T</u>	<u>1</u>	<u>TT</u>	<u>3000gal</u>
	B				
	C				
	D	<u>Spill Clean Up</u>			

A. WPQ # G00501 DISP CODE: _____ C. WPQ # _____ DISP CODE: _____
 B. WPQ # _____ DISP CODE: _____ D. WPQ # _____ DISP CODE: _____

DISPOSAL

DUMP DELAY TIME _____
 WASH OUT YES () NO ()
 TIME IN _____ TIME OUT _____
 E. WATER 3000 GALLONS LOCATION F 211 TEST de pH 8.2 DISP CODE WTP-A
 F. SOLIDS _____ GALLONS LOCATION _____ TEST _____ DISP CODE _____
 _____% SUSPENDED SOLIDS BY CENTRIFUGE + _____ GALS SEDIMENT
 G. OIL/DIESEL/GAS _____ GALLONS LOCATION _____ TEST _____ DISP CODE _____
 HOC'S _____ PCB'S _____ B.S.&W _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR, Part 261 or 40 CFR Part 761

X [Signature] SHIPPER (PRINT NAME) DATE: 05/17/12
 X [Signature] CARRIER - DRIVER 1 (PRINT NAME) DATE: 5-17-12
 X _____ CARRIER - DRIVER 2 (PRINT NAME) DATE: _____
 X [Signature] CONSIGNEE (PRINT NAME) DATE: 05/17/12
 X _____ SIGNATURE
 X _____ SIGNATURE
 X _____ SIGNATURE

CUSTOMER



www.emeraldsw.com

7343 E. MARGINAL WAY SOUTH
 SEATTLE, WASHINGTON 98108
 PH. (206) 832-3000
 FAX (206) 832-3030
 24 HOUR EMERGENCY PHONE: 1-888-832-3008

61157

BILL OF LADING AND GALLONAGE TICKET

APW SPILL

SHIPPER/GENERATOR	EMERALD RECYCLING INC.	CONTACT	JOB #
ADDRESS	1500 AIRPORT WAY S	PHONE#	LOAD # 1
CITY, STATE, ZIP	SEATTLE WA 98134		DATE 5-17-12
CARRIER	E.S.I.	PHONE#	DOCUMENT # 6157
CONSIGNEE	EMERALD RECYCLING INC.	CONTACT	TRUCK # 7012
ADDRESS	1500 AIRPORT WAY S	PHONE#	PRODUCT TYPE LIQ
CITY, STATE, ZIP	SEATTLE WA 98134		EST. GALLONS

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY
	A	NON-HAZARDOUS LIQUID BY D.O.T	1	17	315 3202
	B				
	C				
	D	AIRPORT WAY SPILL CLEANUP			

A. WPQ # _____ DISP. CODE: 60501 C. WPQ # _____ DISP. CODE: _____
 B. WPQ # _____ DISP. CODE: _____ D. WPQ # _____ DISP. CODE: _____

DISPOSAL

DUMP DELAY TIME _____
 WASH OUT: YES () NO () TIME IN 14:10 TIME OUT _____
 E. WATER 265 3102 GALLONS LOCATION FDI W-10 TEST DE P19.6 DISP CODE WIP-A
 F. SOLIDS _____ GALLONS LOCATION _____ TEST _____ DISP CODE _____
 _____% SUSPENDED SOLIDS BY CENTRIFUGE + _____ GALS SEDIMENT
 G. OIL/DIESEL/GAS TRACE GALLONS LOCATION _____ TEST _____ DISP CODE _____
 HOC'S _____ PCB'S _____ B.S.&W _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR Part 261 or 40 CFR Part 761

X ON BEHALF OF CUSTOMER
 SHIPPER (PRINT NAME) _____ DATE: _____
 X LEE HOFF
 CARRIER - DRIVER 1 (PRINT NAME) _____ SIGNATURE: [Signature] DATE: 5-17-12
 X [Signature]
 CARRIER - DRIVER 2 (PRINT NAME) _____ SIGNATURE: [Signature] DATE: _____
 X [Signature]
 CONSIGNEE (PRINT NAME) _____ SIGNATURE: [Signature] DATE: 05/17/12



7343 E. MARGINAL WAY SOUTH
 SEATTLE, WASHINGTON 98108
 PH. (206) 832-3000
 FAX (206) 832-3030
 24 HOUR EMERGENCY PHONE 1-888-832-3008

61158

BILL OF LADING AND GALLONAGE TICKET

APW SPILL

SHIPPER/GENERATOR <u>EMERALD RECYCLING INC.</u>		CONTACT	JOB # <u>65417</u>
ADDRESS <u>1500 AIRPORT WAY S.</u>		PHONE#	LOAD # <u>2</u>
CITY, STATE, ZIP <u>SEATTLE WA 98134</u>			DATE <u>5-17-12</u>
CARRIER <u>E.S.F.</u>		PHONE#	DOCUMENT # <u>61158</u>
CONSIGNEE <u>EMERALD RECYCLING INC.</u>		CONTACT	TRUCK # <u>712</u>
ADDRESS <u>1500 AIRPORT WAY S.</u>		PHONE#	PRODUCT TYPE <u>LIP</u>
CITY, STATE, ZIP <u>SEATTLE WA 98134</u>			EST. GALLONS <u>2284</u>

HM	ITEM #	U.S. DOT DESCRIPTION	#	TYPE	QTY.
	A	<u>NON-HAZARDOUS LIQUID BY D.O.T.</u>	<u>1</u>	<u>TT</u>	<u>2284</u>
	B				
	C				
	D				

A. WPQ # _____ DISP CODE: 6005018 C. WPQ # _____ DISP CODE: _____
 B. WPQ # _____ DISP CODE: _____ D. WPQ # _____ DISP CODE: _____

DISPOSAL

WASH OUT YES () NO () DUMP DELAY TIME _____
 TIME IN 17:30 TIME OUT _____
 E. WATER 225 GALLONS LOCATION W 10 TEST OK P48.2 DISP CODE WIP-4
 F. SOLIDS 30 GALLONS LOCATION F P11 TEST OK DISP CODE NES
 _____% SUSPENDED SOLIDS BY CENTRIFUGE + 30 GALS SEDIMENT
 G. OIL/DIESEL/GAS _____ GALLONS LOCATION _____ TEST _____ DISP CODE _____
 HOC'S _____ PCB'S _____ B.S.&W _____ API _____ LAB: Y / N

Shipper's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway, vessel and rail according to applicable international and national government regulations and this material is not regulated as a hazardous waste in accordance with WAC 173-303, 40 CFR Part 261 or 40 CFR Part 761.

X ON BEHALF OF CUSTOMER SHIPPER (PRINT NAME) X [Signature] SIGNATURE DATE: 5-17-12
 X LEE HOPE CARRIER - DRIVER 1 (PRINT NAME) X [Signature] SIGNATURE DATE: 5-17-12
 X _____ CARRIER - DRIVER 2 (PRINT NAME) X _____ SIGNATURE DATE: _____
 X [Signature] CONSIGNEE (PRINT NAME) X _____ SIGNATURE DATE: 05/17/12

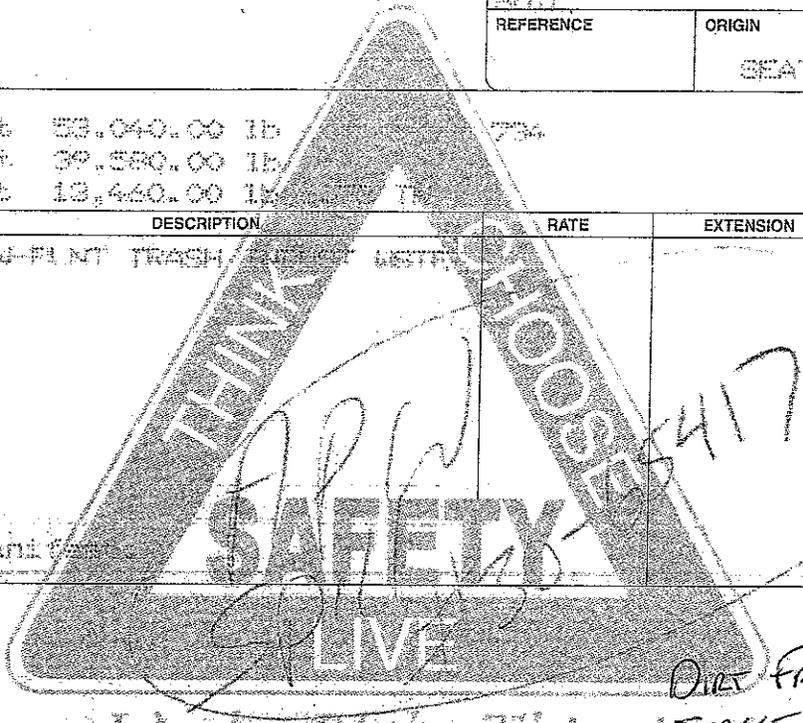
SPD AND LANDER
SPD AND LANDER

SEATTLE, WA
010498 - 0005
Emerald Services
1500 Airport Way So., Seattle
Seattle, WA
Contract: LW-11142

SITE	TICKET	GRID
01	532541	
SCALE OPERATOR		
LESLIE U		
DATE IN	TIME IN	
25 June 2012	12:09 pm	
DATE OUT	TIME OUT	
25 June 2012	12:14 pm	
VEHICLE	ROLL OFF	
RTI		
REFERENCE	ORIGIN	
	SEATTLE KING	

00 Gross Weight 53,040.00 lb 734
Tare Weight 39,580.00 lb
Net Weight 13,460.00 lb

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
4.73	TY	ALL-PLNT TRASH, STREET MSTRY				



NET AMOUNT
TENDERED
CHANGE
CHECK NO.

SAFETY MEMOS:

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

It's the Right Thing!

Dave
SIGNATURE

Dirt from STREET TRENCH.

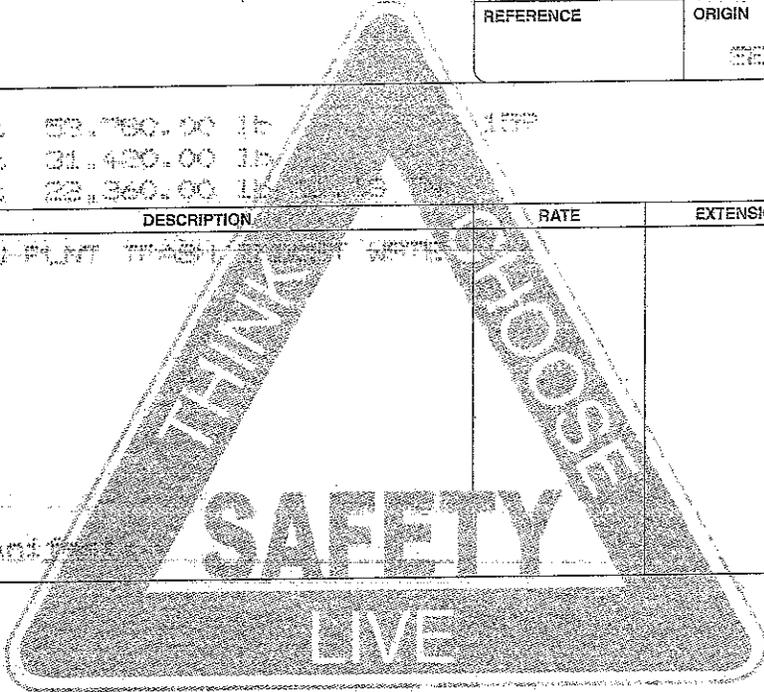
3RD AND LANDER
3RD AND LANDER

SEATTLE, WA
010495 - 0005
Everett Services
1500 Airport Way So., Seattle
Seattle, WA
Contract: 11-11142

SITE	TICKET	GRID
01	522376	
SCALE OPERATOR		
LD00066 LARRY C		
DATE IN		TIME IN
22 May 2012		7:19 AM
DATE OUT		TIME OUT
22 May 2012		7:27 AM
VEHICLE		ROLL OFF
5011		
REFERENCE	ORIGIN	
	SEATTLE/KING	

CO Cycles Weight 52,760.00 lb
Tare Weight 21,420.00 lb
Net Weight 23,360.00 lb

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
11.15	TN	SUPPLY TRASH				



NET AMOUNT
TENDERED
CHANGE
CHECK NO.

It's the Right Thing!
APU STREET DIRT

SAFETY MEMOS:

- Hard hats **MUST** be worn.
- High Visibility vests **MUST** be worn.
- Passengers **MUST** remain in vehicle at all times.

SIGNATURE *[Signature]*

Attachment C
Photographs



Looking North on May 24, 2012



Typical Trench Opening on May 24, 2012, curb on the left.



Section of West Wall 3 looking West on June 8, 2012



Location of Sample West Wall 3 on June 8, 2012



Trench interior on June 8, 2012



South end of Excavation on June 26, 2012 facing North



View of Westwall-062612 looking West



West Wall Final Excavation Depth of 3 feet on June 26, 2012

Attachment D
Laboratory Reports

May 31, 2012

Rachel Chang
CH2MHill
1100 112th Ave NE
Bellevue, WA 98004

RE: Project: Emerald Airport Way South
Pace Project No.: 2512312

Dear Rachel Chang:

Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Dan Gossett

dan.gossett@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: Emerald Airport Way South

Pace Project No.: 2512312

Washington Certification IDs

940 South Harney Street, Seattle, WA 98108

Alaska CS Certification #: UST-025

Arizona Certification #: AZ0770

California Certification #: 01153CA

Florida/NELAP Certification #: E87617

Oregon Certification #: WA200007

Washington Certification #: C555

REPORT OF LABORATORY ANALYSIS

Page 2 of 14

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SAMPLE SUMMARY

Project: Emerald Airport Way South

Pace Project No.: 2512312

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2512312001	NWES-WEST-052412	Solid	05/24/12 09:50	05/24/12 11:15
2512312002	NWES-BOTTOM-052412	Solid	05/24/12 10:00	05/24/12 11:15
2512312003	NWES-SOUTH-052412	Solid	05/24/12 10:10	05/24/12 11:15
2512312004	NWES-NORTH-052412	Solid	05/24/12 10:15	05/24/12 11:15
2512312005	NWES-EAST-052412	Solid	05/24/12 10:20	05/24/12 11:15
2512312006	NWES-DUP1-052412	Solid	05/24/12 09:40	05/24/12 11:15

REPORT OF LABORATORY ANALYSIS

Page 3 of 14

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SAMPLE ANALYTE COUNT

Project: Emerald Airport Way South

Pace Project No.: 2512312

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2512312001	NWES-WEST-052412	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512312002	NWES-BOTTOM-052412	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512312003	NWES-SOUTH-052412	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512312004	NWES-NORTH-052412	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512312005	NWES-EAST-052412	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512312006	NWES-DUP1-052412	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: Emerald Airport Way South

Pace Project No.: 2512312

Sample: NWES-WEST-052412 Lab ID: 2512312001 Collected: 05/24/12 09:50 Received: 05/24/12 11:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	7960	mg/kg	191	10	05/29/12 12:00	05/31/12 01:54		
Motor Oil Range SG	977	mg/kg	76.5	1	05/29/12 12:00	05/29/12 18:37	64742-65-0	
Surrogates								
n-Octacosane (S) SG	103	%	50-150	1	05/29/12 12:00	05/29/12 18:37	630-02-4	
o-Terphenyl (S) SG	111	%	50-150	10	05/29/12 12:00	05/31/12 01:54	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	17.4	%	0.10	1		05/24/12 16:22		

ANALYTICAL RESULTS

Project: Emerald Airport Way South

Pace Project No.: 2512312

Sample: NWES-BOTTOM-052412 Lab ID: 2512312002 Collected: 05/24/12 10:00 Received: 05/24/12 11:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	1950	mg/kg	18.3	1	05/29/12 12:00	05/29/12 19:12		
Motor Oil Range SG	526	mg/kg	73.2	1	05/29/12 12:00	05/29/12 19:12	64742-65-0	
Surrogates								
n-Octacosane (S) SG	111	%	50-150	1	05/29/12 12:00	05/29/12 19:12	630-02-4	
o-Terphenyl (S) SG	102	%	50-150	1	05/29/12 12:00	05/29/12 19:12	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	13.8	%	0.10	1		05/24/12 16:23		

ANALYTICAL RESULTS

Project: Emerald Airport Way South

Pace Project No.: 2512312

Sample: NWES-SOUTH-052412 Lab ID: 2512312003 Collected: 05/24/12 10:10 Received: 05/24/12 11:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	2210	mg/kg	17.5	1	05/29/12 12:00	05/29/12 19:29		
Motor Oil Range SG	405	mg/kg	70.2	1	05/29/12 12:00	05/29/12 19:29	64742-65-0	
Surrogates								
n-Octacosane (S) SG	109	%	50-150	1	05/29/12 12:00	05/29/12 19:29	630-02-4	
o-Terphenyl (S) SG	100	%	50-150	1	05/29/12 12:00	05/29/12 19:29	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	9.7	%	0.10	1		05/24/12 16:24		

ANALYTICAL RESULTS

Project: Emerald Airport Way South

Pace Project No.: 2512312

Sample: NWES-NORTH-052412 Lab ID: 2512312004 Collected: 05/24/12 10:15 Received: 05/24/12 11:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	1880	mg/kg	18.4	1	05/29/12 12:00	05/29/12 19:47		
Motor Oil Range SG	545	mg/kg	73.7	1	05/29/12 12:00	05/29/12 19:47	64742-65-0	
Surrogates								
n-Octacosane (S) SG	111	%	50-150	1	05/29/12 12:00	05/29/12 19:47	630-02-4	
o-Terphenyl (S) SG	102	%	50-150	1	05/29/12 12:00	05/29/12 19:47	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	14.3	%	0.10	1		05/24/12 16:24		

ANALYTICAL RESULTS

Project: Emerald Airport Way South

Pace Project No.: 2512312

Sample: NWES-EAST-052412 Lab ID: 2512312005 Collected: 05/24/12 10:20 Received: 05/24/12 11:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	1950	mg/kg	17.2	1	05/29/12 12:00	05/29/12 20:04		
Motor Oil Range SG	339	mg/kg	68.9	1	05/29/12 12:00	05/29/12 20:04	64742-65-0	
Surrogates								
n-Octacosane (S) SG	116	%	50-150	1	05/29/12 12:00	05/29/12 20:04	630-02-4	
o-Terphenyl (S) SG	106	%	50-150	1	05/29/12 12:00	05/29/12 20:04	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	8.6	%	0.10	1		05/24/12 16:25		

ANALYTICAL RESULTS

Project: Emerald Airport Way South

Pace Project No.: 2512312

Sample: NWES-DUP1-052412 Lab ID: 2512312006 Collected: 05/24/12 09:40 Received: 05/24/12 11:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	1860	mg/kg	18.1	1	05/29/12 12:00	05/29/12 20:57		
Motor Oil Range SG	498	mg/kg	72.4	1	05/29/12 12:00	05/29/12 20:57	64742-65-0	
Surrogates								
n-Octacosane (S) SG	106 %		50-150	1	05/29/12 12:00	05/29/12 20:57	630-02-4	
o-Terphenyl (S) SG	98 %		50-150	1	05/29/12 12:00	05/29/12 20:57	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	12.7	%	0.10	1		05/24/12 16:26		

QUALITY CONTROL DATA

Project: Emerald Airport Way South

Pace Project No.: 2512312

QC Batch: OEXT/5575

Analysis Method: NWTPH-Dx

QC Batch Method: EPA 3546

Analysis Description: NWTPH-Dx GCS

Associated Lab Samples: 2512312001, 2512312002, 2512312003, 2512312004, 2512312005, 2512312006

METHOD BLANK: 117016

Matrix: Solid

Associated Lab Samples: 2512312001, 2512312002, 2512312003, 2512312004, 2512312005, 2512312006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range SG	mg/kg	ND	16.0	05/29/12 18:03	
Motor Oil Range SG	mg/kg	ND	64.0	05/29/12 18:03	
n-Octacosane (S) SG	%	102	50-150	05/29/12 18:03	
o-Terphenyl (S) SG	%	91	50-150	05/29/12 18:03	

LABORATORY CONTROL SAMPLE: 117017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range SG	mg/kg	400	380	95	69-113	
Motor Oil Range SG	mg/kg	400	430	107	75-119	
n-Octacosane (S) SG	%			112	50-150	
o-Terphenyl (S) SG	%			100	50-150	

SAMPLE DUPLICATE: 117018

Parameter	Units	2512312001 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Range SG	mg/kg	7960	6570	19	50	
Motor Oil Range SG	mg/kg	977	885	10	48	
n-Octacosane (S) SG	%	103	102	.7		
o-Terphenyl (S) SG	%	111	109	2		

SAMPLE DUPLICATE: 117019

Parameter	Units	2512322002 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Range SG	mg/kg	ND	ND		50	
Motor Oil Range SG	mg/kg	ND	ND		48	
n-Octacosane (S) SG	%	116	114	2		
o-Terphenyl (S) SG	%	105	102	3		

QUALITY CONTROL DATA

Project: Emerald Airport Way South

Pace Project No.: 2512312

QC Batch: PMST/2060 Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 2512312001, 2512312002, 2512312003, 2512312004, 2512312005, 2512312006

SAMPLE DUPLICATE: 116494

Parameter	Units	2512286001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	26.0	25.9	.4	30	

QUALIFIERS

Project: Emerald Airport Way South

Pace Project No.: 2512312

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel Clean-Up

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Emerald Airport Way South

Pace Project No.: 2512312

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2512312001	NWES-WEST-052412	EPA 3546	OEXT/5575	NWTPH-Dx	GCSV/3567
2512312002	NWES-BOTTOM-052412	EPA 3546	OEXT/5575	NWTPH-Dx	GCSV/3567
2512312003	NWES-SOUTH-052412	EPA 3546	OEXT/5575	NWTPH-Dx	GCSV/3567
2512312004	NWES-NORTH-052412	EPA 3546	OEXT/5575	NWTPH-Dx	GCSV/3567
2512312005	NWES-EAST-052412	EPA 3546	OEXT/5575	NWTPH-Dx	GCSV/3567
2512312006	NWES-DUP1-052412	EPA 3546	OEXT/5575	NWTPH-Dx	GCSV/3567
2512312001	NWES-WEST-052412	ASTM D2974-87	PMST/2060		
2512312002	NWES-BOTTOM-052412	ASTM D2974-87	PMST/2060		
2512312003	NWES-SOUTH-052412	ASTM D2974-87	PMST/2060		
2512312004	NWES-NORTH-052412	ASTM D2974-87	PMST/2060		
2512312005	NWES-EAST-052412	ASTM D2974-87	PMST/2060		
2512312006	NWES-DUP1-052412	ASTM D2974-87	PMST/2060		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1491725

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: <u>CH2MHILL</u>	Report To: <u>Rachel Chang</u>	Attention: <u>NWES - Sheila Smith</u>	
Address: <u>1100 112TH AVE NE</u> <u>BELLEVUE, WA 98004</u>	Copy To:	Company Name: <u>Emerald Services</u>	REGULATORY AGENCY
Email To: <u>Rachel.Chang@ch2m.com</u>	Purchase Order No.:	Address: <u>7343 East Marginal Way S</u>	<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER
Phone: <u>425 453-5000</u> Fax:	Project Name: <u>NWES</u>	Pace Quote Reference:	<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER
Requested Due Date/TAT: <u>2 day</u>	Project Number: <u>425942.11.0C</u>	Pace Project Manager: <u>Dan Gossett</u>	Site Location: <u>WA</u>
		Pace Profile #:	STATE: <u>WA</u>

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test ↓	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other				
			DATE	TIME	DATE	TIME														
1	<u>NWES - WEST - 052412</u>	<u>SL G</u>	<u>5/24/12</u>	<u>0950</u>			<u>1</u>	<u>X</u>												
2	<u>NWES - BOTTOM - 052412</u>	<u>SL G</u>	<u>1</u>	<u>1000</u>			<u>1</u>	<u>X</u>												
3	<u>NWES - SOUTH - 052412</u>	<u>SL G</u>	<u>1</u>	<u>1010</u>			<u>1</u>	<u>X</u>												
4	<u>NWES - NORTH - 052412</u>	<u>SL G</u>	<u>1</u>	<u>1015</u>			<u>1</u>	<u>X</u>												
5	<u>NWES - EAST - 052412</u>	<u>SL G</u>	<u>1</u>	<u>1020</u>			<u>1</u>	<u>X</u>												
6	<u>NWES - DUP1 - 052412</u>	<u>SL G</u>	<u>1</u>	<u>0940</u>			<u>1</u>	<u>X</u>												
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	<u>[Signature]</u> <u>CH2MHILL</u>	<u>5/25/12</u>	<u>1115</u>	<u>Colby Weaver/PACE</u>	<u>052412</u>	<u>1115</u>	<u>7.1</u>	<u>Y</u>	<u>N</u>	<u>Y</u>

ORIGINAL

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER: <u>MARIO LOPEZ-TRAMOS</u>		DATE Signed (MM/DD/YY): <u>05/24/12</u>	
SIGNATURE of SAMPLER: <u>[Signature]</u>		Temp in °C	
		Received on ice (Y/N)	Samples Intact (Y/N)
		Custody Sealed Cooler (Y/N)	

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Container Count

CLIENT: Emerald Services



COC PAGE 1 of 1
 COC ID# 1491725

Trip Blank(s) Provided?
Y / (N)

Sample Line Item	VG9H	AG1H	AG1U	BP1U	BP2U	BP3U	BP3N	BP3S	WGKU	WGFU	WG2U	DG9M	DG9B	VG9W	VSG	Comments
1									↓							
2																
3																
4																
5																
6									↓							
7																
8																
9																
10																
11																
12																

AG1H	1 liter HCL amber glass	BP2S	500mL H2SO4 plastic	JGFU	4 oz amber glass soil jar
AG1U	1 liter unpreserved amber glass	BP2U	500mL unpreserved plastic	WGKU	8 oz clear glass soil jar
AG2S	500mL H2SO4 amber glass	BP2Z	500mL NaOH, Zn Ac	WGFU	4 oz clear glass soil jar
AG2U	500mL unpreserved amber glass	BP3C	250mL NaOH plastic	WG2U	2 oz clear glass soil jar
AG3S	250mL H2SO4 amber glass	BP3N	250mL HNO3 plastic	JGFM	4 oz amber glass soil jar with MeOH
BG1H	1 liter HCL clear glass	BP3S	250mL H2SO4 plastic	VG9U	40mL unpreserved clear vial
BG1U	1 liter unpreserved glass	BP3U	250mL unpreserved plastic	VG9W	40mL clear vial pre-weighted with DI water
BP1N	1 liter HNO3 plastic	DG9B	40mL Na Bisulfate clear vial	VSG	Headspace septa vial
BP1S	1 liter H2SO4 plastic	DG9H	40mL HCL amber vial	VG9H	40mL HCL clear vial
BP1U	1 liter unpreserved plastic	DG9M	40mL MeOH clear vial	WGFX	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac	DG9T	40mL Na Thio amber vial	VG9T	40mL Na Thio. clear vial
BP2N	500mL HNO3 plastic	DG9U	40mL unpreserved amber vial	ZPLC	Ziploc Bag
BP2O	500mL NaOH plastic		Wipe/Swab	U	Summa Can



Sample Condition Upon Receipt

Client Name: Emerald Service Project #

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #:

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other Zip Temp. Blank Yes No X

Thermometer Used 132013 or 101731862 or 226099 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 7.1 Biological Tissue is Frozen: Yes No Temp should be above freezing <= 6°C

Date and Initials of person examining contents: RC 5/24/12

Table with 17 rows and 2 columns. Rows include Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Follow Up / Hold Analysis Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, All containers needing preservation are found to be in compliance with EPA recommendation, Exceptions: VOA, coliform, TOC, O&G, Samples checked for dechlorination, Headspace in VOA Vials (>6mm), Trip Blanks Present, Trip Blank Custody Seals Present, Pace Trip Blank Creation Date.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Rachel Chung Date/Time: 1125 5/24

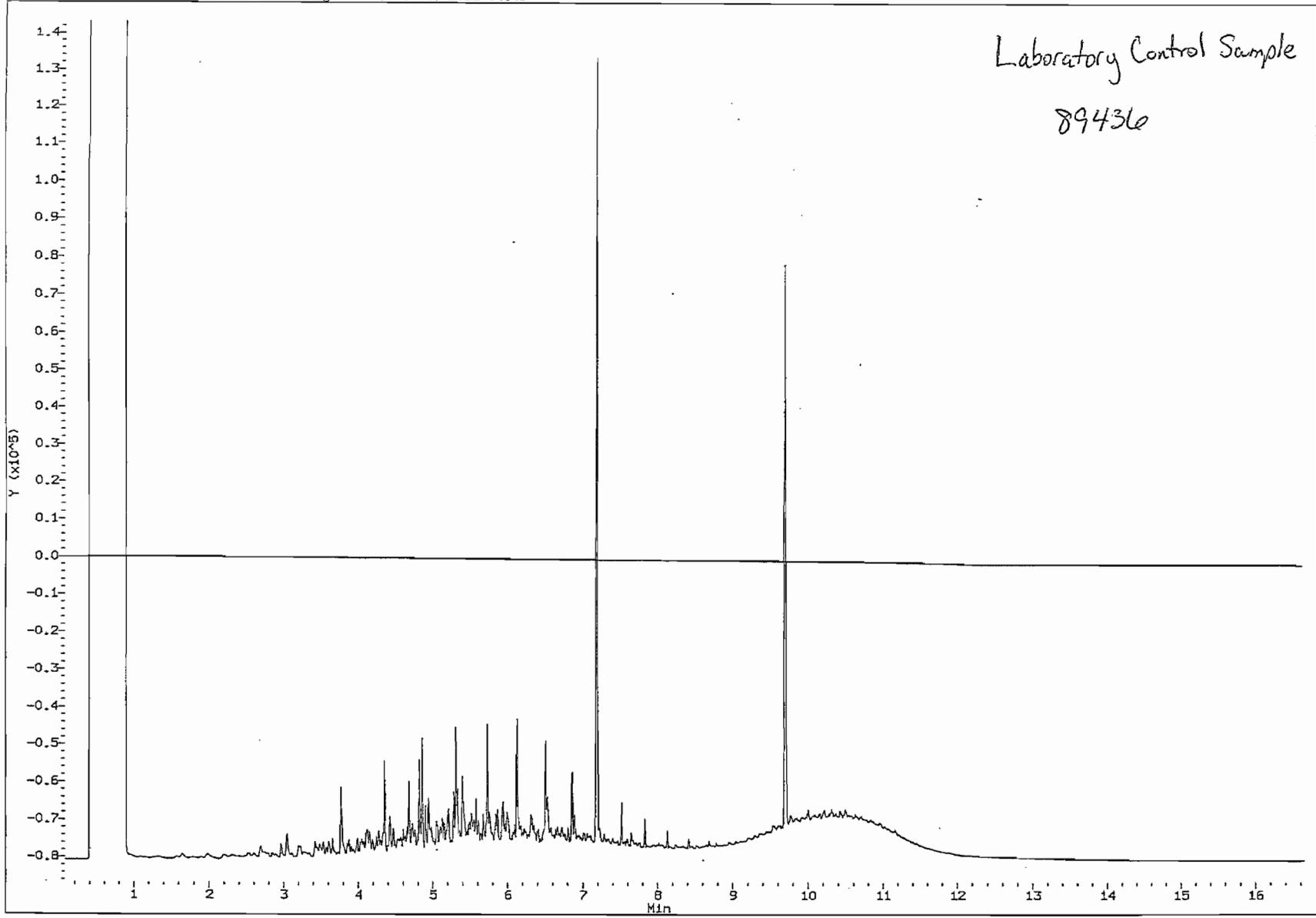
Comments/ Resolution: Run Dr w/ silica gel

Project Manager Review: [Signature] Date: 5/24

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

File: HP5890 GC Data_fid1a.ch Inj. Date: 08-OCT-2011 04:49
File: HP5890 GC Data_fid2b.ch Inj. Date: 08-OCT-2011 04:49

Laboratory Control Sample
89436

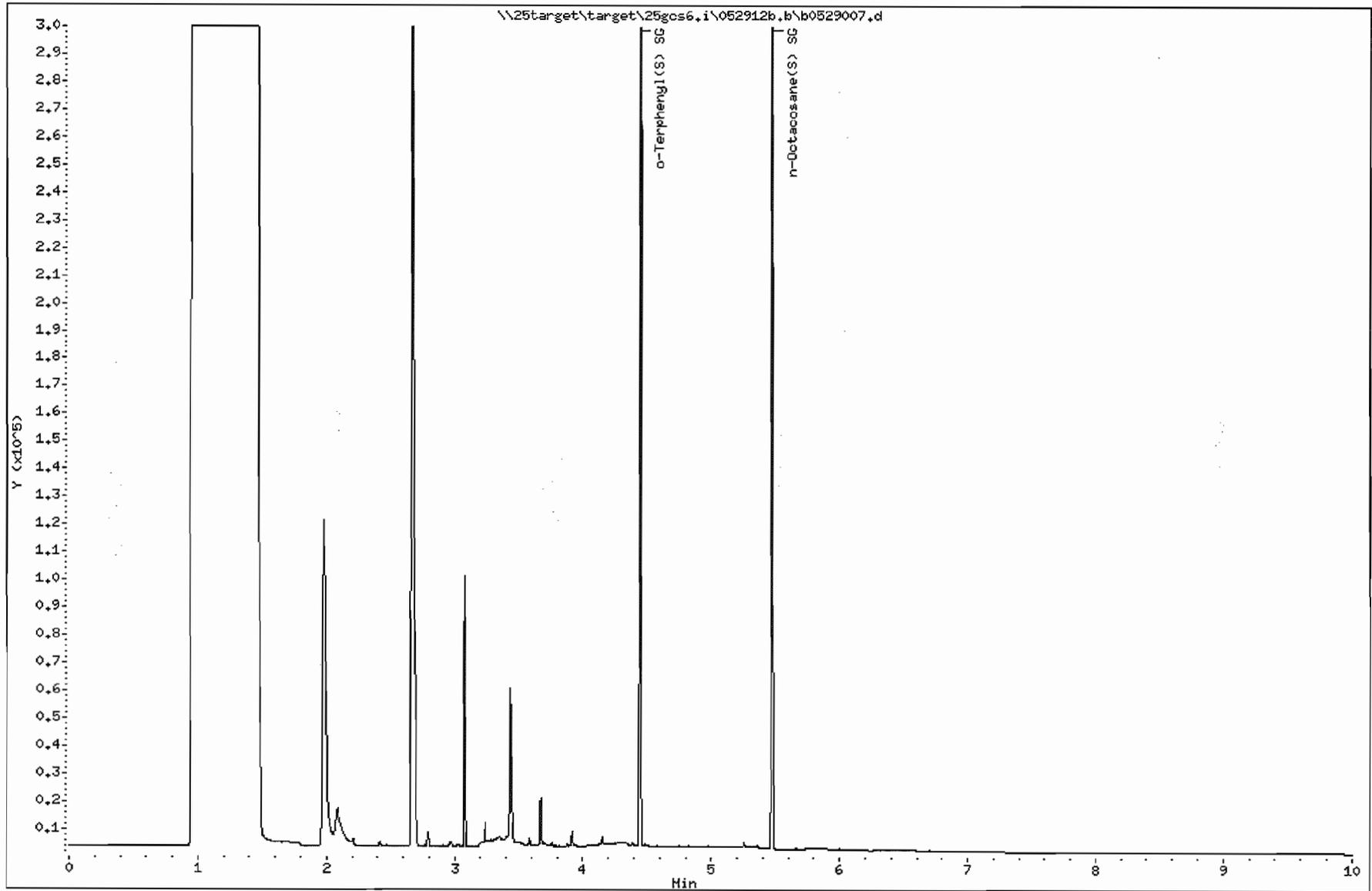


Data File: \\25target\target\25gcs6.i\052912b.b\b0529007.d
Date : 29-MAY-2012 18:03
Client ID: MB
Sample Info: 117016
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: 25gcs6.i

Operator: ayd

Column diameter: 0.32



Data File: \\25target\target\25gcs6.i\052912b.b\b0529008.d

Date : 29-MAY-2012 18:20

Client ID: MBLCS

Sample Info: 117017

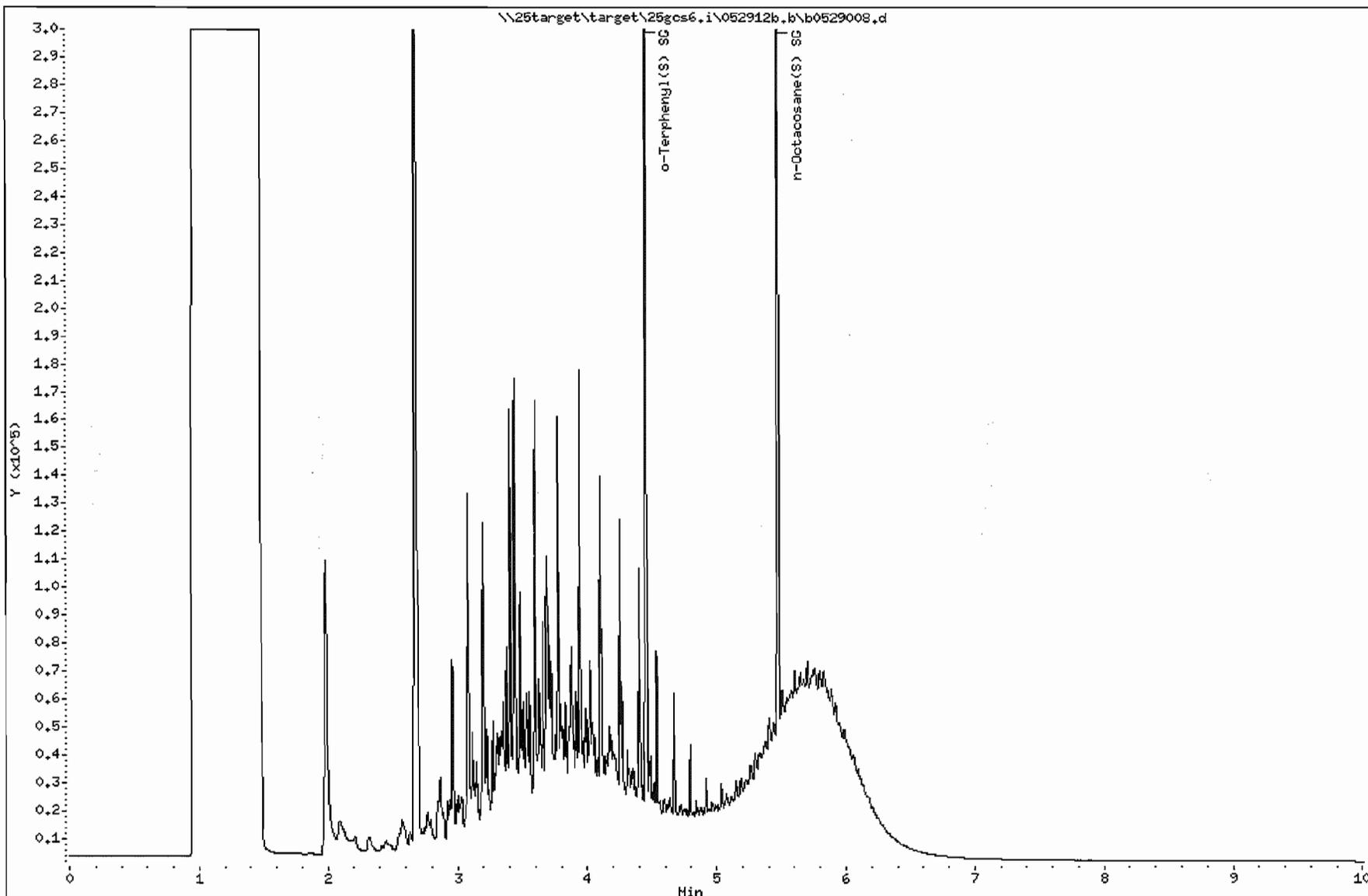
Volume Injected (uL): 1.0

Column phase: RTX-5

Instrument: 25gcs6.i

Operator: ayd

Column diameter: 0.32



Date : 31-MAY-2012 01:54

Client ID: NWES-WEST-052412

Sample Info: 2512312001X10

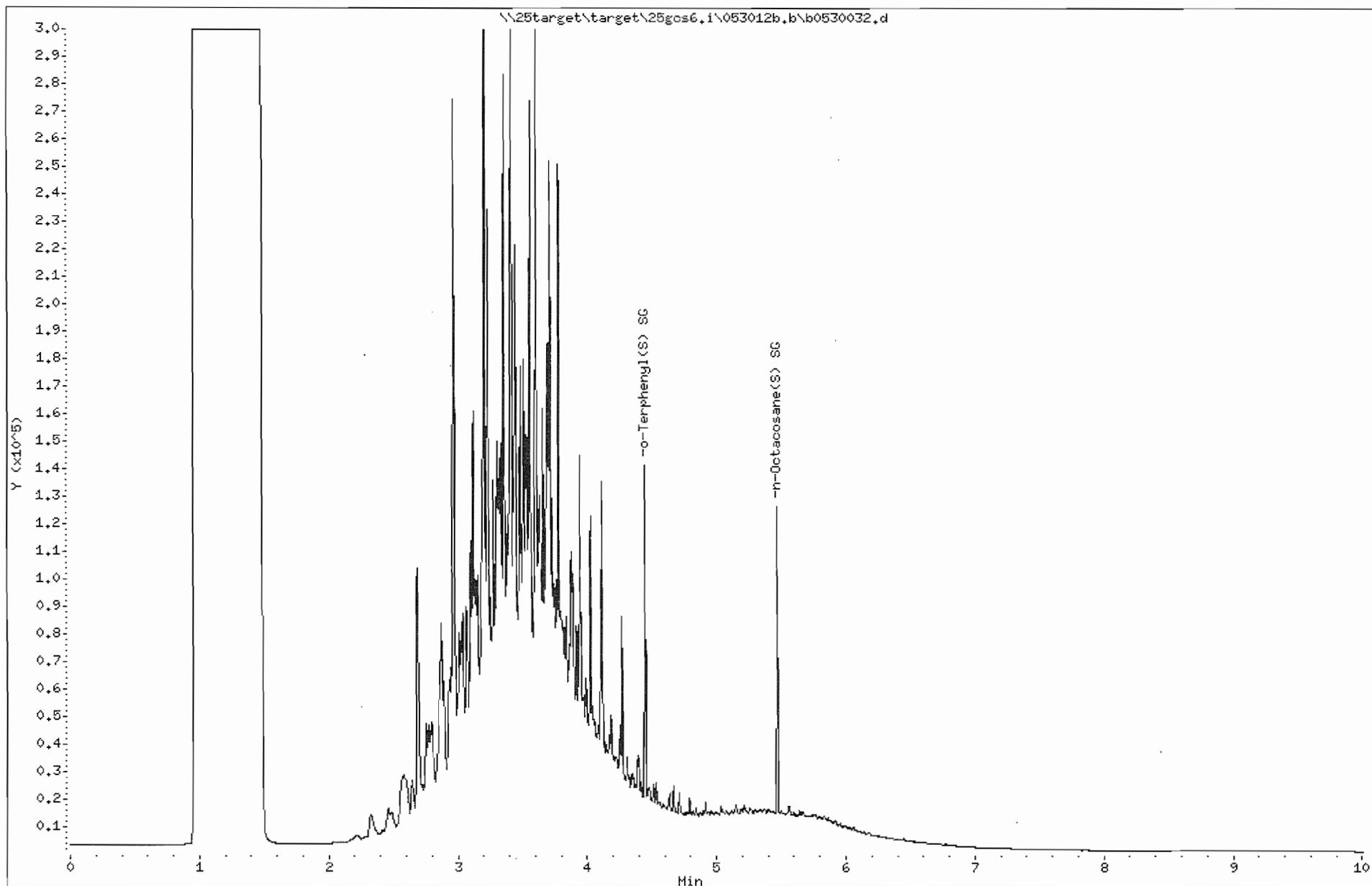
Volume Injected (uL): 1.0

Column phase: RTX-5

Instrument: 25gos6.i

Operator: ag1

Column diameter: 0.32



Date : 29-MAY-2012 18:37

Client ID: NWES-WEST-052412

Sample Info: 2512312001

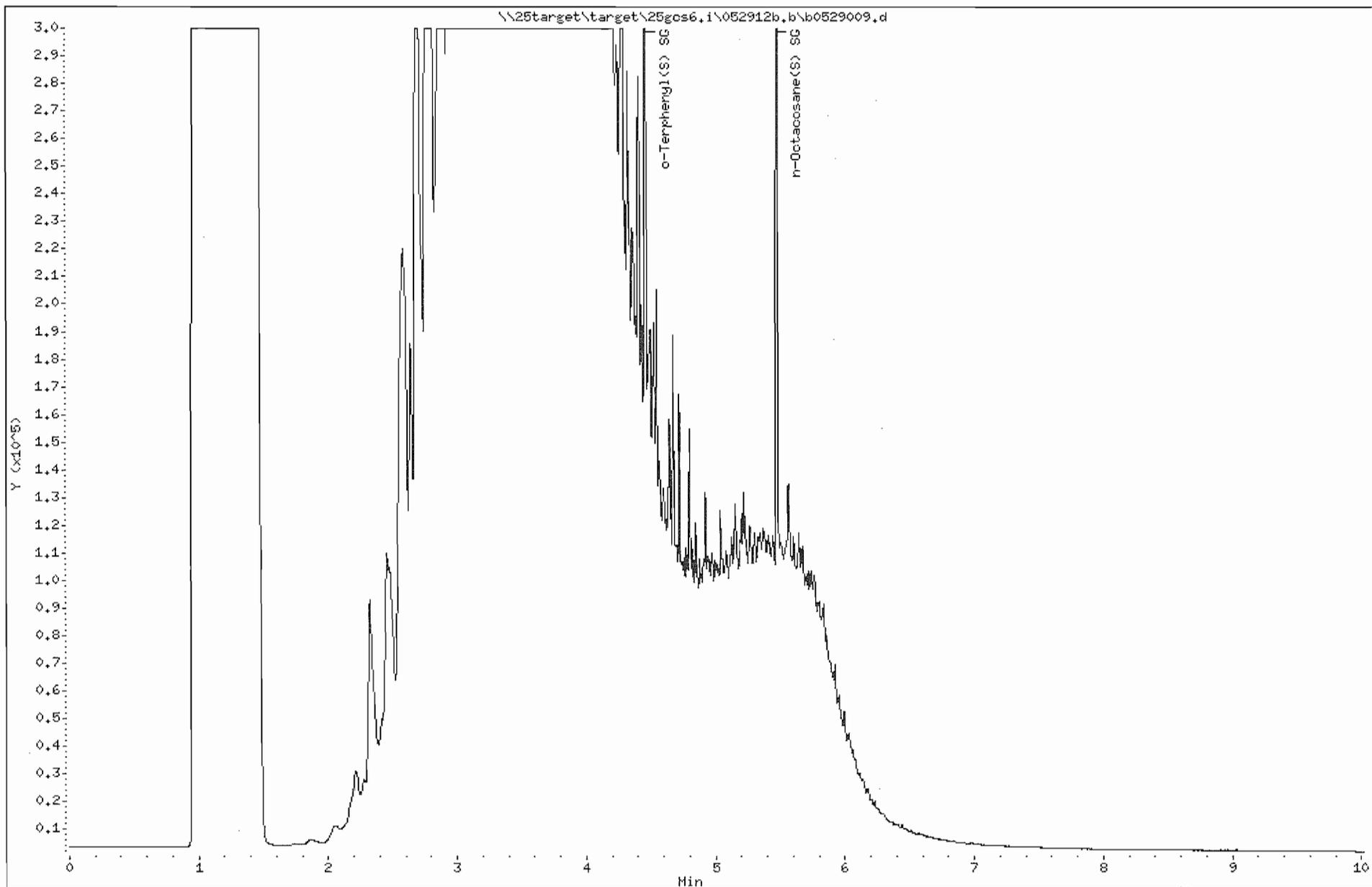
Volume Injected (uL): 1.0

Column phase: RTX-5

Instrument: 25gos6.i

Operator: ag1

Column diameter: 0.32



Data File: \\25target\target\25gcs6.i\052912b.b\b0529011.d

Page 1

Date : 29-MAY-2012 19:12

Client ID: NWES-BOTTOM-052412

Instrument: 25gcs6.i

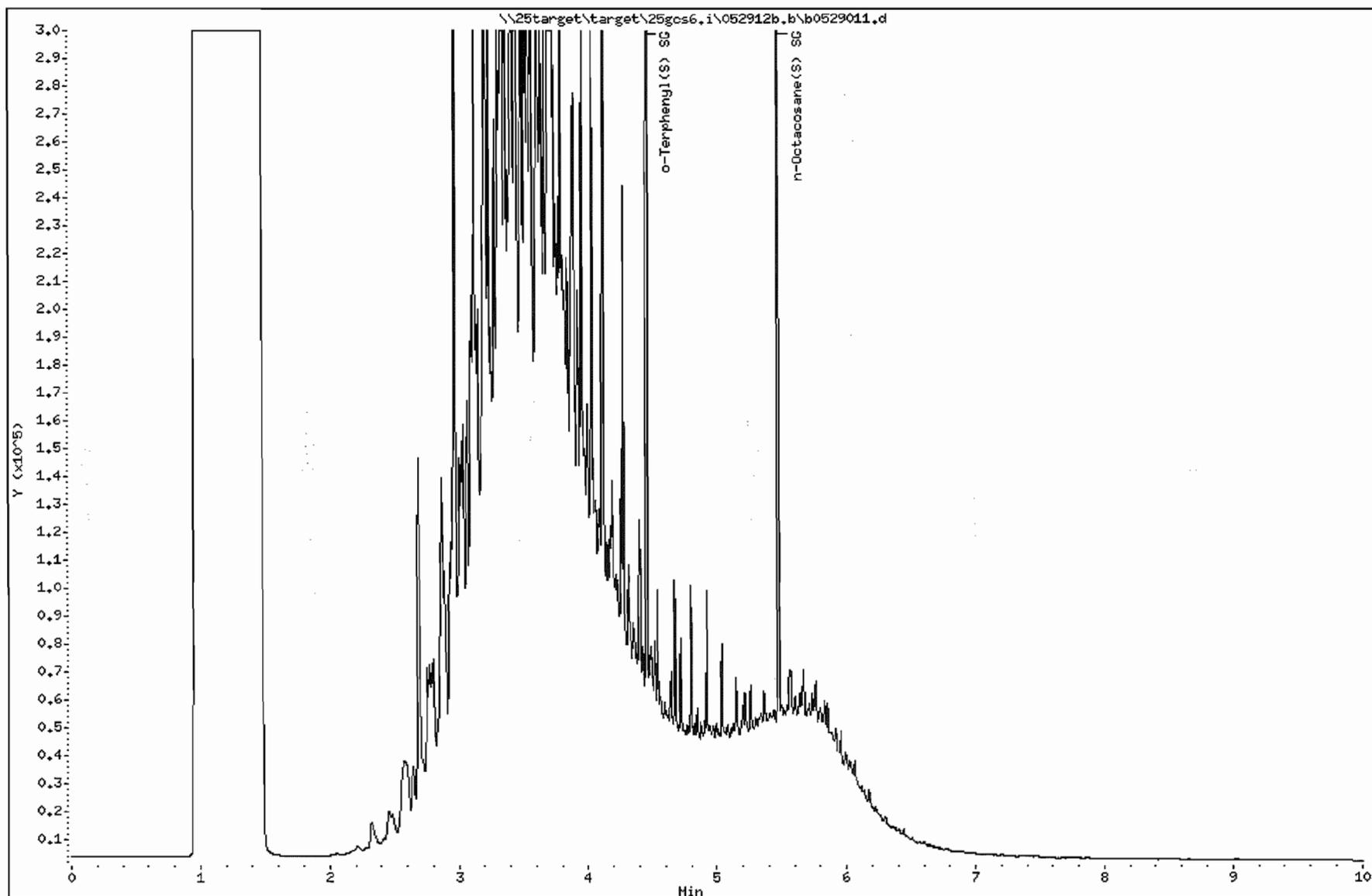
Sample Info: 2512312002

Volume Injected (uL): 1.0

Operator: ay1

Column phase: RTX-5

Column diameter: 0.32



Data File: \\25target\target\25gcs6.i\052912b.b\b0529012.d

Page 1

Date : 29-MAY-2012 19:29

Client ID: NWES-SOUTH-052412

Sample Info: 2512312003

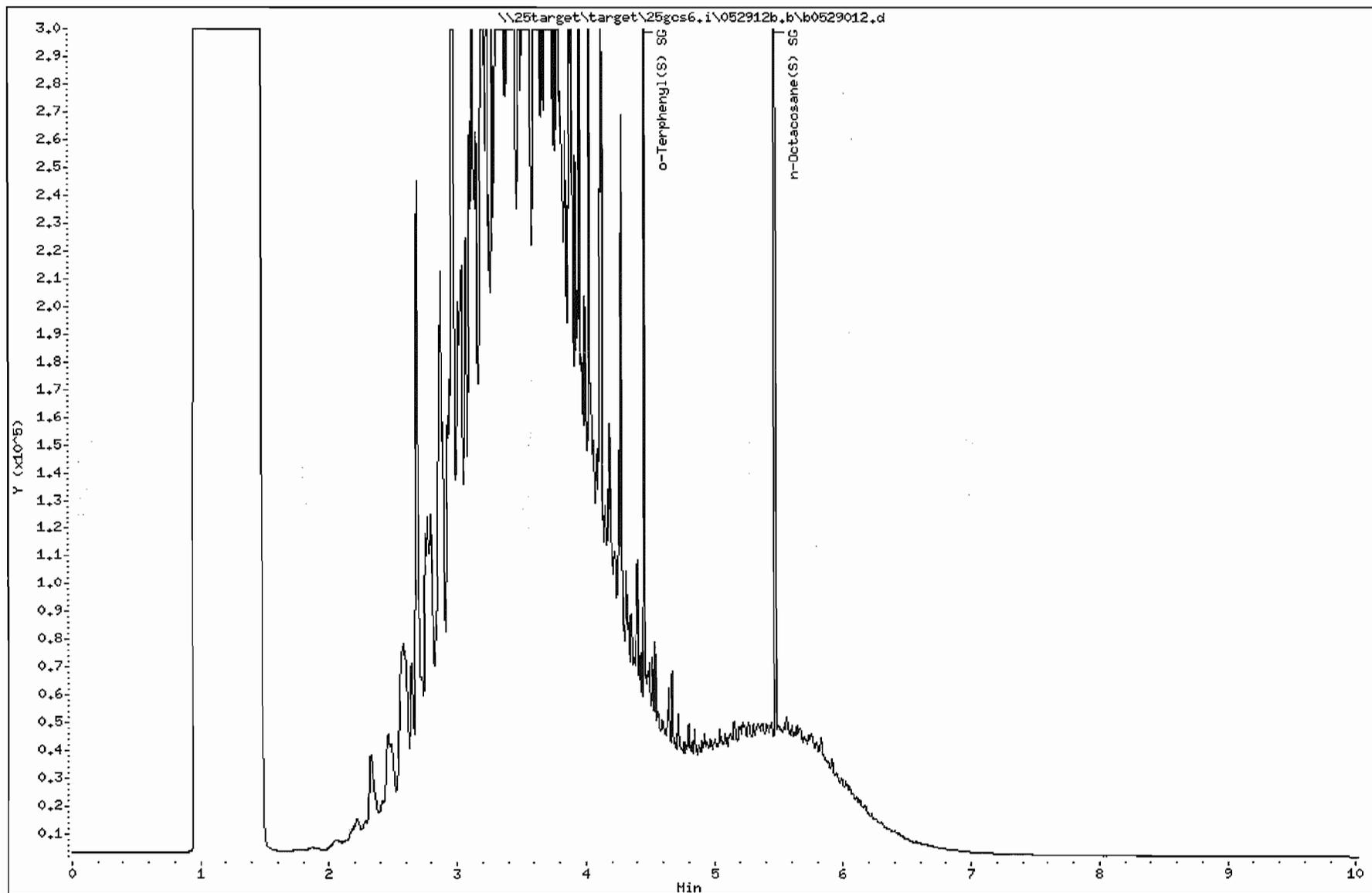
Volume Injected (uL): 1.0

Column phase: RTX-5

Instrument: 25gcs6.i

Operator: ayd

Column diameter: 0.32



Data File: \\25target\target\25gcs6.i\052912b.b\b0529013.d

Page 1

Date : 29-MAY-2012 19:47

Client ID: NWES-NORTH-052412

Instrument: 25gcs6.i

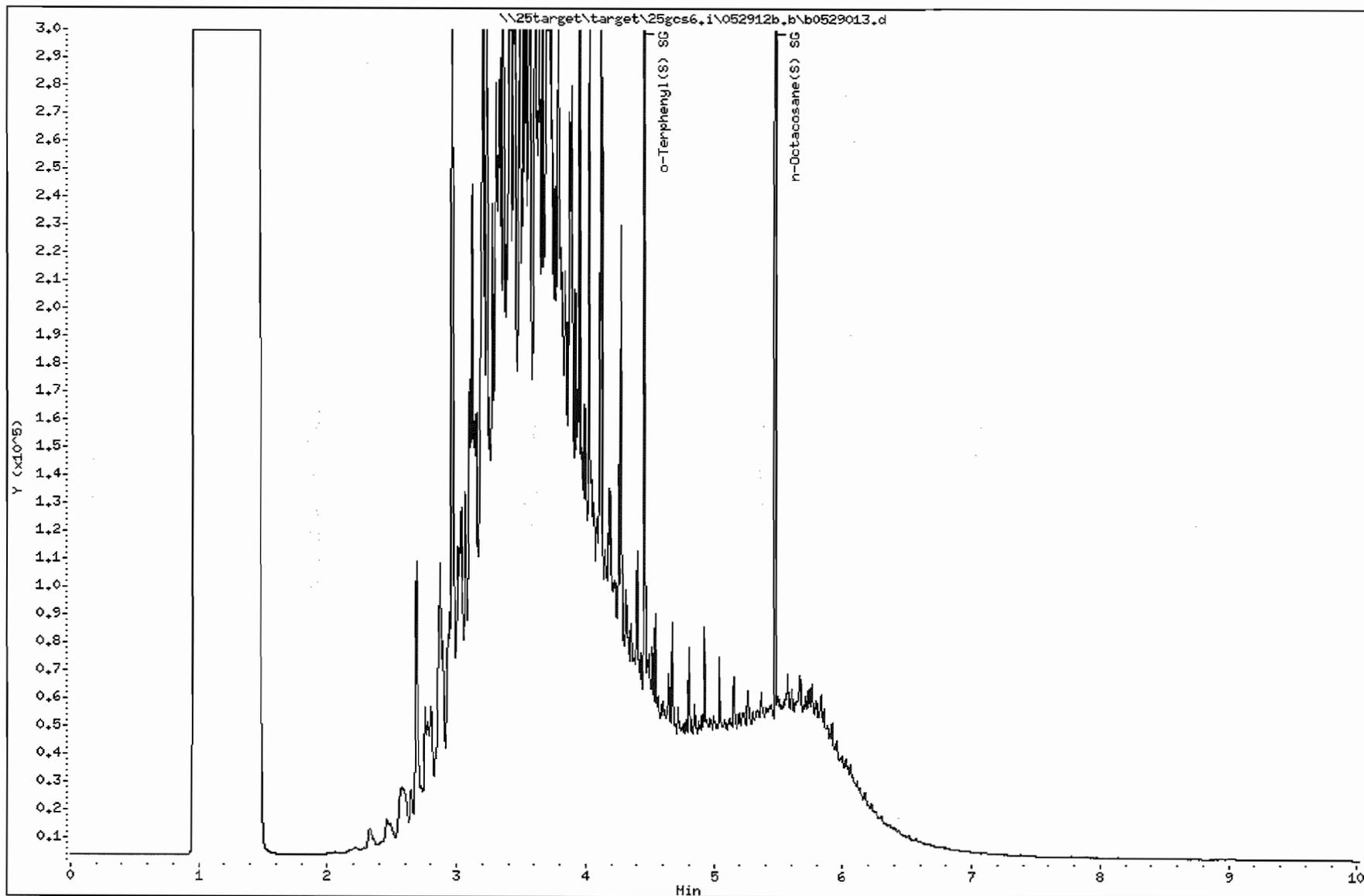
Sample Info: 2512312004

Volume Injected (uL): 1.0

Operator: ayl

Column phase: RTX-5

Column diameter: 0.32



Data File: \\25target\target\25gcs6.i\052912b.b\b0529014.d

Date : 29-MAY-2012 20:04

Client ID: NWES-EAST-052412

Instrument: 25gcs6.i

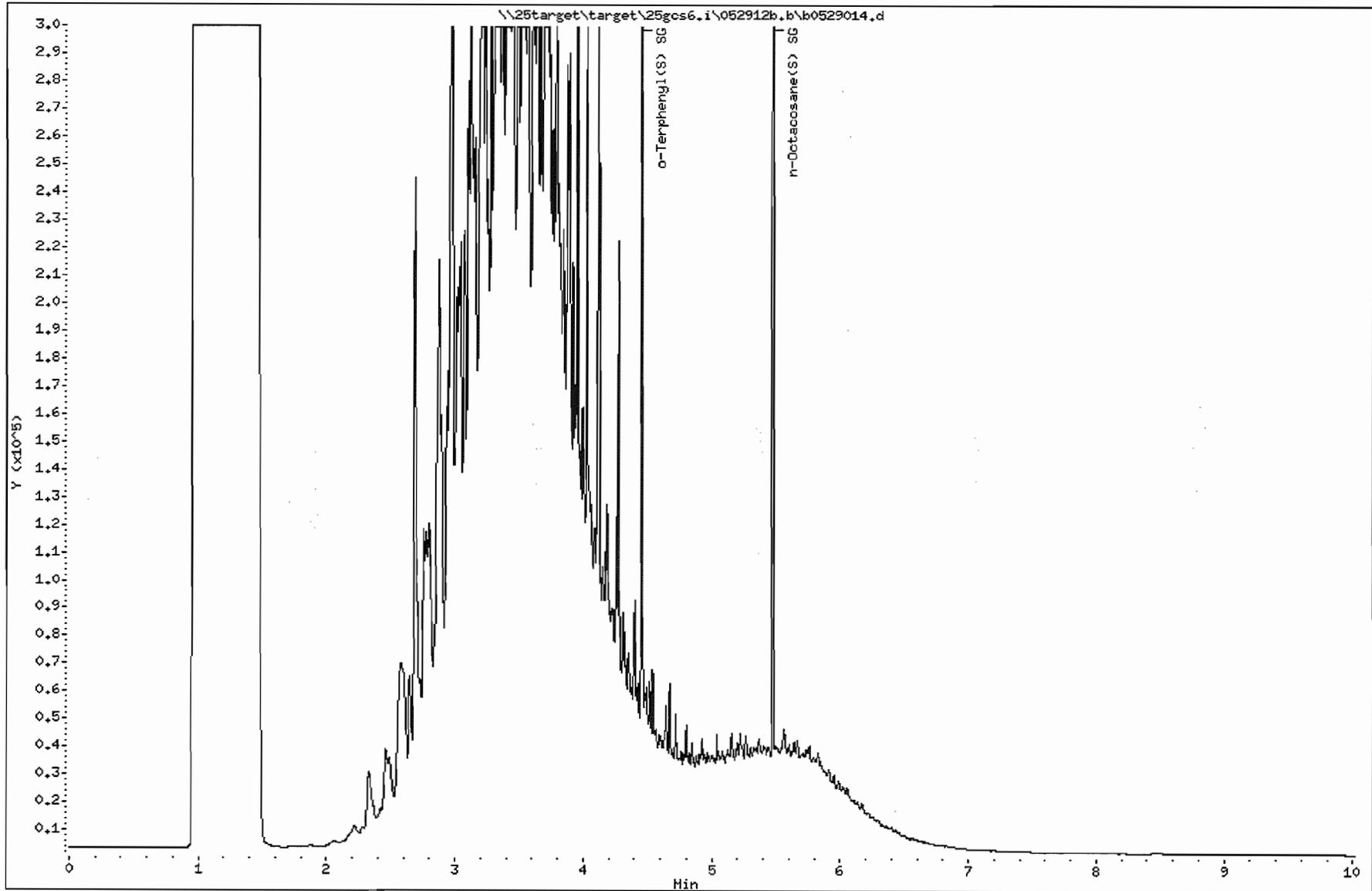
Sample Info: 2512312005

Volume Injected (uL): 1.0

Operator: ayl

Column phase: RTX-5

Column diameter: 0,32

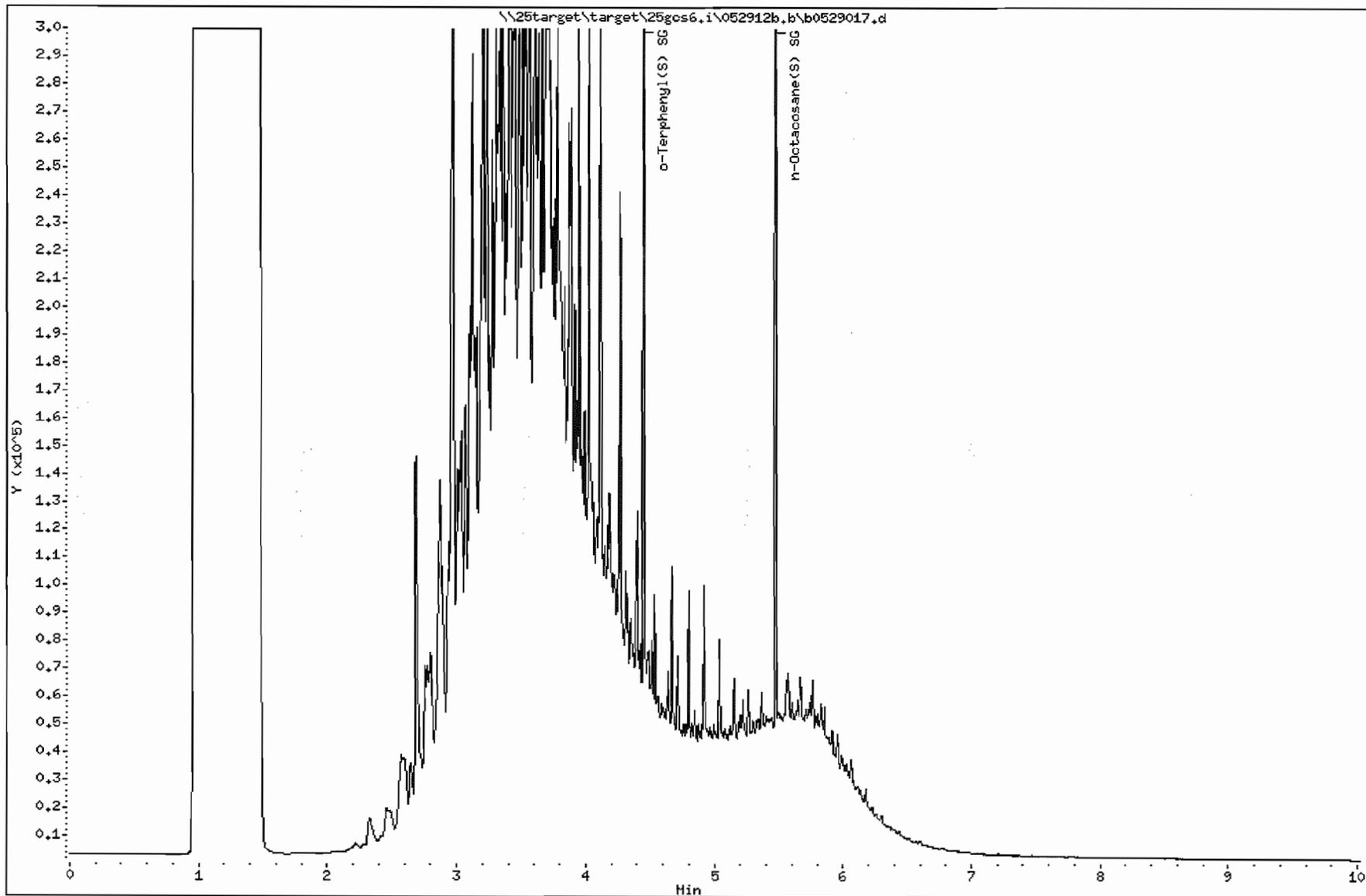


Data File: \\25target\target\25gcs6.i\052912b.b\b0529017.d
Date : 29-MAY-2012 20:57
Client ID: NWES-DUP1-052412
Sample Info: 2512312006
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: 25gcs6.i

Operator: ayl

Column diameter: 0.32

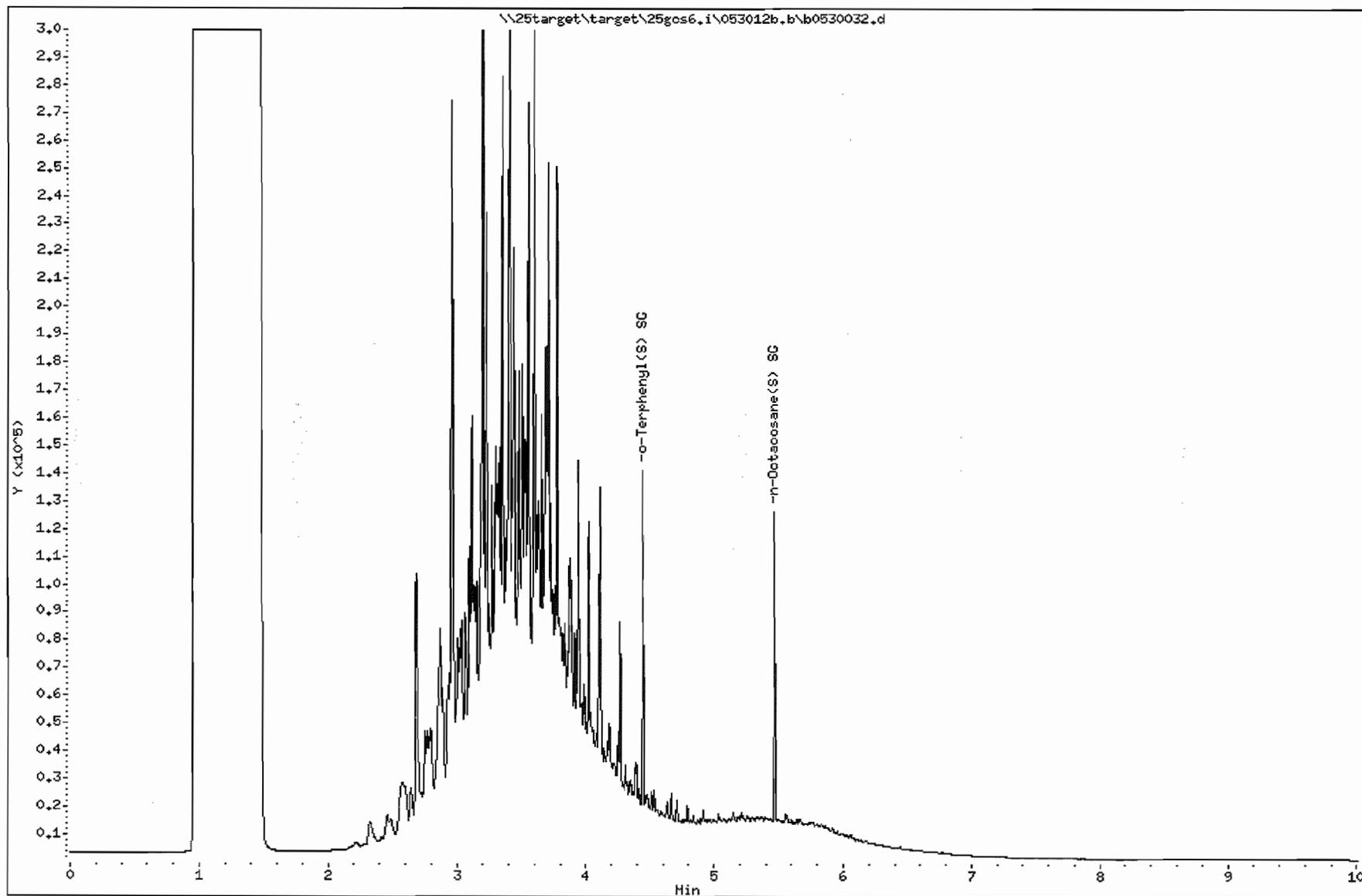


Data File: \\25target\target\25gcs6.i\053012b.b\b0530032.d
Date : 31-MAY-2012 01:54
Client ID: NWES-WEST-062412
Sample Info: 2512312001X10
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: 25gcs6.i

Operator: ayl

Column diameter: 0.32

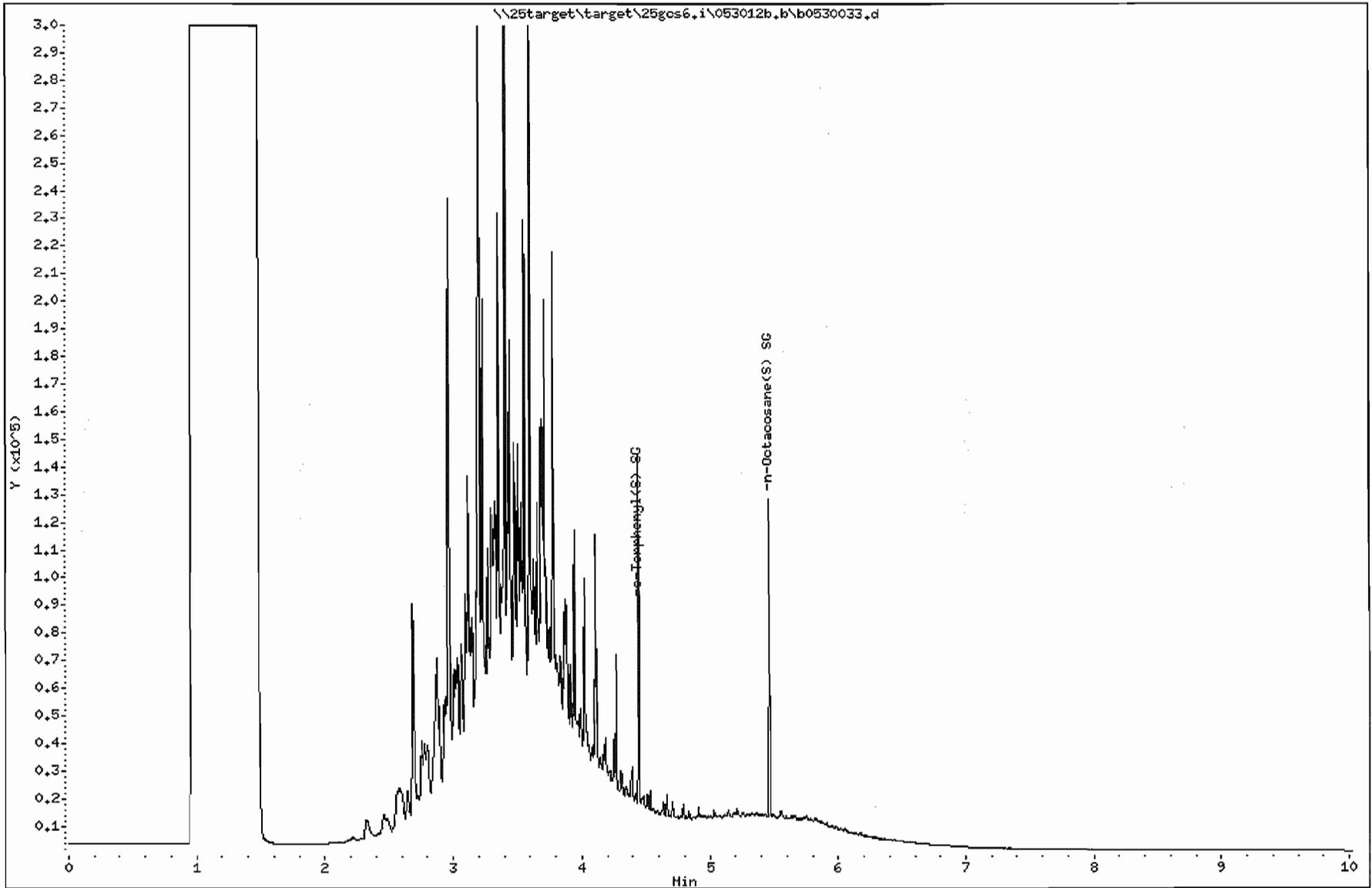


Data File: \\25target\target\25gcs6.i\053012b.b\b0530033.d
Date : 31-MAY-2012 02:11
Client ID: NWES-WEST-052412DUP
Sample Info: 117018X10
Volume Injected (uL): 1.0
Column phase: RTX-5

Instrument: 25gcs6.i

Operator: ay1

Column diameter: 0.32



June 26, 2012

Rachel Chang
CH2MHill
1100 112th Ave NE
Bellevue, WA 98004

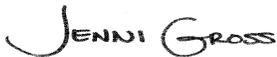
RE: Project: Emerald Services
Pace Project No.: 2512502

Dear Rachel Chang:

Enclosed are the analytical results for sample(s) received by the laboratory on June 08, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross for
Dan Gossett
dan.gossett@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Emerald Services

Pace Project No.: 2512502

Washington Certification IDs

940 South Harney Street, Seattle, WA 98108

Alaska CS Certification #: UST-025

Arizona Certification #: AZ0770

California Certification #: 01153CA

Florida/NELAP Certification #: E87617

Oregon Certification #: WA200007

Washington Certification #: C555

REPORT OF LABORATORY ANALYSIS

Page 2 of 13

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SAMPLE SUMMARY

Project: Emerald Services

Pace Project No.: 2512502

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2512502001	South Wall	Solid	06/08/12 07:35	06/08/12 09:30
2512502002	West Wall-1	Solid	06/08/12 07:45	06/08/12 09:30
2512502003	West Wall-2	Solid	06/08/12 07:50	06/08/12 09:30
2512502004	West Wall-3	Solid	06/08/12 08:00	06/08/12 09:30
2512502005	West Wall-4	Solid	06/08/12 08:10	06/08/12 09:30

REPORT OF LABORATORY ANALYSIS

Page 3 of 13

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SAMPLE ANALYTE COUNT

Project: Emerald Services

Pace Project No.: 2512502

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2512502001	South Wall	ASTM D2974-87	RAB	1
2512502002	West Wall-1	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512502003	West Wall-2	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512502004	West Wall-3	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512502005	West Wall-4	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Emerald Services

Pace Project No.: 2512502

Sample: South Wall **Lab ID: 2512502001** Collected: 06/08/12 07:35 Received: 06/08/12 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	6.5	%	0.10	1		06/08/12 13:55		

ANALYTICAL RESULTS

Project: Emerald Services

Pace Project No.: 2512502

Sample: West Wall-1 **Lab ID: 2512502002** Collected: 06/08/12 07:45 Received: 06/08/12 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	560	mg/kg	20.9	1	06/08/12 13:25	06/08/12 18:47		
Motor Oil Range SG	240	mg/kg	83.6	1	06/08/12 13:25	06/08/12 18:47	64742-65-0	
Surrogates								
n-Octacosane (S) SG	77	%	50-150	1	06/08/12 13:25	06/08/12 18:47	630-02-4	
o-Terphenyl (S) SG	76	%	50-150	1	06/08/12 13:25	06/08/12 18:47	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	25.1	%	0.10	1		06/08/12 13:57		

ANALYTICAL RESULTS

Project: Emerald Services

Pace Project No.: 2512502

Sample: West Wall-2 **Lab ID: 2512502003** Collected: 06/08/12 07:50 Received: 06/08/12 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	1840	mg/kg	18.2	1	06/08/12 13:25	06/08/12 19:22		
Motor Oil Range SG	701	mg/kg	72.9	1	06/08/12 13:25	06/08/12 19:22	64742-65-0	
Surrogates								
n-Octacosane (S) SG	95 %		50-150	1	06/08/12 13:25	06/08/12 19:22	630-02-4	
o-Terphenyl (S) SG	93 %		50-150	1	06/08/12 13:25	06/08/12 19:22	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	14.2	%	0.10	1		06/08/12 14:01		

ANALYTICAL RESULTS

Project: Emerald Services

Pace Project No.: 2512502

Sample: West Wall-3 **Lab ID: 2512502004** Collected: 06/08/12 08:00 Received: 06/08/12 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	11300	mg/kg	89.1	5	06/08/12 13:25	06/08/12 20:15		
Motor Oil Range SG	1650	mg/kg	71.3	1	06/08/12 13:25	06/08/12 19:40	64742-65-0	
Surrogates								
n-Octacosane (S) SG	96 %		50-150	1	06/08/12 13:25	06/08/12 19:40	630-02-4	
o-Terphenyl (S) SG	96 %		50-150	5	06/08/12 13:25	06/08/12 20:15	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	12.2	%	0.10	1		06/08/12 14:02		

ANALYTICAL RESULTS

Project: Emerald Services

Pace Project No.: 2512502

Sample: West Wall-4 **Lab ID: 2512502005** Collected: 06/08/12 08:10 Received: 06/08/12 09:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	331	mg/kg	17.4	1	06/08/12 13:25	06/11/12 15:41		
Motor Oil Range SG	525	mg/kg	69.8	1	06/08/12 13:25	06/11/12 15:41	64742-65-0	
Surrogates								
n-Octacosane (S) SG	101	%	50-150	1	06/08/12 13:25	06/11/12 15:41	630-02-4	
o-Terphenyl (S) SG	99	%	50-150	1	06/08/12 13:25	06/11/12 15:41	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	10.3	%	0.10	1		06/08/12 14:03		

QUALITY CONTROL DATA

Project: Emerald Services

Pace Project No.: 2512502

QC Batch: OEXT/5627 Analysis Method: NWTPH-Dx
 QC Batch Method: EPA 3546 Analysis Description: NWTPH-Dx GCS
 Associated Lab Samples: 2512502002, 2512502003, 2512502004, 2512502005

METHOD BLANK: 118412 Matrix: Solid
 Associated Lab Samples: 2512502002, 2512502003, 2512502004, 2512502005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range SG	mg/kg	ND	16.0	06/11/12 15:24	
Motor Oil Range SG	mg/kg	ND	64.0	06/11/12 15:24	
n-Octacosane (S) SG	%	97	50-150	06/11/12 15:24	
o-Terphenyl (S) SG	%	93	50-150	06/11/12 15:24	

LABORATORY CONTROL SAMPLE: 118413

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range SG	mg/kg	400	380	95	69-113	
Motor Oil Range SG	mg/kg	400	449	112	75-119	
n-Octacosane (S) SG	%			96	50-150	
o-Terphenyl (S) SG	%			88	50-150	

SAMPLE DUPLICATE: 118414

Parameter	Units	2512502002 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Range SG	mg/kg	560	280	67	50	D6
Motor Oil Range SG	mg/kg	240	115	70	48	D6
n-Octacosane (S) SG	%	77	76	2		
o-Terphenyl (S) SG	%	76	76	.07		

QUALIFIERS

Project: Emerald Services

Pace Project No.: 2512502

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel Clean-Up

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Emerald Services

Pace Project No.: 2512502

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2512502002	West Wall-1	EPA 3546	OEXT/5627	NWTPH-Dx	GCSV/3603
2512502003	West Wall-2	EPA 3546	OEXT/5627	NWTPH-Dx	GCSV/3603
2512502004	West Wall-3	EPA 3546	OEXT/5627	NWTPH-Dx	GCSV/3603
2512502005	West Wall-4	EPA 3546	OEXT/5627	NWTPH-Dx	GCSV/3603
2512502001	South Wall	ASTM D2974-87	PMST/2071		
2512502002	West Wall-1	ASTM D2974-87	PMST/2071		
2512502003	West Wall-2	ASTM D2974-87	PMST/2071		
2512502004	West Wall-3	ASTM D2974-87	PMST/2071		
2512502005	West Wall-4	ASTM D2974-87	PMST/2071		

CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

2512502

Page: 1 of 1

1532916

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: CH2MHILL		Report To: Rachel Chang		Attention: Sheila Smith	
Address: 1100 112th Ave NE #400		Copy To:		Company Name: Emerald Services	
Belleve, WA 98004		Purchase Order No.:		Address:	
Email To: rachel.chang@ch2m.com		Project Name: Emerald Services		Pace Quote Reference:	
Phone: 425.453.5000 Fax:		Project Number: 425942.11.00		Pace Project Manager:	
Requested Due Date/TAI: 48 hrs.		Requested Analysis Filtered (Y/N)		REGULATORY AGENCY	
				<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER Site Location STATE: WA	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT	Matrix Code (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab ID
					DATE	TIME			DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃				
1	South Wall		SL G		6.8.12	0735		1											
2	West Wall-1		SL G		6.8.12	0745		1											
3	West Wall-2		SL G		6.8.12	0750		1											
4	West Wall-3		SL G		6.8.12	0800		1											
5	West Wall-4		SL G		6.8.12	0810		1											
6																			
7																			
8																			
9																			
10																			
11																			
12																			

ADDITIONAL COMMENTS: Please place item #1 on hold until further notice

RELINQUISHED BY / AFFILIATION: [Signature] CH2MHILL DATE: 6.8.12 TIME: 0930

ACCEPTED BY / AFFILIATION: [Signature] DATE: 6.8.12 TIME: 0930

TEMPERATURE: 43

RECEIVED ON ICE: Y

CUSTODY SEALED COOLER: N

SAMPLES INTACT: Y

ORIGINAL

SAMPLER NAME AND SIGNATURE: [Signature] DATE SIGNED: 06/08/12

PRINT NAME OF SAMPLER: Navio Lopez Ramos

SIGNATURE OF SAMPLER: [Signature]

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-O-020rev.07, 15-May-2007

Sample Container Count

2512502



CLIENT: Emerald Services

COC PAGE 1 of 1
 COC ID# 1532916

Trip Blank(s) Provided?
 Y / N

Sample Line Item	VG9H	AG1H	AG1U	BP1U	BP2U	BP3U	BP3N	BP3S	WGKU	WGFU	WG2U	DG9M	DG9B	VG9W	VSG	Comments
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

AG1H	1 liter HCL amber glass	BP2S	500mL H2SO4 plastic	JGFU	4 oz amber glass soil jar
AG1U	1liter unpreserved amber glass	BP2U	500mL unpreserved plastic	WGKU	8 oz clear glass soil jar
AG2S	500mL H2SO4 amber glass	BP2Z	500mL NaOH, Zn Ac	WGFU	4 oz clear glass soil jar
AG2U	500mL unpreserved amber glass	BP3C	250mL NaOH plastic	WG2U	2 oz clear glass soil jar
AG3S	250mL H2SO4 amber glass	BP3N	250mL HNO3 plastic	JGFM	4 oz amber glass soil jar with MeOH
BG1H	1 liter HCL clear glass	BP3S	250mL H2SO4 plastic	VG9U	40mL unpreserved clear vial
BG1U	1 liter unpreserved glass	BP3U	250mL unpreserved plastic	VG9W	40mL clear vial pre-weighted with DI water
BP1N	1 liter HNO3 plastic	DG9B	40mL Na Bisulfate clear vial	VSG	Headspace septa vial
BP1S	1 liter H2SO4 plastic	DG9H	40mL HCL amber voa vial	VG9H	40mL HCL clear vial
BP1U	1 liter unpreserved plastic	DG9M	40mL MeOH clear vial	WGFU	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac	DG9T	40mL Na Thio amber vial	VG9T	40mL Na Thio. clear vial
BP2N	500mL HNO3 plastic	DG9U	40mL unpreserved amber vial	ZPLC	Ziploc Bag
BP2O	500mL NaOH plastic	I	Wipe/Swab	U	Summa Can



Sample Condition Upon Receipt

Client Name: Emerald Services

Project # 2512502

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other _____ Temp. Blank Yes _____ No

Thermometer Used 132013 or 101731962 or 226099 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 4.3C
Temp should be above freezing $\leq 8^{\circ}\text{C}$

Biological Tissue is Frozen: Yes No

Date and Initials of person examining contents: 020812 CW

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>2 day</u>
Follow Up / Hold Analysis Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>Sample South Wall on hold</u>
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>No sample time on container coc but was on containers added to coc</u>
-Includes date/time/ID/Analysis Matrix:	<u>SL</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, O&G	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blanks Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17.
Pace Trip Blank Creation Date:		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature]

Date: 6/18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

June 29, 2012

Rachel Chang
CH2MHill
1100 112th Ave NE
Bellevue, WA 98004

RE: Project: South/West Wall
Pace Project No.: 2512703

Dear Rachel Chang:

Enclosed are the analytical results for sample(s) received by the laboratory on June 26, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Dan Gossett

dan.gossett@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: South/West Wall

Pace Project No.: 2512703

Washington Certification IDs

940 South Harney Street, Seattle, WA 98108

Alaska CS Certification #: UST-025

Arizona Certification #: AZ0770

California Certification #: 01153CA

Florida/NELAP Certification #: E87617

Oregon Certification #: WA200007

Washington Certification #: C555

SAMPLE SUMMARY

Project: South/West Wall

Pace Project No.: 2512703

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2512703001	SOUTH WALL-062612	Solid	06/26/12 09:30	06/26/12 10:25
2512703002	WEST WALL-062612	Solid	06/26/12 09:40	06/26/12 10:25

REPORT OF LABORATORY ANALYSIS

SAMPLE ANALYTE COUNT

Project: South/West Wall

Pace Project No.: 2512703

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2512703001	SOUTH WALL-062612	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1
2512703002	WEST WALL-062612	NWTPH-Dx	AY1	4
		ASTM D2974-87	RAB	1

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: South/West Wall

Pace Project No.: 2512703

Sample: SOUTH WALL-062612 Lab ID: 2512703001 Collected: 06/26/12 09:30 Received: 06/26/12 10:25 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	180	mg/kg	16.3	1	06/28/12 11:15	06/28/12 16:55		
Motor Oil Range SG	ND	mg/kg	65.3	1	06/28/12 11:15	06/28/12 16:55	64742-65-0	
Surrogates								
n-Octacosane (S) SG	79 %		50-150	1	06/28/12 11:15	06/28/12 16:55	630-02-4	
o-Terphenyl (S) SG	78 %		50-150	1	06/28/12 11:15	06/28/12 16:55	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	5.4	%	0.10	1		06/26/12 15:09		

ANALYTICAL RESULTS

Project: South/West Wall

Pace Project No.: 2512703

Sample: WEST WALL-062612 **Lab ID: 2512703002** Collected: 06/26/12 09:40 Received: 06/26/12 10:25 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel		Analytical Method: NWTPH-Dx Preparation Method: EPA 3546						
Diesel Range SG	4540	mg/kg	19.2	1	06/28/12 11:15	06/28/12 17:30		
Motor Oil Range SG	687	mg/kg	76.9	1	06/28/12 11:15	06/28/12 17:30	64742-65-0	
Surrogates								
n-Octacosane (S) SG	82 %		50-150	1	06/28/12 11:15	06/28/12 17:30	630-02-4	
o-Terphenyl (S) SG	81 %		50-150	1	06/28/12 11:15	06/28/12 17:30	84-15-1	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	18.8	%	0.10	1		06/26/12 15:10		

QUALITY CONTROL DATA

Project: South/West Wall

Pace Project No.: 2512703

QC Batch: OEXT/5716

Analysis Method: NWTPH-Dx

QC Batch Method: EPA 3546

Analysis Description: NWTPH-Dx GCS

Associated Lab Samples: 2512703001, 2512703002

METHOD BLANK: 120977

Matrix: Solid

Associated Lab Samples: 2512703001, 2512703002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range SG	mg/kg	ND	16.0	06/28/12 16:21	
Motor Oil Range SG	mg/kg	ND	64.0	06/28/12 16:21	
n-Octacosane (S) SG	%	85	50-150	06/28/12 16:21	
o-Terphenyl (S) SG	%	86	50-150	06/28/12 16:21	

LABORATORY CONTROL SAMPLE: 120978

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Range SG	mg/kg	400	348	87	69-113	
Motor Oil Range SG	mg/kg	400	407	102	75-119	
n-Octacosane (S) SG	%			85	50-150	
o-Terphenyl (S) SG	%			84	50-150	

SAMPLE DUPLICATE: 120979

Parameter	Units	2512703001 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Range SG	mg/kg	180	190	6	50	
Motor Oil Range SG	mg/kg	ND	ND		48	
n-Octacosane (S) SG	%	79	78	.6		
o-Terphenyl (S) SG	%	78	77	.7		

QUALITY CONTROL DATA

Project: South/West Wall

Pace Project No.: 2512703

QC Batch: PMST/2084

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 2512703001, 2512703002

SAMPLE DUPLICATE: 120531

Parameter	Units	2512706001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	23.0	23.3	1	30	

QUALIFIERS

Project: South/West Wall

Pace Project No.: 2512703

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel Clean-Up

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: South/West Wall

Pace Project No.: 2512703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2512703001	SOUTH WALL-062612	EPA 3546	OEXT/5716	NWTPH-Dx	GCSV/3651
2512703002	WEST WALL-062612	EPA 3546	OEXT/5716	NWTPH-Dx	GCSV/3651
2512703001	SOUTH WALL-062612	ASTM D2974-87	PMST/2084		
2512703002	WEST WALL-062612	ASTM D2974-87	PMST/2084		

Section A Required Client Information: Section B Required Project Information: Section C Invoice Information:

Company: **CH2MHILL** Report To: **RACHEL CHANG** Attention: **Shonda Smith** Invoice Information: **Emerald Services**

Address: **1100 112th Ave NE #100** Copy To: **RACHEL CHANG** Company Name: **Emerald Services**

Email To: **Rachel.Chang@ch2m.com** Purchase Order No.: Project Number: **425942.11.00**

Phone: **425-453-5000** Fax: Project Name: Price Quote Reference: **WA**

Requested Due Date/TAT: **48 hrs** Project Number: **425942.11.00** Price Review #: **WA**

REGULATORY AGENCY: NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location: **WA**

ITEM #	Section D Required Client Information	Matrix Codes MATRIX CODE	MATERIAL CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl			
1	SOUTH WALL-062612	SLG	SLG	G	6/26	0930	1	1									
2	WEST WALL-062612	SLG	SLG	G	6/26	0940	1	1									
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

ADDITIONAL COMMENTS: **REQUISITIONED BY / AFFILIATION: CH2MHILL DATE: 6/26/12 TIME: 1025 ACCEPTED BY / AFFILIATION: [Signature] DATE: 6/26/12 TIME: 1025**

SAMPLER NAME AND SIGNATURE: **MARIO LOPEZ RAMOS**

PRINT Name of SAMPLER: **MARIO LOPEZ RAMOS** DATE Signed (MM/DD/YY): **6/26/12 1025**

SIGNATURE of SAMPLER: **[Signature]**

Temp in °C: **5.2** Received on Ice (Y/N): **Y** Custody Sealed Cooler (Y/N): **N** Samples Intact (Y/N): **Y**

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoice not paid within 30 days.

Sample Container Count

2512703



CLIENT: CH2M Hill

COC PAGE 1 of 1

COC ID# _____

Trip Blank(s) Provided?
Y / N

Sample Line Item	VG9H	AG1H	AG1U	BP1U	BP2U	BP3U	BP3N	BP3S	WGKU	WGFU	WG2U	DG9M	DG9B	VG9W	VSG	Comments
1									1							
2									1							
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

AG1H	1 liter HCL amber glass	BP2S	500mL H2SO4 plastic	JGFU	4 oz amber glass soil jar
AG1U	1liter unpreserved amber glass	BP2U	500mL unpreserved plastic	WGKU	8 oz clear glass soil jar
AG2S	500mL H2SO4 amber glass	BP2Z	500mL NaOH, Zn Ac	WGFU	4 oz clear glass soil jar
AG2U	500mL unpreserved amber glass	BP3C	250mL NaOH plastic	WG2U	2 oz clear glass soil jar
AG3S	250mL H2SO4 amber glass	BP3N	250mL HNO3 plastic	JGFM	4 oz amber glass soil jar with MeOH
BG1H	1 liter HCL clear glass	BP3S	250mL H2SO4 plastic	VG9U	40mL unpreserved clear vial
BG1U	1 liter unpreserved glass	BP3U	250mL unpreserved plastic	VG9W	40mL clear vial pre-weighted with DI water
BP1N	1 liter HNO3 plastic	DG9B	40mL Na Bisulfate clear vial	VSG	Headspace septa vial
BP1S	1 liter H2SO4 plastic	DG9H	40mL HCL amber vial	VG9H	40mL HCL clear vial
BP1U	1 liter unpreserved plastic	DG9M	40mL MeOH clear vial	WGFU	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac	DG9T	40mL Na Thio amber vial	VG9T	40mL Na Thio. clear vial
BP2N	500mL HNO3 plastic	DG9U	40mL unpreserved amber vial	ZPLC	Ziploc Bag
BP2O	500mL NaOH plastic	I	Wipe/Swab	U	Summa Can



Sample Condition Upon Receipt

Client Name: CH2M Hill

Project # 2512703

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other _____ Temp. Blank Yes _____ No _____

Thermometer Used 132013 or 10173196 or 226099 Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temperature 3.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing $\leq 6^{\circ}\text{C}$

Comments:

Date and Initials of person examining contents: 6/26/12

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>2-day TAT</u>
Follow Up / Hold Analysis Requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
-Includes date/time/ID/Analysis Matrix: <u>SL</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, O&G	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blanks Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Creation Date:		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: JENNI GROSS

Date: 6/26/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Attachment E
Field Notes

NWES - AIRPORT WAY SOUTH 5/24/2012

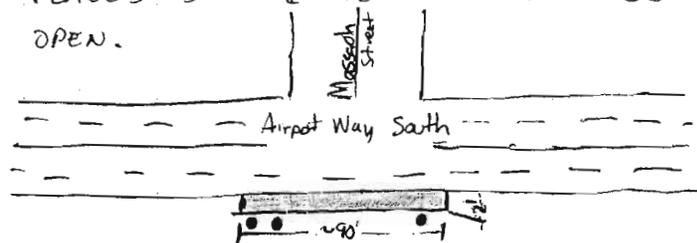
0820 MLK ONSITE TO COLLECT SOIL SAMPLES FROM OPEN TRENCH LOCATED OUTSIDE OF THE PROPERTY ON THE WEST SIDEWALK AT THE INTERSECTION OF AIRPORTWAY SOUTH & S. MASSACHUSETTS.

0805 CALIBRATED PID UNIT USING ISOBUTYLENE CAL. GAS. ZERO CAL: 0.0 PPM.
SPAN CAL: 103-105 PPM

0805 WAITING FOR SITE PERSONNEL TO ASSIST IN REMOVING STEEL PLATES TO COLLECT SOIL SAMPLES.

DISCUSSED W/ HARRY UMBINETTI THE SCOPE OF WORK FOR COLLECTING THE SOIL SAMPLES WITHOUT CLOSING THE RIGHT LANE.

TEAM TO WORK ON MOVING EACH STEEL PLATE W/ LOADER AND ALLOW SAMPLER TO COLLECT GRAB SAMPLES FROM EACH SIDE WALLS AND BOTTOM. AFTER EACH GRAB SAMPLE, STEEL PLATE WOULD BE PLACED BACK & NEW ONE WOULD BE OPEN.



○ Light Poles ■ AREA OF EXCAVATION

NWES - AIRPORT WAY SOUTH 5/24/12

SAMPLER USED A DECONTAMINATED STAINLESS STEEL BOWL TO COLLECT SAMPLES. (ONE BOWL PER WALL & BOTTOM) TO LATER HOMOGENIZE & COLLECT COMPOSITE OF ALL GRAB SAMPLES.

0840 COLLECTING SAMPLES.

THE WEST WALL OF THE EXCAVATION IS NEXT TO THE WALL OF THE CURB - ONLY APPROXIMATELY 3-5 INCHES OF SOIL IS EXPOSED, REST IS THE CURB.

DEPTH OF THE EXCAVATION RANGES FROM 1-FT TO 1.5 FT IN DEPTH.

WIDTH OF EXCAVATION IS 2.0 FT.

LENGTH IS ~90 FT

ONCE ALL GRAB SAMPLES WERE COLLECTED, THE TRENCH WAS COVERED W/ PLASTIC SHEETING & THE STEEL PLATES

- WEST WALL COMPOSITE: 115-120 ppm (Petro-addr)

NWES - WEST - 052412 @ 0950

- BOTTOM COMPOSITE: 80-89 ppm (Petro-addr)

NWES - BOTTOM - 052412 @ 1000 (Petro-addr)

COLLECTED DUPLICATE SAMPLE FROM BOTTOM

NWES-DUP1 - 052412 @ 0940

SOUTH WALL @ 150-159 PPM (Petro-addr)

NWES - SOUTH - 052412 @ 1010

NWES - AIRPORT WAY SOUTH 05/24/12
 NORTH WALL - 89-92 PPM (PETROLEUM ODR)

NWES - NORTH - 052412 @ 1015

EAST WALL - 200-220 PPM (PETROLEUM ODR)

NWES - EAST - 052412 @ 1020

End of SAMPLING

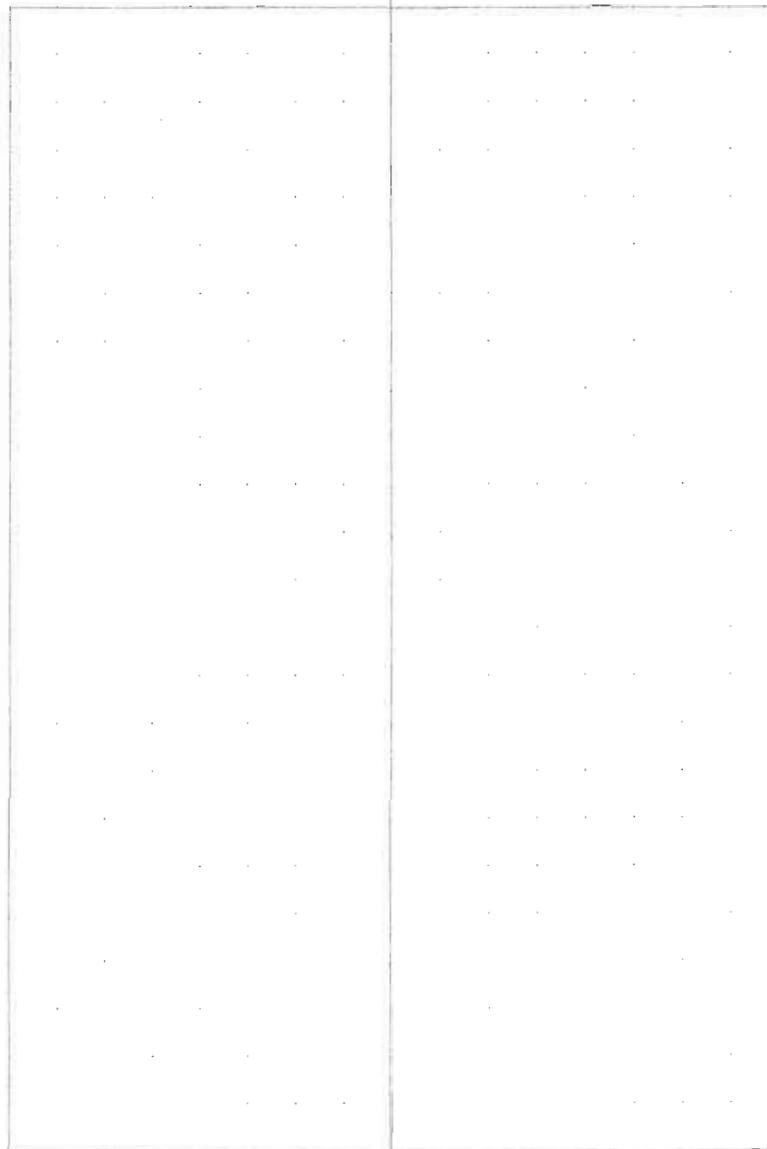
- ALL SAMPLES WERE SLIGHTLY MOIST
 & HAD MOD-STRONG - PETROLEUM ODR.
 NO STANDING WATER/OIL WAS OBSERVED
 SW THE TRENCH.

- COLLECTED VARIOUS PICTURES OF THE LOCATIONS
 WHERE SAMPLES WERE TAKEN

- PREPARED SAMPLES FOR DELIVERY

- SAMPLES TO BE ANALYSED FOR
 NWTPH-DX W/ A 2-DAY TURN-
 AROUND REPORTING.

IOUS OFFSITES TO DELIVER SAMPLES



Emerald Services - Seattle

6/08/12

0715 MCR onsite, met w/ Terry and discussed plan for sampling.

- Calibrated PID meter while waiting for excavator to arrive and pull steel plates

0930 Collecting samples

- South Wall - 0735 230-240 ppm, Sandy clay
Collected sample per Terry's request.

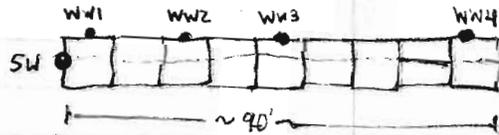
- West Wall 1 - 0745 20-32 ppm
Sandy clay

- West Wall 2 - 0750 25-30 ppm
CDF material, low TPH odor

- West Wall 3 - 0820 60-75 ppm
CDF material, seems like not much excavation was done @ this location. Only ~3" of soil was exposed below the curb wall

- West Wall 4 - 0810 0.8-1.2 ppm
CDF material, low TPH odor

- Sample Locations:



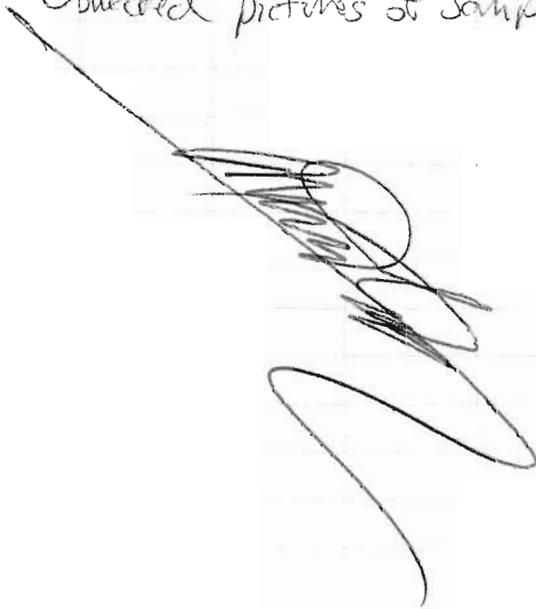
- Prepared samples for delivery to the lab

Emerald Services 6.8.12

- Discussed sample visual inspectors w/ P.M. (Rachel Chang) and determined to analyze only samples on the West Wall (1-4) but not the South Wall Sample as PID readings were high.
- Will submit sample to lab and will place a hold until further notice.

0930 Samples delivered to the lab on a 48-hr turn-around-reporting.

Collected pictures of sample locations.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1
1532916

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: CH2MHILL		Report To: Rachel Chang		Attention: Sheila Smith	
Address: 1100 112th Ave NE #400 Bellevue, WA 98004		Copy To:		Company Name: Emerald Services	
Email To: mcdel.chang@ch2m.com		Purchase Order No.:		Address:	
Phone: 425.453.5000 Fax:		Project Name: Emerald Services		Pace Quote Reference:	
Requested Due Date/TAT: 48 hrs.		Project Number: 425942.11.0C		Pace Project Manager:	
				Pace Profile #:	
				REGULATORY AGENCY	
				<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input checked="" type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
				Site Location: WA	
				STATE: WA	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analysis Test Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.					
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other											
					DATE	TIME	DATE	TIME																					
1	South Wall		SLG		6.8.12	0735			1	X																			
2	West Wall-1		SLG		6.8.12	0745			1	X																			
3	West Wall-2		SLG		6.8.12	0750			1	X																			
4	West Wall-3		SLG		6.8.12	0800			1	X																			
5	West Wall-4		SLG		6.8.12	0810			1	X																			
6																													
7																													
8																													
9																													
10																													
11																													
12																													

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please place item #1 on hold until further notice.	Mario Lopez Ramos / CH2MHILL	6.8.12	0930	Sheila Smith / PACE	6.8.12	0930	4.3	Y	N	Y

2

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER: Mario Lopez Ramos		DATE Signed (MM/DD/YY): 06/08/12	Temp in °C
SIGNATURE of SAMPLER: <i>[Signature]</i>			
			Received on Ice (Y/N)
			Custody Sealed Cooler (Y/N)
			Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Emerald Services

6/28/12

23

0830 ONSITE TO COLLECT ADDITIONAL CONFIRMATION
SAMPLES FROM THE DIESEL SPILL OPEN TRENCH.

- MET W/ HARRY

0840 CALIBRATING PID METER WHILE WAIT FOR
TRENCHES TO BE EXPOSED (STEEL PLATES OVER)

ZERO CALIBRATION: 0.0 PPM

SPAN CALIBRATION: 101-103 PPM

PID # C100939

CAL SOLUTION: ISOBUTYLENE 100 PPM

- LOOKS LIKE TEAM EXCAVATED ADDITIONAL 20~
FEET FURTHER SOUTH FROM PREVIOUS EXCAVATION

0910 COLLECTING SAMPLES STARTING AT
SOUTH WALL.

SOIL - GRAVELLY SAND W/ CLAY STRIPS

SAMPLE: SOUTH WALL - 062612 @ 0930

PID: 35 - 50 PPM

0935 COLLECTING SAMPLE ON WEST WALL
MIDDLE OF THE TRENCH:

SOIL - SANDY CLAY W/ GRAVEL

PID: 150 - 175 PPM

WEST WALL - 062612 @ 0940

EXCAVATION IN THIS AREA WAS DOWN
ALL THE WAY TO THE UTILITY LINES
PHASE OF EXCAVATION HAD MOSTLY

6/26/12

A CLAY LAYER W/ SAND &
GRAVEL.

EXCAVATION IN THIS AREA WAS
ONLY DONE DOWNWARDS TO THE
UTILITY LINES AND NOT FURTHER.
HORIZONTAL EXCAVATION WAS DONE
ON THE WEST SIDE OF THE TRENCH
SINCE DOING SO WOULD UNDERMINE
THE INTEGRITY OF THE ROAD.

AFTER PROCESSING SAMPLES, THESE
WERE PUT ON ICE FOR PRESERVATION
AND HAND-DELIVERED TO THE LAB.

1025 RELINQUISHED SAMPLES AT
PACE ANALYTICAL TO BE ANALYSED
FOR NUTPH-D W/ SILICA GEL
PREPARATION. ON A 48-HR. TAT.
END OF FIELD WORK.

